



Environmental and Social Impact Assessment

Design, Construction and Management of a
429 ha Industrial Economic Zone within the
Akoupé-Zeudji Industrial Zone PK24

Final Report

28 February 2023

Project No.: 0637039

Signature Page

28 February 2023

Environmental and Social Impact Assessment

Design, Construction and Management of a 429 ha Industrial Economic
Zone within the Akoupé-Zeudji Industrial Zone PK24

Final Report



Raimund Vogelsberger
Partner



Anna Kalashnyk
Consultant

ERM GmbH
Siemensstrasse 9
63263 Neu-Isenburg
Germany

© Copyright 2023 by The ERM International Group Limited and/or its affiliates ('ERM').
All rights reserved. No part of this work may be reproduced or transmitted in any form,
or by any means, without the prior written permission of ERM

CONTENTS

Signature Page	3
CONTENTS.....	I
List of Tables	vi
List of Figures	ix
Acronyms and Abbreviations	xi
1. INTRODUCTION	1
1.1 ESIA Objectives	1
1.2 Structure of the ESIA Report	1
1.3 Responsibility for the ESIA Execution.....	4
1.4 ESIA Procedure and Scope	5
2. LEGAL FRAMEWORK.....	7
2.1 National Environmental Policies	7
2.1.1 National Strategy on Environment	7
2.1.2 National Development Plan (Plan National de Développement, PND)	7
2.1.3 National Climate Change Programme Strategy (Stratégie du Programme National du Changement Climatique, SPNCC).....	8
2.1.4 National Gender Policy (Politique Nationale en Matière du Genre, PNG).....	8
2.1.5 National Water Policy.....	8
2.2 Institutional and Regulatory Framework	8
2.2.1 Relevant Authorities in Côte d'Ivoire	8
2.2.2 Relevant Legislation in Côte d'Ivoire.....	19
2.2.3 International Conventions, Protocols and Agreements	36
2.3 International Guidelines and Practices	38
2.4 Specific Regulatory Limits (Côte d'Ivoire and IFC)	40
2.4.1 Air Quality	40
2.4.2 Noise.....	41
3. METHODOLOGY AND WORK PROGRAMME.....	44
3.1 Approach	44
3.2 Screening.....	44
3.3 Scoping.....	44
3.4 Impact Assessment	45
4. PROJECT DESCRIPTION	46
4.1 Project Background	46
4.1.1 Presentation of the Context of the Project	46
4.1.2 Project Owners	46
4.1.3 Project Proponent	47
4.2 Project Justification.....	50
4.2.1 Industrial Zones in Côte d'Ivoire.....	50
4.2.2 PK24 Industrial Zone	50
4.2.3 The need for the Project	52
4.3 Project Overview.....	52
4.3.1 Location	52
4.3.2 Project Master Plan.....	55
4.3.3 Project Components	58
4.4 Land Ownership & Compensations	60
4.5 Project Alternatives.....	60
4.5.1 Alternative Location	60
4.5.2 Alternative Development Type.....	60

4.5.3	Alternative Layouts Considered for the Project.....	60
4.5.4	Alternative Designs for the Project.....	62
4.5.5	Supply Chain.....	63
4.5.6	No-Project Development Scenario and Implications.....	63
4.6	Schedule for the Implementation of Project Activities.....	63
4.6.1	Construction Activities and Sequencing.....	63
4.6.2	Operation and Maintenance Activities.....	70
4.6.3	Closure or Rehabilitation Phase.....	70
4.7	Embedded Controls.....	70
4.8	Best Practice applicable to the Project.....	71
4.9	Need for an ESIA.....	75
5.	DESCRIPTION OF EXISTING BASELINE.....	76
5.1	Methodology.....	76
5.1.1	Area of Influence.....	76
5.1.2	Data Collection.....	76
5.2	Physical Environment.....	81
5.2.1	Climate and Weather.....	81
5.2.2	Greenhouse Gas Emissions.....	83
5.2.3	Topography.....	83
5.2.4	Land Cover.....	84
5.2.5	Geology and Soils.....	86
5.2.6	Surface Hydrology.....	88
5.2.7	Hydrogeology.....	98
5.2.8	Air Quality.....	105
5.2.9	Noise.....	112
5.3	Biological Environment.....	115
5.3.1	Flora, Vegetation and Habitats.....	116
5.3.2	Fauna.....	123
5.3.3	Conservation Areas.....	125
5.3.4	Ebrié Lagoon.....	132
5.3.5	Ecosystem Services.....	133
5.4	Socio-economic and Cultural Environment.....	137
5.4.1	Social Area of Influence (Aoi).....	137
5.4.2	Administrative and Governance Framework.....	139
5.4.3	Demographic and Vulnerability profile.....	143
5.4.4	Land Ownership and Land Use.....	162
5.4.5	Economy and Employment.....	167
5.4.6	Education.....	176
5.4.7	Health.....	181
5.4.8	Infrastructure and public services.....	191
5.4.9	Cultural Heritage.....	201
6.	IDENTIFICATION AND ASSESSMENT OF ENVIRONMENTAL AND SOCIAL IMPACTS... 209	
6.1	Methods and Techniques Used.....	209
6.1.1	Prediction of Magnitude.....	211
6.1.2	Sensitivity of Resources and Receptors.....	211
6.1.3	Evaluation of Significance.....	211
6.1.4	Identification of Mitigation Measures.....	213
6.1.5	Unplanned Events.....	213
6.1.6	Assessment of Residual Impact.....	214
6.2	Physical Resources and Receptors.....	215
6.2.1	Hydrology & Hydrogeology.....	215
6.2.2	Air Quality.....	222
6.2.3	Noise.....	230

6.2.4	Resources and Waste.....	235
6.3	Biological Resources and Receptors	239
6.3.1	Potential Impact	239
6.3.2	Construction Phase Assessment	239
6.3.3	Operation Phase Assessment.....	240
6.4	Social Resources and Receptors.....	245
6.4.1	Economy and Employment	245
6.4.2	Land and Livelihoods	252
6.4.3	Community Health, Safety and Security	256
6.4.4	Labour and Working Conditions.....	266
6.4.5	Access to Infrastructure and Services.....	270
6.4.6	Community Cohesion.....	274
6.4.7	Summary of Socio-economic Impacts of the Project.....	278
6.4.8	Cultural Heritage	290
6.5	Cumulative Impact.....	294
6.5.1	Introduction	294
6.5.2	Objectives and Scope	294
6.5.3	Key Terminology	295
6.5.4	Assessment Methodology	296
6.5.5	Assumptions and Limitations	297
6.5.6	Cumulative Impact Assessment.....	297
7.	MITIGATION MEASURES	307
7.1	Physical Environment	307
7.1.1	Hydrology & Hydrogeology	307
7.1.2	Air Quality	313
7.1.3	Noise.....	316
7.1.4	Resources & Waste	318
7.2	Biological Environment	320
7.2.1	Construction Phase.....	320
7.2.2	Operation Phase	322
7.2.3	Summary of Biological Residual Impacts.....	322
7.3	Socio-economic and Cultural Environment.....	326
7.3.1	Economy and Employment	326
7.3.2	Land Use and Livelihood Activities	328
7.3.3	Community Health Safety and Security	329
7.3.4	Labour and Working Conditions.....	333
7.3.5	Access to Infrastructure and Services.....	337
7.3.6	Community Cohesion.....	338
7.3.7	Summary of Socio-economic Mitigation Measures and Assessment of Residual Impact.....	339
7.3.8	Cultural Heritage	350
8.	CLIMATE CHANGE	352
8.1	Activities to be carried out within the Project.....	352
8.2	List of Greenhouse Gases Generated by the Project and their Sources	352
8.3	Ranking of Most Significant GHG Emissions	353
8.4	Carbon footprint of the Project.....	353
8.5	Recommendations and Mitigation Measures	354
9.	RISK AND ACCIDENT MANAGEMENT.....	356
9.1	Unplanned Events	356
9.1.1	Overview	356
9.1.2	Potential Impacts Associated with Construction Traffic.....	356
9.1.3	Potential Impacts Associated with Accidental Oil and Chemical Spills	357

9.2	Health and Safety Policies and Standards.....	358
9.3	Emergency Preparedness and Response Planning	359
9.4	Worker medical assistance	360
10.	ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN	361
10.1	Introduction	361
10.2	Overview and Scope.....	361
10.3	Objectives	361
10.4	Principles	362
10.4.1	Principles of Sustainable Development.....	362
10.4.2	Principles of Ethics and Quality.....	362
10.4.3	Principles of Best Practice	362
10.5	General Requirements.....	362
10.6	Plan-Do-Check-Act	363
10.7	ARISE Corporate Sustainability System, Policies and Processes	363
10.8	Planning.....	364
10.8.1	Impact Assessment.....	364
10.8.2	Environmental and Social Commitments	364
10.8.3	Supporting Environmental and Social Management Plans	365
10.9	Implementation	368
10.9.1	Roles and Responsibilities	368
10.9.2	Training and Awareness	368
10.9.3	Communication	369
10.9.4	Documentation	370
10.9.5	Operational Control Procedures.....	370
10.9.6	Managing Changes to Project Activities.....	370
10.9.7	Stakeholder Engagement and Grievance Management	371
10.9.8	Checking and Corrective Action during Construction and Operation of the Project ..	371
10.10	Environmental and Social Management Plan (ESMP).....	373
11.	STAKEHOLDER CONSULTATIONS	388
11.1	Introduction	388
11.2	Objectives	388
11.3	Engagement in the ESIA Process.....	388
11.3.1	Pre-scoping Consultations	389
11.3.2	Stakeholder Engagement Undertaken during Scoping Phase	390
11.3.3	Stakeholder Engagement Undertaken during ESIA Phase.....	397
11.4	Review of Key Considerations for Future Engagement Activities	422
11.5	Planned Engagement during the ESIA Disclosure Process.....	422
11.6	Grievance Mechanisms	423
11.6.1	Overview	423
11.6.2	Grievance Management.....	424
11.6.3	Contacts to provide feedback and grievances	424
11.7	Monitoring and Reporting.....	425
11.7.1	Introduction	425
11.7.2	Monitoring Stakeholder Engagement Activities.....	425
11.7.3	Reporting Stakeholder Engagement Activities.....	425

APPENDIX A ESIA TOR FROM ANDE

APPENDIX B SCOPING STUDY SUMMARY TABLE

APPENDIX C PHOTOLOG FROM THE SITE VISITS

**APPENDIX D AGREEMENT FOR PROGRESSIVE LAND ACQUISITION OF AND
COMPENSATION FOR THE PK24**

APPENDIX E SPECIES INVENTORIED IN THE PROJECT AREA

APPENDIX F STAKEHOLDER ENGAGEMENT SCOPING MEETING MINUTES

APPENDIX G STAKEHOLDER ENGAGEMENT ESIA MEETING MINUTES

APPENDIX H BACKGROUND INFORMATION DOCUMENT (BID)

APPENDIX I LABORATORY WATER ANALYSIS RESULTS

APPENDIX J CLIMATE CHANGE RISK ASSESSMENT

APPENDIX K GREENHOUSE GAS INVENTORY

List of Tables

Table 1-1	ESIA Report Structure	2
Table 2-1	Institutional Framework Relevant to the Project	9
Table 2-2	Ivorian Legislation Related to the Project	20
Table 2-3	International Treaties Applicable to the Project	36
Table 2-4	International human rights treaties ratified by Côte d'Ivoire.....	37
Table 2-5	International Guidelines and Standards.....	39
Table 2-6	Ivorian Ambient Air Quality Guidelines	41
Table 2-7	IFC Ambient Air Quality Guidelines	41
Table 2-8	Noise Criteria - Ministry of the Environment	42
Table 2-9	Regulatory and IFC Limit Values for Ambient Noise Levels at Receptor Level	42
Table 2-10	Magnitude of Noise Impacts from Construction Activities.....	43
Table 4-1	QHSE Team Roles and Responsibilities	48
Table 4-2	Classification of Project Components	59
Table 4-3	Estimated Excavation and Backfill Material	68
Table 4-4	Project Temporary Construction Facilities	68
Table 4-5	International Best Practices	72
Table 5-1	Methodological Approaches for the Baseline Studies	79
Table 5-2	Relevant Climate Hazards in Abidjan District	82
Table 5-3	Land Use Area (ha) in the Aol	86
Table 5-4	Summary of Baseline Surface Water Results.....	96
Table 5-5	Summary of Baseline Groundwater Results	104
Table 5-6	Monitoring Locations for NO ₂	108
Table 5-7	Location of the PM Monitor	109
Table 5-8	Baseline Concentration of NO ₂ (µg/m ³)	111
Table 5-9	Baseline Concentration of PM ₁₀ and PM _{2.5} (µg/m ³)	111
Table 5-10	Measured Noise Levels	114
Table 5-11	Plant Species of Particular Importance Potentially Found in the Project Area.....	121
Table 5-12	Animal species of Particular Importance Potentially Present in the Area.....	124
Table 5-13	Protected Areas and KBAs near the Project area	125
Table 5-14	Fauna found at the Ebrié Lagoon	133
Table 5-15	Common Uses of the Plants found in the Project area.....	135
Table 5-16	Villages in the Aol and Proximity to the Project	138
Table 5-17	National Data on Ivorian Population, 2014 - 2021	144
Table 5-18	Ivorian Demographic Indicators, 2020	144
Table 5-19	Age Structure Population Côte d'Ivoire, 2009-2019	145
Table 5-20	Overview of Vulnerable Groups	146
Table 5-21	Key Gender-related Indicators of Côte d'Ivoire, 2021.....	149
Table 5-22	Key Poverty-related Indicators, Côte d'Ivoire, 2016	150
Table 5-23	Poverty Levels in Côte d'Ivoire, 2015	150
Table 5-24	Religion Distribution of the Resident Population, 2021	151
Table 5-25	Ethnic Groups Distribution of Ivorian Population, 2021	152
Table 5-26	Proportion of Non-Ivorian Population Living on Ivorian Territory, 1975 - 2021	152
Table 5-27	Literacy Rate by Gender and Age Group, 2019	154
Table 5-28	Population in Abidjan Autonomous District, 2021	155
Table 5-29	Population in Anyama Sub-Prefecture, 2014.....	156
Table 5-30	Population in Songon Sub-Prefecture, 2014	157
Table 5-31	Population Distribution in the Villages in the Aol, 2022	158
Table 5-32	Age Distribution in the Villages in the Aol, 2022.....	158
Table 5-33	Percentage of Female-Headed Households in the Aol, 2022	159
Table 5-34	Percentage of Population Living under the Poverty Line in the Aol, 2022	160
Table 5-35	Religion in the Villages of the Aol, 2022	160
Table 5-36	Religious and Sacred Sites in the Aol, 2022	161

Table 5-37	Type of Land Use in Côte d'Ivoire, 2018	163
Table 5-38	Percentage of Land Use in the Aol	164
Table 5-39	Percentage of Land Use in the Project Footprint.....	166
Table 5-40	Economy Performance Data in Côte d'Ivoire, 2018.....	168
Table 5-41	Child Labour Rate, 2020, Côte d'Ivoire.....	168
Table 5-42	Economic Activities in the Aol, 2022.....	172
Table 5-43	Number of Educational Facilities in Anyama	177
Table 5-44	Number of Educational Facilities in Songon	177
Table 5-45	Education Facilities in the Aol, 2022.....	178
Table 5-46	Literacy Levels in the Aol, 2022.....	179
Table 5-47	Education Enrolment in the Aol, 2022	180
Table 5-48	Causes of Death in Côte d'Ivoire, 2019	181
Table 5-49	Estimated Number of Malaria Cases and Deaths, Côte d'Ivoire, 2017	183
Table 5-50	Structure of Health Facilities, Côte d'Ivoire, 2017.....	184
Table 5-51	Health Infrastructures in Anyama.....	186
Table 5-52	Number of Medical Staff in Anyama	186
Table 5-53	Health Infrastructures in Songon	186
Table 5-54	Number of Medical Staff in Yopougon Ouest - Songon Health District	187
Table 5-55	Health Facilities Accessed by the Communities in the Aol, 2022.....	187
Table 5-56	Diseases and Health Problems in the Aol, 2022	189
Table 5-57	Main Causes of Accidents and Deaths in the Aol, 2022	190
Table 5-58	Côte d'Ivoire Statistics on Energy and Electricity, 2010 – 2016	193
Table 5-59	Characteristics of the Roads of Anyama Sub-prefecture.....	195
Table 5-60	Infrastructures and Services Conditions in the Aol, 2022.....	198
Table 5-61	Cultural Heritage Baseline Gazetteer	204
Table 5-62	Criteria for Cultural Heritage Impact Significance.....	208
Table 6-1	Impact assessment scale recommended by ANDE.....	209
Table 6-2	Definitions for Likelihood Designation for Unplanned Events	211
Table 6-3	Context of Impact Significance	212
Table 6-4	Surface Waters and Groundwater Impacts.....	215
Table 6-5	Hydrology and Hydrogeology Impact Assessment.....	221
Table 6-6	Air Quality Impact Assessment.....	229
Table 6-7	Summary of Noise Criteria and Period Definitions	230
Table 6-8	Magnitude of Noise Impacts from Construction Activities.....	231
Table 6-9	Equipment Sound Power Levels - Construction	232
Table 6-10	Predicted levels vs Distance	233
Table 6-11	Noise Impact Assessment	234
Table 6-12	Resources and Waste Impact Assessment.....	238
Table 6-13	Biological Impact Assessment	242
Table 6-14	Potential Impacts on Economy and Employment	245
Table 6-15	Potential Impacts on Land and Livelihoods	253
Table 6-16	Potential Impacts on Community Health and Safety	256
Table 6-17	Potential Impacts on Labour and Working Conditions.....	266
Table 6-18	Potential Impacts on Access to Infrastructure and Services	271
Table 6-19	Potential Impacts on Community Cohesion.....	274
Table 6-20	Socio-economic Impact Assessment.....	279
Table 6-21	Spatial scope of the Impact Assessment.....	290
Table 6-22	Impact Magnitude definitions for cultural heritage	291
Table 6-23	Cultural Heritage Impact Assessment	293
Table 6-24	Key VECs Identification	299
Table 6-25	CIA trigger projects - Screening Step 3	301
Table 6-26	Cumulative Assessment: Transformation and Manufacturing Industry Projects	303

Table 6-27	Residual Cumulative Impact Significance: Transformation and Manufacturing Industry Projects	304
Table 6-28	Cumulative Assessment: Services Industry Projects.....	305
Table 6-29	Residual Cumulative Impact Significance: Services Industry Projects.....	306
Table 7-1	Hydrology & Hydrogeology Mitigation Measures and Residual Impact Assessment ..	312
Table 7-2	Air Quality Mitigation Measures	313
Table 7-3	Air Quality Mitigation Measures and Residual Impact Assessment	315
Table 7-4	Noise Mitigation Measures and Residual Impact Assessment.....	317
Table 7-5	Resources & Waste Mitigation Measures and Residual Impact Assessment	319
Table 7-6	Biodiversity Mitigation Measures and Residual Impact Assessment.....	323
Table 7-7	Socio-economic Mitigation Measures and Residual Impact Assessment	340
Table 7-8	Cultural Heritage Mitigation Measures and Residual Impact Assessment	351
Table 8-1	GHGs Generated by the Project.....	353
Table 8-2	Ranking of Most Significant GHG Emissions of Activities	353
Table 8-3	Summary of all Annual Emissions for Scope 1 and 2.....	353
Table 8-4	Climate Change Mitigation Measures and Residual Impact Assessment	355
Table 10-1	Management Plans	366
Table 10-2	Environmental and Social Management Plan.....	374
Table 11-1	Engagements Undertaken prior to Scoping phase	389
Table 11-2	List of Scoping Engagement Meetings with National, District, and Subprefecture Government Stakeholders	391
Table 11-3	Summary of Concerns and Issues Raised by National and Local Government Stakeholders in the Scoping Phase	393
Table 11-4	List of Scoping Meetings with Local Community Representatives of Villages in the Project Area	395
Table 11-5	Summary of Concerns and Issues Raised by Local Community Representatives in the Scoping Phase	396
Table 11-6	List of ESIA Engagement Meetings with National, District, and Subprefecture Government Stakeholders	400
Table 11-7	Summary of Concerns and Issues Raised by National and Local Government Stakeholders in the ESIA Phase	407
Table 11-8	List of ESIA Meetings with Local Community Representatives of Villages in the Project Area	413
Table 11-9	Summary of Concerns and Issues Raised by Local Community Representatives in the ESIA Phase	419

List of Figures

Figure 1-1	Core Project Team	4
Figure 1-2	ESIA Process Diagram in Côte d'Ivoire	6
Figure 3-1	ESIA Approach.....	44
Figure 4-1	Organisational Chart HSE Team ARISE	48
Figure 4-2	Industries in the PK24 (November 2022).....	51
Figure 4-3	Project Location Overview	53
Figure 4-4	PK24 and Project Area Overview Map	54
Figure 4-5	Project Access	55
Figure 4-6	Project Master Plan.....	57
Figure 4-7	Construction Schedule for Phase 1	65
Figure 4-8	Construction Schedule for Phase 2	66
Figure 5-1	Climate Data from Abidjan (1991-2021)	81
Figure 5-2	Wind Direction and Speed Analysis.....	82
Figure 5-3	Contour & Slope Characteristics Phase 1 Zone 1	83
Figure 5-4	Contour & Slope Characteristics Phase 1 Zone 2 and Phase 2.....	84
Figure 5-5	Land Use in the Aol	85
Figure 5-6	Extract from the Geological Map from Côte d'Ivoire	87
Figure 5-7	Geological formations of the coastal sedimentary basin in Abidjan	88
Figure 5-8	Simplified Model of Circulation - Ébrié Lagoon.....	89
Figure 5-9	Geology and hydrology of Abidjan area.....	89
Figure 5-10	Watercourses in the Project Area	91
Figure 5-11	Main Runoff Directions at the Project Area (North portion)	92
Figure 5-12	Main Runoff Directions at the Project Area (Southern portion)	92
Figure 5-13	Surface Water Sampling Points at the Project Area	94
Figure 5-14	Surface Water Sampling Locations Overview	95
Figure 5-15	North-south cross-section of the coastal basin in Abidjan.....	99
Figure 5-16	Location of the Closest Larger Wellfields in the Project Vicinity.....	100
Figure 5-17	Simulated groundwater flowpath delineating the capture zones of wellfields of Abidjan aquifer	101
Figure 5-18	Calculated drawdown in the aquifer in 2030.....	101
Figure 5-19	Location of the Wells Sampling Points	103
Figure 5-20	Diffusion Tubes	106
Figure 5-21	Monitoring Locations for NO ₂	107
Figure 5-22	Images for Locations of NO ₂ Tubes.....	109
Figure 5-23	Monitoring location for PM	110
Figure 5-24	Baseline Noise Measurements Locations.....	113
Figure 5-25	Project Area	115
Figure 5-26	Examples of the Habitats Found in the Project Area.....	117
Figure 5-27	Empty Glyphosate Containers Found during the November 2022 Site Visit.....	119
Figure 5-28	Species Diversity per Plant Family in the Project Area.....	120
Figure 5-29	Locations of Each of the Specimens of Yellow Iroko (<i>Milicia regia</i> , VU) found on Site	122
Figure 5-30	<i>Leptoderris miegei</i>	123
Figure 5-31	Location of Protected Areas and KBAs near the Project Area	126
Figure 5-32	Landscape Patterns within the Banco National Park (1992, 2002)	129
Figure 5-33	Threats to Banco National Park caused by Anthropic Land Uses.....	130
Figure 5-34	Sources of Environmental Disturbance Around Banco National Park.....	131
Figure 5-35	Examples of Ecosystem Services in the Project Area.....	134
Figure 5-36	Location of the Project and Direct Aol	138
Figure 5-37	Côte d'Ivoire Administrative Districts	139
Figure 5-38	ADD Sub-Prefectures and Communes and Location of the Project.....	141
Figure 5-39	Projected Population Pyramid Côte d'Ivoire, 2019	145

Figure 5-40	Origin of Migrants in Côte d'Ivoire, 2015	153
Figure 5-41	Stateless, Returnees and Refugees, Côte d'Ivoire 2021	154
Figure 5-42	Land Use in the Aol	164
Figure 5-43	Land Use in the Project Footprint	165
Figure 5-44	Wood Shelter for Workers of the Lands and Factories surrounding the Project Footprint.....	166
Figure 5-45	Agricultural Activities and Land in the Project Footprint	167
Figure 5-46	Cassava Plants in the Village of Adonkoi I, 2022	174
Figure 5-47	Market and Food Store in Adonkoi I	175
Figure 5-48	Gross Enrolment Ratio by Gender and Level of Education, 2014-2020.....	176
Figure 5-49	Number of Out-of-School Children and Adolescents by Gender, 2014- 2020	176
Figure 5-50	School in Songon	178
Figure 5-51	Risk Factors Prospections and Trends, Côte d'Ivoire, 2000-2025	182
Figure 5-52	Fatalities by User, Comparison Chart, Côte d'Ivoire, 2020	185
Figure 5-53	Health Facilities in Songon	187
Figure 5-54	Health Facilities in the Aol and the Project Vicinity.....	189
Figure 5-55	National Policies and Plans: Existence and Implementation, Côte d'Ivoire 2017	192
Figure 5-56	Financing for Increasing Access to Water Supply and Sanitation, Côte d'Ivoire, 2017	192
Figure 5-57	Total Energy Supply (TES) by Source, Côte d'Ivoire 1990-2019	194
Figure 5-58	Overview of a Road and some means of Transport in Anyama	195
Figure 5-59	SODECI Treatment plant in Adonkoi I, 2022	197
Figure 5-60	Types of Roads in the Aol.....	200
Figure 5-61	Bifacial lithic material from Palaeolithic studies in 1983	202
Figure 5-62	An example of a French colony set up in Abidjan in 1905.....	203
Figure 5-63	Aerial photograph showing the mid 1900 segregational districts of Abidjan and the canal leading into the Lagoon	203
Figure 5-64	Cultural Heritage resources within the Project Aol	205
Figure 5-65	Potential cultural heritage IEZ_CH_01	206
Figure 5-66	Potential cultural heritage IEZ_CH_02	207
Figure 5-67	Potential cultural heritage IEZ_CH_03	207
Figure 6-1	ERM Impact Assessment Methodology	210
Figure 6-2	Impact Significance Matrix	212
Figure 6-3	Hierarchy of Options for Mitigation.....	213
Figure 6-4	Infographic for Air Quality Assessment of Dust	225
Figure 6-5	Traffic infographic for Air Quality Assessment.....	227
Figure 6-6	PK24 Master Plan Overview	295
Figure 11-1	ARISE Grievance Process.....	424

Acronyms and Abbreviations

Name	Description
AAD	Abidjan Autonomous District
AGEDI	Agence de Gestion et de Développement des Infrastructures Industrielles (Agency for the Management and Development of Industrial Infrastructures)
ANAGED	Agence Nationale de Gestion des Déchets (National Waste Management Agency)
ANDE	Agence Nationale de l'Environnement (National Environmental Agency)
AoI	Area of Influence
AQMP	Air Quality Management Procedure
ARISE	ARISE Ivoire SA
ASL	Above Sea Level
AZE	Alliance Zero Extinction
BID	Background Information Document
BNETD	Bureau National d'Études Techniques et de Développement (National Office for Technical Studies and Development)
BPMP	Borrow Pit Management Plan
CAEF	Commission des Affaires Économiques et Financières (Economic and Financial Affairs Commission)
CCI CI	Chamber of Commerce and Industry of Côte d'Ivoire
CCRA	Climate Change Risk Assessment
CEDAW	Committee on the Elimination of Discrimination against Women
CEPICI	Centre pour la Promotion des Investissements en Côte d'Ivoire (Centre for the Promotion of Investments in Côte d'Ivoire)
CFA	Communauté Financière Africaine (African Financial Community)
CHEC	China Harbour Engineering Company
CHMP	Cultural Heritage Management Plan (CHMP)
CHSMP	Community Health and Safety Management Plan
CHSMP	Community Health and Safety Management Plan
CIA	Cumulative Impact Assessment
CIAPOL	Centre Ivoirien Antipollution (Ivorian Anti-Pollution Centre)
CIE	Compagnie Ivoirienne d'Électricité (Ivorian Electricity Company)
CLO	Community Liaison Officer
CMP	Construction Management Plan
CMU	Ministère de la Santé, de l'Hygiène Publique et de la Couverture Maladie Universelle (Ministry of Health, Public Hygiene and Universal Health Coverage)
CNPP	Comité National de Pilotage des Partenariats Publics Privés (National Steering Committee for Public Private Partnerships)
CNPS	Caisse Nationale de Prévoyance Sociale (National Social Insurance Fund)
CRO	Centre de Recherche Océanologique (Oceanological Research Centre)
CSU	Centre Santé Urbain (Urban Health Centre)
CSW	Commercial Sex Workers
CT	Continental Terminal Aquifer
DAS	Direction de l'Assainissement et de la Salubrité (Directorate of Sanitation and Hygiene)

DEDD	Département Environnementale et du Développement Durable (Environmental and Sustainable Development Department)
DGDD	Direction Générale du Développement Durable (Directorate General for Sustainable Development)
DGE	Direction Générale de l'Environnement (Directorate General for the Environment)
DGFF	Direction Générale des Forêts et de la Faune (General Directorate of Forestry and Wildlife)
DGH	Direction Générale des Hydrocarbures (Directorate General of Hydrocarbons)
DGRE	Direction Générale des Ressources en Eau (Directorate General for Water Resources)
DGTTC	Direction Générale des Transports Terrestres et de la Circulation (Directorate General of Land Transport and Traffic)
DHPSE	Direction de l'Hygiène Publique et de la Santé Environnement (Directorate of Public Hygiene and Health-Environment)
DISI	Direction des Infrastructures et de la Sécurité Industrielles (Industrial Infrastructure and Security Directorate)
DIT	Direction de l'Inspection du Travail (Directorate of Labour Inspection)
DMP	Dust Management Plan
E&S	Environmental and Social
ECoW	<i>Ecological Clerk of Works</i>
ECOWAS	Economic Community of West African States
ENVAL	ENVAL SARL
EP	Equator Principles
EPC	Engineering, procurement, and construction
EPRP	Emergency Preparedness and Response Plan
ERM	Environmental Resources Management GmbH
ESG	Environmental Social Governance
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
FGD	Focus Group Discussions
FODI	Fond de Développement des Infrastructures Industrielles (Industrial Infrastructure Development Fund)
GBV	Gender-Based Violence
GBVH	Gender-Based Violence and Harassment
GCCI	Générale de Construction en Côte d'Ivoire
GDI	Gender Development Index
GDP	Gross Domestic Product
GDWQ	Guidelines for Drinking-water Quality
GHG	Greenhouse Gases
GLAAS	Global Analysis and Assessment of Sanitation and Drinking Water
GM	Grievance Mechanism
GMP	Community Grievance Mechanism Procedure
GSPM	Groupement de Sapeurs-Pompiers Militaires (Military Fire Brigade Group)
HMMP	Hazardous Materials Management Plan

HSE	Health Safety and Environment
IAP	Invasive Alien Plant
IDP	Internally Displaced Persons
IEZ	Industrial Economic Zone
IFC	International Finance Corporation
ILO	International Labour Organisation
IMF	International Monetary Fund
INS	Institut National de la Statistique (National Institute of Statistics)
IPF	Impôt Propriété Foncière (Property Tax)
ITCZ	Inter-Tropical Convergence Zone
IWRM	Integrated Water Resources Management
KBA	Key Biodiversity Areas
KII	Key Informant Interviews
LCPP	Local Content and Procurement Plan
LRP	Livelihood Restoration Plan
LRP	Livelihood Restoration Plan
MCI	Ministry of Commerce and Industry
MCLU	Ministère de la Construction, du Logement et de l'Urbanisme (Ministry of Construction, Housing and Urban Development)
MEF	Ministère de l'Économie et des Finances (Ministry of Economy and Finances)
MEPS	Ministère de l'Emploi et de la Protection Sociale (Ministry of Employment and Social Protection)
MINADER	Ministère de l'Agriculture et du Développement Rural (Ministry of Agriculture and Rural Development)
MINEDD	Ministère de l'Environnement et du Développement Durable (Ministry of Environment and Sustainable Development)
MMPE	Ministère des Mines du Pétrole et de l'Énergie (Ministry of Mines, Petrol and Energy)
MPD	Ministère du Plan et du Développement (Ministry of Planning and Development)
MSHP	Ministère de la Santé et de l'Hygiène Publique (Ministry of Health and Public Hygiene)
NCDs	Non-communicable diseases
NDP	National Development Plan
NGL	Natural Gas Liquids
NSR	Noise Sensitive Receptors
NTFP	Non-Timber Forest Products
NTS	Non-Technical Summary
OECD	Organisation for Economic Co-operation and Development
OFT	Observatoire de la Fluidité du Transport (Observatory of Transport Fluidity)
OHSC	Occupational Health and Safety Committee
OHSMP	Occupational Health and Safety Management Plan
OHSMP	Occupational Health and Safety Management Plan
OIPC	Office Ivoirien du Patrimoine Culturel (Ivoiran Office of Cultural Heritage)
ONAD	Office National de l'Assainissement et du Drainage (National Office of Sanitation and Drainage)

ONEP	Office National de l'Eau Potable (National Drinking Water Board)
ONPC	Office National de la Protection Civile (National Office for Civil Protection)
OSER	Office de la Sécurité Routière (Road Safety Office)
PAP	Project Affected People
PK24	940 ha Akoupe-Zeudji Industrial Zone PK24 within Abidjan Autonomous District in Côte d'Ivoire
PNAE	Plan National d'Action Environnemental (National Environmental Action Plan)
PND	Plan Nationale de Développement (National Development Plan)
PNG	Politique Nationale en Matière du Genre (National Gender Policy)
PPP	Public-Private Partnership
PRSP	Plan de Stratégie de Réduction de la Pauvreté (Poverty Reduction Strategy Paper)
PS	Performance Standards
QHSE	Quality, Health, Safety and Environment
RAP	Resettlement Action Plan
RASS	Rapport Annuel sur la Situation Sanitaire (Annual Report on the Sanitary Situation)
REP	Recruitment and Employment Plan
REP	Recruitment and Employment Plan
RGPH	Recensement Général de la Population et de l'Habitat (General Census of Population and Housing)
SCCI	Société Ciment Côte d'Ivoire (Ivorian Cement Company),
SCLU	Secteur de la Construction, du Logement et de l'Urbanisme (Construction, Housing and Urbanism Sector)
SDG	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SEP	Stakeholder Engagement Plan
SEP	Stakeholder Engagement Plan
SEZ	Special Economic Zone
SMEs	Small and Medium Enterprises
SMP	Security Management Plan
SMP	Security Management Plan
SODECI	Société de Distribution d'Eau de la Côte d'Ivoire (Water Distribution Company of the Côte d'Ivoire)
SOGEDI	Société de Gestion et de Développement des Infrastructures industrielles (Industrial Infrastructure Management and Development Company)
SPNCC	Stratégie du Programme National du Changement Climatique National (Climate Change Programme Strategy)
SPRP	Spill Prevention and Response Plan
STDs	Sexually Transmitted Diseases
STI	Sexually Transmitted Infections
TMP	Traffic Management Plan
ToR	Terms of References
TRCI	Tropical Rubber Côte d'Ivoire
UN	United Nations
UNDP	United Nations Development Programme

UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGC	United Nations Global Compact's
VECs	Valued Social and Environmental Components
WBG	World Bank Group
WCA	Waste Collection Areas
WHO	World Health Organization
WMP	Waste Management Plan
WRMP	Water Resources Management Plan
WWF	World Wide Fund for Nature
ZEI	Zones Economiques Industrielles (Industrial Economic Zones)
ZLD	Zero Liquid Discharge

1. INTRODUCTION

1.1 ESIA Objectives

This document is the Report for the Environmental and Social Impact Assessment (ESIA) of the proposed design, construction, and management of a 429 ha Industrial Economic Zone (IEZ) in the Abidjan Autonomous District in Côte d'Ivoire (hereafter referred to as the "Project" or the "Project IEZ"). The Project is a part of the overall 940 ha Akoupé-Zeudji Industrial Zone PK24 (hereafter referred to as the "PK24"). The ESIA Report and supplementary documents have been prepared by Environmental Resources Management GmbH (ERM), together with its local subcontractor ENVAL sarl (ENVAL), on behalf of ARISE Ivoire SA (ARISE).

This ESIA package is aligned with Terms of Reference issued by the *Agence Nationale de l'Environnement* (ANDE) in October 2022 (refer to Appendix A). The ESIA identifies the sensitive environmental and social (E&S) elements existing in the baseline area of the Project, estimates the type and significance of potential E&S impacts of the Project on the baseline, and provides recommended measures and actions to mitigate the potential impacts.

Decree No. 96-894 of 8 November 1996 (of the Ivorian Environmental Act) that sets the rules and procedures applicable to studies relating to the environmental impact of development projects. Accordingly, the ESIA aims to:

- Describe in a comprehensive manner the Project as a whole, and explain the context of its implementation (environmental and technical reasons and justification for the choice of the Project);
- Present and describe all the components of the natural and human environments (initial state or baseline) of the Project area likely to be affected;
- Demonstrate how the Project fits into the environment (physical, biological and social aspects), by presenting a detailed analysis of the potential impacts (positive and negative) and by defining the measures intended to correct the impacts that are harmful to the quality of the environment and to maximise those that are likely to improve it;
- Develop and implement a methodology for assessing the significance of impacts qualitatively and/or quantitatively;
- Take into account the views, reactions and main concerns of populations, groups and communities; and
- Provide a programme for monitoring and follow-up (Environmental and Social Management Plan) to ensure compliance with legal and environmental requirements and then verify the relevance and effectiveness of the proposed environmental protection measures.

The primary objective of this ESIA is to support ARISE in obtaining the obligatory national permits/approvals for the development of the Project in a timely manner. In addition, in accordance with ARISE corporate policies, the ESIA is conducted with consideration of good international practice, particularly the IFC Performance Standards, the Equator Principles (EP) and the World Bank Group (WBG) Environmental and Social Guidelines and other as outlined in Chapter 2.

1.2 Structure of the ESIA Report

The structure of this ESIA Report is aligned with ANDE's instructions in the Terms of References (ToR) and includes chapters and subsections as described in Table 1-1.

As per the ANDE ToR and international standards, a Non-Technical Summary (NTS) has been prepared for public disclosure. In addition, and in alignment with international standards, a Stakeholder Engagement Plan (SEP), as a stand-alone document, has also been developed to guide the stakeholder consultation activities for the Project development.

Table 1-1 ESIA Report Structure

ANDE ToR	Section	Title	Content
<ul style="list-style-type: none"> ■ Introduction <ul style="list-style-type: none"> - Objectives of the study; - ESIA managers; - Procedure and scope of the ESIA; - National environmental policy; - Institutional and regulatory framework for ESIA's; - Methodology and work program. 	Section 1	Introduction	Introduces the ESIA and responsibility for the execution.
	Section 2	Legal Framework - Synopsis	Outlines the regulatory and administrative framework for impact assessment applicable to the Project.
	Section 3	Methodology and work programme	Presents the methodology applied in conducting the Project's impact assessment.
<ul style="list-style-type: none"> ■ Project description <ul style="list-style-type: none"> - Project promoter; - Project site; - Justification of the Project; - Description of the Project and its alternatives (including the situation without the Project); - Chronogram for the implementation of activities; - Need for an ESIA. 	Section 4	Project description	Briefly outlines the Project and various components of it including specifications on land requirements, temporary construction facilities, operations and maintenance. Provides the Project background and justification.
<ul style="list-style-type: none"> ■ Initial state of the environment <ul style="list-style-type: none"> - Data collection methods; - Basic data on the physical, biological and socio-economic context; - Relationship between the Project and other development activities in the region; - Trends in the state of the environment; - Data gaps. 	Section 5	Description of existing baseline	Presents the existing baseline conditions of the Project's physical environment, biological environment and social component.
<ul style="list-style-type: none"> ■ Identification, analysis/prediction and assessment of the significance of the impacts induced by the Project 	Section 6	Identification and assessment of environmental and social impacts	Describes the Project's identified environmental and social impacts.

ANDE ToR	Section	Title	Content
<ul style="list-style-type: none"> - Description and analysis of the potential impacts of project activities on the biophysical and socio-economic components (construction and operation phases); - Assessment of the significance of the impacts; - Comparative evaluation of the variants; - Methods and techniques used; - Uncertainties and knowledge gaps. 			
<ul style="list-style-type: none"> ■ Environmental protection measures <ul style="list-style-type: none"> - Description of the protection measures envisaged (prevention, mitigation, compensation, restoration). 	Section 7	Mitigation measures	Outlines respective mitigation actions to be undertaken by the Project developer.
<ul style="list-style-type: none"> ■ Climate change 	Section 8	Climate change	Describes climate change aspects of the Project.
<ul style="list-style-type: none"> ■ Risk and accident management 	Section 9	Risk and accident management	Presents analysis of the hazards associated with the Project and outlines the risk and accident management strategies implemented by the Project developer.
<ul style="list-style-type: none"> ■ Environmental protection measures <ul style="list-style-type: none"> - Description of the protection measures envisaged (prevention, mitigation, compensation, restoration). 	Section 10	Environmental and social management plan	Presents Project's monitoring and evaluation requirements.
<ul style="list-style-type: none"> ■ Stakeholder consultations 	Section 11	Stakeholder consultations	Summarises the stakeholder engagement activities undertaken to date and outlines Project participation and consultation arrangements for resettlement planning and implementation.

1.3 Responsibility for the ESIA Execution

Project Owners: ARISE and the Ministry of Commerce, Industry and SME Promotion

The project will be developed as a Public-Private Partnership, thus the Ministry of Commerce, Industry and SME Promotion is the Project Owner together with ARISE. The Ministry is responsible for land acquisition processes via the Industrial Infrastructure Management and Development Agency of Côte d'Ivoire (AGEDI)¹.

Project Proponent / EPC Contractor: ARISE

ARISE has been mandated by the Ivorian Ministry of Commerce, Industry and SME Promotion to carry out the design, construction, and management of this 429 ha Project.

National Impact Assessment Authority: ANDE

ANDE is responsible for following activities in the ESIA execution process:

- The elaboration of the Terms of Reference of the ESIA;
- The evaluation of the ESIA Report;
- The monitoring of the Environmental and Social Management Plan (ESMP); and
- The monitoring of the environmental compliance of the Project activities.

Environmental consultant: ERM & ENVAL

The international consulting firm Environmental Resources Management GmbH (ERM) together with the local Ivorian partner, ENVAL sarl. (ENVAL) are responsible for preparation of the ESIA Report and related documents. The team have comprehensive experience and cover all of the necessary qualifications for this assignment. An overview of the key members of the Project team is provided in Figure 1-1 below. Note that for each of the technical areas, only the topic leads' names are listed here. However, they were supported by other team members and backstopping staff.

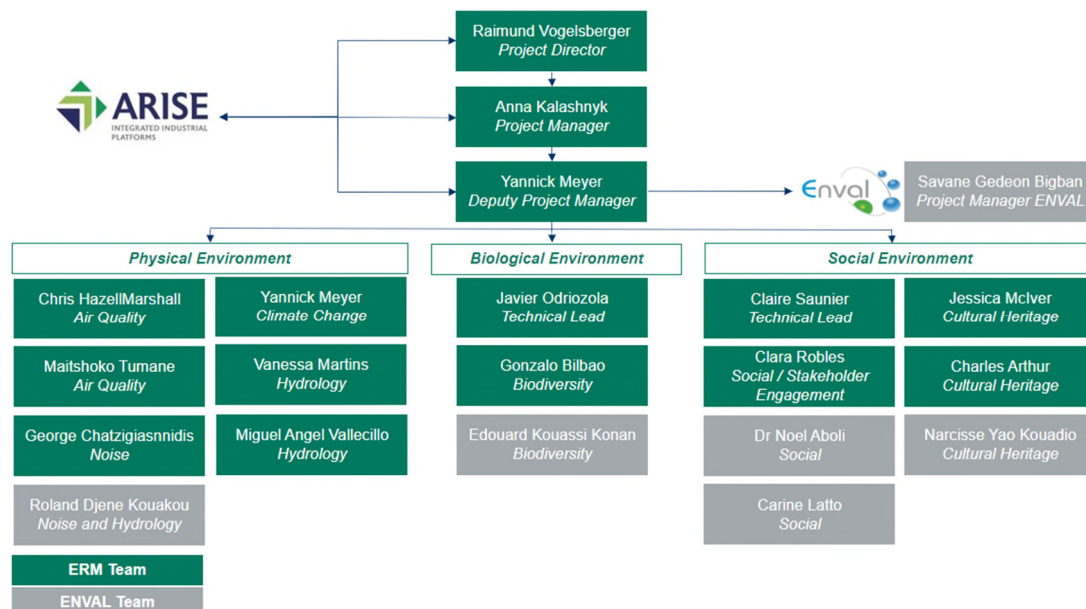


Figure 1-1 Core Project Team

¹ On 30.03.2022 was created the Industrial Infrastructure Management and Development Company (SOGEDI), replacing the Industrial Infrastructure Development Fund (FODI) and the dissolved Industrial Infrastructure Management and Development Agency (AGEDI). In this ESIA Report this agency is still referred as AGEDI.

ERM/ENVAL are responsible for carrying out the ESIA process evaluating the potential impacts that the Project is likely to have on key aspects of the physical, biological, and socio-economic receiving environment. The ESIA team has been mandated to prepare the ESIA Report, the Non-Technical Summary (NTS) and the Stakeholder Engagement Plan (SEP). Other topic specific management or action plans e.g., a Resettlement Action Plan (RAP) or Livelihood Restoration Plan (LRP) may be needed to confirm to international standards (i.e., IFC), but this is not part of the present ESIA package

1.4 ESIA Procedure and Scope

The impact assessment process anticipates and evaluates the potential impacts that the Project is likely to have on key aspects of the physical, biological, and socio-economic receiving environment. This process helps to identify appropriate measures to mitigate and manage the impacts that the Project may generate and is a requirement of the Project Planning System in Côte d'Ivoire.

This ESIA undertaken for the Project is aligned with the national requirements of Côte d'Ivoire for construction and operation authorisation and complies with the requirements set out in the Environmental Code - Law n°96-766 of 3 October 1996 and the law on impact assessment - Decree 96 -894 of 8 November 1996 and shared with the Local Impact Assessment Authority - ANDE.

As the Project developer may optionally be seeking international funding for the Project, the ESIA must be conducted in accordance with international good practice, including the International Finance Corporation (IFC) Performance Standards (PS), the Equator Principles (EP) and the World Bank Group (WBG) Environmental and Social Guidelines and other applicable standards.

The national procedure for development and approval of an ESIA in the Côte d'Ivoire is summarised in the following flowchart (see Figure 1-2).

Chapters 2.1 and 2.2 below give an overview of the national environmental policy and legal framework relevant to this Project. Chapter 2.3 provides further information on the international E&S standards upon which this ESIA study is based, both national and.

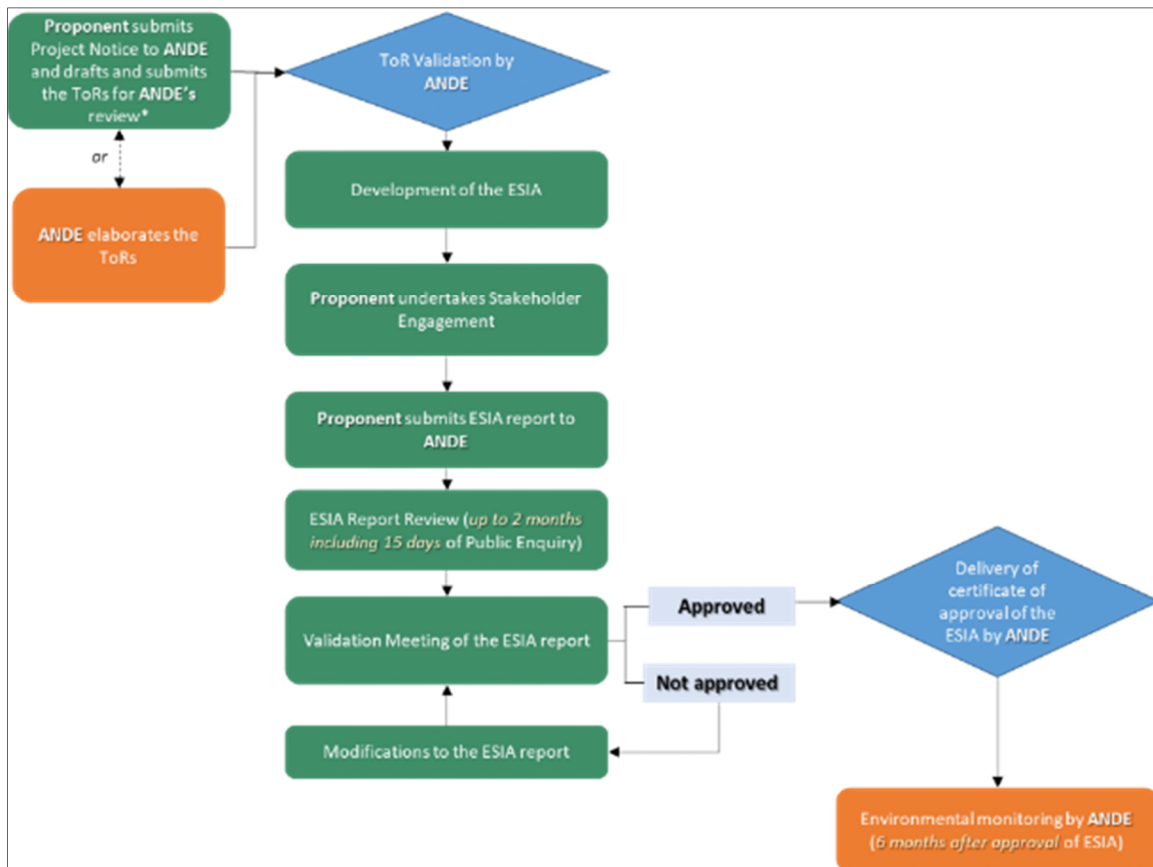


Figure 1-2 ESIA Process Diagram in Côte d'Ivoire

The process can be summarised as follows:

- Firstly, the Proponent must submit to ANDE a Project Notice for the elaboration of a Terms of Reference (ToR) of the ESIA. The request will include details of the Project Proponent, an overview description of the Project, and its key impacts. [done]
- ANDE or the Proponent can elaborate the draft the ToR of the Project. [done]
- Within two (2) weeks after the opening of the dossier, ANDE will provide the validation of the ToR through a ToR validation workshop (1 day). [done]
- The Proponent will develop the ESIA and will be in charge of performing stakeholder engagement via local consultations with the community and local authorities. Minutes of these consultations will be included in the ESIA Report. [done]
- Once the consultations have concluded and addressed. The Proponent will submit the ESIA Report to ANDE. [currently under way]
- The reviewing and evaluation of the ESIA Report by the ANDE can take up to 2 months, including 15 days of Public Enquiry, which will involve both local communities and key authorities. Usually one meeting for each Province/Prefecture involved will be undertaken.
- Before the final approval of the ESIA a Validation Meeting of the ESIA Report between the Proponent and key Authorities will have to be carried out. In this workshop, ANDE will confirm (or not) the release of the permit.
- If the Project is considered acceptable by the ANDE from an environmental management perspective, the Environmental Authority will deliver a certificate of approval of the ESIA.
- Six months after approval of the ESIA, the ANDE will start to undertake Environmental monitoring of the Project.

2. LEGAL FRAMEWORK

2.1 National Environmental Policies

2.1.1 National Strategy on Environment

Environmental protection became one of the priorities of Côte d'Ivoire after the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, and this is also viewed as a condition for sustainable development. Within this context, the National Environmental Action Plan (PNAE) was drawn up in 1992 in order to assess the state of the environment and lay the foundations for the rational management of natural resources and sustained protection of the environment.

The implementation of the PNAE is based on compliance with six strategies:

- Continuity;
- Dialogue and participation;
- Consistency;
- Efficiency;
- Coordination; and
- Cooperation and exchange.

The PNAE process makes use of the Environmental Impact Assessment as a tool for integrating the environment into the design, implementation and operation of projects.

In Côte d'Ivoire, the Ministry of Environment and Sustainable Development (MINEDD) leads environmental policy and defines national guidelines and strategies for environmental management. In addition, Côte d'Ivoire's accession to the Convention on Biological Diversity and all other conventions aimed at protecting the environment and safeguarding biodiversity has resulted in the formulation of a national biodiversity strategy.

Côte d'Ivoire adopted the law on the Environment Code (Law n° 96-766 of 3 October 1996) and a decree determining the rules and procedures applicable to studies relating to the environmental impact of development projects (Decree n° 96-894 of 8 November 1996). Subsequently, the decree on the Environmental Audit was issued (Decree n°2005 - 03 of 6 January 20059 on the Environmental Audit).

2.1.2 National Development Plan (*Plan National de Développement, PND*)

The National Development Plan (PND) replaced the Poverty Reduction Strategy Paper – *Plan de Stratégie de Réduction de la Pauvreté* (PRSP). The PND constitutes the general orientation framework of the development policy of Côte d'Ivoire initiated by the government since 2012.

The general objective of the PND is to reduce the poverty rate by more than half by 2020 and to make Côte d'Ivoire an emerging country at the same time.

Following the first phase (2012-2015) of the PND, which was considered successful, the Government has started working on the implementation of the second phase of the PND covering the period 2016-2020. The second phase had five strategic axes, one of which is the development of the infrastructure harmoniously distributed over the national territory and the preservation of the environment.

This Project corresponds to the governmental goal of developing infrastructure in a sustainable way and according to the international environmental and social standards as well as best practices.

2.1.3 National Climate Change Programme Strategy (Stratégie du Programme National du Changement Climatique, SPNCC)

The SPNCC revolves primarily around seven (7) strategic axes integrating the five pillars initially defined in Bali during COP 13 in 2007: shared vision, adaptation, mitigation, technology transfer and funding. These strategic axes are broken down as follows:

- Strategic axis 1: Promote the integration of climate change into sector policies and strategies, in development planning and strengthen the institutional and legal framework
- Strategic axis 2: Improve national knowledge on climate change and strengthen the technical and human capacities of the actors of the National CC Program
- Strategic axis 3: Promote measures to mitigate the effects of climate change in all sectors (REDD+, CDM, etc.)
- Strategic axis 4: Strengthen and promote actions to adapt to climate change
- Strategic axis 5: Promote research and development at the national level and the transfer of technologies in the field of climate change
- Strategic axis 6: Manage the risks of natural disasters
- Strategic axis 7: Strengthen international cooperation and mobilise funding for the implementation of the CC National Policy.

2.1.4 National Gender Policy (Politique Nationale en Matière du Genre, PNG)

The issue of equality between men and women is a major development issue in Côte d'Ivoire. Recently, Côte d'Ivoire endorsed the recommendations of the United Nations Commission on the Status of Women (2006-2011) multi-year program and United Nations Security Council Resolution 1325. The principle of equality between women and men enshrined in the second constitution of July 23, 2000, prohibits all forms of torture and physical and moral violence, mutilation and degradation against women.

Within the framework of this Project, the actors must give regard to gender in the execution of the works.

2.1.5 National Water Policy

The overall objective of the National Water Policy is to provide appropriate solutions to water-related problems so that water is not a limiting factor in socio-economic development. It is oriented towards Integrated Water Resources Management (IWRM), so that this vital resource is managed in such a way as to reconcile the different physiological, social, cultural, environmental, economic and spiritual uses and functions of water to ensure sustainable management of the available resource.

2.2 Institutional and Regulatory Framework

2.2.1 Relevant Authorities in Côte d'Ivoire

The Ivorian authorities involved in environmental and social management and relevant to the Project are described below in Table 2-1.

Table 2-1 Institutional Framework Relevant to the Project

Institutions	Structures	Description	Role in the Project
Ministry of the Environment and Sustainable Development (Ministère de l'Environnement et du Développement Durable) (MINEDD)	Directorate General for the Environment (Direction Générale de l'Environnement) (DGE)	<p>The DGE, in relation with the Directorate General for the Environment and other MINEDD structures is responsible for: promoting the relevant provisions of the Constitution in terms of environment; ensuring the follow-up of the management of international conventions and treaties on the environment; developing and implementing national policy on the environment and sustainable development; monitoring the revision of the Environmental Code and the drafting of related implementation texts; coordinating and evaluating the activities of the Central Directorates under its authority; ensuring the monitoring and evaluation of the development and implementation of sectoral policies to combat climate change; promoting scientific and technical research projects on the environment and nature protection; ensuring the follow-up of the activities of the Focal Points in the implementation of international conventions and agreements on the environment, ratified by Côte d'Ivoire in relation with the competent structures of the Ministry; ensuring the monitoring and evaluation of the ecologically rational management of environmental matrices and the protection of nature: monitoring and evaluating the quality of the environment in relation to air, soil and water; monitoring and evaluating the management of industrial waste and chemical substances; ensuring the development and implementation of information, awareness, education and communication strategies and programmes.</p> <ul style="list-style-type: none"> ■ The Directorate General for the Environment comprises four central directorates; ■ The Directorate for the Fight against Climate Change; ■ The Directorate for Ecology and Nature Protection; ■ The Directorate for Environmental Quality and Risk Prevention; and ■ The Directorate of Industrial Waste and Chemical Substances. 	It is involved here as part of the ESIA Report review panel to ensure that all aspects of the Project's environmental compliance are taken into account by the promoter ARISE.
	Directorate General for Sustainable Development (Direction Générale du Développement Durable) (DGDD)	<p>The DGDD, in relation with the Directorate General for the Environment and other MINEDD structures is responsible for: monitoring the implementation of international agreements on sustainable development; developing and implementing the national policy on sustainable development; coordinating and evaluating the activities of the Central Directorates under its authority; ensuring the follow-up and evaluation of the elaboration of the national policy on sustainable development; drafting the texts for the application of law n°2014-390 of 20 June 2014 on sustainable development; coordinating the implementation of the Sustainable Development Goals at national level; coordinating Côte d'Ivoire's participation in international conferences on sustainable development; ensuring the monitoring and evaluation of the implementation of the national strategy on sustainable development; monitoring and evaluating the integration of sustainable development principles into sectoral policies, plans and programmes; monitoring and evaluating the development and promotion of green technologies and responsible consumption and production patterns; monitoring and evaluation of education, training, information and promotion of sustainable development in all sectors of society.</p> <p>It consists of three central Directorates:</p> <ul style="list-style-type: none"> ■ The Sustainable Development Policies and Strategies Directorate (DPSDD); ■ The Directorate for Promotion and Education for Sustainable Development (DPEDD); ■ The Directorate for the Green Economy and Corporate Social Responsibility (DEVRSO). 	It intervenes here as part of the review panel for the ESIA Report to ensure that all aspects of Sustainable Development are taken into account

Institutions	Structures	Description	Role in the Project
	National Environment Agency (Agence Nationale de l'Environnement) (ANDE)	The National Environment Agency (ANDE) is the one-stop shop for the assessment of environmental and social impact studies. ANDE was created by Decree No. 97-393 of 9 July 1997 with the following missions and attributions, among others: (i) to guarantee that environmental concerns are considered in projects and programme development, and (ii) to implement the impact study procedure, as well as the evaluation of the environmental impact of macro-economic policies.	ANDE's competence in this Project concerns, i) the elaboration of the Terms of Reference of the ESIA, ii) the evaluation of the ESIA Report, iii) the monitoring of the Environmental and Social Management Plan (ESMP) and iv) the monitoring of the environmental compliance of the Project activities.
	Ivorian Anti-Pollution Centre (Centre Ivoirien Anti-Pollution) (CIAPOL)	CIAPOL is responsible for monitoring the level of pollution of water (lagoons, sea, and fresh water), soil and air. In addition, through its Sub-Directorate for the Inspection of Classified Installations (S/DIIC), CIAPOL also ensures the implementation and compliance with the technical provisions that will be prescribed by the operating permit decree to better consider environmental protection.	CIAPOL in collaboration with ANDE will monitor the implementation of the ESMP. It will carry out inspections and controls of the platform. It will ensure that the operations are functioning properly so that the liquid discharges into the receiving environment comply with the discharge standards.
Ministry of Mines, Petrol and Energy (Ministère des Mines du Pétrole et de L'Energie) (MMPE)	Directorate General of Hydrocarbons (Direction Générale des Hydrocarbures) (DGH)	The MMPE is responsible for the implementation and monitoring of the Government's policy on petroleum, electricity, and renewable energy development. The DGH is responsible for coordinating the exploration and production of hydrocarbons, coordinating the supply, refining and distribution of petroleum products, and monitoring and regulating hydrocarbons.	The MMPE will be responsible for the transmission of electricity in the new industrial zone and the distribution of electricity to the industry.
Ministry of Health, Public Hygiene and Universal Health Coverage (Ministère de la Santé, de l'Hygiène Publique et de la Couverture Maladie Universelle) (MSHPCMU)	Directorate of Public Hygiene and Health-Environment (Direction de l'Hygiène Publique et de la Santé-Environnement) (DHPSE)	The MSHPCMU is responsible for the implementation and monitoring of the Government's health and public hygiene policy. These structures, such as the Directorate of Public Hygiene and Health-Environment (DHPSE), ensure compliance with regulations on hygiene, environmental health, and the health of workers and the population.	The DHPSE will ensure that the environmental measures taken by ARISE guarantee and preserve the health of the personnel and populations in the Project area.
Ministry of Water and Forests (Ministère des Eaux et Forêts)	General Directorate of Forestry and Wildlife (Direction Générale des Forêts et de la Faune) (DGFF)	The General Directorate of Forestry and Wildlife is responsible for: <ul style="list-style-type: none"> ■ Constituting, demarcating, conserving, renewing, developing and managing the national forest heritage; ■ Maintaining the integrity of the State's forest estate; ■ Applying the rules of management of state forests with a view to their development and the increase of the wood potential; 	The DGFF intervenes in the protection of biodiversity.

Institutions	Structures	Description	Role in the Project
		<ul style="list-style-type: none"> ■ Promoting the rational exploitation of forest resources; ■ Controlling the exploitation of timber products and their compliance with current standards; ■ Promoting the development of private forestry by communities and individuals; ■ Protect soils, fauna and vegetation; ■ Managing and promoting hunting resources; ■ Enforcing forestry and wildlife regulations; ■ Ensuring the regulation of hunting and controlling its products; ■ Leading the observatory of the national and international timber market, including the ecotourism valuation of environmental services; ■ Updating and implementing the national reforestation plan; ■ Ensure the safeguarding of wildlife and the protection of its habitats, in particular those of vulnerable species; ■ Develop programmes for the reconstitution of populations of endangered species; ■ To develop research on wildlife and its habitats; ■ Ensure the development of wildlife through sightseeing and hunting, while respecting the possibilities of harvesting; ■ To support managers in the rational development of areas containing wildlife habitats; and ■ Promote rational wildlife management in national and local public policies; 	
	<p>Directorate General for Water Resources (Direction Générale des Ressources en Eau) (DGRE)</p>	<p>Within the Ministry of Water and Forests, the DGRE is responsible for:</p> <ul style="list-style-type: none"> ■ Monitoring the implementation of the Water Code; ■ Coordination of the implementation of the National Action Plan for Integrated Water Resources Management; ■ Monitoring international conventions and agreements on water resources; ■ Promotion of the support and monitoring of national and international river basin organisations' projects and programmes; ■ Promotion of education, research and development activities in the field of water; ■ Drawing up, in liaison with the Financial Affairs and Heritage Department, the financial policy for Water Resources; ■ Development water policy; ■ Control of the basin structures and agencies; and ■ Protection of water resources. 	<p>The DGRE will intervene in the protection of water resources.</p>

Institutions	Structures	Description	Role in the Project
Ministry of Agriculture and Rural Development (Ministère de l'Agriculture et du Développement Rural)	Directorate for Water Management and Farm Modernisation (Direction de la Maîtrise de l'eau dans le domaine agricole et de la Modernisation des Exploitations)	This ministerial department is responsible for the implementation of agricultural policy. It is also responsible for the management of rural land. Thus, the National Rural Land Programme and the National Land Management and Rural Development Programme will be interested in the compensation plan proposed by ONAD for the populations whose land will be used to set up the treatment stations.	It will be involved in the assessment of possible crop losses due to the destruction of fields.
	Rural Land Directorate (Direction du Foncier Rural)	This Ministry intervenes in this Project through its Directorate of Rural Land and Rural Cadastre to investigate and manage land disputes in liaison with the Service Autonome des Affaires Juridiques, attached to the cabinet. <ul style="list-style-type: none"> ■ Manage rural land and to develop and implement a rural land register ■ Encourage the promotion of modern agriculture; ■ Organise and protect plant health; and ■ Train and coach farmers, including the provision of technical and management advice to farmers. 	The Directorate of Rural Land Tenure and Cadastre will intervene in the management of land disputes.
Ministry of Commerce, Industry and SME Promotion (Ministère du commerce, de l'industrie et de la Promotion des PME)	Industrial Infrastructure and Security Directorate (Direction des Infrastructures et de la Sécurité Industrielles) (DISI)	It is responsible for: <ul style="list-style-type: none"> ■ Developing the strategy for the implementation of industrial infrastructure; ■ Promoting and contributing to the organisation and monitoring of industrial zones; ■ To ensure the respect of the industrial environment; ■ To define industrial safety regulations and standards; and ■ Contribute to the organisation of industrial safety monitoring and control. 	This Directorate is interested in this project because it must, through its competent services, guide ARISE on the axes enabling it to carry out its activities in compliance with Ivorian regulations and to optimise its investments.
	Agency for the Management and Development of Industrial Infrastructures (Agence de Gestion et Développement des Infrastructures Industrielles) (AGEDI)	The Ministry of Commerce, Industry and SME Promotion is responsible for implementing and monitoring the Government's policy on trade and industry. This ministry is responsible for the following tasks, among others: <ul style="list-style-type: none"> ■ Implementation of the industrial strategy ; ■ Drafting of laws and regulations in the field of industry ■ Management of industrial land, in liaison with the Ministers in charge of Construction, Economy and Finance and the Budget; ■ Design and implementation of new industrial development instruments, in particular free zones, export centres, industrial zones and parks and export insurance; ■ Promotion, coordination and monitoring of industrial activities; 	The Ministry of Commerce, Industry and SME Promotion is the Project Owner and is responsible for land acquisition processes.

Institutions	Structures	Description	Role in the Project
		<p>AGEDI² lays under supervision of the Ministry of Commerce, Industry and SME Promotion, Its mission is to design, implement and manage industrial development tools such as land, parks and industrial zones. Its goal is to:</p> <ul style="list-style-type: none"> ■ Draw up programmes for the creation of industrial zones; ■ Elaborate studies and to proceed to the development and equipment of economic zones with industrial vocation; and ■ Undertake directly or indirectly all infrastructure or superstructure works allowing it to create economic zones with industrial vocation, with a view to renting them to industrial promoters. 	
	Centre for the Promotion of Investments in Côte d'Ivoire (Centre pour la promotion des investissements en Côte d'Ivoire) (CEPICI)	<p>CEPICI is a one-stop investment shop responsible for :</p> <ul style="list-style-type: none"> ■ Centralising and facilitating the completion of administrative formalities relating to the creation of companies, their modification, dissolution, etc. ■ Centralising and facilitating the completion of formalities relating to the granting of advantages offered by the Investment Code; ■ To seek and permanently implement ways of simplifying and rationalising investors' contacts with the various administrations and services concerned. 	In the context of this project, this will facilitate project investments.
Ministry of Interior and Security (Ministère De l'Interieur et de la Sécurité)	Administrative and Collective Territorial Authorities (Prefecture of Abidjan/ sub-prefecture of Anayma and Songon, Communes of Andokoi I, Akoupé-Zeudji, Allokoï, Attinguié, Abadjin-Kouté, Songon-Agban)	This ministerial department is concerned with environmental protection because of its action throughout the national territory and is therefore involved in the company's activities through the local authorities and communities located in the districts of Anyama, Abobo, Attécoubé and Songon and Abidjan will have to cooperate with the municipal, prefectorial and regional council authorities in order to take into account their requirements in terms of occupational health, safety and community environment.	The Prefecture of Abidjan/ sub-prefecture of Anayma and Songon, Communes of Andokoi I, Akoupé-Zeudji, Allokoï, Attinguié, Abadjin-Kouté, Songon-Agban will be responsible for the supervision of works in the Project area. They will ensure the safety of all workers and other persons involved during all phases of the Project.
	National Office for Civil Protection (Office National de la Protection Civile) (ONPC)	This Ministry also intervenes in the framework of this project through the National Office of Civil Protection (ONPC). Created in 2000, with the advent of the 2nd Republic, by Decree No. 2000-822 of 22 November 2000, the Directorate of Civil Protection became an EPN classified in the category of EPAs and was named the National Office of Civil Protection (ONPC). In 2008, Decree No. 2008-60 of 28 February 2008 transformed the ONPC into a General Directorate under the supervision of the Ministry of the Interior.	<p>The National Office of Civil Protection will intervene in this Project to:</p> <ul style="list-style-type: none"> ■ Deployment of the ORSEC Plan and POLLUMAR (National Oil Spill Contingency Plan); ■ Issuing the safety notice and proposing recommendations for preventing and combating the risk of fire.

² On 30.03.2022 was created the Industrial Infrastructure Management and Development Company (SOGEDI), replacing the Industrial Infrastructure Development Fund (FODI) and the dissolved Industrial Infrastructure Management and Development Agency (AGEDI). In this ESIA Report this agency is still referred as AGEDI.

Institutions	Structures	Description	Role in the Project
Ministry of Construction, Housing and Urban Development (Ministère de la Construction, du Logement et de l'Urbanisme) (MCLU)		<p>The Ministry of Construction, Housing and Urban Planning is responsible for implementing and monitoring the Government's policy on construction, housing and urban planning. Developing and monitoring of the implementation of policies, legislation and regulations on land and property in the field of urban planning:</p> <ul style="list-style-type: none"> ■ Participation in the management of industrial, tourist and craft land ■ Drawing up, approving and promoting planning tools, in particular town planning master plans ■ Assistance to local authorities in the area of land, particularly in the renovation and restructuring of urban districts ■ The supervision of professions involved in the field of urban planning and land tenure; ■ The modernisation of village communities; ■ The promotion of land ownership; ■ The purging of customary rights; ■ The constitution and management of land reserves on behalf of the State; ■ Assistance to local authorities in urban planning. 	The MCLU will be involved in the management of the industrial land.
Ministry of Water, Sanitation and Hygiene (Ministère de L'Hydrolique, de L'Assainissement et de la Salubrité (MINHAS)	National Waste Management Agency (Agence Nationale de Gestion des Déchets) (ANAGED)	<p>The MINHAS is responsible for the implementation and monitoring of the Government's policy on water and access to drinking water, sanitation and drainage, health and improvement of the living environment. In this capacity and in liaison with the various ministerial departments concerned, it has the initiative and responsibility for the following actions:</p> <ul style="list-style-type: none"> ■ Participation in the monitoring and protection of water resources; ■ Management of drinking water sector infrastructures; ■ Development of drinking water supply infrastructures in urban and rural areas; and ■ Elaboration and monitoring of regulations concerning studies, construction and operation of hydraulic works. <p>The National Agency for Waste Management (ANAGED) responsible for:</p> <ul style="list-style-type: none"> ■ Regulation of the functioning of the management of the waste sector of all kinds, having an impact on urban health; ■ The concession of the public service of cleaning and cleanliness of the cities, Communes and Districts of Côte d'Ivoire; ■ The concession for the processing of waste ■ Controlling the proper functioning of the infrastructures conceded by the State to third parties or communities for the transfer, sorting and processing of refuse and waste; ■ Organisation and management of emergency operations; ■ Management of the Urban Health Programme Support Fund (FSPSU); the fight against insalubrity and nuisance in urban areas. <p>As such, ANAGED ensures:</p> <ul style="list-style-type: none"> ■ Planning, implementation and equipment of waste infrastructure; 	<p>The MINHAS will be responsible for the development of drinking water supply infrastructures in for the Project.</p> <p>ANAGED will ensure the proper management of waste within the framework of the Project. It will provide assistance to the communities and control the companies providing the public sanitation service so that they comply with the regulations in force.</p>

Institutions	Structures	Description	Role in the Project
		<ul style="list-style-type: none"> ■ The delegated management of all maintenance and rehabilitation work on the said infrastructures; ■ Assistance to local authorities and control of compliance with water supply regulations by companies providing public sanitation services, in accordance with the terms of reference as defined by the specifications or, failing that, by any regulatory provision adopted by the competent authority. 	
	Directorate of Sanitation and Hygiene (Direction de l'Assainissement et de la Salubrité) (DAS)	The Sanitation and Hygiene Directorate is specifically responsible for programming sanitation master plans, hygiene, and monitoring studies.	Within the framework of the Project, the role of this department will be to provide appropriate solutions to problems related to sanitation and hygiene.
	National Office of Sanitation and Drainage (Office National de l'Assainissement et du Drainage) (ONAD)	The ONAD is the structure under the supervision of the Ministry which will ensure the supervision, in accordance with the applicable provisions in the Republic of Côte d'Ivoire. Its mission will be environmental control in accordance with the applicable provisions.	The mission of ONAD will be to provide access to sanitation and drainage facilities in a sustainable and cost effective manner.
Ministry of Employment and Social Protection (Ministère de l'Emploi et de la Protection Sociale) (MEPS)	National Social Insurance Fund (Caisse Nationale de Prévoyance Sociale) (CNPS)	The Ministry of Employment and Social Protection is responsible for the implementation and monitoring of the government's policy on employment, poverty reduction and social affairs. In this capacity and in liaison with the other ministerial departments concerned, it has the initiative and responsibility for actions in the field of employment and social affairs. The structures under the authority of this ministry that will be involved in this project are, among others the National Social Insurance Fund. It administers the compulsory social security scheme for the private sector and similar. It also operates in the field of health and social.	The MEPS and CNPS are involved in this Project in the field of health and social action.
	Directorate of Labour Inspection (Direction de l'Inspection du Travail) (DIT)	Its role in this Project is to: <ul style="list-style-type: none"> ■ Monitor the application of labour, employment and social security legislation and regulations; ■ Advise parties and arbitrate individual disputes and labour and employment disputes; and ■ Ensure compliance with occupational health regulations. 	The Labour Inspectorate will be responsible for monitoring the application of labour, employment and social security legislation and regulations
	Occupational Health and Safety Directorate (Direction de la Santé et de la Sécurité au Travail) (DSST)	The Occupational Health and Safety Directorate is responsible for: <ul style="list-style-type: none"> ■ Defining hygiene, health and safety standards within the company and in the workplace; ■ Ensuring the implementation and updating of occupational health and safety legislation and regulations; ■ Ensuring the prevention of accidents at work and occupational diseases; ■ Identifying and assessing the occupational risks inherent in the various enterprises and inform the competent authorities ; 	DSST is involved in this Project in the field of occupational health and safety.

Institutions	Structures	Description	Role in the Project
		<ul style="list-style-type: none"> Participating in the examination and professional reclassification of disabled persons, as well as in the meetings of the reform commission for civil servants and those of the Health Council for civil servants. 	
Ministry of State, Ministry of Defence (Ministère de L'État, Ministère de la Défense)	Military Fire Brigade Group (Groupement de Sapeurs-Pompiers Militaires) (GSPM)	<ul style="list-style-type: none"> The mission of the Military Fire Brigade Group, a structure of this ministry, is to rescue and protect people, property and the environment, and to fight against the perils or consequences of accidents of all kinds (floods, pollution, fires) 	It will intervene in the event of a disaster on the Project site.
Ministry of Economy and Finances (Ministère de L'Économie et des Finances) (MEF)		<p>The MEF is responsible for implementing the Government's economic, financial and monetary policy. It has the initiative and responsibility for the following actions:</p> <p>In economic matters:</p> <ul style="list-style-type: none"> Macroeconomic management and liberalisation of the economy; Monitoring and management of the economic dimensions of integration; and Follow-up of relations with bilateral and multilateral funding agencies. <p>In financial matters:</p> <ul style="list-style-type: none"> Management of the liquidation of banks and financial institutions, and management of the liquidation of real estate; Control of the accounting of the whole administration; Representation of the State on the boards of directors of banks and financial institutions in charge of the Budget and the State Portfolio and the technical supervisory ministers; and Participation in the management of the liquidation of national public establishments, State companies and companies with public financial participation, responsible for the Budget and the State Portfolio, and participation in the management of the liquidation of real estate. <p>In monetary matters:</p> <ul style="list-style-type: none"> Drawing up and applying regulations relating to public and private bodies involved in the fields of money, credit, stock exchange operations, foreign exchange and insurance and monitoring the application of the organisational rules and guidelines laid down in these fields; Monitoring relations with monetary issuing institutions; Monitoring relations with bilateral and multilateral monetary organisations; and Representing and defending the interests of the State of Côte d'Ivoire in monetary structures and organisations. 	For the implementation of the Project, the MEF will ensure the economic and financial supervision of the Ivorian State.

Institutions	Structures	Description	Role in the Project
Ministry of Planning and Development (Ministère du Plan et du Développement) (MPD)		<p>The MPD is responsible for the implementation and monitoring of the Government's policy on development planning and programming.</p> <ul style="list-style-type: none"> ■ Planning, programming and implementation of regional planning and regionalisation actions, notably through the regional planning support funds; ■ Elaboration, coordination and monitoring of the execution of the matrices of actions carried out by the State and the three-year public investment programme; ■ Programming and monitoring of the implementation of medium and long-term economic, social and cultural development policies and strategies; evaluation of their results; ■ Elaboration of the medium and long term macro-economic framework and programming of macro-economic, sectoral and regional studies on the economic and financial impacts of investment projects; ■ Economic and financial projections in the medium and long term, in particular, with evaluation of recurrent costs; ■ Elaboration and presentation of national accounts; ■ Harmonisation of studies and actions of the State of an economic, financial, social and cultural nature in the medium and long term with regard to development programmes; ■ Animation of national and regional development commissions; ■ Elaboration and monitoring of the implementation of the poverty reduction strategy; ■ Production, centralisation, analysis and dissemination of statistical information; ■ Organisation of national censuses and statistical surveys; ■ Formulation and monitoring of the implementation of population policies and strategies; ■ Controlling population growth and immigration; and ■ Follow-up of relations with lateral and multilateral development agencies under the coordination of the Prime Minister and in relation with the Ministers in charge of Economy, Finance and Budget. 	<p>The MPD is in charge of the National Development Plan (NDP) 2016-2020, which includes the development of the PK24.</p>

Institutions	Structures	Description	Role in the Project
Ministry of Transport (Ministère des Transports)	Directorate General of Land Transport and Traffic (Direction Générale des Transports Terrestres et de la Circulation (DGTTC))	<p>The main mission of the Ministry of Transport is to monitor and implement the Government's transport policy, with a view to modernising the transport system and organising transport activities.</p> <p>As regards the organisation of transport, the General Directorate of Land Transport and Traffic (DGTTC) was created in 2006 by Decree 2006-50 of 22 March 2006. It is the operational structure on behalf of the State for the organisation and management of land transport in Côte d'Ivoire.</p>	Within the framework of this Project, this Directorate will ensure that ARISE complies with the traffic plans and rules in force in Côte d'Ivoire.
	Observatory of Transport Fluidity (Observatoire de la Fluidité du Transport) (OFT)	<p>The main mission of the Ministry of Transport is to monitor and implement the Government's transport policy in order to modernise the Ivorian transport system.</p> <p>The Observatory of Transport Fluidity, a structure under the supervision of this ministry, is in charge of managing congestion in the entire national transport system, raising awareness among the actors of the national transport system and contributing to sub-regional integration through trade facilitation.</p>	The OFT shall ensure the fluidity and continuity of transport
	Road Safety Office (Office de la Sécurité Routière) (OSER)	<p>The National Road Safety Office ensures that road safety rules are respected. It promotes road safety.</p> <p>The promoter will refer to these structures under the Ministry of Transport for issues related to road traffic on the Project site.</p>	OSER will manage the traffic issues of the Project site.

2.2.2 Relevant Legislation in Côte d'Ivoire

The regulatory framework in Côte d'Ivoire is in the form of laws, decrees, circulars, or ministerial orders promulgated from time to time. The most important regulatory frameworks relevant to the Project activities are listed in Table 2-2.

Table 2-2 Ivorian Legislation Related to the Project

Regulation	Description	Relevance to the Project
Constitutional law n°2020-348 of 19 March 2020 amending law n°2016886 of 08 November 2016 establishing the Constitution of the Republic of Côte d'Ivoire	Article 11: The right to property is guaranteed to all. No one shall be deprived of his property except in the public interest and subject to fair and prior compensation.	The Project must be carried out in accordance with the requirements of the fundamental law of the Côte d'Ivoire .
	Article 27: The right to a healthy environment is recognised for all throughout the national territory	
	Article 28: The state is "committed to respecting the Constitution, human rights, and public freedoms. It ensures awareness and dissemination of them among the population"	
	Article 40: The protection of the environment and the promotion of the quality of life are a duty for the community and for each natural or legal person	
	Article 101: The law shall lay down rules concerning the protection of the environment and sustainable development	
Law n°88-651 of 7 July 1988 on the protection of public health and the environment against the effects of toxic and nuclear industrial waste and harmful toxic substances	Article 1: All acts relating to the purchase, sale, import, transit, transport, deposit and storage of toxic and nuclear industrial waste and harmful substances are prohibited throughout the country.	ARISE will prohibit, in the course of its activities, any act relating to the purchase, sale, import, transit, transport, deposit and storage of toxic and nuclear industrial waste and harmful substances.
Law n°92-469 of 30 July 1992 on the repression of fraud in the field of petroleum products and violations of technical safety requirements	Article 2: The import, export, processing, storage, transport, and distribution of petroleum products are subject to prior authorisation, under conditions defined by decree.	ARISE shall obtain the necessary authorisations for any storage of hydrocarbons on the Project site
Environment Code - Law n°96-766 of 3 October 1996	Article 25: The characteristics of the wastewater discharged must not harm the receiving environment.	ARISE will ensure the environmentally sound disposal of wastewater from its activities. This will involve ensuring that the wastewater meets the discharge criteria.
	Article 26: All waste must be collected, treated, and disposed of in an environmentally sound manner in order to prevent, eliminate or reduce its harmful effects on human health, natural resources, fauna and flora and the quality of the environment.	A waste management plan, including hazardous waste, should be drawn up.
	Article 28: The disposal of waste must comply with the standards in force and be designed to facilitate its recovery. To this end, the structures concerned are required to: <ul style="list-style-type: none"> ■ develop and disseminate knowledge of appropriate techniques; ■ conclude contracts organising the re-use of waste ; ■ regulate the methods of manufacture ARISE must ensure that the organisations in charge of the removal and disposal of its waste have an approval. 	ARISE must ensure that the organisations responsible for the collection and disposal of its waste are approved.

Regulation	Description	Relevance to the Project
	<p>Article 39: Any major project likely to have an impact on the environment must be subject to a prior impact study. All projects are subject to control and monitoring to verify the relevance of the forecasts and adopt the necessary corrective measures.</p>	<p>This Project is subject to an Impact Assessment to control its impact on the environment</p>
	<p>Article 40: describes the content of an Environmental Impact Assessment</p>	
	<p>Article 75: It is forbidden to dump any solid, liquid or gaseous substances into waterways and water bodies and their surroundings, and to carry out any activity likely to harm the quality of the air and surface or underground water.</p>	<p>ARISE has to undertake all necessary measures to prevent any form of Lagoon pollution during the operations.</p>
	<p>Article 76: It is forbidden to discharge into the maritime and lagoon areas any substances likely to :</p> <ul style="list-style-type: none"> ■ destroy sites and monuments of scientific, cultural, tourist or historical interest; ■ destroy the fauna and flora; ■ damage the aesthetic and tourist value of the lagoon, the sea and the coastline. 	
	<p>Article 77: It is forbidden to discharge into maritime and lagoon waters:</p> <ul style="list-style-type: none"> ■ wastewater, unless it has been previously treated in accordance with the standards in force; ■ untreated and harmful waste of all kinds. 	
	<p>Article 78: It is prohibited to hold or abandon waste likely to :</p> <ul style="list-style-type: none"> ■ encourage the development of disease-carrying animals; ■ cause damage to people and property. 	
	<p>Article 79: The following are prohibited</p> <ul style="list-style-type: none"> ■ all spills, flows, discharges or deposits of any kind likely to cause or increase pollution of continental, lagoon and maritime waters within the territorial limits; ■ any illegal, degrading and/or unregulated exploitation; ■ any emission into the atmosphere of toxic gases, smoke, soot, dust or any other chemical substances that do not comply with the regulations in force. 	
	<p>Article 80: In accordance with the special provisions of the international conventions ratified by Côte d'Ivoire, the dumping, immersion and incineration in maritime waters under Ivorian jurisdiction of substances of any kind likely to :</p> <ul style="list-style-type: none"> ■ harming public health and living marine resources; ■ to interfere with maritime activities including shipping and fishing; ■ alter the quality of marine waters; ■ degrade the amenity values and tourism potential of the sea and coastline. 	
	<p>Article 81: The following are prohibited</p>	

Regulation	Description	Relevance to the Project
	<ul style="list-style-type: none"> ■ the unauthorised import of waste into the country; ■ the deposit of waste on the unauthorised public domain, including the public maritime domain as defined by the texts in force; ■ the dumping, incineration or disposal by any process whatsoever of waste in continental, lagoon and maritime waters under Ivorian jurisdiction. 	
Law n° 98-755 of 23 December 1998 on the Water Code	Article 12: The taking of water from the public hydraulic domain and the construction of hydraulic works are subject, depending on the case, to authorisation or prior declaration.	ARISE shall comply with the requirements contained in this Act to avoid any liquid discharge that may degrade surface water.
	Article 17: The right to use water and the use of hydraulic installations and works are limited by the obligation not to infringe the rights of riparians and to return water in such a way that it can be reused.	
	Article 25: No one shall impede the free flow of surface water and groundwater.	
	Article 48: the dumping or deposit of waste of any kind or radioactive effluent, likely to cause or increase the pollution of water resources, is prohibited.	
	Article 49: Any discharge of wastewater into the receiving environment must comply with the standards in force.	
	Article 51: It is forbidden to discharge into the sea, watercourses, lakes In addition to the above-mentioned waste, the following must be disposed of: any waste, fermentable residue of vegetable or animal origin, any solid or liquid, toxic or flammable substance likely to constitute a danger or a cause of insalubrity, or to provoke a fire or an explosion, in ponds, canals, underground waters, on their banks and in alluvial layers.	
	Article 78: "Water intended for human consumption must comply with the standards of potability set by joint order of the water authority and the Minister of Health.	Drinking water on the ARISE site must comply with potability standards
Law No. 99-477 of 2 August 1999 on the Social Security Code and its decrees amended by Order No. 2012-03 of 11 January 2012	Article 79: Any person who offers water to the public for human consumption, whether in return for payment or free of charge and in any form whatsoever, including ice cream, is required to ensure that this water is potable and complies with the standards in force.	ARISE is required to ensure the potability of water for human consumption.
	Article 2: "Any employer employing salaried workers must be affiliated to the National Social Security Fund. This affiliation shall take effect from the first recruitment of an employee. The mission of the CNPS is to : The management of the compulsory social security scheme for private sector workers and persons treated as such, which includes <ul style="list-style-type: none"> ■ the family benefits branch ; ■ the branch of Accidents at Work and Occupational Diseases ; 	ARISE is obliged to declare its local employees to the CNPS and also any work accident in accordance with the requirements of this law

Regulation	Description	Relevance to the Project
	<ul style="list-style-type: none"> ■ old-age insurance (pension) ; ■ maternity insurance ; ■ the management of supplementary or special schemes, whether compulsory or voluntary; ■ the collection of social security contributions and the provision of benefits under these various schemes. <p>Article 71: "The employer shall be obliged to declare within 48 hours any occupational accident or disease occurring in the undertaking. The declaration may be made by the worker or his or her representatives until the end of the second year following the date of the accident or the first medical finding of occupational disease.</p> <p>In the case of occupational diseases, the date of the first medical finding of the disease shall be deemed to be the data of the accident.</p> <p>Article 73: "The employer shall, as soon as an accident occurs:</p> <ul style="list-style-type: none"> ■ to provide first aid; and ■ to notify the doctor in charge of the company's medical services or, failing that, the nearest doctor. 	
<p>Law n° 2003-208 of 7 July 2003 on the transfer and distribution of competences from the State to the territorial authorities (in the field of environmental protection and natural resources management)</p>	<p>Article 1: "Local authorities shall contribute with the State to the economic, social, health, educational, cultural and scientific development of the populations and, in general, to the constant improvement of their living environment. To this end, they shall have general and special competences conferred by laws and regulations".</p> <p>Article 2: "Competences other than those provided for by the provisions of this law may be transferred, if necessary, from the State to the Territorial Communities by law".</p>	<p>The local authorities in the Project area must be involved in the management of environmental preservation.</p>
	<p>Article 7: The construction of a facility on the territory of a territorial authority may not be undertaken by the State or by another territorial authority without prior consultation with the authority concerned.</p>	<p>ARISE will have to consult the local authorities in the Project area.</p>

Regulation	Description	Relevance to the Project
<p>Law n° 2014-390 of 20 June 2014 on sustainable development</p>	<p>Article 3: This law applies in particular to the following area:</p> <ul style="list-style-type: none"> ■ Biodiversity ; ■ Biosecurity ; ■ Climate change ; ■ Sustainable urban development ; ■ Energy ; ■ The coastal and marine environment ; ■ Disaster management ; ■ Sustainable forest management ; ■ Sustainable management of seas and coasts ; ■ Sustainable land management and desertification ; ■ The Clean Development Mechanism ; ■ The REDD+ mechanism ; ■ Sustainable consumption and production patterns; and ■ Water resources <p>Article 37: "The private sector shall apply the principles and objectives of sustainable development provided for in this law in its operations and in the implementation of its actions, in particular by</p> <ul style="list-style-type: none"> ■ the adoption of responsible modes and methods of supply, operation, production and management, meeting the requirements of sustainable development; ■ environmental and social assessments to verify the impact of their activities on the environment; ■ contributing to the dissemination of sustainable development values and demanding that their partners, especially their suppliers, respect the environment and these values; ■ adopting transparent communication on their environmental management; ■ compliance with the requirements of corporate social responsibility for the promotion of sustainable development. <p>Article 38: "The private sector shall comply with the conditions for the implementation of the social responsibility of organisations provided for in this law. "</p> <p>Article 39: "The private sector shall periodically Report on the implementation of its sustainable development plan. The periodicity, format and content of the Report shall be determined by decree."</p>	<p>The Project is covered by this law.</p>

Regulation	Description	Relevance to the Project
<p>Law No. 2014-451 of 5 August 2014 on the orientation of the general organisation of territorial administration</p>	<p>Article 1: "The territorial administration is structured according to the principles of deconcentration, decentralisation and the particular territorial entity that is the Autonomous District." It is organised with a view to ensuring the supervision of the population, providing for their needs, promoting economic, social and cultural development and achieving national unity and cohesion.</p> <p>Article 2: "The deconcentrated territorial administration is ensured within the framework of hierarchical administrative districts which are</p> <ul style="list-style-type: none"> ■ Regions; ■ Departments; ■ Sub-prefectures; and ■ Villages. <p>Article 32: "Decentralised administration shall be ensured within the framework of territorial authorities which are:</p> <ul style="list-style-type: none"> ■ Regions; and ■ Municipalities. <p>Local and regional authorities have the following tasks, within the limits of their competence</p> <ul style="list-style-type: none"> ■ Organisation of community life in the local authority; ■ Participation of the population in the management of local affairs; ■ Promotion and realisation of local development; ■ Modernisation of the rural world; ■ Improving the living environment; and ■ Land and environmental management". 	<p>The prefecture of Abidjan, the sub-prefectures of Anyama and Songon as well as the town halls of Abobo, Attécobé, Anyama and Songon should be included in the list of stakeholders to be consulted in the framework of this ESIA</p>
<p>Law N° 2015-532 of 20 July 2015 on the Labour Code</p>	<p>Article 42.1. An Occupational Health and Safety Committee shall be set up in every establishment or undertaking normally employing more than fifty employees.</p> <p>Article. 42.2. The Occupational Health and Safety Committee is composed, in particular, of the head of the undertaking or his representative and staff representatives under the conditions determined by decree.</p> <p>Article 42.3 Without prejudice to the powers of any staff representative, the Occupational Health and Safety Committee shall be responsible for studying the conditions of health and safety at work in which the protection and health of workers are ensured. It shall ensure the application of legislative and regulatory requirements and contribute to the education of workers in the field of health and safety.</p>	<p>ARISE will identify the risks, train and sensitise staff on occupational hazards, provide PPE and ensure that staff work in suitable conditions to protect their life and health.</p> <p>ARISE will have to set up an Occupational Health and Safety Committee (OHSC).</p>

Regulation	Description	Relevance to the Project
	<p>Article 43.1 Every employer must provide an occupational health service for the workers he employs. This occupational health service exists in two forms:</p> <ul style="list-style-type: none"> ■ Autonomous medical service; ■ Inter-company medical service. <p>Article 43.2. Occupational health benefits are essentially:</p> <ul style="list-style-type: none"> ■ Workplace surveillance to prevent occupational accidents and diseases; ■ Health surveillance of workers, which includes a medical examination of candidates for recruitment or newly recruited employees at the latest before the expiry of their probationary period, periodic examinations of employees to ensure their good health and continued fitness for the job in question, and the early diagnosis of occupational diseases. These benefits are due to all workers, regardless of the sector of activity or size of the company. <p>Article 43.3. The occupational health service is directed by a doctor who holds a diploma in occupational medicine and meets the conditions for practising medicine in Côte d'Ivoire.</p> <p>Article 43.4. Decrees shall determine the modalities of application of the provisions of this chapter.</p>	
<p>Law n°2019-675 of 23 July 2019 on the Forestry Code</p>	<p>Article 3: This law applies to forests, agro-forests, trees outside forests and botanical gardens.</p> <p>Article 10: The State shall take all measures to fix the soil, protect land, banks and structures against the risks of erosion and flooding, and conserve natural species threatened with extinction</p> <p>Article 26: Sacred forests shall be protected by the forestry administration in accordance with the rights, customs and practices of rural communities, under the conditions determined by decree of the Council of Ministers.</p> <p>Article 27: Ownership of a natural forest or a natural tree shall be vested in the owner of the land on which it is situated. Ownership of a created forest or a planted tree shall be vested in the landowner or the person who created or planted it by virtue of an agreement with the said owner.</p> <p>Article 45: Any project or activity likely to lead to the clearing of part of the national forest estate shall be subject to prior authorisation by the Ministry in charge of forests.</p> <p>Article 46: Subject to the clearing necessary for the construction of tracks and other provisions provided for in the management plan of classified forests, the clearing of all or part of a classified forest or agroforest shall be subject to a prior redefinition of the boundaries under the conditions determined by decree issued by the Council of Ministers.</p> <p>Article 47: The conditions for clearing and redefining the boundaries of forests throughout the national territory shall be specified by a decree issued by the Council of Ministers.</p>	<p>The Project is affected by this law.</p>

Regulation	Description	Relevance to the Project
<p>ORDINANCE n° 2019-1088 of 18 December 2019 amending Ordinance n°2018-646 of 01 August 2018 on the Investment Code.</p>	<p>Article 1: The group of words structuring project defined in point (u.) of article 1 of the aforementioned order n°2018-646 of 1 August 2018 is newly defined as follows:</p> <ul style="list-style-type: none"> ■ Structuring project: Any investment programme that is important because of its amount, the number of stable jobs to be created, the effects induced on the economy as a whole, the region in which it is to be carried out, the technology it transfers or its contribution to environmental protection. ■ The structuring project concerns mainly industrial projects, notably automobile assembly, production of machine tools for the processing industry of local agricultural products, assembly of household appliances and ICT, or any other sector deemed highly strategic by the Government. <p>Article 2: The content stated in Section II, before sub-section I, of Chapter 2 of TITLE II is replaced by the following:</p> <ul style="list-style-type: none"> ■ Companies approved for the creation of activities benefit, for the realisation of their investment programme, from advantages in the establishment phase and in the exploitation phase. ■ The enterprises approved in the framework of the development of activities benefit exclusively from the advantages in the setting up phase. 	<p>ARISE and those responsible for this Project should ensure that its investments are productive and socially responsible in Côte d'Ivoire. That it encourages the creation and development of activities oriented in particular towards technology, research and innovation, environmental protection, and the improvement of the quality of life.</p>
<p>Decree No. 96-197 of 7 March 1996 on the internal regulations</p>	<p>Article 1: "Internal regulations shall be compulsory in industrial, commercial or agricultural undertakings, usually employing more than ten workers. The above workforce does not include day labourers, part-time workers, or temporary workers. However, as soon as it is posted, all the staff of the undertaking shall be subject to its internal regulations, including the workers mentioned in the previous paragraph.</p>	<p>ARISE must have internal rules (e.g. E&S policies and procedures) within the company.</p>
<p>Decree No. 96-894 of 8 November 1996 determining the rules and procedures applicable to studies relating to the Environmental Impact of development projects</p>	<p>Articles 2: The following are subject to environmental impact assessment:</p> <ul style="list-style-type: none"> ■ Projects located in or near risk areas or environmentally sensitive areas listed in Annex III of this decree. ■ (...) When a project, because of its nature, its dimensions, or the sensitivity of the site where it is to be carried out, is likely to harm the environment, the supervisory administration responsible for examining the technical file must first request authorisation from the Ministry of the Environment. <p>Annex 1:(Projects subject to environmental impact assessment)</p>	<p>The Project is a subject to the environmental impact assessment.</p>
<p>Decree No. 96-203 of 7 March 1996 on working hours</p>	<p>Article 1: "Subject to the rules relating to equivalence, the recovery of hours collectively lost, overtime and the permanent or temporary derogations provided for in Articles 13 and 14, the weekly working time may not exceed :</p> <ul style="list-style-type: none"> ■ 40 hours per week for non-agricultural businesses; ■ forty-eight hours per week for farms, establishments, agricultural enterprises and similar businesses, up to a maximum of two thousand four hundred hours per year. 	<p>ARISE shall comply with these requirements in relation to working hours at its site</p>

Regulation	Description	Relevance to the Project
	<p>Article 3: "Longer weekly hours, eligible for equivalence, are delimited as follows:</p> <ul style="list-style-type: none"> a) between 40 hours and a maximum of 44 hours for non-agricultural businesses; b) between 48 hours and 52 hours maximum for farms, establishments, agricultural enterprises and similar. Any hour worked in excess of the permitted attendance time, on an equivalent basis and as the case may be, shall be considered as overtime and paid as such; c) 56 hours for domestic staff and caretakers. 	
<p>Decree No. 96-894 of 8 November 1996 determining the rules and procedures applicable to studies on the environmental impact of development projects</p>	<p>Article 2: The following are subject to environmental impact assessment:</p> <ul style="list-style-type: none"> ■ projects located on or near risk areas or ecologically sensitive areas listed in Annex III of this decree. ■ (...) when a project, due to its nature, size, sensitivity of the site where it is to be carried out, is likely to harm the environment, the supervisory administration responsible for examining the technical file must first request authorisation from the Ministry responsible for the environment. <p>Annex 1: (Projects subject to environmental impact assessment).</p>	<p>ARISE is planning the design, construction and management of a 429 hectare economic and industrial zone within the AKOUPÉ-ZEUDJI industrial zone (PK24), thus this ESIA is necessary for the Project.</p>
<p>Decree n° 97-393 of 09 July on the creation and organisation of a public establishment of an administrative nature called the National Environment Agency of Côte d'Ivoire (ANDE)</p>	<p>Article 4: The mission of the National Environment Agency (ANDE) is:</p> <ul style="list-style-type: none"> ■ to ensure the coordination of the execution of development projects of an environmental nature; ■ to monitor and evaluate the Projects of the National Environmental Action Plan (PNAE); ■ Establish and manage a portfolio of environmental investment projects; ■ to participate, alongside the Minister for the Economy and Finance, in the search for financing for the PNAE; ■ ensure that environmental concerns are taken into account in development projects and programmes ■ ensure the establishment and management of a national environmental information system; ■ implement the impact assessment procedure and the environmental impact assessment of macro-economic policies; ■ implementing international conventions in the field of the environment; ■ establish an ongoing relationship with NGO networks. 	<p>In this case, ANDE is in charge of the validation of this ESIA Report.</p>
<p>Decree n°98-38 of 28 January 1998 on general hygiene measures in industrial environments</p>	<p>Article 1 of this decree specifies: "Any establishment or service where workers are employed within the meaning of Article 2 of the Labour Code, whatever its nature, whether public or private, is subject to the provisions of this decree.</p>	<p>ARISE must have clean and well-maintained premises (or site) for these workers, latrines, drinking water, etc.</p>

Regulation	Description	Relevance to the Project
Decree No. 98-40 of 28 January 1998 on the technical advisory committee for the study of questions concerning the health and safety of workers.	<p>Article 1: Powers of the Committee</p> <p>Article 2: Composition of the Committee</p> <p>Article 3 to 6: Operation of the Committee</p>	The committee should be established and should deal with matters relating to the health and safety of workers
Decree No. 98-43 of 28 January 1998 on installations classified for environmental protection	<p>Article 1: Factories, warehouses, building sites, quarries, underground storage, shops, workshops and, in general, installations operated or held by any natural or legal person, public or private, which may present inconveniences for the convenience of the neighbourhood, for health, safety, public health, for agriculture, for the protection of nature and the environment and for the conservation of sites and monuments, are subject to the provisions of the present decree.</p> <p>Article 3: Installations that present the dangers and inconveniences referred to in Article 1 are subject to prior authorisation for environmental compliance by the Minister in charge of the Environment.</p> <p>The authorisation can only be granted if these dangers or inconveniences can be prevented by the execution of measures specified by order of the Minister in charge of the Environment.</p> <p>Article 4: Installations are subject to declaration which, although they do not present the dangers or inconveniences mentioned above, must nevertheless comply with the general requirements laid down for all installations for the protection of the interests mentioned in Article 1.</p>	The nature of the planned activities does not require ARISE to obtain authorisations from the Minister of the Environment and Sustainable Development and to implement measures to control environmental risks.
Decree No. 2005-03 of 6 January 2005 on Environmental Audit	<p>Article 3: "Every three years, enterprises, industries and works, or part or combination thereof, of public or private law, which are sources of pollution, and which have their own functional and administrative structure, are subject to environmental audit. The objectives are defined by the applicant. The scope is defined by the audit manager after consultation with the applicant.</p> <p>Article 19 and 20: Any natural or legal person who manages an installation or a work that constitutes a threat to the environment is obliged to systematically keep registers that help to provide proof of sound management of its activities.</p>	ARISE is required to keep records of discharge monitoring and carry out environmental audits for 3 years.
Decree n°2012-980 of 10 October 2012 banning smoking in public places and public transport	<p>Article 1 of this decree states that its purpose is to determine the public places and public transport where smoking is prohibited.</p> <p>Article 3 states that smoking is prohibited in public places and on public transport.</p> <p>Article 4 makes an inventory of enclosed or open public places. It mentions, in particular, company premises.</p> <p>Article 5 also mentions that all ancillary places commonly used by workers in the course of their employment, including corridors, lifts, stairways, toilets, lounges, dining rooms, shelters, and sheds.</p>	ARISE must provide smoking areas on its site or implement a smoking ban throughout its perimeter.
Decree n°2012-1047 of 24 October 2012 setting the terms of application of the polluter-pays principle as defined by law n° 96-766 of 03 October 1996	<p>Article 3: "The polluter-pays principle has the effect of making the polluter responsible for the expenses relating to the prevention, reduction and control of pollution, nuisances and all other forms of degradation as well as those relating to the restoration of the environment. It</p>	ARISE's responsibility is to restore the environment and repair any damage caused to it by its activity.

Regulation	Description	Relevance to the Project
	<p>makes it possible to set the rules for charging the cost of measures in favour of the environment".</p> <p>Article 7: The polluter-pays principle applies to procedures for eliminating all forms of pollution and nuisance, as well as to all activities that cause or are likely to cause damage to the environment. The polluter pays principle is applicable to the impacts of development projects and programmes in the context of the implementation of the recommendations of environmental and social impact studies, environmental audits, and inspections of classified installations.</p> <p>Article 20: Any natural or legal person whose actions or activities cause or are likely to cause damage to the environment shall use clean technologies for the restoration of the environment.</p> <p>Article 23: The polluter-pays principle applies when the classified installation is the source of the production of industrial discharges, non-biodegradable, or hazardous waste.</p>	
<p>Decree n°2015-346 of 13 May 2015 determining the list of infringements of the water code that may give rise to a transaction and infringements excluding any transaction</p>	<p>Articles 2 and 3 stipulate: Infringements include:</p> <ul style="list-style-type: none"> ■ taking water from the public domain in excessive quantities, without prior authorisation or declaration; ■ wasting water; ■ the discharge, dumping or flowing into surface waters, groundwater or the waters of the territorial sea, of waste or substances whose effects are harmful to health or cause damage to flora or fauna or alter the normal flow of water; ■ the deterioration of the quality of water or of hydraulic installations or works; ■ the offer to the public of water which does not comply with public health and hygiene standards, for human or animal consumption, whether free of charge or in return for payment. 	<p>ARISE shall take all steps to avoid the violations of the requirements of this law</p>
<p>Decree n°2016-791 of 12 October 2016 on neighbourhood noise emissions</p>	<p>In accordance with the Environment Code, this decree sets out, while specifying the application criteria, the rules applicable to the various categories of noise pollution, in particular noise from households, establishments or premises and events of a professional, commercial, craft, cultural or sporting nature, as well as to any natural or legal person broadcasting on a regular or exceptional basis or not.</p>	<p>ARISE will have to take the necessary measures to comply with the threshold values of the WHO and Ivorian law by reducing noise, vibration and odour pollution.</p>
<p>Decree n°2017-125 of 22 February 2017 on air quality;</p>	<p>Article 2: "The purpose of this decree is to set standards for ambient air quality and for gases and particles emitted by motor vehicles and motorbikes.</p> <p>Article 3: "This decree applies to: classified installations referred to in Article 1 of Decree No. 98-43 of 28 January 1998 on classified installations for the protection of the environment, installations other than classified installations, operated or owned by any natural or legal person, public or private, which are the source of emissions of smoke, particles or pollutants into the air, any machine and means of transport equipped with combustion engines, any act likely to alter air quality.</p> <p>Article 4: Defines the limit values for air pollutants.</p>	<p>ARISE shall comply with the specifications of this decree.</p>

Regulation	Description	Relevance to the Project
Decree No. 2020-423 of 29 April 2020 setting the conditions for deforestation and land clearing in the national forest estate.	Article 1: The purpose of this decree is to define the conditions for clearing forests.	The requirements of this decree regarding deforestation or land clearing will have to be taken into account by ARISE
	Article 2: Any deforestation or clearing of a forest not provided for in the forest management plan is subject to prior authorisation issued by the forestry administration, upon request by the applicant to the nearest forestry service.	
	Article 4: The response to the request for authorisation shall be notified to the applicant within two (2) months from the date of receipt. Beyond the two (2) month period, the silence of the administration shall be deemed to be acceptance.	
	Article 5: Authorisation for forest clearance is subject to the maintenance of at least 30% of the area concerned. It is issued free of charge	
Decree n°2020-424 of 29 April 2020 defining the modalities of protection of sacred forests	Article 1: The purpose of this decree is to define the modalities for the protection of sacred forests.	ARISE must avoid the destruction of sacred forests
	Article 2: Sacred forests are identified, created and managed by individuals or rural communities, in accordance with the principles and rules of their customs.	
	Article 8: Deforestation or clearing activities or any other activities tending to degrade sacred forests are prohibited. The harvesting and collection of fruits and non-timber forest products and the exploitation of environmental services in sacred forests can only be done with the prior agreement of the individuals or rural communities concerned. Scientific research activities may be allowed under the same conditions.	
Decree No. 2020-955 of 9 December 2020 on the powers, composition and operation of the Occupational Health and Safety Committee	Article 2: In all establishments or companies usually employing more than fifty employees, the employer must create an Occupational Health and Safety Committee, In companies with less than or equal to fifty employees, the staff delegation plays the role of Occupational Health and Safety Committee, in accordance with article n°61.12 of the Labour Code	ARISE must have an occupational health and safety committee at its site.
Order N°01164/MINEF/CIAPOL/SDIIC of 4 November 2008 relating to the regulation of discharges and emissions from installations classified for environmental protection	Article 6: Spreading of water and sludge	ARISE must comply with the required standards prior to any water and sludge application during water treatment activities.
	Article 7: Subject to the specific provisions for certain activities, gaseous effluents must respect limit values according to the maximum authorised hourly flow.	ARISE must ensure that air emissions comply with the regulatory requirements in force in Côte d'Ivoire.
	Article 9: General provisions on noise.	ARISE is required to put in place provisions relating to noise management to comply with regulatory requirements.

Regulation	Description	Relevance to the Project
	<p>Article 10: Monitoring of discharges and emissions.</p>	<p>ARISE is required to put in place arrangements for the management and monitoring of discharges and emissions to ensure compliance with the regulations in force.</p>
<p>Order n°1240 of 28 October 2009 on the procedure for issuing approval to companies providing services for the recovery, reclamation and/or disposal of industrial waste</p>	<p>Article 30: All records relating to compliance with the requirements of the environmental permit to operate shall be kept by the organization for five (5) consecutive years.</p> <p>Article 4: "The service providers in charge of industrial waste removal must be approved by the competent authorities of the ministry in charge of the environment.</p>	<p>ARISE shall establish the procedure for record keeping.</p> <p>The management of industrial waste produced on the Project site will have to be entrusted to companies approved by CIAPOL.</p>
<p>Law No. 87-806 concerning the protection of the cultural heritage (28 July 1987). Article 7 of the Constitution of 23 July 2000.</p>	<p>Articles 58 and 59 of this law state that the exportation of listed goods is forbidden: "the exportation of cultural goods is forbidden. It may however be authorised in exceptional circumstances, for a limited period and with clear conditions for return."</p> <p>Article 59 lays down that, in addition to the provisions concerning listed objects in Article 58, "the exportation of art objects and antiques by any individual is subject to prior authorisation, which is provided in the form of an export certificate. The State may in such a situation assert its right to acquisition within conditions set by decree." Unfortunately, over thirty years later, there is still no decree for implementing this law, even though statistics provided by the Museum of Civilisations (one of the two national museums charged with delivering export certificates) show that an average of five hundred objects leave the national territory every month.</p> <p>Article 4: General inventor of National Cultural Heritage is updated annually;</p> <p>Article 7: Protective measures may relate to a building, the surroundings of buildings and ruins of land;</p> <p>Article 9 and 10: A safeguard perimeter can be set up to preserve a building. Then any works construction or modification are subject to authorisation by Cultural Affairs Minister;</p> <p>Article 14: Any proposed works to a listed building other than maintenance must be authorised by Cultural Affairs Minister;</p> <p>Article 36: A maximum period of 1 year is granted for archaeological salvage operations, surveys and excavations before landscaping;</p> <p>Article 37-38: Archaeological excavation projects are subject to authorization. The findings of excavation must be declared to Ministers for Culture and Mining. Any discoveries can be claimed by the state;</p> <p>Article 42: Any excavator is required to restore land to its original condition. If land cannot be restored compensation must be paid;</p> <p>Article 44: The state, with owner consent may carry out excavations in the interests of history, archaeology;</p> <p>Article 45: Buildings exhumed as a result of excavations may be classified or expropriated for public utility;</p>	<p>ARISE with construction works must comply with the requirements of this Law.</p>

Regulation	Description	Relevance to the Project
	<p>Article 55: Movable cultural property is considered national property. Export of movable cultural property is prohibited; and</p> <p>Article 61-64: Relates to sanctions for exports on classified objects.</p>	
<p>Decree 71-74 of 16 February 1971 on state and land procedure.</p>	<p>Article 1: All real estate transactions, all subdivisions, all parcelling out of land and, as a general rule, all agreements relating to real estate rights, which are subject to a compulsory domain or land procedure. In order to be legal, any occupation of land must be justified:</p> <ul style="list-style-type: none"> ■ For rural land, by the possession of a provisional or definitive concession title issued by the Minister of Agriculture or by a precarious and revocable occupation authorisation and revocable, issued by the Minister of the Interior or his representative. This authorisation may give rise to a permanent concession or a long lease; ■ For urban land, by the possession of a provisional or definitive concession title issued by the Minister of Construction and Urban Planning who may delegate his powers to the prefects. <p>Article 2: Rights relating to the use of land, known as customary rights, are personal to those rights are personal to those who exercise them and may not be transferred in any capacity whatsoever. No one may be a transferee of the said rights throughout the territory of the Republic.</p> <p>Article 3: Any allocation of rural land shall be subject to the following formalities:</p> <ul style="list-style-type: none"> ■ Application to the territorially competent administrative authority; ■ An administrative enquiry in accordance with the regulations in force; ■ Granting of a precarious and revocable occupation authorisation, or granting of a temporary concession; ■ Registration of the land in the name of the State to clear it of all third party rights and guarantee the origin of the property; ■ Statement of development; and ■ Granting of a final concession, either in the form of a transfer of ownership or in the form of a long lease. 	
<p>Decree No. 2013-224 of 22 March 2013 regulating the purging of customary rights over land for land for general interest; and</p>	<p>Article 5: The purging of customary rights shall be carried out by the State acting on its own behalf or on behalf of the local authorities. It shall be carried out by administrative means. Legal persons governed by private law may, exceptionally, on the basis of a purge agreement with the State, purge customary rights. Any contract relating to customary rights, concluded between holders of such rights and legal persons under private law who are not previously bound by a purge agreement with the State, is deemed never to have been concluded.</p>	

Regulation	Description	Relevance to the Project
Decree No. 2014-25 of 22 January 2014 amending Decree No. 2013-224 of 22 March 2013 regulating the purging of customary land rights for general interest	<p>Article 6: The purging of customary land rights gives rise to compensation, in cash or in kind, and indemnification for the holders of such rights.</p> <p>The compensation corresponds to the loss of the source of income that can be derived from the land. It can be done:</p> <p>It can be done:</p> <ul style="list-style-type: none"> ■ In kind, through the allocation, free of charge, of plots of land, whether equipped or not, known as "compensation plots": ■ In cash; or ■ In kind and in cash. <p>The compensation corresponds to the destruction of the crops and expenses existing on the agricultural land at the time of the purge. Compensation is determined on the basis of the scale set by the Ministry of Agriculture.</p> <p>Article 7: The scale of the purge for the loss of land use rights is fixed as follows:</p> <ul style="list-style-type: none"> ■ Autonomous District of Abidjan: two thousand CFA francs per square metre. 	
Order No. 208/PM/CAB of 12 April 2016 establishing the deadlines, costs, and procedures applicable to the one-stop shop for construction permits	<p>Article 13: The application for a building permit as well as the application for all the acts involved in the issuance of the building permit shall be submitted to the one-stop shop for building permits.</p>	ARISE will need to submit a planning application to the Planning Permit Office for the planned buildings.
Inter-ministerial order n°453/MINADER/MIS/MIRAH/MCLU/MMG/MEER/MPEER/SEPTEMBRE of 01 August 2018 setting the scale of compensation for destruction or planned destruction of crops and other investments in rural areas and slaughter of livestock	<p>Article 4: The compensation calculations shall be established by the competent services of the Ministries concerned on the basis of this order and after they have carried out the observations in accordance with Article 4 of this order. The calculation methods and the results obtained in accordance with the attached calculation formulas shall be sent to the person affected and to the person civilly responsible for the destruction;</p> <p>Article 6: The criteria to be used to calculate the value of compensation for each type of crop are as follows:</p> <ul style="list-style-type: none"> ■ the area destroyed (ha) ; ■ the cost of establishing the hectare (FCFA/ha); ■ the optimal scientific density per hectare in number of plants (number of plants/ha); ■ the maintenance cost per hectare of crop (FCFA/ha); ■ the yield per hectare (kg/ha); ■ the current market price per kilogram in CFA francs at the time of destruction for annual crops. ■ the prevailing field price per kilogram in CFA francs at the time of destruction for perennial crops; ■ the age of the plantation; ■ the number of years of immaturity required before entering production; and 	ARISE will take this order into account for the compensation of crops on site. Compensation must be paid before the work begins.

Regulation	Description	Relevance to the Project
	<ul style="list-style-type: none"><li>■ the moral prejudice suffered by the victim, representing 10% of the amount of the compensation. <p>Article 12: The payment of the compensation shall be borne by the natural or legal person civilly responsible for the actual or future destruction. In the event that the destruction results from the execution of a public work, the payment of the compensation shall be the responsibility of the Project owner</p>	

2.2.3 International Conventions, Protocols and Agreements

Table 2-3 International Treaties Applicable to the Project

Name of the Convention	Date of Ratification by Côte d'Ivoire	Objective of the Convention	Aspects Related to the Project
Bamako Convention on the Ban of the import into Africa and the control of Transboundary movement and management of hazardous wastes within Africa, January 31, 1991	09/06/1994	This Convention defines strict rules concerning waste imports and movements, which have to be authorised by the authorities of each country and prohibiting the import of any hazardous (including radioactive) waste.	Waste management during the construction and operation of the Project.
United Nations Convention on Biological Diversity (CBD), Rio de Janeiro, June 1992	24/11/1994	The objective of this Convention is to develop national strategies for the conservation and sustainable use of biological diversity and a fair and equitable sharing of benefits arising from genetic resources.	Protection of the biodiversity in the surrounding of the site during construction, operation, and decommissioning phases of the Project.
Basel Convention on the control of transboundary movements of hazardous wastes and their disposal, March 22, 1989	09/06/1994	International treaty that was designed to reduce the movements of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less developed countries.	Waste management during the construction and operation of the Project.
United Nations Framework Convention on Climate Change (UNFCCC) of 1992	14/11/1994	The objective of the Convention is to stabilise greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.	Greenhouse gases emission during construction and operation of the Project.
Ramsar Convention on wetlands of international importance, February 2, 1971	02/02/1993	Treaty on the conservation and sustainable utilization of wetlands, to stem the progressive encroachment on and loss of wetlands now and in the future, recognizing the fundamental ecological functions of wetlands and their economic, cultural, scientific, and recreational value	Rivers and/or associated wetlands to be considered within the Project development.
The Convention for the Safeguarding of the Intangible Cultural Heritage	20 January 2006	A UNESCO Treaty, its purpose to: <ul style="list-style-type: none"> ■ Safeguard the intangible cultural heritage. ■ Ensure respect for the intangible cultural heritage of the communities, groups and individuals concerned. ■ Raise awareness at the local, national and international levels of the importance of the intangible cultural heritage, and of ensuring mutual appreciation thereof. Provide for international cooperation and assistance.	Cultural Heritage within the Project Aol

Name of the Convention	Date of Ratification by Côte d'Ivoire	Objective of the Convention	Aspects Related to the Project
Convention for the Protection of the world cultural and natural heritage ³	30 January 1981	Article 4: Each State Party to this Convention recognizes that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage	Cultural Heritage within the Project Aol
International Covenant on Economic, Social and Cultural Rights	16 December 1966	Article 15 recognises the right of everyone to participate in cultural life, enjoy the benefits of scientific progress and to benefit from the protection of the moral and material rights to any scientific discovery or artistic work they have created. Parties must also work to promote the conservation, development and diffusion of science and culture	Cultural Heritage within the Project Aol
Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict	14 May 1954	Focuses on the protection of cultural property in armed conflict. It requires that States Parties adopt protection measures during peacetime for the safeguarding of cultural property. Such measures include the preparation of inventories, preparation for the removal of movable cultural property and the designation of competent authorities responsible for the safeguarding of cultural property.	Cultural Heritage within the Project Aol

The Republic of Cote d'Ivoire is a member of the United Nations (UN) and the African Union – as a result, it has ratified many UN Human Rights Conventions and has therefore made an international commitment to ensure they meet the universal standard for human rights⁴. Moreover, Côte d'Ivoire has signed a number of human rights agreements and conventions that should be considered by ARISE during the Project construction. Table 2-4 provides an overview of the treaties ratified by Côte d'Ivoire .

Table 2-4 International human rights treaties ratified by Côte d'Ivoire

Topic/Name of Agreement	Date of ratification
Human rights	
International Bill of Human Rights of 10 December 1948	Included in the constitution (updated in November 2016)
African Charter on Human and Peoples' Rights	1992
Committee on Economic, Social and Cultural Rights (CESCR)	1992
Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (ICCPR)	1992
Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment	1997

³ <https://whc.unesco.org/en/conventiontext/>

⁴ Claiming Human Rights. 2010. Claiming Human Rights - in Cote d'Ivoire. Available at: <http://www.claiminghumanrights.org/cotedivoire.html?L=0>

Topic/Name of Agreement	Date of ratification
International Covenant on Civil and Political Rights (CCPR)	1992
Convention on the Rights of Persons with Disabilities (CRPD)	2014
Prevention of discrimination on grounds of race, religion or belief and protection of minorities	
International Convention on the Elimination of All Forms of Racial Discrimination (CERD)	1973
Women's rights	
Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)	1995
Convention on the Political Rights of Women	1995
Prevention of torture and inhuman or degrading treatment or punishment	
International Convention on the Abolition of Forced and Compulsory Labour	1960
Convention and its Optional Protocols on the Abolition of Slavery and Similar Practices	1961 and 1970
Convention against Torture and Inhuman or Degrading Treatment or Punishment (CAT)	1995
Children's rights	
African Charter on the Rights and Welfare of the Child	2004
Convention on the Rights of the Child (CRC)	1991
Convention concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour, commonly known as the Worst Forms of Child Labour Recommendation	2003
Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict (CRC-OP-AC)	2012
Optional Protocol to the Convention on the Rights of the Child on the sale of children child prostitution and child pornography (CRC-OP-SC)	2011
Labour and human rights at work	
International Convention on Equal Treatment	1961
International Convention on Freedom of Association	1961
International Convention on Labour Inspection in the Industrial and Commercial Sectors	1987
International Convention on the Minimum Age of Workers	2003
International Convention on the Right to Organise and Collective Bargaining	1961

2.3 International Guidelines and Practices

The Project considers involvement of international lenders and therefore international standards, Good International Industry Practices (GIIP) must be applied to the Project when developing the E&S studies.

A summary of the main environmental and social performance standards required by financial institutions being considered through the ESIA process in relation to this Project is presented in Table 2-5.

Table 2-5 International Guidelines and Standards

The Equator Principles

The Equator Principles (EP) are a risk management framework, adopted by financial institutions, for determining, assessing and managing environmental and social risk in projects and are primarily intended to provide a minimum standard for due diligence to support responsible risk decision-making.

- *Review and categorisation*
- *Social and environmental assessment*
- *Applicable environmental and social standards*
- *Environmental and social management systems and equator principles action plan*
- *Stakeholder engagement*
- *Grievance mechanism*
- *Independent review*
- *Covenants*
- *Independent monitoring and reporting*
- *Reporting and transparency*

The EP require that Projects conduct an ESIA process in compliance with the IFC Performance Standards on Environmental and Social Sustainability. The IFC Performance Standards are discussed below.

Also considered: The EP Guidance on Implementation of the EP during the Covid-19 Pandemic⁵.

World Bank Group Safeguard Policies

The World Bank has ten environmental and social Safeguard Policies that are used to examine the potential environmental and social risks and benefits associated with World Bank lending operations. The guidelines and standards serve as relevant standards for international good practice. These safeguard policies include the following:

- *Environmental Assessment*
- *Natural Habitats*
- *Forests*
- *Pest Management*
- *Physical Cultural Resources*
- *Involuntary Resettlement*
- *Indigenous Peoples*
- *Safety of Dams*
- *Projects in International Waterways*
- *Projects in Disputed Areas*

International Finance Corporation (IFC) Performance Standards

The Performance Standards are directed towards providing guidance on how to identify risks and impacts, and are designed to help avoid, mitigate and, manage risks and impacts as a way of doing business in a sustainable way.

- PS1 Assessment and management of environmental and social risks and impacts*
- PS2 Labour and working conditions*
- PS3 Resources efficiency and pollution prevention*
- PS4 Community, health, safety and security*
- PS5 Land acquisition and involuntary resettlement*
- PS6 Biodiversity conservation and sustainable management of living natural resources*
- PS7 Indigenous peoples*
- PS8 Cultural heritage*

⁵ https://mcusercontent.com/29a35e3ae7f22268fce033de7/files/47780b41-c7e5-4319-8ac4-a4736a01ab89/1620009666_GN_in_EPA_Format_Final.pdf

IFC Environmental, Health and Safety (EHS) Guidelines

The Environmental, Health and Safety (EHS) Guidelines are technical reference documents that address IFC's expectation regarding the industrial pollution management performance of projects. This information supports actions aimed at avoiding, minimising, and controlling EHS impacts during the construction, operation, and decommissioning phase of a project or facility.

In the context of the proposed Project, the World Bank Group General EHS Guidelines (2007) and the EHS Guidelines for Water and Sanitation (2007) are the most relevant.

In addition to the above:

A Good Practice Handbook for Companies Doing Business in Emerging Markets⁶

Interim advice for IFC clients on safe stakeholder engagement in the context of covid-19⁷

OECD Common Approaches

The OECD Recommendation of the Council on Common Approaches for Officially Supported Export Credits and Environmental and Social Due Diligence (the "Common Approaches"), which was adopted on 28 June 2012 and revised by the OECD Council on 6 April 2016 (OECD/LEGAL/0393), sets common approaches for undertaking environmental and social due diligence to identify, consider and address the potential environmental and social impacts and risks relating to applications for officially supported export credits as an integral part of Members' decision-making and risk management systems.

While an OECD Recommendation is not legally binding, it expresses the common position or will of the whole OECD memberships, and therefore may entail important political commitment for Member governments. This Recommendation applies to officially supported export credits for projects with a repayment term of two years or more.

The general objectives of this Recommendation are to: i) Promote coherence between policies regarding officially supported export credits and policies for the protection of the environment, including relevant international agreements and conventions, thereby contributing towards sustainable development; ii) develop common procedures and processes relating to the environmental review of projects benefiting from officially supported export credits, with a view to achieving equivalence among the measures taken by the Members and to reducing the potential for trade distortion; iii) promote good environmental practice and consistent processes for projects benefiting from officially supported export credits, with a view to achieving a high level of environmental protection; iv) enhance efficiency of official support procedures by ensuring that the administrative burden for applicants and export credit agencies is commensurate with the environment protection objectives of this Recommendation; and v) promote a level playing field for officially supported export credits.

Source: ERM, 2022

2.4 Specific Regulatory Limits (Côte d'Ivoire and IFC)

2.4.1 Air Quality

The IFC guidelines stipulate that national standards should be used where these are reasonable and based on sound science. Therefore, where a national standard for a specific pollutant in a specific averaging period exists, that was used as the applicable air quality standard. However, in practice it is advisable to also use standards and guidelines from the IFC, World Health Organisation (WHO) and other bodies to demonstrate robust compliance. Cote d'Ivoire ambient air quality standards are shown in Table 2-6 below.

⁶ https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_stakeholderengagement_wci_1319577185063

⁷ https://www.ifc.org/wps/wcm/connect/30258731-0e7d-4cb2-863c-a6fb4c6d0d95/Tip+Sheet_Interim+Advice_StakeholderEngagement_COVID19_May2020.pdf?MOD=AJPERES&CVID=n9s.b9a

Table 2-6 Ivorian Ambient Air Quality Guidelines

Pollutant	Averaging Period	Limit / Guideline (in µg/m ³) ⁸
NO ₂	24-hour	200 (standard)
Particulate Matter (PM ₁₀)	1-year	20 (objective) 40 (standard)
	24-hour	50 (standard)

IFC EHS guidelines are provided in Table 2-7 below.

Table 2-7 IFC Ambient Air Quality Guidelines

Pollutant	Averaging Period	Limit / Guideline (in µg/m ³)
NO ₂	1-year	40 (guideline)
	24-hour	200 (guideline)
Particulate Matter (PM ₁₀)	1-year	70 (Interim target-1) 50 (Interim target-2) 30 (Interim target-3) 20 (guideline)
	24-hour	150 (Interim target-1) 100 (Interim target-2) 30 (Interim target-3) 50 (guideline)

Source: IFC, 2007

2.4.2 Noise

The noise impact assessment has been undertaken with due regard to, and in accordance with, the following acoustics standards and guidelines:

- Ivorian Ministry of the Environment guidance on noise emissions REPUBLIQUE DE COTE D'IVOIRE - MINISTERE DE L'ENVIRONNEMENT ET DE LA FORET ARRETE N° 01164 du 04 Novembre 2008 - Portant Réglementation des Rejets et Emissions des Installations Classées pour la Protection de l'Environnement, Article 8 and 9.
- International Finance Corporation's (IFC) Environmental, Health, and Safety (EHS) Guidelines – Section 1.7 – Environmental Noise Management (IFC EHS Guidelines 1.7 Noise).
- International Organisation for Standardisation (ISO) 9613-2:1996 (ISO9613:2) - Acoustics - Attenuation of Sound during Propagation Outdoors - Part 2: General Method of Calculation.
- BS 5228-2:2009 + A1:2014 Code of practice for noise and vibration control on construction and open sites.

Article 8 and 9 of the Cote d'Ivoire Ministry of the Environment guidance on noise emissions (Republique De Cote D'Ivoire - Ministere De L'environnement et de la Foret - Arrete N° 01164 du 04 Novembre 2008 - Portant Réglementation des Rejets et Emissions des Installations Classées pour la Protection de l'Environnement) outlines the following noise criteria in Table 2-8, with the relevant criteria for the Project setting roughly translates to “Areas with predominance of industrial activities”.

⁸ Republique De Côte D'Ivoire (2017) Decret No. 2017-125 du 22 Fevrier 2017 Relatif a la Qualitie de L'air

Table 2-8 Noise Criteria - Ministry of the Environment

Zones	MOMENT OU PERIODE DE LA JOURNEE		
	JOUR (en décibel)	PERIODE INTERMEDIAIRE	NUIT (en décibel)
Zone d'hôpitaux, zone de repos, aires de protection d'espace naturel	40	35	30
Zones résidentielles ou rurale, avec faible circulation de trafic terrestre, fluvial ou aérien.....	45	40	35
Zones résidentielles urbaine.....	50	45	40
Zones résidentielles urbaine, avec quelques ateliers ou centres d'affaires, ou avec des voies de trafic terrestre, fluvial, ou aérien assez importantes ou dans les communes rurales.....	60	55	45
Zones à prédominance d'activités commerciales, industrielles.....	70	65	50
Zones à prédominance industrielles.....	75	70	60

The Cote d'Ivoire Ministry of the Environment noise guidance defines different time periods as per below:

- Day – 07:00 – 18:00
- Periode Intermediaire/ Evening – 18:00 – 22:00
- Night – 22:00 – 07:00.

Reference is also made to the IFC General EHS guideline (2007). When considering these standard and IFC EHS Guidelines, noise shall not exceed the levels present in Table 2-9 or result in an increase in baseline noise level by more than 3 dB(A) at the Nearest Sensitive Receptors (NSR)'s located off-site.

Table 2-9 Regulatory and IFC Limit Values for Ambient Noise Levels at Receptor Level

Reference	World Bank / IFC Guideline (one hour LAeq)	
Type of Area	Industrial	Residential
Day-time (07:00 – 22:00)	70 dBA	55 dBA
Night-time (22:00 – 07:00)	70 dBA	45 dBA

Specific Construction Noise Criteria

There are no national standards for noise from temporary sources such as construction. At international level, besides the IFC general noise guideline, good practice for construction can be taken from the UK construction noise guidance document BS 5228⁹, limiting noise levels (LAeq,12h façade)

⁹ BS 5228-2:2009 + A1:2014 Code of practice for noise and vibration control on construction and open sites.

from construction activities below 65 dB at the nearest noise sensitive receptors during the daytime. Any construction works carried out at night will be limited to quiet activities which do not produce significant levels of noise at the nearest Noise Sensitive Receptors (NSRs). Construction noise levels above the criterion are considered to be Medium or above, whilst construction noise levels which do not exceed the criterion are considered to be Small or below. This is summarised in Table 2-10.

Table 2-10 Magnitude of Noise Impacts from Construction Activities

Magnitude	Day-time Noise Level at Property Façade, $L_{Aeq,12h}$ (db)
Negligible	< 65
Minor	65-70
Moderate	70 - 75
Major	> 75

3. METHODOLOGY AND WORK PROGRAMME

3.1 Approach

The ESIA for the Project follows a systematic process of predicting and evaluating the impacts the Project might have on the physical, natural, cultural, social and socio-economic environment, and identifying measures that ARISE will need to take to avoid, reduce, remedy, offset or compensate for adverse impacts, and to provide benefits where possible.

The overall approach is shown schematically in Figure 3-1 and the key steps are described briefly in the subsequent sections; further references are made to other parts of this ESIA Report in which the specific topics are more specifically addressed.

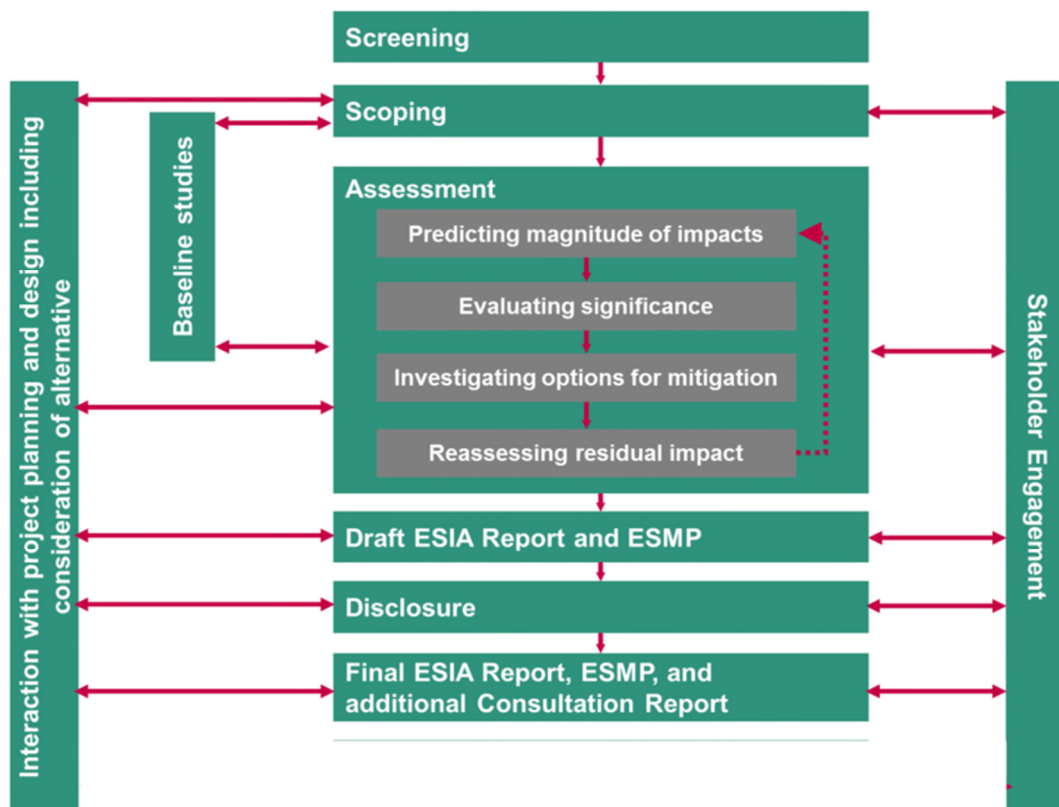


Figure 3-1 ESIA Approach

3.2 Screening

Screening was the first stage in impact assessment, in which the need for assessment and the level of assessment required is determined for a particular project. For this Project, a separate Screening Study was not required because by the nature of the Project and its categorisation (e.g., Category A or Category B as per IFC), it is clear that a Scoping is needed followed by a full ESIA.

3.3 Scoping

The Scoping phase is intended to identify the likely significant impacts of the Project (i.e., the “key topics” of concern), and to define the appropriate approaches to be followed in the ESIA process for:

- Gathering further baseline information to assess these impacts; and
- Determining corresponding mitigation measures.

During this process, the Project itself was defined as well as the structures, installations and activities that will be included in the Area of Influence are established. The Scoping process also involved obtaining input from local public and other stakeholders about their views and concerns on the Project.

The Scoping studies were undertaken due to the design changes, implemented to avoid impacts (i.e., physical displacement impacts). The Scoping studies were completed in accordance with good international practice (whilst subject to certain limitations due to the COVID pandemic). The final Scoping report was submitted to ARISE on 30 November 2022. The key findings of the Scoping are taken in account during the development of this ESIA Report. A summarised table of all E&S matters that were assessed and consequently scoped in or out is presented in Appendix B of this Report.

On 14th June 2022, ENVAL, on behalf of ARISE submitted to ANDE the Project Notice. ANDE acknowledged the receipt of the notice and attached documents on the 14th June 2022. ANDE conducted a site visit on 20th of September together with ARISE and ENVAL. As a result, ANDE issued a ToR for the ESIA for this Project in October 2022. This ESIA Report (document in hand) was developed based on the received ToR from ANDE and completely follows the structure suggested by the ANDE in the ToR, as described in the Table 1-1.

3.4 Impact Assessment

ERM's approach in conducting this ESIA study is to work closely with the two parties of this PPP (i.e., ARISE and Ministry of Commerce, Industry and SME Promotion) so that the environmental and social assessment is an iterative process. In this way, all E&S considerations and mitigation and enhancement measures are embedded into the design, where possible, to maximise efficiencies.

The methodology for the baseline data collection is based on a targeted analysis of the various components of the natural and socio-economic environment that are likely to be modified by the Project. The baseline data collection methods are further described in the Section 5.1.2.

The impact assessment methodology follows strategy suggested by ANDE in the ToR as well as international good practice as recognised and accepted by Equator-Banks, IFC and other international lenders. The potential impacts of the Project (i.e., the interaction of elements of the physical, biological, cultural or human environment) are assessed against the baseline conditions of the Project's Area of Influence (further addressed in the Section 5.1). Further description of the assessment method is presented in Section 6.1.

ERM has worked closely with ARISE during the early stages of the Project so that the design already includes many technical measures to avoid/minimise impacts, (e.g. International Best Practices and Smart Design Solutions Tools). Such "embedded measures" are considered as part of the existing Project design and not specified again as mitigation measures - they are anyhow already planned/obligatory. Additional mitigation measures to be implemented are addressed in the sections below of this ESIA Report.

4. PROJECT DESCRIPTION

This section provides a description of the Project summarizing Project alternatives, Project components and activities during the development, construction, and operation phases.

4.1 Project Background

4.1.1 Presentation of the Context of the Project

The industrial sector of Côte d'Ivoire is growing in recent years recording a sector growth of 9.7 % in 2019, increasing the share in the Gross Domestic Product (GDP) of Côte d'Ivoire to 26 %¹⁰. The Ivorian government has initiated an extensive industrial development programme as part of the National Development Plan (NDP, 2012-2015¹¹) to foster economic growth in Côte d'Ivoire. The aim of the NDP is to create new infrastructures and designated industrial economic zones (IEZs) which will support existing industrial zones (Yopougon, Vridi and Koumassi) and increase the number of permanent jobs available in the country. This is intended to significantly improve economic outlooks and the ability to compete on global markets.

The development of the new industrial area of Akoupé-Zeudji PK24 aims to focus on processing of raw material generated in the country and to ease the pressure on the other industrial zones around the economic centre of the country; it will also promote the development of competitive infrastructure in the country. It is anticipated that this will contribute to the development of alternatives to imports, and the creation of an ecosystem promoting the establishment of clusters allowing synergy between large companies and Small and Medium Enterprises (SMEs). The government has planned to build two multi-level road intersections to ensure good traffic flow for the PK24 IEZ.

The PK24 is divided into a number of large plots of 100-250 ha and has been available for private investors and operators for development according to the implementation strategy employed by the Government (i.e., Public-Private Partnership (PPP) strategy). As a part of the PPP strategy, ARISE was appointed by the government to develop 429 ha of the PK24 IEZ (i.e., the Project).

AGEDI¹², the Industrial Infrastructure Management and Development Agency of Côte d'Ivoire, is responsible for designing, implementing, and ensuring the management of industrial development instruments such as land and industrial zones. AGEDI was the authority leading the compensation process for the land area of PK24. Furthermore, AGEDI has confirmed to ARISE that the evaluation and compensation have already been paid according to national regulations authority on the PK24 area, which includes the Project area.

The 940 ha area of PK24 is divided into different plots and allocated to various industries and developers.

4.1.2 Project Owners

The Ministry of Commerce, Industry and SME Promotion together with ARISE are the Project Owners as a part of the PPP. ARISE has been mandated by the Ivorian Ministry of Commerce, Industry and SME Promotion to carry out the design, construction, and management of this 429 ha Project. On 18th of March 2020 ARISE signed the Development Agreement¹³ with the Republic of Côte d'Ivoire

¹⁰ Government of Côte d'Ivoire, 2020, retrieved from: https://www.gouv.ci/_actualite-article.php?recordID=10852

¹¹ Republic of Côte d'Ivoire, 2012: Plan National de Développement, retrieved from: <http://extwprlegs1.fao.org/docs/pdf/ivc147254.pdf> (22.07.2022)

¹² On 30.03.2022 was created the Industrial Infrastructure Management and Development Company (SOGEDI), replacing the Industrial Infrastructure Development Fund (FODI) and the dissolved Industrial Infrastructure Management and Development Agency (AGEDI). In this ESIA Report this agency is still referred as AGEDI.

¹³ "Accord de Développement du Projet de Zones Economiques Industrielles a Abidjan, Ferkessedougou et San Pedro" entre l'État de Côte d'Ivoire le Conseil Regional du Tchologo le Port Autonome de San Pedro et La Societe Arise Ivoire, Août 2020

(represented by Le Ministre auprès du Premier Ministre, Charge du Budget et du portefeuille de l'Etat) on development of the Project¹⁴.

4.1.3 Project Proponent

4.1.3.1 ARISE Group

ARISE Group is a company formed by the joint venture partnership of Africa Finance Corporation and OLAM International (a Singapore based company). ARISE Group is a Pan-African industrial ecosystem developer who designs, creates, finances, and builds interconnected infrastructure, in addition to providing logistical solutions. It started its activities in Gabon with the creation, in partnership with the Gabonese State, of the Nkok Special Economic Zone. Today, it wishes to implement other ambitious projects of industrial zones across the continent. To do so, ARISE Group has reorganised its business into three separate business lines: ARISE Port & Logistics ("ARISE P&L"), ARISE Integrated Industrial Platforms ("ARISE IIP") and ARISE Infrastructure Services ("ARISE IS").

4.1.3.2 ARISE in Côte d'Ivoire

ARISE Ivoire SE (hereafter "ARISE") is the Ivorian subsidiary of the ARISE Group and is developing several large-scale infrastructure projects as part of a major strategic partnership with the Republic of Côte d'Ivoire. Under this partnership, ARISE will design, build, finance and operate several infrastructures with following goals¹⁵:

- Increase in industrial GDP;
- Improvement of the balance of trade (competitiveness of Ivorian exporting sectors); and
- Creation of thousands of high value-added jobs in the country (technicians, managers, skilled workers, etc.), especially in peri-urban areas where demographic pressure is strong

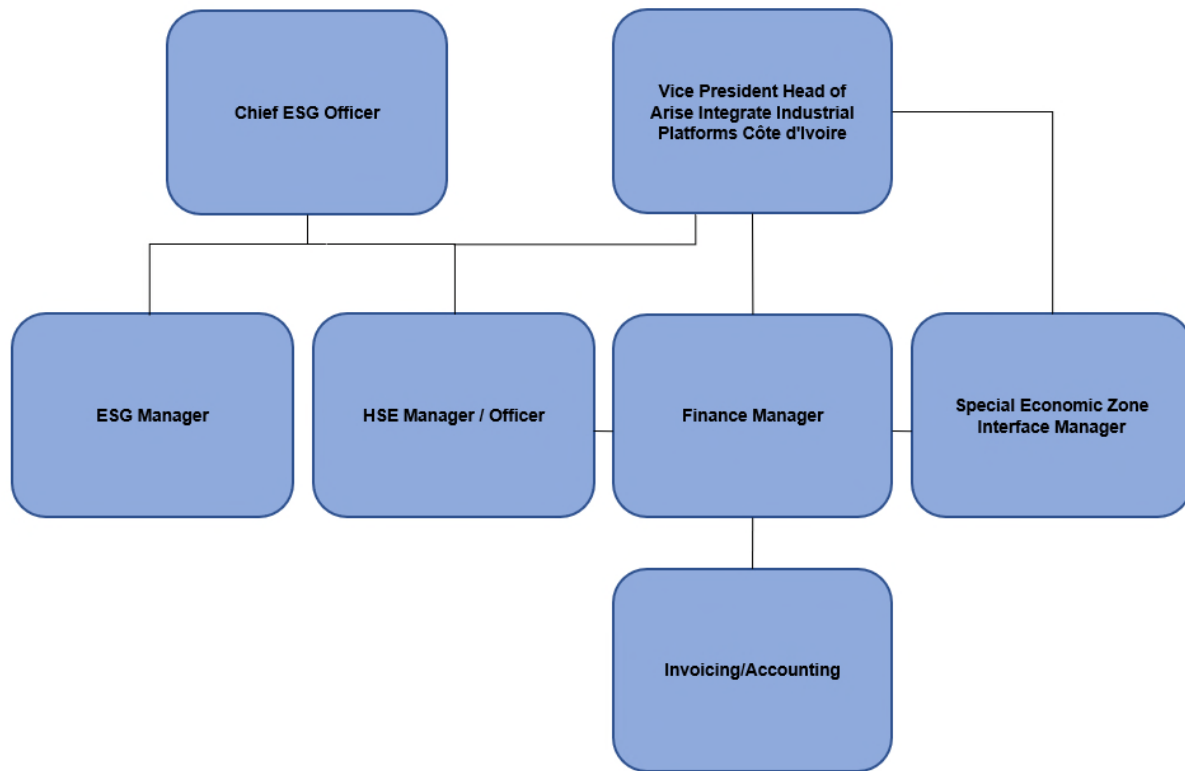
ARISE has been mandated to carry out the design, construction, and management of this 429 ha Project. ARISE is formally registered in Côte d'Ivoire under the RCCM number CI-ABJ-2020-M-07742 (Registre de Commerce et de Crédit Mobilier).

4.1.3.3 ARISE Project Team

During construction and operation, the Project will be resourced with a Quality, Health, Safety and Environment (QHSE) team. The organisational chart from ARISE is shown in Figure 4-1 below. Additional team members are currently in the process of being recruited and will be added to this scheme at a later time.

¹⁴ As per December 2022, information provided by ARISE.

¹⁵ [ARISE Ivoire, partenariat stratégique avec la République de Côte d'Ivoire](#)



Source: Prepared by ERM based on ARISE provided information (2022)

Note: HSE – Health, Safety and Environment; ESG – Environmental Social Governance

Figure 4-1 Organisational Chart HSE Team ARISE

Table 4-1 below provides further description on the roles and responsibilities of the QHSE team.

Table 4-1 QHSE Team Roles and Responsibilities

Role	Responsibility Description
Vice President Head of ARISE Integrated Industrial Platforms Côte d'Ivoire	The Vice President Head of ARISE IPP Côte d'Ivoire has the primary responsibility to ensure that all the workplaces under their jurisdiction adhere to the policy and review them annually.
Chief ESG Officer of ARISE IIP	The Chief ESG Officer is accountable for ensuring implementation and compliance with ARISE policies and procedures and the QHSE requirements. The Chief ESG Officer is in charge of coordinating the activities of all personnel involved in the contract and ensuring conformity with their Safety Procedures. The Chief ESG Office will work closely with the ESG Manager and the Contractor Project Manager who will assigning work and responsibilities. The Contractor Project Manager is responsible to ensure day to day implementation and operational control for the provisions described in the ARISE Policies.
ESG Manager	The ESG Manager is in-charge is responsible for the reviewing and updating of the Construction Phase plan. The ESG Manager will develop QHSE Management System, QHSE Rules and Regulations and Safe Work Practice for the Project and monitor its implementation and compliance. The ESG manager is responsible for the organisation of the necessary training sessions. The ESG Manager shall Report directly to the Chief ESG Officer.

Role	Responsibility Description
HSE Manager / Officer	<p>The HSE Manager/Officer acts as a healthy, safety and environment champion, helping to establish a positive QHSE culture among workers. In addition, the HSE Manager/Officer is responsible to assess the adequacy of existing site specific HSE operational controls and to recommend improvements. The HSE organises HSE training for workers, maintains the Emergency Preparedness and Response plans for QHSE related events and conduct all drills or exercises necessary to support the plans.</p> <p>The HSE Manager/Officer is responsible to ensure day to day implementation and operational control for the provisions described in the ARISE Policies. He has the duty to be aware of the Project's Health and Safety Plan, safe construction methods and the relevant risk assessments and safety requirements. He has the responsibility to ensure that employees under his direct supervision are working in compliance with the requirements set out by the QHSE Plan.</p>
Special Economic Zone (SEZ) Interface Manager	<p>The SEZ Interface Manager is responsible for the coordination and management of a Project's interactions with its participants. This includes ensuring that all Project tasks and tasks within the Project are completed in a timely and accurate manner, and that all Project stakeholders are aware of their responsibilities and deadlines.</p>
Finance Manager	<p>The Finance Manager is responsible for assigning roles and responsibilities within the Finance Team. The Finance Manager is responsible for preparing the Project budget and cost forecasts.</p>
Invoicing/Accounting	<p>Invoicing and Accounting is responsible for accounting treatment for inventories, including the determination of cost, the subsequent recognition of an expense and any write-downs to net realisable value.</p>

4.1.3.4 ARISE E&S Policies

In their Health, Safety and Environment (HSE) policy¹⁶, ARISE is committed to providing a safe and healthy working environment for its employees, subcontractors, and visitors in Côte d'Ivoire. Prior to commencement of construction activities, the selected EPC subcontractors will have to share their safety management plan and other plans with ARISE. ARISE will then review and validate the received plans and verify if they integrate well with ARISE's internal vision and requirements of this ESIA Report. The HSE obligations will be underpinned by a number of corporate- and Project-level management procedures, listed below:

Arise IIP Group-Level policies, plans and procedures¹⁷:

- Environmental, Social & Governance Policy;
- Ethical Recruitment Policy;
- Smoking, Drug & Alcohol Use Policy;
- Sexual Harassment Policy;
- Environmental Sustainability Policy;
- Health and Safety Policy;
- Sustainability Charter;
- Information Security Policy;
- ARISE Policy Manual;
- Excluded Activities Policy;
- Sustainable Procurement Policy;

¹⁶ [Sustainability - Arise IVOIRE](#)

¹⁷ [About Arise Integrated Industrial Platforms \(Arise IIP\)](#)

- Risk Management and Internal Audit Policy;
- Code of conduct;
- Grievance mechanism (external and internal);
- Environmental and Social Management System; and
- Life Saving Rules.

Further necessary Project E&S plans and procedures are specified later in this ESIA Report. The embedded measures that are already in place and will be developed by ARISE following their policies are described in section 0 and others that will be required as a mitigation measures to address the impact assessment findings are described in section 10.10.

The implementation of the Project-specific safety management programme will be based on a safe system of work including, but not limited to, risk assessment and mitigation, standard operating procedures, emergency response plan and permit to work system.

4.2 Project Justification

4.2.1 Industrial Zones in Côte d'Ivoire

The creation of new IEZs in Côte d'Ivoire is based on the 1969 Abidjan Urban Development Plan¹⁸ and the goal of the industrial sector is to contribute around 40 % to the GDP in 2022. The aim is to promote industrial manufacturing in country and to provide up to 100,000 jobs by 2025 and 350,000 jobs by 2030 in the sector.

The new PK24 will be one of four industrial areas within greater Abidjan including Koumassi (120 ha), Yopougon (469 ha) and the Vridi Industrial Area (120 ha)¹⁹.

Further industrial zones within Côte d'Ivoire can be found in Bonoua (300 ha), Yamoussoukro (700 ha), San Pedro (511 ha), Bouaké (300 ha) on the Bouaké-Diabo axis, Korhogo (400 ha) as well as Assouba (50 ha) and Aboisso (90 ha)²⁰.

4.2.2 PK24 Industrial Zone

The Ministry of Commerce and Industry has declared in 2015 the creation of a new industrial zone (i.e., PK24) as a national priority. The PK24 is located adjacent to the Autoroute du Nord (A3) north-west of Abidjan and encompasses an area of 940 ha. The PK24 is set to be the biggest such zone in the country. The establishment of this zone was announced by the authorities in 2015, in an agreement between the Minister of Economy, Finance and Budget, the Minister of Commerce and Industry as well as the Minister of Construction, Housing, Sanitation and Urbanism.

Concretely, PK24 is designed to respond to the key challenges of industrialisation and local transformation for the development of a competitive and sustainable Agri-value chains in Côte d'Ivoire.

The 940 ha PK24 zone is divided into numerous smaller plots, some of which are already assigned for different developers and industries. Thus, currently some industries are in different stages of implementation (e.g., design, development, or operation). However, none of these ongoing developments is specifically within the Project. The 429 ha of the Project are split into three plots, two plots are located in the north while the third plot is in the south-east of the PK24 zone.

¹⁸ Bureau National d'Etudes Techniques et de Développement, 1969: Scheme of Abidjan, found in Koutoua, 2019: Planification Urbaine et Développement du Grand Abidjan (p.150), retrieved from: <https://halshs.archives-ouvertes.fr/tel-02435354/document> (22.07.2022)

¹⁹ <https://www.agedi.ci/zones/Abidjan>

²⁰ <https://www.agedi.ci/zones/Interieur>

Figure 4-2 provides an overview of the industries that are already in PK24 and in operation or final stage of the development. The industry constructions within PK24 are ongoing, thus the status of the existing industries is subject to quick changes.

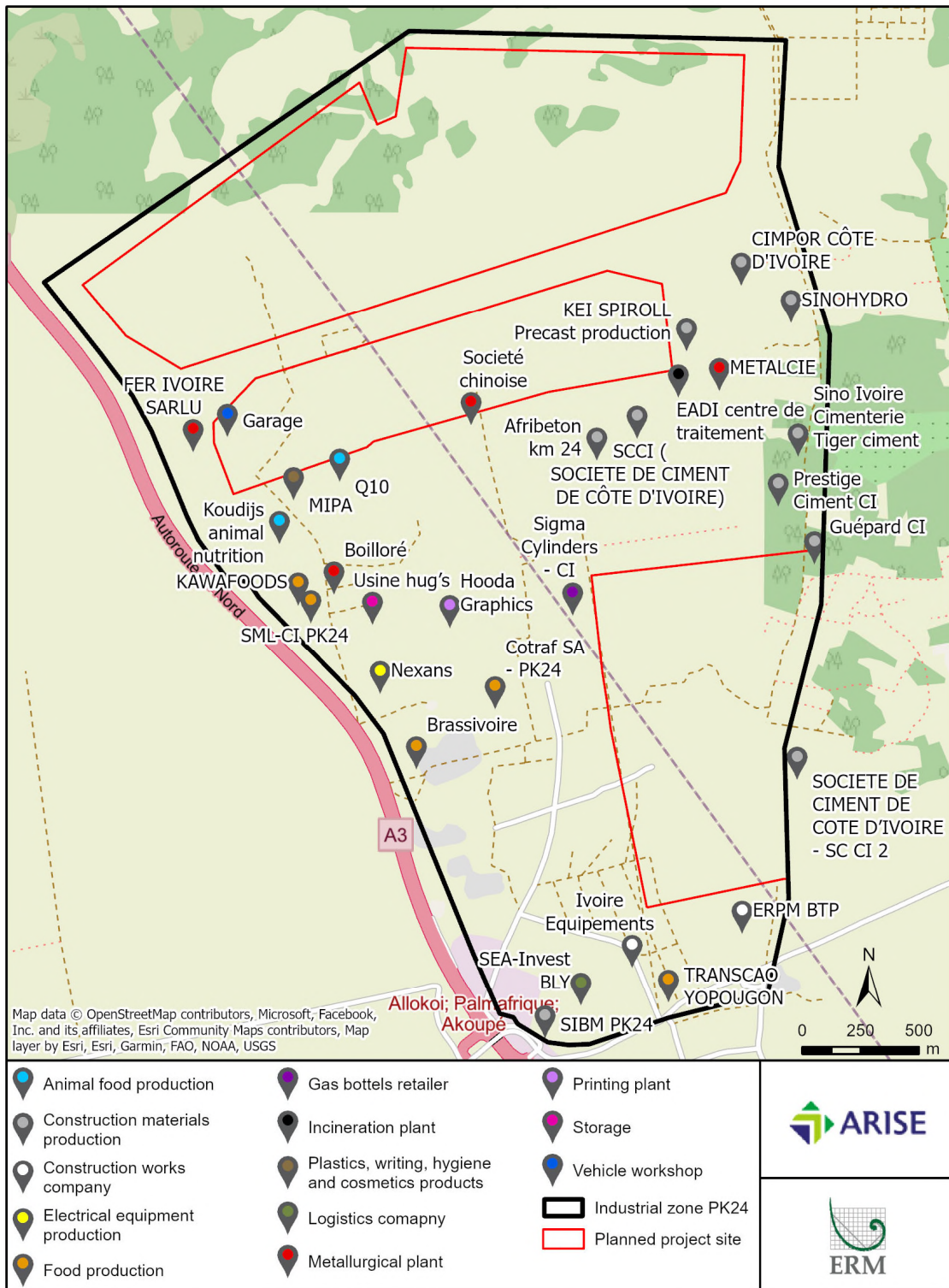


Figure 4-2 Industries in the PK24 (November 2022)

4.2.3 The need for the Project

ARISE has been allocated 429 ha of PK24 land for the development of basic infrastructure (such as standard factories, warehouses, administrative buildings, logistics and parking centres, commercial buildings, internal road networks, drainage, and sewerage, etc.) and will prepare all utilities, in order to accommodate the industrial units and companies.

The Project IEZ dedicated to value addition and import substitution in Côte d'Ivoire with the clustering of agro-allied businesses that are guided by the potential offered by industrialisation. The Project development is primarily intended to relieve pressure on industrial areas around the country's economic centre, with commercial, residential, and recreational development, and will also promote the following outcomes the development of competitive industrial infrastructure in the country for the processing of Ivorian main agricultural products, in particular cashew nuts, rubber, cotton, steel, pharmaceuticals and other light industries. Also, any others deemed appropriate by agreement with the mainly export-oriented parties and the substitution of imported goods with products from local industries located in the PK24 industrial zone, the valorisation and transformation of local products.

The Project aims to directly replace importing industries and strengthen local production, transforming local commodities and logistics services into exportable goods and products. The Project is expected to have the capacity to accommodate up to 100 tenant companies. In this sense, ARISE will be responsible for general management of the Project within which each of the industrial units will be liable for the construction of the special infrastructure required according to the specific design of its industry and for obtaining the necessary environmental permits and approvals, as well as for the operation of its own facility.

4.3 Project Overview

4.3.1 Location

The Project is located in the southern part of Côte d'Ivoire, within the Abidjan Autonomous District (AAD), on the boundary between Anyama sub-prefecture and Songon sub-prefecture (Figure 4-3). The Project has a total area of 429 ha (hereafter referred as the "Project area") and consists of several blocks of 244 ha (Phase 2), 93 ha (Phase 1, Zone 1) and 92 ha (Phase 1, Zone 2). The Project plots are situated in the northern and south-eastern area of the PK24 as shown in Figure 4-4. The Project lays about 6 km north-west of the economical capital Abidjan, adjacent to the A3 highway, connecting Abidjan to Yamoussoukro (political capital), as shown in Figure 4-5.

The Project can be accessed via northern motorway and several access roads within PK24 (some already built, some under construction, and others are only planned). The A3 highway also connects the Project with the Abidjan Seaport and Abidjan International Airport (both located in the south).



Figure 4-3 Project Location Overview

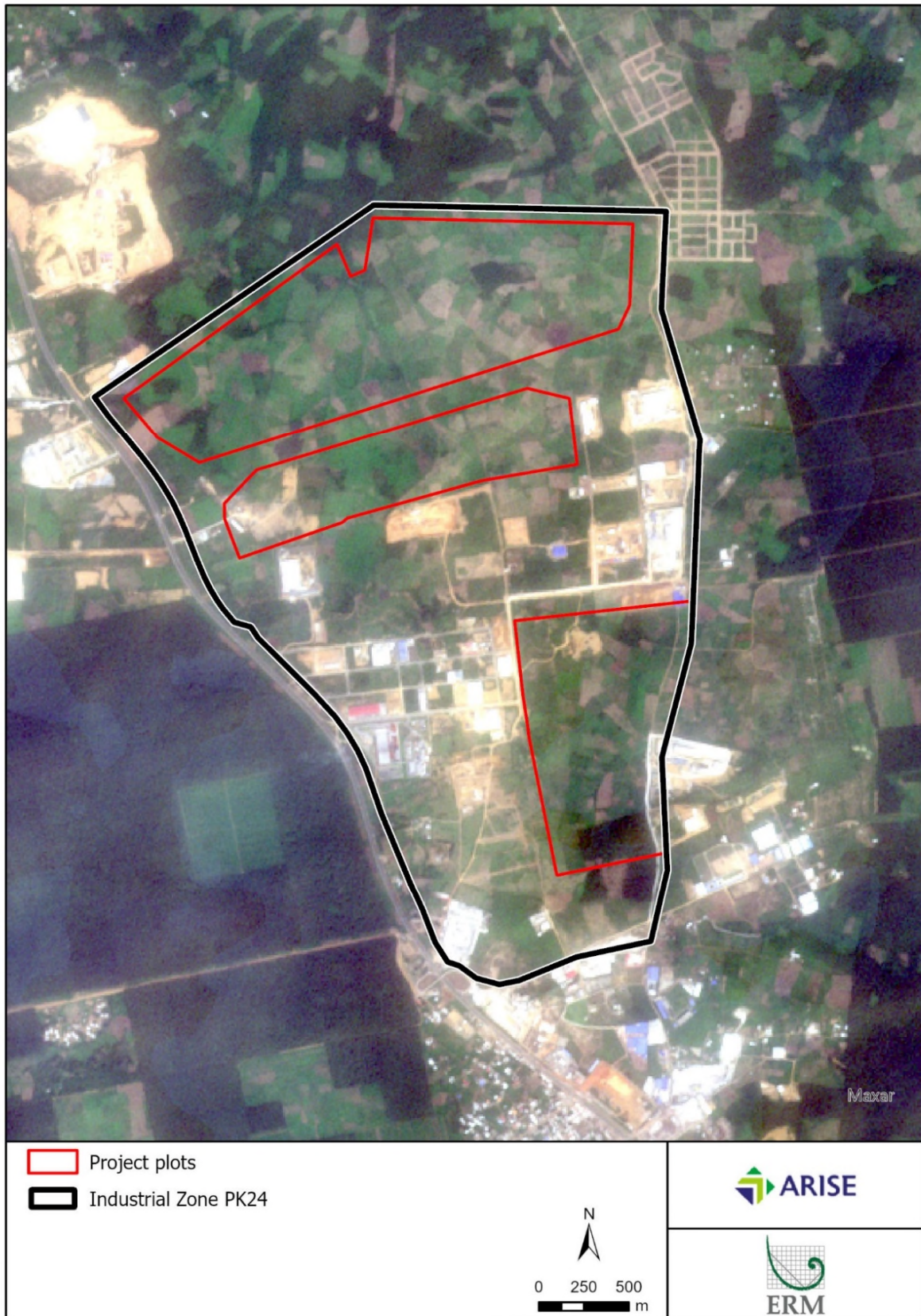


Figure 4-4 PK24 and Project Area Overview Map

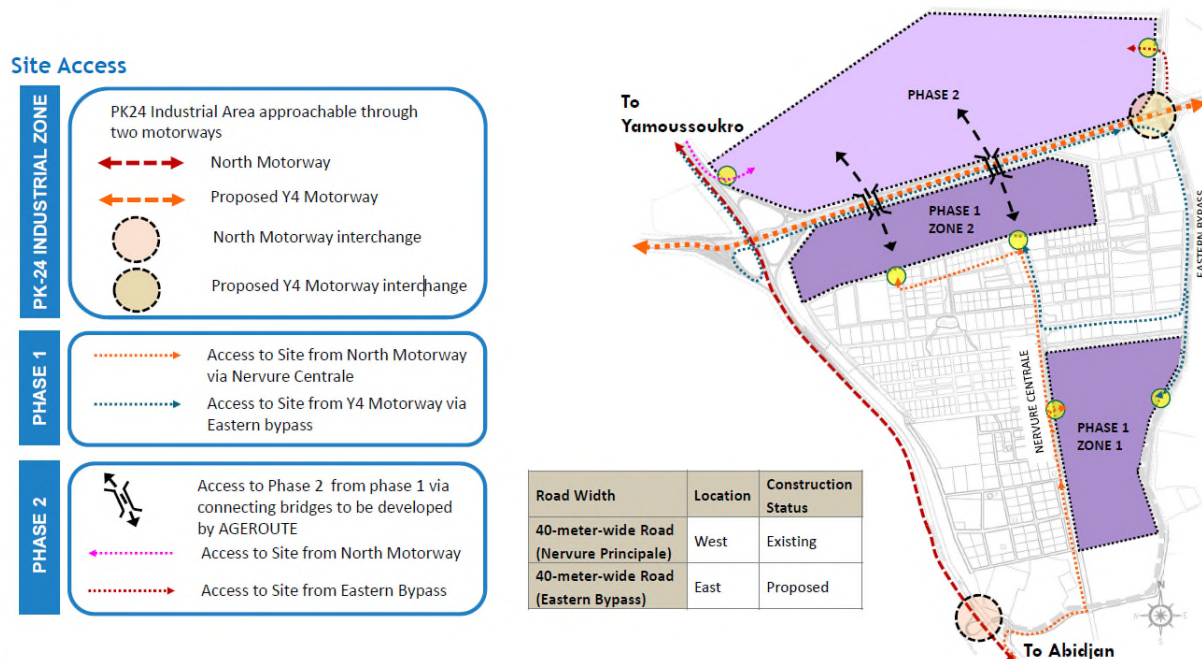


Figure 4-5 Project Access

Source: ARISE, 2022

4.3.2 Project Master Plan

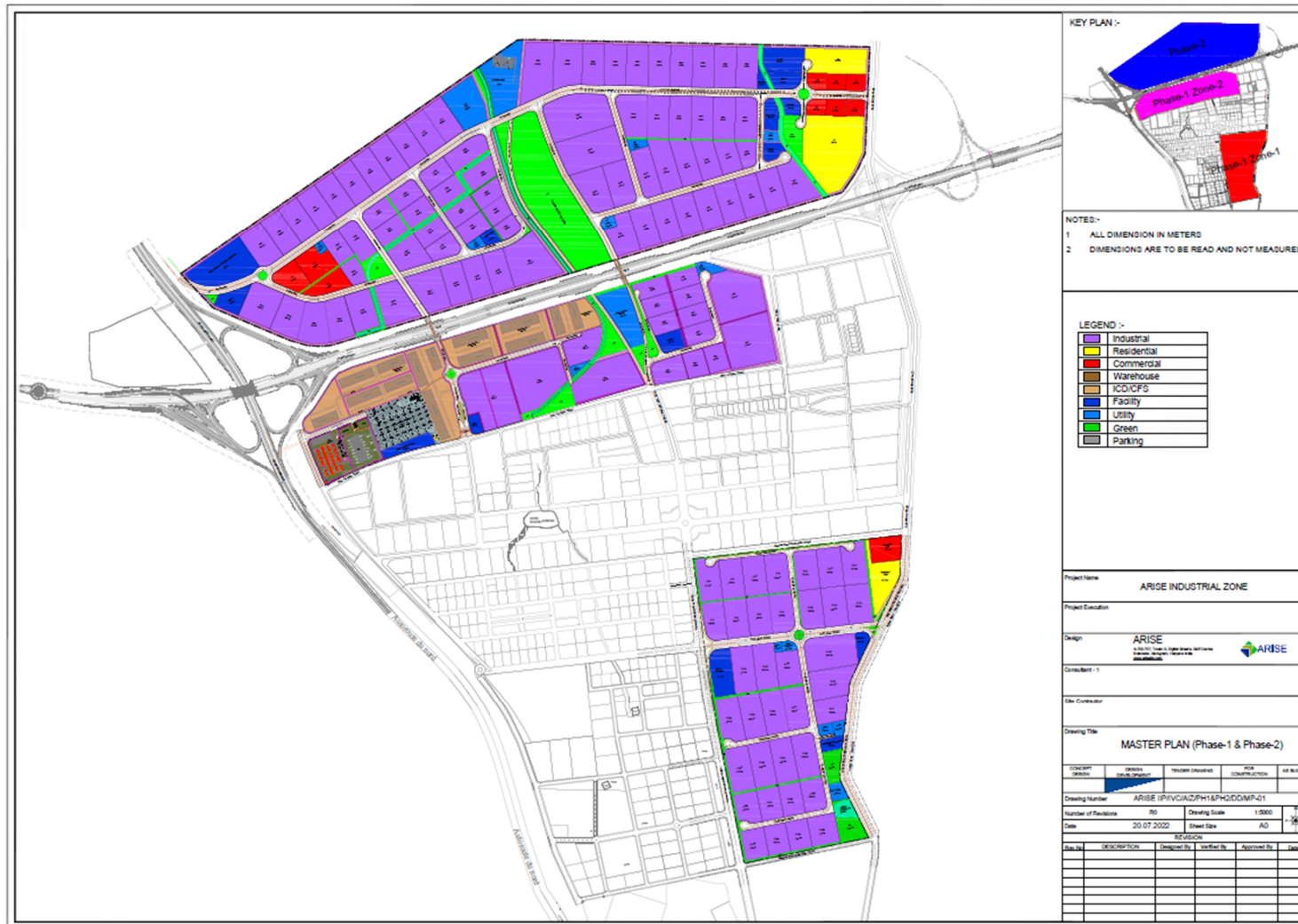
ARISE developed a Master Plan for the Project which defines the different uses of within the 429 ha. The Master Plan represents the projection on which industries types of the future tenants of 429 ha will be located where. The target industries planned to be operating within the Project include light construction, steel, pharma, rubber, agriculture (e.g., cashew, cassava, fruits, and vegetables processing). Within the scope of the Project, ARISE will construct only the basic infrastructure (such as standard factory shells, warehouses, administrative buildings, logistic and parking centres, commercial buildings, internal road networks, drainage, and sewerage, etc.) for the 429 ha and prepare all utilities to be ready for the enterprises who decide to settle in. It will be responsibility of each particular enterprise to construct the required special infrastructure based on their specific project design, and to obtain the necessary environmental permits and approvals as per Ivorian regulations.

Figure 4-6 provides an overview of the Project Master Plan as per September 2022. It shows the planned location for different zone types within the Project footprint:

- **Industrial:** Plots allocated for the enterprises of the target industries (e.g., cashew nut sector, rubber, cassava starch, construction material, pharmaceutical industries, and other manufacturing activities);
- **Residential:** Housing for direct and indirect jobs generated by the industries and related activities;
- **Commercial:** Shops, offices, banks, offices, and ATMs due to the influx of temporary or permanent employees;
- **Warehouse:** Storage spaces for the industries of the zone to store equipment, raw materials, and finished products;

- **ICD/CFS²¹**: A hub for the transshipment of marine cargo to inland destinations. It will include storage and consolidation facilities for cargo, maintenance centres for motor carriers and customs clearance services.
- **Facility**: The common administrative buildings to be constructed are as follows:
 - Single window office: A public service building to serve the administrative/documentation needs of the Project industrial zone. The building will also house customs services and government representatives;
 - Police Station: to enhance the safety and security of the Project industrial zone;
 - Fire Station: to serve the users of the Project industrial zone;
- **Utility**: Electricity supply and distribution system, water supply and management system, solid waste management system;
- **Green**: The green areas integrated into the residential space and the industrial zone where for individuals can experience nature in their daily life;
- **Parking**: The space to park vehicles for a relatively short period of time. The parking area in the northern west part of the Phase 1 Zone 2 of the Project is already existing (was constructed prior the Project).

²¹ ICD - Inland Container Depots; CFS - Container Freight Stations



Source: ARISE, September 2022

Figure 4-6 Project Master Plan

4.3.3 Project Components

The IFC Performance Standards require project proponents to identify and manage environmental and social risks and impacts within their Area of Influence (AoI). The AoI is defined in *Performance Standard 1*²² as:

- *The area likely to be affected by: (i) the Project and the client's activities and facilities that are directly owned, operated or managed (including by contractors) and that are a component of the Project; (ii) impacts from unplanned but predictable developments caused by the Project that may occur later or at a different location; or (iii) indirect project impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent.*
- *Associated facilities, which are facilities that are not funded as part of the Project and that would not have been constructed or expanded if the Project did not exist and without which the Project would not be viable.*
- *Cumulative impacts that result from the incremental impact, on areas or resources used or directly impacted by the Project, from other existing, planned or reasonably defined developments at the time the risks and impacts identification process is conducted.*

The appropriate level of assessment and management of risks and impacts is determined by the degree of control that the Project is able to exercise over its facilities or activities, and by the importance of the facilities or activities to the Project's successful operation. The first step in defining the Area of Influence is to classify the facilities and activities ('the Project components') that make up the Project. The following project component categories are considered for this Project:

- **Core component.** Facilities constructed and operated by the Project proponent (i.e., ARISE), and activities directly associated with their construction and operation. ARISE is expected to have full control of these components in terms of management of risks and impacts.
- **Associated component (associated facilities).** Third party facilities that have been constructed or expanded as part of the Project and that are essential to its successful operation. Activities associated with constructing and operating these facilities are also considered associated components. As the component is dependent on the Project, and vice versa, ARISE is expected to have a high level of control. Note that these types of components are considered to meet the definition of an associated facility per *Performance Standard 1*, e.g., to be constructed ad-hoc for the Project (access roads, grid connection line, etc.). However, for example, as the Project is located within the PK24 and will be serviced/benefiting by wastewater treatment plant and other facilities already constructed or planned to be part of the 940 ha industrial zone (i.e., grid substation, roads etc.) alongside with other enterprises, these facilities are not Project-associated facilities since these facilities already exist or will exist in any case.
- **Primary supply chain.** Third parties supplying goods or materials that are essential to the successful operation of the Project, on an ongoing basis. The level of control ARISE can exercise may be limited, especially for suppliers further along the supply chain. Primary supply chain elements for the Project include quarries providing gravel and/or other construction materials.
- **Other third-party activities.** Facilities constructed or operated by third parties, and associated activities, which are not essential to the successful operation of the Project. These are not within the Project's AoI. A possible exception would be a development that occurs as a result of the Project's existence, but that is not part of the Project itself. The potential for this kind of induced development to occur will be considered as part of the impact assessment. Note: within the Project footprint there are other third-parties activities (i.e., garage and hangar located in the northeast of the Phase 1 Zone 2) that were established before the Project. At this moment these are not considered as part of the Project, as it is not known if they will stay or be demolished.

²² IFC (2012): Performance Standard 1 Assessment and Management of Environmental and Social Risks and Impacts (p.i-ii). Available at: [PS1_English_2012.pdf \(ifc.org\)](#)

Classification of Project Components applicable to the Project is presented in Table 4-2.

Table 4-2 Classification of Project Components

Project Facilities and Activities	Classification	Timeline (Permanent – P Temporary – T)	Project Phase (Construction – C Operation – O)
Within the 429 ha (Project direct footprint)			
Office facilities	Core Component	P	C & O
Warehouse facilities	Core Component	P	C & O
Residential facilities	Core Component	P	C & O
Wastewater treatment plants (WWTP)	Core Component	P	C & O
Pipes from Enterprises to WWTPs	Core Component	P	C & O
Pipes from WWTPs to discharging points	Core Component	P	C & O
Wastewater Pumping Station	Core Component	P	C & O
Electrical System	Core Component	P	C & O
Temporary laydown Areas for Construction	Core Component	T	C
Access Roads	Core Component	P & T	C & O
Fuel Tanks	Core Component	P & T	C & O
Water Storage Tanks	Core Component	P & T	C & O
Vehicle Movements	Core Component	P & T	C & O
Hazardous Products Storage Area	Core Component	P	C & O
Green Areas	Core Component	P	C & O
Industrial Facilities	Core Component	P	C & O
Other Facilities for common administrative buildings (e.g., police, fire station etc.)	Core Component	P	C & O
Parking	Core Component	P	C & O
ICD/CFS ²³	Core Component	P	C & O
Within the 940 ha PK24			
Multi-level Road (within PK24)	Associated Facility	P	O
Access Roads (within PK24)	Associated Facility	P & T	C & O
Wastewater treatment plants	Associated Facility	P	O
Other			
Quarry	Primary Supply Chain	T	C
Power Evacuation and Transmission (municipal supply)	Other Third-Party Activities	P	C & O
Potable Water Supply (municipal supply)	Other Third-Party Activities	P	C & O
Sludge treatment Plant	Associated Facility	P	O
Landfill (for sludge deposit)	Other Third-Party Activities	P	O

²³ Inland Container Depots (ICDs) and Container Freight Stations (CFSs)

4.4 Land Ownership & Compensations

The area of PK24 prior to the development of the industrial zone was owned and used by private individuals for farming and other activities. The government then acquired all parcels for the development of the PK24 industrial zone.

The government via AGEDI allotted to ARISE an initial area of 329 ha (Phase 1 Zone 2 and Phase 2) as agreed in the “Accord de développement du projet de Zones Economiques Industrielles (ZEI) à Abidjan, Ferkéssédougou et San Pedro” on 24th November 2020. According to ARISE the remaining 100 ha (Phase 1 Zone 1) has also been allocated by AGEDI to ARISE.

ARISE were assured by AGEDI that evaluation and compensation of previous land-owners/users were already done. During the stakeholder engagement undertaken as part of the Scoping phase of this ESIA, no documentation and/or records were identified to confirm this. However, subsequently ARISE received and made available to the ESIA team several related documents: the “Convention de Purge des Droits Coutumiers de la Parcelle de 940 Hectares SISE au “PK 24” de l’Autoroute du Nord” dated on 8th of May 2020 and the “Certificat de Paiement de Purge” dated 9th of December 2020. These documents provide some information on how the landowners were identified and/or selected and how the compensation was conducted, but not comprehensively for the whole Project area. *Therefore, further due diligence and engagement with Project affected people is required to be aligned with the international standards, as it will be required after ESIA phase to document and understand the alignment of government resettlement process with IFC PS5.*

4.5 Project Alternatives

4.5.1 Alternative Location

No alternatives were considered for the Project location, since the development is in response to the recent zoning of the site for industrial use by the Ministry of Commerce, Industry and SME Promotion in Cote d’Ivoire, as part of the country’s National Development Plan. The PK24 has been zoned industrial and the Government of Cote d’Ivoire has allocated individual plots within the broader zoned area for this future use. The location of the industrial development is therefore governed by compatible zoning laws and regulations for Cote d’Ivoire concerning where such development can be located. These decisions are outside of ARISE’s level of control or management. ARISE has been allocated the selected development plots by the Ministry of Commerce and Industry of Côte d’Ivoire, with no alternative plot locations provided.

4.5.2 Alternative Development Type

No alternative development types have been considered, as the site is zoned for industrial use by the Government of Cote d’Ivoire (see section 4.4.1). Only compatible uses and activity types were considered in alignment with this land use zoning type (this essentially constitute a mixed use consisting of industrial, commercial, and residential components with retention of some open/green space).

4.5.3 Alternative Layouts Considered for the Project

4.5.3.1 Layout Planning to Avoid Displacement of Agricultural Activities

ARISE have been allocated three plots within the PK24, totaling 429 ha. The entire PK24 is specifically zoned and intended for commercial development and ARISE has an agreed Master Plan for development of the Project. The basis for this planning is that AGEDI has assured ARISE that the expropriation of any formal or informal land users within the PK24 has been conducted already.

4.5.3.2 Layout Planning to Avoid Social-Cultural Impacts

There are several local communities in the wider area around the PK24, with clusters of human settlement identified to the north, south-west and east (within a distance of 1-2 km of the Project area). As mentioned the entire PK24 is designated as a commercial development zone and ARISE has a Master Plan for the Project that has been approved. This planning is justified by AGEDI's commitment to acting in a way that minimises social and cultural repercussions on the PK24.

4.5.3.3 Layout Planning to Avoid Impacts to Key Biodiversity

The majority of the land cover within the Project site (429 ha) is agricultural land used mainly for growing cassava and maize crops, fallow lands as well as wood plantations. Therefore, these areas have been considered of low ecological importance as they are highly unlikely to support key biodiversity such as important habitats and species of fauna and flora of conservation importance (e.g., threatened species). The baseline biodiversity assessment as part of this ESIA suggests that these habitats are largely incompatible and unsuitable for key species of conservation importance screened.

Wetlands:

A single wetland was identified in the north-eastern corner of the Project area, which is in a poor/degraded condition and would be difficult to manage sustainably given the intended industrial use of the broader site. Within the wetland the globally 'Endangered' (EN) White-bellied Pangolin (*Phataginus tricuspis*) was identified as being hunted by local persons (this species has an affinity for dense vegetation growth associated with watercourses, with tolerance for some degree of habitat modification). The wetland is therefore the only habitat on the site that holds some biodiversity value, with all other habitats being heavily modified and considered of low biodiversity importance. Thus, any viable connectivity between habitats to support this species' ecological requirements are limited. Ultimately, a decision was made to develop the wetland. Pangolins are most likely to vacate the site and move into adjacent natural or modified habitats outside of the Project area, as construction activity noise and disturbance will most likely flush these animals from the wetland habitat on the site.

Forest Patches:

There are several patches of forest on the Project site, which are all degraded as a result of existing high level of anthropogenic disturbance at the site. Their highly fragmented nature (limited connectivity) makes them largely unsuitable for supporting conservation important/sensitive wildlife. Avoidance of forest patches was not considered feasible given the general objective to maximise development on the zoned industrial site, and furthermore the high levels of development on the broader site would not be conducive to the protection and sustainable management of these forest patches, which would then exist within a highly transformed landscape. Rather, it is recommended that 'green' space allocated to the Project according to the Master Plan layout (see section 4.3.2) be used to restore forest habitat or woodland on these sites where conditions allow for the establishment of typical forest species. Open/green spaces were selected based on the existing landscaped e.g., in steep areas that are difficult to develop (requiring extensive cut and fill).

Fallow Lands:

The fallow lands (old, cultivated lands now left to recover) were identified as hosting several woody and herbaceous species, one being the Yellow Iroko (*Milicia regia*), which is regarded as globally 'Vulnerable' (VU) in terms of the IUCN online database of threatened species. Leaving the fallow lands undeveloped to preserve these trees is not feasible due to the need to maximise development space on the site. An alternative would be to rescue and translocate these trees, which is not considered feasible due to the impracticality of relocating large established trees. Instead, a potentially viable alternative would be to cultivate saplings of these trees and plant these species within 'green' areas to be retained onsite as part of the Project Master Plan (see section 4.3.2) and potentially landscaping plan (e.g., tree replacement plan).

4.5.4 Alternative Designs for the Project

4.5.4.1 Basic Infrastructure

The site design is relatively straightforward, comprising of the standard basic infrastructure required to accommodate industrial units and companies at the site (such as standard factory shells, warehouses, administrative buildings, logistic and parking centres, commercial buildings, internal road networks, drainage, and sewerage, etc.). The service and utilities infrastructure²⁴ will be developed following standard designs and building procedures. No alternative infrastructure designs were considered, nor are these considered necessary.

4.5.4.2 Wastewater Management

The management of industrial and domestic wastewater from the industrial site and residential plots is a key environmental consideration, particularly from a water quality and water resources perspective (pollution/contamination risk).

A wastewater treatment plant (WWTP) for PK24 already exists. Thus, the Project considered following two options:

- a. To connect the Project and Project tenants to a wastewater treatment plant constructed for all PK24 industries and require the Project tenants provide pre-treatment where needed; or
- b. To construct an onsite wastewater treatment plant to serve only tenants of the Project.

Since there is a wastewater treatment plant (currently under construction by the CHEC company) in the north of the PK24, primarily ARISE considers to connect the Project infrastructure to this wastewater treatment plant. However, taking in account that the CHEC WWTP will be also treating discharges of all other industries in the PK24 and might run out of capacity, ARISE already looking into the second alternative as well. Therefore, the Master Plan already includes the areas (in Phase 2 and in Phase 1 zone 1) that could be potentially used for the construction of the wastewater plant facilities that will serve only industries of the Project. Polluting industries and large industrial units will be required to be fitted with in-house pre-treatment facilities to reduce pollution levels. The pre-treated wastewater generated will then be conveyed to the central treatment facility where it will undergo a complete aerobic activated sludge process treatment before the treated effluent is released back to the environment, after meeting the necessary compliances and water quality standards.

4.5.4.3 Stormwater Drainage and Precipitation Runoff

The Project will be connected to the existing PK24 drainage system where it is already developed and will include the considerations to those parts that are still under development for the PK24.

Within the Project area, storm water systems will be designed following standard good practice international guidelines and procedures and will be also guided by the design assumptions followed in the other developments (i.e., enterprises) in PK24 industrial zone. A holistic approach will be adopted while sizing the primary drainage network considering effects of both internal catchment and external catchment contributing to the Project area.

Open U-type surface drains with covers at approaches are planned to ease the maintenance and operation activities and these are preferred over the alternative of installing underground pipelines as these are prone to becoming blocked and are expected to become silted-up frequently during construction.

²⁴ Whilst the basic service/utility infrastructure will be built for each industrial stand, it will be responsibility of each particular enterprise that purchases or leases the sites to construct the required special infrastructure based on their specific project design and requirements, and to obtain the necessary environmental permits and approvals as per national regulations. Note also that the specific scope of industries and business to be located within the Project is still subject to change.

Multiple storm water outfalls will be considered to minimise the carrying capacity of the sections, which are generally favoured over fewer but larger outfalls that pose a greater risk of potential erosion/scouring of the environment below the outfalls due to the volume of water these convey.

4.5.4.4 Water Supply

Groundwater is the only option considered for the Project. No alternatives are available.

4.5.4.5 Fuel & Energy

ARISE has considered measures to reduce use of fossil fuels (primarily diesel for generators and construction equipment), and dependency on hydrocarbons as well as improve resource use efficiencies. ARISE is currently trying to negotiate the placement of a temporary electric power transmission line with CIE (Ivorian Electricity Company) during the construction phase to be able to have access to electricity and therefore reduce the need for diesel generators where possible. It could be feasible to have between 2 and 4 MW of electric capacity for the initial months of the works. Furthermore, during the construction phase ARISE does not foresee the need for night work, which will lower energy requirements in terms of night lighting for the construction zone.

4.5.4.6 Road Design

To ensure good traffic flow around the Project area, the Côte d'Ivoire Government has planned to build two multi-level road intersection for the PK24. This is outside of the control and scope of ARISE and therefore alternatives from a traffic management perspective have not been considered.

4.5.5 Supply Chain

The level of control that ARISE can exercise over its supply chain is considered limited, especially for suppliers further along the supply chain. Primary supply chain elements for the Project include quarries providing gravel and/or other construction materials. Geotechnical studies are still ongoing to inform quarry site selection. Suppliers to the Project have not yet been identified e.g., for construction materials and equipment. Furthermore, ARISE's sub-contractors will be also responsible for the supply chain of materials for the constructions once procured.

4.5.6 No-Project Development Scenario and Implications

The PK24, which ARISE is a key tenant of, is part of a National Development Plan for developing industrial zones. Under the No-Project scenario, the site would not be developed by the ARISE and would probably be developed for other industrial use by another applicant.

Thus, the conservation of any habitats or species on the site is highly unlikely to be achievable in the future. Given that the habitats are mostly modified or disturbed and of low biodiversity importance, whether the site is developed or not is probably of relatively low consequence for biodiversity at the local or regional level.

Traffic and social impacts would also not be prevented by a No-Go option, as the zoning status of the site presumes that some form of industrial development will take place in accordance with the National Development Plan for Côte d'Ivoire.

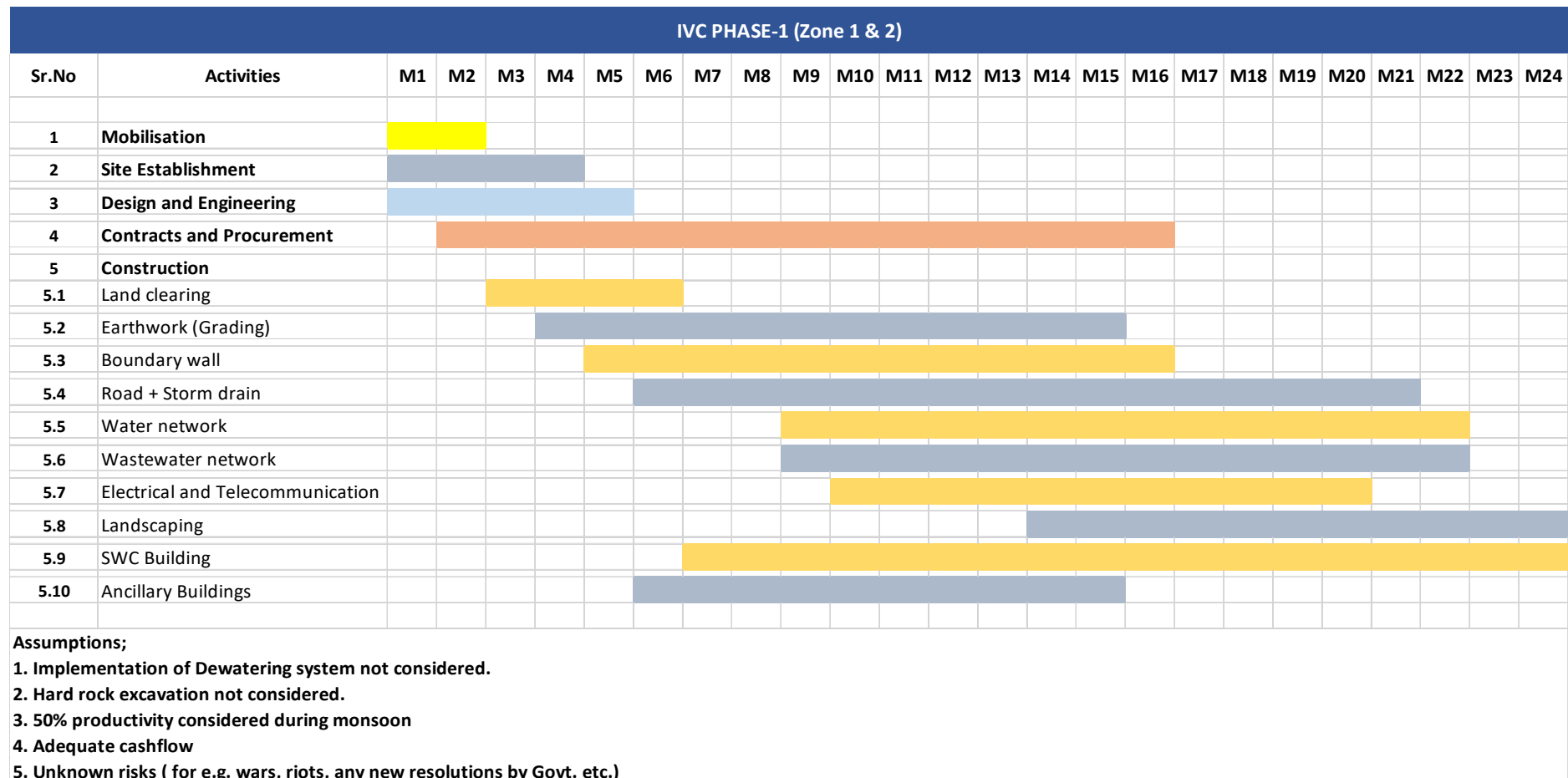
4.6 Schedule for the Implementation of Project Activities

4.6.1 Construction Activities and Sequencing

ARISE's role is to conceptualise the Project, build the basic infrastructure, provide management, carry out maintenance and promote the zone to investors. The construction of the Phase 1 area of the Project is scheduled to start in 2023, and Phase 2 in 2025; each phase has a duration of 24 months. Construction works to establish essential infrastructure will include:

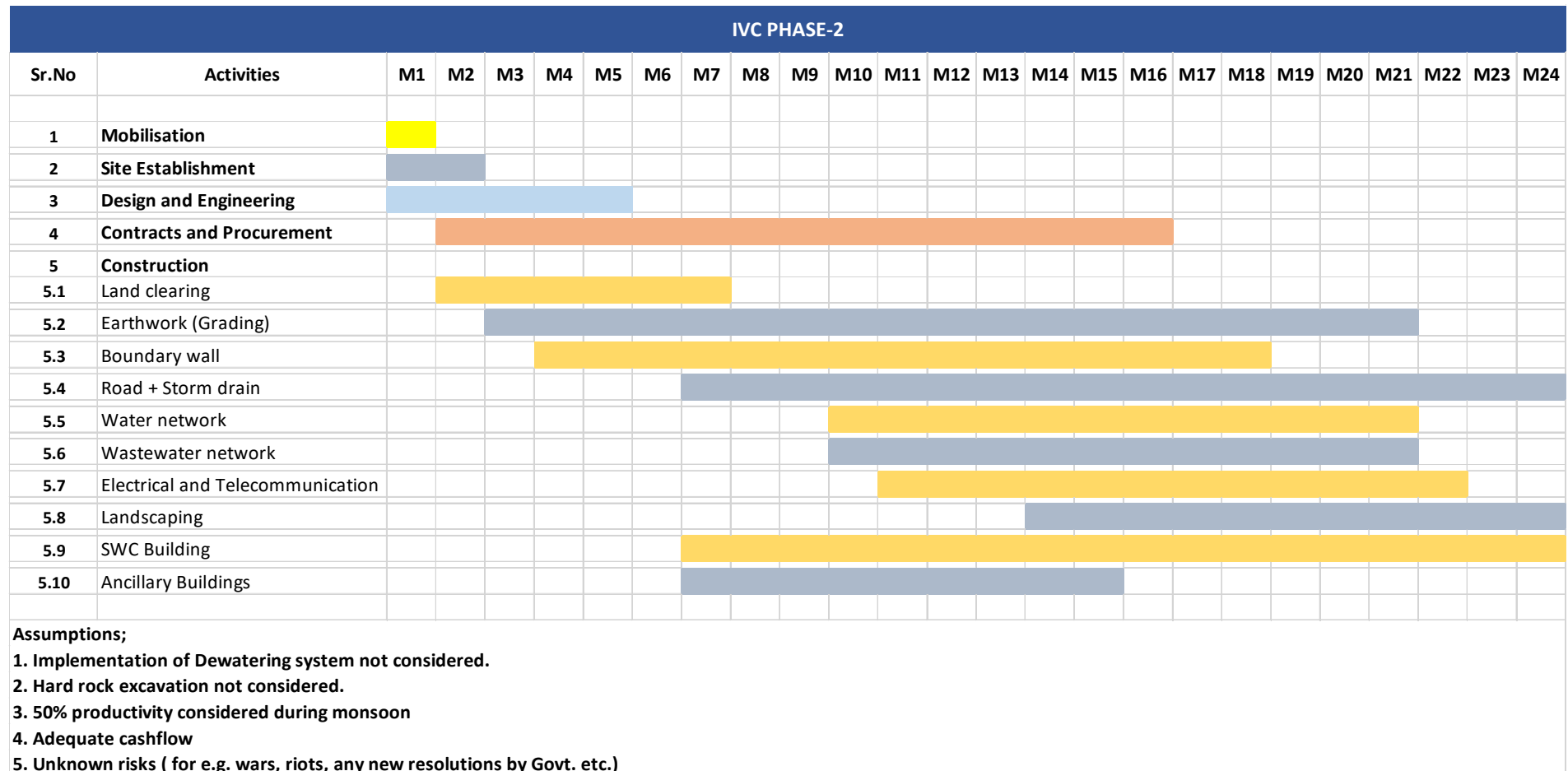
- De-vegetation and topsoil removal;
- Land surface grading, clearing and backfilling;
- Construction of on-site roads and drainage systems;
- Construction of sewerage and water supply systems (boreholes, piping, manholes, water storage tanks);
- Construction of electricity distribution (electricity poles, transformer platforms, etc.);
- Construction of a wastewater treatment plant, a wastewater treatment plant and a pumping station; and
- Construction of buildings (industrial, logistics, offices, first aid centre, fire station, police station)

Following construction schedule is planned for Phase 1 (Figure 4-7) and Phase 2 (Figure 4-8).



Source: Arise, 2022

Figure 4-7 Construction Schedule for Phase 1



Source: Arise, 2022

Figure 4-8 Construction Schedule for Phase 2

4.6.1.1 Construction Employment

During the construction phase, at the beginning ARISE might have maximum 30 workers but at peak times around 700 (including workforce of subcontractors). ARISE is expected to hire between 250 and 500 local workers in total during the construction phase, although this will depend on the detailed manpower plan that is yet to be produced. It is anticipated it will be possible to hire the majority of workers (both skilled and unskilled) nationally.

Considering this number of workers, most of whom will be Ivorian, and that the Project is being developed in a close proximity to Abidjan city, it is expected that no purpose-built worker camp or accommodation will be needed during the construction phase.

4.6.1.2 Security Arrangements

ARISE has deployed a security agency to ensure the security of the Project site during construction. It is assumed that security and the well-being of all the workers will be guaranteed by ARISE for the residential area, administrative buildings, industrial facilities, warehouse, production area and ancillary facilities

ARISE will ensure that the security provider is well versed in international conventions pertaining to security and human rights. As a general rule, ARISE does not permit private security providers to handle firearms.

4.6.1.3 Technology and Equipment to be mobilised

For the construction of the Project various construction contractors will have equipment for following activities:

- Earth clearance and movement;
- Levelling;
- Concrete and asphalt works; and
- Utility placement etc.

The following technology and equipment are planned to be mobilised during construction:

- Excavator;
- Bulldozer;
- Grader;
- Roller;
- Rotavator;
- Asphalt Paver;
- Pneumatic Roller;
- Transit Mixer (Concrete);
- Crane;
- Backhoe;
- Wheel Loader;
- Diesel Generator; and
- Concrete vibrator.

Table 4-3 provides information on the estimated quantity of excavation material, backfill material and remaining material.

Table 4-3 Estimated Excavation and Backfill Material

Material	Amount in m ³
Total Excavation Material	11,414,116
Total Backfill Material	11,390,442
Remaining Material	23,673

Note: The remaining material will be used for landscaping, road median filling, slope protection etc.

Source: ARISE 2022

4.6.1.4 Temporary Construction Facilities

Temporary construction facilities are the facilities that are funded as part of the Project and will be removed and reinstated to its original condition upon completion of the construction activities.

Temporary construction facilities are listed in Table 4-4.

Table 4-4 Project Temporary Construction Facilities

Facility	Details	Provider
Temporary laydown Areas for Construction	ARISE plans temporary/rest areas, sanitary facilities and drinking water, required for workers and subcontractors	ARISE
Existing Access Roads	ARISE plans to use the existing adjacent access roads, and at the moment there is no plan in place for the construction of any new and permanent access roads.	By third parties
New Access Roads	In case new access road construction is needed.	By third parties
Fuel Tanks	During the construction phase, to supply equipment and generators.	Local Supplier
Dumpsites	Temporary dumpsites for construction work located close to the construction site and compliant with the country's laws.	ARISE
Administrative Area	Office area for technical and administrative teams. Camp site installations.	ARISE
Common Area	Share space for the workforce including a fully equipped kitchen, toilets, showers, laundry, canteen, dressing rooms and a nursery in compliance with the QHSE requirements.	ARISE
Warehouse	Stockade area for materials and equipment.	ARISE
Water Storage Tanks	Temporary water supply for construction purposes.	By third parties

Construction Worker Accommodations and Laydown Areas

ARISE plans to establish a central office on site and install mobile containerised structures for offices, meeting rooms, ablutions etc. ARISE will provide the required temporary/rest areas, sanitary facilities and drinking water, required for workers and subcontractors.

It is assumed that no purpose-built worker camp or accommodation will be constructed during the construction phase.

Access Roads

The Project site is accessible through the Nervure Principale along the west and proposed connector to Y4 Motorway on the east as highlighted in Figure 4-5. Within the PK24 the Phase 1 and Phase 2 of the Project have also several access roads. Some are already constructed and paved, some under construction and some are still unpaved. The road constructions within PK24 are ongoing, thus the status of the roads is a subject to quick changes.

Fuel Tanks

Fuel tanks during the construction phase will be provided by third parties. All necessary training and technical assistance are going to be agreed between ARISE and the authorised third parties involved in the fuel supply for machinery operations.

Dumpsites, Administrative & Common Area, Warehouse

Temporary dumpsites for construction works will be located close to the construction sites, will be compliant with the country's laws and operated by ARISE.

ARISE will also operate the administrative as well as common area and warehouses on the Project sites during the construction phase of the Project.

Water Storage Tanks

Water storage tanks during the construction phase will be provided by third parties.

4.6.1.5 Associated Facilities

Drainage Network

AGEDI is providing the drainage network for rainfall and stormwater runoff for the entire PK24. The network is designed for an average annual rainfall of about 2000 mm and an annual frequency of 115 mm/h for duration of 15 minutes. A drainage network is present within the Project area along the external 40-meter-wide road (Nervure Principale) and along the southern road. The drainage network has pipes with sizes between 300 - 2000 mm diameter. The constructed catch basins along the Nervure Principale have an external dimension of 2.5 x 2.5 meter.

Sewage Network

A sewage network which will also be built by AGEDI is present along the external 40-meter-wide road (Nervure Principale). The constructed manholes along the Nervure Principale have an external dimension of 2.5 x 2.5 meter.

Water Supply Network

Piped water is to be supplied by AGEDI, extracted through several boreholes located on the southwest part of the PK24. The AGEDI water supply is planned to supply 16,000 m³/day for the complete Project site. Five boreholes with cumulative flow of 1000 m³/hr have been constructed. Pressure at tapping point varies from 3 bar to 6 bar and water is supplied through a 600 mm diameter pipeline.

Power Generation and Distribution

During the construction phase, power will be generated by the diesel generators located on the construction sites. Furthermore, ARISE are currently negotiating the temporary gridline with Ivorian Electricity Company (CIE – Compagnie Ivoirienne d'Électricité), which would enable the construction phase to be able to have electricity from the grid. The CIE announced to ARISE that it could be feasible to have between 2 and 4 MW of electricity which would be available starting 2-3 months after start of construction of the Project.

There is a power distribution network operated by CIE. The Akoupé Zeudji substation is located approximately 13 km from the Project area. This is equipped with three 225/33kV 60 MVA power transformers. Along the northern highway, there are two overhead MW lines from the Akoupé Zeudji substation. An overhead MW line also coming from the Yopougou 1 substation. There are three substations around PK24, among which the nearest one is Yopougou 2 substation (225 KV). The load carried through the High Tension (HT) line is 225 KV and medium voltage network is 33 KV.

4.6.2 Operation and Maintenance Activities

ARISE will be responsible for the operation and maintenance of the basic infrastructure serving the tenants, e.g., water supply, sewerage/water treatment plant, gas supply, electrical power, fuel storage, road maintenance, landscaping, and general security.

4.6.2.1 Employment

Operation Phase

The operations workforce for the basic infrastructure will be hired and managed by ARISE. The approximate number of labour is expected to be 40 ARISE employees for office housekeeping, the survey team and security.

4.6.2.2 Security Arrangements

During operations, ARISE will manage the overall site security. Each operator within the Project IEZ will have the opportunity to deploy the security agency they want to ensure the security of their industrial plots.

4.6.2.3 Technology and Equipment to be mobilised

The following technology and equipment are planned to be mobilised during operation:

- Forklift;
- Trailers;
- Reach stacker;
- Empty handler;
- Terminal tractor; and
- Road sweeping machine.

4.6.2.4 Associated Facilities

ARISE will be responsible for maintaining and operating the networks of water supply, stormwater drainage and sewage serving the tenants within the Project area. The facilities and utilities outside the Project area (i.e., within the PK24) will be managed by AGEDI and/or operated by respective governmental agencies e.g., central power distribution network will be maintained and operated by CIE.

4.6.3 Closure or Rehabilitation Phase

At this stage of the Project development there are no plans yet regarding closure or rehabilitation of the Project components. It can be assumed that periodic upgrade/rehabilitation will be undertaken in line with wear-and-tear of the components. This will be done in line with the applicable Ivorian technical standards and E&S regulations.

At some distant time in future the whole Project site (or parts thereof) will be closed and dismantled-decommissioned. This will be performed in accordance with E&S laws that are then in force, including foreseeable maximum recycling-reuse of materials.

4.7 Embedded Controls

Embedded controls include procedures or technical/design aspects that will be employed to avoid or minimise potential environmental or social impacts of the Project, these controls are considered an integral part of the Project design. The impact assessments on individual topics in this ESIA assume that these controls are already implemented and that any supplemental mitigation measures would

therefore be 'above and beyond' any existing/planned embedded controls to address specific risks that are not sufficiently mitigated by these controls. Embedded controls that have already been applied or will be integrated into the next phase of the Project's design are as follows:

- Ivorian Environmental and Social Laws/Regulations;
- IFC General EHS Guidelines;
- ARISE Technical Standards and Applicable Design Criteria.

International Best Practices Example: the improper storage of fuels and hazardous liquids or wastes in the field poses a risk of spillage and consequential contamination of local soils, vegetation and potential surface or groundwater. However, the proper storage, handling and labelling of such materials (including containment/bunding, spill-response, etc.) is addressed in Ivorian regulations, IFC Guidelines and is standard practice of ARISE. Therefore, these embedded controls are deemed sufficient to address the normal risks of such material storage, including the practice of routine inspection/monitoring of these storage locations under a construction management system that will be applied. As such, no supplemental mitigation measure is warranted in the ESIA to adequately manage these risks. An exception to this might be in case there are some particularly vulnerable/sensitive receptors in any of the Project site, and it may then be justified to implement some further restrictions/protective measures as an enhanced mitigation measure.

In summary, several E&S risks of related to Project construction and operation will be sufficiently managed by the numerous embedded measures, and only the more significant or unique risks will require supplemental mitigation measures. The Impact Assessment for each individual topic therefore focusses mainly on the case-specific measures, as it assumed that ARISE has already adopted and/or has committed to applying the embedded measures in the Project's design and implementation.

4.8 Best Practice applicable to the Project

This section defines the general mitigation measures applicable for the design, construction, and operation phases of the industrial zones. It includes international best practices and requirements of IFC EHS Guidelines for each topic. The measures have been tailored to the Project's scope and are presented in Table 4-5. These will be considered during the pre-construction phase, to be implemented as much as feasible.

Table 4-5 International Best Practices

SUBJECT	INTERNATIONAL BEST PRACTICES
Solid Waste	Potential impact on soil, groundwater, and surface water, in the context of protection, conservation and long-term sustainability of water and land resources, should be assessed when land is used as part of any waste or wastewater treatment system.
Hazardous Chemicals	Develop and implement a prevention program that includes identification of potential hazards, written operating procedures, training, maintenance, and accident investigation procedures.
	Develop and implement a plan for responding to accidental releases.
Noise	Installing noise barriers along the border of the plant (e.g., earthen mounds, vegetation, etc.) where passing through sensitive receptors cannot be avoided.
Socio-Economic	Minimise the area of land take, expropriation and demolition required for the Project during the next stage of design works.
	If additional locations are identified - through public consultation, comments, or the planned census - where the issue of severance affects people significantly, it will be assessed where additional passages can be incorporated in the design.
Cultural Heritage	Identify and protect Cultural Heritage by ensuring that internationally recognised practices for the protection, field-based study, and documentation of Cultural Heritage are implemented;
	A programme of comprehensive walk-over reconnaissance (Field Survey) by archaeological specialists of all proposed areas of ground works to support avoidance and minimisation of impacts through detailed design development and to identify any suspect areas;
	Implementation of a Chance Find Procedure to address construction phase heritage impacts in accordance with international standards;
	Critical heritage should not be removed unless in exceptional circumstances where impacts are unavoidable. In such cases external experts should be retained to assist in its protection and assessment;
	Public involvement, access and sharing of information (with due consideration of the need for keeping certain site-specific information confidential, as per international common practice).
Accidents and Injuries	Implement a confined spaces entry program that is consistent with applicable national requirements and internationally accepted standards. Valves to process tanks should be locked to prevent accidental flooding during maintenance;
	Use fall protection equipment when working at heights;
	Maintain work areas to minimise slipping and tripping hazards;
	Use proper techniques for trenching and shoring;
	Implement fire and explosion prevention measures in accordance with internationally accepted standards;
	When installing or repairing mains adjacent to roadways, implement procedures and traffic controls, such as: <ul style="list-style-type: none"> ■ Establishment of work zones so as to separate workers from traffic and from equipment as much as possible; ■ Reduction of allowed vehicle speeds in work zones; ■ Use of high-visibility safety apparel for workers in the vicinity of traffic; and

SUBJECT	INTERNATIONAL BEST PRACTICES
	<ul style="list-style-type: none"> ■ For night work, provision of proper illumination for the workspace, while controlling glare so as not to blind workers and passing motorists <p>Locate all underground utilities before digging.</p>
Community Health	<p>Restrict access to waste management facilities by implementing security procedures, such as:</p> <ul style="list-style-type: none"> ■ Perimeter fencing of adequate height and suitable material, with lockable site access gate ■ Security cameras at key access points, and security alarms fitted to buildings and storage areas; and ■ Use of a site visitor register. <p>Light the site where necessary. As this may cause light nuisance to neighbours, the lighting installations should be selected to minimise ambient light pollution.</p>
Safeguards Assessment	<p>Evaluating the social and environmental considerations for the proposed industrial park with respect to relevant national requirements and international commitments, providing a proposed impact mitigation and management strategy, and influencing the demand and investment costs for the park as well as its competitiveness²⁵.</p>
Surface drainage ²⁵	<ul style="list-style-type: none"> ■ Drainage on all roadways ■ Gravity-based rainwater harvesting ■ Rainwater storage tanks
Water supply ²⁵	<ul style="list-style-type: none"> ■ Sufficient drinking and non-potable water, with separate distribution networks ■ Wells, boreholes and reservoirs ■ Water pumping station ■ Water treatment plant ■ Smart water metering
Sewerage ²⁵	<ul style="list-style-type: none"> ■ Sewage and effluent collection and storage systems (separate for industrial and household needs) ■ Systems for removal of contaminants from wastewater, storm run-off, and domestic sewage, through primary treatment of effluents ■ Physical, chemical and biological treatment processes ■ Treated and recycled water system ■ Smart sewage metering
Power Supply ²⁵	<ul style="list-style-type: none"> ■ 24x7 supply of electricity throughout the site ■ Distribution substations at strategic locations, with network of underground cables or overhead lines ■ On-site renewable energy (e.g., rooftop solar PV panels or solar farm to serve the park) ■ Smart energy metering

²⁵ UNIDO, 2020. International Guidelines for Industrial Parks

SUBJECT	INTERNATIONAL BEST PRACTICES
Safety and security ²⁵	<ul style="list-style-type: none"> ■ 24x7 public safety infrastructure, including lighting and CCTV surveillance systems ■ The security contractor shall undergo a due diligence process and an induction prior to working on site. They shall primarily be responsible for controlling site access and perimeter security. ■ Emergency response centre/s (including for accidents and first aid, fire and chemical hazards, security incidents, natural disasters and crises, etc.) ■ Health care centre, medical facilities ■ Live air quality monitoring through smart environment monitoring system ■ License plate monitoring and speed control
Specialised industrial support infrastructure ²⁶	<ul style="list-style-type: none"> ■ Standard factory shells and warehouses with smart, sustainable building design ■ Public depot warehousing and cold storage facilities ■ Quality assurance services and quality control laboratory (whether run by private or public entities) ■ R&D, incubation, training, innovation centre and knowledge hub

²⁶ UNIDO, 2020. International Guidelines for Industrial Parks

4.9 Need for an ESIA

The Ivorian regulations (eg as implemented by ANDE) require that a full ESIA be prepared for this category of project (for more information refer to Chapter 1). In addition, international lending institutions require a formal ESIA as a prerequisite for their potential involvement in financing the Project. Therefore, this ESIA is developed to fulfil the requirements of the national environment regulator - ANDE - and international standards (IFC PS, WB EHS Guidelines, Equator Principles 4, and the OECD Common Approaches) of potential lenders.

5. DESCRIPTION OF EXISTING BASELINE

5.1 Methodology

The baseline conditions have been compiled through a review of publicly available information, as well as an analysis of aerial imagery and field observations/ground truthing of the desktop data gathered, site visit observations, the settlement profiling surveys and information derive from Key Stakeholder Interviews, public consultations including government officials and representatives of community groups.

5.1.1 Area of Influence

The Area of Influence (Aol) of the Project as given in IFC PS 1²⁷ is used during the impact assessment. The Aol encompasses:

- The area likely to be affected by:
 - (i) the Project and ARISE's activities and facilities that are directly owned, operated or managed (including by subcontractors) and that are a component of the Project;
 - (ii) impacts from unplanned but predictable developments caused by the Project that may occur later or at a different location; or
 - (iii) indirect Project impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent.
- Cumulative impacts that result from the incremental impact, on areas or resources used or directly impacted by the Project, from other existing, planned or reasonably defined developments at the time the risks and impacts identification process is conducted.

The initial step in defining the Area of Influence is to classify the facilities and activities ('the Project components') that make up the Project. The components of this Project are described in Chapter 4.3.3. The appropriate level of assessment and management of risks and impacts is determined by the degree of control that the Project is able to exercise over its facilities or activities, and by the importance of the facilities or activities to the Project's successful operation.

Thus, the environmental Aol of this Project includes the footprint of all Project activities within a radius of 500 m of the Project site, which covers the areas in which a direct or indirect impact on the physical, biological, social or cultural environment might occur.

Furthermore, thus the social Aol for the Project is used to describe the boundaries of the area where Project direct impacts may occur, for the preliminary social baseline purposes, the surveyed area for the Project entails adjacent settlements potentially affected by disturbances from Project construction works and operations, such as dust, airborne emissions, and noise. Also, it includes adjacent settlements that could potentially benefit from Project related opportunities, as employment, local economic development, increased influx and associated indirect economic impacts, etc.

In addition, the Project is expected to induce in-migration and increase the burden on local infrastructure provisions, such as roads, and services, affecting the villages surrounding the Project site. Therefore, the social Aol as 5 km is defined and considered in this ESIA assessment includes the areas in which a direct or indirect impact social or cultural environment might occur.

5.1.2 Data Collection

The methodology for the ESIA baseline data collection is based on a targeted analysis of the various components of the natural and socio-economic environment that are likely to be modified by the Project. This analysis is supplemented by surveys/interviews with representatives of the various

²⁷ IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts, January 1, 2012.

administrations and stakeholders, review of publicly available information and data provided by ARISE. Information was collected on the environment of the District of Abidjan and in particular the relevant communes of Andokoi I, Akoupé-Zeudji, Allokoï, Attinguié, Abadjin-Kouté.

The analysis focuses on:

- The physical environment;
- The biological environment;
- The socio-economic environment.

The analysis of the immediate environment shows the level of sensitivity of each component and the foreseeable development of the environment in the absence of the Project. The description of the environment shows, as far as possible, the relationships and interactions between the different components of the environment. In particular, the study:

- Specifies the demographics of the various municipalities affected by the Project;
- Describes the initial state of the current site, taking into account the existing basic infrastructures, the current forms of occupation, as well as the socio-economic activities that take place on the land; and
- Describes present the sanitary state of the Project area with the different pathologies and the existing basic infrastructures.

The description of the components above includes not only a description of their current state, but also an assessment of the potential and sensitivities of these environments with regard to their initial state and their own dynamics.

For the social part of the studies the desktop data collection process comprised review of publicly available information primarily from the following sources:

- Published literature including supporting literature (previous Reports, existing studies, etc.) sourced from websites / Governmental data portals, academic and research institutions, social organizations, etc. Most of the data was recent (2020) with some data from the previous years in cases where up-to-date information was not available.
- Online Government databases and statistical information, in particular the following:
 - *Institut National de la Statistique (INS)*
 - *Recensement General de la Population et de l'Habitat (RGPH)*
- References from previous studies that are publicly available for recent projects in the same geographic region or of similar nature.
- Reports published by multilateral organisations, such as the Organisation for Economic Co-operation and Development (OECD), International Labour Organisation (ILO), International Monetary Fund (IMF), World Health Organisation (WHO) or United Nations (UN) and its different Agencies.
- Non-technical literature (newspaper articles, etc.).

The collected desktop information was mainly used to obtain contextual socioeconomic and health, information at the Regional and District levels, and included some limited information at the local level.

Furthermore, several site visits (in June 2022, September - December 2022) were performed by ENVAL (under ERM's supervision) during the Scoping and ESIA phases of the Project. The objective of this collection of information is complete, verify and analyse data collected through desktop study and collect views of the key stakeholders to inform baseline. Stakeholder engagement was deployed to consult National and District Government Authorities, and community representatives from the

villages, sub-prefectures and communes in the Aol, representatives of the Chiefdom, representatives of Women Associations and Youth Associations.

Engagement as part of the ESIA process have been conducted in November 2022 and were led by a team of social specialists from ENVAL under guidance from ERM and with attendance from ARISE representatives in some cases. As with previous engagement activities carried out during Scoping phase in June 2022, stakeholder engagement has been carried out under COVID-19 restrictions with reduced face-to-face interaction and use of social distancing measures, provision of masks and hydroalcoholic gel. For more information regarding the Stakeholder engagement, please refer to Section 11 below.

In alignment with the ToR received from ANDE and in order to describe the existing baseline, specific methodological approaches were developed to collect and analyse data. These are summarised in Table 5-1.

Table 5-1 Methodological Approaches for the Baseline Studies

Aspects	Topic	Methodological Approach	Data Gaps / Limitations
Physical Environment	Climate and Weather	Bibliographical review and secondary data analysis	
	Geology and Soils	Bibliographical review and secondary data analysis	
	Topography	Bibliographical review and secondary data analysis	
	Land Cover	Secondary data analysis	Resolution of the satellite imaginary
	Hydrology	Bibliographical review, secondary data analysis, field visit, laboratory analysis	Equipment limitations
	Hydrogeology	Bibliographical review, secondary data analysis, field visit, laboratory analysis	Equipment limitations
	Air Quality	Particulate Matter (PM) monitor was used to measure the concentration of PM ₁₀ , over a period of two months (October – November). Diffusion tubes were located at 12 monitoring sites and were used to measure the concentration NO ₂ , this occurred over a period of two months. The diffusion tubes were sent to the laboratory for analysis.	Some of the diffusion tubes were removed by third parties on site and due to constant power cuts, the PM monitor did not record data for the entire 60 days. For the first round of sampling 10 diffusion tubes were collected on site and only 6 were analysed at the lab and on the second round of monitoring 10 out of 12 diffusion tubes were collected and analysed. Third parties removed the two diffusion tubes.
	Noise	Long term noise measurements over a period of 24 hrs	Equipment limitations
Biological Environment	Flora, Vegetation and Habitats	Bibliographical review, secondary data analysis, field visits (Flora: an exhaustive data collection method; Fauna: recce method)	
	Fauna		
	Conservation Areas		
Socio-economic Environment	Governance and Administration	Bibliographical review, secondary data analysis, field visit	<ul style="list-style-type: none"> Most of the quantitative statistical data obtained through the Census Recensement General de la Population et de l'Habitat (RGPH) and the National Agency for Statistical Information, l'Institut National de la Statistique (INS) do not cover key aspects such as migration, vulnerable groups, workforce and unemployment, at district, subprefecture and village level. Additionally, up to date statistical data on informal economy - which is prevalent in Côte d'Ivoire – was not available. Therefore, it was not possible to obtain information on these topics through secondary sources nor through field survey data collection activities.
	Human Rights	Bibliographical review, secondary data analysis	
	Demographics	Bibliographical review, secondary data analysis, field visit	
	Vulnerability	Bibliographical review, secondary data analysis	
	Land Use and Ownership	Bibliographical review, secondary data analysis, field visit	
	Economy and Employment	Bibliographical review, secondary data analysis, field visit	

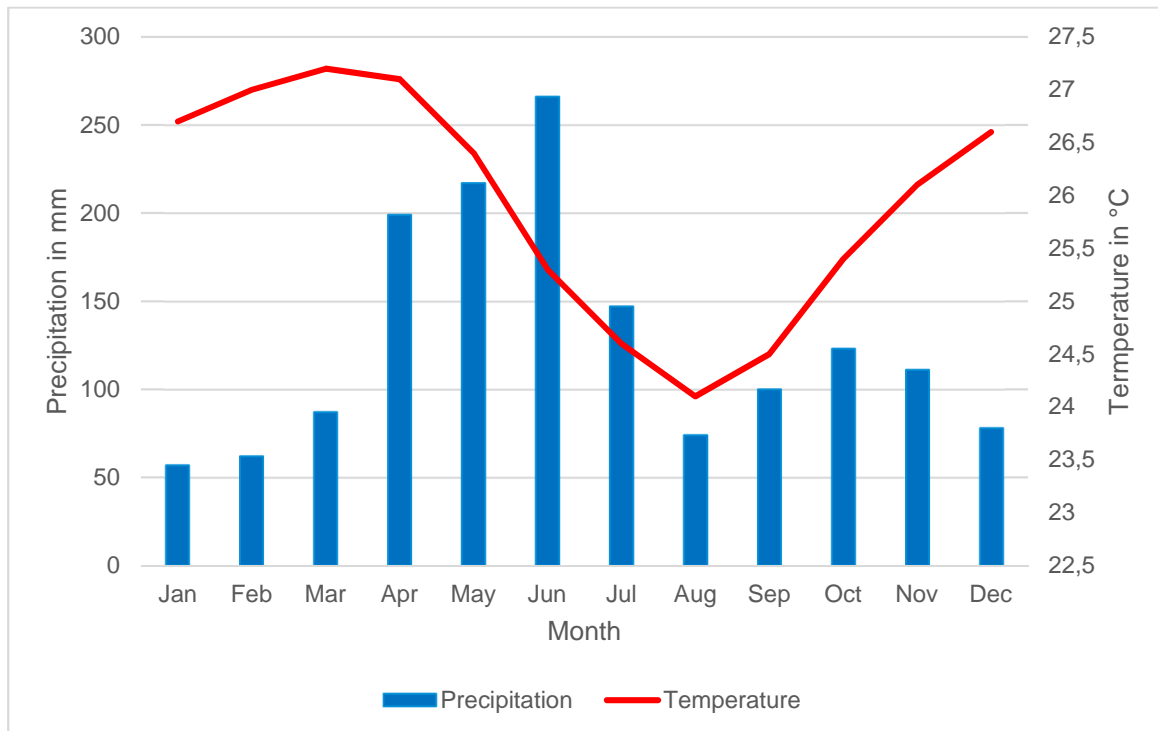
Aspects	Topic	Methodological Approach	Data Gaps / Limitations
	Livelihood Activities	Bibliographical review, secondary data analysis, field visit	<ul style="list-style-type: none"> ■ Latest national statistical data from RGPH census is dated 2014 i.e., 8 years prior to this ESIA. As the urbanisation in Abidjan District has progressed rapidly over the past decades, one can anticipate socio-economic context has significantly changed since the last census. Note that the Government has recently carried out a census in 2021 , but the detailed outcomes of this census were not available at the time of this ESIA (November 2022). The only published information of the RGPH has been provided through press releases , and through the global results of the census , and only contains overall information at national and district level, and no information at sub-prefecture or village level.
	Education	Bibliographical review, secondary data analysis, field visit	
	Health	Bibliographical review, secondary data analysis, field visit	
	Infrastructure and Public Services	Bibliographical review, secondary data analysis, field visit	
	Cultural Heritage	Bibliographical review, secondary data analysis, Social survey for the inclusion of intangible Cultural Heritage	Tangible Cultural Heritage was assessed through desk-based research. No tangible Cultural Heritage field surveys were conducted for this baseline.

5.2 Physical Environment

5.2.1 Climate and Weather

Côte d'Ivoire is located in the equatorial tropical climatic zone. The climate of the country is influenced by the seasonal displacement of the Inter-Tropical Convergence Zone (ITCZ). The alternation of dry and rainy seasons results from the annual north-south migration of the ITCZ, which is due to the yearly positional changes of the earth in relation to the sun.

The Project location, situated in the surroundings of the city of Abidjan, is classified as tropical climate with dry winters (Am) according to the Köppen and Geiger climate classification. An overview of the climate conditions in Abidjan can be seen in Figure 5-1.



Source: Climate Data, 2022²⁸

Figure 5-1 Climate Data from Abidjan (1991-2021)

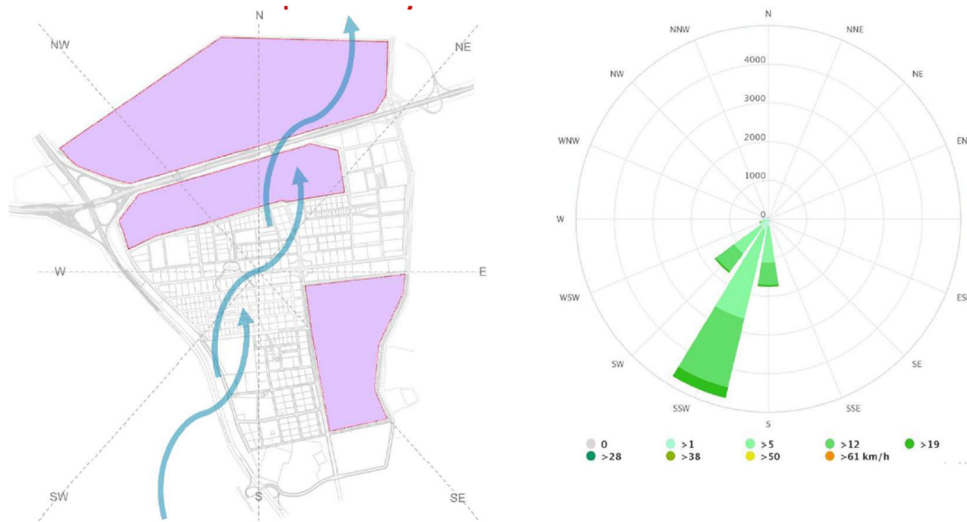
Monthly temperatures in Abidjan range between 24.1 °C (in August) and 27.2 °C (in March). Abidjan is characterised having four differentiated seasons²⁹: the main rainy season generally occurs between April and July with the highest precipitation in June (256 mm). The second rainy season occurs between September and November. The months of August and September, often named as the short dry season, are dry and cool. The main warm and dry season occurs between December and April, with the lowest precipitation in January (57 mm). On average, 1,441 mm of precipitation falls within a year.

The Ivoirian continental shelf is subject to the anti-cyclonic system of the Southern Hemisphere. In the same way as the equatorial zone, it is subject to the influence of the trade winds. There is a significant seasonal and inter-annual variability in the wind field. The monsoon trade winds occur 10 months of the year from the southwest and southeast. They are generally weak (3 to 4 m/s), regular and

²⁸ [Abidjan climate: Average Temperature, weather by month, Abidjan water temperature - Climate-Data.org](https://climate-data.org/abidjan-climate-average-temperature-weather-by-month-abidjan-water-temperature)

²⁹ Agoh, C., Lekadou, T., Saley, M., Gala, B., Danumah, J., Coffi, P., Koffi, Z. and Goula, B. (2021) Impact of Climate Variability on Water Resources: The Case of Marc Delorme-Cnra Station, Southeast of Côte d'Ivoire. Journal of Water Resource and Protection, 13, 726-749

characterised by a daily cycle. The prevailing wind direction is almost exclusively from the southwest in the Abidjan region (Figure 5-2).



Source: ARISE, 2022

Figure 5-2 Wind Direction and Speed Analysis

5.2.1.1 Climate Change Risks

In Table 5-2 climate hazards currently present in the Abidjan Autonomous District are outlined and ranked according to risk thresholds from very low to high. Further assessment on Climate Change Risks can be found in Appendix J. In paragraphs below the impact of and likelihood of those different risks recurring in the next decades is briefly discussed for the high and medium risks, as they are the most significant to this Project context. Tsunamis and coastal floods were not considered since the Project area is over 20 km away from the ocean and the lowest site elevation is 66 m above sea level.

Table 5-2 Relevant Climate Hazards in Abidjan District

Hazard	Hazard Level Valuation ³⁰
River flood	High
Wildfire	High
Extreme heat	Medium
Urban flood	Low
Landslides	Low
Water scarcity	Very low

Source: Thinkhazard, 2022

The hazard classification table (Table 5-2) shows that risk of river floods and wildfires were classified as highest followed by extreme heat. River flood hazards were classified as high meaning that potentially damaging and life-threatening river floods are expected to occur at least once in the next 10 years. Regarding wildfires, there is greater than a 50% chance of encountering weather that could support a significant wildfire. Extreme heat hazards in Abidjan are classified as medium. This implies that there is more than a 25 % chance that at least one period of prolonged exposure to extreme heat,

³⁰ thinkhazard.org (2022)

resulting in heat stress, will occur in the next five years³⁰. The risks of urban flooding, landslides and water scarcity are evaluated as low and very low, and thus not considered further in this assessment.

5.2.2 Greenhouse Gas Emissions

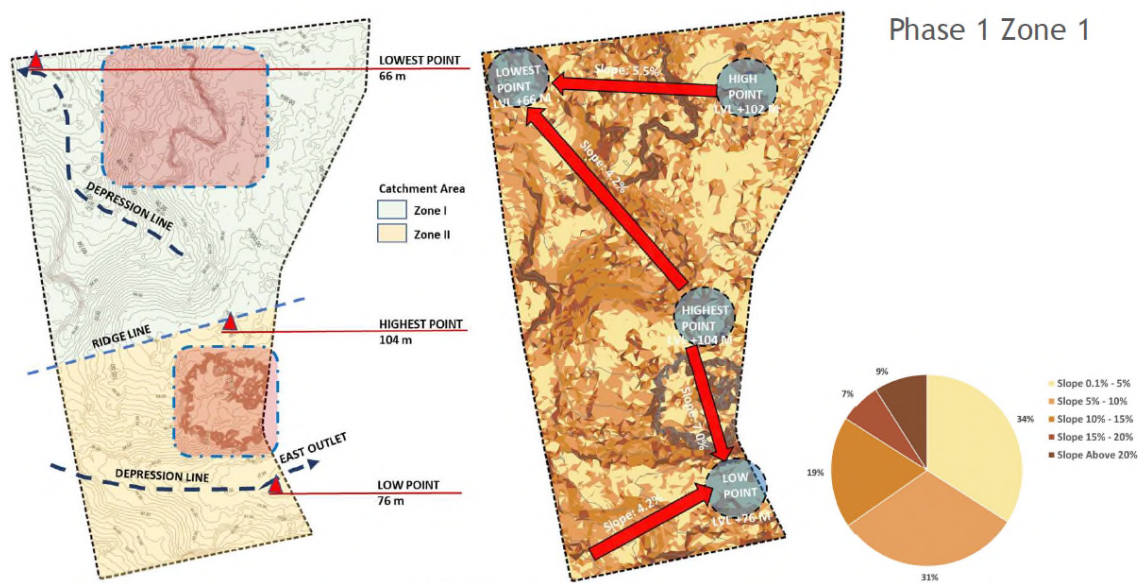
The development of the Project itself (i.e., construction and operation of the basic infrastructure on 429 ha) will have limited greenhouse gas (GHG) relevance. However, the combined activities/emissions of the future tenants will potentially increase the amount of GHG emissions contributing to climate change.

The GHG emissions during construction primarily relate to the fuel consumption for construction equipment. During operation, GHG emissions stem from power consumption for operating equipment and fuel consumption of operation equipment of from ARISE. The projected GHG emissions for the Project are calculated in Chapter 8 and GHG inventory for the Project is provided in Appendix K.

5.2.3 Topography

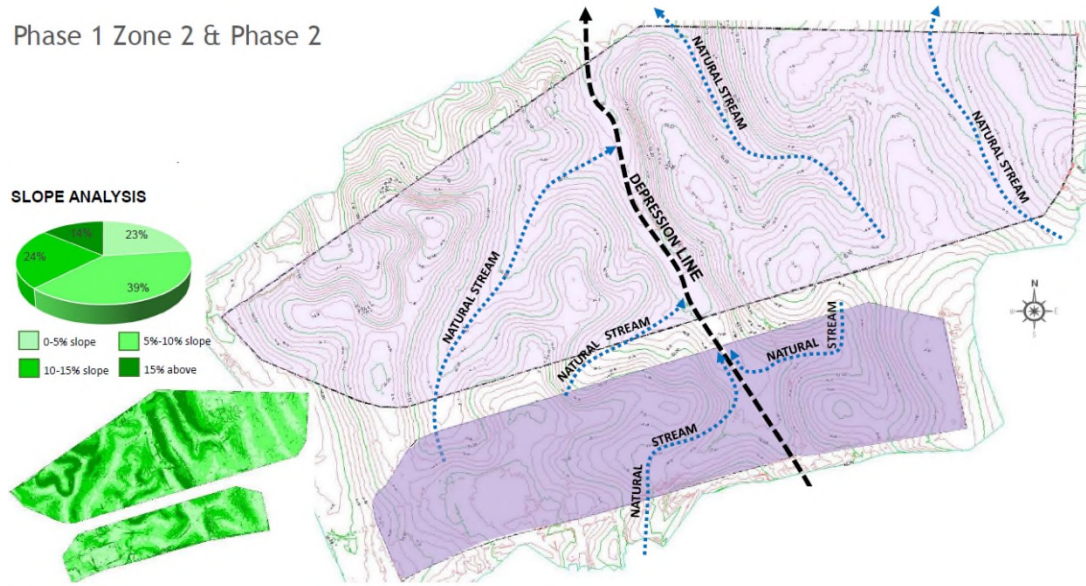
Ivorian terrain can generally be described as a large plateau rising gradually from sea level in the south to almost 500 m elevation in the north. For the city of Abidjan, the highest elevation is in the north with about 174 m above the sea level and the lowest at sea level on the south as it borders with the Ébrié Lagoon. The average elevation for Abidjan is 52 m above sea level (asl).

The Project is located on sedimentary substrate in a relatively flat area with few altitudinal variations conforming a monotony landscape, with altitudes of between 66 m asl and 104 m asl and average slopes varying between 6 and 9 % (see Figure 5-3 and Figure 5-4).



Source : ARISE, 2022

Figure 5-3 Contour & Slope Characteristics Phase 1 Zone 1



Source: ARISE, 2022

Figure 5-4 Contour & Slope Characteristics Phase 1 Zone 2 and Phase 2

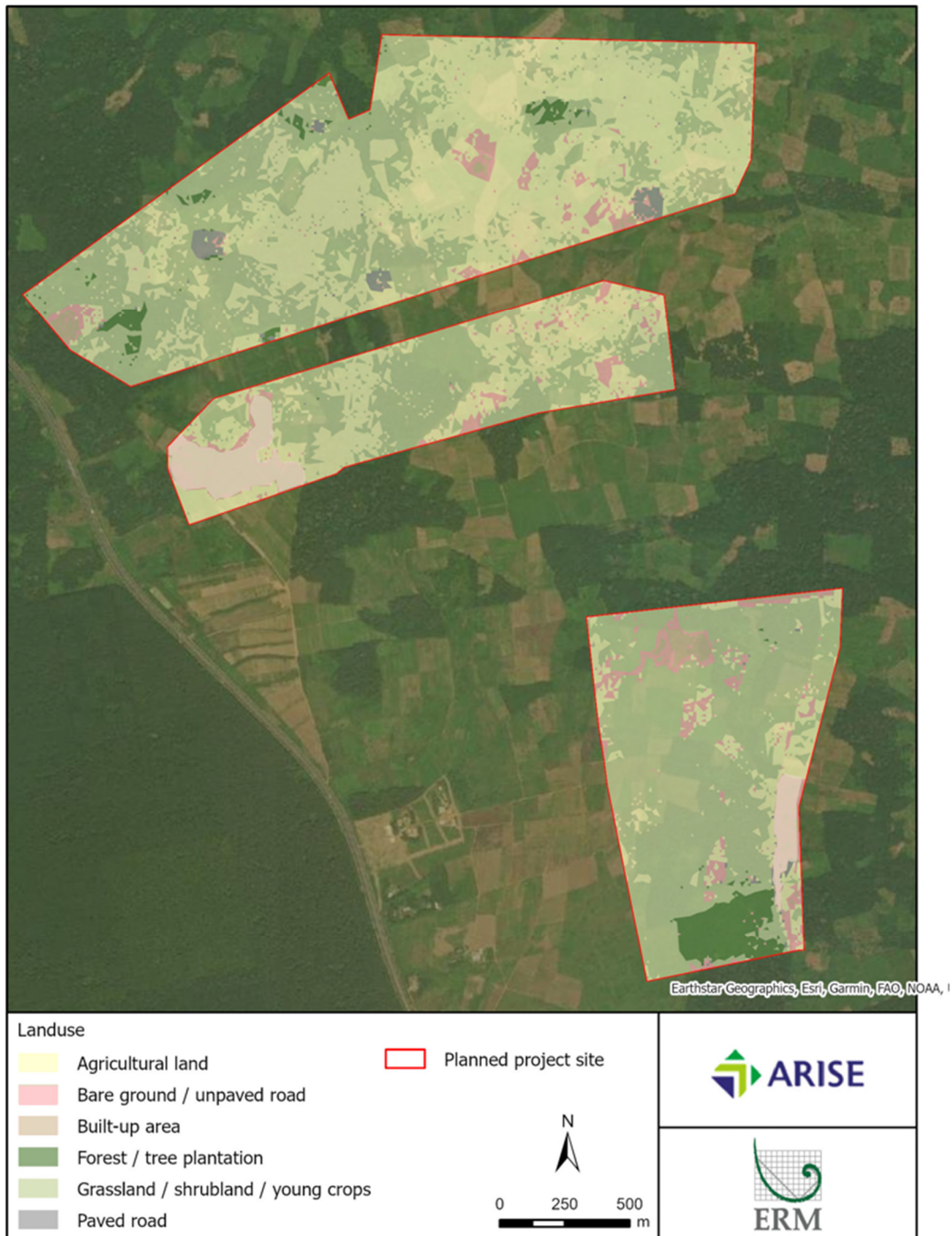
From a geomorphology perspective the area is characterised by an undulated landscape with a few small hills and mainly by numerous interfluvies and natural depressions or valleys, with very gentle slopes, generally occupied by food crops. These depressions or talwegs are well hierarchical and generally lead the drainage of run-off water in this region to the most depressed points

5.2.4 Land Cover

According to the Earth Resources Observation and Science Website³¹, land use and land cover in Côte d'Ivoire have changed since the 1970s with a net increase of agriculture of 84 % (31,600 km²) driven by population growth. Agriculture has spread almost everywhere in Côte d'Ivoire, up to the boundary of Comoé National Park and the protected savanna. In the southern half of the country, rainfall is higher and the soils more productive, making it the centre of production of most of the export crops, such as coffee and cocoa. Palm, coconut trees, and rubber tree plantations also increased by 160 % (10,420 km²), mostly in the southern and central parts of the country. In the northern half of Côte d'Ivoire, subsistence and cash crops such as cotton, sugar, starches, and rice greatly increased, fragmenting the large expanses of woodland and savannas. The continuous deforestation to clear for cultivation is one of the most dramatic and possibly irreversible events in Côte d'Ivoire. In the past, most of the timber harvest occurred within the reserved forests that counted for 40 % of the total dense forest of the country (14,500 km²).

The land cover within the AoI is mostly grassland and agricultural plantations (Figure 5-5) and there is some tree plantation area (i.e., patches of trees) in the south-west of the AoI. Further description on land use is provided in section 5.4.4.2.

³¹ eros.usgs.gov



Source: ERM, 2022 based on Sentinel satellite imagery (Copernicus Sentinel data - dated January 2020)

Figure 5-5 Land Use in the Aol

Table 5-3 shows the proportion of the different types of land use in the Aol.

Table 5-3 Land Use Area (ha) in the Aol

Land Use	Area (%)
Agricultural land	40 %
Bare ground / unpaved road	6 %
Built-up area	2 %
Forest / tree plantation	3 %
Grassland / shrubland / young crops	48 %
Paved road	1 %

Most of the land is grassland, shrubland and/or young crops, followed by agricultural use (approximately 40 % of land). There are approximately 6 % of build-up areas. There is also 3 % of unpaved road and/or bare ground and 1 % of paved roads approximately.

5.2.5 Geology and Soils

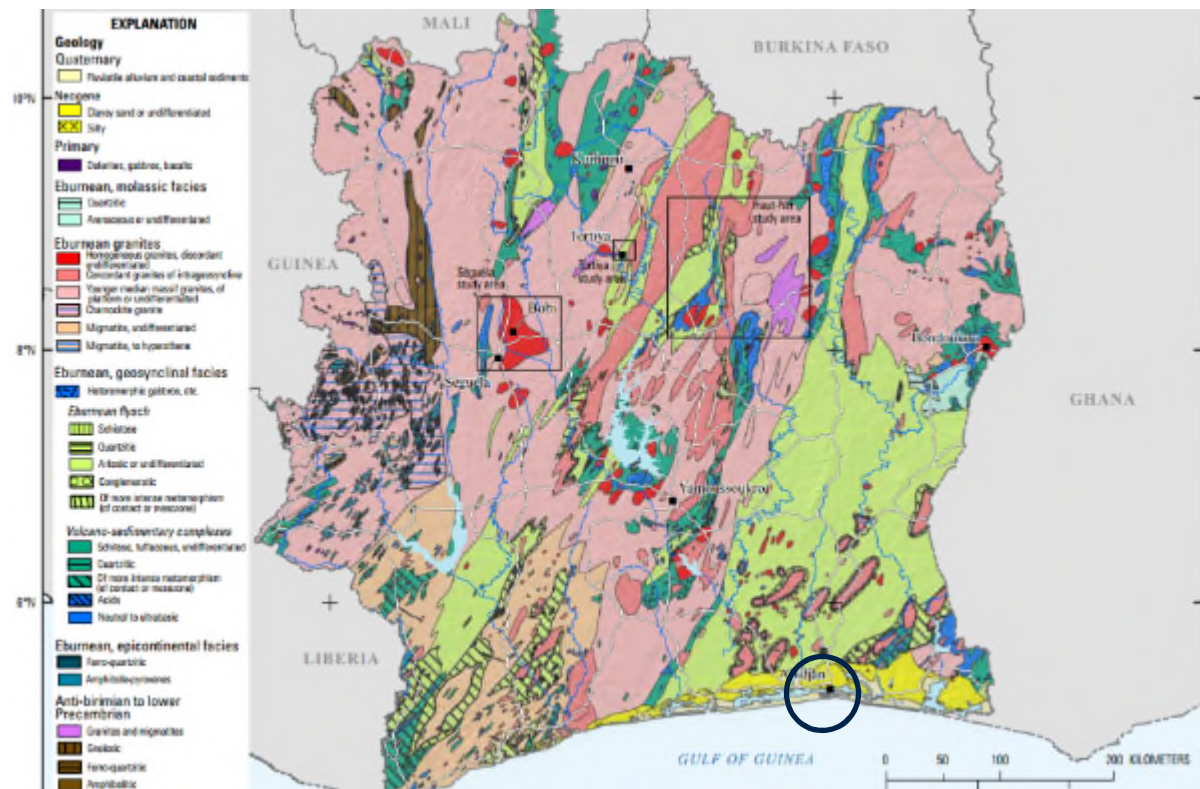
The geological landscape of Côte d'Ivoire consists of two main areas:

- the Precambrian basement (97.5% of the territory's surface), composed mainly of granite, rocks metamorphic schist and greenstone;
- the coastal sedimentary basin (2.5%) which includes the Tertiary, Quaternary and recent alluvial sand formations (Aka, 1991; Tastet, 1979).

The Project area, comprising 429 ha, lies within the coastal sedimentary basin, which extends approximately 400 km in length and 40 km in width. Sedimentary deposits are the most common geological features, with variable composition in terms of organic and inorganic materials, depending essentially on the availability of surface and groundwater (Figure 5-6).

The main types of soils present within the Project area are described below (Soil Atlas of Africa, 2014):

- Gleyzems are hold wetland soils that, unless darined, are saturated with groundwater for long enough periods to develop characteristics “gleyic colour pattern”. This pattern is essentially made up of reddish, brownish or yellow colours at ped surfaces and/or in the upper soil layer(s), in combination with greyish/bluish colours inside the peds or deeper in the soil.
- Arenosols occur over large areas in Africa and Côte d'Ivoire; these are soils with a loamy sand or coarser texture either to a depth of at least 100 cm from the soil surface, or to a (petro-)plinthic or salic horizon between 50 and 100 cm from the soil surface. They contain less than 35 percent (by volume) rock fragments or other coarse fragments within 100 cm from the soil surface and have no diagnostic horizons other than an ochric, yermic or albic horizon, a (petro-)plinthic or salic horizon below 50 cm from the soil surface, or an argic or spodic horizon below 200 cm below the soil surface.
- Oxisols are relatively uncommon in Côte d'Ivoire but can be seen at the two southern ends of the country as well as around Mount Nimba. These are very old soils and often also highly eroded, leaving only 10% or less content of weatherable minerals. These soils are formed very sparingly across the country, and only found in tropical environments with large amounts of rainfall.



Source: Wikipédia, 2022³²

Figure 5-6 Extract from the Geological Map from Côte d'Ivoire

Mostly Neogene to Recent clastic sediments exist along and of shore as part of the country's Atlantic coast, which is generally made up of sandy beaches and lagoons. This sedimentary basin hosts Ivorian known oil and natural gas reserves

5.2.5.1 Local Geology

The region of AAD (including the Project area) constitutes the central part of a coastal sedimentary basin which covers a surface of 16,000 km² between the latitudes of 5°00 and 5°30N and the longitudes of 3°00 and 6°00W³³.

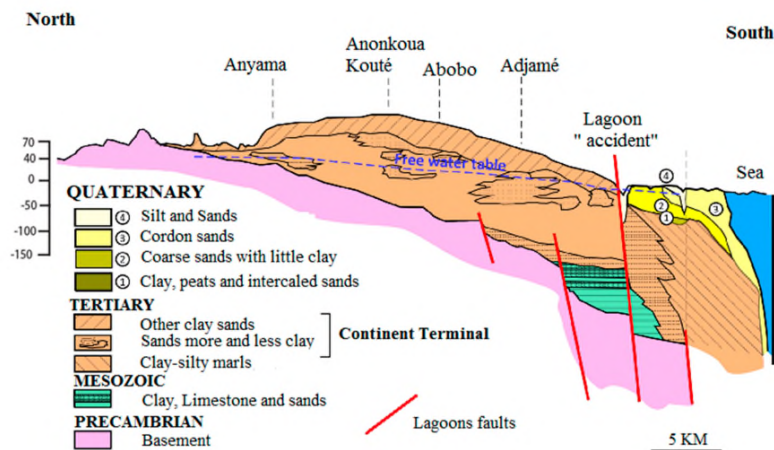
The coastal sedimentary basin, made up of post-Eburnean formations, is known for its cretaceous to quaternary detritic sediments and has a high potential for groundwater. It has a crescent shape with little curvature towards the sea and covers an area from the Fresco region in the west to the city of Axim in Ghana to the east³³. It is characterized by three episodes of transgression as shown in Figure 5-7.

In terms of the stratification of the geological layers, we can distinguish, from bottom to top, five lithological formations, resting on Precambrian basement: Maestrichian limestone (Terminal Cretaceous); fine sands, coarse sands, medium sands and the sandy clays of the plateaus.

Overall, below the topsoil of approximately 20 m, the bedrock of this area consists mainly of a fairly thick cover of sediments. The main materials consist of a detritic sequence of sandy clays varying colours (yellowish and brownish). A geological cross-section North to South of these units is shown in Figure 5-7.

³² Available at: https://en.wikipedia.org/wiki/Geology_of_Ivory_Coast/

³³ Kouamé, A.A. et al, Assessment of the Potential Pollution of the Abidjan Unconfined Aquifer by Hydrocarbons. Geosciences 2019, 9, 60



Source: Kouamé, A.A. et al. 2019³⁴.

Figure 5-7 Geological formations of the coastal sedimentary basin in Abidjan

5.2.5.2 Soils

The main soil (topsoil) encountered on the Project area and surroundings are the ferralitic soils (also called lateritic soils); which are characteristic of humid tropics as the result of chemical weathering and by accumulation of humus beneath vegetation, typically are low silica content and high percentage of aluminium and iron.

Associated to the depressed and drainage areas there are hydromorphic soils, which are caused by a pedological evolution dominated by an excess of water that causes a lack of oxygen over a long period. Either the ferrous iron accumulates in the profile giving a grey colour, or it is mobilised forming concretions of ferric iron.

These soils contain many plant roots and animal burrows and have a thickness about 20 m (LBTP, Geotechnical surveys, 2015).

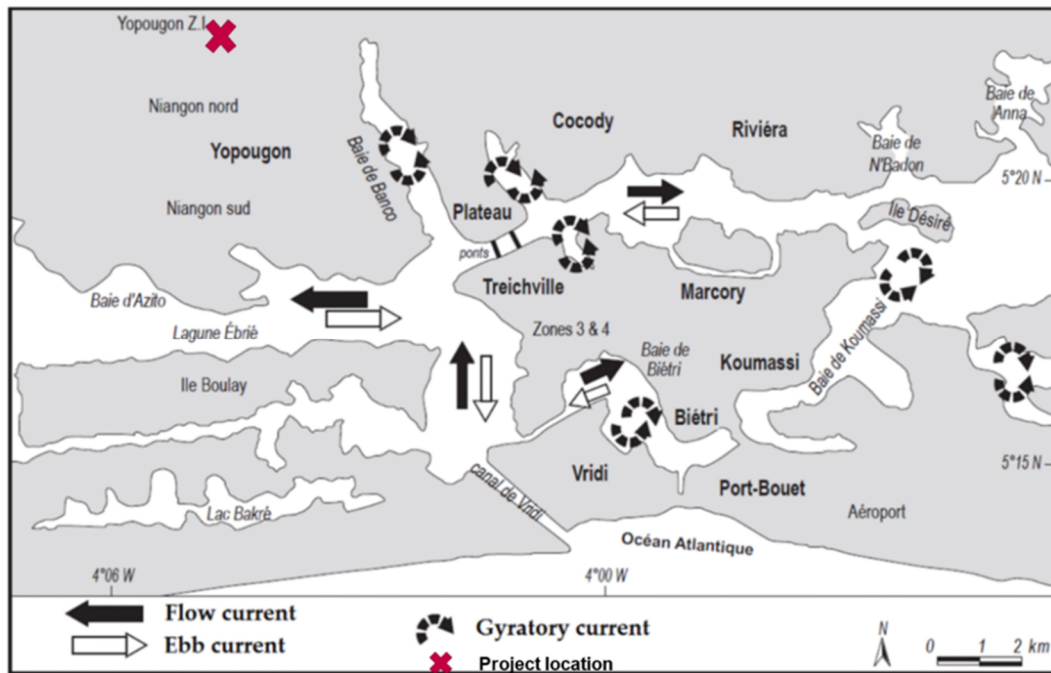
5.2.6 Surface Hydrology

5.2.6.1 General Conditions

Côte d'Ivoire has four main rivers that run roughly parallel from the north to the south. They are the Cavally (on the border with Liberia), Sassandra, Bandama, and Komoé; the longest of these is the Bandama, which runs about 800 km.

A regional level, the main hydrological feature at the Project area is the Ebrié Lagoon (Figure 5-8). It is one of the largest Lagoon systems in West Africa (approximately 140 km long, 4 km wide and 8 m deep – except in the port of Abidjan area where it is deeper). It has a total surface area of 566 km² and total estimated perimeter of 644 km. The Ebrié Lagoon connects to the Atlantic Ocean via the Vridi Canal, which was opened in July 1950 to facilitate the expansion of the Port of Abidjan.

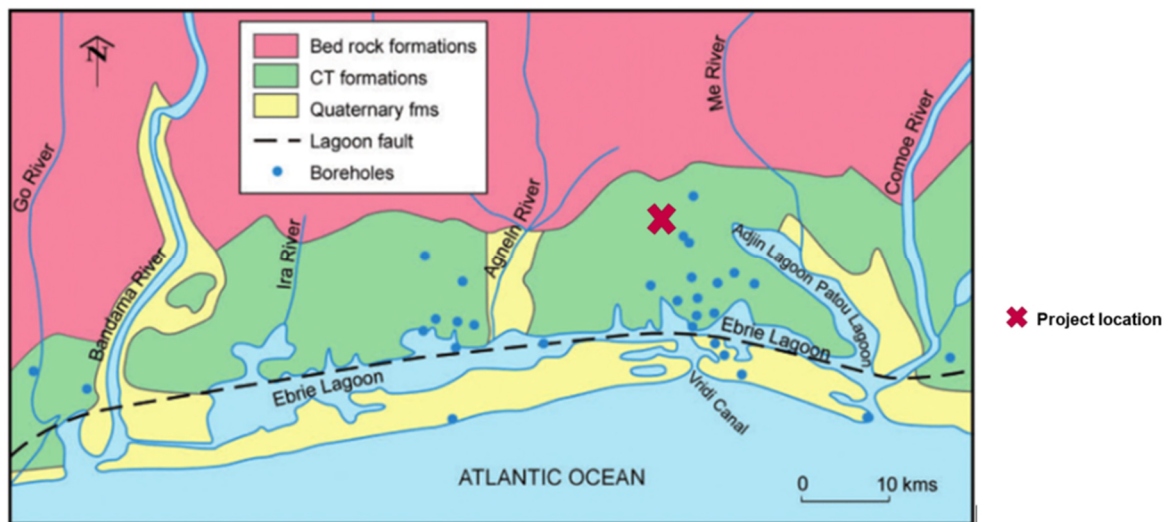
³⁴ Kouamé, A.A. et al, Assessment of the Potential Pollution of the Abidjan Unconfined Aquifer by Hydrocarbons. Geosciences 2019, 9, 60



Source: Pottier and Affian (2008)³⁵

Figure 5-8 Simplified Model of Circulation - Ébrié Lagoon

As the Lagoon is connected to the ocean, the volume of marine water entering the Lagoon varies seasonally and is dependent on the relative hydraulic levels of the Lagoon (maximum during the dry season, minimum during flood events). The Ébrié Lagoon collects water from Agneby, Comoé and Mé rivers but also from smaller streams and from precipitation within the Lagoon area (Figure 5-9); and the ocean level, as marine water intrusion occurs during the dry season between January and April.



Source: Adelana, S.M.A. et al. (2008)³⁶

Figure 5-9 Geology and hydrology of Abidjan area

³⁵ Pottier, P. and Affian, K. (2008): Géographie du littoral de Côte d'Ivoire, éléments de réflexion pour une politique de gestion intégré (pp.165-184) Available at : https://www.researchgate.net/publication/280753785_La_lagune_Ebrie_a_l'epreuve_de_la_pression_anthropique

³⁶ Adelana, S.M.A. et al. (2008): Urban groundwater management and protection in Sub-Saharan Africa.

The Ebrié Lagoon hydrological regime also depends on terrestrial and marine exchanges, hydrodynamics, morphology and bathymetry. This can result in variability in a number of the parameters defining water quality throughout the year, in particular temperature, salinity and pH, turbidity and dissolved oxygen.

The hydrological dynamic is influenced largely by the predominant climate (sub-equatorial or humid tropical climate) and constitutes a complex system in which interact the main rivers, the numerous wetlands and shallow channels, the Lagoon water surface and the sea.

Locally, the Project area has a dense hydrographic network, such as the Agnébi River and the Banco River (25 km² of drainage areas), Gbangbo River (58 km² of drainage areas), Anguédedou River and Djibi River (41 km² of drainage areas). Most of these rivers flow in a north-south direction and discharge to the Ebrié lagoon. The Agnéby is a coastal river that takes its source is at Agoua, at an altitude of 250 m. It covers a catchment area of 8,900 km² and is 200 km long.

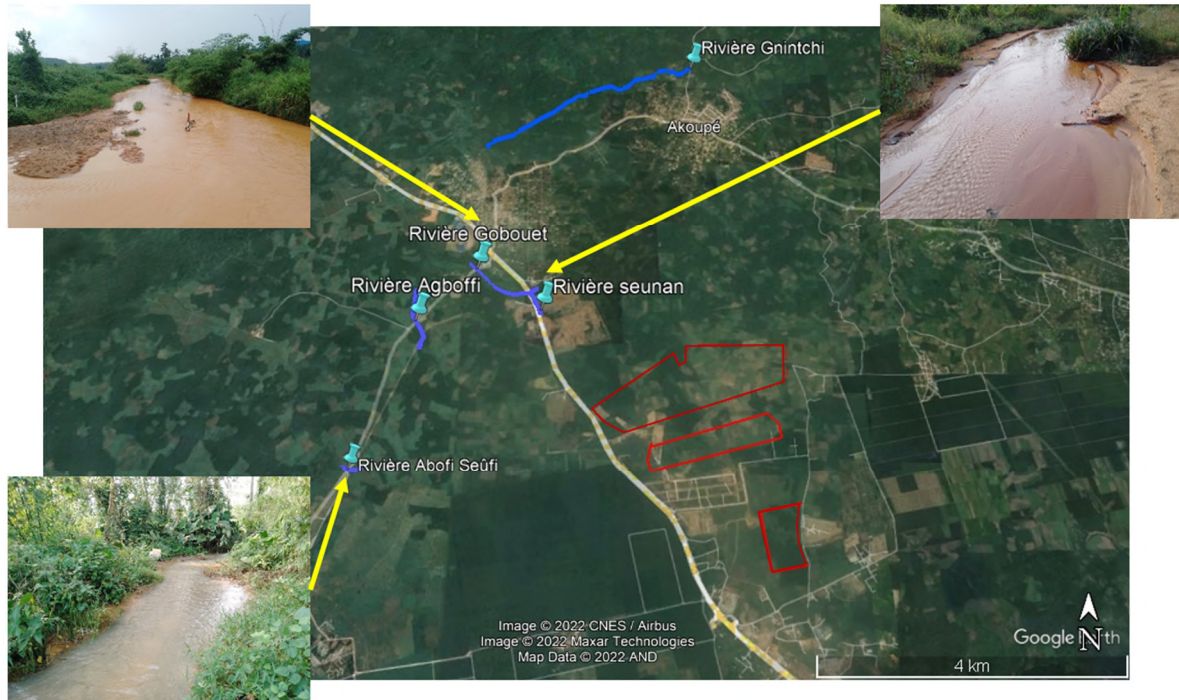
Ivorian industrial development has been heavily concentrated in the metropolitan area of Abidjan. According to the United Nations Environment Programme³⁷, Ébrié Lagoon is highly polluted with solid and liquid urban waste from Abidjan. The Lagoon has suffered from years of major pollution and currently industrial and domestic wastewaters are discharged in the lagoon. However, the Lagoon is still a resource for fisheries and is used for navigation purposes. The Ebrié Lagoon has several bays in which untreated or insufficiently treated wastewater effluents (domestic, industrial wastewater, and so forth) or solid waste have been discharged for decades. In addition, the biodegradable waste causes an intense eutrophication phenomenon, especially in the low renewal areas such as bays³⁸.

5.2.6.2 Local Water Drainage System

As discussed in the previous sections, the hydrographic network to regional level drains essentially from north to south, towards Ebrié Lagoon. However, due to the undulated landscape with numerous interfluves and natural depressions, the Project area is situated in a slightly elevated area with the lowest point in the north, which conditions the local runoff. The Project area contains a hydrographic network composed mainly of small rivers such as the Gobouet, Seunan, Agboffi Gninki and Aboffi Seûf (Figure 5-10).

³⁷ UNEP (2017). Available at: <https://www.unep.org/news-and-stories/story/unep-cote-divoire-assessment-highlights-action-required-path-sustainable>

³⁸ Coulibaly, et al. (2018): Spatio-temporal analysis and water quality indices (wqi): Case of the Ébrié lagoon, Abidjan, Côte d'Ivoire



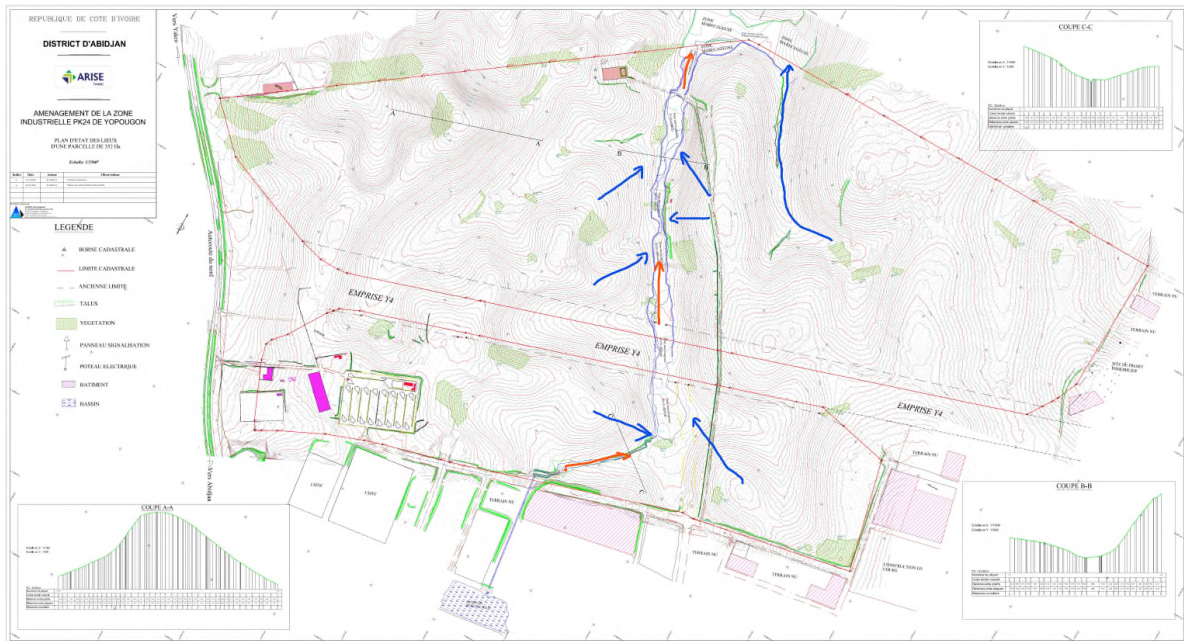
Source: Enval and ERM survey (December 2022).

Figure 5-10 Watercourses in the Project Area

The risk of flooding is all the greater in flood-prone areas such as valleys, low-lying areas, talwegs, and swamps. Floods generally occur in May-June and September-October, and low water in February-March. In the Project area, the overflows of the Gobouet not only flood its banks, but also feed the low-lying (marshy) areas and numerous natural depressions. Like all the rivers in the study area, the Gobouet plays an important role in regulating the ecosystem in this area and in the lives of the local population.

Locally, considering the area of influence of the PK24, the surface water in the region drains superficially, on slopes with a low inclination, towards the main watercourse that runs from south to north in direction to the Gobouet River. This is the main watercourse and natural water source, which is a permanent course that drains the northern boundary of the PK24 940 ha area running east-west, flows into the Agnébi River to finally discharge to Ebrié Lagoon.

A local thalweg cutting perpendicularly the Phase 2 and Phase 1 Zone 2 of the Project is the main drainage line, as can be seen in Figure 5-11 and Figure 5-12 .



Source: ARISE, 2022

Figure 5-11 Main Runoff Directions at the Project Area (North portion)



Source: ARISE, 2022

Figure 5-12 Main Runoff Directions at the Project Area (Southern portion)

5.2.6.3 Baseline Fresh Water Quality

In general, the quality of some inland watercourses, especially rivers in the Project area (Gobouet River at the northern edge of the 940 ha of PK24), is acceptable³⁹. However, the smaller ones remain vulnerable to nitrate, faecal and pesticide pollution, due to intensive agricultural practices, household discharges, leading to eutrophication and loss of biodiversity; as well as, to other nitrogenous, microbiological or organic matter.

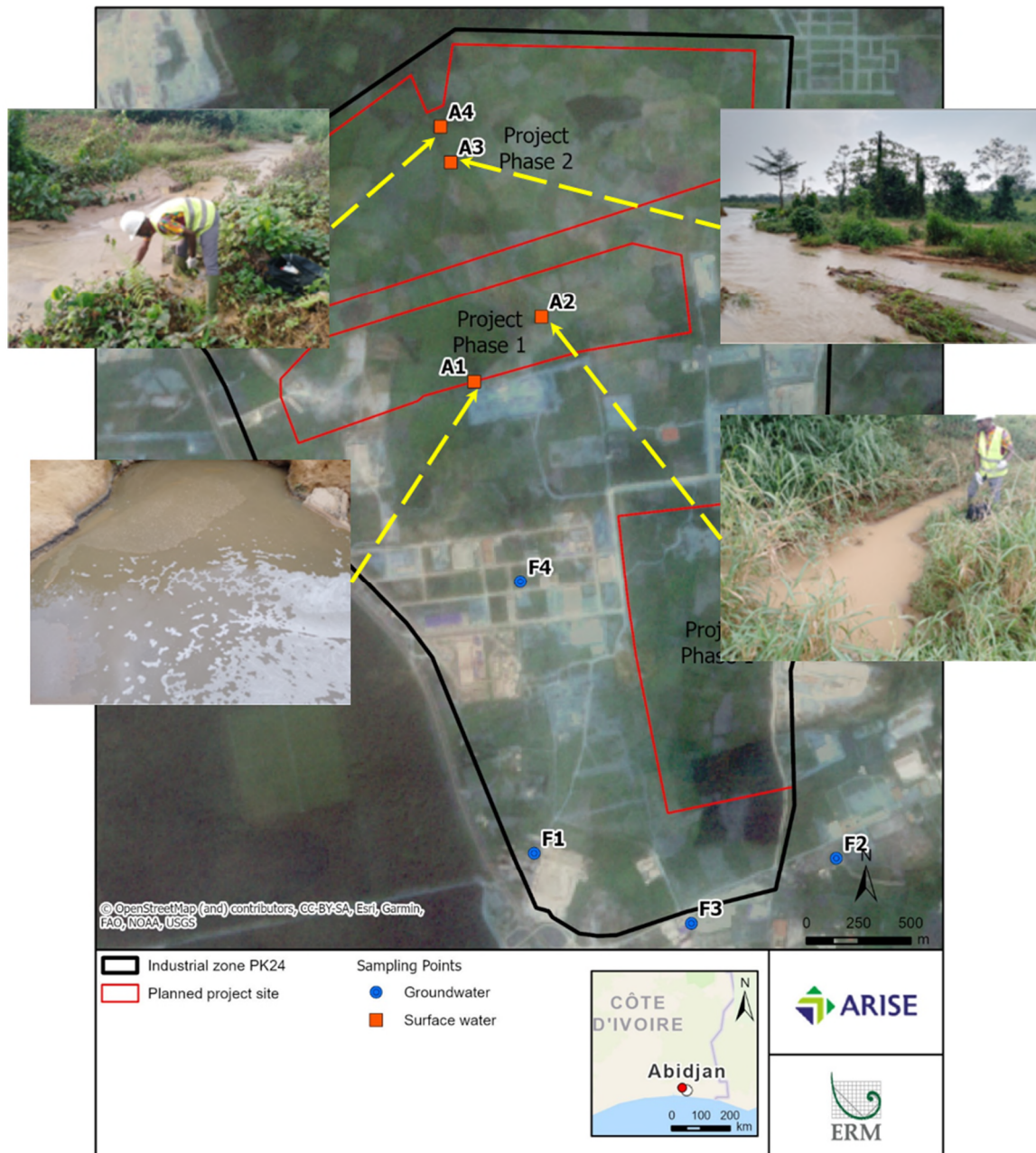
The development and operation of the Project IEZ could lead to a degradation or even disturbance of the aquatic environment of the Gobouet River by an increase in suspended load, discharged pollutants and eutrophication.

In addition to the desktop studies, the ESIA team carried out a site visit to identified water sources in the Project area. The team also conducted water sampling to understand the existing water quality in identified streams that interact with the area of influence of the Project. As is showed in the above Figure 5-11, the unnamed local watercourse running perpendicularly through the Project area is the main element of the hydrographic network in the Project area as surface runoff converges on this waterbed.

To evaluate the freshwater baseline quality of this watercourse, a monitoring plan was delineated with a scope of six surface water sample locations: four locations within the Project area and two in the wider Project AoI. A brief description of the sample location within the Project area is provided below and shown in Figure 5-13:

- Point A1 – located downstream of the Phase1 (Zone 1) and upstream of the Phase 1 (Zone 2);
- Point A2 – located downstream of the Phase1 (Zone 2) and upstream of the Phase 2;
- Point A3 – area of influence of Phase 2; and
- Point A4 – located downstream of Phase 2.

³⁹ NAGA et al., 2018 - Spatio-Temporal Analysis and Water Quality Indices (WQI): Case of the Ébrié Lagoon, Abidjan, Côte d'Ivoire - Hydrology 5(3).



Source of the photos: Enval and ERM survey (December 2022)

Figure 5-13 Surface Water Sampling Points at the Project Area

The two samples in the wider Aol were taken upstream and downstream of the Project area, as shown in Figure 5-14. The sample at Point A5 was taken upstream of the discharge area of all wastewater from the industries of PK24. The sample was originally intended to reflect baseline conditions but was later determined that the location is a large area of stagnant water adjacent to the main Autoroute du Nord (A3) and used for irrigation. This sample was then excluded of the assessment as it does not represent baseline surface watercourse conditions. Point A6 shows an downstream sample, at the confluence between the Seunan River and the Gobouet River near the Autoroute du Nord (A3). The Point 6 sample is included in assessment of the baseline.

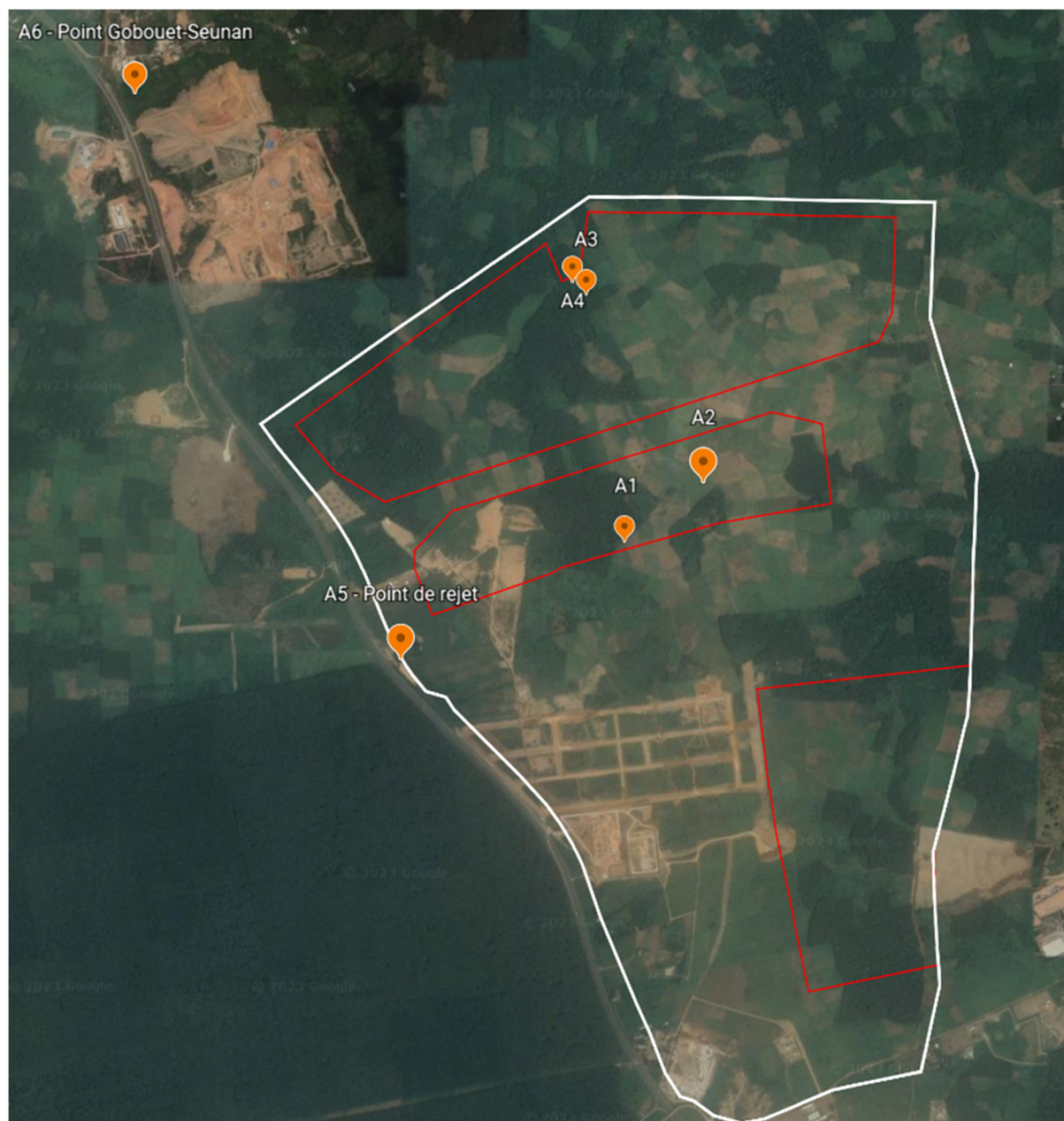


Figure 5-14 Surface Water Sampling Locations Overview

As per the local legislation, the analysed parameters included the following:

- Physicochemical parameters: pH, conductivity, dissolved oxygen and temperature.
- Anions and cations: Cl, SO₄, HCO₃, Ca, Mg, Na, and K.⁴⁰
- Nutrients: ammonia, nitrite, nitrate, phosphorus (total) and orthophosphate.
- Metals: Fe, Al, As, Cr, Pb, Ba, Zn, Cd, Hg, Se, B.⁴¹
- Pollutants: Total Petroleum Hydrocarbons C10-C40 (TPH), cyanide and phenol (total).
- Biological parameters: coliforms bacteria and thermotolerant coliform bacteria.

⁴⁰ chloride (Cl), sulphate (SO₄), bicarbonate (HCO₃), calcium (Ca), magnesium (Mg), sodium (Na), and potassium (K)

⁴¹ iron (Fe), aluminium (Al), arsenic (As), chrome total (Cr), lead (Pb), barium (Ba), zinc (Zn), cadmium (Cd), mercury (Hg), selenium (Se), boron (B), calcium (Ca), magnesium (Mg), sodium (Na), and potassium (K)

- **Miscellaneous parameters:** chemical oxygen demand (COD), sulphur, suspended matter (MES), total suspended solids (TSS). Alkalinity (TAC), water hardness (THT).

Samples were collected by the ERM subcontractor ENVAL between 8-9 December 2022. During the sampling the physicochemical parameters were measured (turbidity, temperature, pH, conductivity, and dissolved oxygen). All of the collected samples were placed in laboratory-supplied containers and maintained in cooler boxes to 5 °C from the moment they were collected until they arrived at the laboratory. Appropriate chain-of-custody forms accompanied the samples. The water samples were submitted and analysed by the ENVAL laboratory; it is a widely experienced in environmental analyses and is ISO/IEC 17025 (accreditation number ES18004).

Water analytical results are compared with the Ivorian national standard on drinking water (Inter-Ministerial Decree-ID N 0168/MSHP/MINEF of 03/08/2020) fixing the standards of potability intended for human consumption, excluding natural mineral water and spring water). In addition, the World Health Organization's (WHO) guidelines for drinking-water quality (GDWQ) 4th edition (2017, 2022), are also referred to. Neither the Ivorian nor the WHO standards are quality limits for surficial waters; but as drinking water standards they provide a benchmark for initial water quality assessments and for water safety and potential water uses.

The analytical results of the water samples are summarised in Table 5-4 and the complete laboratory analytical report is included in Appendix I.

Table 5-4 Summary of Baseline Surface Water Results

Analytical Parameter	Unit	Results					REFERENCE (WHO, 2011 ⁴²)
		A1	A2	A3	A4	A6	
Total cyanides	mg/L	0.659	0.034	0.159	0.251	0.029	0.05*
Aluminum	µg/L	125	604	1040	46.4	238	200
Iron	µg/L	2020	1439	2306	1130	823	300
Lead	µg/L	<5	11.2	12.7	<5	8.06	10
Coliform bacteria	UFC/10 0mL	>80,000	>80,000	>80,000	>80,000	N=53	0

xxxx = Value higher than reference

* Inter-ministerial Decree-ID N 0168/MSHP/MINEF of 03/08/2020

Physicochemical parameters:

Regarding the physical-chemical parameters, the pH varies little over the all samples collected and is between 5.3 and 7.1, indicating an acidic to neutral conditions. The conductivity values range between 58,7 µS/cm to 1014 µS/cm. The recorded temperature values vary between 24.0°C and between 24.2°C, indicating typical surface water temperature for tropical shallow streams. The dissolved oxygen concentrations recorded in the medium are low except for A6 (4.1 mg/L); which can be an effect of the high temperatures that reduce the solubility of gases in water and/or the presence of a high organic load in the water.

In general, the physicochemical parameters suggest water that is poorly mineralised, poor in dissolved oxygen with pH acid or neutral. The low dissolved oxygen levels registered may affect the life of aquatic organisms and the quality of the water.

⁴² WHO (2011). Guidelines for Drinking-water Quality. Fourth Edition

Anions and cations:

These waters are low-medium mineralised, with chloride, bicarbonate, calcium and sodium as the main dissolved elements. There are no exceedances of the reference values, although a high concentration variability is identified between the different samples with a general tendency to decrease mineralisation from A1 to A6.

Nutrients

Presence of nutrients in all samples highlighting the presence of ammonium close to the reference value of 4 mg/L (ID 0168/MSHP/MINEF) in A1, A3 and A4; and high concentrations of phosphorus ranging from 1.75 mg/L (A2) to 7.25 mg/L in A3. The phosphorus concentrations are above the recommended limits proposed by some International Agencies⁴³; and could cause rapid weed growth or algal blooms which can choke aquatic life and cause long-term damage to the health of a waterbody.

Metals

The results for the 11 compounds included in this group indicate exceedances of the GDWQ for aluminium, lead and iron and the absence of the most polluting heavy metals (Cd and Hg). The concentrations of aluminium, lead and iron metals are probably related to local geology, associated with alteration of granitoids and gneisses. Currently some Environmental and Health Agencies (including the WHO in the last update version of guidelines in 2022) recognise that available evidence does not support the derivation of a health-based guideline value for aluminium and iron in drinking-water, and the presence of both metals at concentrations in excess of 0.2–0.3 mg/l respectively often leads to consumer complaints as a result of changes in taste, colour and turbidity.

Pollutants

In general terms, the surface water samples collected in this main course indicated the presence of cyanide in the five samples ranged from 0.659 mg/L to 0.029 mg/l in A6, exceeding the reference value of 0.05 in A1, A3 and A4. The cyanide concentrations may be related to the use of agrochemicals and pesticides or other discharges of industrial effluents.

Biological parameters

The concentration of coliforms and thermotolerant coliform bacteria in freshwater bodies are an indirect indicator of contamination with human and animal excreta. The results indicate the presence of both bacteria exceeding the analytical determination range (>80,000) in the four samples from the project area (A1 through A4) with findings also in A6 downstream. The Maximum Contaminant Level (MCL) for bacteria in drinking water is zero total coliform colonies per 100 milliliters of water as established by the WHO, EU Directives and US EPA.

Miscellaneous parameters

These parameters are indirect indications of water quality and characteristics. The results for alkalinity and hardness suggest moderately hard waters in the project area that are diluted downstream (A4 and A6). MES and TSS measure a similar property to turbidity but provides an actual weight of particulate matter for a given volume of sample, the results ranged between 960 mg/L (A4) to 8 mg/L (A6) suggesting a significant load of inorganic materials, although bacteria and algae can contribute to total solid levels. The chemical oxygen demand ranged from 950.5 mg/L (A1) to <30 mg/L in A6 suggesting a correlation with the results of the bacteria analyses.

⁴³ The US EPA established a recommended limit of 0.05 mg/L for total phosphates in streams that enter lakes and 0.1 mg/L for total phosphorus in flowing waters

Summary of Baseline Surface Water Quality

To summarise, the surface water at the measurement points A1 to A4 are particularly polluted especially regarding coliform bacteria. The surface water at A6 is comparatively clean nevertheless, the pollution might be diluted because point A6 was taken from a larger water body.

5.2.7 Hydrogeology

5.2.7.1 General Conditions

The coastal sedimentary basin in Abidjan is composed of three aquifers: the Quaternary aquifer, the Continental Terminal aquifer (CT) of Mio-Pliocene age (Tertiary), and the Maastrichtian aquifer. The Project area is located on the Continental Terminal aquifer, which is the main groundwater resource and it is covering the most area of the coastal sedimentary basin, Figure 5-9.

Deeper in the basin, between 130 and 170 m depth in the sandstone limestone banks and fine clayey sands with low permeability, the Maastrichtian carbonates and sandstones constitute a confined aquifer. The only known abstraction wells for the production of mineral water are by the *Société africaine des eaux minérales* (SADEM Company).

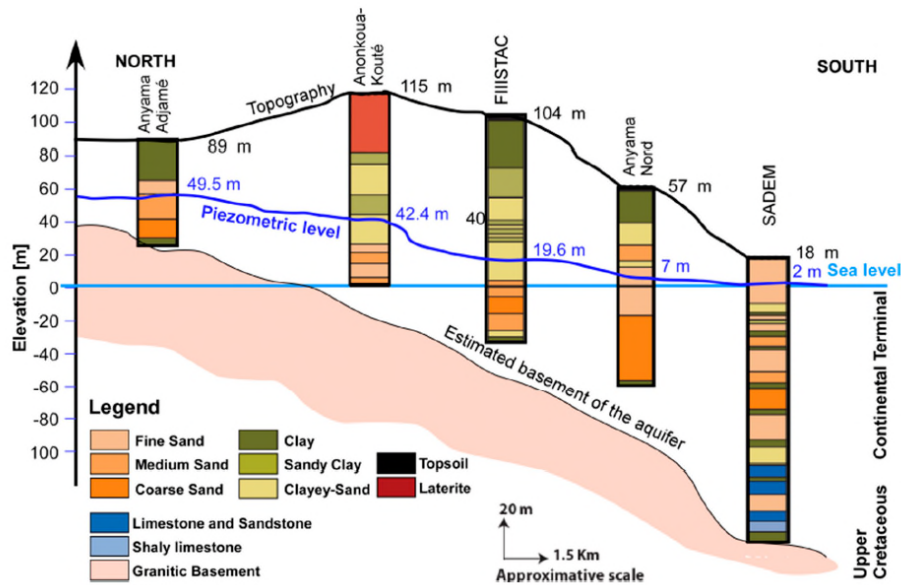
The Quaternary deposits are composed of clay sands, mud and sand from fluvio-lagunar depressions and marine sand. This unit forms an aquifer highly vulnerable to pollution because its piezometric surface is very close to the ground surface, with values ranging between zero to five meters below ground level (BGL) depending on the area. The existence of water bodies and sewage effluents facilitates infiltration of rainwater and other contaminants into the groundwater, therefore, the Quaternary deposits are the most vulnerable of the three aquifers. The hydraulic conductivity ranges between 3.5 and 100 m/d. In the southern part of Abidjan District, groundwater supplies from Quaternary formations represent the most important groundwater resource for a large percentage of suburban and rural populations.

The Continental Terminal aquifer, also known as the “Abidjan aquifer”, is unconfined, and includes four levels from top to bottom (CT1 to CT4) extending over approximately 1,435 km² and is divided into several large compartments or elements by the major rivers.

The hydraulic conductivity of the CT aquifer is variable due to lateral changes in the grain size of water-bearing sediments (100 m/d in the sands and the sandstones and 0.1 m/d in the clayey sands). The transmissivity values can be as high as 10,000 m²/d, while porosity values range from 0.05 to 0.20. The regional groundwater flow occurs from north to south, i.e., towards the lagoon. The hydraulic gradient increases up to 3 ‰ close to the Lagoon. The flow rates are low compared to that of the CT aquifer: 0.6 to 6 l/s for the Quaternary aquifer and 2 to 90 l/s for the CT aquifer (relevant for the Project hydro resources)(Oga et al., 2008).

The reserves in the CT aquifer are renewed by direct infiltration or percolation through Quaternary formations with the aquifer recharges from one to four months after the long rainy season (Kouamé, A.A. et al. 2019). The water bearing layers CT3 and CT4 are hydrologically important. Both units are interconnected, although CT3 may be confined when its upper layers are clay rich.

Figure 5-15 shows the different lithological facies of the sedimentary basin with a large variation; some facies are recurrent, such as clayey sands, clay, sandy clays and sands, and others, such as laterite, are observed only locally.



Source: Kouamé, A.A. et al. (2019)⁴⁴

Figure 5-15 North-south cross-section of the coastal basin in Abidjan

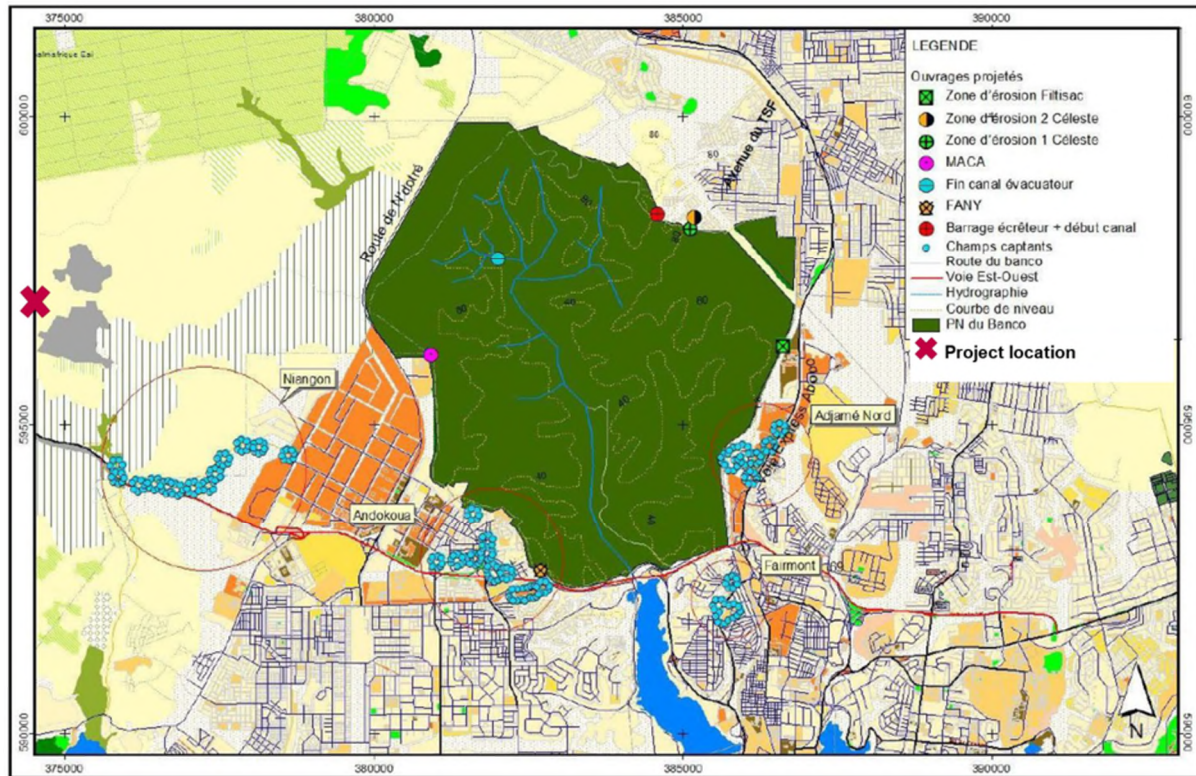
In the Abidjan area, the groundwater is the main valuable water resource for drinking water production, and agricultural irrigation from two types of abstraction wells:

- Shallow dug wells mainly drilled manually by digging with simple hands tools, such as, shovels and hoes. These wells serve for domestic and agricultural purposes and are frequent in the Quaternary aquifer. Dug and bored wells have a large diameter and are able to obtain water from less-permeable materials such as very fine sand, silt, or clay. Some disadvantages of this type of well are that they are shallow, making them subject to contamination from nearby surface sources, and they go dry during periods of drought if the water table drops below the well bottom.
- Drilled wells, which exploit deeper aquifer units through high flow rates. Drilling equipment range from rather simple up to very sophisticated and powerful machines capable of drilling more than 200 metres in depth. In general, drilled wells are less susceptible to contamination compared to dug wells, although are exposed to diffuse pollution (nitrate) and arsenic. The well fields of Water Distribution Company of the Côte d'Ivoire (SODECI) and others used industrial purposes are drilled wells placed in the CT aquifer.

Water uses

The CT aquifer is the main targeted water source for the Project, which has been exploited by SODECI for more than 30 years, mainly thanks to several well fields to supply drinking water to the city of Abidjan. At the current stage (January 2023) the current water needs of the full operating Project including tenants is unclear. The risks of overexploitation of this resource, which is primarily intended for consumption, may be real if new wells are installed in the area. Either the existence in the area of other wells for industrial or domestic purposes cannot be ruled out. This needs to be assessed by ARISE through a Water Resources Management Plan. The nearest wellfield of SODECI is located in Niangon, less than 10 km from the Project as is illustrated in Figure 5-16.

⁴⁴ Kouamé, A.A. et al. (2019). Piezometric levels on 11 December 1992. Assessment of the Potential Pollution of the Abidjan Unconfined Aquifer by Hydrocarbons. Geosciences 2019, 9, 60.



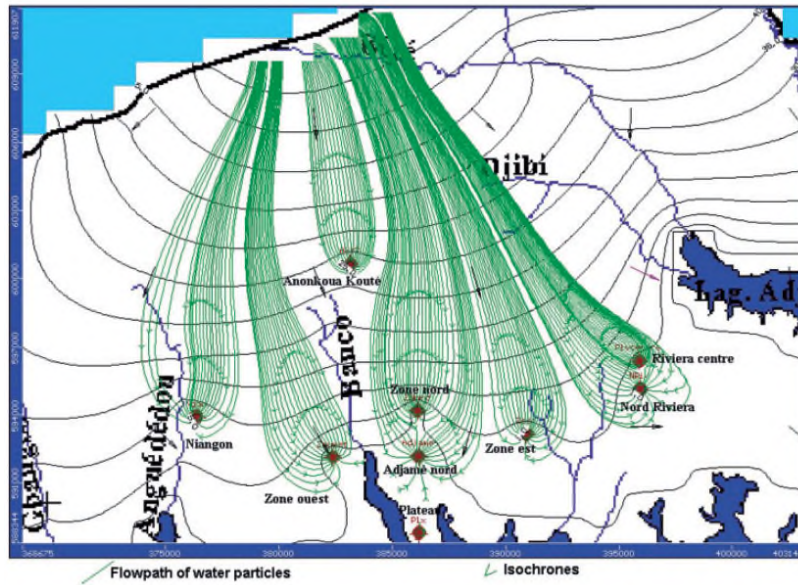
Source: NDELB, 2014.

Figure 5-16 Location of the Closest Larger Wellfields in the Project Vicinity

These abstraction wells have a wellhead protection area delineated by the Water Department and SODECI, to protect the resource against any type of pollution. According to the Water and Environmental Codes there are three protective perimeters which together provide a maximum protection distance ranged from 200 to 240 m. The wider remote protection zone can extend to about 4 ha around the drilling point, or to an entire catchment area.

A numerical groundwater flow model conducted by Kouneme K.J, et al. (2008) considering the forecast of water extraction of SODECI for 2030, confirmed that the water collected by the main wellfields of SODECI come all from the north(Figure 5-17). It is unclear if the Project site is within the capture zone of the Niangon wellfield. ARISE will need to check and liaise with SODECI and other stakeholders in the wider PK24 to get clarity on any restrictions to groundwater at PK24 including the Project area.

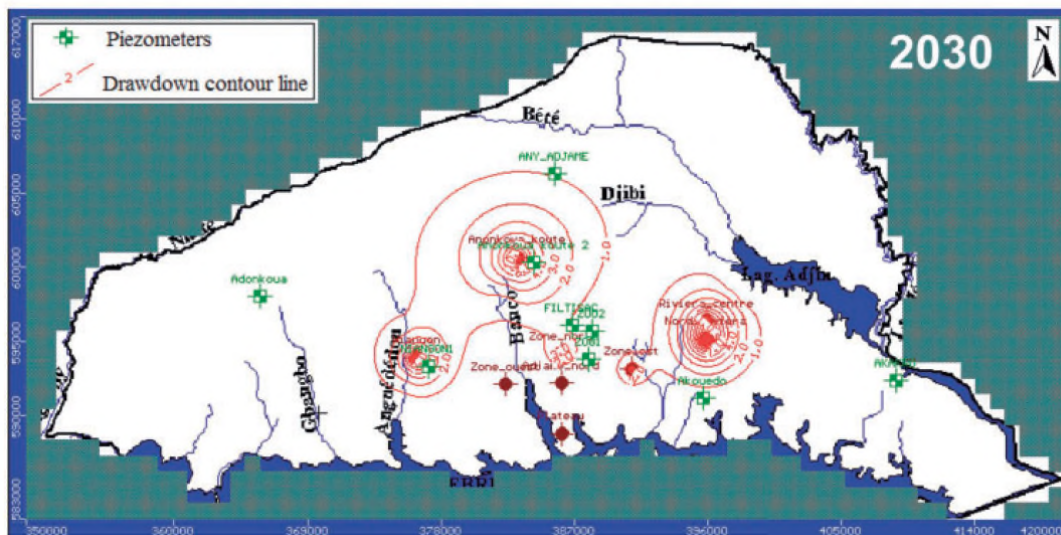
Although the protection perimeters of the capture zone may not sufficiently be enforced by the government



Source: Kouneme K.J, et al. (2008)⁴⁵

Figure 5-17 Simulated groundwater flowpath delineating the capture zones of wellfields of Abidjan aquifer

Kouneme K.J, et al. (2008) also simulated the water table drawdown including the influence of the additional demands envisaged by SODECI for 2030. Based on this study the water table drawdown for 2030 will vary between 1 and 16 m compared to initial head values (Figure 5-18). Theoretically, and without significant additional pumping, it is expected that the renewable resources (recharge) of the aquifer would support the water withdrawals, including the influence of the additional demands envisaged by SODECI.



Source: Kouneme K.J, et al. (2008)⁴⁶

Figure 5-18 Calculated drawdown in the aquifer in 2030

⁴⁵ Kouneme K.J, et al. (2008): Groundwater modelling and implication for groundwater protection: Case study of the Abidjan Aquifer, Côte d'Ivoire.

⁴⁶ Kouneme K.J, et al. (2008). Groundwater modelling and implication for groundwater protection: Case study of the Abidjan Aquifer, Côte d'Ivoire.

The highest drawdown cone was calculated in the area of influence of the Project at western and south-eastern parts of the model where the drawdowns could affect shallow wells used for domestic purposes. Furthermore, an increase in pumping due to new abstraction wells may result in the following adverse effects: salt-water intrusion in the south boundary of aquifer, degradation or modifications of the water table in the Banco forest (one significant groundwater recharge area), with possible consequences for the ecosystems and generate tensions with the local communities in the long term between the proposed new economic activities (demand for water for industrial needs) and the traditional uses (household consumption and irrigation), especially during the dry seasons.

Several studies (Kouamé, et al., 2019, Adelana et al., 2008 and Jourda et al. 2006) have reported the potential overexploitation and pollution of the CT aquifer. High nitrate concentrations of up to 120 mg/L have been found in some boreholes with some abstraction wells used to supply drinking water abandoned due to high nitrate concentrations. A three-year assessment project on the pollution status and vulnerability of the Abidjan aquifer, concluded that the groundwater of Abidjan is affected by the progression of pollution from the south towards the north and east. The major pollution threat to the Abidjan aquifer and main sources of nitrate are (i) sewage due to the absence of systems for the collection of waste and wastewater and (ii) nitrate and/or pesticide pollution, due to intensive agricultural practices (particularly for shallow aquifers).

According to studies (NDELB, 2014), nitrogen pollution is starting at four of the nine SODECI drilling sites: Plateau, Adjamé Nord, Nord Riviera and Zone Ouest (south-west corner of Banco).

5.2.7.2 Baseline Groundwater Quality Monitoring

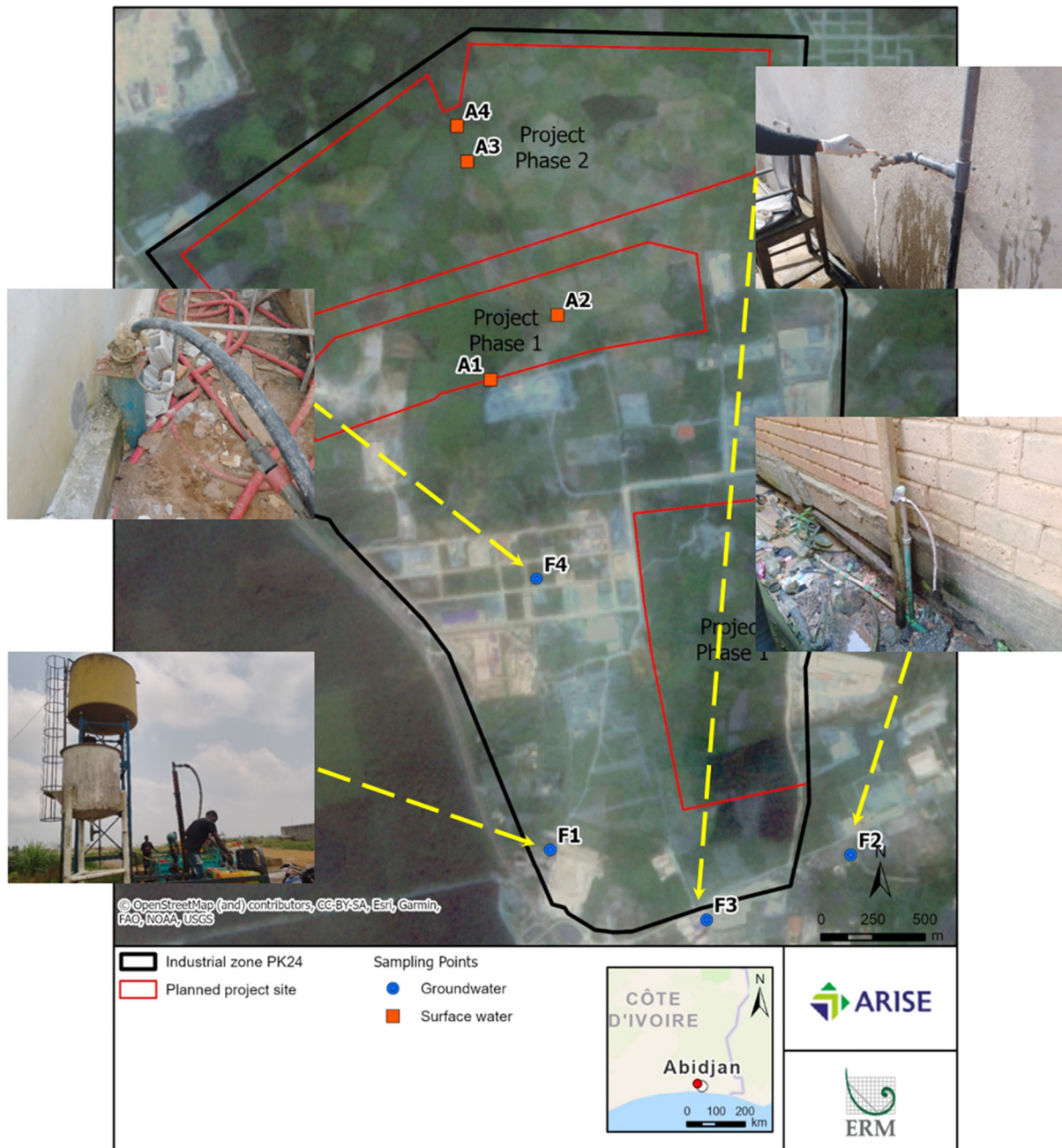
For this ESIA study, the monitoring plan for determining the groundwater quality baseline at the Project AOI considered the existent extraction wells currently installed in the PK24 IEZ and surroundings areas. Four groundwater samples were collected at the points F1 to F4, located to west to the Phase 1 area (Zone 1) and upstream to the Phase 1 (Zone 2) and Phase 2 (see Figure 5-19).

As per the local legislation, the analysed parameters included the following:

- Physicochemical parameters: pH, conductivity, dissolved oxygen and temperature.
- Anions and cations: Cl, SO₄, HCO₃, Ca, Mg, Na, and K.⁴⁷
- Nutrients: ammonia, nitrite, nitrate, phosphorus (total) and orthophosphate.
- Metals: Fe, Al, As, Cr, Pb, Ba, Zn, Cd, Hg, Se, B.⁴⁸
- Pollutants: Total Petroleum Hydrocarbons C10-C40 (TPH), cyanide and phenol (total).
- Biological parameters: coliforms bacteria and thermotolerant coliform bacteria.
- Miscellaneous parameters: chemical oxygen demand (COD), sulphur, suspended matter (MES), total suspended solids (TSS). Alkalinity (TAC), water hardness (THT).

⁴⁷ chloride (Cl), sulphate (SO₄), bicarbonate (HCO₃), calcium (Ca), magnesium (Mg), sodium (Na), and potassium (K)

⁴⁸ iron (Fe), aluminium (Al), arsenic (As), chrome total (Cr), lead (Pb), barium (Ba), zinc (Zn), cadmium (Cd), mercury (Hg), selenium (Se), boron (B), calcium (Ca), magnesium (Mg), sodium (Na), and potassium (K)



Source of the photos: ENVAL and ERM survey (December 2022)

Figure 5-19 Location of the Wells Sampling Points

The analytical results of the groundwater samples are summarised in Table 5-5 and the complete laboratory analytical report is included in Appendix I.

Table 5-5 Summary of Baseline Groundwater Results

Analytical Parameter	Unit	Results				REFERENCE (WHO, 2011 ⁴⁹)
		F1	F2	F3	F4	
pH/Temperature	°C	4.6 at 24.4°C	4.7 at 23.9°C	4.7 at 23.9°C	4.6 at 24.1°C	6.5-8.5*
Total cyanides	mg/L	<0.020	<0.020	<0.020	<0.020	0.05**
Aluminum	µg/L	93	74.4	38.2	27.4	200
Iron	µg/L	<5	<5	<5	<5	300
Lead	µg/L	<5	<5	<5	<5	10
Coliform bacteria	UFC/10 0mL	N=90	<1	N=13	<1	0
Thermotolerant coliforms	UFC/10 0mL	N=80	<1	N=12	<1	0

xxxx = Value higher than reference ** Inter-ministerial Decree-ID N 0168/MSHP/MINEF of 03/08/2020

*Optimum pH required for construction materials used in the distribution system

Physicochemical parameters

In general, the physicochemical parameters suggest waters oxygenated, poor mineralised and with pH acidic. Except the pH values that are below 6, all parameters would be in compliance with the GDWQ and the ID 0168/MSHP/MINEF references (water with a pH<6 is not suitable for human consumption).

Anions and cations

These waters are low mineralised. Lack of alkaline substances in the groundwater system is also helpful in the accumulation of acidity of the groundwater.

Nutrients

Presence of trace concentrations of nutrients in all samples well below the reference value of ID 0168/MSHP/MINEF and WHO (where applicable).

Metals

Of the 11 compounds analysed only aluminium was detected in all four samples. The results in all cases are well below the reference values (where applicable).

Pollutants

No detected.

Biological parameters

The results indicate the presence of both bacteria (coliforms and thermotolerant coliform) in wells 1 and 3 above the Maximum Contaminant Level (MCL) for bacteria in drinking water (zero total coliform colonies per 100 milliliters).

⁴⁹ WHO (2011). WHO (2011). Guidelines for Drinking-water Quality. Fourth Edition

Miscellaneous parameters

The results of these analyses are consistent with the previous ones being representative of weakly mineralised waters and do not suggest any significant impact.

5.2.8 Air Quality

This baseline air quality section was informed by site visits undertaken by the ESIA team in June, September and October 2022. The team observed that construction activities within the PK24 IEZ have commenced with some industries already operational such as cement, steel, cosmetic and paper-related industries. Visible air emissions from various industries were noted in addition to airborne dust arising from vehicles movement, road construction and unpaved roads.

During the site visits, existing agricultural activities were identified in different parts of the Project area. Air emissions from such activities are usually limited to times of ploughing and harvesting, and potentially dust lift from fields during dry, windy periods. These activities will cease upon the construction phase of the Project.

In the area of the Phase 1 Zone 1 of the Project, there was some soil stockpiling from neighbouring construction sites which were moved to other areas of the PK24 as required. Stockpiling activities generate dust emissions during loading and unloading of the piles, and from wind erosion of the stockpile itself, but noting that the stockpile will naturally vegetate over time. Secondary emissions from track-out also occur, whereby mud and debris are brought onto the roads and dust is re-suspended; these are typical of construction activities.

As these activities affect the local air quality, efforts have been made to keep distance from the construction areas during the installation of the baseline monitoring equipment to minimise the influence on the monitoring and thus to facilitate the identification of the true baseline.

The villages (Allokoi and Gounioubé) are the nearest sensitive human receptors in the study area and are considered of medium sensitivity.

5.2.8.1 Baseline Air Quality Monitoring

ERM has undertaken a baseline monitoring exercise with the assistance of a local partner ENVAL. The key rationale for baseline study is to determine the current state of the airshed⁵⁰ in the Project area. The approach to the baseline monitoring was informed by the International Finance Corporation (IFC) General Environmental, Health, and Safety (EHS) Guidelines: Environmental: Air Emissions and Ambient Air Quality (2007)⁵¹ and ERM profession judgement and experience.

The baseline study encompassed ambient monitoring of nitrogen dioxide (NO₂) and particulate matter less than 10 microns (PM₁₀) and PM less than 2.5 (PM_{2.5}). The pollutants of interest are based on a review of the proposed activities against the relevant IFC sector specific guidance, namely increased traffic (exhausts from vehicle engines), boilers and electricity generation (from diesel generators) and emissions from process-related activities.

Dust impacts during construction are discussed further in this report (section 6.2.2.2). However, dust was not considered as a pollutant of interest for the operational phase. Considering the assumption of adequate management of the Project activities with appropriate mitigation in place, the emissions of dust during the operational phase is negligible.

⁵⁰ An airshed is an area that shares a common flow of air and that is exposed to the same conditions which may become uniformly polluted or stagnant.

⁵¹ Available at: <https://www.ifc.org/wps/wcm/connect/4e01e089-ad1a-4986-b955-e19e1f305ff0/1-1%2BAir%2BEmissions%2Band%2BAmbient%2BAir%2BQuality.pdf?MOD=AJPERES&CVID=nPtqvbS>

West African countries⁵², including Cote d'Ivoire, have committed to the adoption of low sulphur fuels for road transport. On this basis, SO₂ is not a pollutant of interest for the Project. No monitoring of SO₂ has been undertaken.

Monitoring Techniques

Nitrogen dioxide (NO₂)

NO₂: passive monitoring was undertaken using Palmes-type diffusion tubes (see Figure 5-20), provided and analysed by Gradko Laboratories and deployed for approximately 30 days per sampling round. Two rounds of consecutive sampling were undertaken at twelve monitoring locations. The first round of NO₂ monitoring continued from 21st/22nd September 2022 until 21st/22nd October 2022, capturing part of the wet season. The second round of NO₂ sampling started on 21st/22nd October 2022 until 21st/22nd November 2022 capturing a part of the drier season. The diffusion tubes were sent for laboratory analysis to determine the period mean concentration.



Source : ERM, 2022

Figure 5-20 Diffusion Tubes

The locations of the NO₂ diffusion tubes are shown in Figure 5-21 below. Points marked as "N" refer to diffusion tube locations.

⁵² <https://www.unep.org/news-and-stories/news/west-african-countries-adopt-low-sulphur-diesel-standards>



Source: ERM, 2022 from Google Earth ®

Figure 5-21 Monitoring Locations for NO₂

The exact location for each monitoring point is given in Table 5-6 and the photos from the sampling points are presented in Figure 5-22.

Table 5-6 Monitoring Locations for NO₂

Monitor location	Location Coordinates (UTM)		
Location	Zone	m E	m N
N1	30N	369518	602133
N2	30N	373179	601892
N3	30N	370306	600530
N4	30N	373317	599966
N5	30N	366737	597771
N6	30N	372437	597220
N7	30N	373495	596032
N8	30N	369902	597730
N9	30N	372049	605117
N10	30N	373990	599195
N11	30N	369221	604687
N12	30N	373927	597754



Photo N1



Photo N2



Photo N3



Photo N4



Photo N5



Photo N6



Figure 5-22 Images for Locations of NO₂ Tubes

Each sampling campaign included 12 diffusion tubes at 12 different locations. Among the 24 diffusion tubes that were installed during the both sampling rounds, a few of the tubes were removed by unknown third parties (indicated in the section below). Nevertheless, the results of the remaining locations are presented in Table 5-8 below. While the removal of some samples has reduced the sample size, the key locations of upwind, downwind, and cross-wind of the Project area have been captured by the remaining samples.

Particulate Matter (PM₁₀ and PM_{2.5})

PM monitoring was undertaken by ENVAL and ERM for a period of two months. The monitor used was a DustTrak device, located at point PM 1 shown in Figure 5-23. The location was chosen based on the following factors: accessibility, security, power supply, proximity to the Project area and sensitive receptors. Data from the DustTrak was downloaded after every 15 days; the periods of missing data are attributed to power cuts in the area.

Table 5-7 Location of the PM Monitor

Points	Zone	UTM Coordinates	
		m.E	m.N
PM1	30N	372200	597456



Source: ERM, 2022 from Google Earth ©

Figure 5-23 Monitoring location for PM

Results

Nitrogen dioxide (NO₂) ambient concentration

The table below shows the averages of the first and second rounds of NO₂ monitoring. During the first (wet) month of monitoring, two tubes went missing on site. In the second (dry) month, six tubes were not analysed due to either being missing on site or cross-contamination. The missing tubes are indicated in Table 5-8 below.

Table 5-8 Baseline Concentration of NO₂ (µg/m³)

Location	Monthly Ambient Concentration (µg/m ³)		
	First (wet) month	Second (dry) month	Average
N1	43.19	33.05	38.12
N2	14.19	n/a	14.19
N3	17.98	n/a	17.98
N4	n/a	n/a	n/a
N5	n/a	8.71	8.71
N6	17.16	9.64	13.40
N7	10.86	5.01	7.94
N8	9.69	5.32	9.69
N9	7.87	n/a	7.87
N10	9.80	n/a	9.80
N11	10.15	n/a	10.15
N12	15.43	12	13.72
Average	15.63	12.29	13.58

Source: ERM, 2022

The monitoring data shows that monthly average concentrations for NO₂ are well below the annual air quality standard (AQS) for Côte d'Ivoire and IFC (refer to Table 2-6 and Table 2-7) at all measured locations. The overall average ambient NO₂ concentration is 13.58 µg/m³ which is 34 % of the Ivorian and IFC annual AQS respectively (i.e., 40 µg/m³).

The short-term baseline (1 hour or 24 hour) value can be assumed as being twice the long-term value⁵³. On this basis, the short-term baseline concentrations at all locations were well below the 24-hour AQS. The overall average short-term concentration, at an assumed 27 µg/m³, is 14% of both the Côte d'Ivoire and IFC 24-hour AQS (i.e., 200 µg/m³). The baseline data clearly shows that the airshed in the Project area is not degraded for NO₂ (i.e., the baseline concentration is within the air quality standard).

Particulate Matter (PM₁₀ and PM_{2.5}) ambient concentration

The results of the PM monitoring from the Dust Trak for PM₁₀ and PM_{2.5} (24 hour) are presented in the Table 5-9 below.

Table 5-9 Baseline Concentration of PM₁₀ and PM_{2.5} (µg/m³)

Data download frequency Pollutant	Dry Season	Wet Season	Annual Average
PM₁₀ monthly average	161	186	174
Maximum PM₁₀	684	874	
PM_{2.5} monthly average	158	183	171
Maximum PM_{2.5}	871	674	

Source: ERM, 2022

⁵³ <https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit#calculating-averaging-periods>

The monitoring data shows that the annual average concentrations for PM₁₀ is 174 µg/m³ respectively, which is exceeding largely the Ivorian and IFC annual AQSs, that are 40 µg/m³ and 20 µg/m³ respectively. The monitoring data shows that the annual average concentrations for PM_{2.5} is 171 µg/m³, which is also greatly above the national and the IFC annual AQS.

Consequently, the baseline data shows that the airshed is degraded for PM₁₀ and PM_{2.5} (i.e., the baseline concentration is much above the national and IFC AQS). The above results for PM indicate that there is a substantial amount of dust pollution in the air in a close proximity to the Project area, as these results are above both the IFC/WHO and Ivorian AQS.

5.2.9 Noise

5.2.9.1 Introduction

An important part of the noise assessment is the quantification and understanding of the existing acoustic environment, including the identification of baseline noise levels at potentially Noise Sensitive Receptors (NSRs). The baseline environment can be defined as the conditions that would prevail in the absence of the Project.

This section presents the results of the baseline noise survey undertaken during November 2022. The quantification of baseline noise levels provides the basis for the assessment of potential noise impacts at NSRs as a result of the Project. Noise measurement locations were chosen to achieve a representative understanding of the noise baseline at NSRs in the vicinity of the Project.

The IFC guidelines require the compilation of a baseline study. The section below sets out techniques and methods used by ERM in the collation of the noise baseline for the Project ESIA..

5.2.9.2 Methodology

Noise Measurement Locations

The baseline noise study consisted of a series of continuous unattended noise monitoring at four locations in the surrounds of the Project. The measurement locations are presented in Figure 5-24.

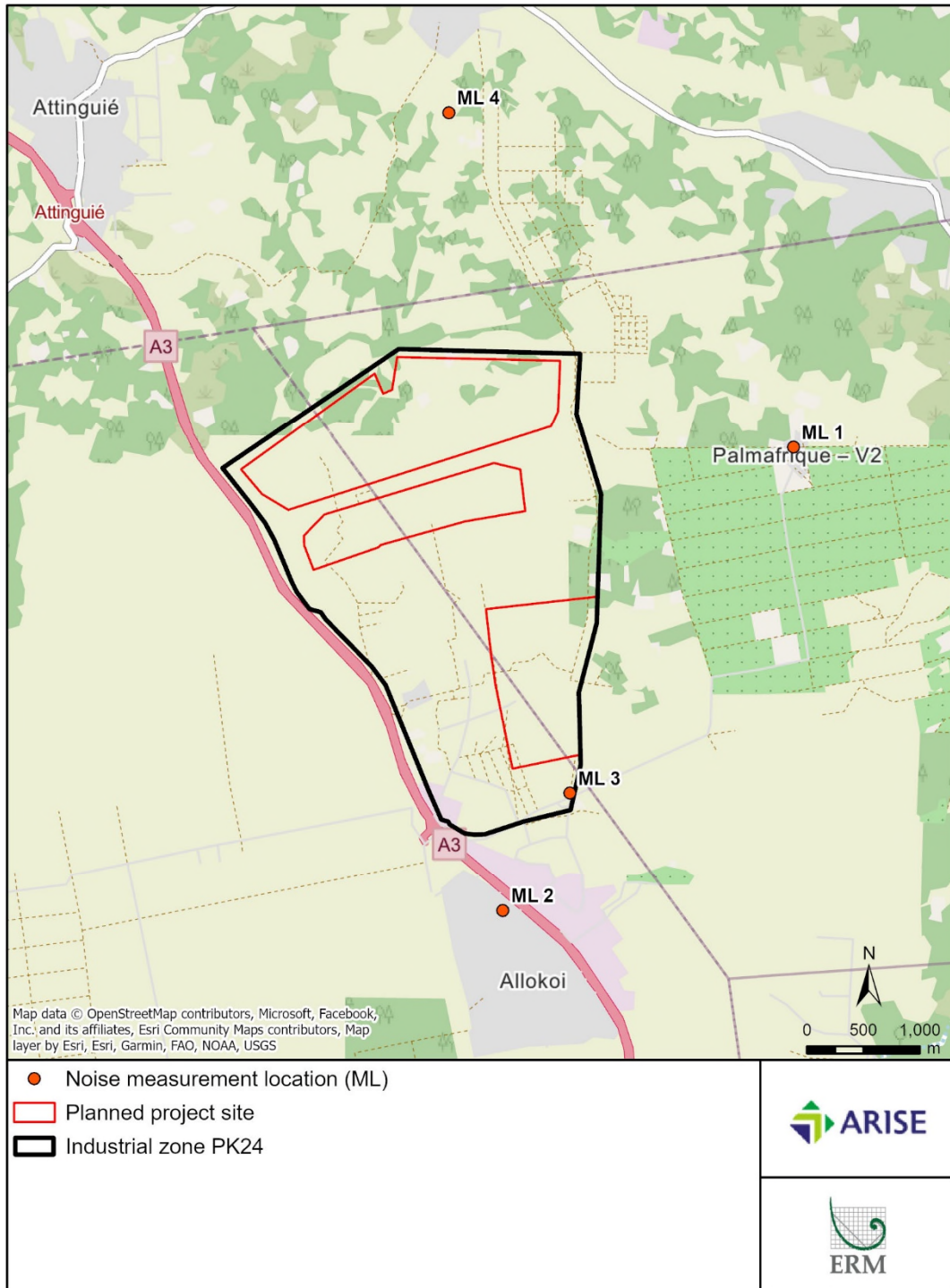


Figure 5-24 Baseline Noise Measurements Locations

Equipment and Setup

Long term noise measurements over a period of 24 hrs were undertaken using a CR:B171B monitoring kit by CIRRUS RESEARCH. The equipment was calibrated before and after each measurement.

The microphone of the noise monitoring device was set to a height of 1.5 m above ground and greater than 3.5 m from any reflective surface (except ground) so that it was a free-field

measurement. The noise monitor automatically logged environmental noise measurement parameters including L_{Aeq} , L_{A90} , L_{A10} , L_{Max} and L_{Min} parameters in hourly intervals. At each location, a minimum of 24 hours continuous unattended noise monitoring was conducted to provide noise levels to understand the variation between the daytime and night-time periods.

The L_{Aeq} metric is the steady, continuous equivalent sound level, which has the same acoustic energy as the actual varying sound levels over the same time. The letter “A” in the metrics denotes that “A”-weighting has been used. The “eq” in L_{Aeq} indicates that an equivalent level has been calculated. Therefore, $L_{Aeq}(T)$ is the A-weighted continuous sound level, measured over period “T.”

The L_{A90} metric is a percentile noise level, which represents the noise level exceeded for 90 per cent of the monitoring period (T) being considered. It represents the quiet lulls between noise events, such as cars or locomotives going by or planes flying overhead. The L_{A90} metric is the near-minimum baseline level that only occurs, by definition, 10 per cent of the time. The L_{A90} level is often referred to as the “background” noise level and is commonly used as a basis for determining noise criteria for assessment purposes. For this monitoring assessment, the L_{A90} metric would be used to represent background noise levels.

Aside from the L_{Aeq} and L_{A90} , other sound metrics typically collected during sound surveys are L_{Amax} , L_{Amin} , and L_{A10} . The L_{Amax} and L_{Amin} metrics are the maximum and minimum noise levels in a noise sample, respectively. The L_{A10} metric is also a percentile representing the noise level exceeded for 10 per cent of the monitoring period (T).

The noise meter automatically logs these environmental noise measurement parameters. For the purposes of this study, the L_{Aeq} is the noise parameter of most interest, as it is this parameter that needs to be directly compared to the applicable noise standards of the International Finance Corporation (IFC)⁵⁴.

5.2.9.3 Results

The results of measurements recorded are summarised in Table 5-10. The daytime, evening and night-time periods are defined according to national noise guidelines. The national and IFC noise regulatory limits are presented in section 2.4.2.

Table 5-10 Measured Noise Levels

Location	ID	Period (T)	Measurement Parameter, dB				
			L_{Aeq}	L_{A10}	L_{A90}	L_{Amax}	L_{Amin}
Palmafrique	ML1	Daytime (07:00 – 18:00)	62	67	44	86	35
		Evening (18:00 – 22:00)	58	60	51	72	45
		Night-time (22:00 – 07:00)	61	59	47	93	38
Allokoi	ML2	Daytime (07:00 – 18:00)	65	68	52	80	29
		Evening (18:00 – 22:00)	67	73	51	92	39
		Night-time (22:00 – 07:00)	59	61	35	77	29
Akwaba	ML3	Daytime (07:00 – 18:00)	65	69	53	93	42
		Evening (18:00 – 22:00)	59	63	46	78	44
		Night-time (22:00 – 07:00)	52	51	40	88	37
Akoupezeudji	ML4	Daytime (07:00 – 18:00)	61	62	54	82	31
		Evening (18:00 – 22:00)	60	64	53	78	30

⁵⁴ IFC (International Finance Corporation) 2007. Environmental, Health, and Safety (EHS) General Guidelines, April 30, 2007.

Location	ID	Period (T)	Measurement Parameter, dB				
			L _{Aeq}	L _{A10}	L _{A90}	L _{Amax}	L _{Amin}
		Night-time (22:00 – 07:00)	50	54	33	67	28

A comparison of the above measured noise values with the IFC and national standards (see section 2.4.2) shows that:

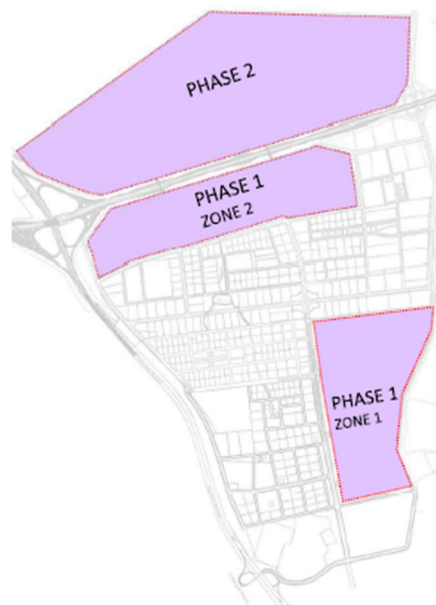
- All values of LAeq exceed the IFC standards for all four locations;
- All values also exceed the national standards, whereby Daytime values at ML1 and ML4 are only slightly above the standard.

The results show that for the most remote sampling point (i.e. M4) the noise levels were identified as the lowest. While the location M2 was next to the Autoroute du Nord (A3) and most probably measured high traffic noise during the morning and evening hours.

5.3 Biological Environment

Two different approaches were undertaken during this ESIA study to understand the environmental conditions in the Project area.

- First, a desktop survey was performed using official websites, internationally recognised databases, and peer-reviewed literature.
- Second, two field visits were performed, in June 2022 (Scoping Phase) and in November 2022 (ESIA Phase) by ERM-ENVAL during which the Project areas were inspected and biodiversity values were identified. The areas covered during the field visit are shown in Figure 5-25. The site visits were divided in two parts or blocks:
 - First block (southern section of the Project area) including Phase 1 Zone 1; and
 - Second block (northern section of the Project area), covering Phase 1 Zone 2 and Phase 2.



Source: ARISE, 2022

Figure 5-25 Project Area

Desktop Survey

As part of the Desktop Survey, and in order to scope biological related risks within the assessment of risks and impacts, a preliminary analysis was performed using the Integrated Biodiversity Assessment Tool (IBAT)⁵⁵. This tool provides key decision-makers with access to critical information on biodiversity priority sites to inform risk management and decision-making processes that address potential biodiversity impacts. This also supports the identification of the risks related to the Project and to inform the studies that shall be carried out on the ESIA.

The analysis was performed by running two different but complementary reports:

- IBAT Proximity Report; and
- IBAT World Bank Group Biodiversity Risk Screen.

The IBAT Proximity Report provided an indication of the potential biodiversity-related features - protected areas, key biodiversity areas and species - close to the specified Project location. It provided an early indication of potential biodiversity concerns. This information was helpful to assess preliminary potential environmental risk and impact triggered by the Project and prepare the terms of reference for the subsequent impact assessment, focusing attention on key species of conservation concern and sites of known conservation value. For this purpose, a proximity analysis exercise was developed to identify the biodiversity features and species which are located within 15 km buffer.

The IBAT World Bank Group Biodiversity Risk Screen provides an initial screening for critical habitat values. Therefore, habitat of significant importance to priority species will trigger critical habitat status (see IFC PS6: parag. 16). IBAT provided a preliminary list of priority species that could occur within the 50 km buffer. This list is drawn from the IUCN Red List of Threatened Species (IUCN RL), and should be used to guide any further assessment, with the aim of confirming known or likely occurrence of these species within the Project area.

Field Visits

One rapid biodiversity survey was undertaken in June 2022 during the scoping phase of the Project. The technique used was an exhaustive site walkover, covering the entire Project area, identifying the habitats found, all the species observed within them, and establishing the degree of anthropisation of the habitats observed.

Based on these outcomes, the experts recommended that for the ESIA phase primary data collection would be held, detailed flora/vegetation and habitats mapping is considered necessary due to proximity of a wetland, apparently degraded. Additionally, further stakeholder consultations were deemed necessary to understand how the area is used by local fauna (mainly by avifauna and potentially by white bellied pangolins, *Phataginus tricuspis*, CR).

Therefore, in alignment with the scoping assessment, the focused surveys were held in November 2022. The information collected was assessed and the ESIA baseline were developed. All the findings are compiled in the next sub-sections.

5.3.1 Flora, Vegetation and Habitats

In Côte d'Ivoire there are six ecoregions described by the World Wide Fund for Nature (WWF). The Project is located in the Eastern Guinean Forest ecoregion, which is characterised by a tropical climate, with annual rainfall ranges from 2,500 to 1,500 mm and a monthly average temperature of approx. +25°C (refer to Section 5.2.1). Tropical moist forest is the predominant vegetation type in this ecoregion.

⁵⁵ Available at: <https://www.ibat-alliance.org/>

The site visit performed in June 2022 identified key sensitivities of the Project area. The results of this field visit, together with the desktop-based data collection, allowed the team to identify the following habitats during the scoping phase:

- **Crops:** areas where active crops are planted, maintained, and harvested. Common crop species are cassava (*Manihot esculenta*), corn (*Zea mays*) and bell peppers (*Capsicum* spp.);
- **Fallow lands:** abandoned or currently unused crops lands, often containing woody as well as herbaceous species;
- **Bare lands:** lands that are being prepared for setting crops; and
- **Wetlands:** one marshy area was identified, with abundant presence of bamboo (*Bambusa vulgaris*, no IUCN status) in the northern corner of the Project area (Phase 2) and continued along the plot edge towards the southwest (northern edge of Phase 2).

All habitat types were found in both blocks of the Project area, except that a wetland is only present in the northern part of the Phase 2 of the Project area. In general terms, the Project area shows intense anthropisation signs and limited biodiversity value. Figure 5-26 shows examples of the habitats found in the Project area.



Cassava (*Manihot esculenta*) crop with woody species (e.g., *Ricinodendron heudelotii*, LC)



Rubber tree (*Hevea brasiliensis*, LC) plantation with woody species



Fallow land with woody and herbaceous species, including the yellow iroko (*Milicia regia*, VU)



Wetland with bamboo (*Bambusa vulgaris*, NA)

Note: IUCN conservation statuses: NA-Not Assessed; LC-Least Concern, NT-Near Threatened, VU-Vulnerable, EN-Endangered, CR-Critically Endangered.

Figure 5-26 Examples of the Habitats Found in the Project Area

The site visits held in June 2022 and in November 2022 indicated that six biotopes exist in the Project area:

- **Fallow and barren lands:** fallow lands in the Project area are generally small and highly anthropised and is characterised by two strata:
 - woody: sparse and has very little cover, is made up of trees between 2 and 12 m in height. The main species that compose it are *Anthocleista djalonensis* (LC), *Anthocleista nobilis* (LC), *Rauvolfia vomitoria* (LC), the flat crown albizia (*Albizia adianthifolia*, LC), the okuro (*Albizia zygia*, LC), broom cluster fig (*Ficus sur*, LC), *Cecropia peltata* (LC), rubber tree (*Hevea brasiliensis*, LC), yellow iroko (*Milicia regia*, VU), *Macaranga barteri* (LC), camwood (*Baphia nitida*, LC), African nutmeg (*Pycnanthus angolensis*, LC), *Tabernaemontana crassa* (LC), *Ricinodendron heudelotii* (LC), *Terminalia superba* (NA), kapok (*Ceiba pentandra*, LC), *Spondias mombin* (LC), emien (*Alstonia boonei*, LC), umbrella tree (*Musanga cecropioides* (LC), giant-leaved fig (*Ficus lutea*, LC), *Ficus exasperata* (LC).
 - Herbaceous: between 1 and 2 m high; it is more abundant and diversified. It is composed of representatives of the species of the woody stratum, in addition to herbaceous vegetation mostly of the poaceae family.

There are several lianas, including *Alchornea cordifolia* (LC), *Dalbergiella welwitschii* (NA), *Cardiospermum grandiflorum* (NA), *Dalbergia hostilis* (LC), *Mikania cordata* (NA), *Pueraria phaseoloides* (NA), *Schrankia leptocarpa* (NA), *Stephania dinklagei* (NA), *Urera keayi* (NA), *Cnestis ferruginea* (NA), *Dalbergia afzeliana* (LC), *Cissus aralioides* (NA), *Adenia lobata* (NA), *Griffonia simplicifolia* (NA), *Ipomoea asarifolia* (NA), *Lonchocarpus cyanescens* (NA)
- **Hydromorphic thickets:** these plant formations are found in the northern apex of the Project area on hydromorphic and temporarily flooded soils. They contain few tree species and have two strata:
 - A woody stratum, which includes trees ranging from 2 to 8 m in height, is less diverse. The characteristic species are *Anthocleista djalonensis* (LC), *Anthocleista nobilis* (LC), *Harungana madagascariensis* (LC), flat-crown albizia (*Albizia adianthifolia*, LC), *Cecropia peltata* (LC), umbrella tree (*Musanga cecropioides*, LC), rubber tree (*Hevea brasiliensis*, LC), *Macaranga barteri* (LC), *Macaranga spinosa* (LC), *Millettia zechiana* (LC), *Trichilia priureana* (NA), *Trichilia tessmannii* (LC), adrarezina (*Trema orientalis*, LC), giant-leaved fig (*Ficus lutea*, LC), broom cluster fig (*Ficus sur*, LC), *Baphia nida* (LC).
 - A herbaceous stratum (1 to 2 m high) is dominant and more diversified. In addition to specimens of the species of woody stratum, it features and grassy vegetation and several lianas such as *Alchornea cordifolia* (LC), *Cardiospermum grandiflorum* (NA), *Mikania cordata* (NA), *Pueraria phaseoloides* (NA), *Schrankia leptocarpa* (NA), *Stephania dinklagei* (NA) are also present.
 - Lianas such as *Urera keayi* (NA), *Cissus aralioides* (NA), *Griffonia simplicifolia* (NA), *Ipomoea asarifolia* (NA), *Lonchocarpus cyanescens* (NA), *Lantana camara* (NA), *Melanthera scandens* (NA), *Mezoneurum benthamianum* (NA), *Passiflora foetida* (NA).
- **Rubber tree plantation:** a monospecific rubber tree (*Hevea brasiliensis*, LC) crop, mixed with a few other woody species, including *Psydrax subcordata* (NA), umbrella tree (*Musanga cecropioides*, LC), *Margaritaria discoidea* (LC), camwood (*Baphia nitida*, NA), *Nauclea pobeguini* (NA), *Sterculia tragacantha* (LC), flat crown albizia (*Albizia adianthifolia*, LC), *Anthocleista nobilis* (NA) and *Anthocleista djalonensis* (NA) accompanied by a dominant and more herbaceous understory.
- **Croplands:** The Project area features large portions of cultivated land, with dominant crops of maize (*Zea mays*, LC) and cassava (*Manihot esculenta*, LC). These fields are in active production maintained by the owners. Pesticides are used in some areas, as empty pesticide

containers were found: Bibana 680 SG and Roundup (both Glyphosate, see Figure 5-27). The tree species present on these areas are essentially composed of : Kapok (*Ceiba pentandra*, LC), *Bombax buonopozense* (LC), emien (*Alstonia boonei*, LC), *Terminalia superba* (LC), yellow iroko (*Milicia regia*, VU), *Antiaris toxicaria* (LC), rubber tree (*Hevea brasiliensis*, LC), common mango (*Mangifera indica*, LC), avocado tree (*Persea americana*, LC), guava (*Psidium guajava*, LC), African nutmeg (*Pycnanthus angolensis*, LC), *Rauvolfia vomitoria* (LC), *Ricinodendron heudelotii* (LC), *Vitex grandifolia* (LC), andrarezina (*Trema orientalis*, LC), *Sterculia tragacantha* (LC), *Newbouldia laevis* (LC), umbrella tree (*Musanga cecropioides*, LC), *Cecropia peltata* (LC), *Lonchocarpus sericeus* (LC), *Harungana madagascariensis* (LC), broom cluster fig (*Ficus sur*, LC), giant leaved fig (*Ficus exasperate*, LC), *Ficus mucuso* (LC), camwood (*Baphia nitida*, LC), *Anthocleista djalonensis* (LC), and *Anthocleista nobilis* (LC). The few palm trees (*Elaeis guineensis*, LC) present in these fields are felled for the production of palm wine.

- **Cleared land:** The Project site contains cleared land ready to be used for growing cassava or maize.
- **Grasslands:** This vegetation is composed of herbaceous plants, mainly belonging to the Poaceae family. There is a very low presence of woody species represented by flat-crowned (*Albizia adianthifolia*, LC), giant-leaved fig (*Ficus exasperata*, LC), broom cluster fig (*Ficus sur*, LC) *Ficus mucuso* (LC) and *Rauvolfia vomitoria* (LC).



Figure 5-27 Empty Glyphosate Containers Found during the November 2022 Site Visit

An exhaustive data collection method was used to understand the flora on the Project area, and in view of the area to be covered and the level of information sought. For the sampling of the flora, the plant species encountered were identified on site and the scientific names were noted. *Taxa* not recognized in the field were collected or photographed for later identification in the national herbarium. The nomenclature adopted in this Report is that of the flora of Côte d'Ivoire by Aké Assi (2001⁵⁶, 2002⁵⁷) and the work of Hawthorne and Jongking (2006)⁵⁸. The APG (Angiosperms Phylogeny Group, 2016⁵⁹) phylogenetic classification version IV was used to update scientific names and families.

For each of the inventoried species, the genus and the family were informed. Subsequently, the list of inventoried species was crossed on the one hand with that of the IUCN red list (2020) to determine the threatened species and on the other hand with that of the rare and threatened species of Aké-

⁵⁶ Aké-Assi L. 2001. Flore de la Côte d'Ivoire 1, Catalogue, systématique, biogéographie et écologie. Conservatoire et Jardin Botanique de Genève, Genève, Suisse, Boissiera, tome 1, 396 p.

⁵⁷ Aké-Assi L. 2002. Flore de la Côte d'Ivoire 2, catalogue, systématique, biogéographie et écologie. Conservatoire et Jardin Botanique de Genève. Genève, Suisse, Boissiera, tome 2, 441 p.

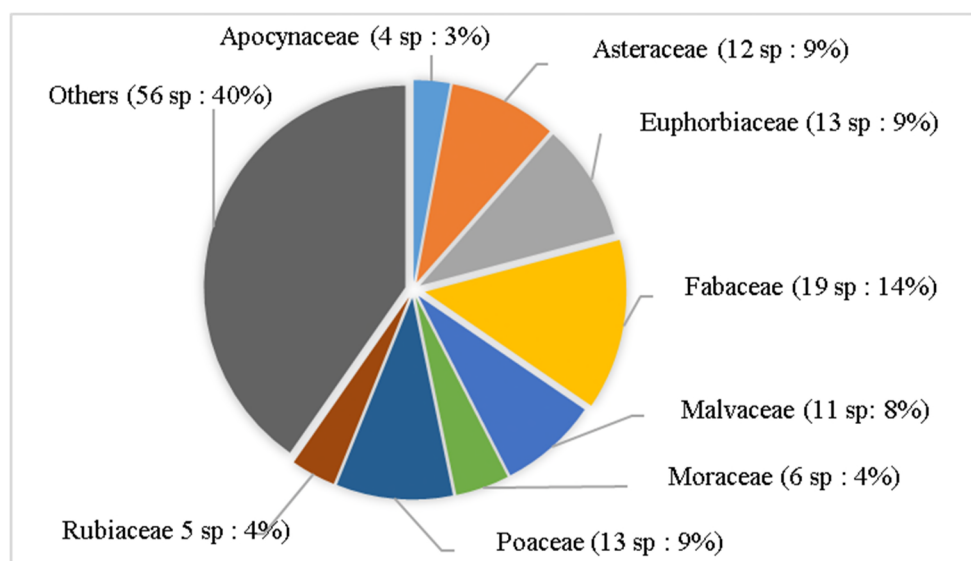
⁵⁸ Hawthorne, W. D., & Jongkind, C. C. (2006). Woody plants of Western African forests, A guide to the forest trees, shrubs and lianes from Senegal to Ghana. Royal Botanic Gardens, Kew.

⁵⁹ APG IV. 2016. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants. Botanical Journal of the Linnean Society, 181: 1-20

Assi (1984⁶⁰). Finally, for the distinction of endemism, the floristic list was crossed with Aké-Assi (2001; 2002) and Poorter et al. (2004⁶¹).

A total of 139 plant species were inventoried in the Project area (the complete list of the species found in the Project area can be seen on Appendix E). They are distributed among 120 genera, classified in 47 families (Figure 5-28). The most represented families are the Fabaceae, with 19 species, the Euphorbiaceae and the Poaceae, with 13 species each. Next come the Asteraceae (12 species), Malvaceae (11 species), Moraceae (6 species) and Rubiaceae (5 species).

Three genera recorded the highest number of species. These are the genera *Ficus*, with four species, *Boerhavia* and *Sida*, each with three species.



Source: ERM, 2022

Figure 5-28 Species Diversity per Plant Family in the Project Area

The 139 species inventoried are divided into 12 biological types. They are dominated by Microphanerophytes, with 35 species (25.17% of the species diversity). In contrast, geophytes and rhizomes, with respectively two and one species are the least represented in the Project area with less than 2% each.

The classification of the species inventoried within the chorological affinities made it possible to obtain four groups of species. These are Guinean-Congolese species (GC), species native to the Guinean Congolese and Sudan-Zambezi phytogeographical regions (GC-SZ), exotic or introduced species (I) and neotropical species (N). The GC group is dominant, with 76 species (55% of the total species), followed by GC-SZ with 50 species, or 36%. I and N are the least represented, with 8 species and one species respectively.

5.3.1.1 Threatened Flora

The IUCN classifies species according to the level of threat they face in the wild. The categories in which a species can be classified are:

- Extinct (EX) or Extinct in the Wild (EW);

⁶⁰ Aké-Assi L. 1984. Flore de la Côte d'Ivoire : Étude descriptive et biogéographique avec quelques notes ethnobotaniques. Thèse de Doctorat d'État, Faculté de Sciences et Techniques, Université de Cocody, Abidjan, Côte d'Ivoire, 1206 p.

⁶¹ Poorter L., Bongers F., Kouamé F. N. & Hawthorne W. D. 2004. Biodiversity of West African Forests: An Ecological Atlas of Woody Plant Species. Centre for Agriculture and Bioscience International Publishing, Nederland, Pays-Bas, 521 p.

- Critically Endangered (CR), Endangered (EN) and Vulnerable (VU): species threatened with global extinction;
- Near Threatened (NT): species close to the threatened thresholds or that would be threatened without ongoing conservation measures;
- Least Concern (LC): species evaluated with a lower risk of extinction;
- Data Deficient (DD): no assessment because of insufficient data.

A Remote Sensing Analysis was obtained through the IBAT platform⁶² for the study, which revealed the potential presence of several threatened species. This remote sensing analysis considered a buffer of 50 km around the Project area, and this will be the Area of Influence (AoI) for the biodiversity scope. The IBAT platform revealed the potential presence of several Critically Endangered, Endangered and Vulnerable species (as per IUCN Red-list nomenclature⁶³) included in Table 5-11.

Table 5-11 Plant Species of Particular Importance Potentially Found in the Project Area

Scientific name	Common name	IUCN Status	Scientific name	Common name	IUCN Status
<i>Aframomum atewae</i>	-	EN	<i>Ficus cyathistipuloides</i>		VU
<i>Eremospatha dransfieldii</i>	Rattan	EN	<i>Maesobotrya barteri</i> var. <i>barteri</i>		VU
<i>Okoubaka aubrevillei</i>	Death Tree	EN	<i>Macropodiella heteromorpha</i>		VU
<i>Omphalocarpum ahia</i>	Abe aguia	EN	<i>Mussaenda conopharyngiifolia</i>		VU
<i>Pterocarpus santalinoides</i>	Mututi	VU	<i>Zanthoxylum mezoneurispinosum</i>		VU
<i>Milicia regia</i>	Yellow Iroko	VU	<i>Eremospatha dransfieldii</i>	Rattan	EN
<i>Aeglopsis mangelotii</i>		CR	<i>Dracaena scabra</i>		EN
<i>Suregada ivorensis</i>		VU	<i>Aframomum atewae</i>		EN
<i>Azelia africana</i>	African Mahogany	VU	<i>Croton dispar</i>		EN
<i>Guibourtia copallifera</i>	Kobo Tree	VU	<i>Pericopsis elata</i>	Yellow Satinwood	EN
<i>Tristemma involucreatum</i>		VU	<i>Leplaea adenopunctata</i>		EN
<i>Turraeanthus africana</i>		VU	<i>Okoubaka aubrevillei</i>	Death Tree	EN
<i>Milicia regia</i>		VU	<i>Omphalocarpum ahia</i>	Abe aguia	EN

⁶² <https://www.ibat-alliance.org/>

⁶³ IUCN Red List of Threatened Species (IUCN RL or Red List): international standard for assessing threat status for species. The Red List is compiled by IUCN's global network of experts, specialist groups and partners. For further information, please see the IUCN Red List of Threatened Species website. Red List categories are: Critically Endangered (CR): Highest risk of extinction. A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered, and it is therefore considered to be facing an extremely high risk of extinction in the wild. Endangered (EN): Very high risk of extinction. A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered, and it is therefore considered to be facing a very high risk of extinction in the wild. Vulnerable (VU): Risk of extinction. A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable, and it is therefore considered to be facing a high risk of extinction in the wild.

Only one of these species, the yellow Iroko (*Milicia regia*, VU), represented by 11 specimens, was found on the site. A map showing the location of each of the specimens can be seen in Figure 5-29.



Figure 5-29 Locations of Each of the Specimens of Yellow Iroko (*Milicia regia*, VU) found on Site

During the site visit held in November 2022, interviews with local population indicate that they do not use the yellow iroko or harvest wood or other parts of the tree for any purpose.

5.3.1.2 Endemic flora

The site visit of November 2022 revealed the presence of three endemic species. One species *Leptoderris miegei* (not Assessed by the IUCN) is a climber growing primarily in wet tropical biomes in Côte d'Ivoire and Liberia (see Figure 5-30). The other two species are endemic to the West African forest block. These are *Anthocleista nobilis* (LC) and *Solenostemon monostachyus* (not assessed by

the IUCN). It is important to note that all three species are quite abundant and frequent in the Project area.



Figure 5-30 Leptoderris miegei

5.3.2 Fauna

Data collection of fauna in the field was carried out according to the recce method (reconnaissance walk) as described by Maréchal and Bastin (2008). This method consists of doing a reconnaissance walk of direct and indirect observations. Indirect observations are based on the recognition of unmistakable clues of animal species, namely tracks, noises and cries.

Three zoological groups (mammals, birds and reptiles) consisting of 21 animal species were recorded during the field visits. Mammals comprise 14 species (66.67% of the species diversity recorded). They are followed by birds with six species (28.57%). Finally, the group with the fewest species is the reptiles with one species (4.76%). All animal species recorded during this inventory are common species in Côte d'Ivoire (Ahissa et al., 2020; Bohoussou et al., 2018⁶⁴, Akpatou et al. 2018). They are all of Least Concern (IUCN, 2020).

Fallow lands and cassava plantations record the highest number of species with 11 species and rubber plantations record the lowest number of species (six). The Shannon diversity indices (H') describe a similar pattern with the highest diversity registered in cassava plantations ($H' = 2.54$), followed by fallow lands ($H' = 2.4$). The lowest diversity index is obtained in rubber plantations ($H' = 1.79$).

All animal species recorded during this inventory are common species in Côte d'Ivoire (Ahissa et al., 2020; Bohoussou et al., 2018, Akpatou et al. 2018). They are all of Least Concern (IUCN, 2020).

The complete list of the species found in the Project area can be seen on Appendix E.

5.3.2.1 Threatened Fauna and of Special Interest

Potential presence of threatened flora and fauna was preliminary screened using the IBAT platform. This tool uses a 50 km buffer area around the selected location (in this case, around the Project Aol) and returns the species potentially found in it. The 50 km buffer included nationally protected areas with high biodiversity values, not relevant for this assessment (see Section 5.3.3).

⁶⁴ Bohoussou, K. H., Akpatou, K. B., Kouassi, Y. W. R., & Kpangui, K. B. (2018). Diversity of mammals and value for the conservation of forest relics in an agro-industrial concession in the south-west of Ivory Coast. *VertigO-La Revue Electronique en Sciences de l'Environnement*, 18(1).

The analysis in the Aol plus the 50 km buffer area around revealed the potential presence of several Endangered and Vulnerable species (as per IUCN Red-list nomenclature⁶⁵) included in Table 5-12. These results are then analysed based on literature reviews, areas of distribution, local biodiversity specialist judgement and site visit outcomes. None of these species was found on site.

Table 5-12 Animal species of Particular Importance Potentially Present in the Area

Class	Scientific Name	Common Name	IUCN Status
Birds	<i>Necrosyrtes monachus</i>	Hooded Vulture	CR
	<i>Psittacus timneh</i>	Timneh Parrot	EN
	<i>Ceratogymna elata</i>	Yellow-casqued Hornbill	VU
	<i>Scotopelia ussheri</i>	Rufous Fishing-owl	VU
	<i>Picathartes gymnocephalus</i>	White-necked Rockfowl	VU
	<i>Bycanistes cylindricus</i>	Brown-cheeked Hornbill	VU
	<i>Lobotos lobatus</i>	Western Wattled Cuckooshrike	VU
	<i>Criniger olivaceus</i>	Yellow-bearded Greenbul	VU
Mammals	<i>Cercopithecus roloway</i>	Roloway Monkey	CR
	<i>Colobus vellerosus</i>	White-thighed Colobus	CR
	<i>Crocidura wimmeri</i>	Wimmer's Shrew	CR
	<i>Piliocolobus waldroni</i>	Miss Waldron's Red Colobus	CR
	<i>Choeropsis liberiensis</i>	Pygmy Hippopotamus	EN
	<i>Cercocebus lunulatus</i>	White-naped Mangabey	EN
	<i>Hylomyscus baeri</i>	Baer's Wood Mouse	EN
	<i>Smutsia gigantea</i>	Giant Ground Pangolin	EN
	<i>Phataginus tricuspis</i>	White-bellied Pangolin	EN
	<i>Pan troglodytes</i>	Chimpanzee	EN
	<i>Phataginus tetradactyla</i>	Black-bellied Pangolin	VU
	<i>Panthera pardus</i>	Leopard	VU
	<i>Procolobus verus</i>	Olive Colobus	VU
	<i>Caracal aurata</i>	African Golden Cat	VU
<i>Cercopithecus lowei</i>	Lowe's Monkey	VU	
Reptiles	<i>Mecistops cataphractus</i>	Slender-snouted Crocodile	CR
	<i>Kinixys homeana</i>	Home's Hinge-back Tortoise	CR
	<i>Bitis nasicornis</i>	Rhinoceros Viper	VU
Gastropods	<i>Potadoma vogelii</i>	unknown	EN

⁶⁵ IUCN Red List of Threatened Species (IUCN RL or Red List): international standard for assessing threat status for species. The Red List is compiled by IUCN's global network of experts, specialist groups and partners. For further information, please see the IUCN Red List of Threatened Species website. Red List categories are: Critically Endangered (CR): Highest risk of extinction. A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered, and it is therefore considered to be facing an extremely high risk of extinction in the wild. Endangered (EN): Very high risk of extinction. A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered, and it is therefore considered to be facing a very high risk of extinction in the wild. Vulnerable (VU): Risk of extinction. A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable, and it is therefore considered to be facing a high risk of extinction in the wild.

As per the local biodiversity specialist, the area is a suitable habitat for white-bellied pangolins (*Phataginus tricuspis*, EN). During the site visit held in November 2022, interviews with local population indicate that pangolins are not hunted in the area. The presence of this species cannot be totally discarded but it is not probable.

5.3.3 Conservation Areas

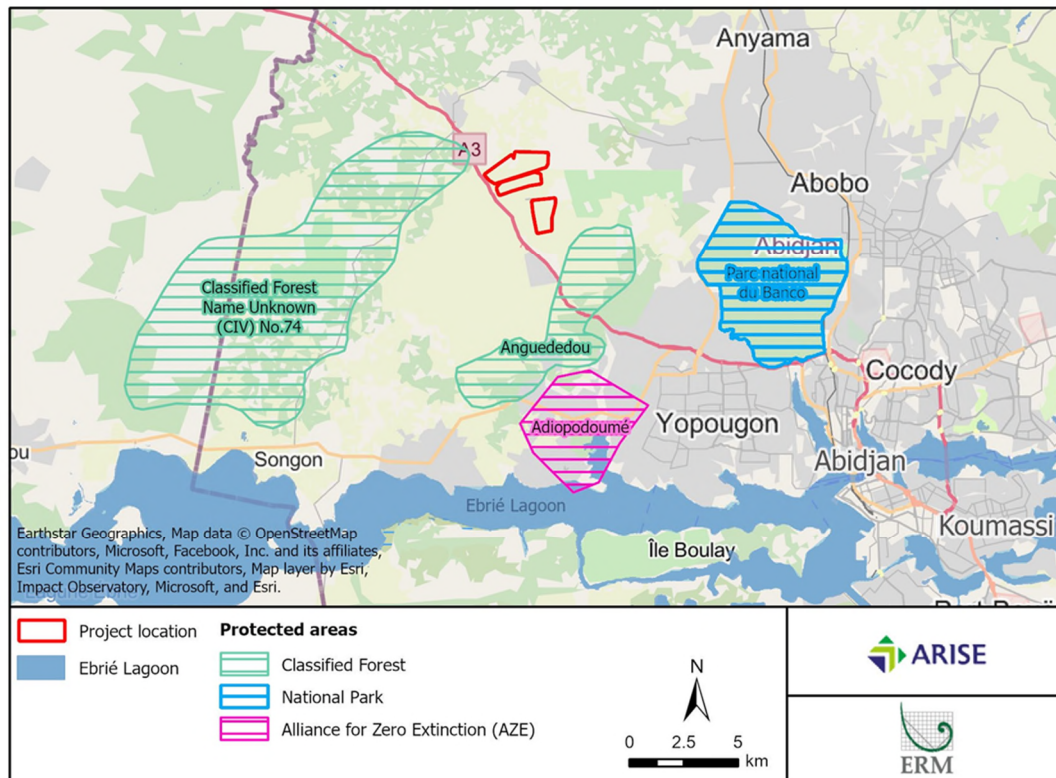
Conservation areas include Nationally Protected Areas and internationally Designated Areas. Nationally protected areas have a legal protection status, whereas internationally designated areas are known to hold important ecological values although they are not necessarily protected at a national level.

The closest conservation areas to the Project are listed in Table 5-13. Figure 5-31 represents the geographic location of the national and international protected areas.

Table 5-13 Protected Areas and KBAs near the Project area

Name	Type of Area	IUCN Category	Surface (ha)	Distance from the Project (km)
Anguededou	Classified Forest	Not Reported	2,575	1.2
Classified Forest (CIV) No.74	Classified Forest	Not Reported	9,658	~1 (992 m)
Banco National Park	National Park, AZE	II	3,438	6.9
Adiopodoumé	AZE	Not Reported	1,952	6.7

Source: Protected Planet, 2022; Key Biodiversity Areas, 2022. *IBAT Proximity Report (2022)*



Note: although not a Protected Area or a KBA, the Ebré Lagoon has been included as it is an important environmental feature in the area

Figure 5-31 Location of Protected Areas and KBAs near the Project Area

In terms of biodiversity values, the most representative area for the Project (and also the one with the highest protection degree) is the Banco National Park.

5.3.3.1 Nationally Protected Areas

According to the UN’s Protected Planet website⁶⁶, there are 255 protected areas in Côte d’Ivoire, covering 22.96 % (74,420 km²) of the country. The Ministry of Water and Forests (*Ministère des Eaux et Forêts*) is responsible for all protected areas. The levels of protection and management in the parks and reserves vary. These include figures with different levels of protection, with the most representative being:

- National Parks (highest protection);
- Nature Reserves;
- Partial Faunal Reserves; and
- Classified Forests (lowest protection);

No protected areas are found within the Projects’ footprint. Within a 10 km radius from the Project location, three protected areas have been identified:

- Banco National Park;
- Classified Forest of Anguedédou; and
- Classified Forest (CIV) No.74.

⁶⁶ <https://www.protectedplanet.net/country/CIV>

National parks are subject to two threats: poaching and gold prospecting. Other regular threats are posed by forest exploitation and cultivation of the land by local villagers (World Database on Protected Area).

A Classified Forest is an area of at least 10.0 ha of forest or non-forest wildlife habitat where the landowner has agreed (by application) to be a good steward of the land and its natural resources. Certain activities cannot take place on Classified Forest and Wildlands:

- Grazing by domestic livestock;
- Building of houses, sheds, etc.;
- Intentional burning unless prescribed under a written management plan; and
- Growing Christmas trees.

Other activities are allowed and are encouraged when appropriate to meet the landowner's goals and objectives for the land. These activities, however, must not be conducted in a manner detrimental to the health and productivity of the property or its watershed. Allowed activities include:

- Wildlife management;
- Maintenance of access roads and trails;
- Timber harvesting;
- Firewood cutting;
- Horseback riding;
- Hiking; and
- Hunting.

Anguédédou forest and Classified Forest (CIV) No.74 are subject to the abovementioned standards for the classified forests. These are areas of 2,575 ha and 9,658 ha located to the south and north of the Project, respectively. Figure 5-31 represents the geographic location of the protected areas. Limited information is available regarding Classified Forest (CIV) No.74.

Anguédédou is considered a relict of the forest extensions once visible in southern Côte d'Ivoire. Once a deciduous forest, today, it is highly secondarised (88 % of its original area is degraded). It presents itself as a mosaic of natural formation (1.5 % of the area), of old reforestation, plantations and fallow lands. As a result, it is classified according to forest categorization, among semi-natural forests (Forman, 2009). However, there are some species of heliophilic trees and shrubs as well as native species (Mahogany Bassam (*Khaya ivorensis*), Azobé (*Lophira alata*) or other non-native species).

In terms of fauna, the Anguédédou forest appears to be an environment essentially impoverished in animal species. Faunal populations are almost non-existent because they have been heavily poached by populations. Therefore, there is only a small presence of small mammals such as the harnessed guib, squirrels (*Tragelaphus scriptus*), Gambian rats and some bird specimens such as the Touraco, the mosque swallow (*Hirundo senegalensis*), the brown-cheeked hornbill (*Bycanistes cylindrus*).

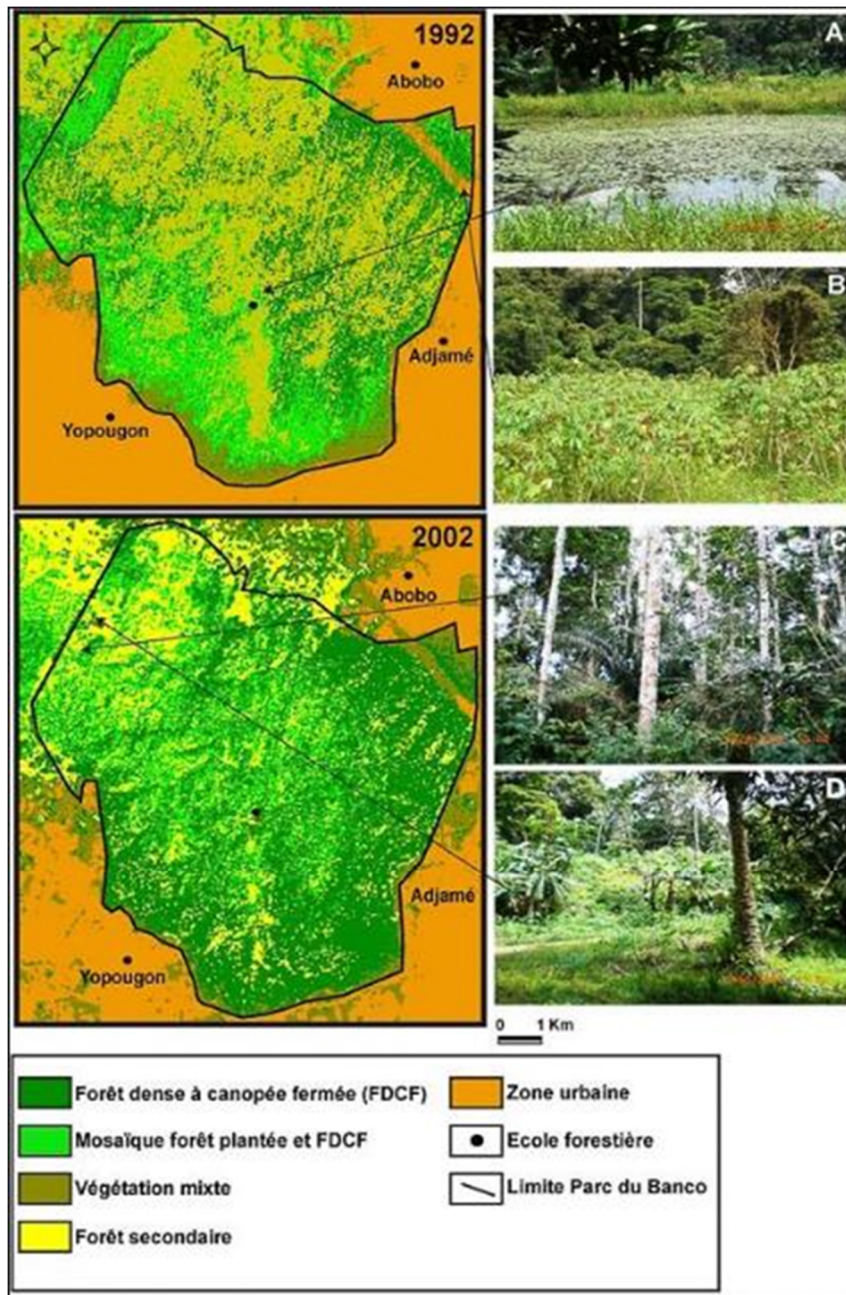
Banco National Park (IUCN management category: II) is one of eight national parks and seven nature reserves in Cote d'Ivoire, covering 6.5 % of the country's area. Constitutes one of the last relics of dense humid evergreen forest in the Ivorian coastal zone. The Park covers an area of 3,438 ha and is qualified as a hydraulic reservoir and green lung of the city of Abidjan. Its main task is to protect the water table for the supply of drinking water to the city of Abidjan. Its main assets are: the existence of an arboretum of more than 800 species of vascular plants from tropical regions of Africa, Asia and Latin America and the existence of fish ponds located in the land of the Park.

Faced with agricultural pressure and rapid urbanization in the Abidjan region, 86 % of the area of this coastal forest (i.e., Park) has been destroyed since the 1950s (Aké-Assi, 1984 and 2001; Chatelain, 1996; DPN, 2001 and 2002; Duschesne, 2002).

The Banco National Park is experiencing negative impacts due to rapid urban expansion, population growth, and industrial and commercial activities in the district of Abidjan. The park is surrounded by four municipalities and is affected by pollution from human activities and overcrowding in the surrounding neighborhoods, particularly from inadequate sanitation facilities. The park also receives solid and liquid waste and partial discharge of municipal rainwater, as well as the negative effects from nearby industrial operations and new housing developments. These issues have been ongoing for decades.

The Banco National Park is experiencing negative impacts due to rapid urban expansion, population growth, and industrial and commercial activities in the district of Abidjan⁶⁷. The park is surrounded by four municipalities and is affected by pollution from human activities and overcrowding in the surrounding neighborhoods, particularly from inadequate sanitation facilities. The park also receives solid and liquid waste and partial discharge of municipal rainwater, as well as the negative effects from nearby industrial operations and new housing developments. These issues have been ongoing for decades.

⁶⁷ Kouakou and Singh, Urban Forest BNP in Abidjan, IJRASET, 2020. DOI:10.22214/ijraset.2020.32326



Source: Adopted based on Kouakou and Singh 2020

Figure 5-32 Landscape Patterns within the Banco National Park (1992, 2002)

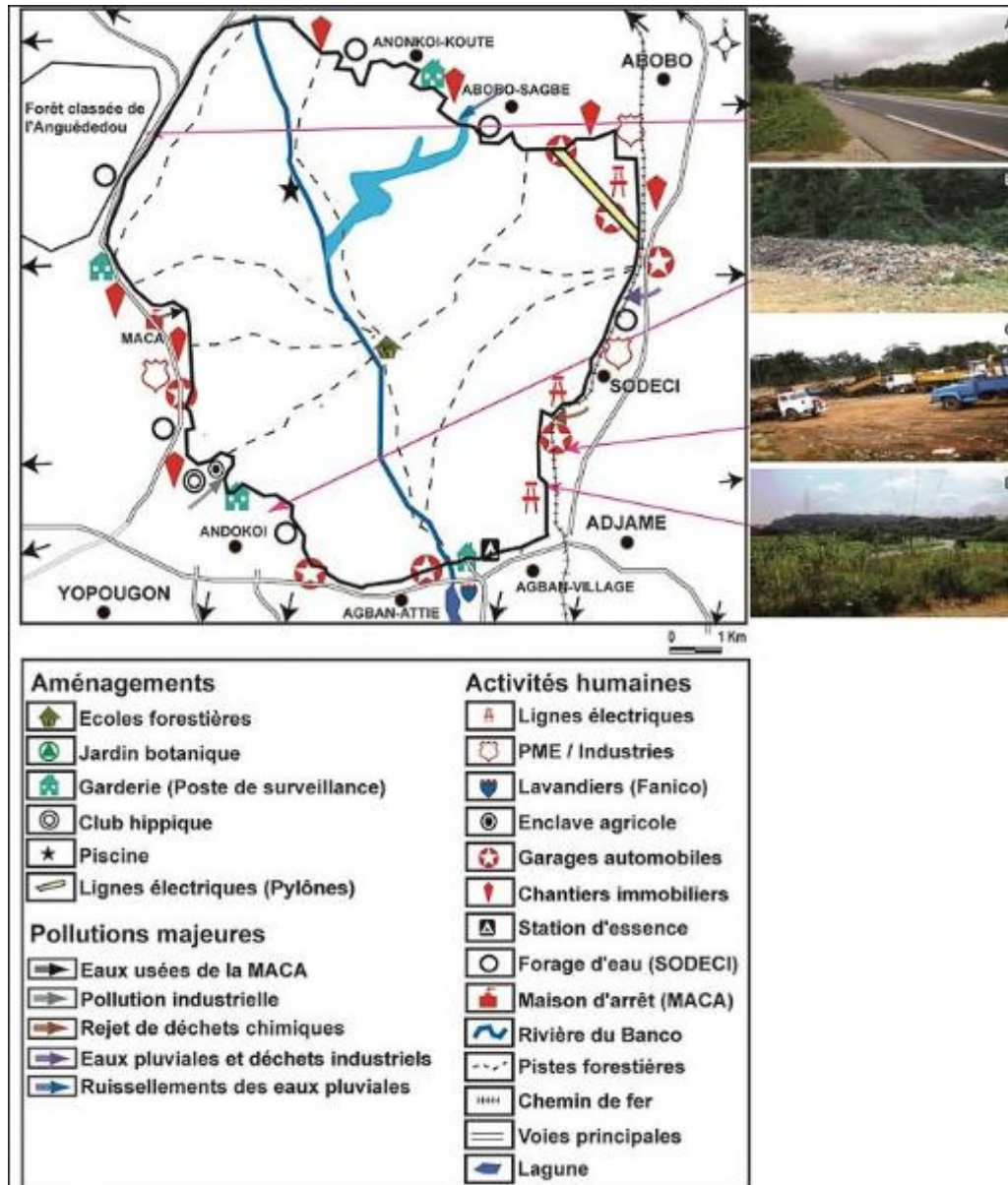
At the end of 2019, a study funded by the Global Environment Facility and implemented by the United Nations Environment Programme (UNEP) found that the Park was home to more than 590 vascular plants, including 561 angiosperms, 27 ferns, and 2 lycophytes. The study also documented the Park's mycoflora and found 86 species of mushrooms. The flora includes 88 rare or endangered species, seven of which are only known in Côte d'Ivoire. Twenty species of flora appear on the IUCN of Nature's Red List (2019).

Two endangered species *Placodiscus pseudostipularis* and *Tieghemella heckelii* face a very high risk of extinction in the wild because their area of occurrence has drastically reduced due to the expansion of agriculture.

According to Kouakou and Singh (2020), the types of administrative boundaries also play an important role in the behaviour of the populations living in the surroundings of the Park. Forests

located near administrative boundaries, such as walls, barriers, or signs, are less impacted than those in close proximity to populated areas. The ease of crossing administrative boundaries also varies depending on the specific border region and the actions of local communities.

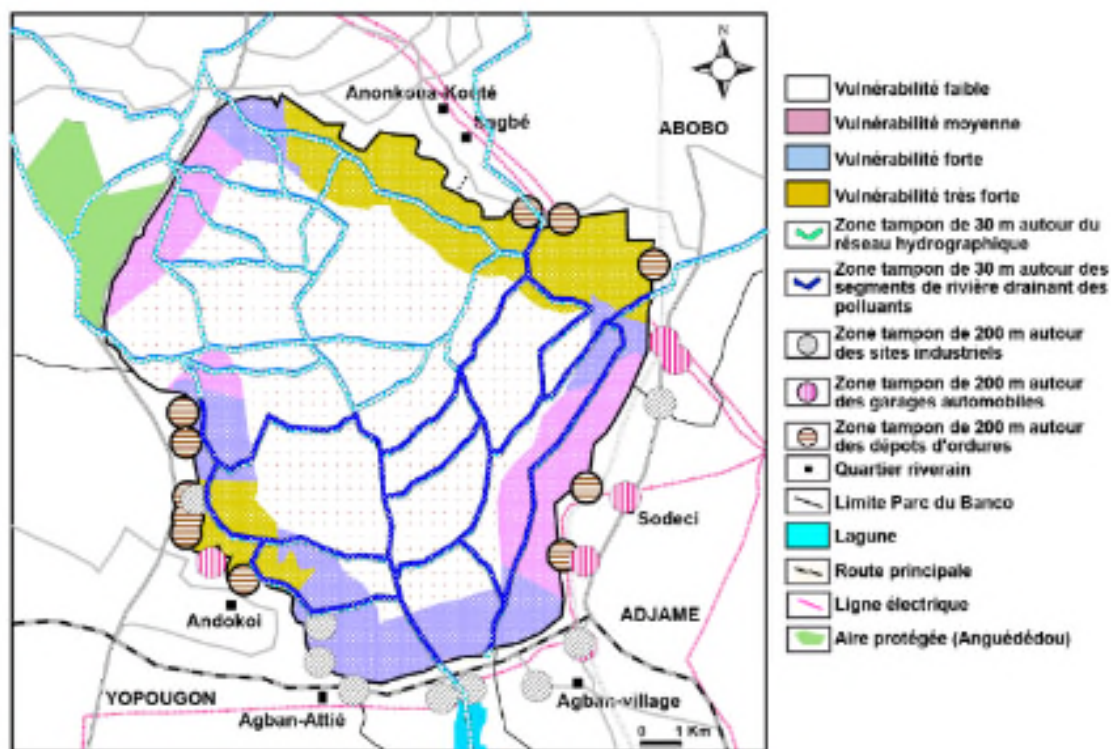
Field observations and cartographic analyses based on socio-economic and environmental variables observed around the Park show that the most vulnerable areas on its margins are located in the southwest, east and south half of the region, as well as in the northeast, which are part of the areas where the administrative limits of the forest that are not materialised – despite a high urban density. The infiltrations found in the forests adjacent to these areas are more significant (Figure 5-33).



Source: Kouakou and Singh 2020

Figure 5-33 Threats to Banco National Park caused by Anthropic Land Uses

The different types of pollution caused by domestic, artisanal or industrial discharges have severe impact on the environmental aspects on Banco National Park (Sako et al, 2013). The solid and liquid wastes produced upstream of this hydrographic network are across the Park (Figure 5-34).



Source: Sako et al (2013)⁶⁸

Figure 5-34 Sources of Environmental Disturbance Around Banco National Park

Damp soils with lots of leftover debris or household waste are widespread. The impacts of the polluting artisanal activities of car scrapping, car workshops near the forest and industrial sites are also linked to the hydrographic network and the direction of the diffusion of these pollutants in the Park according to the topography.

5.3.3.2 Internationally Designated Areas

Key Biodiversity Areas

Key Biodiversity Areas (KBA)⁶⁹ represent some of the most important sites for biodiversity conservation worldwide and are identified nationally using globally standardised criteria and thresholds. The criteria that trigger the recognition of a KBA include:

- Presence of threatened biodiversity and ecosystems;
- Presence of geographically restricted biodiversity;
- The ecological integrity of the area;
- Biological processes (aggregations, refugia, etc.); and
- Biological irreplaceability.

⁶⁸ Nakouma Sako, Gérard Beltrando, Koffi Lazare Atta, Hyppolite Dibi N'da et Téléphore Brou, « Dynamique forestière et pression urbaine dans le Parc national du Banco (Abidjan, Côte d'Ivoire) », VertigO - la revue électronique en sciences de l'environnement [En ligne], Volume 13 Numéro 2 | septembre 2013.

⁶⁹ Key Biodiversity Area information website. Available at: keybiodiversityareas.org

KBAs include Alliance for Zero Extinction (AZE⁷⁰) sites, and Important Bird Areas (IBA⁷¹). The Alliance for Zero Extinction was established to designate and effectively conserve the most important sites for global biodiversity conservation, working to prevent species extinctions.

Among KBAs, IBAs are areas recognised as internationally important areas for the conservation of bird populations and associated biodiversity, as designated by BirdLife International. No KBAs are found within the Project footprint. Within a 10 km radius from the Project location, two KBAs have been identified:

- Adiopodoume; and
- Banco National Park;

Adiopodoumé is a protected area of 1,952 ha considered an AZE site until 2010, when Wimmer's shrew (*Crocidura wimmeri*, CR) was proclaimed as "Possibly Extinct" in the area (IUCN 2010). Today, it is still considered a KBA, working as a botanical garden and as a trial garden where research programmes are carried out. Figure 5-31 represents the geographic location of the KBAs.

Ramsar sites

Ramsar sites⁷² are internationally designated protected areas whose mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world" (Ramsar convention site, 2021). The Ramsar site closest to the Project is Grand Bassam, located approximately 38 km Southeast of the Project, so not considered relevant for the Project as it is far away.

5.3.4 Ebrié Lagoon

Ebrié Lagoon is not a protected or designated area, but it is a natural habitat and one of the most important water resources in Côte d'Ivoire; it represents a transition from a freshwater to a marine environment, harbouring a wealth of species, some of them threatened. The Lagoon lies adjacent to the city of Abidjan, about 9 km south of the Project.

The Lagoon extends for approximately 150 km in an east-west direction; its surface area is approximately 550 km², and there is an additional 200 km² of adjacent mangrove swamps and other types of wetlands. It is separated from the Gulf of Guinea for almost its entire length by a narrow, mostly sandy, strip of land. Fresh water flows into the Lagoon from a number of small creeks and rivers, the most significant being the Comoé and Mé in the east, and the Ira and Agnéby in the central part (as explained above in the Hydrology section, The Agneby is the main receiving body of drainage from the Project area – via the tributary Gobouet River). The Lagoon averages some 4 km in width and 5 m in depth.

Albaret et al., 1994, identified 153 fish species in the Ebrié lagoon. The species classified as threatened according to the IUCN Red list are reported in Table 5-14.

⁷⁰ Alliance for Zero Extinction website. Available at: <http://www.zeroextinction.org/>

⁷¹ BirdLife Important Bird and Biodiversity Areas Website. Available at: <http://datazone.birdlife.org/info/ibasaf>

⁷² Ramsar Information Website. Available at: <https://www.ramsar.org/sites-countries>.

Table 5-14 Fauna found at the Ebrié Lagoon

Scientific Name	IUCN Status	Scientific Name	IUCN Status
<i>Dasyatis margarita</i>	VU	<i>Sardinella maderensis</i>	VU
<i>Urogymnus asperrimus</i>	VU	<i>Pseudupeneus prayensis</i>	VU
<i>Megalops atlanticus</i>	VU	<i>Epinephelus itjara</i>	VU
<i>Pseudotolithus senegalensis</i>	EN		

Note: VU – Vulnerable; EN – Endangered.

Source: Albaret et al., 1994

Despite not being considered as a Conservation Area nor a Key Biodiversity Area, the Ébrié Lagoon is considered an important biological feature. The high number of marine, freshwater and brackish water fish species, reflects: a diversity of habitats via the system comprising mangrove formations, benthic substrates consisting of sand and mud, good connection with the sea through an artificial channel about 15 m deep. Its proximity with shallow coastal estuary waters home to a considerable ichthyological biodiversity and the variety of freshwater ecosystems connected to the system (Blaber, 2000).

5.3.5 Ecosystem Services

Ecosystem services are the benefits obtained by people from ecosystems. Biodiversity is crucial in the provision of ecosystem services, since the functioning of an ecosystem and thus its ability to provide services, is strongly influenced by the functional and structural variability in species as well as the quantity and distribution of all three components of biodiversity (i.e., genes, species, ecosystems). Ecosystems services can be local such as pollination or the provision of fresh water, others regional (flood and landslide control) and still others global in nature (climate regulation).

Ecosystem services can be classified into provisioning, regulating, cultural and supporting. These are, as summarised by the World Resources Institute⁷³:

- **Provisioning services:** provisioning services are the goods or products obtained from ecosystems, such as food, timber, fibre, and freshwater;
- **Regulating services** are the contributions to human well-being arising from an ecosystem's control of natural processes, such as climate regulation, disease control, erosion prevention, water flow regulation, and protection from natural hazards;
- **Cultural services** are the non-material contributions of ecosystems to human well-being, such as recreation, spiritual values, and aesthetic enjoyment; and
- **Supporting services** are the natural processes, such as nutrient cycling and primary production that maintain the other services.

Agricultural lands offer provisioning services (food, fibres, biomass), regulating services (such as pollination, biological pest control, maintenance of soil fertility and structure), cultural (such as traditional foods, landscapes), and supporting (such as nutrient and water cycling). Similarly, grazing lands offer provision of food and animal fibres (wool, animal skins), regulating services (such as weed control seed dispersal), cultural and supporting services.

Forests lands offer provisioning services (food, fibres, wood for construction and fuel, bushmeat), regulating services (maintenance of soil fertility), cultural (religious, aesthetic, tourism), and supporting (nutrient and water cycling).

⁷³ WRI, 2013

The direct footprint of the Project is characterised by a mix of agricultural, grazing and barren lands, and forested patches. During the scoping phase site visit held in June 2022, a preliminary assessment of Ecosystem Services was carried out. Several services were documented including:

- Agriculture;
- Grazing;
- Hunting;
- Wood for fire;
- Wood for construction (including of the Ivorian categories P1, P2 and P3, see Section 5.3.5.1);
- Surface water use;
- Artistic-Ornamental;
- Wild plants for food; and
- Wild plants for medicine.

Examples of ecosystem services observed during the site visit are shown in Figure 5-35.



Cattle grazing in the Northern sites of the Project area



Bamboo (*Bambusa vulgaris*) harvesting



Cassava (*Manihot esculenta*) crops.



Wetland with traces of human activity.

Figure 5-35 Examples of Ecosystem Services in the Project Area

A list of plant species and their associated uses is given in Table 5-15.

Table 5-15 Common Uses of the Plants found in the Project area

Species	Common name	Family	IUCN Status	Use
<i>Albizia adianthifolia</i>	Flat-crown	Fabaceae	LC	Medicinal
<i>Alchornea cordifolia</i>	Christmas bush	Euphorbiaceae	LC	Medicinal
<i>Alstonia boonei</i>	Cheese wood	Apocynaceae		Wood (P2); Medicinal
<i>Anthocleista djalonensis</i>	Cabbage tree	Gentianaceae		Medicinal
<i>Bambusa vulgaris</i>	Common bamboo	Poaceae		Wood, Ornamental
<i>Baphia nitida</i>	Camwood	Fabaceae	LC	Ornamental
<i>Bidens pilosa</i>	Beggar's tick	Asteraceae		Medicinal
<i>Bombax buenopozense</i>	Red-flowered silk cotton tree	Malvaceae		Wood (P2)
<i>Bridelia ferruginea</i>	-	Euphorbiaceae		Medicinal
<i>Carica papaya</i>	Papaya	Caricaceae		Food
<i>Cola nitida</i>	Kola	Malvaceae		Food, Medicinal
<i>Desmodium adscendens</i>	Tick clover	Fabaceae		Medicinal
<i>Elaeis guineensis</i>	African palm oil tree	Arecaceae	LC	Food; Ornamental
<i>Euphorbia heterophylla</i>	Wild poinsetia	Euphorbiaceae		Ornamental
<i>Euphorbia hirta</i>	Hairy spurge	Euphorbiaceae		Medicinal
<i>Ficus exasperata</i>	Sandpaper tree	Moraceae	LC	Medicinal
<i>Griffonia simplicifolia</i>	-	Fabaceae		Medicinal
<i>Mangifera indica</i>	Mango tree	Anacardiaceae		Food; Medicinal
<i>Manihot esculenta</i>	cassava	Euphorbiaceae		Food; Medicinal
<i>Milicia regia</i>	Yellow iroko	Moraceae	VU	Wood (P1)
<i>Morinda lucida</i>	Brimstone tree	Rubiaceae	LC	Medicinal
<i>Musa paradisiaca</i>	Banana	Musaceae		Food
<i>Newbouldia laevis</i>	Boundary tree	Bignoniaceae		Medicinal; Ornamental
<i>Persea americana</i>	Avocado tree	Lauraceae		Food
<i>Phyllanthus amarus</i>	Gale of wind	Euphorbiaceae		Medicinal
<i>Psidium guajava</i>	Guava	Myrtaceae	LC	Food; Medicinal
<i>Pycnanthus angolensis</i>	African nutmeg	Myristicaceae		Wood (P1)
<i>Rauvolfia vomitoria</i>	Devil's pepper	Apocynaceae	LC	Medicinal
<i>Ricinodendron heudelotii</i>	African wood-oil nut tree	Euphorbiaceae		Food; Wood (P2)
<i>Sterculia tragacantha</i>	-	Malvaceae		Wood (P3)
<i>Thaumatococcus daniellii</i>	Sweet prayer plant	Marantaceae		Medicinal
<i>Trema orientalis</i>	Pigeon wood	Cannabaceae	LC	Medicinal
<i>Trichilia tessmannii</i>	Aribanda	Meliaceae		Wood (P3)
<i>Zea mays</i>	Corn	Poaceae		Food

5.3.5.1 Flora of Commercial Interest

In Côte d'Ivoire, within the framework of rational exploitation for timber production, forest species have been divided into two groups according to their technological use. These are the main species and the secondary species. The main species are subdivided into three categories, according to their technological values and market demand:

- P1: First category timber species, often logged;
- P2: Less common species but also frequently logged; and
- P3: Species used sporadically or whose use wants to be promoted.

Secondary species, on the other hand are forest species not used for lumber and cabinetry.

Ten timber species were found in the Project area.

- Five P1 species: *Antiaris toxicaria* (LC), *kapok* (*Ceiba pentandra* LC), *yellow iroko* (*Milicia*, VU) *regia*, *African nutmeg* (*Pycnanthus angolensis*, LC) and *Terminalia superba* (LC).
- Three P2 species: *Emien* (*Alstonia boonei*, LC), *Bombax buenopozense* (NA) and *Ricinodendron heudelotii* (LC).
- Two P3 species: *Sterculia tragacantha* (LC) and *Trichilia tessmannii* (LC).

The species *Milicia regia* (yellow iroko) is, in addition to a P1 class species, a Vulnerable taxon according to the IUCN.

5.3.5.2 Reported ecosystem services

During the ESIA phase site visit held in November 2022, a series of interviews were conducted to better understand how local people use resources around them, how households collect materials in the Project area, and which ones (e.g., wood for fire, medicinal plants, forest products etc.). The purpose of this exercise is to understand how villagers use living things for their own use and enjoyment – products found in the forest, animals and plants are used for domestic use, or to obtain income and monetary profit for sale.

Among the Project stakeholders (refer to Chapter 11 for more information), the following representatives from local villages were invited to participate in local meetings with the ESIA team: hunters, men who collect firewood or building materials, and women (use of plants for traditional medicine, clothing and cooking).

The number of participants taking part in the meetings was limited. Attendees were asked questions related to the ecosystem services topic. Some questions were particularly relevant to men others to women, depending on who is in charge of the activity. The summarised results of the survey were:

- From men's responses:
 - No hunting was practiced in the Project area;
 - All the Project area is grazed by cattle that roams freely. Local men also indicated that cattle was used for selling and not for domestic consumption (Note: bovine cattle was observed during site visits);
 - No wood was harvested for construction;
- From men's and women's responses:
 - No fishing was performed in the Project area;
 - No firewood was collected in the Project area for heating and cooking in all locations except in Agoussi village, where locals indicated that hévéas wood (*Hevea brasiliensis*, LC) is collected. They did not indicate whether hévéas is used for other uses;

- No fruits, mushrooms, and other forest products were collected in the Project area for heating and cooking;
- From women's responses:
 - No medicinal plants were collected in the Project area except for the village of Agoussi, where they indicated collecting hysope (*Newbouldia laevis*, LC), and nyme (*Azadirachta indica*, LC).

Due to the low participation rate of local villagers in the interviews, the above results are likely incomplete, and more interviews would be required to have a more robust image of the ecosystem services in the area. Some of the answers provided are in sharp contrast with field observations made by ERM/ENVAL consultants. This is the case of wood harvesting, where clear evidence of this was collected in the field during the ESIA surveys - despite local interview results that indicate that it is not harvested. The results of the interview should therefore be considered non-exhaustive.

During the field visits carried out in November 2022, the chiefs and the community representatives were surveyed to collect information about the use of the Project area by the population from the villages in the Aol. Therefore, the veracity/accuracy of the information could be also affected by the fact that ecosystem services information collected by surveys was not always provided by the population of the villages that practice these activities, but also by the community representatives, whose knowledge of the type of activities, and its location could be limited.

5.4 Socio-economic and Cultural Environment

This section describes the current socio-economic, health and human rights baseline conditions in the Project Aol along with more general information at the national and district level. The available information about the districts, sub-prefectures and communes and villages located within the Aol of the Project, has been used to provide additional context to the Project area. The baseline description approach and data collection methodology are described in Section 5.1.

5.4.1 Social Area of Influence (Aol)

As mentioned in Section 5.1.1, the social Aol for the Project is used to describe the boundaries of the area where Project direct impacts may occur. The social direct Aol has been established as 5 km around the Project footprint to cover all villages that might be impacted (Figure 5-36), and encompasses:

- The Project footprint (429 ha).
- Settlements adjacent to the Project, i.e.,
 - Adonkoi I,
 - Akoupé-Zeudji,
 - Agoussi (which belongs to Akoupé-Zeudji),
 - Allokoi,
 - Attinguié,
 - Anguédedou (settlement on the south-west of the Project that administratively belongs to the village of Abadjin-Kouté) and
 - Palmafrigue V2 (community composed of Palmafrigue's employees and their families), which belongs to Abadjin-Kouté and Songon-Agban.

As presented in Figure 5-36, the Project is located between the above-mentioned villages within the Abidjan Autonomous District (AAD).

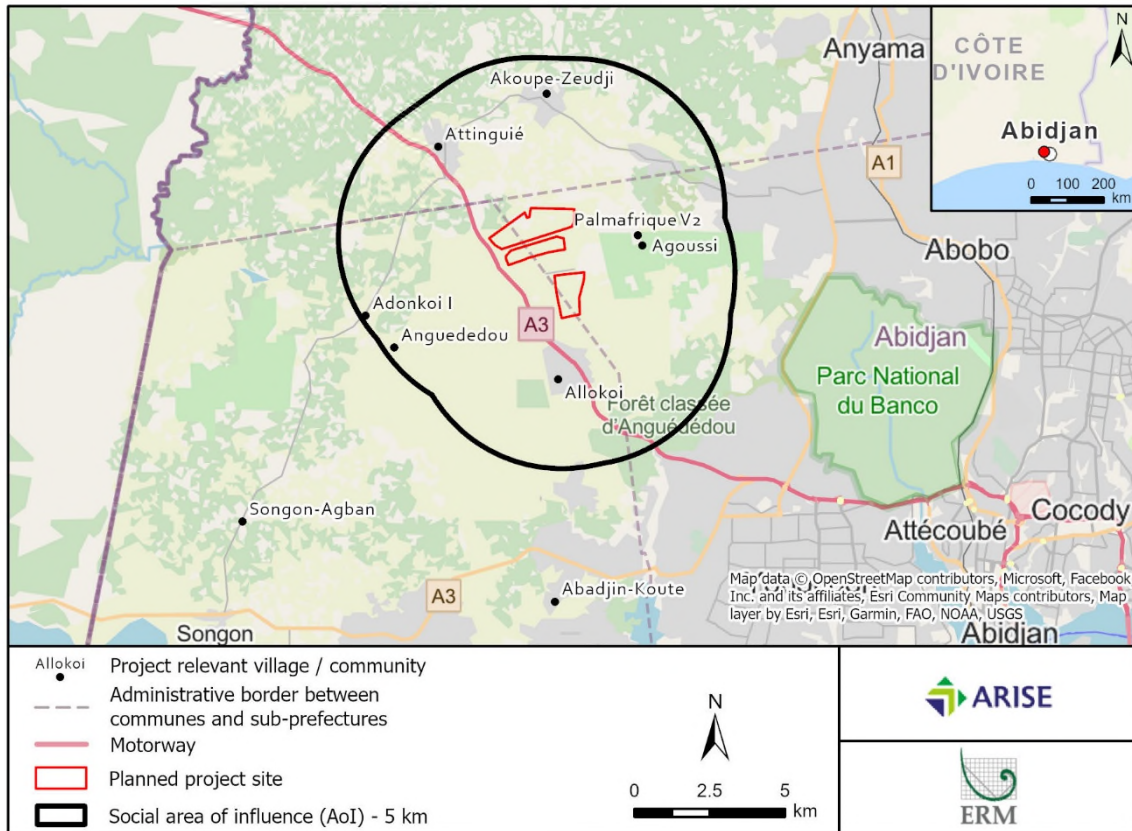


Figure 5-36 Location of the Project and Direct AoI

Table 5-16 presents the administrative division of the villages as well as their proximity to the Project.

Table 5-16 Villages in the AoI and Proximity to the Project

District	Sub-prefecture / Commune	Village	Community /Settlement	Proximity to the Project (km)
Abidjan Autonomous District	Anyama	Adonkoi I		4.5
		Akoupé-Zeudji		3.7
			Agoussi	2
		Allokoi		3
	Attinguié		3	
	Songon	Abadjin-Kouté		9.2
			Anguédedou	4.5
Songon-Agban (14.8 km)		Palmafrique V2	1.9	

As compared to the socio-economic baseline described in the Scoping report:

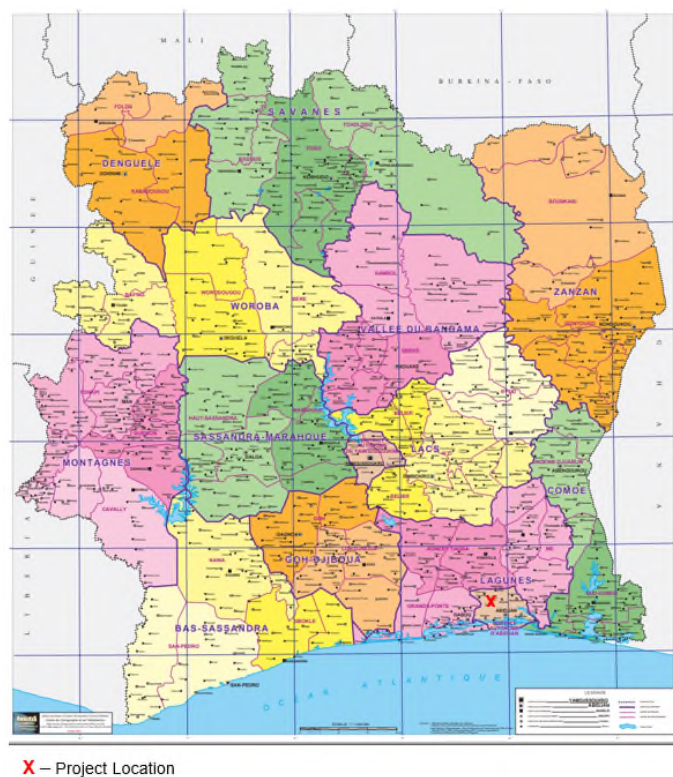
- The village of Songon-Agban is no longer considered in the AoI (as too distant 14.8 km),
- The village Adonkoi II is discarded from the villages inside the AoI, as during the scoping phase visit, the direct impacts of the Project were ruled out by the consultants from ENVAL,

- The village of Agoussi has now been added (during the ESIA phase) as a result of the site visit and consultations.

5.4.2 Administrative and Governance Framework

5.4.2.1 National Level

Côte d'Ivoire was a French-Portuguese colony and has been an independent republic since 1960⁷⁴. The administrative structure of Côte d'Ivoire was revised in September 2011. Côte d'Ivoire is subdivided into 14 districts, including the two autonomous districts around Yamoussoukro and Abidjan (AAD). Each of the districts is headed by a governor (*gouverneur* in French). Besides the two autonomous districts, the other 12 districts are subdivided into 31 regions, which are further subdivided into 108 third-level subdivisions, the *départements*. The *departments* are subdivided into 510 sub-prefectures. The communes have also been created in parallel with the sub-prefectures. The AAD has ten communes and four sub-prefectures, (of which Anyama and Songon are relevant for this Project). Then the villages, each headed by a chief (*chef*)⁷⁵ see Figure 5-37.



Source: Government of Côte d'Ivoire, 2021⁷⁶

Figure 5-37 Côte d'Ivoire Administrative Districts

Regarding land governance in the country, according to the Land Link Organisation⁷⁷ in Côte d'Ivoire, almost all farmland is held and transferred according to the rules and norms of customary law. Land is

⁷⁴ Lawler, Nancy Ellen, Mundt, Robert John and Comhaire, Jean L. "Côte d'Ivoire". Encyclopedia Britannica, (2020),

<https://www.britannica.com/place/Cote-dIvoire>

⁷⁵ PCGN (2015) Administrative Structure Côte d'Ivoire. Available from:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/499705/Ivory_Coast_Administrative_Structure.pdf

⁷⁶ Gouvernement de Côte d'Ivoire. Carte Administrative. Available from: <https://www.gouv.ci/img/CARTE-DE-COTE-IVOIRE-ADMINISTRATIVE.pdf>

⁷⁷ <https://www.land-links.org/country-profile/cote-divoire/>

viewed as belonging to the lineage of the original inhabitants of an area. A village chief or other notable can allocate use of the land to extended family members or as often happens in the south, to outsiders. Because customary procedures for the transfer of land are not well defined or consistently applied, their use has led to conflict, especially in the last few decades as population growth, immigration and commercialisation of agriculture have increased competition for land.

5.4.2.2 District and Sub-prefecture Level

The Project is located in the southern part of Côte d'Ivoire, within the Abidjan Autonomous District (AAD), on the boundary between Anyama sub-prefecture and Songon sub-prefecture (see Figure 5-38).

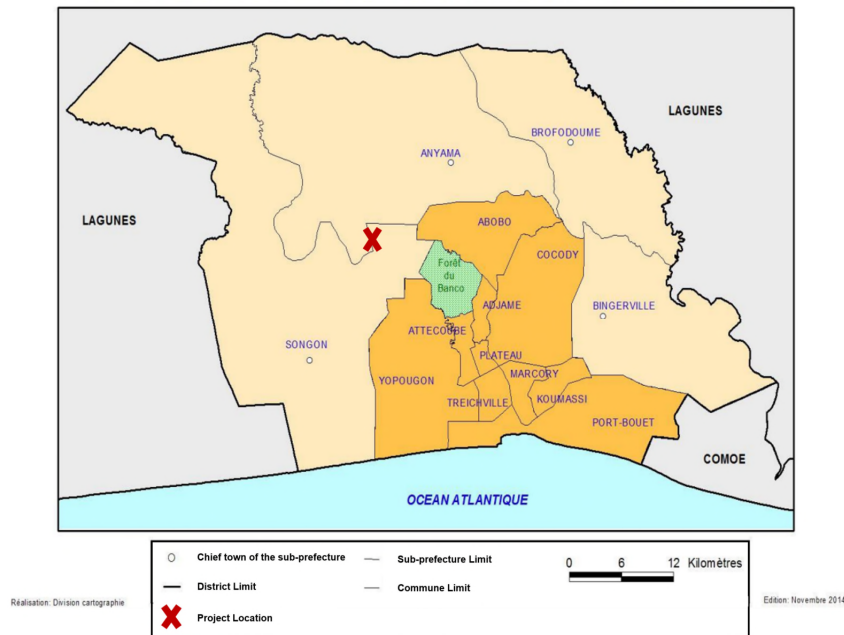
In 2011, the AAD was established by a decree instituting a system based on districts and regions, with four rural sub-prefectures. Each of the ten communes of AAD has its own municipal council, headed by a mayor. The sub-prefectures of the autonomous district also have their own mayors and councils.

Local governance is organised between administrative authorities appointed by the central government, namely prefects and sub-prefects, municipalities elected by citizens and traditional authorities at the village level.

Traditional authorities are embodied by a village chief designated within a designated lineage of the village. A lineage is understood as several different families sharing a common ancestor. A village is usually made of a small number of lineages. Each village has a reigning lineage, usually the lineage descending from the village founder. The head of the reigning lineage is called the land chief, which is a different role from village chief. This reigning lineage is not necessarily the lineage in which the village chief is selected.

The village chiefhood is almost exclusively held by men and inherited from brother to brother or maternal uncle to nephew. All the village lineages are involved in the chief selection. Ultimately, the land chief has the authority to designate the village chief once all lineages have reached a consensus on the village chief selection.

Women take part in the traditional authority management of villages, although indirectly. Women in a village select a women president who will be consulted by the village chief as part of the decision-making process.



Source: RGPH 2014⁷⁸

Figure 5-38 ADD Sub-Prefectures and Communes and Location of the Project

Anyama Sub-prefecture

The sub-prefecture of Anyama is one of the four AAD rural suburbs. It is bordered by the sub-prefecture of Azaguïé to the north, to the south by the commune of Abobo, to the east by the sub-prefecture of Brofodoumé and to the west by the sub-prefecture of Songon. The Anyama city is accessible by the national road A1, Abidjan - Adzopé and also by the Abidjan - Ouagadougou railway.

The Project is located near the villages of Adonkoi I, Akoupé-Zeudji, Allokoï and Attinguïé in Anyama sub-prefecture.

Songon Sub-prefecture

The sub-prefecture of Songon is one of the four AAD rural suburbs. It is bordered to the north by the Commune of Yopougon, to the east by the sub-prefecture of Anyama and in the south by the Departments of Jacquévillie and Dabou. It is also accessible by the Abidjan-Dabou Road. Songon is composed of several Ébrié villages such as: Songon-Kassemblé (Chief town of the Sub-prefecture) or Songon-Adjamé, Songon-Dagbé, Songon-Agban, Abiaté, Nonkouagon, Bago, Djeboté, Guébo, etc.

The Project is located near the settlement of Anguédedou (which belongs to the village of Abadjin-Kouté) and the village of Palmafrique V2 (which belongs to Abadjin-Kouté and Songon-Agban) and Agoussi in the Songon sub-prefecture.

5.4.2.3 Local Level and Aol

Stakeholders interviewed during the visit to the villages in the Project's Aol described the local decision-making process at the village level and identified local authorities and definitions of roles and responsibilities in the governance of village life.

The social structure obeys the traditional chiefdom and is composed of structures as youth and women's and men's organisations. The Administrative Authority is exercised in the application of state laws and regulations.

⁷⁸ Institut National de la Statistique (2014) RGPH. Available from: <https://www.ins.ci/documents/rgph/ABIDJAN.pdf>

In the village, the chief is a key figure who serves as an intermediary between the community and the administrative authorities. The chief's responsibilities include informing the community and settling disputes. In the event that the chief is absent, the deputy chief assumes their duties. The notables, who are respected members of the community, also help the chief address the village's problems. Additionally, there are leaders who represent and speak on behalf of specific groups within the community, such as the women's president and the youth president. These individuals serve as spokespersons for women and youth, respectively, at the chiefdom level.

Anyama Sub-Prefecture

In Adonkoi I, the local decision-making structure identified during the field survey is represented by the chieftaincy, which functions by generation and sits for 15 to 20 years per age group. The chieftaincy is composed by the chief of the village, the notables, the elders of the village, who are the advisers who help in the respect and the execution of the uses and customs; the village elder of the generation in power; the chief of the land; the president of the youth the president of the women; and the representatives of the locals and foreigners, who are the guarantors of peace and cohesion in the locality.

In Akoupé-Zeudji, the local decision-making structure identified during the field survey is composed by the village chief; four (4) deputies to the chief; councillors of the same and previous generations, the representative of the women; and the representative of the youth.

In Allokoi, Agoussi and Attinguié, the local decision-making structure identified during the field survey are the same, in both cases the village chiefdom is composed by the chief, the deputy chief, the general secretary, the notables, the advisors, the chief of the land, the representative of the youth; the representative of the women; and community leaders.

Songon Sub-Prefecture

In Abadjin-Kouté, the local decision-making process at the community level is organised by generation that succeeds to power. There are four generations (Gnando, Dougbo, Tchagbas and Blessoué) and four classes according to age groups (the Djehou, the Dongba, the Agbans, and the Assoukrou). Currently the Tchagbas generation is in power. The local authorities are the titular chief, the deputy chief, resident chief, which presides over litigation commissions, the commission of litigation, which is in charge of customary settlement, 20 notables, the representative of the youth, and the president of the women.

In Anguédédou the local decision-making structure identified during the field survey is composed by the village chief and his deputies, the representative of the youth; and the representative of the women.

In Palmafrique V2, the local decision-making structure identified during the field survey is composed by the village chief; the advisors, the secretary, the treasurer and assistant treasurer, the accountant; and two (2) organisation secretaries, in charge of organizing community events.

Regarding land ownership, during the field survey carried out in November 2022, stakeholders were asked about the mode of accession to property in the villages in the Aol. Most of them reported to access to land by inheritance and consider the figure of the head of the family to be in charge of land management within the village.

In Allokoi, Adokoi I and Akoupé-Zeudji, the mode of accession to land is by inheritance. The land is managed by the chief of the land who is an integral part of the community (chief of the land). The land is managed by the rightful owner and if it is a patrimony, it is the heads of the family who manage it. In Akoupé-Zeudji there are patriarchal and matriarchal regimes.

In Abadjin Kouté, land ownership is bequeathed by legacy to the oldest person designated as head of the family (both real and personal property). The land belongs to the family (the head of the family can give it up after a family consultation to the beneficiaries: wives, children and many others). There is

not a figure in the family that manages the land, as it is usually managed by all members. Land ownership in the village is managed by consensus.

The V2 Palmafrique village gathers all the workers of Palmafrique Company. Therefore, all the land is owned by and belongs to the company.

Anguédédou Village, there are different ethnic groups that have different customs. Therefore, the mode of ownership, the resource person in charge of the management and the way this property is managed differ from one ethnic group to another.

In the Aol, regarding the type of agreement to access the land in the villages, most of the community can have access the land through lease contracts, for example, in Agoussi, all the community access the land through rental agreements, and there are no landowners in the villages. Only in Akoupé-Zeudji there is a majority of people who own land (99 % of the village community are landowners). The rest of the agreements are lease or rental contracts, and in this sense, the type of lease contracts most common is verbal rental agreements between members of the community. In some cases, this is the only type of agreement in place to access the land, as in Anguédédou and Agoussi.

The most common type of land ownership present in the Aol is through customary law or verbal rental agreements. Registered contracts were not reported to be used by communities in the Aol. In most of the cases, the location of the land that is being used by villagers is inside the village⁷⁹.

5.4.3 Demographic and Vulnerability profile

5.4.3.1 National Level

Household, Age and Gender Distribution

Preliminary results from the most recent RGPH 2021 indicate that the population has meanwhile grown to over 29 million, whereby men accounted for 52.2 % of the population and women 47.8 %. This results in an overall sex ratio of 109 men for 100 women in Côte d'Ivoire. The RGPH 2021 results inform that there are 5,616,487 households in total, with an average household size of 5.2 persons⁸⁰.

The most populated district in the country is AAD (with 6,321,017 people), representing 21.5% of the total population, followed by far by Montagnes district (10.3%), Sassandra-marahoue (9.3%), and Bas-Sassandra (9.1%).

In 2021, 52.5% of the population of the country resides in the cities. The urban population has thus increased (in 2020) of 3.4 %⁸¹ estimated growth rate since 50.3% in 2014.

About 20 % of the population lived in agglomerations of more than one million inhabitants in 2020⁸². In 2021, the city of Abidjan hosts the majority of the urban population, accounting for 36% of in Côte d'Ivoire, followed by the city of Bouaké with 4.7% of the urban population. There are 17 cities in Côte d'Ivoire that are populated by more than 100,000 inhabitants.⁸³

According to current projection from the World Population Review, Côte d'Ivoire population is expected to continue to grow throughout the rest of the century. By 2049, the population is expected to surpass 50 million people.

⁷⁹ Land Links. Country profile: Côte d'Ivoire. Available from: <https://land-links.org/country-profile/cote-divoire/>

⁸⁰ Government of Côte d'Ivoire (2021) Final overall results of the RGPH 2021. Available from: https://www.gouv.ci/_actualite-article.php?recordID=13769

⁸¹ World Bank (2020) Database. Country profile: Côte d'Ivoire. Available from: <https://donnees.banquemondiale.org/indicateur/EN.URB.MCTY.TL.ZS?locations=CI>

⁸² World Bank (2020) Database. Country profile: Côte d'Ivoire. Available from: <https://donnees.banquemondiale.org/indicateur/EN.URB.MCTY.TL.ZS?locations=CI>

⁸³ Government of Côte d'Ivoire (2021) Final overall results of the RGPH 2021. Available from: https://www.gouv.ci/_actualite-article.php?recordID=13769

The local socio-demographic context is characterised by a fast population growth associated with urbanisation and industrialisation. Even though the population is growing, there has been a constant decrease on the annual growth rate of the Ivorian population (from 3.3 in 1998 to 2.9% in 2021). In addition, the population density in Côte d'Ivoire has increased from 48 inhabitants per km² in 1998 to 91.1 inhabitants per km² in 2021⁸⁴. An overview of population indicators at the national level is provided in Table 5-17.

Table 5-17 National Data on Ivorian Population, 2014 - 2021

Population / Indicators	Census Year			
	RGPH 2014		RGPH 2021 (Overall Results) ⁸⁵	
	Number	% of total population (2014)	Number	% of total population (2021)
Abidjan	4,395,243	19	6,321,017	21.5
Total Population Côte d'Ivoire	22,671,331	100	29,389,150	100
Urban Population	11,408,413	50	15,428,957	52.5
Rural Population	11,262,918	50	13,960,193	47.5
Ivorian Population	17,175,457	76	22,840,169	78
Non-Ivorian Population	5,490,222	24	6,435,835	22
Density (inhabitants/km ²)	70.3	N/A	91.1	N/A

Source: RGPH, 2014 and RGPH 2021 Overall Results.

As presented in Table 5-18, much of the population growth can be attributed to the significant increase in live births and life expectancy, as the Ivorian population is very young, in 2021, 75.6% of the total population is under 35 years of age⁸⁶ and the proportion of the population under 15 years of age was almost 40 % in 2020⁸⁷.

Table 5-18 Ivorian Demographic Indicators, 2020

Demographic Indicators	2020
Fertility rate, total (live births per woman)	4.7
Life expectancy at birth (females/males, years)	58.6 / 56.1
Infant mortality rate (per 1,000 live births)	60.4

Source: World Bank and UN Data, 2021.

The population structure represented in Figure 5-39.. This pyramid shows a larger working age population than currently exists compared to the number of dependent children and elders.⁸⁸

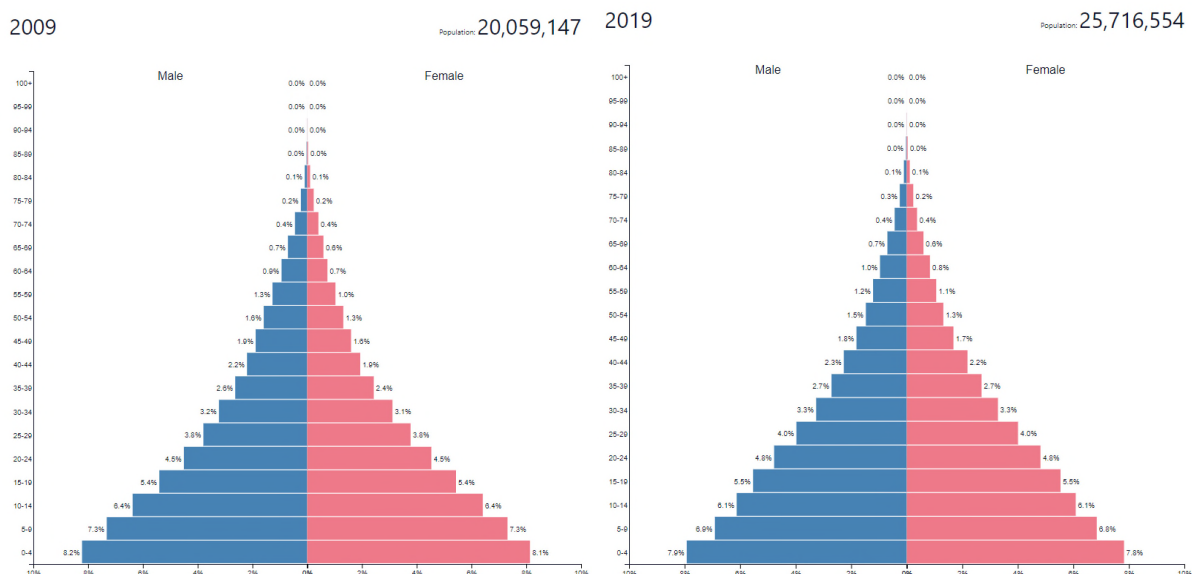
⁸⁴ Government of Côte d'Ivoire (2021) Final overall results of the RGPH 2021. Available from: https://www.gouv.ci/_actualite-article.php?recordID=13769

⁸⁵ As the only information published to date (November 2022) are the overall results of the RGPH, not all the information required in this table is available.

⁸⁶ Government of Côte d'Ivoire (2021) Final overall results of the RGPH 2021. Available from: https://www.gouv.ci/_actualite-article.php?recordID=13769

⁸⁷ World Bank (2020) Database. Country profile: Côte d'Ivoire. Available from: <https://data.worldbank.org/indicator/SP.POP.0014.TO.ZS?locations=CI>

⁸⁸ Demographic Dividend (2020) Côte d'Ivoire. Available at : <https://demographicdividend.org/cote-divoire/>



Source: Population Pyramid, 2019.⁸⁹

Figure 5-39 Projected Population Pyramid Côte d'Ivoire, 2019

Comparing both periods we can see that the population is ageing, with a 2.4 % increase in the population between 14-65 years of age. In terms of gender, male population is slightly bigger than female population, with a representation of 50.4 % and 49.6 % respectively in 2019. See Table 5-19 below for the disaggregated information.

Table 5-19 Age Structure Population Côte d'Ivoire, 2009-2019

Age structure	2009			2019		
	% of population	Male (%)	Female (%)	% of population	Male (%)	Female (%)
0-14 years	43.7	21.9	21.8	41.6	20.9	20.7
14-65 years	53.1	27.4	25.7	55.5	28.1	27.4
+ 65 years	2.7	1.4	1.3	2.8	1.3	1.5

Source: Population Pyramid, 2019

Vulnerable Groups

According to the IFC, vulnerable groups refer to people who, by virtue of gender identity, ethnicity, age, disability, economic disadvantage, or social status may be more adversely affected by project impacts than others and who may be limited in their ability to claim or take advantage of project benefits. Vulnerable individuals and/or groups may also include people living below the poverty line, the landless, the elderly, women and children headed households, refugees, internally displaced people, ethnic minorities, natural resource dependent communities or other displaced persons who may not be protected by national and/or international law⁹⁰.

⁸⁹Population Pyramid (2019). Country Data: Côte d'Ivoire. Available from: <https://www.populationpyramid.net/c%C3%B4te-divoire/2019/>

⁹⁰ EBRD. 2019. ERBD Performance Requirement 5. Land Acquisition, Involuntary Resettlement and Economic Displacement. Available from: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjKk-yD7vPyAhXyEWMBHZ_BVYQFnoECACQAQ&url=https%3A%2F%2Fwww.ebrd.com%2Fdocuments%2Fenvironment%2Fperformance-requirement-5.pdf&usg=AOvVaw33p4S_ef2Bfluv0gpGS2kY

This section identifies these individuals and groups in Cote d'Ivoire. The main population groups that have been identified as potentially vulnerable in the context of the Project and the rationale for their identification are presented in Table 5-20.

Table 5-20 Overview of Vulnerable Groups

Group	Description
Generic Vulnerability	
Women	Due to the nature of domestic relations, women may be reliant on the male members of the family for financial support. As such they are less likely to have access to financial assets, as well as access to higher educational and literacy levels.
Ethnic minorities	Some groups, including migrants and refugees, may be marginalised with reduced access to healthcare, education, freedom of speech, credit and other services. In most cases ethnic minority groups have their own language, which is not the language practiced by the dominant ethnic group.
Illiterate People	Those who lack reading and writing skills may have more difficulties than other residents accessing written information, and therefore being unable to participate in the decision-making.
Children	Children are often reliant on older members of the households or community to access assets/resources. When a child is not adequately represented by an adult, from a low-income family or an ethnic minority, (s)he may be vulnerable to exploitation within the community or workplace.
Youth	Youth may be vulnerable in terms of access to assets, education, or employment opportunities.
Elderly/ retired	Retired members of the community may have a minimal income and are more likely to have reduced physical or mental capacity to cope with changes to their environment. In many settlements, the elderly may be reliant on subsistence farming, which would make them specifically vulnerable, as the loss of lands can mean the loss of food. In addition, elderly are more affected by illiteracy, contributing to their vulnerability.
Low-income households ⁹¹	Low-income households have fewer resources on which to rely and are less likely to have savings and/or access to credit, which make them vulnerable to shocks and change.
Physical/mental health and disability	Those who lack physical mobility or who have mental health issues may be vulnerable to changes, might have difficulties in understanding Project impacts and risks and might be unable to participate in decision making.

Source: EBRD, 2019⁹²

These groups and their vulnerabilities in Côte d'Ivoire are further described in the following sections.

⁹¹ The current minimum wage in Côte d'Ivoire is defined as 60,000 CFA Francs (€ 91,5) a month valid as of February 2022. Households on low income are defined as those earning the minimum national wage or below.

⁹² EBRD (2019) Environmental and Social Policy, Available from: [EBRD Environmental and Social Policy 2019](#)

Human Rights

An overview of the situation in the country, based on the information in the Côte d'Ivoire Human Rights Report of 2020⁹³ from the US Department of State is provided below:

- Respect for the Integrity of the Person, Including Freedom from:
 - *Disappearance* – in 2019, there were at least two Reports of disappearances carried out by or on behalf of government authorities.
 - *Torture and other cruel, inhuman or degrading treatment or punishment* - Human Rights organisations reported that prisoners were subject to violence and abuse, including beatings and extortion, by prison officials and that the perpetrators of these acts went unpunished.
 - Prison conditions are insufficient as there is not enough food, there is overcrowding and understaffing. The system has built prisons to fit 8,000 prisoners but currently has 21,430.
 - *Arbitrary arrest or detention* – Reports have claimed that people were sometimes detained without charge and surpassed the 48-hour detention without charge limit.
- Respect for Civil Liberties, including:
 - *Freedom of expression, including for the press* - The law prohibits incitement to violence, ethnic hatred, and rebellion, as well as insulting the head of state or other senior members of the government.
 - *Freedom of peaceful assembly and association* - the law requires groups that wish to hold demonstrations or rallies in stadiums or other enclosed spaces to submit a written notice to the government at least three days before the proposed event. This being said, numerous opposition political parties reported denials of their requests to hold political meetings and alleged inconsistent standards for granting public assembly permits.
 - *Freedom of movement* - the constitution and law do not specifically provide for freedom of movement, foreign travel, emigration, or repatriation, although it is generally respected.
 - *Status and treatment of internally displaced persons* - as of December 2019, in Côte d'Ivoire there were 3,000 internally displaced persons (IDPs) in the country as a result of feared or experienced violence associated with the October 31, 2019 presidential election.
- Corruption and lack of transparency in government - Human Rights organisations reported official corruption, particularly in the judiciary, police, and security forces, but noted that victims of such corruption often did not Report it or assist in investigations, fearing retaliation
- Discrimination, Societal abuses and trafficking in persons
 - *Women* - the law prohibits rape and provides for prison terms of five to 20 years for perpetrators. The law does not specifically penalise spousal rape. In addition, NGOs in the country reported rape of schoolgirls by professors as an issue.
 - *Children* – a Report of 2018 showed, although penalised by law, that 9 percent of girls and 11 percent of boys had been victims of sexual violence and 47 percent of girls and 61 percent of boys had been victims of physical violence.
 - *Persons with disabilities* – although the law protects people with disabilities and requires the government to educate and train them, they reportedly encountered serious discrimination in employment and education.
 - *Members of national/racial/ethnic minority groups* – ethnic discrimination has been reported as an issue, amongst the 60 ethnic groups existing in the country. During the presidential

⁹³ Available at: https://www.state.gov/wp-content/uploads/2021/03/COTE-D_IVOIRE-2020-HUMAN-RIGHTS-REPORT.pdf

elections, a particularly violent clash in the town of Dabou between two ethnic groups, Malinke and Adjoukrou claimed 16 lives and injured 67 persons.

- *Acts of violence, criminalisation, and other abuses based on sexual orientation and gender identity* - Homosexuality is not criminalised, but public heterosexual and same-sex intimate activity is subject to conviction as a form of public indecency that carries a penalty of up to two years' imprisonment.

Gender Equality

With regard to gender equality, Côte d'Ivoire falls into category 5 of the Gender Development Index (GDI)⁹⁴ which means that levels of equality between women and men are low.⁹⁵

Cote d'Ivoire became the second country to launch the African Women Leaders Network in 2018 to promote a movement of women leaders to play an important role in Africa's transformation, through the Africa Agenda 2063 and Sustainable Development Goals 2030.⁹⁶

UN Women considers that although Côte d'Ivoire is improving women's rights in the country, some progress still needs to be made. Out of the 72 specific indicators they use to track gender equality in a country, in 2020 it was considered that only 47.6 % of them were available in Côte d'Ivoire and 50 % of their legal frameworks promote, enforce and monitor gender equality⁹⁷.

In addition, conditions for women also improved with the new legislation, according to the Human Rights Watch Report of 2020, which allows for co-ownership of marital property and gives a widow the right to one-quarter of the husband's estate (previously all of it would go to the children)⁹⁸.

However, inequalities persist in several socioeconomic indicators. In education, women have significant lower literacy than men (52.1 % for women and 70.8 % for men aged 15-24 in 2020) and primary completion rates (33.4 % for women and 53.1 % for men aged 15-24 in 2020). In terms of employment and economic participation, women have a substantial lower participation in the economy than men and higher rates in vulnerable employment.⁹⁹

Regarding gender-related considerations at national level, Table 5-21 shows that there are significant disparities between men and women in Côte d'Ivoire, particularly in terms of education, income, participation in work and representation in the parliament. The adolescent birth rate shows that 13.5 % of the women giving birth are between 15-19 years.¹⁰⁰

⁹⁴ The GDI reflects gender inequalities in the three dimensions of the HDI: health (measured by the life expectancy of women and men at birth), education (measured by women's expected years of schooling) and men and years of average schooling completed); and the control of economic resources (measured by GNI per capita estimated for women and men)

⁹⁵ UNDP Gender Development Index. Available at <http://hdr.undp.org/en/composite/GDI>

⁹⁶ UN Women (2018) Cote d'Ivoire launches its chapter of the African Women Leaders Network. Available from: <https://africa.unwomen.org/en/news-and-events/stories/2018/02/onu-femmes-lance-le-reseau-des-femmes-leaders-africaines-en-cote-divoire>

⁹⁷ UN Women. 2022. Country Fact Sheet. Côte d'Ivoire. Available at: <https://data.unwomen.org/country/cote-divoire>

⁹⁸ Human Rights Watch. 2020. World Report 2020: Côte d'Ivoire. Available at: <https://www.hrw.org/world-report/2020/country-chapters/cote-divoire>

⁹⁹ World Bank. 2022. Côte d'Ivoire | Data. Available at: <https://data.worldbank.org/country/cote-divoire>

¹⁰⁰ UNDP Gender Inequality Index. Available at <http://hdr.undp.org/en/composite/GII>

Table 5-21 Key Gender-related Indicators of Côte d'Ivoire, 2021

Gender –related indicators	Female	Male
Life Expectancy at birth (years)	59.1	56.6
Years of schooling planned (years) ¹⁰¹	9	10.9
Average Years of Schooling (years)	4.2	6.4
Estimated Gross Income Per Capita (2011 Per Person Per Year in USD)	2,561	7,531
Participation rate in the Labour market (% of female and male population aged 15 and over)	44.54	65.66
Maternal mortality ratio (deaths per 100,000 live births)	645	N/A
Population with at least secondary education (% of age 25 and over)	16.5	32.7
Seating occupied by women in the national parliament (% held by women)	9.2	N/A
Adolescent birth rate (births per 1,000 women aged 15-19)	135.5	N/A
Employment to population ratio, 15+, by gender % (modelled ILO estimate 2018)	46.8	64.7
Population working as salaried employees (%)	18.92	36.28
Employment rate of vulnerable persons (%)	80.35	61.47

Source: World Bank, 2021

According to a study published in 2018 the US Department of State ¹⁰², about 30 % of women in Côte d'Ivoire report violence during their childhood (before the age of 15) and 7 % Report sexual abuse during their childhood. In adulthood, the same Report states that 40 % of women Report being abused by their spouse. Only 25 % of these women say they have denounced these acts of violence to the authorities. 16 % of women Report being abused by someone who is not their spouse. 6.7 % of women reported having experienced sexual violence by someone other than their spouse.

Women Headed Households

Women have fewer options on the labour market than men, which make them more vulnerable to poverty. According to CEIC Economic data organisation ¹⁰³, as of 2012, 18 % of households in Cote d'Ivoire were female headed; a decrease from 2005 where the number was 18.4 % but an increase since 1999 when it was only 14.4 %.

These women may have more difficulties to access information and engagement relating to the Project's activities, as well as less access to employment and other opportunities that will arise from the Project. They might also be more susceptible to gender-based violence that may arise from the Project, as well as disadvantaged in regards of land acquisition.

According to Land Links Organisation ¹⁰⁴, although women produce and market most of the food in Côte d'Ivoire, customary law excludes women from owning land. It is the status of women within the family that determines women's access to land, and only implies the right of use. Of particular concern is the right of the widow to remain on the land she cultivated during her husband's lifetime. The Rural Land Law of 1998 reverses traditional practices with respect to women and land, giving women rights equal to those of men, although the Rural Land Law, remains little known and little used in the national context.

¹⁰¹ Number of years of schooling a child of school age can expect if prevailing trends in age-specific enrolment rates persist throughout the child's lifetime.

¹⁰² US Department of State (2018) Gender-based violence among stateless and national populations in Côte d'Ivoire. Available from: https://reliefweb.int/sites/reliefweb.int/files/resources/FY%2014_%20Gender-based%20violence%20among%20stateless%20and%20national%20populations%20in%20Cote%20d%27Ivoire.pdf

¹⁰³ CEIC. 2012. Côte d'Ivoire CI: Female Headed Households. Available at: <https://www.ceicdata.com/en/ivory-coast/population-and-urbanization-statistics/ci-female-headed-households>

¹⁰⁴ LandLink Organisation. Country Profile: Côte d'Ivoire. Available from: <https://www.land-links.org/country-profile/cote-divoire/#1528484326408-915aad39-5e27>

Poverty Index and Households Living Under the Poverty Line

According to the UN Development Programme's (UNDP) Global Multidimensional Poverty Index, Côte d'Ivoire had the following poverty-related indicators in 2016:

Table 5-22 Key Poverty-related Indicators, Côte d'Ivoire, 2016

Poverty – related indicators		%
Population living in multidimensional poverty		46.1
Population in severe multidimensional poverty		25.5
Population vulnerable to multidimensional poverty		17.6
Population living below poverty line	National Poverty Line	39.5
	PPP USD 1.99 a day ¹⁰⁵	29.8

Source: UNDP, 2021¹⁰⁶

According to a 2019 OECD Report¹⁰⁷, despite remarkable economic success since 2012, the living standards remain low, with a poverty headcount ratio of 46 % in 2015, only three percentage points lower than the 2010 level (49 %). The same report includes that, beginning in 2012, when gross domestic product (GDP) growth in Côte d'Ivoire reached nearly 11 %, the Ivorian economy outpaced both lower-middle-income countries and Sub-Saharan African countries every year through 2017. In 2015, for example, annual GDP per-capita growth was slightly more than 6 % in Côte d'Ivoire, while GDP per-capita growth averaged 4.1 % in all lower-middle-income countries and just 0.2 % in all Sub-Saharan African countries.

However, the living standards for the poorer parts of the Ivorian population are still low. Côte d'Ivoire's HDI value for 2019 is 0.538 — which put the country in the low human development category — positioning it at 162 out of 189 countries and territories.¹⁰⁸

According to the World Bank, the poverty rate in Cote d'Ivoire (USD 1.90/day) was at 28 % of the population in 2015 (Table 5-23). The lack of assets makes poor people vulnerable to shocks and change. Their vulnerability is reinforced by a lack of social, medical and educational facilities, and proper housing. Only 68.55 % of the population in 2019 had access to electricity¹⁰⁹.

Table 5-23 Poverty Levels in Côte d'Ivoire, 2015

Poverty	Number of poor (million)	Rate (%)
National poverty line	10.7	46.3
International poverty line (USD 1.90/day or CFA 473,1/day)	6.6	28.2
Lower middle income class poverty line (USD 3,2 or CFA 797,1)	13.3	57.4

¹⁰⁵ The MDG Indicator is defined as the percentage of the population living below the international poverty line, where the average daily consumption (or income) is less than USD 1.25 per person per day

¹⁰⁶ UNDP (2021) Global Multidimensional Poverty Index. Available from: https://hdr.undp.org/sites/default/files/2021_mpi_report_en.pdf

¹⁰⁷ OECD (2019) Equity and Poverty in Côte d'Ivoire. Available from: <https://www.oecd.org/dev/inclusivesocietiesanddevelopment/CIV-Equity-%20Poverty-Cote-dIvoire-DRAFT-Working-Document.pdf>

¹⁰⁸ Human Development Report (2020) Côte d'Ivoire. Available from: <https://hdr.undp.org/sites/default/files/Country-Profiles/CIV.pdf>

¹⁰⁹ World Bank. 2020. Poverty and Equity Brief, Cote d'Ivoire. Available at: https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_CIV.pdf

Poverty	Number of poor (million)	Rate (%)
Upper middle income class poverty line (USD 5.5 or CFA 1370,1)	19.1	82.3
Multidimensional poverty measure		49.9

Source: World Bank. 2020.¹¹⁰

Ethnicity, Language and Religion

Three main languages are spoken in Côte d'Ivoire; French (official), Dioula, Baoulé, plus a total of 60 native dialects. As presented in Table 5-24, population in Côte d'Ivoire in 2021 practiced two major religions: Islam (42.5 %), and Christianity (39.8 %). Animists (2.2 %), and other religions (0.7 %) represent a very small percentage of the population. People who do not practice any religion accounts for 12.6 % of the resident population in Côte d'Ivoire.¹¹¹

Table 5-24 Religion Distribution of the Resident Population, 2021

Religion	%
Islam	42.5
Christianism	39.8
Animists	2.2
Other religions	0.7
People who do not practice any religion	12.6

Source: RGPH 2021¹¹²

According to the World Directory of Minorities and Indigenous People, although Cote d'Ivoire has over 60 ethnic groups whose linguistic and cultural identities and interrelationships are diverse and complex.¹¹³ There are five (5) main ethnic groups in Côte d'Ivoire: The Akan or Kwa, the Krou (Kru), the Mandé du Sud (Southern Mande), the Mandé du Nord (Northern Mande) and the Gur (Voltaic, voltaïque). The distribution of the Ivorian population by major ethnic groups in 2021 according to the overall results of the RGPH is presented in Table 5-25.

¹¹⁰ World Bank (2020) Poverty and Equity Brief, Cote d'Ivoire. Available at: https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_CIV.pdf

¹¹¹ Government of Côte d'Ivoire (2021) Final overall results of the RGPH 2021. Available from: https://www.gouv.ci/_actualite-article.php?recordID=13769

¹¹² Government of Côte d'Ivoire (2021) Final overall results of the RGPH 2021. Available from: https://www.gouv.ci/_actualite-article.php?recordID=13769

¹¹³ World Directory of Minorities and Indigenous People. 2018. Cote d'Ivoire. Available at: <https://minorityrights.org/country/cote-divoire/>

Table 5-25 Ethnic Groups Distribution of Ivorian Population, 2021

Ethnic group	%
Akan	38
Gour	22
Mandé of the North	22
Krou	9.1
Southern Mande	8.6
Naturalised	0.3

Source: RGPH 2021 ¹¹⁴

Besides five main ethnic groups there are 69 subgroups in the country. The Baoulé (also spelled Baule), an Akan subgroup, as the largest single ethnic group, constituting about 15-20 % of the population and Akan speakers make up 28.8 % of the population¹¹⁵:

The Minority Rights Organisation¹¹⁶ states that another Akan subgroup is the Ebrié (Kyama), an extremely complex grouping of people along the south-east coast, particularly around the Ebrié Lagoon and Abidjan. Lagoon people have attracted many migrant labourers to their farms, especially Mossi from Burkina Faso. Baoulé and Dioula have also moved in and assumed political and economic prominence to the concern of the original inhabitants.

Migration and Refugee Population

Native Ivorians account for 78 % of the total population, and non-Ivorians 22 %.¹¹⁷ The portion of non-Ivorian population has been constantly decreasing, as shown in Table 5-26.

Table 5-26 Proportion of Non-Ivorian Population Living on Ivorian Territory, 1975 - 2021

Year	% of the population of non-Ivorian nationality
1975	33
1988	28
1998	26
2021	22

Source: RGPH 2021 ¹¹⁸

Côte d'Ivoire had a net migration rate in 2021 of 1.21 migrants per 1,000 population, positioning the country at number 58/231 in the world ranking. The current net migration rate is positive, meaning so far in 2021 more people have migrated to Côte d'Ivoire than emigrated from Côte d'Ivoire to other

¹¹⁴ Government of Côte d'Ivoire (2021) Final overall results of the RGPH 2021. Available from: https://www.gouv.ci/_actualite-article.php?recordID=13769

¹¹⁵ Austrian Red Cross and UNHCR (2021) Côte d'Ivoire: COI Compilation. Available from: https://www.ecoi.net/en/file/local/2060352/ACCORD+COI+Compilation_Cote+d%27Ivoire_September+2021.pdf

¹¹⁶ Minority Rights (2021) Country Côte d'Ivoire. Available from: <https://minorityrights.org/country/cote-divoire/>

¹¹⁷ Government of Côte d'Ivoire (2021) Final overall results of the RGPH 2021. Available from: https://www.gouv.ci/_actualite-article.php?recordID=13769

¹¹⁸ Government of Côte d'Ivoire (2021) Final overall results of the RGPH 2021. Available from: https://www.gouv.ci/_actualite-article.php?recordID=13769

countries.¹¹⁹ This could be due to the impact of the Sahel conflict on cross border movements from Burkina Faso and Mali towards Côte d'Ivoire and Ghana.¹²⁰

According to the OECD, Cote d'Ivoire is integrating migration into their development strategies and investing in new policies and preparing for the long-term effects of migration on all sectors of society. Migrants and the remittances they send back contribute to the development of their country of origin. Immigrants (mainly from Burkina Faso), account for around 10 % of Côte d'Ivoire's population. On the other hand, Côte d'Ivoire's emigrants represent around 4 % of its population, with more than half living in Burkina Faso.¹²¹

Between 25 and over 40 % of the migrant population consists of migrants from African countries. See Figure 5-40 below for the latest data of the distribution of migrants in Côte d'Ivoire by origin.

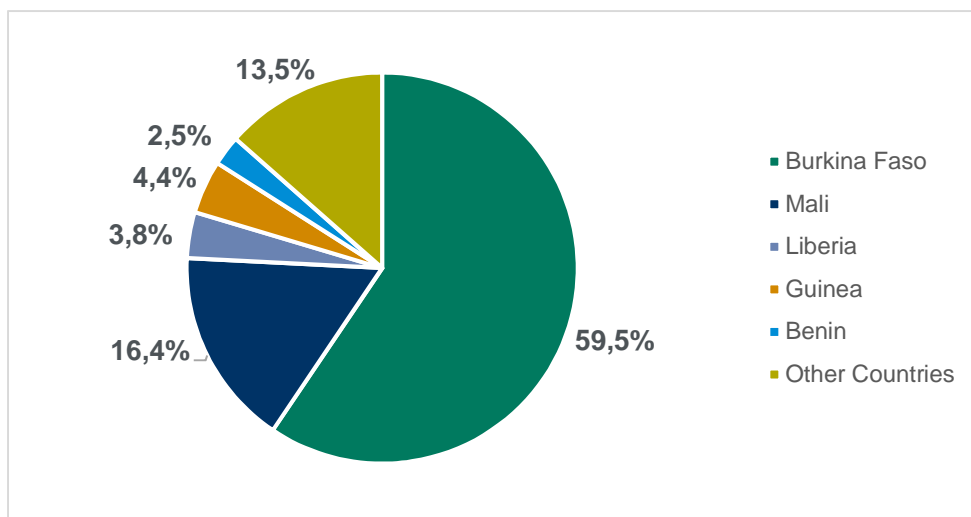


Figure 5-40 Origin of Migrants in Côte d'Ivoire, 2015

Source: MGSOG, 2017¹²²

The migrants population is roughly divided equally among practitioners of Christianity, Islam and traditional beliefs. Many adherents of Christianity and Islam combine these beliefs with traditional beliefs. Most Muslims live in the north and most Christians in the south.¹²³

According to the UN Refugee Agency, Côte d'Ivoire is home to one of Africa's largest populations at risk of statelessness, more than 1.6 million people. Committed to ending statelessness by 2024, Côte d'Ivoire is the first country in Africa to establish a process to identify and protect stateless persons.¹²⁴

Figure 5-41 below shows the number of stateless, returnees, refugees and asylum seekers in Côte d'Ivoire in 2021.

¹¹⁹ CIA (2022) The World Factbook. Country: Côte d'Ivoire. Available from: <https://www.cia.gov/the-world-factbook/countries/cote-divoire/>

¹²⁰ UN Refugee Agency and Migex Migration Centre (2021) Impact of the Sahel conflict on cross border movements from Burkina Faso and Mali towards Côte d'Ivoire and Ghana. Available from: https://reliefweb.int/sites/reliefweb.int/files/resources/192_the_impact_of_the_Sahel_conflict_on_cross_border_movements.pdf

¹²¹ OECD. Côte d'Ivoire stands to benefit by integrating migration into its national and sectoral development strategies. Available from: <https://www.oecd.org/dev/migration-development/cotedivoirestandstobenefitbyintegratingmigrationintoitsnationalandsectoraldevelopmentstrategies.htm>

¹²² Maastricht Graduate School of Governance (2017) Côte d'Ivoire migration profile. Available from: <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjx9erLnZH2AhUtPewKHZp4BDcQFnoECAMQAQ&url=https%3A%2F%2Fwww.merit.unu.edu%2Fpublications%2Fuploads%2F1518183449.pdf&usg=AOvVaw0SsgOmIAa5AoMNIoNVYY3B>

¹²³ Minority Rights (2018) Country: Côte d'Ivoire. Available from: <https://minorityrights.org/country/cote-divoire/>

¹²⁴ UN Refugee Agency (2021). Côte d'Ivoire. Available from: <https://www.unhcr.org/cote-divoire.html>

All refugees

2,200

Last updated 31 Dec 2021

Asylum seekers

388

Last updated 31 Dec 2021

People at risk of statelessness and stateless people

1,656,330

Last updated 31 May 2021

Figure 5-41 Stateless, Returnees and Refugees, Côte d'Ivoire 2021

Source: UNHCR, 2021¹²⁵

Two regulations signed on September 2020 formally established procedures that regularise the status of stateless people and fulfil a crucial component of Côte d'Ivoire's National Action Plan. Formal recognition of statelessness status will pave the way for people – who until then had no recognised legal existence – to receive identity documents, enrol in school, have access health services, seek lawful employment, open a bank account, and buy land.¹²⁶

Illiterate population

Literacy rates in the country have some variations depending on the age group and the gender Table 5-27 shows that although the average for the age group 15-24 is 83.5 %, the percentage for men is much higher (92.8 %) than women (76.4 %).

Table 5-27 Literacy Rate by Gender and Age Group, 2019

Age group	Literacy rate (%) in 2019		
	Men	Female	Total
15-24 years	92.8	76.4	83.6
15 years and older	86.7	93.1	89.9
65 years and older	89.5	75.1	82.1

Source: UNESCO, 2021

The numbers remain in the same pattern for illiteracy rates. In 2019, in the age group ranging from 15-24, 818,556 people were illiterate, of which 628,192 were women¹²⁷.

A large part of these differences can be explained by the socio-economic disparities between the inhabitants of urban and rural areas. The proportion of primary school graduates is only 18 % for children from poor households, overrepresented in rural areas. It reaches 75 % in medium-high income households.¹²⁸

¹²⁵ UN Refugee Agency (2021) Country Factsheet: Côte d'Ivoire. Available from: <https://reporting.unhcr.org/document/909>

¹²⁶ OCHA (2020) Relief Web. Côte d'Ivoire adopts Africa's first legal process to identify and protect stateless people Available from: <https://reliefweb.int/report/c-te-divoire/c-te-d-ivoire-adopts-africa-s-first-legal-process-identify-and-protect-stateless>

¹²⁷ UNESCO, 2021

¹²⁸ OECD Development Centre (2016) Examen multidimensionnel de la Côte d'Ivoire. Available at : <https://www.oecd-ilibrary.org/sites/9789264251670-8-fr/index.html?itemId=/content/component/9789264251670-8-fr>

People with Disability

Disabled people throughout the Project area are vulnerable in terms of participation in decision-making and access to employment opportunities. Disabled people may also experience varying levels of social exclusion, community marginalisation, and are more vulnerable to change.

Although Cote d'Ivoire has signed (not ratified) the Convention on the Rights of Persons with Disabilities, disabled people are more likely to be discriminated, as disabilities are not commonly displayed and are shamed in society. The government has made efforts to include disabled people into society, with acts such as employing 300 persons with disabilities as civil servants in 2015 and another 158 in 2018¹²⁹.

5.4.3.2 District and Sub-prefecture Level

Abidjan Autonomous District

Located in the south of the country, bordering the Gulf of Guinea, the AAD covers an area of 2,119 km². The megalopolis is surrounded by bodies of water which represent approximately 15 % of its total area. The AAD cosmopolitan population represents more than 50 % of the urban population in Côte d'Ivoire, with the presence of a strong foreign community coming mainly from the countries of the Economic Community of West African States (ECOWAS). Practically all nationalities are present in Abidjan.¹³⁰

As presented in Table 5-28, most of the population is concentrated in the City of Abidjan (5,616,633 people), with a great difference from the population of the rest of the Abidjan District (704,384 people). Anyama sub-prefecture is by far the most populated sub-prefecture and Songon the least. It also should be noted that Anyama has an average household size that is higher than the average (4.8 in Anyama compared to an average of 4.6 in the rest of the district).

Table 5-28 Population in Abidjan Autonomous District, 2021

District	Subprefecture /Commune	Population				Households	
		Male	Female	Total	Sex Ratio ¹³¹	Number	Average size
Abidjan Autonomous District	Abobo	680,422	659,661	1,340,083	103	280,206	4.8
	Adjame	180,917	159,974	340,892	113	72,671	4.7
	Attecoubé	163,989	149,146	313,135	110	67,683	4.6
	Cocody	330,016	362,566	692,583	91	169,438	4.1
	Koumassi	209,098	203,184	412,282	103	97,794	4.2
	Marcory	110,458	103,603	214,061	107	50,945	4.2
	Plateau	3,635	3,551	7,186	102	1,584	4.4
	Port-Bouet	321,726	297,070	618,795	108	146,903	4.2
	Treichville	55,910	50,642	106,552	110	25,046	4.2
	Yopougon	795,443	775,622	1,571,065	103	34,480	4.5
	Total Abidjan City	2,851,614	2,765,020	5,616,633	103	1,261,750	4.5
Anyama	200,517	189,076	389,592	106	80,147	4.8	

¹²⁹ European Asylum Support Office. 2019. Cote d'Ivoire Country Focus. Available at: <https://www.justice.gov/eoir/page/file/1315951/download>

¹³⁰ Observatoire International des Maires. Abidjan, Côte d'Ivoire. Available from: <https://observatoirevivreensemble.org/abidjan>

¹³¹ Male vs Female

District	Subprefecture /Commune	Population				Households	
		Male	Female	Total	Sex Ratio ¹³¹	Number	Average size
	Bingerville	101,397	103,259	204,656	98	46,607	4.4
	Brofodoume	10,623	9,734	20,357	109	5,088	4
	Songon	46,833	42,295	89,778	109	20,544	4.4
	Total rest of the district	359,369	345,014	704,384	104	152,386	4.6
	Total AAD	3,210,983	3,110,034	6,321,017	103	1,414,136	4.5

Source: RGPH, 2021¹³²

Anyama Sub-prefecture

The population of Anyama Sub-prefecture is estimated according to the 2014 RGPH at 148,962 inhabitants. The populations of the Project-related locations are presented in Table 5-29.

Table 5-29 Population in Anyama Sub-Prefecture, 2014

Location	Population		
	Male	Female	Total
Adonkoi I	219	261	480
Akoupé Zeudji	4,622	4,127	8,749
Allokoi	802	715	1,517
Attinguié	3,815	3,479	7,294
Anyama Subprefecture	75,882	73,080	148,962

Source: RGPH 2014¹³³

The word Anyama is a derivative of the word "Gnan", an ethnic group (Attié subgroups) who were the first to occupy present-day Anyama. The city was born from the establishment of the railway in 1905 where, around the Anyama station, a small Dioula community was settled, dominated by the Malinkés of Odiénné and also a small proportion of Malians, Guineans and Burkinabes.

This population is mainly composed of Akyé and Abbey ethnic communities which coexist with other ethnic groups (Bété, Baoulé, Agni, Gouro, Malinké, etc.), and a large population of ECOWAS nationals (Malians, Burkinabés, Guineans, Senegalese, etc.).

Several religions coexist, while Islam remains largely dominant in the city of Anyama, but remains limited in the villages. Evangelical Churches in different denominations and Catholic Churches also have a marked presence in the town and in several villages.

Songon Sub-prefecture

According to the RGPH of 2014, the population of Songon-sub-prefecture was 56,038 inhabitants in 2014. Table 5-30 shows demographic information about the project-relevant villages.

¹³² Institut National de la Statistique (2021) RGPH. Available from : <https://plan.gouv.ci/assets/fichier/RGPH2021-RESULTATS-GLOBAUX-VF.pdf>

¹³³ Institut National de la Statistique (2014) RGPH. Available at: <https://www.ins.ci/documents/rgph/ABIDJAN.pdf>

Table 5-30 Population in Songon Sub-Prefecture, 2014

Location	Population		
	Male	Female	Total
	NA	NA	NA
Abadjin – Kouté (including Anguédédou community)	1,830	1,719	3,549
Palmafrique V2	1,145	1,184	2,329
Agoussi	NA	NA	NA
Songon Sub-prefecture	28,538	27,500	56,038

Source: RGPH 2014¹³⁴

The word "Songon" comes from the deformation of the word "Assoumougon" which means "the field of Assoumou" in Ebré. One of the fundamental structures of Atchan society is the *generations* of inhabitants. This organisation considers both sexes (man and woman) and there are four generations designated under the following names: Injured, Gnando, Dougbo, and Tchagba.

Each generation includes four age groups whose names are Djehou (elders), Dogba (younger), Agban (younger) and Assoukrou (youngest). Relations between generations are institutionalised. This organisation ensures that for the Atchan people, all individuals have equal rights and duties and are responsible for running the affairs of the village and creates a relatively egalitarian and democratic society. Each year, one of the above-mentioned generations organises a feast called Fatchué. This is a 300-year old traditional initiation ceremony that marks the passage from one stage to another in the lives of young girls and boys in the age groups that make up a generation. During this feast, the ruling age class passes the torch to another age group who will in turn take charge of the affairs of the village.

The Songon population is made up of indigenous Ebré and inhabitants of other ethnicities (Baoulés, Gouros, Senoufos, Yacoubas, Akyés, etc.). Inhabitants from other ECOWAS countries are mainly Burkinabés, who constitute the great majority employed in agricultural plantations, in addition to the widespread presence of Malians, Nigerians, and Guineans.

5.4.3.3 Local level and Aol

There is only limited published socioeconomic data broken down to the level of the villages within the Project Aol. Therefore, during the field visits in June and November 2022, the ESIA teams interviewed the local chiefs and other community representatives to obtain their estimates of the requested data. As such, the information presented below is not necessarily statistically accurate, but considered sufficiently robust for the purpose of this ESIA.

Household, Age and Gender Distribution

Table 5-31 below shows the population distribution in the villages in the Aol, the inhabited areas in the Aol are composed by small-medium size villages. There are two (2) big villages in the Aol. The most populated village in the Aol is Akoupé-Zeudji village (Anyama sub-prefecture), with 30,000 inhabitants, followed by Attinguié, with 25,000 inhabitants. The rest of the settlements are small villages, the biggest of them being Allokoi with 10,000 inhabitants and the smallest Palmafrique V2, with 700 inhabitants.

Regarding the average household composition (number of people per household), some data that stand out, as there is a high average number of persons per household, an average of 9 people per household between all the villages; in Allokoi there is an average of 15 people per household, and in Anguédédou (which belongs to Abadjin-Kouté) and Abadjin-Kouté, there are 10 people per household

¹³⁴ Institut National de la Statistique (2014) RGPH. Available at: <https://www.ins.ci/documents/rgph/ABIDJAN.pdf>

in both, according to the information gathered during field visit. Palmafrique V2 and Adonkoi I are the villages with the lowest average number of household composition, with 6 and 5 people per household, respectively.

With respect to the gender ratio, data collected identified that the number of females is often higher than the number of males in the villages in the Aol. For example, in Akoupé-Zeudji there are 18,000 women and 12,000 men; and in Attinguié there are 15,000 women and 10,000 men. This is an exception in Allokoi, where there is 6,500 men and 3,500 women, and Palmafrique V2, with 400 men and 200 women, for example.

Table 5-31 Population Distribution in the Villages in the Aol, 2022

District	Sub-prefecture Commune	Village	Community /Settlement	Population				
				Male	Female	Total	Number of Households	Average Number of people per Households
Abidjan Auto-nomous District	Anyama	Adonkoi I		800	1,200	2,000	400	5
		Akoupé-Zeudji		12,000	18,000	30,000	-	-
			Agoussi		700	800	1,500	100
		Allokoi		6,500	3,500	10,000	700	15
	Attinguié		10,000	15,000	25,000	-	-	
	Songon	Abadjin-Kouté		1,040	960	2,000	350	10
			Anguédedou		1,800	1,200	3,000	350
Palmafrique V2				450	250	700	97	6

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022

In terms of age distribution, as shown in Table 5-32 it was reported that that the population in the Project areas is predominantly young and adults. Overall, around 70 % of the population in the Aol is below 40 years of age. Around 30 % of the population of the villages are children under 15 years old, 40 % people between 16 and 40 years, 20 % from 41 to 64 years, and 10 % of the population in the Aol are people over 65 years old.

The village with the youngest population is Palmafrique V2, with around 55 % of its population being under 15 years, and with no population over 65 years old, and Agoussi, with half of its population being under 15 years, and 50% under 40. On the other hand, Anguédedou and Allokoi have 50 % of their population between 16 and 40 years old.

Table 5-32 Age Distribution in the Villages in the Aol, 2022

District	Sub-prefecture/ Commune	Village	Community /Settlement	Age Group Distribution (%)			
				<15 years	16-40 years	41-64 years	+65 years
Abidjan Autonomous District	Anyama	Adonkoi I		30 %	45 %	20 %	5 %
		Akoupé- Zeudji		30 %	40 %	20 %	10 %
			Agoussi		50 %	32 %	10 %
		Allokoi		15 %	50 %	20 %	15 %
		Attinguié		35 %	40 %	20 %	5 %
				10 %	50 %	25 %	15 %

District	Sub-prefecture/ Commune	Village	Community /Settlement	Age Group Distribution (%)			
				<15 years	16-40 years	41-64 years	+65 years
	Songon	Abadjin-Kouté	Anguédedou	10 %	50 %	25 %	15 %
			Palmafrique V2	55 %	30 %	15 %	0 %

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022¹³⁵

Women Headed-Households in the Aol

From the data collected, Attinguié has the highest percentage of women headed households, with approximately 20 % of total households, followed by Abadjin-Kouté with 15 %. The lowest percentage of women headed households is in Palmafrique V2, where stakeholders reported that there were no female-headed households in the village. This could be since Palmafrique V2 is a workers-village.

Table 5-33 Percentage of Female-Headed Households in the Aol, 2022

District	Sub-prefecture	Village	Community /Settlement	Female-Headed households (% of households)
Abidjan Autonomous District	Anyama	Adonkoi I		0.4 %
		Akoupé- Zeudji		10 %
			Agoussi	5 %
		Allokoï		5 %
	Attinguié		20 %	
	Songon	Abadjin-Kouté		15 %
			Anguédedou	8 %
		Songon -Agban	Palmafrique V2	0 %

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022 ¹³⁶

Women's involvement in economic activities in the Aol is limited. According to the data reported, overall, in the communities, women have fewer options on the labour market than men, which make them more vulnerable to poverty. Women are normally in charge of children and household tasks whereas property management and family economy are tasks for men. In addition, men are mainly in charge of working the land, and women are in charge of selling the products in the local markets, which is very common as there is a large presence of the agricultural sector in the Aol.

Households below poverty line in the Aol

As shown in Table 5-34, an average of 43 % of the families live under the poverty line in the villages of the Aol. The highest percentage of families suffering poverty rate is reported in Agoussi, with 90 % of its population living under the poverty line and Attinguié, with 75 %. Akoupé-Zeudji and Palmafrique V2 have approximately half of their population living under the poverty line. The lowest percentages of

¹³⁵ This information is an approximation provided by village community representatives. This information could not be triangulated with official published sources and therefore may differ from actual conditions.

¹³⁶ This information is an approximation provided by village community representatives and is therefore approximate. This information could not be triangulated with trusted sources and therefore may differ from actual conditions.

people suffering poverty is in Adonkoi I, where it was reported that there are no people living under the poverty line in the village.

Table 5-34 Percentage of Population Living under the Poverty Line in the Aol, 2022

District	Sub-prefecture	Village	Community /Settlement	% of population living under the poverty line
Abidjan Autonomous District	Anyama	Adonkoi I		0 %
		Akoupé- Zeudji		55 %
			Agoussi	90 %
		Allokoi		15 %
	Attinguié		75 %	
	Songon	Abadjin-Kouté		30 %
			Anguédédou	30 %
Palmafrique V2			45 %	

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022¹³⁷

According to the field survey, there are barriers accessing health care due to lack of financial means for the population living under the poverty line in Abadjin-Kouté.

Religion and Ethnicity

Approximately 40 % of the population in the Aol are Akyé, and 30 % other ethnic groups as Ebríé, Abbey, Beté, Baoulé, Agni, Gouro, Malinké, Senoufo, Yacoubas, Atchan, Kwa. About 30 % of the population in the villages in the Aol are migrants from ECOWAS¹³⁸ countries, this is 8 % higher than national rate. Notable also, that Agoussi is primarily populated (80 %, almost four times higher than national rate) by immigrants from ECOWAS countries, and the percentage of immigrants is also high in Anguédédou (60 %) and Attinguié (40 %). About 55 % of Palmafrique's population are Burkinabés.

As shown in Table 5-35 below, the main religions in the Aol are Protestantism (approximately 26 % overall)catholic (22 %) Muslim (24 %) and evangelic (19 %), with 9 % from other religions (mostly harrists). In Adonkoi I, the vast majority (75 %) are protestant, and in Attinguié and Anguédédou, 40 % of their population are catholic. Regarding Muslim population, the village that stands out is Agoussi, with 90% muslims. There are also 30 % of Muslim population in Anguédédou, and 30 % of Muslim in Abadjin-Kouté. In Palmafrique V2, 45 % of its population is evangelic.

Table 5-35 Religion in the Villages of the Aol, 2022

District	Sub-prefecture	Village	Community /Settlement	Religion				
				Catholic	Muslim	Evangelic Church	Protestant	Other
Abidjan Auto-	Anyama	Adonkoi I			10 %	15 %	75 %	
				20 %	5 %		45 %	30 %

¹³⁷ This information is an approximation provided by village community representatives and is therefore approximate. This information could not be triangulated with trusted sources and therefore may differ from actual conditions.

¹³⁸ The 15 members of the Economic Community of West African States (ECOWAS) are Benin, Burkina Faso, Cabo Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo.

District	Sub-prefecture	Village	Community /Settlement	Religion				
				Catholic	Muslim	Evangelic Church	Protestant	Other
nomous District	Akoupé-Zeudji	Agoussi		3 %	90 %	7 %		
		Allokoi		30 %	10 %	15 %	45 %	
		Attinguié		40 %	10 %	10 %	20 %	20 %
	Songon	Abadjin-Kouté		20 %	30 %	30 %		20 %
		Anguédédou		40 %	30 %	30 %		
		Palmafrique V2		25 %	10 %	45 %	20 %	

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022¹³⁹

In terms of religious and sacred sites in the Project AoI, all the villages have mosques and/or churches except for Agoussi, where there are no places of worship. There are approximately 57 churches, 13 mosques and three cemeteries in the Project AoI. Most of the churches are in Attinguié (27) and Anguédédou (12). There are five mosques in Attinguié. There are some villages that do not have cemeteries as Adonkoi I, Allokoi, Anguédédou Agoussi and Palmafrique V2. In some cases, as respondents explained, it is because the burials are done in other places; for example, in Adonkoi I, the burials are done in the village of origin Attinguié; in Agoussi, the burials are done in Akoupé-Zeudji, and in Palmafrique, the burials take place in the old V1 village where the factory is now located.

Table 5-36 Religious and Sacred Sites in the AoI, 2022

District	Sub-prefecture	Village	Community /Settlement	Sacred Places		
				Churches	Mosques	Cemeteries
Abidjan Autonomous District	Anyama	Adonkoi I		1	1	0
		Akoupé- Zeudji		4	2	1
			Agoussi		0	0
		Allokoi		7	1	0
		Attinguié		27	5	1
	Songon	Abadjin-Kouté		3	0	1
		Anguédédou		12	3	0
		Palmafrique V2		3	1	0

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022¹³⁹

No religious places of culture, no known archaeological sites and no sacred forests in any of the villages were identified by respondents in the AoI. In addition, respondents were asked about the history of their village. Most of the villages were created in search of cultivable land, water, or fertile land. Photos from various religious sites in the AoI can be found in Appendix C.

¹³⁹ This information is an approximation provided by village community representatives and is therefore approximate. This information could not be triangulated with trusted sources and therefore may differ from actual conditions.

People with Disability in the Aol

According to the data collected in the villages consulted, there is a low percentage of population with disabilities, with an overall average of 1.5 % of the population. Akoupé-Zeudji, reported the highest percentage of disabled people, 5 % of its population. Palmafrique V2 and Attinguié reported no people with disabilities and other villages as Abadjin Kouté, do not have information related to disabilities.

5.4.4 Land Ownership and Land Use

5.4.4.1 Land Ownership and Land Acquisition

The Project site is owned by the Government of Côte d'Ivoire and leased to ARISE for the Project.

An agreement for progressive land acquisition of and compensation for the 940 hectares parcel located at "PK24" of the northern highway was signed in 2015 by the Government, through the representatives of the Minister of Construction, Housing and Urbanism, the Minister of Industry and Mines and the Minister of State, Minister of Interior and Security, and the chiefs of the three (3) affected villages (Akoupé-Zeudji, Allokoi and Attinguié) recognised as the legitimate representatives of land owners. The agreement states the land acquisition process was carried out in line with national standards. The land acquisition and compensation agreement are presented in Appendix D and provisions for several successive compensation payments related to the progressive occupation of the land by the Government from 2016 to 2019. The agreement defines the compensation rate for land (2,500 CFA francs per square meter) applicable to all compensation payments. The total compensation amount is 23,500,000,000 FCFA. The agreement also includes a provision for compensation of crops aligned with national standards in due course. The agreement does not present the eligibility criteria, affected assets and Project Affected Peoples (PAPs) nor the methodology used to come to this agreement. ERM has received two copies of the payments certificates, but not the full set of compensation agreements confirming the payments were made according to the agreement.

Considering the above, the extent of displacement impacts is unclear (how many PAPs were identified through census and considered eligible to compensation, affected assets and activities, nature of displacement – physical vs. economic, etc.) as well as the compensation that was paid (type, rates and amounts). ERM assumes that no livelihood restoration support and in-kind compensation was given.

Although most of the people interviewed during the site visit confirmed having received compensation from *AGEDI*, for their losses, some individuals reported not having been compensated for their loss of land.

5.4.4.2 Land Use

National Level

Côte d'Ivoire has a total of 322,463 km², of which 318,003 km² (98.6 %) are land and 4,460 km² (1.4 %) are water bodies.¹⁴⁰

According to Land Links Organisation, Côte d'Ivoire is divided between two large agro-ecological zones: the northern savannah zone, where food crops, cotton and livestock predominate; and the fertile forest zone of the south, where most of the country's cash crops, including cocoa and coffee, are produced. Nearly 64% of land in Côte d'Ivoire is used for agricultural purposes, and 68 % of the Labour force works in agriculture.¹⁴¹

¹⁴⁰ CIA. World Fact book. Country: Côte d'Ivoire. Available from: <https://www.cia.gov/the-world-factbook/countries/cote-divoire/>

¹⁴¹ Land Links. Country profile: Côte d'Ivoire. Available from: <https://land-links.org/country-profile/cote-divoire/>

Table 5-37 shows the percentage shares of total land area for three different types of land use: agricultural land, forest, and other. Agricultural land is further divided into arable land, permanent crops and permanent pastures and meadows. Land classified as other includes built-up areas, roads and other transportation elements, barren land, or wasteland.

Table 5-37 Type of Land Use in Côte d'Ivoire, 2018

Land Use		% of land
Agricultural Land	Arable Land	9.1
	Permanent Crops	14.2
	Permanent pasture and meadows	41.5
	Total of Agricultural use	64.8
Forest		32.7
Other:		2.5

Source: CIA, 2018

Local Level and Aol

The land use within the Aol is mostly represented by grassland and wood plantations (Figure 5-5) and there is a big plantation area in the south-west of the Aol. At the same time most of the land within the village limits is used for housing constructions and agricultural and animal husbandry purposes. The housing state project and the construction of other companies in the area are also one of the common uses of land in the Aol.

According to the information reported by communities interviewed, the scarcity of land available is a major obstacle to accessing cultivable land. In some cases, communities reported this lack of cultivable land to be a consequence of the establishment of a housing estate development project in the village; in Akoupé-Zeudji and Attinguié, communities reported the lack of available land because of the selling to third parties, leading to decrease in agriculture areas. In Palmafrique communities interviewed identified the Industrial Zone as being one of their main reasons for decrease in land availability.

Land use information presented in this section is based on the Sentinel satellite imagery (Copernicus Sentinel data), dated January 2020. Table 5-38 shows the proportion of the different types of land use in the Aol in 2020. Most of the land is forest or tree plantation (35.5 % of the land in the Aol) and grassland/shrubland (31.3 %), followed by agricultural use (22 %). There are approximately 5.9 % of build-up areas. There is also 2.75 % of unpaved road / bare ground and 2.5 % of paved roads approximately.

Table 5-38 Percentage of Land Use in the AoI

Land Use	%
Agricultural land	22
Bare ground / unpaved road	2.75
Built-up area	5.9
Forest / Tree plantation	35.5
Grassland / shrubland / young crops	31.3
Paved road	2.5
Water body	0

Figure 5-5 shows the proportion of land intended for the different uses. The land in the AoI is mostly forest and tree plantation, grassland / shrubland and agricultural land. The surrounding areas of the Project are mostly built-up areas.

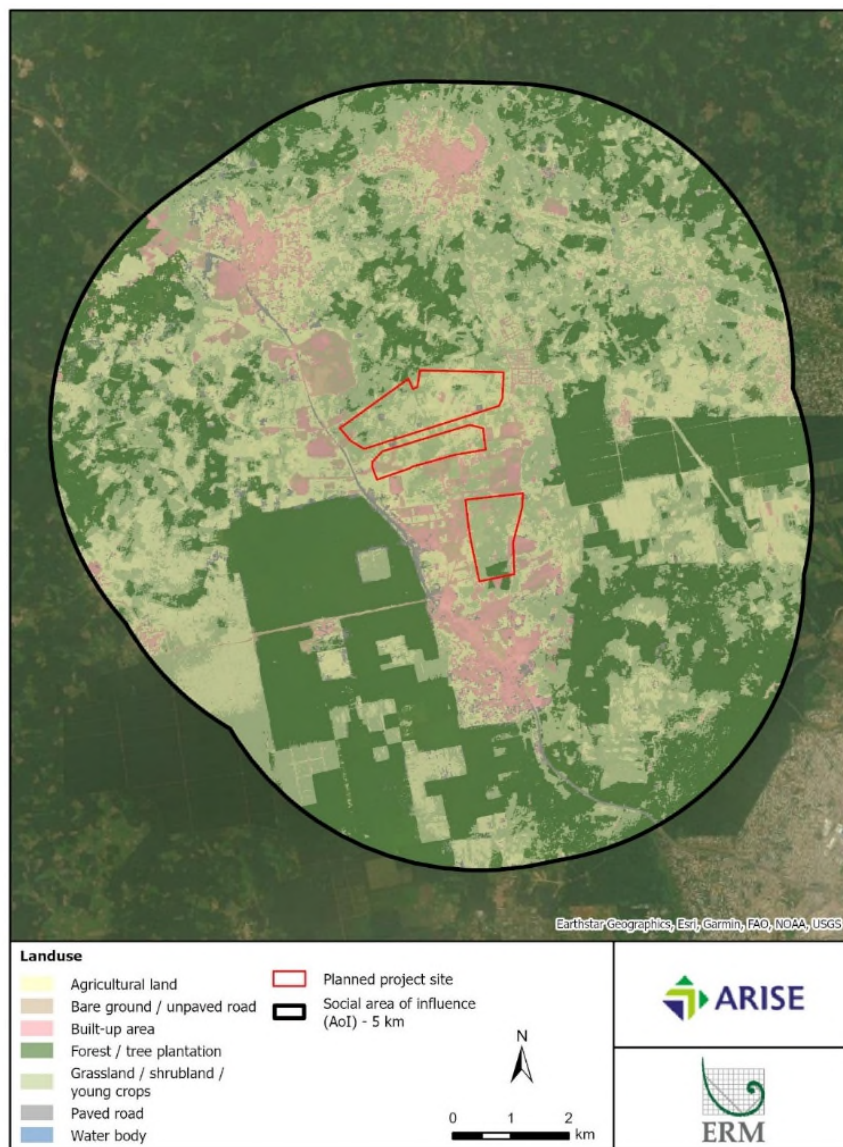


Figure 5-42 Land Use in the AoI

Project Footprint

Figure 5-43 shows the proportion of land in the Project footprint intended for the different uses. The land in the Project footprint is mostly grassland / shrubland or young crops and agricultural land. As can be seen in the figure, these uses vary from one plot to another. For example, the plot in the north is mostly composed by agricultural land, and some proportion of grassland/shrubland, and the land uses of the plot in the south are reversed, having more proportion of grassland / shrubland than agricultural land. There is a significant forest or tree plantation in the south of this plot. The proportion of each of the land uses is presented in Table 5-39 below.

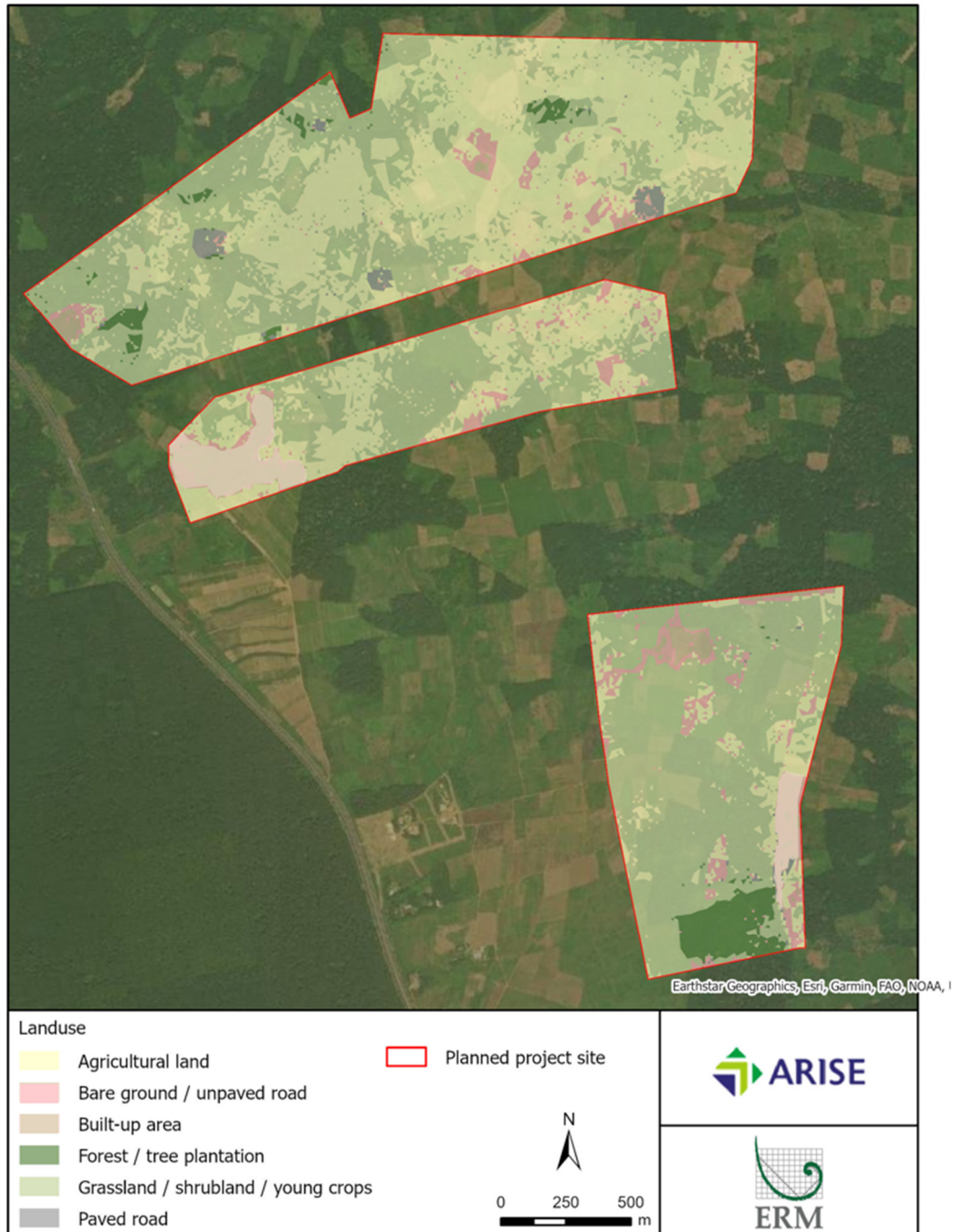


Figure 5-43 Land Use in the Project Footprint

Table 5-39 shows the proportion of the different types of land use in the Project footprint in 2020. Most of the land is grassland/shrubland/young crops (48 % of all the land in the Project footprint) followed by agricultural use (approximately 40 % of land). There are approximately 2.7 % of build-up areas. There is also 2.85 % of forest / tree plantation, 5.6 % of unpaved road / bare ground and 1 % of paved roads approximately.

Table 5-39 Percentage of Land Use in the Project Footprint

Land Use	%
Agricultural land	39.9
Built-up area	2.7
Bare ground / unpaved road	5.6
Forest / tree plantation	2.85
Grassland / shrubland / young crops	47.92
Paved road	0.94

In alignment with the land use in 2020 presented in Figure 5-43, the site of the Project is still under agricultural use by communities (as per November of 2022), consisting of annual and pluriennial crops such as cassava, rubber, corn, banana and palm trees, etc., and most of the land is grassland/shrubland. No physical structures were identified on the Project footprint end 2022, except for truck parking, warehouse near the truck parking and huts or cabins built of wood by farmers (i.e., those who cultivates the land and plantations that are currently located within the Project footprint) and some wooden structures in the Project footprint used by employees of neighbouring companies and factories as shelter from the sun to eat and rest. Women from surrounding villages also prepare food and sell it to the workers in these wood cabins (Figure 5-44)



Source : ENVAL, 2022

Figure 5-44 Wood Shelter for Workers of the Lands and Factories surrounding the Project Footprint

Within PK24 (excluding 429 ha of the Project) some factories enterprises were already under operation, some were still under construction. Overall, during the site visit end 2022, it was noted the area within PK24 is already highly disrupted with industrial constructions and (with few exceptions) only the plots allocated to the Project were still free from any construction activities.

The Project site is under agricultural use, and small structures in wood of traditional nature and networks of footpaths suggest that the area is used by local communities for farming or other activities as collection of Non-timber Forest Products (NTFP) for construction of structures or cooking and heating (this was specifically confirmed in the village of Agoussi, as communities reported to be collecting wood in the Project area).

Furthermore, during the site visit it was noted that the Project neighbouring industries within the PK24 have taken advantage of undeveloped Project areas. For example, several soil deposits on the direct Project footprint were observed. ARISE is aware of those activities and mentioned that surplus of soil was deposited by other enterprises from PK24 during their construction phases. At the same time, other enterprises remove some soil from the Project area for their construction needs, few queries were also observed.

Source : ENVAL, 2022

Figure 5-45 presents various agricultural activities in the Project footprint, a woman working the land in a cassava field (left) and a corn field (right).



Woman working the land in a cassava field

Corn field

Source : ENVAL, 2022

Figure 5-45 Agricultural Activities and Land in the Project Footprint

5.4.5 Economy and Employment

5.4.5.1 National Level

The first economic developments in the country started on the coast under European influence. As a result, important activity centres for Ivorian economy, such as major cities, ports, airports, industries, large-scale plantations, traditional and semi-industrial fisheries, and other socio-economic infrastructures in the country are most of them located in coastal areas.

According to the Economic and Social Council, Côte d'Ivoire has experienced notable economic growth — Gross Domestic Product (GDP) growth was 8.3 % between 2012 and 2019, on average —

and has achieved positive results in poverty reduction and public investment through the Social Programme of the Government 2019–2020 and its National Development Plan (NDP) 2016–2020.¹⁴²

The country has one of the fastest growing economies in the continent, mainly based on the export of cacao and cashews, and a GDP of USD 58.5 billion as of 2019. Between the years 2015 to 2019, Cote d'Ivoire's Foreign Direct Investment (FDI) has gone from USD 494 million to USD 1 billion¹⁴³. In addition, the national currency, *Communauté Financière Africaine (CFA)* franc, has been tied to the Euro since 2002, preventing it to highly fluctuate.

This being said, the country remains highly unequal, as can be seen in the Sustainable Development Report, where they rank 131st out of 165 and have an overall score of 57.6 on the achievement of the SDGs¹⁴⁴. Table 5-40 shows the main economic performance data of Côte d'Ivoire in 2018.

Table 5-40 Economy Performance Data in Côte d'Ivoire, 2018

Economic Indicators	Performance
GDP Growth (annual %)	4.4 %
GDP per capita growth (annual %)	4.7 %
GNI per capita (current USD)	1,610
Employment to population ratio, 15+, total % (modelled ILO estimate)	55.9 %
Vulnerable employment, total (% of total employment) (modelled ILO estimate)	72.4 %
Vulnerable employment, female (% of total employment) (modelled ILO estimate)	84.6%
Vulnerable employment, male (% of total employment) (modelled ILO estimate)	63.8%

Source: The World Bank, 2019

Information on child labour according to the US Department of Labour is presented in Table 5-41 for 2020. According to this, 25.6 % of children aged 5 to 14 were working in Côte d'Ivoire, 70.1 % attending school and 21.8 % were combining both. Thus, child labour remains a challenge in Côte d'Ivoire, as overall about one out of four children between 5 and 14 years is working and not in school. Children in Côte d'Ivoire are subjected to the worst forms of child labour, including in the harvesting of cocoa and coffee, sometimes as a result of human trafficking. Although the government has made efforts in recent years to combat child labour, it does not have a mechanism to assess civil penalties for labour law violations due to the lack of financial resources and personnel¹⁴⁵.

Table 5-41 Child Labour Rate, 2020, Côte d'Ivoire

Children	Age	%
Working (%)	5 to 14	25.6
Attending School (%)	5 to 14	70.1
Combining Work and School (%)	7 to 14	21.8
Primary completion rate (%)		78.8

Source: US Department of Labour, 2020

¹⁴² UN Economic and Social Council (2020) Country programme document, Côte d'Ivoire. Available from: https://www.unicef.org/executiveboard/media/2241/file/2021-PL12-C%C3%B4te_d%E2%80%99Ivoire_draft_CPD-EN.pdf

¹⁴³ World Bank. 2022. Cote d'Ivoire. Available at: <https://data.worldbank.org/country/cote-divoire>

¹⁴⁴ Sustainable Development Report (2020). Country Dashboard: Côte d'Ivoire. Available from:

<https://dashboards.sdgindex.org/profiles/cote-d-ivoire>

¹⁴⁵ U.S. Department of Labour. 2020. Findings on the Worst Forms of Child Labour - Côte d'Ivoire. Available from: <https://www.dol.gov/agencies/ilab/resources/reports/child-labor/cote-divoire>

Agriculture

A report from the Food and Agriculture Organization (FAO)¹⁴⁶ states that Côte d'Ivoire is largely dependent on agriculture, which employs 48 % of the labour force. Agriculture composition in terms of GDP represented 20 % of the country's GDP in 2020, and accounts for about 80 % of total export earnings.

Côte d'Ivoire is an important cocoa producer, with an estimated of 40 % (2,150,000 ton) of the world's total production in 2021¹⁴⁷. Cocoa beans alone account for 37 % of total export earnings and 10 % of total exports volume. Côte d'Ivoire is also among the world's largest producers of kola nuts, cashews, and yams. Other major exports include rubber (11 %), cocoa butter (6 %), coconut (3.8 %), bananas (3.4 %) and coffee (1.1 %).¹⁴⁸

According to the FAO report¹⁴⁹, the agriculture sector in Côte d'Ivoire is confronted with several challenges, including high deforestation rates, soil erosion, land tenure insecurity, rising average temperatures, falling average precipitation, and frequent extreme climate events.

Most agricultural production is subsistence-based, and smallholder farmers rely on rain, manual family labour, traditional knowledge and practices, and agricultural expansion to maintain productivity. Smallholders have very limited access to the services and inputs necessary to innovate, including robust extension services, high quality crop inputs, information services (e.g., weather, pests, markets), credit and insurance services, mechanisation, good postharvest processing, robust transportation infrastructure, and stable markets. Urbanisation has drastically reduced the number of youth and skilled workers in rural areas.¹⁵⁰

Tourism

Based on the World Travel & Tourism Council, the direct contribution of tourism to GDP was 8.5 % of total GDP in 2019 and 4.8 % in 2020 (which meant a total decrease of -44 %, presumably due to the Corona pandemic). This primarily reflects the economic activity generated by industries such as hotels, travel agencies, airlines and other passenger transportation services, and the activities of the restaurant and leisure industries directly supported by tourists¹⁵¹.

Abidjan remains the heart of tourist activities and offers a wide range of accommodation. The city has more communication infrastructure than many competing cities, which has boosted its business tourism offering. The city has also capitalised on its environmental benefits, promoting its beaches, views and lagoons. The development of hotel businesses has generated several informal activities such as the sale of art objects and tourist items (clothes, hats, etc.).

Fishing

Côte d'Ivoire has 550 km of coastline, offering employment to more than 400,000 people in the fisheries sector and contributing to poverty alleviation¹⁵².

¹⁴⁶ FAO (2020) Digital Agriculture Profile : Côte d'Ivoire. Available from: <https://www.fao.org/3/cb2505en/cb2505en.pdf>

¹⁴⁷ PHYS Org (2021) Boom times for organic cocoa in Côte d'Ivoire. Available from: <https://phys.org/news/2021-05-boom-cocoa-ivory-coast.html>

¹⁴⁸ FAO (2020) Digital Agriculture Profile : Côte d'Ivoire. Available from: <https://www.fao.org/3/cb2505en/cb2505en.pdf>

¹⁴⁹ FAO (2020) Digital Agriculture Profile : Côte d'Ivoire. Available from: <https://www.fao.org/3/cb2505en/cb2505en.pdf>

¹⁵⁰ World Bank (2017) Cote d'Ivoire Land Policy Improvement and Implementation Project
Available from: <https://documents1.worldbank.org/curated/en/823571509717469081/pdf/ITM00184-P157206-11-03-2017-1509717464849.pdf>

¹⁵¹ World Travel & Tourism Council (2021) Economic Impact 2021. Côte d'Ivoire. Available from: <https://wtcc.org/Portals/0/Documents/Reports/2021/Global%20Economic%20Impact%20and%20Trends%202021.pdf>

¹⁵² FAO (2021) The role of small-scale fisheries in Côte d'Ivoire. Available from: <https://www.fao.org/in-action/coastal-fisheries-initiative/news/detail-es/es/c/1415254/>

Fish have become scarce in the Ébrié Lagoon. The 100 km long Lagoon, linked to the sea by the Vridi Canal, was once considered a symbol of the country's beauty, but has suffered from years of extensive pollution, untreated sewage and trash/litter, endangering the four million inhabitants that live along its coastline¹⁵³. Nearly 60 % of the industries in the country are concentrated around the Lagoon area, contributing in large part to its degradation¹⁵⁴.

Oil and Gas

The oil and gas industry in Côte d'Ivoire is still in its early stages, with most of the exploration and production activity taking place offshore. The country's main oil and gas reserves are located in the Gulf of Guinea, with the majority of production coming from the Espoir field. Despite its small size, the oil and gas industry in Côte d'Ivoire is important for the country's economy, as it accounts for a significant portion of government revenue and foreign exchange earnings. However, the country still relies heavily on agriculture and services sector as the main contributors to its GDP.¹⁵⁵

Mining

Mining in Côte d'Ivoire is mainly about gold production. Several mining licenses have been granted to mining companies, including Caystar Corporation (a subsidiary of Gold Star Resources), Cluff Gold (Angovia Mine) and Rangold.

Other industries

One of the relevant industrial sectors is textiles. Côte d'Ivoire has seen its production recently increase, moving from 4th to 3rd place in the ranking of African cotton producers. Official figures show an 11.2 % increase in seed cotton production between 2017-2019. This is due to the increase of the cultivable areas, which went from 327,204 ha to 392,131 ha during the same period.¹⁵⁶

Another important sector is the wood industry. Most industrial production of timber is destined for the export market. The EU is a major market for Ivorian wood processing exports, accounting for almost 38% of all wood exports from the country in 2018.¹⁵⁷

5.4.5.2 District and Subprefecture Level

Anyama Sub-Prefecture

Anyama is located in a forest area. It benefits from many economic infrastructures, such as the markets of its villages, the new bus station in the City of Anyama and its shops. Today, private companies such as Unicafe, Sicafe and La Scierie have settled in the sub-prefecture. The current socio-cultural facilities consist of a cultural centre and a women's home. In some villages of Anyama there are also youth and recreational centres.¹⁵⁸

Agriculture

Anyama is West Africa's main cola nut collection centre. The cultivation of agricultural raw materials such as: coffee, cocoa, oil palm and rubber were also noted (see the photolog in Appendix C). In

¹⁵³ Earth Journalism Network (2014) Who will clean up Abidjan's Ebrie Lagoon? Available from: <https://earthjournalism.net/stories/who-will-clean-up-abidjans-ebrie-lagoon>

¹⁵⁴ Earth Journalism Network (2014) Who will clean up Abidjan's Ebrie Lagoon? Available from: <https://earthjournalism.net/stories/who-will-clean-up-abidjans-ebrie-lagoon>

¹⁵⁵ [Côte d'Ivoire targets traditional and renewable energy sources to boost capacity and support rural electrification - Africa 2019 - Oxford Business Group](#)

¹⁵⁶ Fashionomics Africa (2021) Textile Industry in Côte d'Ivoire. Available from: https://fashionomicsafrica.org/en/blog/post/891_the-fashion-and-textile-industry-a-promising-sector-for-cote-d-ivoire

¹⁵⁷ EU Flegt Facility (2021) Côte d'Ivoire. Available from: <https://www.euflegt.efi.int/cote-ivoire>

¹⁵⁸ Abidjan District. Commune d'Anyama. Available from: <http://www.abidjan.district.ci/index2.php?page=com&num=3>

addition to these perennial crops, there are tropical flower, food, and vegetable crops. Animal husbandry is a marginal activity in Anyama sub-prefecture. The breeding practiced in this municipality is essentially traditional and dominated by cattle and pig breeding on the outskirts of the municipality.

Industry and Commerce

Anyama has several small commercial establishments (KING CASH, CDCI, BONPRIX, etc.). Next to these shopping centres, there are “small businesses” represented by cabin managers, food vendors, etc. Anyama sub-prefecture also has one (1) large market and five (5) small markets. A project to build a slaughterhouse is under study. There are also various types of craft activities, including sewing, hairdressing, shoe repair, laundry, carpentry, mechanics, etc. These activities are spread over the entire municipal territory. The industrial sector is represented by private companies such as UNICAFE, SICAFE, LA SCIERIE, etc. Banking activity is also developed in Anyama. Also present are several banking establishments (COOPEC, SGBCI, etc.) and microfinances (ATLANTIC MICROFINANCES).

Tourism

Anyama does not have a particular tourist site. In addition, as in Akan country, the yam festival is celebrated in Anyama. The generation holiday of the “Gnan” people is also celebrated by the indigenous people. The current socio-cultural facilities of Anyama commune consist of a cultural centre and a women's centre.

Songon Sub-prefecture

Agriculture

Songon is an area of perennial crops (oil palm and rubber), food crops (plantain, cassava), and market gardening (okra, eggplant, tomato, pepper, cabbage, cucumber, lettuce). Agriculture is done in the traditional way by the Atchan peoples and especially by the populations of the sub-region (Beninese, Ghanaian, Togolese, etc.). The fruit of all these cultivations and livelihood activities is intended either for direct consumption or for sale on the local market. There are also many poultry farms and extensive banana plantations, mainly for export.

Industry and Commerce

One of Songon's economic strengths is its proximity to Abidjan. Most of the neighbourhoods (villages) have a market (wholesale fruit and vegetable market), the most popular of which is in Songon-Agban. Small business is represented by the sale of attiéké, food, firewood, and cosmetics. The sub-prefecture has the main banking and microfinance services (BNI, CECP, CPZ), restaurants, bakeries, service stations.

The industrial/processing sector is dominated by the processing of agricultural raw materials such as oil palm and rubber. We also note a strong establishment of agricultural commodity processing business operations, including: Tropical Rubber Côte D'Ivoire, SCB, PALMAFRIQUE, SIMPO, DOMAK, DAVAL, SODIPEX, CADERAK, the Sawmill of Songon M'brathé, CDBCI, Terre Noble (plantation company poyo banana). An attiéké¹⁵⁹ and a canned tomato production plant have recently been set up in Songon Kassemblé. Resource extraction activity is represented by several Lagoon sand dredging companies.

¹⁵⁹ Attiéké is a staple food of the Côte d'Ivoire consisting of grated and fermented cassava, eaten with most main meals.

Tourism

The Songon sub-prefecture does not benefit from any particular tourist sites. There are, however, some entertainment and recreation spaces and several hotels (Songon Park Hotel, N'nili Beach, etc.) capable of hosting a range of customers and travellers.

5.4.5.3 Local Level and Aol

The Project area has been identified as an industrial area (i.e., PK24 zone), and there are several companies and buildings in the nearby areas dedicated to different industries (see section 4.2.2). The stage of construction differs from one to another, some of them are already operating and other are starting the earthworks and construction activities. The type of industries and companies in the nearby area (i.e., PK24 zone) and Aol differs widely. There are various concrete factories as *Société Ciment Côte d'Ivoire* (SCCI), a Chinese concrete company named Guepard, and another concrete company named Prestige. There are also packaging companies as SIPA, a shoe manufacturing company, a company producing cosmetics products and other products called MIPA, companies of steel, textile companies and companies for the transformation of products such as flour and palm oil.

Construction companies active in the area include *Générale de Construction en Côte d'Ivoire* (GCCI) and Soroubat-CI (that oversee the construction of the Y Motorway dividing the Phase 1 Zone 2 and Phase 2 of the Project).

There is a high number of workforce seen in the Project nearby areas; most people who work in these companies and factories are local people from the surrounding villages.

The economic activities in the villages in the Aol can be characterised by a high presence of the agricultural sector, which is present in most of the villages within the Aol. There are villages where agriculture shares space with the public sector or local commerce and businesses. Furthermore, in Allokoi, the economic sector identified was real estate and land. Table 5-42 below illustrates the main economic sectors in the Aol based on the information collected during the field work.

Table 5-42 Economic Activities in the Aol, 2022

District	Sub-prefecture	Village	Community /Settlement	Main Economic Sector
Abidjan Autonomous District	Anyama	Adonkoi I		<ul style="list-style-type: none"> ■ Agriculture ■ Animal Husbandry ■ Public Sector ■ Services
		Akoupé- Zeudji		<ul style="list-style-type: none"> ■ Agriculture: 50 % of existing land ■ Animal Husbandry ■ Commerce ■ Local businesses and crafts
			Agoussi	
		Allokoi		<ul style="list-style-type: none"> ■ Agriculture ■ Animal Husbandry ■ Real Estate and Land Sector.
		Attinguié		<ul style="list-style-type: none"> ■ Agriculture ■ Animal Husbandry ■ Local businesses
	Songon	Abadjin-Kouté		<ul style="list-style-type: none"> ■ Agriculture ■ Animal Husbandry ■ Commerce ■ Local businesses and crafts

District	Sub-prefecture	Village	Community /Settlement	Main Economic Sector
			Anguédédou	<ul style="list-style-type: none"> ■ Agriculture belonging to the Tropical Rubber Côte D'Ivoire (TRCI) rubber plant ■ Animal Husbandry ■ Public Sector (Education) ■ Local businesses
			Palmafrique V2	<ul style="list-style-type: none"> ■ Agriculture, Palmafrique employees (private sector) ■ Animal Husbandry

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022¹⁶⁰

Unemployment and dispossession of cultivable land and access to land were named during the field survey conducted in June 2022 as some of the key economic challenges faced by the community in the villages in the Aol. Low employability of the youth was identified as a major challenge in all the villages (except for Palmafrique V2, where all the inhabitants are Palmafrique's employees), as well as the lack of economic bases. Some of the reasons reported are related to the lack of hiring from companies surrounding the villages.

Moreover, although there was uncertainty around the proportion of qualified and unqualified workforce in the villages, all the villages reported to have both skilled and unskilled workforce available. Most settlements reported to have more percentage of unskilled labour force than skilled available; for example, in Anguédédou and Abadjin-Kouté, 75 % of its labour force is unskilled, and 25 % skilled. This is an exception in Agoussi, where 55% of the workforce is skilled, people with professions, careers and university education, over a 45% of unskilled. The lack of skilled workforce was identified as a challenge in Akoupé-Zeudji.

Therefore, the access to employment has been reported as very low in the Aol. Most of the villages explained that companies in the area are not hiring, even though promises of employability were made with the establishment of the PK24 industrial zone. The lack of compliance with the commitments following the promises of employability of the structures was reported as a major concern in several villages in the Aol.

The development of the PK24 was seen as a major opportunity for economic growth and youth employability in several villages in the Aol; this was reported by Akoupé-Zeudji, Allokoi, Agoussi and Attinguié villages. The construction of roads to access the village was also reported as a major development opportunity in Adonkoi I and Palmafrique V2. Other development opportunities identified in the Aol are the construction of a school and a health centre (in Anguédédou and Agoussi) and a maternity hospital (in Abadjin-Kouté), the electrification of the village (in Palmafrique V2), or the implementation of a SODECI's Water Treatment Centre and the housing development project in Adonkoi I.

The needs and expectations from stakeholders have been reported during consultations carried out in June 2022 and November 2022 and are presented in the preliminary overview of concerns and expectations from stakeholders, in section 11.3.2.5 and section 11.3.3.5 of this Report.

The main livelihood activities observed in the Aol are:

- Agriculture and animal husbandry;
- Small trade and local businesses;
- Public sector (minority); and

¹⁶⁰ This information is an approximation provided by village community representatives and is therefore approximate. This information could not be triangulated with trusted sources and therefore may differ from actual conditions.

■ Services (minority).

The agricultural activities that are present in the Project Aol are of different types, from smallholder agriculture to agro-industries and industries for the transformation of products. Figure 5-46 shows some cassava plants in the village of Adonkoi I. In Anguédédou, all the agricultural sector and economic activities belong to the TRCI rubber plant.

In the agriculture sector, the proportion of women involved is significantly lower than men (almost the double of men than women); This case is repeated in all villages along the Aol, where the number of men in charge of the activity is twice that of women. This is an exception in Agoussi, where 50% of the people in charge of the agriculture are women. Regarding animal husbandry, women do not take part in this activity in all of the cases and all the population involved are men, excepting for Anguédédou and Abadjin-Kouté, where there is a 10 % of women in charge of animal husbandry.

In Palmafrique V2, for example, is the other way around, with more women are in charge of the community's agriculture, as the men work in commercial agriculture for Palmafrique Company. In this case, 60 % of the people in charge of agriculture are women.



Figure 5-46 Cassava Plants in the Village of Adonkoi I, 2022

As of the agricultural activities in the Aol, the most common plantation harvested in the Aol is palm oil, mainly in Akoupé-Zeudji and Palmafrique V2 (as Palmafrique is a palm oil producer company). Other crops are grown in the Aol, as coffee, cassava, okra, chili, rubber, corn and eggplants. In Agoussi they also plant trees to collect wood. In Anguédédou, Agoussi and Abadjin-Kouté, the population also harvest medicinal plants. In these villages, the medicinal plants harvested are the Isope, Kinkelibe, Djeka, Nyme and Teck leaves. Photos from the site visit observations of further agricultural fields can be found in Appendix C.

Regarding the presence of markets in the Aol, as reported during the field survey, only Adonkoi I, Akoupé-Zeudji and Abadjin-Kouté have one (1) market in each.

In the Adonkoi I market, tomatoes, eggplants and chillies are sold, and in the Abadjin-Kouté market fish, meat, aubergine, okra, chilli, cassava and other products can be found. More generically Akoupé-Zeudji market also sell vegetables, fish, and meat. All the local agricultural products are sold locally; farmers normally sell directly their products in the market, but in the case of Abadjin-Kouté, they also rely in intermediaries.

Local agricultural products in Akoupé-Zeudji are also sold in the streets and at the factories. In most of the villages, men are in charge of working on the land and of the agricultural production activities, and women are in charge of selling the products in the local market in the village. This is an exception

in Akoupé-Zeudji and Attinguié, where men are in charge of both tasks; agricultural production and of selling the products locally. Figure 5-47 below shows a market in the village of Adonkoi I.

The lack of access to cultivable land has affected the local production and there are several villages that reported the absence of availability local products, as Adonkoi I and Allokoï, as the population has no more land to cultivate. Stakeholders reported that this is due to the implementation of the Project.



Source: ENVAL 2022

Figure 5-47 Market and Food Store in Adonkoi I

Regarding animal husbandry activities, the chicken is the most common animal in livestock farming activities in the Aol, as it has been reported to be present in all the villages in the Aol. Goats, pigs, and cows' cattle are also present and common in the Aol.

Commerce and local businesses are also very common in practically all the Aol villages, as Adonkoi I, Akoupé-Zeudji, Attinguié, Palmafrigue and Abadjin Kouté. The most common types of local businesses are general stores, cosmetic and clothing stores and hair salons and boutiques etc. Poultry trade was reported as a very common type of business in Palmafrigue. The TRCI rubber plant is located in Anguédedou.

The main challenges for local business as reported during the field survey are the lack of economic bases and limitations on hiring employees (mainly youth) and the low demand due to lack of financial means of the population to make procurements, reported in most of the villages in the Aol.

In all the cases, mainly women are involved in local business activity. In Adonkoi I in Akoupé-Zeudji and Anguédedou, all the population in charge of local businesses are women, and in the rest of the cases, there are higher proportion of women who take part in this activity than men. Women are also involved in the transformation of products, even though in lower proportion than men but with an important presence in the activity. For example, in Abadjin-Kouté 30 % of the people involved in transformation of products are women. Photos from the site visit observations of further shops and local businesses can be found in Appendix C.

Other common economic activity of the population in the Aol are in the educational sector, as presented in the section 5.4.6.3, all the villages in the Aol have several educational facilities in the village. Sanitary personnel, construction worker, welder, electrician, product processing and carpenter were also identified as common in some of the villages in the Aol during the field survey. In all cases the involvement in this activity is done by men.

Regarding tourism, no touristic activities or tourism attraction activities were identified in any of the villages in the Aol.

5.4.6 Education

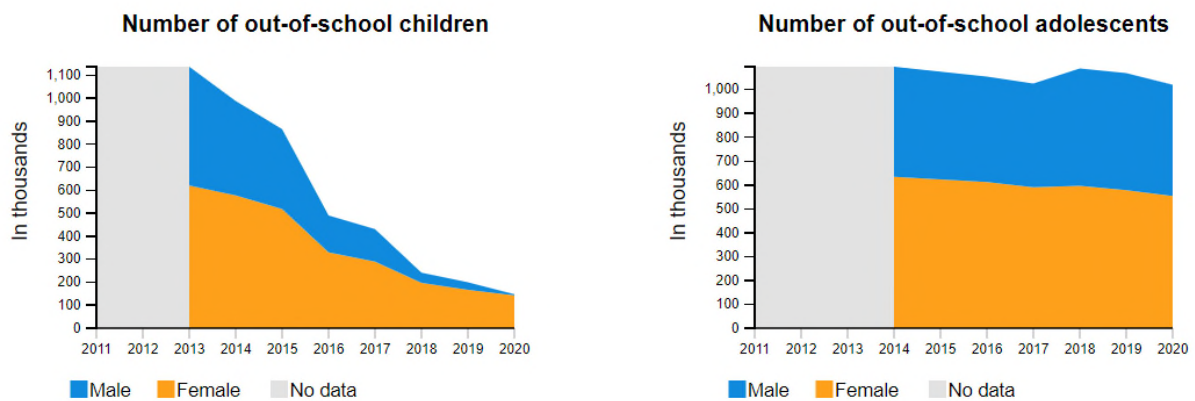
5.4.6.1 National Level

Efforts have been made to improve the level and availability of education in Côte d'Ivoire. As presented in Figure 5-48 gross enrolment ratio in Côte d'Ivoire have been steadily increasing over the years, reaching approximately between 90-100 % in the case of primary education, and 50-60 % in the case of secondary education. It should be stated that this information differs in terms of gender, with a difference of approximately 10-15 % between genders as male enrolment ratio is higher at both educational levels.



Source: UNESCO, 2021¹⁶¹

Figure 5-48 Gross Enrolment Ratio by Gender and Level of Education, 2014-2020



Source: UNESCO, 2021

Figure 5-49 Number of Out-of-School Children and Adolescents by Gender, 2014- 2020

The number of out of school children in Cote d'Ivoire is decreasing rapidly since 2014. Figure 5-49 above, shows the number of out of school children and adolescents by gender. Around 2020, the number had gone down to 200,000 kids and 1 million adolescents. The gender gap must also be considered, especially for children where the number is more uneven with mostly girls being out of school. Refer to Section Illiterate population for more information on Education about literacy rates in Côte d'Ivoire.

¹⁶¹ UNESCO (2021) Country profile: Côte d'Ivoire. Available from: <http://uis.unesco.org/en/country/ci>

5.4.6.2 District and Sub-prefecture Level

Anyama Sub-Prefecture

Anyama has several schools. The success rates for the last school examinations with a large circulation at the regional level are 94 % for the CEPE, 87 % for the *Brevet d'étude du premier cycle (BEPC)* and 45 % for the *Baccalauréat (BAC)* (DRENET Abidjan 4, 2019). Table 5-43 below lists these establishments as well as the number of students and educational staff by level.

Table 5-43 Number of Educational Facilities in Anyama

Category	Sex	Pre-School		Primary		Secondary (General)		Secondary (Technical)
		Private	Public	Private	Public	Private	Public	Private
Number of Educational Facilities		50	19	76	81	19	3	6
Number of Students	Male	1,162	655	8,192	13,432	6,271	3,923	366
	Female	1,150	701	8,083	13,499	6,409	3,711	449
	Total	2,312	1,356	16,275	26,931	12,680	7,634	815
Number of Teaching staff	Male	17	1	266	272	424	165	114
	Female	110	40	217	205	67	40	13
	Total	127	41	483	477	491	205	127

Source: MENET-FP / DSPTS/ Annuaire statistique scolaire 2018-2019, District d'Abidjan

Songon Sub-prefecture

Education in Songon is provided through several schools located in the villages and districts of the sub-prefecture. The success rates for the last large-circulation exams at the regional level are 95% for the *Certificat D'études Primaires Élémentaires (CEPE)*, 80% for the BEPC, 45% for the BAC (DRENET Abidjan 3, 2019). The data presented in Table 5-44 below illustrates this.

Table 5-44 Number of Educational Facilities in Songon

Category	Sex	Pre-School and Primary				Secondary (General)	
		Pre-School		Primary		Private	Public
		Private	Public	Private	Public		
Number of Educational Facilities		10	1	44	7	1	7
Number of Students	M	348	11	5,563	456	786	1,264
	F	375	13	5,494	459	758	1,789
	Total	723	24	11,057	915	1,544	3,053
Number of Teaching staff	M	1	0	143	16	36	134
	F	36	3	115	20	28	32
	Total	37	3	258	36	64	166

Source: MENET-FP / DSPTS/ Annuaire statistique scolaire 2018-2019, District d'Abidjan



Source: ENVAL 2022

Figure 5-50 School in Songon

5.4.6.3 Local Level and Aol

Table 5-45 below shows the education facilities in the villages in the Aol. The reported data shows that all villages have at least one (1) educational facility inside the village, except for Agoussi, where there isn't any kind of educational facility in the village. In the Aol there are four (4) kindergarten, two (2) private and two (2) public; 11 primary schools, eight (8) public and three (3) private; eight (8) middle schools, four (4) public, three (3) private and one (1) semi-private. There is also a technical centre in Akoupé-Zeudji and another in Abadjin-Kouté. These two villages are the only ones having all three types of educational facilities.

Anguédédou village and Agoussi settlement reported obstacles to education due to lack of financial resources for educational facilities.

Table 5-45 Education Facilities in the Aol, 2022

District	Sub-prefecture	Village	Community /Settlement	Education facility		
				Kindergarten	Primary School	Middle School
Abidjan Autonomous District	Anyama	Adonkoi I		0	1 Public Primary School	0
		Akoupé-Zeudji		2 private Kindertgartens	1 Public Primary School	1 Private Middle School 2 Publics 1 Technical Centre
			Agoussi	0	0	0
		Allokoï		0	1 Public Primary School	Private Middle School
		Attinguié		1 Public Kindergarten	1 Public Primary School 1 Private Catholic	0

District	Sub-prefecture	Village	Community /Settlement	Education facility		
				Kindergarten	Primary School	Middle School
					Primary School	
	Songon	Abadjin-Kouté		1 Public Kindergarten	1 Public Primary School 1 Private Primary School	1 Public Middle School 1 Private Middle School 1 Technical Centre
			Anguédedou	0	1 Public Primary Public 1 Private Primary School	1 Public Middle School
			Palmafrique V2	0	1 Public Primary School	0

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022¹⁶²

Photos from the site visit observation of further educational facilities can be found in Appendix C.

As presented in Table 5-46, literacy rates for young people within the populated areas in the Aol are generally high (64 % on average between all villages). Young literacy rates range between 35 % and 80 %; the villages with the highest young literacy rate are Anguédedou and Abadjin-Kouté (80 %), followed by Agoussi (75%) and Attinguié (65 %). The lowest rates are in Adonkoi I and Allokoï, with 45 %.

Adult literacy is overall much lower than for youth – generally around 20% on average, ranging between 5 % and 35 %. The villages with the highest adult literacy rates are Allokoï and Attinguié (35 % each), and Akoupé-Zeudji, Agoussi, Abadjin-Kouté and Anguédedou are the villages having the lowest literacy rates in adults: 5 %, 10%, 15% and 15 % respectively.

Literacy rates for the elderly are very low in most of the settlements in the Aol, going as low as 0 % (Attinguié), but generally around 7 % on average.

Table 5-46 Literacy Levels in the Aol, 2022

District	Sub-prefecture	Village	Community /Settlement	Age group		
				Young	Adults	Seniors
Abidjan Autonomous District	Anyama	Adonkoi I		45 %	20 %	5 %
		Akoupé- Zeudji		55 %	5 %	10 %
			Agoussi		75%	10%
		Allokoï		45 %	35 %	10 %

¹⁶² This information is an approximation provided by village community representatives and is therefore approximate. This information could not be triangulated with trusted sources and therefore may differ from actual conditions.

District	Sub-prefecture	Village	Community /Settlement	Age group		
				Young	Adults	Seniors
		Attinguié		65 %	35 %	0 %
	Songon	Abadjin-Kouté		80 %	15%	5%
			Anguédedou	80 %	15 %	5 %
			Palmafrique V2	NA	NA	NA

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022¹⁶³

In the Aol, there are around 54 % of school-aged children attending kindergarten and elementary school on average between all the villages. Anguédedou has 80 % of children attending kindergarten and elementary school, when Adonkoi I has 30 % of children in school-age attending this educational level.

An average of 37 % of children of school age are attending middle school/college in the Aol; Anguédedou also having the highest percentage (55 %), and Adonkoi I, the lowest (25 %).

Higher education levels are generally lower, as there is 9 % on average of children of high school age attending higher education. The highest percentages are in Akoupé-Zeudji and Allokoï (20 % each), and in Abadjin-Kouté and Palmafrique V2, there is no people in the village enrolled in higher education.

Table 5-47 Education Enrolment in the Aol, 2022

District	Sub-prefecture	Village	Community /Settlement	% of children of age enrolled in education			
				Kindergarten and Primary School	Middle School	High school and higher education	
Abidjan Autonomous District	Anyama	Adonkoi I		30 %	25 %	10 %	
		Akoupé- Zeudji		45 %	35 %	20 %	
			Agoussi		55%	30%	15%
		Allokoï		75 %	45 %	20 %	
		Attinguié		50 %	35 %	15 %	
	Songon	Abadjin-Kouté			55 %	45 %	0%
			Anguédedou		80 %	55 %	5 %
			Palmafrique V2		50 %	35 %	0 %

¹⁶³ This information is an approximation provided by village community representatives and is therefore approximate. This information could not be triangulated with trusted sources and therefore may differ from actual conditions.

Source: Field Survey Settlement Profiling, ENVAL, November 2022¹⁶⁴

Although they are different for each village of the Aol, there are recurring factors that have come up in the different village profiling reports throughout the villages. One of the most important factors is regarding the lack of teachers, the overcrowded classrooms, and the insufficient number of classes in schools. Insufficient school infrastructure, inadequate classrooms, lack of electricity, lack of library facilities, lack of school lunchrooms and lack of schoolbooks and materials were also named during the field survey in the villages in the Aol.

5.4.7 Health

5.4.7.1 National Level

Community Health and Basic Health Indicators

The life expectancy in Cote d'Ivoire has overall been steadily increasing since 1960. The life expectancy at birth in 2019 was of 57.78 years, 56.59 years for men and 59.11 years for women. The infant mortality rate (per 1,000 live births) has steadily decreased as it went from 104.2 in 1990 to 57.9 in 2020¹⁶⁵.

Maternal mortality rates (per 100,000 live births) has been almost constantly decreasing since the year 2000, when it was at 704 to 617 in 2017. The number remains above the Sub-Saharan average, which is at 534 as of 2017. The mortality rate for under-5 (per 1,000 live births) has followed the same trend, decreasing from 143.3 in 2000 to 77.9 in 2020¹⁶⁶. Table 5-48 shows the principal causes of death in Cote d'Ivoire as of 2019.

Table 5-48 Causes of Death in Côte d'Ivoire, 2019

Cause of death	% of total deaths
Malaria	16.13
Neonatal	12.61
Lower Respiratory Infections	9.13
HIV	7.51
Ischemic Heart Disease	5.29
Stroke	4.72

Source: GBD Compare, 2019

Chronic Diseases

Non-communicable diseases (NDCs) accounted for over 34 % in 2018 of all mortality in Cote d'Ivoire.

According to the World Health Organisation, the most important risk factors are:

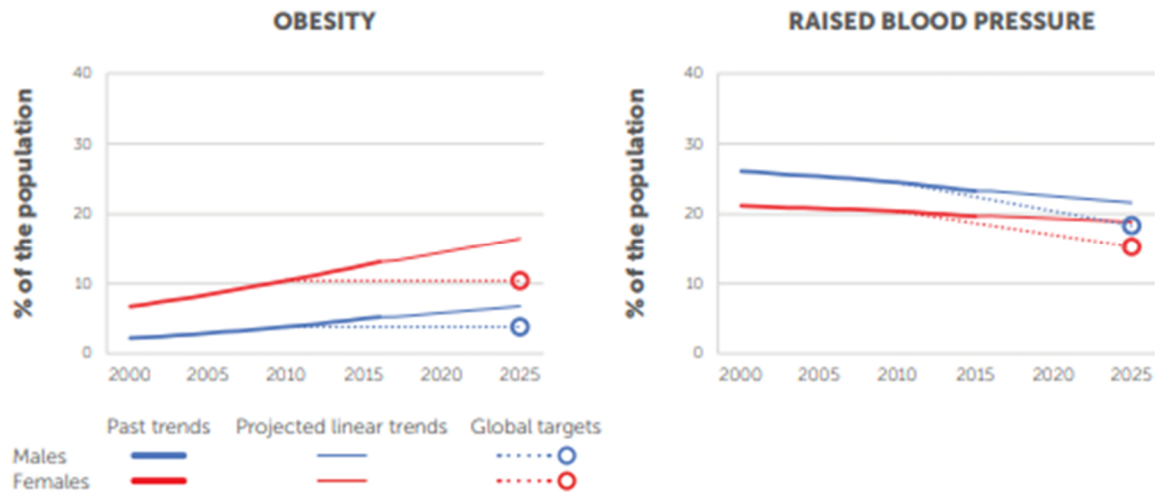
- Household air pollution: in 2018, 82 % of the population had primary reliance within the household to polluting fuels and technologies.
- Insufficient physical activity: in 2018, 31 % of the population did insufficient physical activity, and 9% of the population suffered of obesity.
- Unhealthy diet (in particular high salt/sodium consumption).

¹⁶⁴ This information is an approximation provided by village community representatives and is therefore approximate. This information could not be triangulated with trusted sources and therefore may differ from actual conditions.

¹⁶⁵ The World Bank. 2022. Data Coe d'Ivoire. Available at: <https://data.worldbank.org/country/cote-divoire>

¹⁶⁶ The World Bank. 2022. Data Coe d'Ivoire. Available at: <https://data.worldbank.org/country/cote-divoire>

- High levels of metabolic factors: raised blood pressure, raised total blood glucose, diabetes and obesity (see Figure 5-51 for gender specific data)¹⁶⁷.



Source: WHO, 2018.¹⁶⁸

Figure 5-51 Risk Factors Projections and Trends, Côte d'Ivoire, 2000-2025

The country has shown no progress towards achieving the target for obesity, with an estimated 44.7% of adult (aged 18 years and over) women and 25.9 % of adult men living with obesity. Ivorian obesity prevalence is higher than the regional average of 20.7 % for women and 9.2 % for men. At the same time, diabetes is estimated to affect 23.4 % of adult women and 18.8 % of adult men.

According to the same source the most prevalent NDCs in 2018 were communicable, maternal, prenatal and nutritional conditions (52 %), cardiovascular disease (15 %), cancer (4 %), injuries (10 %), chronic respiratory disease (2 %), and diabetes (2 %)¹⁶⁹.

Communicable diseases

According to the World Health Organization, communicable diseases in Cote d'Ivoire in 2010 accounted for more than 50 % of adult deaths and about 80 % of deaths amongst children under the age of 5¹⁷⁰. The high priority prevention and control diseases are the following:

- The Communicable Diseases with the highest burden and potential amplification are:
 - Acute respiratory illness in children
 - Diarrhoeal illnesses
 - Malaria
 - Tuberculosis
 - HIV/AIDS

¹⁶⁷ World Health Organization. 2018. Non communicable Diseases (NDC) Country profiles, Cote d'Ivoire. Available at: https://www.who.int/nmh/countries/civ_en.pdf?ua=1

¹⁶⁸ Non communicable Diseases (NDC) Country profiles, Cote d'Ivoire. Available at: https://www.who.int/nmh/countries/civ_en.pdf?ua=1

¹⁶⁹ World Health Organization. 2018. Non communicable Diseases (NDC) Country profiles, Cote d'Ivoire. Available at: https://www.who.int/nmh/countries/civ_en.pdf?ua=1

¹⁷⁰ WHO (2010) Communicable disease profile Côte d'Ivoire. Available from: http://apps.who.int/iris/bitstream/handle/10665/70300/WHO_HSE_GAR_DCE_2010.3_eng.pdf?sequence=1

- Diseases with potential for outbreaks:
 - Measles
 - Meningitis
 - Yellow fevers
 - Cholera, dysentery
- Diseases subject to global control with potential for programme disruption:
 - Polio

As part of the profiling, some of the priorities regarding health issues at national level were elaborated. COVID-19, Malaria and sexually transmitted diseases (STDs) are the most important current challenges faced by the country. These are further explained in the sections below.

COVID-19

The first confirmed case of COVID-19 in Côte d'Ivoire was reported on March 11, 2020 and since then until 13 December 2022 there have been 87,891 confirmed cases of COVID-19 and 830 deaths reported to WHO¹⁷¹.

As seen during the site visit in June 2022 and November 2022, COVID-19 related concerns have been reduced. COVID-19 cases in all villages were reported to be no longer registered as often due to a good management of the disease through compliance with barrier. Thus, currently protective measures such as masks or hydroalcoholic gels are rarely used among communities.

Malaria

Globally, Malaria remains a major health issue, especially in Africa. Table 5-49 shows the number of cases and deaths Côte d'Ivoire saw in 2017. The number of reported malaria cases tend to be under-represented, as many cases are not reported. Progress in malaria prevention and control has stagnated in recent years, with the estimated number of cases increasing 15.8% between 2015 and 2018 (from 260 cases per 1,000 population to 300 per 1,000).¹⁷²

Table 5-49 Estimated Number of Malaria Cases and Deaths, Côte d'Ivoire, 2017

Parameter	Population	Lower Estimate	Upper Estimate
reported confirmed cases (health facility)	3,274,683		
Confirmed cases at community level	201,270		
Confirmed cases from private sector	558,828		
reported deaths	3,222		
Estimated cases	3.4M	1.8M	5.5M
Estimated deaths	9.6K	8.1K	11.1K

Source: WHO, 2018¹⁷³

¹⁷¹ WHO (2022) Côte d'Ivoire: WHO Coronavirus Disease (COVID-19). Available from: <https://covid19.who.int/region/afro/country/ci>

¹⁷² Severe Malaria Observatory. Malaria Facts: Côte d'Ivoire. Available from : <https://www.severemalaria.org/countries/la-cote-divoire>

¹⁷³ WHO (2018) Malaria. Country Profile: Côte d'Ivoire. Available from: https://www.who.int/malaria/publications/country-profiles/profile_civ_en.pdf

Sexually Transmitted Diseases (STDs)

According to the World Health Organization (WHO), in Cote d'Ivoire there is a prevalence of 27.4 % of sexually transmitted infections among female adolescents between 15 and 19 years, and 15.5 % in the case of male adolescents in 2012.¹⁷⁴

Côte d'Ivoire is home to approximately 380,000 people living with HIV¹⁷⁵, around 2.1% of the country's population aged between 15 and 49 years.

Intentional and unintentional injuries

According to the International Research Centre, in Cote d'Ivoire, criminal violence primarily takes on the form of rape, land disputes, and the break-down of social cohesion. Due to the vulnerability this leads to an emergence of gangs, which are becoming even younger, averaging the age of 10¹⁷⁶.

Overall, there is a feeling of insecurity due to the levels of urban criminal violence. In addition, as poverty and social marginalisation increases, more younger people move towards crime as a way for survival.

Health facilities and health services

According to the World Bank, the level of government health expenditure is low, representing 3.29 % of GDP as of 2019. Although this was higher than the year before, 2018, where health expenditure represented 2.19 % of GDP, the number has been decreasing since the year 2000, where spending on health was at 6.12 % of GDP¹⁷⁷. The Ministry of Health and Public Hygiene (*Ministère de la Santé et de l'Hygiène Publique, (MSHP)*) is responsible for the health system and comprises 20 regional health directorates and 86 smaller health districts.¹⁷⁸

As of 2017, there were 2,027 first-contact health facilities, 84 national hospitals in the country, 17 regional and 4 specialised institutes. The ratio was one doctor per 6,000 inhabitants in 2017.

According to the Oxford Business School¹⁷⁹, limited access to care due to the high cost remains an issue for most Ivoirians, especially as 47 % of the population lives below the poverty line and health centres are not easily accessible in many rural areas. While the use of public health services increased from 27.5 % in 2013 to 45.3 % in 2016, the lack of trained professionals, long waiting times and poor quality deter many from seeking care. This has consequences, with as many as 80 % of Ivoirians, especially those in rural areas, turning to traditional medicine. The ratio was at one public hospital per 253,064 people (was 237,678 in the year 2000).

Table 5-50 Structure of Health Facilities, Côte d'Ivoire, 2017

Types of health facility	Number
First-contact health facilities	2,027
General hospitals (HG)	84

¹⁷⁴ WHO (2021) Cote d'Ivoire Contraception within the context of adolescents' sexual and reproductive lives: Country profile. Available from: <https://apps.who.int/iris/bitstream/handle/10665/339377/WHO-SRH-20.35-eng.pdf>

¹⁷⁵ Centers for Disease Control and Prevention (CDC) (2021) Country Profile: Côte d'Ivoire Available from: https://www.cdc.gov/globalhealth/countries/cote-d-ivoire/pdf/CDC_in_Cote_dIvoire.pdf

¹⁷⁶ IDRC; CRDI. 2012. Crime and Violence in Cote d'Ivoire. Available at: https://www.idrc.ca/sites/default/files/sp/Documents%20EN/crime_and_violence_in_cote_divoire_-_letter_-_rgb_-_online.pdf

¹⁷⁷ The World Bank. 2022. Data Cote d'Ivoire. Available at: <https://data.worldbank.org/country/cote-divoire>

¹⁷⁸ Oxford Business School (2020) How Côte d'Ivoire is improving access and quality of health care. Available from: <https://oxfordbusinessgroup.com/overview/doctor%E2%80%99s-orders-higher-levels-investment-improve-access-and-quality-care>

¹⁷⁹ Compagnie Fruitière (2017) Health Sector in Cote d'Ivoire in the Process of Recovery (2017) Available from: <https://www.compagniefruitiere.fr/en/health-sector-in-cote-divoire-in-the-process-of-recovery/>

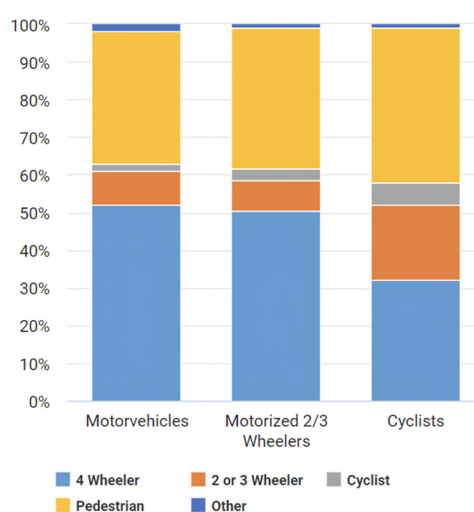
Types of health facility	Number
Regional hospitals (CHR)	17
National specialised institutes	2

Source: Oxford Business School, 2022

Road safety issues

Cote d'Ivoire has an agency in charge of road safety, Road Safety Oce (OSER), funded by the government. The functions of the agency include coordination, legislation and monitoring and evaluation of road safety strategies. The country had both a fatal and non-fatal road safety target, to reduce fatalities by 50 % from 2016 to 2020.

As of 2016, the World Health organisation estimated there was a total of 5,582 road fatalities in Cote d'Ivoire and 83,730 injuries. Figure 5-52 shows a comparison chart of fatalities by users in the country.



Source: Global Road Safety Facility. 2020¹⁸⁰

Figure 5-52 Fatalities by User, Comparison Chart, Côte d'Ivoire, 2020

Domestic violence / Gender Based Violence

Domestic violence against females is a violation of women's and girl's human rights. Tolerance as well as the experience of domestic violence form significant barriers to women's empowerment and women's autonomy in all spheres of social life. This has adverse consequences for women's health, health-seeking behaviour, and the health of their children. Although Côte d'Ivoire is part of the Concluding observations of the Committee on the Elimination of Discrimination against Women (CEDAW), 26 % of women suffer from Lifetime Physical and/or Sexual Intimate Partner Violence, of which 22 % claim it happened in the last 12 months¹⁸¹.

The Demographic and Health Surveys from UNICEF¹⁸², found in 2016, that 34.3 % of women believed a husband is justified in beating his wife when she argues with him, 16.4 % think it is justifiable if she burns the food, 26.6% if she goes out without telling him and 32.7 % if she neglects

¹⁸⁰ Road safety country profile, Cote d'Ivoire. Available at: <https://www.roadssafetyfacility.org/country/cote-divoire>

¹⁸¹ UN Women. Global Database on Violence against Women. Cote d'Ivoire. Available at: <https://evaw-global-database.unwomen.org/fr/countries/africa/cote-d-ivoire>

¹⁸² SIVILSAYFALAR, 2018. Masculine Crisis' Returns to Women as 'Violence by Fatmagül Berktaş. Available from: <https://www.sivilsayfalar.org/2018/04/09/masculinity-crisis-is-reflected-as-violence-against-women/>

the children¹⁸³.

It should be noted that acceptance of wife beating is inversely associated with education and wealth levels, and the living area (urban or rural). Women's empowerment has a dual impact on domestic violence. Indeed, as more women who achieve economic independence are exercising their rights and refusing to stay in abusive relationships, men are going through a "crisis of masculinity" due to the loss of their positions as breadwinners and "protectors" and "maintainers" of women. Accusing women of not being "obedient," men are engaging in physical, sexual, psychological, or economic violence.

5.4.7.2 District and Sub-prefecture Level

Anyama Sub-prefecture

According to the *Rapport Annuel sur la Situation Sanitaire (RASS)*, published in 2018, Anyama has several health facilities. These health structures are supplied with medicines by several pharmacies scattered throughout the sub-prefecture.

Table 5-51 Health Infrastructures in Anyama

General Hospital	Maternity Centre	First Contact Health Centre		Pharmacy		Total
		Rural	Urban	Public	Private	
2	19	13	7	7	8	56

As presented in Table 5-52, there are 249 medical staff for a population of 119,793 people.

Table 5-52 Number of Medical Staff in Anyama

Doctors	Dentists	Pharmaceutical Personal	Eng. Sanitary	Mid wives	Nurses	Health Technicians	Caregivers	Total
38	3	11	2	54	104	26	11	249

Source : Rapport Annuel sur la Situation Sanitaire (RASS), 2018

Songon Sub-prefecture

Songon has few health establishments. The municipality suffers from a critical health infrastructure deficit (one urban health centre including an inpatient ward, a maternity unit). It is part of the Yopougou Ouest - Songon health district. The data relating to these establishments are listed in the tables below.

Table 5-53 Health Infrastructures in Songon

General Hospital	Maternity facilities	First Contact Health Centre		Pharmacy		Total
		Rural	Urban	Public	Private	
1	20	6	25	36	188	279

Source: Rapport Annuel sur la Situation Sanitaire (RASS), 2018

Note: ESPC: First Aid Health Establishments (Rural, Urban, denominational); HG: General Hospitals; Ph: Pharmacy (Public or Private)

¹⁸³ IndexMundi. Cote d'Ivoire Domestic Violence. Available at: <https://www.indexmundi.com/facts/c%3CB4te-d%27ivoire/domestic-violence>

Table 5-54 Number of Medical Staff in Yopougon Ouest - Songon Health District

Number of medical staff in Anyama								Total
Doctors	Dentists	Pharmaceutical Personal	Ing. Sanitaire	Midwives	Nurses	Health Technicians	Carers	
90	6	16	2	163	174	62	67	580

Source : Rapport Annuel sur la Situation Sanitaire (RASS), 2018



Source: ENVAL 2022

Figure 5-53 Health Facilities in Songon

5.4.7.3 Local Level and Aol

The number of health facilities accessed by the communities the Aol is generally low. As presented in Table 5-55, all the villages access at least one (1) health facility except for Agoussi, which does not have a health centre in the village, so the community go to the infirmary located in Palmafrique village (at 50 m from Agoussi).

In most of the villages, the villagers go to the pharmacy to have medicines, except for Anguédedou and Agoussi, where they also use medicinal plants or go to a traditional herbalist and collect medicinal plants from natural resources.

Table 5-55 Health Facilities Accessed by the Communities in the Aol, 2022

District	Sub-prefecture	Village	Community /Settlement	Health Facility Accessed by community			
				Hospital	Health Centre	Pharmacy	Other
Abidjan Autonomous District	Anyama	Adonkoi I		NA	NA	NA	NA
		Akoupé-Zeudji		0	1	1	NA
			Agoussi		0	0	0

District	Sub-prefecture	Village	Community /Settlement	Health Facility Accessed by community			
				Hospital	Health Centre	Pharmacy	Other
		Allokoi		0	1	2	NA
		Attinguié		0	1	2	NA
		Abadjin-Kouté				1 Songon Health Center	
	Anguédédou			0	1 Songo Health Center	0	1 Infirmary in TRCI
	Palmafrique V2			0	0	1 Pharmacy depot	1 Infirmary

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022¹⁸⁴

Figure 5-54 presents a map with the location of the main health facilities in the Aol. As can be noted, the number of health facilities is generally low, as there are approximately six (6) health facilities in total in all the villages. Two (2) urban health centres, one (1) in Akoupé-Zeudji and another in Allokoi, three (3) pharmacies, in Akoupé-Zeudji, Allokoi and Attinguié, and one (1) infirmary in Palmafrique V2. There is no health facility in Agoussi. There are no hospitals in any village in the Aol. The nearest hospital is Anyama General Hospital, which is located 20 km northeast of the Project.

¹⁸⁴ This information is an approximation provided by village community representatives and is therefore approximate. This information could not be triangulated with trusted sources and therefore may differ from actual conditions.

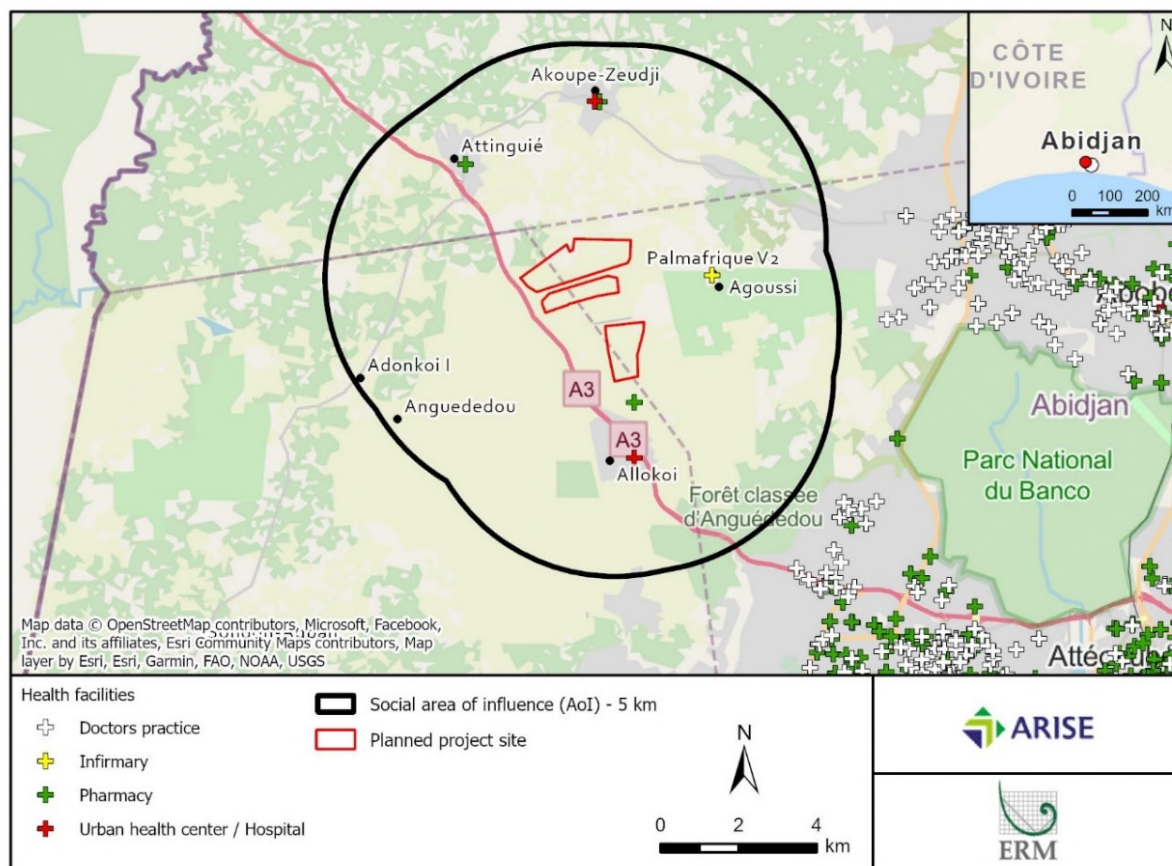


Figure 5-54 Health Facilities in the Aol and the Project Vicinity

Further photos of the health facilities in the Project Aol can be found in Appendix C.

As shown in Table 5-56, the surveys in the Aol confirmed the national status that Malaria is the main health problem for the communities in the Aol. Malaria was reported in all of the villages, and affecting in a higher level to women, except in Abadjin-Kouté, where it affects more to men. Diabetes, and blood pressure were also identified in Anguédedou, affecting both men and women, and Typhoid fever was reported in Abadjin-Kouté as a disease affecting women.

Children are in general less affected by health problems in the Aol, although malaria is recurrent in children in five (5) out of the eight (8) villages. Flu was also identified in children in Allokoi and Adonkoi I, and Anemia in Agoussi and Abadjin-Kouté.

Also, Palmafrigue V2 villagers reported indigestion to water consumption and coughs and colds as major health problems affecting all groups.

Table 5-56 Diseases and Health Problems in the Aol, 2022

District	Sub-prefecture	Village	Community /Settlement	Group		
				Women	Men	Children
Abidjan Autonomous District	Anyama	Adonkoi I		■ Malaria	■ Malaria	■ Flu and acute respiratory infections
				■ Malaria	■ Malaria	
		Akoupe-Zeudji	Agoussi	■ Malaria	■ Malaria	■ Malaria

District	Sub-prefecture	Village	Community /Settlement	Group			
				Women	Men	Children	
						■ Anemia	
		Allokoi	■ Malaria	■ Malaria	■ Malaria ■ Flu		
		Attinguié	■ Malaria	■ Malaria	■ Malaria		
	Songon	Abadjin-Kouté	■ Typhoid fever	■ Malaria	■ Anemia		
			Anguédedou	■ Diabetes, blood pressure, uterine cancer	■ Diabetes, blood pressure	■ Malaria	
			Palmafrique V2	■ Malaria ■ Indigestion due to water consumption ■ Coughs and colds	■ Malaria ■ Indigestion due to water consumption ■ Coughs and colds	■ Malaria ■ Indigestion due to water consumption ■ Coughs and colds	

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022¹⁸⁵

Anguédedou village and Agoussi settlement reported obstacles to health care due to lack of financial resources, for a health centre.

The main causes of accidents and deaths that were identified during the field survey are varied, as presented in Table 5-57. Several villages identified that the main cause of death in the Aol are due to illnesses, mostly malaria, as is the main health problem in the villages. Pregnancy at risk, inadequate health services, equipment and facilities, the state of the roads, traffic accidents and non-compliance with traffic regulations, and poor sanitary treatment were also identified by villagers during baseline field survey.

Table 5-57 Main Causes of Accidents and Deaths in the Aol, 2022

District	Sub-prefecture	Village	Community /Settlement	Main causes of accidents and deaths according to stakeholders
Abidjan Auto-nomous District	Anyama	Adonkoi I		■ Malaria ■ Self-medication ■ Pregnancy at risk
		Akoupé-Zeudji		■ Cases of illness ■ Lack of adequate equipment for care ■ Pregnancies at risk
			Agoussi	■ Lack of health centre ■ The state of the roads
		Allokoi		■ Road uncivilization ■ Inadequate training of the sanitary personnel ■ Outdated technical facilities

¹⁸⁵ This information is an approximation provided by village community representatives and is therefore approximate. This information could not be triangulated with trusted sources and therefore may differ from actual conditions.

District	Sub-prefecture	Village	Community /Settlement	Main causes of accidents and deaths according to stakeholders
		Attinguié		<ul style="list-style-type: none"> ■ Cases of illness ■ Traffic accidents
	Songon	Abadjin-Kouté		<ul style="list-style-type: none"> ■ Non-compliance with traffic regulations ■ Accident cases ■ Cases of illness
Anguédedou			<ul style="list-style-type: none"> ■ Non-compliance with traffic regulations ■ Accident cases ■ Cases of illness 	
Palmafrique V2			<ul style="list-style-type: none"> ■ The state of the road ■ Limited means of transportation ■ The time it takes to get to a better equipped health center 	

Source: Field Survey Settlement Profiling, ENVAL and ERM, November 2022¹⁸⁶

According to the responses given by stakeholders during the field surveys, the pandemic is being managed by the community in compliance with barrier measures and following the pertinent measures. In all the villages it has been confirmed that population is vaccinated against COVID-19.

5.4.8 Infrastructure and public services

This section presents additional infrastructures and public services considerations that are described in previous sections (i.e., education and health facilities).

5.4.8.1 National Level

Housing

There is a household deficit in Cote d'Ivoire, which, in 2015 was at 600,000 units and is estimated to be growing by additional 40,000 every year. In addition, rural areas are heavily vulnerable as 90 % of the people live in temporary structures, which usually need heavy repairing and upkeep¹⁸⁷.

Water Supply and Sanitation

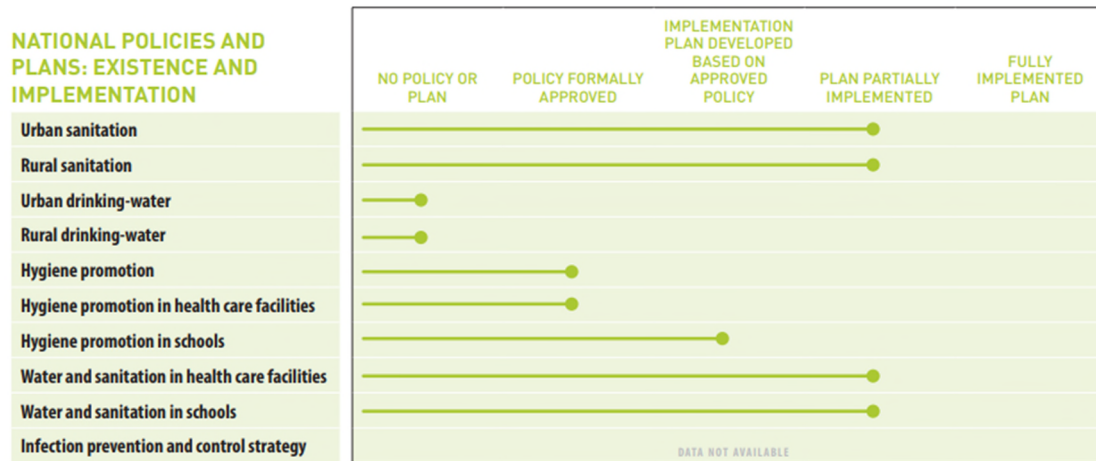
Access to basic drinking water has been improving in Cote d'Ivoire. According to the World Bank, in 2020 54.47 % of the urban population were able to use safely managed drinking water services, and only 14.57 % of the rural population¹⁸⁸.

The World Health Organisation released a report with the UN Water Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS) for Côte d'Ivoire. As shown in Figure 5-55, no policies are fully implemented, the areas with most progress are urban and rural sanitation as well as water and sanitation in healthcare facilities and schools. Again, urban, and rural drinking water are on last place with no existing plan or policy to improve the conditions.

¹⁸⁶ This information is an approximation provided by village community representatives and is therefore approximate. This information could not be triangulated with trusted sources and therefore may differ from actual conditions.

¹⁸⁷ Habitat for Humanity. Country profile: Cote d'Ivoire. Available at: <https://www.habitat.org/where-we-build/cote-d-ivoire>

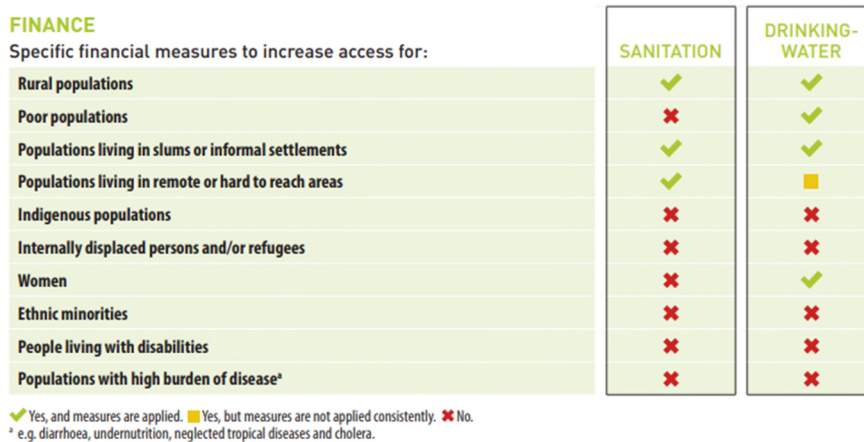
¹⁸⁸ World Bank. 2022. Cote d'Ivoire. Available at: <https://data.worldbank.org/country/cote-divoire>



Source: WHO and GLASS, 2018¹⁸⁹

Figure 5-55 National Policies and Plans: Existence and Implementation, Côte d'Ivoire 2017

Figure 5-56 shows how sanitation and drinking water installations are being financed to increase access to different segments of the population. As can be seen, sanitation is only properly financed and with proper measures applied in rural populations, populations living in slums and remote areas. Regarding drinking water, ILO considers it has been properly financed and applied for rural and poor communities, as well as the ones living in slums and women¹⁹⁰.



Source: WHO and GLASS, 2018

Figure 5-56 Financing for Increasing Access to Water Supply and Sanitation, Côte d'Ivoire, 2017

¹⁸⁹ WHO and UN Water Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS) (2018). Cote d'Ivoire Highlights based on country reported GLAAS. Available at: https://www.who.int/water_sanitation_health/monitoring/investments/country-highlights-2017/cote-d-ivoire-glaas2017-country-highlight181015.pdf

¹⁹⁰ Source: World Health Organization (WHO) and UN Water Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS). Cote d'Ivoire Highlights based on country reported GLAAS 2016/2017 data. Available at: https://www.who.int/water_sanitation_health/monitoring/investments/country-highlights-2017/cote-d-ivoire-glaas2017-country-highlight181015.pdf

Waste Management

Waste management is a serious health and sanitation problem, especially with the rapid growth of the population that the country has been seeing in the past decade. In 2002, the government of Côte d'Ivoire defined its National Waste Management Strategy and implemented the National Sustainable Waste Management Programme¹⁹¹. The Economic and Financial Affairs Commission (Commission des Affaires Économiques et Financières - CAEF) of the Senate unanimously adopted the draft law ratifying Ordinance No. 2019-1087 of December 18, 2019, which amends the procedures for determining the distribution key for the proceeds of the property tax (Impôt Propriété Foncière - IPF) between the bodies responsible for waste management and local authorities. This new law will potentially improve tax allocation towards sanitation and health from 25% to 50%¹⁹².

In addition, with the support of the International Development Association, Cote d'Ivoire's Urban Resilience and Solid Waste Management program received a funding of USD 315 million with three main goals¹⁹³:

- Flood risk mitigation;
- Improvement of the system of collection and disposal of solid waste;
- Capacity building and digital technologies for urban resilience.

Energy and Power Supply

Côte d'Ivoire's energy mix is mostly derived from fossil-fueled thermal power. There are four major thermal power plants in the country: Azito, Ciprel, Aggrekko and Vridi. The main source of power is natural gas. Gas production in Côte d'Ivoire does not meet domestic power demand for the thermal power plants, and the rest of the gas is imported mainly from Nigeria.¹⁹⁴

Table 5-58 shows the mains data gathered for the country regarding access to electricity between 2010 and 2016. Furthermore, the main primary sources of energy in Cote d'Ivoire are shown in Figure 5-57.

Table 5-58 Côte d'Ivoire Statistics on Energy and Electricity, 2010 – 2016

Series	2010	2012	2014	2016
Access to electricity (% of population)	58 %	55.8 %	62 %	64.3 %
Urban (% of urban population)	82.9 %	88 %	84 %	92 %
Rural (% of rural population)	32.5 %	29 %	36.5 %	38 %
Access to clean fuels and technologies for cooking (% of population)	18.6 %	18.4 %	18.5 %	18 %
Renewable energy consumption (% of total final energy consumption)	75.5 %	74.9 %	70.8 %	n/a

¹⁹¹ African Development Bank Group. 2019. Côte d'Ivoire - Project for the construction and operation of a technical landfill centre in Kossihouen for the disposal of household and similar solid waste in the Abidjan Autonomous District (DAA) - Esia Summary. Available at: <https://www.afdb.org/en/documents/cote-divoire-project-construction-and-operation-technical-landfill-centre-kossihouen-disposal-household-and-similar-solid-waste-abidjan-autonomous-district-daa-esia-summary>

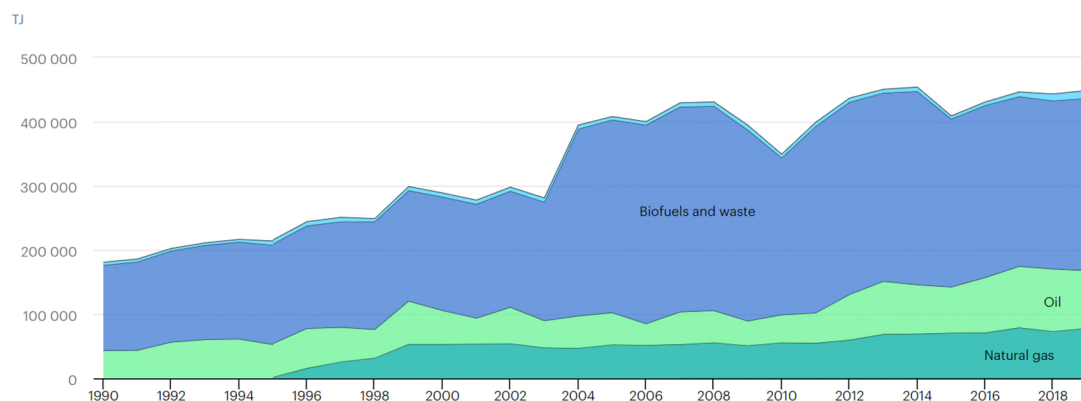
¹⁹² Afrik21. 2020. Cote d'Ivoire: New taxes on waste management come into force. Available at: <https://www.afrik21.africa/en/cote-divoire-new-taxes-on-waste-management-come-into-force/>

¹⁹³ Construction Review. 2021. Cote d'Ivoire receives funds for implementation of its Urban Resilience and Solid Waste Management Project. Available at: <https://constructionreviewonline.com/news/cote-divoire-solid-waste-management-project/>

¹⁹⁴ DLA Piper. (2021) Africa Energy Futures : Côte d'Ivoire. Available from: <https://www.dlapiper.com/cs/czech/insights/publications/2021/11/africa-energy-futures/africa-energy-futures-cote-divoire/>

Series	2010	2012	2014	2016
Renewable electricity output (% of total electricity output)	28.3 %	26.4 %	23.9 %	n/a
Electric power consumption (kWh per capita)	219.3	239.7	280.8	n/a

Source: Sustainable Energy for All. Africa, 2022¹⁹⁵



Source: IEA, 2022¹⁹⁶

Figure 5-57 Total Energy Supply (TES) by Source, Côte d'Ivoire 1990-2019

Net energy production in Côte d'Ivoire was 436 Terajoule (TJ) and electricity consumption was 7.5 Terawatt per hour (TWh) in 2019.¹⁹⁷

According to the African Hub for Sustainable Energy, In Cote d'Ivoire the average access to electricity is at 64 % of the population, with discrepancies between urban (92 %) and rural (38 %) areas.

5.4.8.2 District and Sub-prefecture Level

Anyama Sub-Prefecture

Housing

The housing found in Anyama sub-prefecture generally consists of several types of buildings, of which the most common are of modern type (high standing, medium standing, low standing), for residential use, offices, shops and craft activities.

Road Infrastructures

The Anyama road network is made up of two North-South axes: The Anyama central road which connects Abobo to Agboville and the National Yopougon-Agboville road. The geographical position of Anyama makes this city the main access route to the AAD for all travellers from the East, Centre-East and North-East regions of Côte d'Ivoire. The characteristics of the roads encountered in the sub-prefecture are presented in the table below.

¹⁹⁵ Sustainable Energy for All. Africa Hub. 2022. Cote d'Ivoire Country Data. Available at: <https://www.se4all-africa.org/seforall-in-africa/country-data/cote-d%E2%80%99ivoire/>

¹⁹⁶ IEA. 2022. Cote d'Ivoire. Available at: <https://www.iea.org/countries/cote-divoire>

¹⁹⁷ International Energy Agency (2021) Key World Energy Statistics 2021. Available from: <https://iea.blob.core.windows.net/assets/52f66a88-0b63-4ad2-94a5-29d36e864b82/KeyWorldEnergyStatistics2021.pdf>

Table 5-59 Characteristics of the Roads of Anyama Sub-prefecture

Type of Road	National Road		Urban Road		Communal Road		Total (km)
	Linear (km)	Conservation status	Linear (km)	Conservation status	Linear (km)	Conservation status	
Asphalt	24	Good	-	-	10	Good	34
Non-Asphalt	-	-	-	-	> 300	Degraded	> 300
Total (km)	24		-		> 310		> 334

Source : Direction Technique de la Mairie d'Anyama

The town of Anyama is linked to Burkina Faso by a railway line that runs from Abidjan to Ouagadougou.



Asphalt road that crosses Anyama towards Adzopé



Taxi station in Anyama

Source: ENVAL 2022

Figure 5-58 Overview of a Road and some means of Transport in Anyama

Water, Sanitation and Waste and Wastewater Management

The drinking water supply to the population of Anyama is achieved through a connection to the drinking water distribution network of the Côte d'Ivoire Water Distribution Company (SODECI). However, in areas not served by the drinking water network, people obtain water from wells and various natural sources in the area.

Anyama has a public health or environmental health service whose objectives are to ensure compliance with food hygiene rules, to monitor the quality of drinking water and to fight against the spread of infectious diseases. In practice, these hygiene services are in their entirety ineffective in the field because they are not functional (absence of means of imposing corrective measures in the event of non-compliance with hygiene rules, lack of qualified personnel, lack of resources and equipment). Also, poor sanitary conditions are a recurrent problem, particularly in the commune of Anyama and relate to the management of household waste and the disposal of wastewater.

Wastewater is managed in various ways. Some households have septic tanks or soak wells; wastewater is collected there before being pumped out by tank vehicles from private providers. Other households, on the other hand, connect directly to existing pipes.

There are also several places in the sub-prefecture where solid waste accumulates.

Power Supply

Anyama is connected to the national electricity grid. Faced with the uncontrolled expansion of the municipality, the electricity coverage rate remains low compared to other municipalities in the District of Abidjan. At the village level, they are almost all electrified but there is a need to extend the network further. There are also constant disruptions in the supply of electricity due to the obsolescence of the installations and the supply which does not meet the demand.

Public Services and Security

To ensure the safety of property and people, the Anyama sub-prefecture has a police station, a gendarmerie brigade and a water and forest cantonment (Eaux et Forêts).

Songon Sub-prefecture

Housing

Housing in the sub-prefecture of Songon is very diverse. It is of high standing, medium or low standing type, depending on the type of materials used in the construction. It consists of modern individual houses, housing on common compounds, collective buildings, collective housing built by real estate operations of state companies (SICOGI) or private type (SIPIM, ORIBAT, INTERBAT, PROMOGIM etc.). However, modern constructions contrast with pockets of precarious housing built in mud and / or recycled materials.

Road Infrastructures

The road network in the Songon sub-prefecture is booming due to the State and the Autonomous District of Abidjan infrastructure investments. The opening up of villages by paved roads will have the advantage of facilitating the movement of people and goods, supporting economic development. Songon is also accessible by sea and via the lagoon. Transport is provided by mini cars (Gbaka), transport coaches serving Dabou and Jacqueville (AVS company), then bush taxis.

Water, Sanitation and Waste and Wastewater Management

Songon is connected to the SODECI drinking water distribution network. However, in areas not served by the drinking water network, people obtain water from wells, boreholes and the various natural sources available in the area.

Power Supply

Songon is connected to the national electricity grid. However, the strong demand due to the expansion of the city by the construction of several real estate operations leads to untimely cuts in the supply of electricity. The coverage rate in the villages is relatively satisfactory.

Security

The Songon sub-prefecture has a police brigade to ensure the safety of goods, services and people.

5.4.8.3 Local Level and Aol

Infrastructures and services

As presented in Table 5-60 concerning infrastructures and services in the Aol, running water is present and common in three (3) out of the seven (8) villages in the Aol: Akoupé-Zeudji, Allokoi and Attinguié, but it is not the only source of water. In Agoussi, there isn't running water and the domestic water is not treated, and Adonkoi I village does not have running water but takes the water through a connection that the village has done from another village, Palmafrique V2 has a water tower/tank, and Anguédedou community takes water from drilling (see the photolog in Appendix C).

None of the domestic water used in all the villages in the Aol is treated water, except for Adonkoi I, whose water is treated by SODECI. Figure 5-59 shows the SODECI treatment plant in Adonkoi I.



Figure 5-59 SODECI Treatment plant in Adonkoi I, 2022

The most common sewage or sanitation infrastructure used by communities in the Aol is the septic tank, as all the villages have identified individual septic tanks as the sewage system present in the villages. Traditional or improved latrines are also very common in the Aol.

The most common method of waste disposal is burning, dumping of waste and wild dumps, but disposal of waste in landfills and collection in a container and delivery to municipal collection trucks are also methods present in the Aol.

Regarding the source of lighting, all the villages in the Aol have access to electricity, except for Palmafrigue V2, where they do not have electricity, and use a generator set instead, and Agoussi, where they use solar power, firewood and coal as sources of energy. In addition to electricity, firewood, coal and gas are also very common source of lightning used in the villages in the Aol.

Table 5-60 Infrastructures and Services Conditions in the Aol, 2022

District	Sub-prefecture	Village	Community /Settlement	Infrastructure and Service Item				
				Running Water	Domestic Treated Water	Sewage/ sanitation infrastructure	Method of Waste Disposal	Electricity
Abidjan Autonomous District	Anyama	Adonkoi I		No	Yes	Septic Tank	Wild Wasteland	Electricity Firewood Coal
		Akoupé-Zeudji		Yes	N/A	Septic Tank Traditional or Improved Latrines	Collection in a container and delivery to municipal collection trucks	Electricity Coal Gaz
			Agoussi	No	No	Septic Tank Improved latrines	Wild dumps	Solar energy Coal Firewood
		Allokoi		Yes	No	Septic Tank Traditional or Improved latrines	Disposal of waste in landfills	Electricity
		Attinguié		Yes	No	N/A	Burning/ dumping	Electricity Coal
	Songon	Abadjin-Kouté		Yes	No	Septic Tank Improved latrines	Wild dumps	Electricity Coal Gaz
			Anguédedou	Drilling	No	Septic Tank Improved Latrines	Wild dumps	Electricity Coal Gaz
			Palmafrique V2	Water tower/tank	No	Septic Tank Improved latrines	Burning/ dumping	Generator set

Source: Field Survey Settlement Profiling, ENVAL and ERM November 2022¹⁹⁸

¹⁹⁸ This information is an approximation provided by village community representatives and is therefore approximate. This information could not be triangulated with trusted sources and therefore may differ from actual conditions.

Figures of a clogged sewage canal in the village of Akoupé-Zeudji and rainwater drainage system for the asphaltting of the road in the village of Adonkoi I can be found in Appendix C.

Housing

As per the information gathered during the field survey, there are more than 2,150 households in the Aol. Regarding the housing conditions in the Aol, there is inhabited areas with houses made mostly in stone and clay and wood, but the roofs differ from one to another (tiles and metal sheets). Figures presenting images of the different types of houses in the villages in the Aol can be found in Appendix C.

Transport

Moto taxis, gbakas¹⁹⁹, cars, bus or minibus are the main means of transport in the Aol, being moto taxi and gbakas the most common.

The bad conditions of the road and a high presence of unpaved roads were identified as major concerns during the field survey in most of the villages in the Aol. All the villages reported to have damaged and unpaved roads in the village, which can cause accidents or problems of accessibility to the village.

In addition to the condition of the roads, high cost of transportation, the scarcity of transport vehicles and aging car fleet were also identified as transportation problems in Allokoi, Anguédédou and Abadjin-Kouté.

Figures of bus and gbakas stations in the village of Akoupé-Zeudji can be found in Appendix C.

Figure 5-60 below presents the different types of roads in the Aol. As can be seen, there is a motorway near the Project area, and most of the roads inside the Aol are track or unclassified roads. There are also two (2) secondary roads connecting the village of Adonkoi I, Attinguié, and Akoupé-Zeudji.

¹⁹⁹ Vans driven by individuals that make stops and where people can get on. It is like an intermediary between bus and taxi: bus because you take it with many people and it makes stops (although not established, you can ask for it to stop), and taxi because you get on and off whenever you want, there are no established stops.

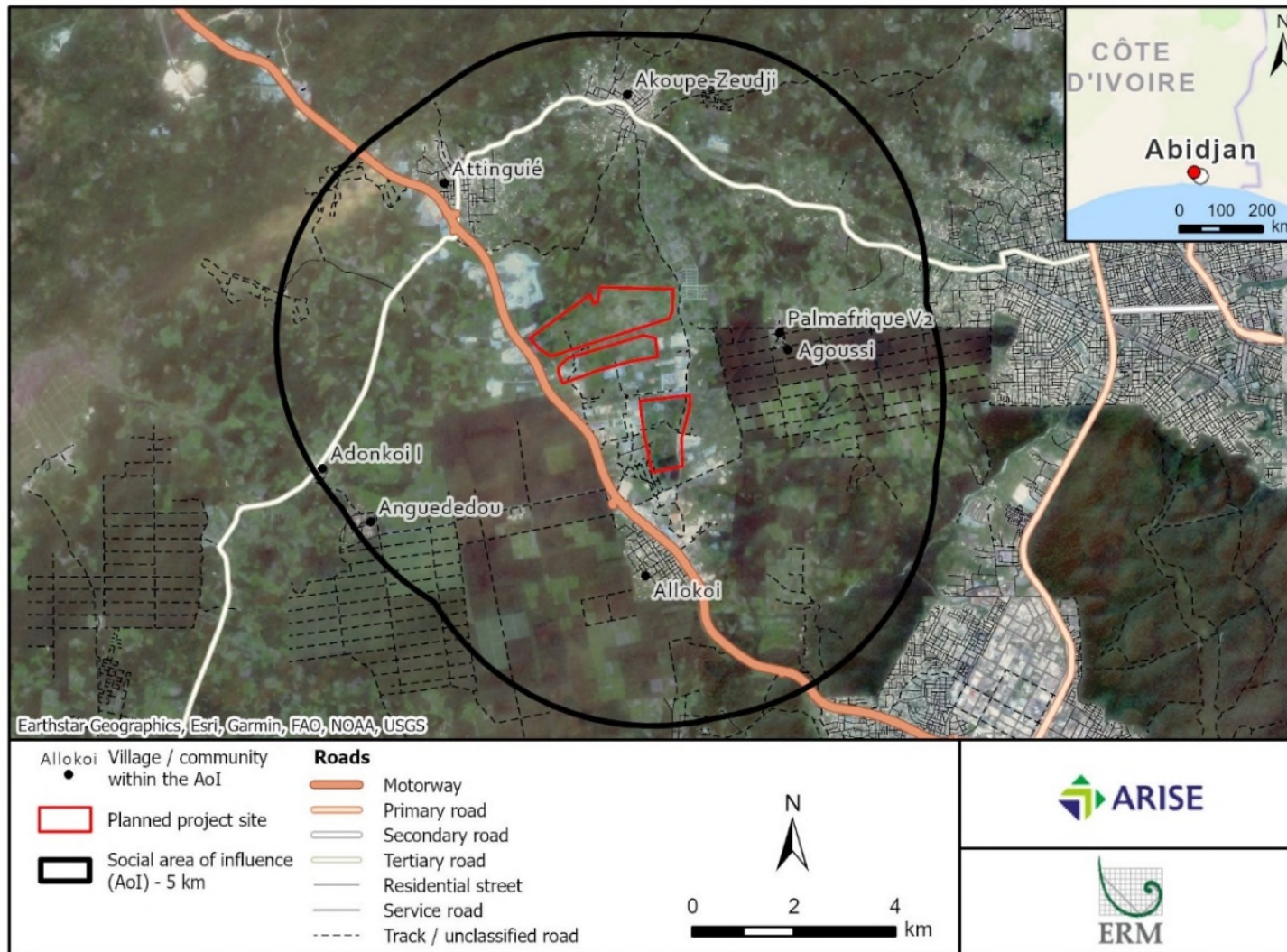


Figure 5-60 Types of Roads in the AoI

5.4.9 Cultural Heritage

This Chapter of the Report presents the baseline for Cultural Heritage and assesses the nature, distribution, and value (significance) of Cultural Heritage resources potential relevant for the Project. The information presented in this baseline report draws on desk-based research, remote sensing, and intangible cultural heritage field surveys by ERM and ENVAL.

Tangible Cultural Heritage was assessed through desk-based research. No tangible Cultural Heritage field surveys were conducted for this baseline.

5.4.9.1 Geographic/ Topographic Context

Regionally, Côte d'Ivoire is composed of Sudanese savannah in the north, jungle mosaic in the central parts and tropical rainforests in the south. The Ivorian tropical rainforest forms part of the Upper Guinea Forest, separated from the Lower Guinea Forest by the Dahoney Gap – a stretch from Togo to Benin where the rainforest extends to the Atlantic coast. The Dahoney Gap accounts for many of the Palaeolithic discoveries mentioned in archaeological and historic background.

The topography surrounding the Project Aol is characterised by a large plateau rising from the coast to approximately 500 meters elevation in the interior. The southern and eastern area contains inland lagoons and stretches from the Ghanaian border along the south coast which is dominated by dense tropical forest in the southwest.

5.4.9.2 Archaeological and Historic Background

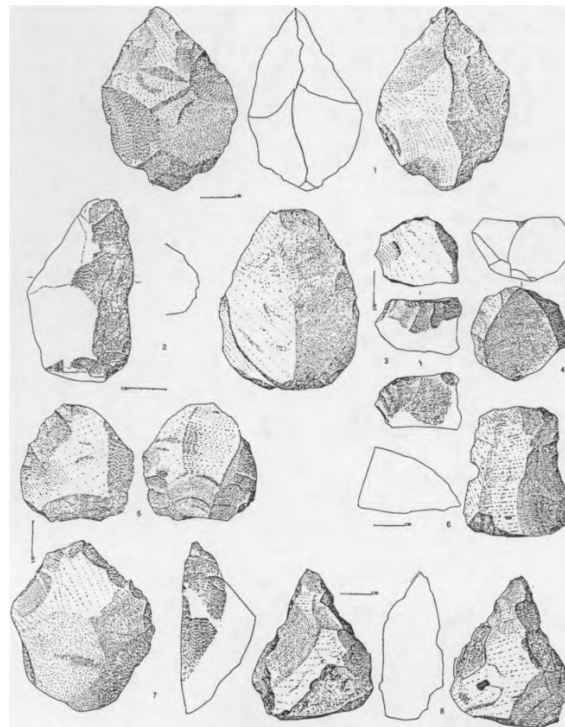
Limited information is available on cultural heritage at a regional and local level in Côte d'Ivoire as few systematic archaeological works have been undertaken to date. This is not uncommon for West Africa in general, but the situation is changing with the emergence of local institutions and local archaeologists who have started to explore the rich heritage. As such, there may be new information that becomes publicly available during the course of the Project development, and this should be kept under review.

Palaeolithic

The first academic overview on the archaeology of Côte d'Ivoire was published as recently as 1972²⁰⁰, and updated in 1983. Palaeolithic studies yielded significant lithic discoveries in 1982 similar to the 'terre de barre' regions in Togo and Benin. These finds included side scrapers, bifacial points, and heavy end scrapers. The material was reported to present characteristics of the well-known Sangoan technology (Figure 5-61). Subsequent studies in 1981 revealed microlithic quartz flakes and charcoal in roadworks excavations between Abidjan and Bingerville, dated to approximately 13000 BP²⁰¹.

²⁰⁰ Mauny, R. Contribution à la connaissance de l'archéologie préhistorique et protohistorique ivoiriennes' (Ann. Univ. Abidjan, Sér. I, 1 (1972), p. 11-32)

²⁰¹ Chenorkian, R. Ivory Coast Prehistory: recent developments. Afr Archaeol Rev 1, 127–142 (1983)



Source: Chenorkian (1983)²⁰¹

Figure 5-61 Bifacial lithic material from Palaeolithic studies in 1983

Neolithic

Neolithic artefacts are widely distributed within Côte d'Ivoire in the form of artefact scatters, comprising quartz and metabasic rocks largely from the Krinjabo and Kong regions. The quality of the raw material is reflected in the technology seen in the archaeological record, specifically with the better quality quartz showing more accurate knapping and retouch. Polished stone axes are similarly distributed, discovered notably in the Bete Valley near the Palaeolithic sites of Anyama.

Shell middens, thought to represent the end of the Neolithic have been widely identified in the region with a focus on Songon Dagbe where one was dated to 2760 BP, containing shell, pottery, microlithic stone artefacts and bone.

Historic

The areas near the Ébrié Lagoon, including the territory on which the city of Abidjan is now located, was occupied by Ébrié communities for many years prior to the French settlement in 1903. Abidjan was originally selected as an appropriate location for a railroad terminus to transport goods from the interior. Several segregational districts were built during European occupation in the early 1900's such as Treichville and Adjame, separated from the administrative and predominantly European districts by a military installation. The segregated districts became locations of large-scale open-air markets. In 1943, the capital was moved to Abidjan (Figure 5-62) to promote growth in the city to provide the labour effort required to construct a canal to allow deep water ships into the Lagoon²⁰². By the 1950's the canal was complete along with an airport to expand international trade (Figure 5-63).

²⁰² Anacker, C. (2010, July 05). Abidjan, Côte d'Ivoire (1903-). BlackPast.org. <https://www.blackpast.org/global-african-history/abidjan-cote-divoire-1903/>



Source: Anacker (2010)²⁰²

Figure 5-62 An example of a French colony set up in Abidjan in 1905



Source: Westland (2018)²⁰³

Figure 5-63 Aerial photograph showing the mid 1900 segregational districts of Abidjan and the canal leading into the Lagoon

5.4.9.3 Intangible cultural heritage and oral traditions

The most well-known element of oral tradition in Côte d'Ivoire is Ivorian poetry. Abidjan specifically has a long history of being the hub of West African music and Ivorian poetry, both connected to dance and theatre. The Yam Festival incorporates many of the elements of Ivorian oral tradition and serves

²⁰³ Westland, T. (2018). How unequal was the Federation of French West Africa? <https://decompressinghistory.com/>

as a memorial service of the dead. The festival sees local communities such as Akan carry out ceremonial dancing, ancestor worship, mask carving and fetish priest ceremonies.

Storytellers are known as *griots* and the long history of oral poetry and storytelling is largely told in French and gathered around a theme known as *chemin*, the French word for path²⁰⁴. Many poems and stories reflect on the feeling of being cut over or tread on during colonial periods, as well as literal paths that were created between colonies and dwellings into the agricultural fields. Some of these elements have the potential to manifest within the cultural heritage resources identified in section 5.4.9.4.

A preliminary intangible cultural heritage survey was conducted as part of the social performance baseline survey for this ESIA. The survey revealed that the villagers are not aware of any intangible cultural heritage resources within the Project Aol. However, a further, more robust survey is required to ascertain the significance of the intangible cultural heritage for the specific Project area.

5.4.9.4 Key Baseline Findings

The baseline study identified three potential cultural heritage resources within the Project Aol. Each resource is assigned a unique identifier (for example IEZ_CH_01). The overview of each cultural heritage resource is provided in Table 5-61, and locations are shown in Figure 5-64.

Table 5-61 Cultural Heritage Baseline Gazetteer

Unique Identifier	Type	Source	Description	Sensitivity	Coordinates
IEZ_CH_01	Potential former homestead	Remote Sensing	A potential former homestead, consisting of large rectangular enclosure bordered by forest on its northwestern edge. Circular stands of trees and other boundary features, on different alignments to the main rectangular enclosure and metal roofed houses, suggest the settlement site may consist of several phases of construction and/or occupation	Medium	5°26'30.98"N 4° 9'38.32"W
IEZ_CH_02	Potential historic boundary	Remote Sensing	A potential historic boundary line associated to a former northeast - southwest aligned trackway that linked to the old Akoupé to Gounioubé dirt road, which is itself part of a broader historic network linking older settlements. It appears to have survived many phases of field system change between 2006 and 2020, suggesting that it is either associated to a significant topographical feature such as a ditch or a ridge, or that it holds cultural or social importance	Medium	5°26'18.31"N 4° 9'9.85"W
IEZ_CH_03	Grove containing potential for intangible cultural heritage	Remote Sensing	This cultural heritage resource which is visible in the previous 35 years of satellite imagery measures 500 by 500 metres and sits in isolation to the agricultural land and recent developmental works surrounding it. It is located in the south-eastern edge of the Phase 1 Zone 1 plot, where significant deforestation has been undertaken in recent years.	Medium	5°24'59.71"N 4° 8'50.28"W

²⁰⁴ Harms, R. (1979). Oral Tradition and Ethnicity. *The Journal of Interdisciplinary History*, 10(1), 61–85. <https://doi.org/10.2307/203301>



Figure 5-64 Cultural Heritage resources within the Project Aoi

Designated cultural heritage

No designated cultural heritage resources were identified within the Project Aol.

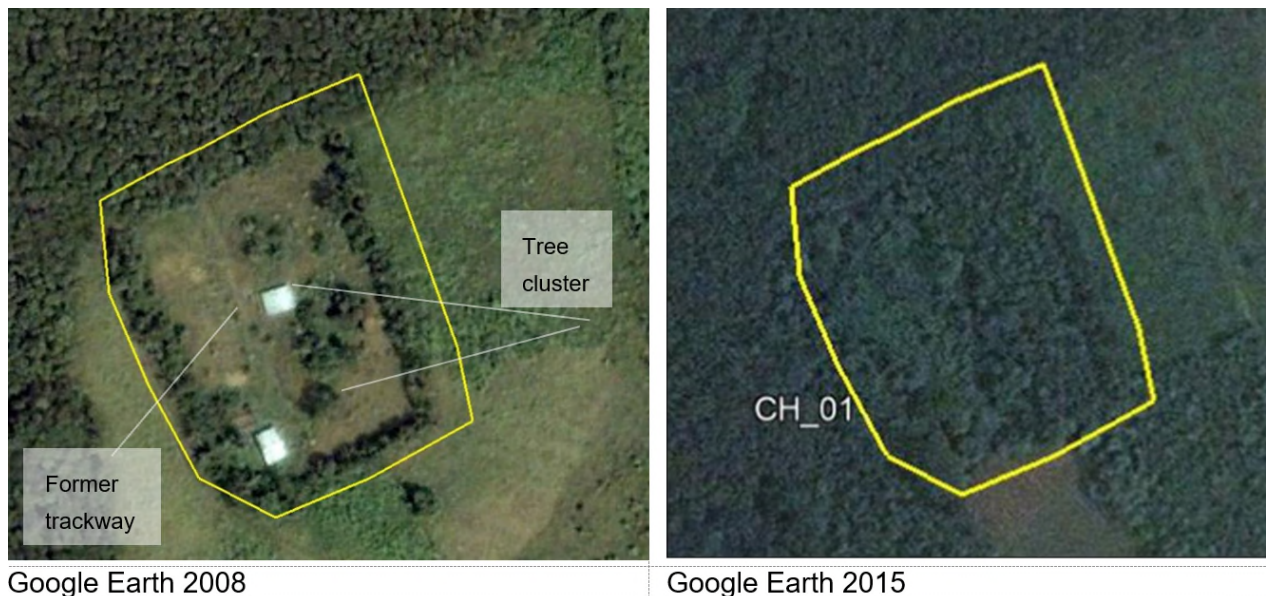
Non-designated cultural heritage

Three non-designated tangible cultural heritage resources were identified within the Project Aol. There were no non-designated intangible cultural heritage resources identified in the Project Aol according to the intangible cultural heritage survey conducted with village representatives. Nevertheless, during the meeting with the Ivorian Office of Cultural Heritage (OIPC), the director of the office mentioned that the possibility remains that intangible cultural heritage resources are present in the Project Aol (refer to Chapter 11)

The three non-designated tangible cultural heritage resources are presented as follows (see Figure 5-65 to Figure 5-67):

IEZ_CH_01:

A potential former homestead, consisting of large rectangular enclosure bordered by forest on its northwestern edge. Circular stands of trees and other boundary features, on different alignments to the main rectangular enclosure and metal roofed houses, suggest the settlement site may consist of several phases of construction and/or occupation.

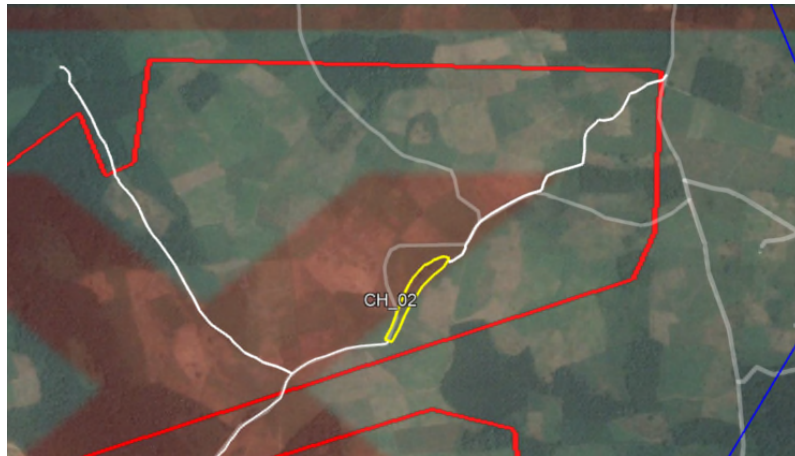


Source: ERM using Google Earth Pro (2022)

Figure 5-65 Potential cultural heritage IEZ_CH_01

IEZ_CH_02:

A potential historic boundary line associated to a former northeast - southwest aligned trackway that linked to the old Akoupé to Gounioubé dirt road, which is itself part of a broader historic network linking older settlements. It appears to have survived many phases of field system change between 2006 and 2020, suggesting that it is either associated to a significant topographical feature such as a ditch or a ridge, or that it holds cultural or social importance

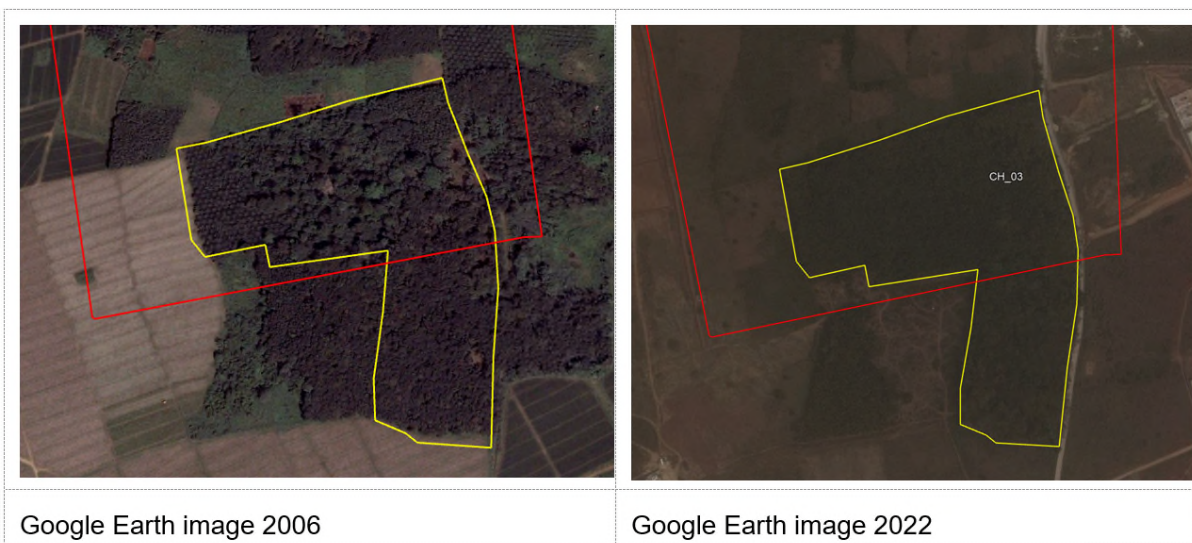


Source: Google Earth Pro (2022)

Figure 5-66 Potential cultural heritage IEZ_CH_02

IEZ_CH_03:

This cultural heritage resource, which is visible in the previous 16 years of satellite imagery, measures 500 by 500 metres and sits in isolation to the agricultural land and recent developmental works surrounding it. It is located in the south-eastern edge of the Phase 1 Zone 1 plot, where significant deforestation has been undertaken in recent years.



Source: Google Earth Pro (2022)

Figure 5-67 Potential cultural heritage IEZ_CH_03

5.4.9.5 Value of Identified Receptors

Each identified Cultural Heritage resource is assigned a sensitivity/ value expressed as "Low", "Medium" and "High" The assignment is based on desk-based research, the field survey on Cultural Heritage and professional judgement, and the ERM methodology aligned with the IFC PS8 guidance as set out in Table 5-62 below.

Table 5-62 Criteria for Cultural Heritage Impact Significance

	Cultural Heritage Site Sensitivity		
	Low	Medium	High
Definitions	<p>Defining Characteristic(s): Site is not specifically protected under local, national, or international laws or treaties; Site can be moved to another location or replaced by a similar site, or is of a type that is common in surrounding region; site has limited or no cultural value to local, national, or international stakeholders; and/or site has limited scientific value or similar information can be obtained at numerous sites.</p> <p>(Replicable Cultural Heritage)</p>	<p>Defining Characteristic(s): Site is specifically or generically protected by local or national laws but laws allow for mitigated impacts; Site can be moved or replaced, or data and artefacts recovered in consultation with stakeholders; Site has considerable cultural value for local and/or national stakeholders; and/or Site has substantial scientific value but similar information can be obtained at a limited number of other sites.</p> <p>(Non-replicable Cultural Heritage)</p>	<p>Defining Characteristic(s): Site is protected by local, national, and international laws or treaties; Site cannot be moved or replaced without major loss of cultural value; Legal status specifically prohibits direct impacts or encroachment on site and/or protection zone; Site has substantial value to local, national, and international stakeholders; and/or Site has exceptional scientific value and similar site types are rare or non-existent.</p> <p>(Critical Cultural Heritage)</p>

Source: ERM, 2012²⁰⁵

Tangible Cultural Heritage

Tangible Cultural Heritage refers to physical artefacts, objects or places produced, maintained and transmitted inter-generationally in a society. *A precautionary approach has been taken when assigning sensitivity to the identified CH resources in the absence of a cultural heritage field survey. Baseline field surveys for cultural heritage provide the opportunity for the sensitivity to be revised and potentially reduced.*

The three identified Tangible Cultural Heritage resources (i.e., IEZ_CH_01,02 and 03) were assigned the “Medium” type of the sensitivity.

Intangible Cultural Heritage

Intangible Cultural Heritage refers to ‘the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith that communities, groups and, in some cases, individuals recognize as part of their Cultural Heritage’ (UNESCO, 2003). Due to the instrumental and artefactual nature of Intangible Cultural Heritage, it is common for Cultural Heritage to have both tangible and intangible value. Intangible Cultural Heritage features may be impacted by restricted access during construction phase and operation phase.

After a preliminary intangible cultural heritage survey was carried out as part of the social performance baseline survey, no intangible cultural heritage resources were identified in the Project AoI. Nonetheless, there might be intangible cultural heritage that the villagers from the surveys are unaware of – and the Director of OIPC mentioned the possibility as well. Therefore, further intangible cultural heritage surveys need to be carried out by an appropriately qualified cultural heritage specialist to accurately assign the sensitivity.

²⁰⁵ Source: ERM Impact Assessment Guidance 2012

6. IDENTIFICATION AND ASSESSMENT OF ENVIRONMENTAL AND SOCIAL IMPACTS

6.1 Methods and Techniques Used

ERM’s approach in conducting this ESIA study is to work closely with the teams of the Project Developer and Owner (i.e., ARISE) so that the environmental and social assessment is an iterative process. In this way, E&S considerations and mitigation and enhancement measures are embedded into the design, where possible, to maximise efficiencies.

For the purpose of this ESIA Report, ERM’s standard Impact Assessment Methodology (Figure 6-1) is combined with ANDE requirements presented in the ToR (see Appendix A).

The overall approach is that the *significance* of an impact is assessed as a result of the impact *magnitude* (which depends on extent, duration and other impact factors) and the *sensitivity* characteristics of resources and receptors. Table 6-1 gives an overview of the scale used for the impact assessment in this ESIA as recommended by ANDE. The resulting impact significance is then defined in terms of Minor, Moderate or Major – or positive, as based on the Fecteau Impact Significance Determination Grid²⁰⁶.

Table 6-1 Impact assessment scale recommended by ANDE

Magnitude	Scope	Duration	Significance
Fa: Low	Lo: Local	Co: Short	E: Minor
Mo: Medium	Po: Occasional	Mo: Medium	Mo: Moderate
Fo: High	Re: Regional	Lg: Long	Ma: Major

Source: ANDE, 2022

For potential impacts that are found to be Major (and in some cases Moderate), one or more mitigation measures are recommended in line with the so-called “Mitigation Hierarchy” to either: avoid, minimise, mitigate, or compensate for the impact so that the resulting residual impact significance is acceptable.

ERM has worked closely with ARISE during the early stages of the Project so that the design already includes many technical measures to avoid/minimise impacts, (e.g. International Best Practices). Such “embedded measures” are considered as part of the existing Project design and not specified again as mitigation measures - they are anyhow already planned/obligatory (refer to sections 0 and 4.8). Additional mitigation measures to be implemented are addressed in the sections below of this ESIA Report.

²⁰⁶ Absolute Significance Grid (Fecteau, 1997)

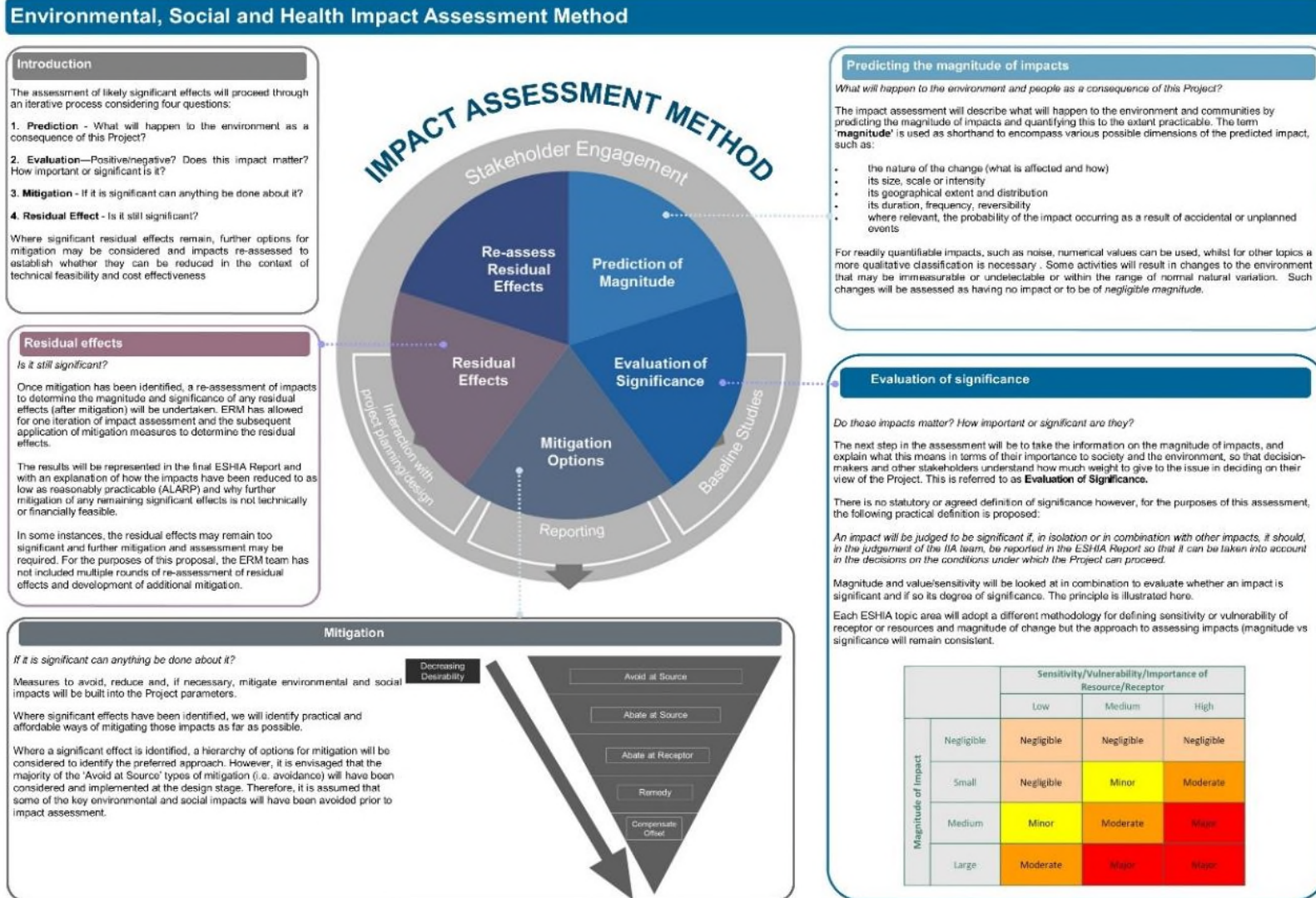


Figure 6-1 ERM Impact Assessment Methodology

6.1.1 Prediction of Magnitude

The magnitude of each impact was predicted as falling into one of the following designations: negligible, small, medium or large. The ‘magnitude’ encompasses various possible dimensions of the predicted impact, such as:

- extent (i.e., local, regional or international);
- duration (i.e., temporary, short-term, long-term or permanent);
- scale or size (no fixed designations);
- frequency (no fixed designations); and
- likelihood, for unplanned events only (i.e., unlikely, possible, likely).

Each ESIA topic area (e.g., noise, biodiversity, social, etc.) adopted a different methodology for defining the magnitude of change as appropriate to the discipline, but the designations used were consistent. For example, for readily quantifiable impacts, such as noise, numerical values were used to define its size, whilst for other topics, e.g., social impacts, a more qualitative classification was necessary.

In the case of positive impacts, no magnitude was assigned.

6.1.2 Sensitivity of Resources and Receptors

The sensitivity (or vulnerability / importance) of the impacted resource or receptor was also defined using one of the followings designations: low, medium or high. As per the magnitude rating, the definition for each designation varied on a resource/receptor basis. Where the resource is physical (for example, a water body) its quality, sensitivity to change and importance (on a local, national and international scale) are considered.

Where the resource/receptor is biological or cultural, its importance (for example, its local, regional, national or international importance) and its sensitivity to the specific type of impact are considered.

Where the receptor is human, the vulnerability of the individual, community or wider societal group is considered. The sensitivity definition for each resource / receptor is defined in more detail in the individual topic assessment sections.

6.1.3 Evaluation of Significance

Once the magnitude of the impact and sensitivity of the resource/receptor has been characterised, the impact significance is assigned using the significance matrix presented in Figure 6-2.

For impacts resulting from unplanned events (typically accidents, such as a major fuel spill or other event that cannot be reasonably foreseen), the above methodology is applied but likelihood is also considered when assigning the magnitude designation, as classified in Table 6-2.

Table 6-2 Definitions for Likelihood Designation for Unplanned Events

Likelihood	Definition
Unlikely	The event is unlikely but may occur at some time during normal operating conditions.
Possible	The event is likely to occur at some time during normal operating conditions.
Likely	The event will occur during normal operating conditions (i.e., it is essentially inevitable).

		Sensitivity/Vulnerability/Importance of Resource/Receptor		
		Low	Medium	High
Magnitude of Impact	Negligible	Negligible	Negligible	Negligible
	Small	Negligible	Minor	Moderate
	Medium	Minor	Moderate	High
	Large	Moderate	High	High

Figure 6-2 Impact Significance Matrix

Table 6-3 provides context for the various ratings of impact significance used for this ESIA Report in ERM and ANDE styles. For the purpose of this ESIA, the colouring methodology from ANDE ToR style (Appendix A) was applied.

Table 6-3 Context of Impact Significance

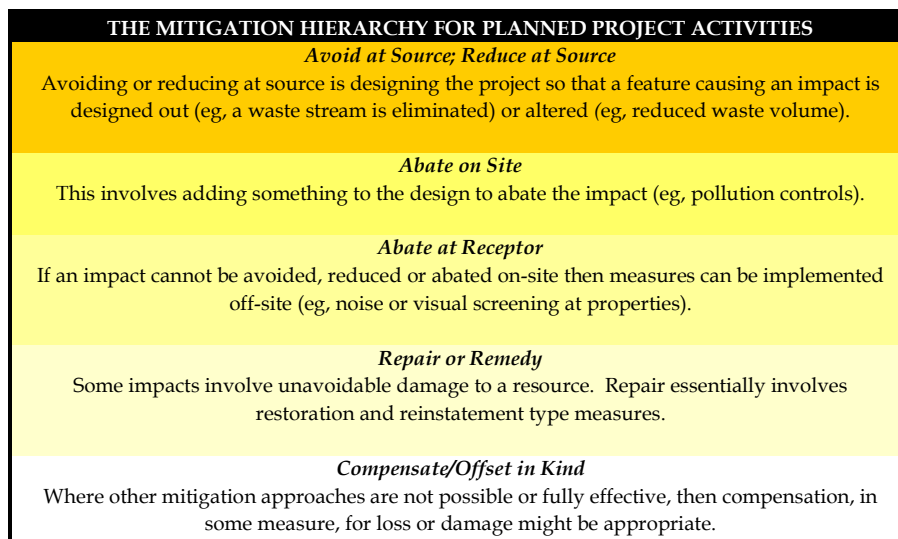
Significance Designation & colour code		Significance Context
ERM style	ANDE style (used in this ESIA)	
Negligible	Minor (Negligible)	A resource/receptor (including people) will not be affected in any way by a particular activity, or the predicted effect is deemed to be 'imperceptible' or is indistinguishable from natural background variations.
Minor	Minor	A resource/receptor will experience a noticeable effect, but the impact magnitude is sufficiently small (with or without mitigation) and/or the resource/receptor is of low sensitivity/vulnerability/ importance. In either case, the magnitude should be well within applicable standards.
Moderate	Moderate	Has an impact magnitude that is within applicable standards but falls somewhere in the range from a threshold below which the impact is minor, up to a level that might be just short of breaching a legal limit.
Major	Major	An accepted limit or standard may be exceeded, or large magnitude impacts occur to highly valued/sensitive resource/receptors.
Positive	Positive	There will be a beneficial impact to a resource/receptor. <i>(note: no magnitude is assigned for positive impacts).</i>

6.1.4 Identification of Mitigation Measures

Where impacts of Moderate or Major significance were identified, mitigation measures have been developed to find practical ways of addressing negative impacts and enhancing positive impacts. Where feasible, mitigation was also evaluated for impacts of Minor significance. The key objective was to mitigate impacts to a level that is ‘as low as reasonably possible’.

A hierarchy of mitigation options is considered, with avoidance at the source of the impact as a priority, and compensatory measures or offsets to reduce the impact significance as a last resort for residual impacts that cannot be further reasonably avoided. The mitigation hierarchy is presented in Figure 6-3.

Embedded controls (i.e., physical or procedural controls that are planned as part of the Project design and are not added in response to an impact significance assignment), were considered as part of the Project (i.e., prior to the impact assessment stage of the ESIA Process). Accordingly, they are not described as mitigation measures in the individual topic assessment sections. Embedded measures (if available) are listed under the respective topics in Chapter 7.



Source: ERM 2020

Figure 6-3 Hierarchy of Options for Mitigation

6.1.5 Unplanned Events

This ESIA considers the impacts that are expected to result from planned activities on the physical, biological and the socioeconomic environment. It also considers cumulative impacts and impacts from unplanned events such as accidents.

These are different to impacts that would reasonably be predicted to occur in the normal course of activities (including the application of in-built control measures) during construction and operations.

6.1.5.1 Evaluation of Likelihood

Unplanned and accidental events have the potential to occur during Project activities and therefore the evaluation of impacts for unplanned and accidental event takes into account the likelihood of the event occurring into the impact magnitude.

For unplanned events (e.g., accidental release of hazardous materials) the likelihood of the impact occurring is taken into consideration in deriving the magnitude rating. The likelihood of an impact occurring as a result of an unplanned event is expressed as a probability and is designated using a

qualitative scale (or semi- quantitative, where appropriate data are available), according to the attributes described in Table 6-2.

6.1.6 Assessment of Residual Impact

Following the identification of mitigation measures, impacts are re-assessed to determine their residual impact. This is essentially a repeat of the impact assessment steps discussed above, albeit with a consideration of the assumed implementation of the mitigation measures.

6.2 Physical Resources and Receptors

6.2.1 Hydrology & Hydrogeology

6.2.1.1 Potential Impact

The potential impacts of the Project on surface waters and groundwater are mostly related to construction activities such as clearance of the working strip, earthworks and reinstatement activities, use of/construction of access roads and other associated facilities, potential presence of contaminated soils/earths along the Project area. The development of the Project will include the use of groundwater, the construction of several components; such as, temporary laydown areas, warehouse facilities, drainages, wastewater treatment plants (WWTP), pipes from enterprises to WWTPs, pipes from WWTPs to discharging points, access roads, fuel tanks, industrial facilities, among others components, as indicated in Table 4-2 (Section 4).

The combination of such activities is assessed in terms of the different impacts that may occur on receptors, as listed in Table 6-4. For each of these impacts, an assessment of significance is presented in the following subsections.

Table 6-4 Surface Waters and Groundwater Impacts

Project Phase	Description of Impact	Source of Impact	Affected Receptor (s)
Construction	Degradation of water resources and quality (Local streams, Gobouet River,)	<ul style="list-style-type: none"> • Clearance, cut and fill earthworks, levelling and compaction • Waste production storage and handling • Accidental spills, leaks and discharges • Presence of contaminated soils that could be mobilized during construction 	Watercourses within/close to the footprint of the construction areas
	Degradation of groundwater resources and quality (abstraction wells, shallow aquifer)	<ul style="list-style-type: none"> • Waste production storage and handling • Accidental spills, leaks and discharges. 	Groundwater features along the Industrial Zone PK24
Operation	Degradation of water resources and quality	<ul style="list-style-type: none"> • Physical Presence of the Industrial Zone (wastewater discharge from industrial facilities, pipelines, electrical sub-stations) 	Watercourses and groundwater features along the Industrial Zone PK24
	Depletion of the renewable resources of the CT aquifer	<ul style="list-style-type: none"> • The water demand could lead to over pumping with the depletion of the piezometric levels and associated resources 	Groundwater resources along the Industrial Zone PK24 and the CT aquifer to regional scale

After the inclusion of the mitigation measures and the management program is in operation, and assuming the Ivorian regulations and controls are implemented (Environmental Code 96-766 of Côte d'Ivoire) the impacts of the Project are expected to be limited.

These impacts are evaluated separately for each impact category for the construction and operational phases, in line with the methodology presented in Chapter 3 and 6, and in particular to the definitions used for the consideration of impact sensitivity and magnitude for physical receptors (Table 6-1 and Table 6-3).

Construction Phase

The civil works involved in the construction phase has a direct effect on drainage regime and some inland rivers in the Project area (Gobouet River and its tributaries at the northern edge of the Phase 2 polygon). These activities can have an indirect effect on the quality of waters.

During construction, interactions with the surface and groundwater system will be caused due to clearance activities, followed by earthworks, levelling and compaction. Surface water quality degradation will occur where the footprint of the Project and PK24, construction areas and support facilities will directly interfere with local streams and or occasioned by uncontrolled erosion processes. Some small stream (canals) are crossed along the Project area, but in terms of importance and dimensions the Gobouet River and some irrigation channels are the most significant.

The Project makes use of the CT aquifer as a source for groundwater for construction needs. Because of its depth, this aquifer has limited susceptibility to the activities associated to the construction phase. However, the local existence of shallow groundwater levels (associated to Quaternary sediments and not the CT aquifer), which could be directly related to the fluvial network and vulnerable to Project activities, cannot be ruled out. In addition to potential impacts on the quality, this shallow aquifer will be likely affected where deep foundation drilling/excavation will be required especially near the stream that crosses the Project area in the Phase 1 Zone 2 and in the Phase 2 areas. In some areas the link between the Quaternary aquifers and the CT aquifer cannot be excluded, therefore any persistent chemicals as fuels that might contaminate the shallow aquifer will possibly migrate to the deeper CT aquifer.

Impacts on water quality and quantity are considered to be temporary during construction operations and include the following:

Surface Water

- Silty/soiled water from runoff affecting surface water quality in streams;
- Inadequately managed wastewater from cement production (for the Project construction purposes) affecting water quality. Liquid cement (and associated wastewater run-off), due to its high alkalinity and corrosive nature, is highly polluting and can give rise to major fish kills in aquatic environments. The accidental spillage of cement and of fuel, oils and lubricants can have significant water quality consequences on watercourses, aquatic ecology and downstream users;
- Potential use of surface water supply sources to obtain water supply needs for the construction process;
- Potential contamination of surface water sources in the event of intentional or accidental discharges of hazardous materials to the ground during construction, particularly in shallow overburden areas; and
- Potential contamination of surface water sources in the event of inadequate wastewater management (i.e., sewage waters).

Groundwater

- Effluent of temporary dewatering measures (if needed) affecting groundwater quality at discharge location;
- Potential use of groundwater supply sources to obtain water supply needs for the construction process;
- Potential contamination of groundwater aquifers in the event of intentional or accidental discharges of hazardous materials to the ground during construction, particularly in shallow overburden areas; and
- Potential contamination of groundwater aquifers sources in the event of inadequate wastewater management (i.e., sewage waters).

Operation Phase

Every tenant within PK24 including the Project tenants and ARISE intent to use groundwater for their operations, presumably from the CT aquifer. The Continental Terminal (CT) aquifer is the main targeted water source for the Project, which has been exploited by SODECI (Water Distribution Company of Côte d'Ivoire) through several well fields to supply drinking water to the city of Abidjan.

Piped water is to be supplied for Project operations by AGEDI (Agency for the Management and Development of Industrial Infrastructures), extracted through several boreholes located on the southwest part of the PK24. The AGEDI Water Supply is planned to supply 16,000 m³/day for the complete Project IEZ. Five abstraction wells with cumulative flow of 1000 m³/hr have been constructed in the area.

Although proportionally the volume of water extracted for the Project (and for PK24 overall) would be much lower than the city usage, the risks of overexploitation of this resource may be real if new wells are installed in the area.

Operational impacts to surface and groundwater are expected along Project area as follow:

- Direct on drainage regime and some inland rivers in the Project area (Gobouet River at the northern edge of the 940 ha polygon). Indirect on Ebrié Lagoon outside the area of influence (less likely due to distance to site);
- Use of and dependence on groundwater sources to obtain water supply needs for the operational processes, potentially impacting the hydrogeological balance and water availability in the basin; and
- Potential contamination of groundwater aquifers or surface water sources in the event of intentional or accidental discharges of hazardous materials to the ground during operation.

6.2.1.2 Embedded Measures

The embedded measures that will help to minimise the impacts of the Project on surface water and groundwater to as low as possible are summarised in the below:

- During the construction phase, appropriate techniques will be implemented that will incorporate risk assessment before excavation and slope stability requirements to reduce the erosion and the disturbance of drains and streambeds, following the overall measures from the Environmental Management Plans, as further discussed in the Section 7.1;
- Topsoil shall be stockpiled separate from subsoil. Stockpiles shall be located away from drainage lines, shall be protected from rain and wind erosion, and shall not be contaminated;
- All waste will be collected, treated and disposed of in an environmentally sound manner in order to prevent, eliminate or reduce its harmful effects on human health, natural resources, fauna and flora and the quality of the environment;
- Any discharge of wastewater into the receiving environment will comply with the standards in force;
- The requirements contained in the Water Code (Law n° 98-755) to avoid any liquid discharge that may degrade surface water will be complied. These measures must be recorded in an Emergency Preparedness and Response Plan (EPRP), in line with the good practices also proposed by GIIP; such as the General EHS guidelines of International Finance Corporation (IFC 2007) for handling spills of hazardous materials including fuels that will be handled during construction and operational works;
- During construction phase the fuel filling and handling practices will be managed appropriately. No fuelling of vehicles or equipment will take place within excavated areas. If heavy equipment cannot be moved to appropriate fuelling points, an impervious surface (such as a drip-tray) will be used for refuelling this equipment to prevent accidental releases to groundwater aquifers;

- All necessary measures to prevent any form of water pollution during the operations will be implemented;
- Obtain the legal authorisation or declaration prior to taking water from the public hydraulic domain and the construction of hydraulic works (abstraction wells);
- Water intended for human consumption on the ARISE site will comply with the standards of potability set by joint order of the water authority and the Minister of Health. The baseline has identified that water resources in the area are seriously exposed to microbiological contamination; and
- MINHAS (Ministry of Sanitation and Hygiene) will be responsible for the development of drinking water supply infrastructures for the Project.

6.2.1.3 Impact Assessment

As previously in section 6.2.1.1 outlined, there are a number of impacts which may arise during the phases of the Project which can affect surface and groundwater resources, such as damage to freshwater ecosystems through a change in water quality as a result of runoff from the construction site into surface water courses. Large construction sites, if not properly managed and operated, can also lead to impacts on water quality due to intentional or accidental discharges or accidental leaks and spills of liquid cement, fuel oils, lubricants from construction, etc.

Construction Phase

The assessment of the impact on surface and groundwater derived from construction activities of the Project alignment are considered **minor** after the inclusion of the mitigation measures, also because the construction works are not expected to require very large volumes of water for extended periods of time. The key construction activity potentially affecting surface water resources are the earthworks, levelling and compaction, excavations for pipelines installation (water drainage system), as well the generation of liquid effluents and wastes.

Soil movement during land cleaning and preparation, excavations for constructions and other structures

The Project's construction phase will demand a series of activities that will modify the current conditions of the land characteristics, low slope of the land. These activities refer to the cleaning of the area with the removal of vegetation cover, earthworks for the construction of the embankment and opening of access roads, installation of the construction site, excavation of foundations, etc. There are a number of impacts which may arise during the construction phase of the Project which can affect surface and groundwater resources, such as damage to freshwater ecosystems through a change in water quality as a result of runoff from the construction site into surface water courses.

Due to the removal of the vegetation, that currently covers the soil and with the progress of the works, erosion processes may be triggered and material transported to watercourses during rainfall and/or wing effect. Such an occurrence could temporarily modify the quality of its water by increasing turbidity, in addition to contributing to the silting up of water bodies. In any case, these effects tend to occur in the immediate vicinity of the exposed areas, being easily avoided with control measures during the works.

Generation of liquid and oily effluents, solid waste and sanitary sewage

In the installation phase, during the construction routines, the generation of oily waste is expected in the maintenance activities of equipment and heavy vehicles. For this reason, these must be carried out in controlled drainage areas and observing the precautions described in the **Environmental Construction Plan and Program of Waste and Effluent Management**. These areas subject to contamination will be equipped with water and oil separators and decantation boxes, whereby the treated effluents can be reused.

Still during the construction works, until the implantation of the drainage channels has been completed, the drainage flows of rainwater free of contamination will be conducted to the natural drainage lines of the land in the Project vicinity.

Another point of relevance that was considered in the study was the risk of leakage of contaminants that could also cause alteration of the groundwater (CT aquifer). However, this risk is considered lower since the local aquifer is deep. Even so, the Monitoring Program will include its assessment whenever necessary.

There is the potential for accidental release of hazardous materials (hydrocarbon fuels (diesel), lubricating oils, and chemicals) during storage and handling or improper disposal of waste.

Operation Phase

The potential impacts related on surface water during the operational phase are estimated to be of moderate magnitude as its sensitivity is considered high, due to the distance of surface water bodies to the Project area and the continuous discharge of effluents. The sensitivity for groundwater as a receptor is considered to be high (due to the importance for public drinking water supply). Groundwater will be used the main source for water for the Project operations which is why the impact significance on groundwater is expected to be major. Even if the groundwater aquifer targeted by the extraction wells provide a stable supply, the aquifer is estimated to have a high sensitivity on the long term.

Land alteration

After the construction of the Project, extensions of land will be waterproofed due to the implementation of pavements, construction of buildings, etc. The fillings associated to the earthmoving may also imply the suppression of natural rain drainage paths. For these reasons, the permanent modifications established by the implementation of the Project will modify the current pattern of drainage in the area, increasing the speed of rain runoff from the impermeable areas, concentrating and intensifying the flows that will reach the water bodies.

The Project's drainage design encompasses the mitigation of impacts on local drainage systems. However, it should be noted that the basic condition for such mitigation must promote the improvement of drainage conditions throughout the Gobouet River basin, to enable the receipt of part of the stormwater discharges from the Project.

Generation of liquid effluents, solid waste and sanitary sewage

In the operation phase of the Project, the possible impact on water bodies is associated with the routing of storm drainage according to the drainage system designed for the Project. Handling of chemical products, waste from wastewater treatment plant (WWTP) and sewage treatment (once decided to be constructed on the Project area) are aspects that can cause impacts of accidental pollution of the soil and groundwater, as well as the generation of liquid effluents to be discharged to the water bodies. In addition, waste collection and transport activities from treatment units are also aspects with potential for accidental contamination. However, at the moment of developing this Report the decision was not yet taken to construct a Project specific WWTP for ARISE and future tenants of 429 ha needs. Thus, further impact assessment studies are required once decision will be taken and technical details of the WWTP will be available.

Furthermore, there is the potential for accidental release of hazardous materials (hydrocarbon fuels (diesel), lubricating oils, and chemicals) during storage and handling or improper disposal of waste.

Groundwater demand

The main water resource in the area is groundwater, which is intensively used in the Abidjan area. Therefore, during operational phase the sustainability of water supply is highly dependent on how resources are managed. As a consequence of the water use during operation there is a risk of impacting the hydrogeological balance and water availability in the aquifer.

No official register of groundwater wells were available to the ESIA team, so there is no accurate information available on the exact number of these in the Project area. The available information does not allow a quantification of the trend of the level of the aquifer and the future variation of the water table in different water periods due to the pumping.

The results from the hydrology and hydrogeology impact assessment are summarised in Table 6-5.

Table 6-5 Hydrology and Hydrogeology Impact Assessment

Project phase	Source of impact		Environmental component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
Development & construction phase	Soil movement during land cleaning and preparation, excavations for constructions and other structures	Expert judgment	Hydrology & Hydrogeology	Direct	Negative	Medium	Local	Short	Moderate	Construction activities may impact surround streams and wetland
	Use of liquid and oily effluents, solid waste and sanitary sewage	Expert judgment	Hydrology & Hydrogeology	Direct	Negative	Low	Local	Short	Minor	Construction activities may impact surround streams and wetland
Operation phase	Land alteration	Expert judgment	Hydrology	Direct	Negative	Low	Local	Long	Moderate	Paving areas may impact the surface runoff regime
	Generation of liquid effluents, solid waste and sanitary sewage	Expert judgment	Hydrology & Hydrogeology	Direct	Negative	Medium	Local	Long	Moderate	Continues discharge of effluents to the water bodies and accidental leaks may impact shallow groundwater and surround streams and wetland
	Groundwater demand	Expert judgment	Hydrogeology	Direct	Negative	High	Regional	Long	Major	The water demand could lead to over pumping with the abatement of the piezometric levels and associated resources

6.2.2 Air Quality

The baseline study has shown the airshed in the Project area is not degraded for NO₂, but is degraded for particulate matter (PM₁₀ and PM_{2.5}). The potential human receptors are of medium sensitivity.

6.2.2.1 Potential impacts

Construction phase

The potential impacts associated with the construction phase of the Project are listed below:

- Construction dust: the construction activities can lead to emissions of dust;
- Construction traffic: Project construction can generate traffic on nearby roads and thereby associated combustion emissions and dust level raising; and
- Mobile plant and on-site power generation: Project construction associated combustion emissions potentially might occur due to diesel generators used.

The potential dust impacts due to construction are assessed and recommendations are made for appropriate mitigation as necessary. As the construction traffic volumes are not known, screening criteria are provided above which mitigation for road traffic should be considered. Emissions and impacts for onsite plant are typically negligible at nearby receptors, and these are not further considered in detail. The nearest sensitive human and environmental receptors which may be impacted by construction activities are:

- The closest dwellings, including schools and churches, are located within 2 km southwest and 3 km northwest from the Project;
- The Gobouet River is located at the northern edge of the Project; and
- The rubber plantation which can be affected by the dust from the Project.

Operational Phase

The potential impacts associated with the operational phase of the Project are:

- Operational traffic: the Project will attract increased traffic and generate vehicular related emissions; and
- Process emissions: the Project might use diesel generators occasionally for power production in cases of emergency or power shortcuts in the grid, which will generate air emission. Further emissions from the industries that are going to be settled in the Project 429 ha IEZ are not known at this stage, thus their potential impacts are not assessed in this report. Each new tenant in the IEZ will be obliged to obtain their own environmental permits, including limits on air pollutants, as appropriate per the Ivorian environmental regulations and standards.

Embedded Mitigation Measures

The following embedded mitigation measures are included in the Project design:

- Construction phase: The Project will require measures to be adopted for the control of dust during the construction phase, as set out in Section 7.1.2. Construction projects are always undertaken with some mitigation, and these measures are therefore considered to be embedded.
- Operational Phase: Combustion sources will meet the relevant IFC emission limits.

6.2.2.2 Impact Assessment

Determination of Significance

The significance of impacts is determined based upon guidelines set out by the IFC. The IFC Environmental, Health, and Safety (EHS) Guidelines are relevant in terms of understanding the Project impacts. The guideline states:

“Projects with significant sources of air emissions, and potential for significant impacts to ambient air quality, should prevent or minimise impacts by ensuring that:

Emissions do not result in pollutant concentrations that reach or exceed relevant ambient quality guidelines and standards by applying national legislated standards, or in their absence, the current WHO Air Quality Guidelines;

Emissions do not contribute a significant portion to the attainment of relevant ambient air quality guidelines or standards. As a general rule, this Guideline suggests 25 percent of the applicable air quality standards to allow additional, future sustainable development in the same airshed.”

An airshed is an area that shares a common flow of air and that is exposed to the same conditions which may become uniformly polluted or stagnant.

The baseline data analyse showed that the dust AQS in the Project AoI are largely exceeding for the PM₁₀ and PM_{2.5} parameters. Thus, considering this contextual environment the impact assessment were conducted in the sections below.

Construction Phase Assessment

The construction phase assessment of development considers the following aspects:

- Construction dust; and
- Construction traffic.

The impacts from these activities are assessed on a semi-quantitative basis as impacts are typically not significant or can be mitigated to the point at which residual impacts are negligible.

Construction Dust

The process for the air quality assessment for construction dust impacts is based on the methodology shown in Figure 6-4. The method indicates the key steps in determining the significance of dust generation. Construction phase data was provided by ARISE (where possible). It should be noted that the Project is within an existing 940 ha PK24 IEZ and construction works on the some areas of the 940 ha IEZ have already commenced. It is understood that the access road into the Project is already partly paved, however the internal roads within the Project remit (during construction) are unpaved or still not available.

The magnitude of dust generation was determined by the following:

- Earthworks expected to be > 50 ha (estimated)²⁰⁷;
- Estimated number of vehicles on the internal unpaved roads is more than 10 per day;
- Material volume handling likely to be more than 500 000m³ (estimated)²⁰⁷; and
- The airshed is considered degraded for PM₁₀ and PM_{2.5} both in the wet and dry seasons.

On the basis of the above parameters the construction phase dust and PM₁₀ and PM_{2.5} generation is determined to be of *large* magnitude (having the potential to exceed dust and PM₁₀ and PM_{2.5} AQS).

²⁰⁷ The estimated values are based on the size of the Project area (i.e., 429 ha), and guidance from IAQM (2014) Assessment of dust from demolition and construction, Institute of Air Quality Management.

Therefore, this impact is considered to be of **major** significance. The receptor profile can be described as being of medium sensitivity (general population).

Mitigation measures are outlined in Section 7.1.2. An **Air Quality Management Procedure** will also be required within the construction **Occupational Health, Safety Plan** which should include construction phase dust management commitments.

With correct implementation of the required dust mitigation, the residual impacts could be negligible.

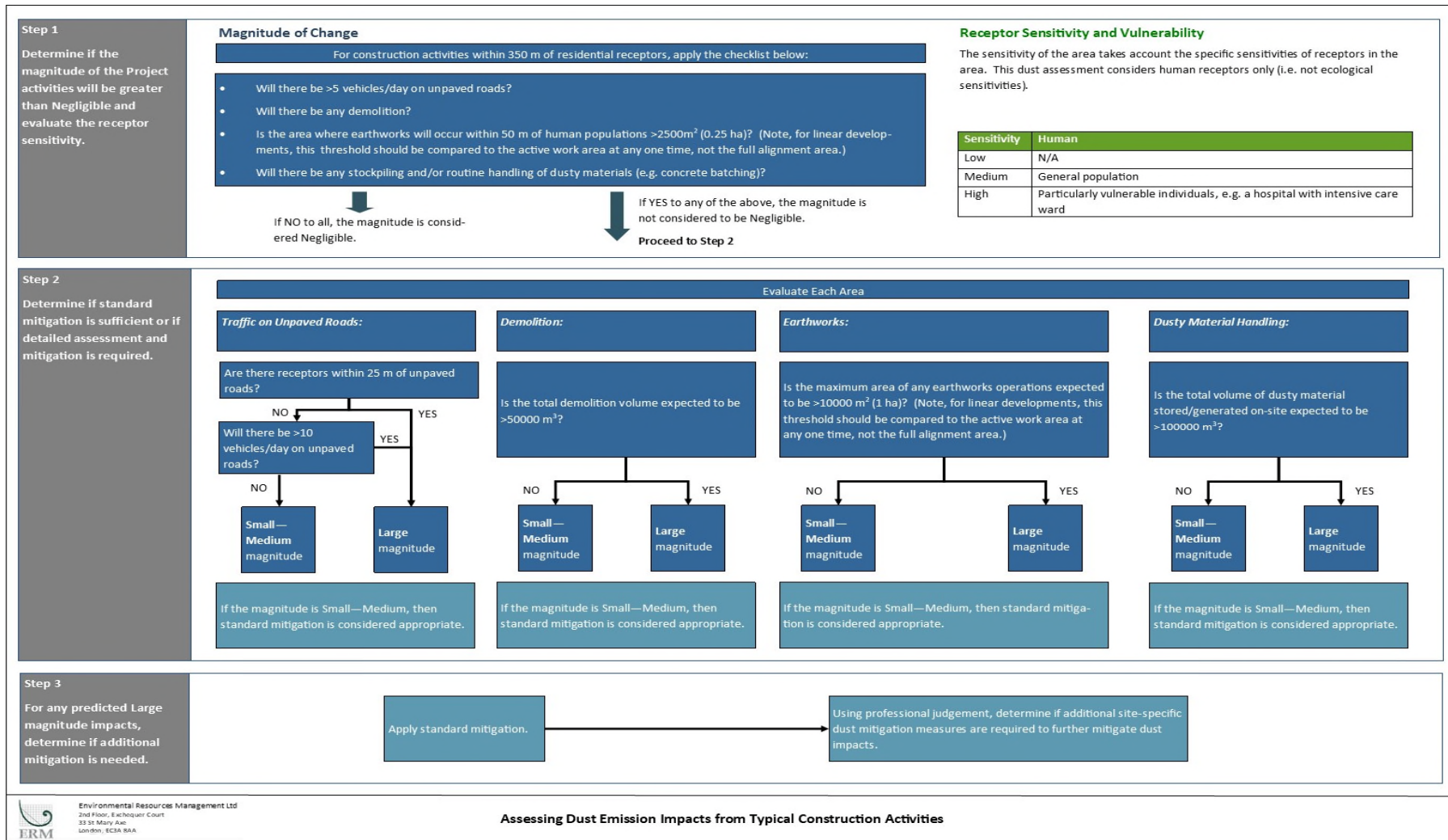


Figure 6-4 Infographic for Air Quality Assessment of Dust

Construction Traffic

The process for the air quality assessment for traffic-related impacts is based on the methodology as shown in the infographic Figure 6-5.

The screening method is based upon the UK Highways Agency Design Manual for Roads and Bridges (DMRB) and IFC guidelines adapted for the traffic fleet likely to be in place in Côte d'Ivoire. DMRB is a semi-quantitative method that utilises traffic emission factors, and a dispersion factors derived from ADMS-Roads model for a typical road to estimate roadside concentrations at increments away from the roadside. This approach provided a set of traffic screening criteria corresponding to thresholds for Minor, Moderate and Major Impacts. These screening thresholds can be used in the future to identify the potential for significant impacts to arise. This approach is proposed as it does not rely upon traffic flow data which is not available, or detailed modelling which will be highly uncertain. As traffic flows associated with the Project are unknown, at this stage the significance of traffic related impacts cannot be determined.

When the amount of traffic is known, this needs to be compared to these thresholds and in the case of moderate or major impacts, mitigation needs to be considered.

It should be noted that this method applies to road traffic exhaust emissions. Dust emissions from vehicle operation on unpaved roads is covered in the section above on construction dust.

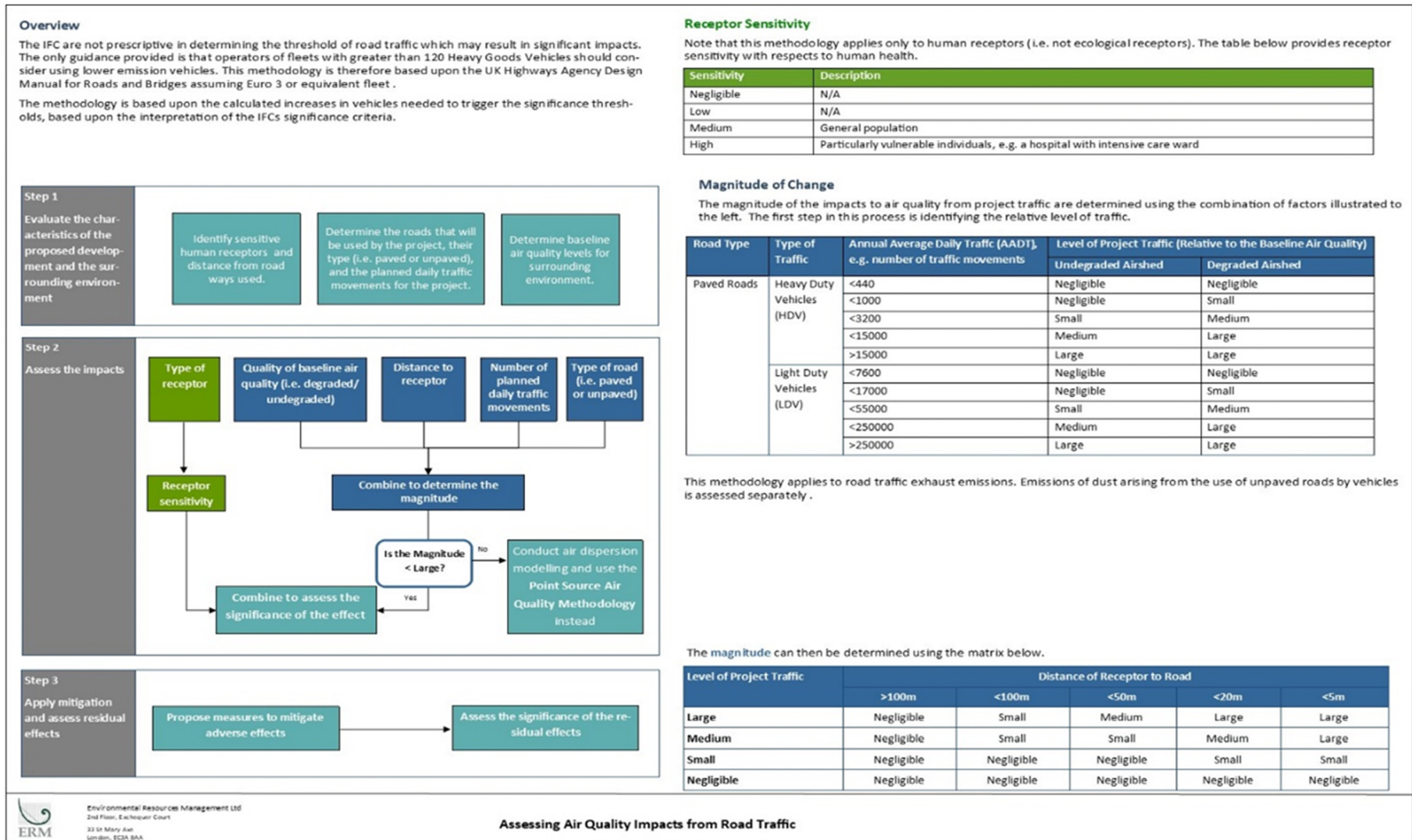


Figure 6-5 Traffic infographic for Air Quality Assessment

Operational Phase

Operating basic infrastructure

As noted, the diesel generator emissions were excluded from further consideration as the generator(s) will operate solely as standby energy supply for lighting and during emergency or power cuts and for other basic infrastructure within this Project.

The operational phase impact of the Project is deemed to be negligible for the operation of the basic infrastructure of the IEZ itself, considering the embedded mitigation. This result is not necessarily indicative of the entire PK24 IEZ. During the permitting process for the industries that will settle in the Project 429 ha, it is understood that a cumulative assessment of the potential impacts will be undertaken to ensure AQS are not exceeded. Each tenant/industrial facility within the IEZ will be responsible for their own permitting procedures/approvals – ARISE will have no responsibility for this.

Traffic during Operation

There is no information on the likely amount of traffic that will be generated by the Project activities. Therefore, the thresholds are provided in Figure 6-5 from which significance, and therefore need for mitigation, can be determined once there is traffic data.

The screening method used for the operation phase assessment is similar to the one discussed for the construction phase (refer to the section above for more information). It should be noted that this method applies to road traffic exhaust emissions. Dust emissions from vehicle operation on unpaved roads is covered in the section above on operational dust. When the amount of traffic is known, this needs to be compared to these thresholds and in the case of moderate or major impacts, mitigation needs to be considered.

As traffic flows associated with the Project are unknown, at this stage the significance of traffic related impacts cannot be determined precisely. However, based on the projected Project activities during the operation phase, it is estimated that the impact from the Project traffic (e.g., servicing basic infrastructure of the Project IEZ) is minor.

Summary of Impact Assessment

A summary of the predicted Air Quality impacts is set out in Table 6-6. Additional mitigation measures for identified potential impacts, as deemed necessary, are outlined in Section 7.1.2 of the mitigation Chapter 7. Measures should be implemented during both the construction and operational stages, in order to effectively address the potential impacts.

Table 6-6 Air Quality Impact Assessment

Project phase	Source of impact		Environmental component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
Development & construction phase	Dust generation from construction activities	See Figure 6-4	Air Quality	Direct	Negative	Medium	Regional	Medium	Moderate	If unmitigated, dust emissions will be polluting the area and add to already dusty air.
	Road vehicles and on unpaved roads and surfaces	See Figure 6-5	Air Quality	Direct	Negative	Low	Local	Medium	Moderate	Due to absence of traffic data, detailed assessment cannot be undertaken. However, estimated higher traffic within the Project area
Operation phase	Operation of facilities	See Figure 6-4	Air Quality	Direct	Negative	Low	Regional	Long	Moderate	It is expected limited air emissions from basic infrastructure of the IEZ.
	Road vehicles	See Figure 6-5	Air Quality	Direct	Negative	Low	Occasional	Long	Minor	Due to absence of traffic data, detailed assessment cannot be undertaken. However, estimated small number of vehicles for limited time
Closure or rehabilitation phase	Dust from demolition activities and traffic accessing the site. Mitigation are similar to the construction phase for dust.									

6.2.3 Noise

6.2.3.1 Introduction

This chapter provides the impact assessment of the noise as part of the ESIA for the construction and operation of the Project. The assessment makes use of Ivorian standards and guidelines and those issued by the IFC/ WB EHS Guidelines to assess the significance of potential impacts (refer to Chapter 2).

During the construction phase, the noise sources related to the Project are primarily the construction equipment, including e.g. heavy vehicles, air compressors and the power generators. During the operations phase, potential noise impacts from the basic infrastructure in the IEZ (i.e., the Project) are anticipated to be negligible. Therefore, this noise assessment will focus only the potential impacts during the construction of the Project. (Aside from these Project-level considerations, in future each new development (i.e., tenant) within the Project IEZ will need to undertake a detailed noise impact assessment of their own operations and undertake appropriate mitigation as needed).

6.2.3.2 Noise Criteria

This subsection presents the approach taken to develop Project-specific noise criteria adopted for the noise impact assessment, per the relevant standards and guidelines (refer to section 2.4.2).

The Côte d'Ivoire Ministry of the Environment noise guidance defines noise limits with different time periods. However, the guidance does not define the times and duration of the assessment periods. Hence guidance is obtained from the IFC EHS Guidelines 1.7 Noise (IFC, 2007)²⁰⁸ where the daytime period is defined as 7:00 am to 10:00 pm and night-time period from 10:00 pm to 7:00 am. IFC guidance does not define an evening or "periode intermediaire" (as Ivorian regulation does). WHO Community Noise Guidance (Part 4)²⁰⁹ does provide a separate time base for the evening period alone, but it refers to "the time base for LAeq for "daytime" and "night-time" is 16 hours and 8 hours, respectively" and that "guideline values for the evening period to be 5 – 10 dB lower than for a 12-hour daytime period". Hence given that the night-time period should be of 9 hours duration, it is reasonable to conclude that the daytime is 11 hours and the evening period is of 4 hours duration. Therefore, the following period definitions and noise criteria outlined in Table 6-7 form the basis of this assessment for the Project for the operation phase.

Table 6-7 Summary of Noise Criteria and Period Definitions

Receptor	Environmental Noise Limit (dBA)		
	Daytime Jour 07:00 – 18:00	Evening Periode Intermediaire 18:00 – 22:00	Night Nuit 22:00 – 07:00
Urban residential areas, with some workshops or business centres, or with considerable land, river, or air traffic junctions or in rural communities and in the surrounding villages	60	55	45

As the construction activities generally expected to produce more noise, for construction phase, the above mentioned daytime noise criteria of 60 dB(A) is substituted by 65 dB(A) at façade, as per BS

²⁰⁸ Available at: <https://www.ifc.org/wps/wcm/connect/4a4db1c5-ee97-43ba-99dd-8b120b22ea32/1-7%2BNoise.pdf?MOD=AJPERES&CVID=nPtgwZY>

²⁰⁹ Berglund, Birgitta, Lindvall, Thomas, Schwela, Dietrich H & World Health Organization. Occupational and Environmental Health Team. (1999). Guidelines for community noise. World Health Organization. <https://apps.who.int/iris/handle/10665/66217>

5228²¹⁰. It is generally accepted that reflections from the surface will increase the measured noise levels by around 3 dB compared to free-field levels, i.e., free-field levels = facade levels – 3 dB, therefore the construction noise criterion for daytime is 62 dB free field.

6.2.3.3 Impact Significance

Noise impact assessment standards and guidelines generally give threshold levels that have the potential to create nuisance or disturbance. In addition, typical noise impact assessment methodologies require an approach that combines impact magnitude with receptor sensitivity to determine impact significance.

Construction noise levels above the criterion are considered to be Medium or above, whilst construction noise levels which do not exceed the criterion are considered to be Small or below. This is summarised in Table 6-8.

Table 6-8 Magnitude of Noise Impacts from Construction Activities

Magnitude	Day-time Noise Level, L_{Aeq} (dB)
Minor (Negligible)	< 62
Minor	62-67
Moderate	67 - 72
Major	> 72

The meaning of the four impact significance ratings used in Table 6-3 and Table 6-8 , in the context of a noise impact assessment, is as follows:

Negligible – no detectable effects, no need to consider in decision making, no mitigation required;

Minor – the effect may be detectable, but small enough that noise management measures would ensure impacts are reduced to be Negligible;

Moderate – a detectable effect, an impact that is significant, noise management practices and/or mitigation should be considered. Mitigation is likely to affect design and cost;

Major – a detectable effect, an impact that is significant, noise management practices and mitigation must be considered. Mitigation will alter project design and cost. Impacts are undesirable if not addressed.

Hence, impacts rated as *Moderate* or above will be mitigated where practicable, feasible and reasonable, with proportionately more emphasis as the rating increases. These criteria will provide the basis for developing performance standards and acoustic specifications for the Project. Mitigation might not eliminate an impact but would be expected to reduce its severity.

6.2.3.4 Noise Modelling Methodology

Construction Phase

The overall duration of the construction period is anticipated to be approximately 48 months. At the time of the assessment details regarding the duration of each construction activity were provided. Information regarding the number of each type of equipment that will be used for each activity were not available; therefore, modelling of noise impact from construction of the Project is calculated based on a typical construction scenario where a construction team is working on a site on flat terrain without any noise shielding effects from topography. This results in a worst-case (conservative) assessment of noise impacts. This scenario is sufficient to calculate noise levels at various distances from the Project, and to calculate noise impacts at receptors from the construction activity. Construction will

²¹⁰ BS 5228-2:2009 + A1:2014 Code of practice for noise and vibration control on construction and open sites.

take place only during daytime. This scenario has been assumed that is applying to the entire Project area.

The construction activity of earthworks and site clearance has been assumed to have the greatest noise emissions. The determination of the source noise levels is based on the type and maximum number of equipment active for is shown in Table 6-9. The sound power levels have been derived by the BS 5228 database. The total sound power level of the activity is estimated to be 115 dB.

Table 6-9 Equipment Sound Power Levels - Construction

Equipment	Number	Reference	% of time	Sound Power Level dB(A)
Backhoe	2	C.2.8	70	95
Bulldozer	2	C.2.11	70	108
Excavator	2	C.4.12	60	105
Wheel Loader	2	C.4.13	80	98
Dump Truck	3	Av C.6.21 & 23	50	109
Roller	1	D.3.116	50	106
Grader	1	C.5.35	50	103
Total				115

The Project covers an area of 429 ha; it has been assumed that all the noisy equipment will be located in area of 50 by 50 meters and will be moving linearly along within the Project area.

Construction traffic details such as traffic flows and routes were not available at the time of the assessment. During the Project construction phase, the Autoroute du Nord will be used for access to the site. It is anticipated that the increase of traffic flow due to construction traffic will be insignificant along the Autoroute du Nord, and therefore negligible impacts are anticipated due to construction traffic.

Operation Phase

During Project operations, the only noise sources related to this study are the air compressors that might be used during emergency repair works and the power generators during power cuts. The operation is expected to have a minimal impact on noise levels, but further developments within the Project 429 ha will require a thorough evaluation of their potential noise impacts.

Predictive Noise Modelling

A reputable noise modelling software package (Brüel & Kjær's Predictor 7810 (Version 2022.11)) was utilised to calculate noise emissions from the construction of the Project and based on ISO 9613-2:1996 (ISO9613:2) - Acoustics - Attenuation of Sound during Propagation Outdoors - Part 2: General Method of Calculation noise propagation algorithms (international method for general purpose, 1/1 octaves). The inputs and assumptions used in the predictive noise modelling are outlined below:

- The noise sources are represented by an area source;
- Ground factor of 0.5 was applied for the study area, 0 is acoustically hard or reflective, 1.0 is soft);
- Temperature 20°C;
- Relative humidity of 60 %.

All noise levels were predicted at a height of 4 m, presented in decibels as dB(A) and rounded to the nearest whole integer or decimal place where necessary. All Sound Pressure Levels (LP) values are

expressed as dB(A) re: 2 x 10⁻⁵ Pascals (Pa) and all Sound Power Level (LW) values are expressed as dB(A) re: 10⁻¹² Watts (W).

6.2.3.5 Results

The distances at which the relevant criteria will be met due to construction activities are presented in Table 6-10.

Table 6-10 Predicted levels vs Distance

Predicted Noise Level in dB(A) free field	Distance in metres
72	20
67	55
62	115

At the present Project location, all receptors are located at distances significantly greater than 115 m. Moreover, the nearest residential receptors are a couple of isolated houses located approximately 800 m from the northeast boundaries of the Project and just west of the Palmafrigue V2. Other residential receptors are located in Allokoi, Akoupé-Zeudji and Attinguié; however, all of these receptors are located at distances greater than 900 m. Noise impacts to human residential receptors are thus estimated to be negligible during the construction phase of the Project.

Summary of Impact Assessment

A summary of the predicted Noise impacts is set out in Table 6-11. Additional mitigation measures for impacts, if required, are detailed in Section 7.1.3 of the mitigation Chapter 7. It is acknowledged that the construction and operational phase are considered to have minor potential impacts, thus any additional measures implemented would be considered a desirable enhancement

Table 6-11 Noise Impact Assessment

Project phase	Source of impact		Environmental component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
Construction phase	Construction equipment and generators	See Table 6-8	Noise	Direct	Negative	Low	Local	Short	Minor	All receptors are located at distances at which noise levels from construction will be negligible
Operation phase	Operational Activities	See Table 6-7	Noise	Direct	Negative	Low	Local	Occasional	Minor	All receptors are located at distances at which noise levels from construction will be negligible.
Closure or rehabilitation phase	The closure of the Project will have an impact on noise level due to emissions from demolishing equipment and works. This assessment has not been undertaken in the absence of closure data. However, it is anticipated that impact significance will be similar to construction phase.									

6.2.4 Resources and Waste

6.2.4.1 Potential Impact

Construction Phase

The Project will require the use of aggregates (sand, gravel), cement, asphalt, fuel (diesel, petrol). These are planned to be sourced locally.

Operation Phase

Sources of waste generation during operation will include typical wastes from routine maintenance of equipment and upkeep of the properties (e.g., empty containers of lubricants, oils, paints, rags, cardboard, office trash).

6.2.4.2 Embedded Measures

The following embedded measures relating to resources and waste are considered:

Construction Phase

■ Hazardous Materials Management Plan:

- Procedures for handling and storage of hazardous materials in accordance with manufacturer's instructions;
- Register of hazardous materials and identification of dangers posed by hazardous materials within the Project site;
- Storage of fuels, oils and hazardous materials on a suitably sized impervious and bunded base and use of drip trays for fuelling;
- Training of on-site personnel on the presence, handling, transport and disposal of hazardous materials and on emergency response management;
- Provision of personal protective equipment (PPE) to staff who are required to handle certain chemicals;
- Protect public from major hazards associated with hazardous materials incidents or process failure, as well as nuisance issues related to noise, odours, or other emissions.

■ Waste Management Plan:

- Application of waste hierarchy to avoid, segregate, re-use, recycle wastes as much as possible and as last option safely dispose wastes;
- Training of construction staff to ensure safe management of all types of waste preventing harm to themselves, the environment and the public;
- Collection and segregation of waste according to its type, whether it is re-usable, recyclable, non-hazardous or hazardous waste;
- Storage of wastes according to international best practice (IFC EHS General Guideline).
- Use and labelling of designated waste collection containers and storage areas for different kinds of wastes (hazardous and non-hazardous);
- Re-use of excavated soils in the Project area as far as possible and seeking alternative uses for surplus spoil where practicable (e.g., landscaping and earth works for other projects) to minimise the requirements for off-site disposal;

- Transport and dispose wastes at licenced waste management sites; prior to selection a due diligence review will be undertaken to understand if the sites are materially compliant with Ivorian requirements;

Operation Phase

- Development of a Waste Management Plan available to all staff at operational areas, showing where different types of wastes can be deposited; Application of reuse/recycling methods to minimise solid waste generation;
- Labelling solid waste containers according to the waste to be disposed in it. Proper labelling will also prevent any hazardous waste to be disposed together with non-hazardous solid wastes;
- Regular inspections of trash-collection sites to ensure facilities are correctly used and are kept clean and tidy; Prevention of disposal of solid waste outside the designated sites and into any surface or groundwater source, or any other location that would potentially affect the environment and human settlements;
- Maintaining full records of the type, quantity, composition, origin, disposal destination and method of transport for all wastes via licensed contractors; and
- Using certified/licensed facilities for final disposal of solid wastes, which cannot be reused/recycled.

6.2.4.3 Impact Assessment

Construction Phase Assessment

The capacity of existing commercial quarries located in/near Abidjan is assumed to be adequate to cater to the aggregate requirements (mainly sand, gravel, perhaps fill material) of the Project construction works. However, in case ARISE decides not to use an existing quarry but to open up a new one, the application and approval procedures for acquiring a quarry license will be in line with Ivorian regulations. In addition to local compliance, Environmental, Health and Safety (EHS) considerations will need to be taken into account in the due diligence and the selection of appropriate quarry sites and access routes in line with IFC General EHS Guidelines²¹¹ as well as guidelines for IFC EHS Guidelines for Construction Materials Extraction²¹².

In case the Project activities result with net surplus material, priority will be given to reusing the surplus material to reinstate the borrow pits (if any) – or to providing the excess material as fill for other construction projects in the vicinity. In case this option is not applicable, ARISE will use dumpsites to store the surplus material and implement the Design Change Management Procedure during the selection and approval process to comply with Project E&S requirements.

Other typical construction wastes will be stored temporarily onsite in appropriate containers and then transferred to and disposed of (or treated) via licensed waste facilities located in vicinity of the Project. The waste facilities used during construction will be selected by ARISE. The wastes that will be generated during the construction process include:

- Recyclable wastes: waste metals, plastics, cables, glass, paper (packaging material, clean air filters, clean containers, drums bins, crushed stone);
- Wastewater from temporary laydown areas and other Project construction sites;
- Non-hazardous waste from construction (scrap metal, slightly contaminated discarded material);
- Hazardous waste (chemicals, additives, paints) generated from use of hazardous materials;

²¹¹ IFC (2007). IFC General EHS Guidelines

²¹² IFC (2007). IFC EHS Guidelines for Construction Materials Extraction

- Machinery operation and maintenance related wastes (machinery parts replacement, used filters, etc.);
- Waste generated from concrete batch plant and asphalt plant (if own plants) and painting operations (wastewater, sludge, spent paint);
- Lubricants and oil from lorries or mechanical part of storage tanks;
- Medical waste; and
- Waste batteries and accumulators.

Operational Phase Assessment

The main waste source during the operational phase of the Project is from routine maintenance of equipment and upkeep of the properties, more specifically from:

- Outdated and damaged accumulators;
- Oil filters of vehicles, etc.;
- Used rubber tires;
- Welding electrodes;
- Luminescent lamps; and
- In the case of accidental spill of oil, soil polluted with petroleum hydrocarbons.

Potential impacts from these wastes have been already considered in the Embedded Controls and will be mitigated according to Ivorian regulations and GIIP.

Summary of Impact Assessment

A summary of the predicted Resource and Waste impacts is set out in Table 6-12. Additional mitigation measures for impacts, if required, are detailed in Section 7.1.4 of the mitigation Chapter 7. The majority of the mitigation efforts will be focused on the construction phase. It is acknowledged that the operational phase is considered to have minor potential impacts, thus any additional measures implemented would be considered a desirable enhancement.

Table 6-12 Resources and Waste Impact Assessment

Project phase	Source of impact		Environment al component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
Development & construction phase	Construction works & excavations	Resources required throughout construction duration	Resources and Waste	Direct	Negative	Medium	Regional	Short	Moderate	Risk for environment from improper managed/stored waste.
Operation phase	Routine maintenance of equipment and upkeep of the properties	Resources required throughout operation duration	Resources and Waste	Direct	Negative	Low	Regional	Short	Minor	Risk for environment from improper managed/stored waste.
Closure or rehabilitation phase	The closure of the Project will generate waste from the demolishing of the buildings and facilities. However, this assessment has not been undertaken in the absence of closure data.									

6.3 Biological Resources and Receptors

This section describes the Biological Resources and Receptors that were scoped in for the impact assessment during the scoping phase of the Project (refer to Appendix B). For each topic the relevant potential impacts are described and an assessment made of the impact significance.

6.3.1 Potential Impact

The Project is embedded within the larger PK24 area, where some industries are already being developed or established. As such, large sections of the AoI are already affected and degraded in terms of the ecological setting. Many of the anticipated threats associated with noise, for example due to moving vehicles and artificial light from vehicles, are already existing. Species remaining in the area are thus assumed to have already a certain degree of adaption to the existing human pressures; similarly, any highly-sensitive and less-adaptive species have presumably left the area.

Construction Phase

The potential impacts associated with the construction phase of the Project are:

- Habitat loss, degradation and fragmentation within the Project area;
- Loss of flora from vegetation clearance;
- Loss of fauna due to direct loss or injury from vehicle or machinery strike or as a result of poaching by Project staff;
- Disturbance and displacement of fauna;
- Introduction of invasive species; and
- Loss of (access to) ecosystem services.

On this basis, the ESIA focusses on potential impacts on biodiversity due to construction and makes recommendations for appropriate mitigation as necessary.

Operational Phase

The potential impacts associated with the construction phase of the Project are:

- Accidental loss of fauna; and
- Displacement of fauna species.

The major threat is expected to be associated with construction: Noise levels are expected to be higher and vegetation will be cleared, among other prominent disturbances. These activities are expected to potentially cause extra stress to biodiversity resources.

6.3.2 Construction Phase Assessment

6.3.2.1 Habitat Loss, Degradation and Fragmentation

There are a number of activities during the construction phase that can result in the damage, fragmentation and loss of habitats: vegetation clearance, soil and rock excavations, borrow pits and quarries and (potential) pesticide use.

The majority of habitat in the Project area is degraded land, which supports very low biodiversity and is considered to be of low sensitivity.

In addition, one marshy area, apparently degraded, was identified in the northern corner of the Project area (i.e., Phase 2) and continued along the plot edge towards the southwest (northern edge of Phase 2). The sensitivity/importance of this area is presumed to be relatively low considering the regular human presence, use of surface water, extraction of resources (bamboo) and the presence of

waste. Although the site visits did not confirm this, as per information from the local biodiversity expert, the area would be suitable for white-bellied pangolins (*Phataginus tricuspis*, EN). Conservatively, this wetland can thus be considered as of medium sensitivity.

6.3.2.2 Loss of Flora and Fauna

Flora species will be directly affected from the construction of the industrial area through vegetation removal, earthworks and potential application of herbicides.

One species, the yellow iroko (*Milicia regia*, VU) was identified in the area, with several specimens present in Phase 1 and Phase 2 of the Project area. This threatened species can be considered as of medium-high sensitivity.

The remaining flora found in the Project area is considered common and not threatened. Therefore, it can be considered of low sensitivity.

In addition, vegetation clearance activities can result in indirect loss of fauna by habitat degradation and direct by vehicle and machinery collisions. Illegal hunting and poaching by Project staff are also a potential direct risk to fauna.

No protected/vulnerable fauna species were observed in the field or are known to the local biodiversity specialist. The species identified or likely to occur on such modified habitats are generally common in the region and considered to have low sensitivity. It is worth noticing that, despite the fact that no threatened fauna was found during the site visits, as per the local biodiversity specialist, the wetland to the north of the Aol is a likely potential habitat for the threatened, white-bellied pangolin (*Phataginus tricuspis*, EN) and this species is of high sensitivity.

6.3.2.3 Disturbance and Displacement of Fauna

Construction activities can directly and indirectly cause disturbance to species of fauna, due in most of the cases to the presence and activity of the machinery.

All species, which are generally common in the region, are considered to have low sensitivity. Although not observed during the field visits, the presence of white bellied pangolins cannot be ruled out in the wetland (located in the Phase 2 of the Project) of the Aol. This species can be considered of high sensitivity.

6.3.2.4 Introduction of Invasive species

Clearance of vegetation from sections of the Project area, as well as the movement of people and vehicles along the Project area during construction and operation may result in the spread of invasive species into new areas. Invasive alien species may replace of native flora and alter habitats. In general terms, invasive species are capable of establishing themselves in degraded environments such as roadsides, borrow pits, or abandoned fields or construction areas. The Aol is for the most part affected by human activities such as agriculture, industrial developments, roads, etc. As such, the area is less prone to new alien species as it is likely already affected by their presence to some degree, and it is considered to be of low sensitivity.

6.3.3 Operation Phase Assessment

6.3.3.1 Loss of Fauna

The operation of the industrial zone will likely increase the encounters of fauna with machinery and moving vehicles, crossing internal roads, and resulting not only in risks to the staff but also in fauna loss getting run over by the vehicles. This can affect to all the different groups of fauna. However, some groups of fauna will be more affected than others.

Only one endangered species in the Aol is potentially found to be threatened, namely the white-bellied pangolin (*Phataginus tricuspis*, EN). This species is of **high sensitivity** and has adequate

habitat in the wetland on the north part of the Phase 2 of the Project. Its presence is not confirmed, however, general mitigation measures are suggested to avoid any potential impacts in that particular area.

6.3.3.2 Displacement of Fauna

With the development of the industrial area, it is expected that human pressures such as noise and vibration, vehicle, and pedestrian presence within and around the area will increase. Such nuisances to fauna can result in the fleeing of the area by local fauna. In addition, the Project can be accessed via several access roads within PK24 (some already built, some under construction, and others are only planned, refer to Section 4.3) that will contribute to the barrier effect created by the area and to habitat fragmentation, limiting animal movement and the isolation of their populations. These factors are linked with the species populations dynamic and can influence in the survival of threaten species. This is not the expected scenario in the Project Aol, as the landscape is already profoundly modified on most of its surface. As more preserved forest patches exist to the north of Phase 2, specially around the wetland, measures to preserve connectivity in this area will be provided.

6.3.3.3 Summary of Biological Impacts

A summary of the predicted Biological impacts is set out in Table 6-13. Additional mitigation measures for identified potential impacts, as deemed necessary, are outlined in Section 7.2 of the mitigation Chapter 7. Measures should be implemented during both the construction and operational stages, in order to effectively address the potential impacts.

Table 6-13 Biological Impact Assessment

	Activity/ Source of impact		Environmental Component Affected	Nature of Impact		Impact Significance Assessment				Summary of reasoning
	Activity	Criteria		Direct/Indirect	Positive/Negative	Magnitude	Scope	Duration	Impact Significance	
Development & construction phase	Habitat Loss Degradation and Fragmentation due to vegetation clearance, excavations, borrow pits and potential use of pesticides	Biological receptors	Habitats	Direct	Negative	Medium	Local	Long-term	Moderate	The majority of habitat in the Project area is degraded land, which supports very low biodiversity and is considered to be of low sensitivity. In addition, one marshy area, apparently degraded, was identified in the northern corner of the Project area (Phase 2), potentially holding biodiversity values. Conservatively, this wetland can be considered as of medium sensitivity.
	Loss of Flora due to vegetation clearance, earthworks and potential use of pesticides	Biological receptors	Flora	Direct	Negative	Medium	Local	Long-term	Moderate	Most flora found in the area is considered common and not threatened. Therefore, it can be considered of low sensitivity. However, one threatened species, the yellow iroko (<i>Milicia regia</i> , VU) can be considered as of medium-high sensitivity.

	Activity/ Source of impact		Environmental Component Affected	Nature of Impact		Impact Significance Assessment				Summary of reasoning
	Activity	Criteria		Direct/Indirect	Positive/Negative	Magnitude	Scope	Duration	Impact Significance	
	Loss, disturbance, and displacement of Fauna	Biological receptors	Fauna	Direct	Negative	Medium	Local	Long-term	Moderate	All species generally common in the region are considered to have low sensitivity. Although not observed during the field visits, the presence of white bellied pangolins (<i>Phataginus tricuspis</i> , EN) cannot be ruled out in the wetland on Phase 2 of the Aol. This species can be considered of high sensitivity.
	Introduction of invasive species	Biological receptors	Habitats	Direct	Negative	Medium	Local	Long-term	Moderate	The Aol is for the most part affected by human activities such as agriculture, industrial developments, roads, etc. As such, the area less prone to new alien species as it is likely already affected by their presence to some degree, and it is considered to be of low sensitivity.

	Activity/ Source of impact		Environmental Component Affected	Nature of Impact		Impact Significance Assessment				Summary of reasoning
	Activity	Criteria		Direct/Indirect	Positive/Negative	Magnitude	Scope	Duration	Impact Significance	
Operation phase	Loss, disturbance, and displacement of Fauna	Biological receptors	Biological receptors (Flora and Fauna)	Direct	Negative	Medium	Local	Long-term	Moderate	The operation of the industrial zone will likely increase the encounters of fauna with machinery and moving vehicles, crossing internal roads, and resulting not only in risks to the staff but also in fauna loss getting run over by the vehicles. This can affect to all the different groups of fauna. One endangered species is potentially found to in the Aol, the threatened, white-bellied pangolin (<i>Phataginus tricuspis</i> , EN). This species is of high sensitivity.
Closure or rehabilitation phase	The closure and decommissioning of the Project will have a very limited (even unpredictable at the moment) impact on biodiversity. Mitigations are similar to the construction phase for biodiversity.									

6.4 Social Resources and Receptors

This section describes the social resources and receptors that were scoped in for the impact assessment during the scoping phase of the ESIA process (refer to Appendix B). For each applicable topic, a description is given in the sub-sections below of the relevant potential impacts, embedded measures (if available), feedback from the stakeholder meetings and assessment of the impact significance. A summarised table of all assessed topics is presented in section 6.4.7.

6.4.1 Economy and Employment

6.4.1.1 Potential Impacts

The Project is intended to result in increased and improved access to employment, which is expected to have positive impacts on the local economy. The development of the Project IEZ, with numerous tenant companies involved in different manufacturing sectors, will create a wide range of direct and indirect employment opportunities and satellite businesses to support the Project IEZ. The creation of jobs and increased budget revenues will contribute to development of the local villages and the AAD.

Table 6-14 summarises the potentially significant impacts on economy and employment during the construction and operation phases of the Project.

Table 6-14 Potential Impacts on Economy and Employment

Construction Phase	Operation Phase
<ul style="list-style-type: none"> ■ Temporary direct and indirect employment opportunities (mainly unskilled); ■ Temporary economic impacts from taxes and fees, procurement, and worker spending; ■ Long-term benefits from capacity enhancement of local labour through on-the-job and formal training opportunities; ■ Indirect opportunities through the procurement of goods and services, such as food supplies and construction materials 	<ul style="list-style-type: none"> ■ Temporary direct and indirect employment opportunities. ■ Regional economic development and strengthening of local production, transforming local commodities and logistics services into exportable goods and products.

Primary impacts are expected to take place during the construction phase through the creation of temporary employment opportunities and the creation of long-term benefits associated with capacity enhancement of local labour through on-the-job training.

Opportunities for economic development and diversification may also result from the use of local goods and services during the construction phase, in particular through sourcing of significant quantities of construction materials and expenditures associated with the running costs of vehicles (i.e., fuel, lubricants, and additives). It is anticipated that skilled and unskilled roles will be available to local communities during construction. These will be temporary posts and will be advertised in local communities.

The operation phase will also generate longer-term local employment opportunities mainly for the Project operation, management, and maintenance. A team of security guards will also be employed during the construction and operation.

The operation phase will also generate large longer-term local indirect economic opportunities mainly from the employment that will attract the industrial units implanted on the Project area.

Overall, the Project will promote regional economic development and strengthen local production, transforming local commodities and logistics services into exportable goods and products. This will develop the economic basis of the region, improving the socio-economic conditions of the IEZ, and the well-being of the community.

6.4.1.2 Baseline Conditions

Relevant baseline conditions (as described in Section 0) that may potentially influence impacts (and mitigation measures) are summarised as follows:

- The construction sector is a major contributor to Côte d'Ivoire's GDP. Given its labour-intensive nature, the construction sector is one of the major employers in the economy; accounting for 10% of the workforce, making it the third largest source of employment.
- Most workers in Côte d'Ivoire are employed informally (80%); 82 % in the case of men, and 94 % for women. The informal sector in Côte d'Ivoire consists of various small-scale businesses, for example producers, wholesalers, and retailers.²¹³
- About 30 % of the population in the villages in the Aol are migrants from ECOWAS²¹⁴ countries, this is 8 % higher than national rate. Notable also, that Agoussi is primarily populated (80 %, almost four times higher than national rate) by immigrants from ECOWAS countries, and the percentage of immigrants is also high in Anguédédou (60 %) and Attinguié (40 %). About 55 % of Palmafrique's population are Burkinabés.
- The main religions in the Aol are Protestantism (approximately 26 % overall)catholic (22 %) Muslim (24 %) and evangelical (19 %), with 9 % from other religions (mostly harrists).
- An average of 36 % of the families live under the poverty line in the villages of the Aol, as reported during the site visits. The highest percentage of families suffering poverty rate are reported in Attinguié, with 75 % of its population living under the poverty line.
- The economic activities in the villages in the Aol can be characterised by a high presence of the agricultural sector, which is present in most of the villages within the Aol. There are villages where agriculture shares space with the public sector or local commerce and businesses.
- Unemployment and dispossession of cultivable land and access to land were named during the field surveys as some of the key economic challenges faced by the community in the villages in the Aol. Low employability of the youth was identified as a major challenge in all the villages (except for Palmafrique V2, where all the inhabitants are Palmafrique's employees), as well as the lack of economic bases. Some of the reasons reported are related to the lack of hiring from companies surrounding the villages.
- During the field visits most settlements reported to have more percentage of unskilled labour force than skilled available; for example, in Anguédédou and Abadjin-Kouté, 75 % of its labour force is unskilled, and 25 % skilled. However, all the villages reported to have both skilled and unskilled workforce available. The lack of skilled workforce was also identified as a challenge in Akoupé-Zeudji.
- Access to employment has been reported as very low in the Aol during the field surveys. Most of the villages explained that companies in the area are not hiring, even though promises of employability were made with the implementation of the PK24 Industrial Zone. The lack of compliance with the commitments following the promises of employability of the structures was reported as a major concern in several villages in the Aol.
- The main challenges for local business as reported during the field survey are the lack of economic bases and limitations on hiring employees and the low demand due to lack of financial means of the communities to make procurements.

²¹³ OECD (2018) Dynamics of growth, jobs and inequalities in West Africa. Available from: <https://www.oecd-ilibrary.org/docserver/9789264302501-18-en.pdf?expires=1646324989&id=id&accname=guest&checksum=65F5677DBF0C5212E61E7410F06E7167>

²¹⁴ The 15 members of the Economic Community of West African States (ECOWAS) are Benin, Burkina Faso, Cabo Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo.

- No information were available regarding the availability of local housing.(in Project Aol and vicinity) for the potential future employers.
- Women are mainly in charge of local businesses in the villages, especially in Adonkoi I in Akoupé-Zeudji and Anguéédou.
- The development of the PK24 was seen as a major opportunity for economic development in several villages in the Aol; this was reported by Akoupé-Zeudji, Allokoï and Attinguï villages. The construction of roads to access the village was also reported as a major development opportunity in Adonkoi I and Palmafrique V2. Other development opportunities identified in the Aol are the construction of a school and a health centre (in Anguéédou) and a maternity hospital (in Abadjin-Kouté), the electrification of the village (in Palmafrique V2), or the implementation of a SODECI's Water Treatment Centre and the housing development project in Adonkoi I.

6.4.1.3 Embedded Measures

In addition to the embedded controls stated in section 4.7, the following measures regarding the economy and employment topics are considered by ARISE as well. ARISE intends to contribute to the development of local companies and AAD's economy, e.g., through local sourcing of supplies including construction materials, equipment, water, medical equipment, fuel, engineering tools as well as services.

The ARISE HSEQ Team will deliver inductions and training to workforce, promoting competencies and technical content. Embedded measures supporting benefits to the local economy and local employment include ARISE's contractual commitments to meeting specific local employment targets for Ivorian nationals. In this regard, ARISE has committed to create between 250 and 500 new employment opportunities, most of them for Ivorian nationals during the 48 months of construction.

One of the key considerations to start the process is the prioritization of the use of local workforce and the implementation of an appropriate system of communication and shared services throughout the lifecycle.

In addition, ARISE has several topic-related policies in place, such as:

- *Supplier Code*, to seek out long-term partnerships with its suppliers built on ethical business conduct and trust.
- *Recruitment Policy*, to constantly aim to attract and recruit the best resources available, as human capital is considered the foundation of the firm.
- *ARISE Fair Employment Policy*, which aims to offer a work environment where all employees' rights are respected. The company's approach to fair employment, which is in line with the Core Purpose of Growing Responsibly, complies fully with the International Labour Organization's (ILO) treaties and the United Nations Global Compact's (UNGC) guiding principles on human rights and labour.
- *Language Policy*, where ARISE acknowledges, respects, and upholds the different racial, ethnic, and linguistic backgrounds of its employees and promotes an inclusive work environment.
- *Subcontractor Management Policy*, aims to provide a safe and healthy workplace for workers and anyone who visits or carries out work on its site. This policy describes the rules, responsibilities, and procedures for managing subcontractors.
- *ARISE IPP Commitment to Making Africa Thrive*, regarding the Company vision based in three (3) pillars: ensure massive job creation, develop high value-added industrial activities for local economies, and contribute to global fight against climate change. Some of the initiatives carried out as part of this commitment include the following:

- ARISE is committed to promote women inclusion in the African labour market by bringing solutions to the hurdles they encounter, providing training to women and include them in the logistics sector.
- ARISE has launched the Future Leaders Program, a four-month programme designed for African post-graduates of leading universities willing to participate in shaping the continent's economic future. In 2021 ARISE IIP launched a new Finance Trainee Programme, a one-year learning journey providing exposure across the different portfolio of the business for talented finance graduates.
- ARISE is committed to the Sustainable Development Goals (SDGs) through four (4) sustainability pillars and nine (9) strategic initiatives towards them. The third pillar, Diversity and Inclusion, includes initiatives to increase ratio of female employees at all levels, to increase diversity at senior management level, to implement dedicated training program on diversity & inclusion, and to reach parity within the next 5-10 years with the industry averages.

6.4.1.4 Feedback from Stakeholders

As detailed in Chapter in 11 of this ESIA, stakeholder feedback related to employment and economy gathered during consultations with the stakeholders includes the following:

- Consultation activities with the various stakeholders showed that their perception towards the Project is positive and that it represents a huge development project that will bring local, regional, and national benefits, promoting the local transformation of raw materials and economic development.
- Access to employment opportunities for local communities near the Project area and especially for the youth was a key issue identified in the settlements in the Aol and raised by different stakeholders. Most of the villages explained that companies in the area are not hiring, even though promises of employability were made with the implementation of the PK24 IEZ. Therefore, there are high expectations in terms of employment and local development directly and indirectly associated to the Project.
- Concerns about the unfair recruitment of the workers from the villages, as the recruitment is done according to the relations between the applicant and the leaders, harming the rest of the community that does not enjoy this opportunity.
- Expectations to establish initiatives to promote benefits and development to the adjacent communities, like strengthen and accompany the farmers, other producers and women in the area, and that the Project will reserve management positions for the youth of the village. Concerns about the unfair recruitment of the workers from the villages. ARISE will strengthen and accompany farmers in the area as well as women and other producers and will develop a training centre in different sectors in order to obtain different profiles for recruitment in the long-term.
- Concerns in Abadjin-Kouté Village about women needing financing support to undertake income-generating activities.

6.4.1.5 Impact Assessment

Construction Phase

Temporary Direct and Indirect Employment Opportunities (mainly unskilled)

During the construction phase, at the beginning ARISE might have maximum 30 workers but at peak times around 700 (including workforce of subcontractors). The Project is expected to hire between 250 and 500 local workers in total during the construction phase, distributed throughout 48 months of construction, , although this will depend on the detailed manpower plan that is yet to be produced. Around 80 % of the workforce required for the construction phase will be unskilled, and 20 % skilled.

ARISE anticipates that it will be possible to hire the majority of workers (both skilled and unskilled) nationally.

In addition, as part of ARISE's Campaign to bring more women involved in the Project, around 20 % of the required workforce will be women.

The construction activities will be carried out by subcontractors, and 60 % of the tenders will be open to local construction companies based in Côte d'Ivoire.

The Project will contribute in all phases to enhance the labour rights practices in Côte d'Ivoire and the Aol by applying ARISE's specific labour policies addressing international requirements.

There will be additional workforce hired by subcontractors. The number of workers from subcontractors will be estimated during detailed design phase. Workers will be hired locally, except for specific roles if they are not available.

Unskilled roles will be available to local communities during construction. These will be temporary roles and will be advertised in local communities. Skilled positions will be sourced locally except for specific roles if they are not available.

Considering the limited number of workers, most of whom will be local, and that the Project is being developed at the proximity to the city of Abidjan, it is expected that no purpose-built worker camp or accommodation will be needed. Rental accommodation, understood to be readily available, will be required for expatriate staff, bringing economic opportunities and increased incomes to the neighbouring communities.

Therefore, the anticipated impacts are **positive** and local in extent due to the high number of primarily unskilled positions available during construction. In addition to direct employment, the Project will result in the indirect employment of workers through procurement of select local goods and services, and the trigger and development of businesses involved in building materials and satellite businesses, creation of jobs, increasing budget revenues and incomes.

These impacts are expected as temporary for the construction phase. Even though the projected workforce of the Project itself will be significantly reduced as the Project moves into operations phase, the establishment of the numerous tenant companies in the IEZ will provide a wide range of permanent employment opportunities with long-term positive impacts.

Taking into account the nature of the Project, as it will attract a significant amount of workforce, the magnitude of the impact is to be high; the scope will be occasional and the duration, medium, as the direct workforce will be significantly reduced for the operation phase.

These impacts will be positive affecting both women and men, but with different incidence; In the case of men, the impact will be **medium-term directly and indirectly positive** due to the increase in employment, either during construction or the indirect employment generated by the economic development of the area. In the case of women, they will also benefit from a **medium-term positive direct and indirect** impact of the Project, also due to the increase of employment. In addition, indirect positive impacts arise from the economic development of the Project for women, as mostly women are in charge of local businesses in the villages and involved in selling agricultural products in the markets. Therefore, both the consumption by workers and the consequent economic development that the Project will bring to the area, will have a very significant positive impact on women.

Temporary Economic Impacts from Taxes and Fees, Procurement and Worker Spending

In general, construction activities associated with the Project will likely generate economic benefits from the procurement of goods and services during construction phase, which will generate benefits at local and district level.

Significant quantities of various types of construction materials will be needed and will be locally sourced, such as sand, gravel, cement, asphalt, and fuel (diesel, petrol), as well as basic needs, such as food and other consumer products.

In accordance with international good practice, environmental and social implications need to be considered in the selection, sourcing, and transport of materials from quarries and borrow pits will be assessed in the ESIA. The main principle is to source the materials locally where possible and feasible.

Taking into account the nature of the Project, as it will attract a significant amount of workforce, the magnitude of the impact is to be high; the scope will be occasional and the duration, medium, as the direct workforce will be significantly reduced for the operation phase.

Therefore, as with Project employment, anticipated impacts of local procurement are **positive**. These impacts are expected as temporary for the construction phase, as this phase is limited in nature.

These impacts will be positive affecting both women and men, but with different incidence; in the case of men, the impact will be **medium-term directly and indirectly positive** due to the increase in employment, either during construction or the indirect employment generated by the economic development of the area. In the case of women, they will benefit directly through their own employment with the Project, and also benefit from a **medium-term positive indirect** impact of the Project, since women are mostly involved in household tasks, which will see household incomes increased through the through the employment of males in the household .Therefore, both the consumption by workers and the consequent economic development that the Project will bring to the area, will have a very significant positive impact on women.

Long-term benefits of capacity enhancement (on-the-job and formal training opportunities)

Those who are able to secure employment on the Project during construction will likely have the opportunity to improve their skills, gain experience and thereby improve their opportunities for future employment within the construction and other sectors.

In addition to on-the-job experience at the level of individual workers, the Project will also represent an opportunity for Ivoirian companies to tender for work on different Project-related components and basic services such as food supply and maintenance. This will result in a capacity enhancement and reputational benefits from working on a major international project to the highest safety and performance standards.

For those companies that meet the eligibility criteria and enter the supply chain, there will be short-term benefits to the businesses and their employees through increased experience, capacity and training opportunities.

Taking into account the nature of the Project, as it will attract a significant amount of workforce, the magnitude of the impact is to be high; the scope will be occasional and the duration, medium, as the direct workforce will be significantly reduced for the operation phase.

Therefore, impacts to individuals and businesses is anticipated to result in **long-term positive** impacts at the local, commune and district level.

These impacts will be positively affecting both women and men, but with different incidence. In the case of men, the impact will be long-term **directly and indirectly positive** due to the increase in local workforce's capacity enhancement, and the promotion of employment opportunities and professional development. In the case of women, they will also see a **long-term positive indirect** impact from the Project. As most households in the AoI are male headed, the women will benefit from having a more stable income for their households provided by the man in charge. This will have a positive impact on women as they will benefit of a higher household income due to the better skills and training provided to the man.

Impacts to individuals and businesses is anticipated to result in long-term **positive** impacts at the local, regional and national levels.

Operations Phase

Temporary Direct and Indirect Employment Opportunities

The primary impact associated with the Project during the operation phase is expected to be the long-term employment of local workforce for operations, maintenance, cleaning and security workers.

The operations workforce for the basic infrastructure will be hired and managed by ARISE. The approximate number of labour is expected to be 40 ARISE employees for office housekeeping, the survey team and security. Therefore, direct recruitment is not expected to be extensive at this stage.

Considering the above, the impact on direct employment is expected to be **long-term positive**, however of a relatively negligible significance, as the recruitment in this phase is not supposed to be extensive.

Regarding the indirect impact on employment, the Project is expected to have the capacity to accommodate up to 100 tenant companies inside the Project site, and the employment that will be required to operate these industrial units is expected to be high.

Nevertheless, the required workforce for the operators of the industrial units is unsure at this stage, as operators within the 429 ha will manage their own workforce.

Taking into account the nature of the Project, as it will attract industrial units that will be hosted by the Project, the magnitude of the impact is to be high; the scope will be regional and the duration, long, as the direct and indirect workforce will be hired for all the operational phase of the Project.

This is expected to result in significant **major long-term positive** impacts, as economy, employment and development will be promoted and enhanced through the consumption and procurement of local goods and services of workers.

In addition, also in this case the impact has different incidence in women and in men; please refer to "Temporary Direct and Indirect Employment Opportunities" Impact Assessment during construction phase to understand how the incidence of this impact is different for women and men.

Regional and National economic development, strengthening of local production, transforming local commodities and logistics services into exportable goods and products.

ARISE Group has developed expertise in the design, financing, construction and management of ecosystems in Africa, providing solutions for the growth and economic transformation of partner countries, with a holistic approach going beyond the sole infrastructure or logistics. The group has demonstrated expertise: development of a world-class platform with diversified projects (industrial zones, ports, rail, airport) in various sectors (wood, mining, agro industry).

Each IEZ is adapted for its appeal to international investors looking for interconnected world-class infrastructure allowing privileged access to raw materials, an appropriate fiscal and legislative framework, and other integrated logistics and industrial services.

ARISE has a strong and growing presence within the West African Region with execution of several infrastructure projects including two (2) ports and two (2) Special Economic Zones. ARISE promotes the development of Industrial zones on the behest and PPP partnership with the respective governments to enrich country with enhanced employment capability and more either earning or saving Forex in terms of local production of goods and essentials for the use of the community.

The Project consists in developing competitive industrial ecosystems in public-private partnerships for the transformation of the main Ivorian agricultural product. The Project is expected to have the

capacity to accommodate up to 100 tenant companies that will implant their activity on the Project site.

The IEZ is primarily intended to ensure massive job creation and develop high value-added industrial activities for the national economy, with commercial, residential and recreational development, and will also promote the following outcomes:

- Development of competitive industrial infrastructure in the country for the processing of the main Ivorian agricultural products in particular cashew nuts, rubber, cotton, steel, pharmaceuticals, and other light industries or any others deemed appropriate by agreement with the primarily export-oriented parties; and
- Substitution of imported goods with products from local industries located in the PK24 industrial zone, the valorisation and processing of local products.

The Project IEZ will be constituted by industries of transformation and substitution aiming at increasing the agricultural and industrial added value produced on the national territory and decreasing the dependence towards imports. The objective of the Project is to attract companies processing semi-finished and finished products from national agricultural production and to make them competitive at the international level.

Therefore, operation activities associated with the Project will likely generate economic and development benefits. As this infrastructure is strengthened and developed, benefits will arise as of the attraction of development and economic opportunities.

During operations, the promotion of local and regional development and economic opportunities will lead to a long-term improvement of the socioeconomic conditions of the communities.

Taking into account the nature of the Project, as it will attract industrial units that will be hosted by the Project, the magnitude of the impact is to be high; the scope will be regional and the duration, long, as the socioeconomic conditions of the region will be strengthened during all the operational phase of the Project.

Considering the above, the direct and indirect impacts on regional and national economic development, strengthening of local production and transforming local commodities and logistics services into exportable goods and products are expected to be **long-term major positive**. These impacts affecting both women and men with similar incidence, as development and socioeconomic conditions of the region and the country will be promoted and enhanced through the implementation of the Project.

6.4.2 Land and Livelihoods

6.4.2.1 Potential Impacts

This section addresses the likely impacts of physical and economic displacement caused by land acquisition inside the 429 ha including classifying the types and extent of displacement, income and land-based livelihood impacts. The assessment is based on the primary data collection undertaken in the Project area in June 2022 and the initial remote sensing exercise through GIS (see Section 0).

As the impacts will take place during the whole life cycle of the Project, the same impacts will have incidence during both construction and operation phases and thus these are explained jointly.

Table 6-15 summarises the potentially significant impacts on land and livelihoods during the construction and operation phases of the Project.

Table 6-15 Potential Impacts on Land and Livelihoods

Construction Phase	Operation Phase
<ul style="list-style-type: none"> ■ Permanent Loss of Livelihoods and Household Income Due to Permanent loss of access to Land in the Project footprint. ■ Impact on Natural Resources and Related Livelihoods. <ul style="list-style-type: none"> ○ Loss of agricultural and grazing land. ○ Loss of access to ecosystem services 	<ul style="list-style-type: none"> ■ Permanent Loss of Livelihoods and Household Income Due to Permanent loss of access to Land in the Project site. ■ Impact on Natural Resources and Related Livelihoods. <ul style="list-style-type: none"> ○ Loss of agricultural and grazing land. ○ Loss of access to ecosystem services

As explained in section 5.4.4 the full extent of displacement impacts is unclear at this stage, e.g.:

- How many Project-Affect People (PAPs) were identified through census and considered eligible to compensation;
- What assets and activities were displaced, types of displacement – physical vs. economic, etc; and
- What compensation was paid (type, rates and amounts) and what support was given to compensate as part of the resettlement and livelihood restoration processes.

The Ministry of Commerce, Industry and SME Promotion owns the land of the Project site. Local villagers are informally using parts of this land for farming and grazing but no dwellings were observed during the site visits on the Project area. It is currently not possible to determine the exact number of land plots (agricultural mainly) and households that will be affected by the Project. However, based on satellite image dated of 2020 and ground-truthing to date an estimated total of 121 ha of agricultural land have been identified within the Project footprint and will be affected. Households whose non-land assets (e.g., crops) will be affected by the Project will be entitled to compensation for the loss of these assets but not for the land itself. Therefore, economic displacement impacts are expected as agriculture activities were observed on the site. Potential for further economic displacement of subsistence farming and other users of the area is an important consideration. Of particular concern is access to alternative land to continue their livelihood, and the desire to be informed about the timeframe.

6.4.2.2 Baseline Conditions

Relevant baseline conditions at the Aol level that may potentially influence impacts and mitigations are summarised as follows:

- The Project site is owned by the Government of Côte d'Ivoire and leased to ARISE for the Project. A convention of compensation of the customary rights of PK24 was carried out in 2015 by government representatives and chiefs of three affected villages. The land acquisition process was carried out as per national standards.
- Some parts of the Project are currently under agricultural use by communities consisting of annual and plurennial crops, and most of the land is grassland/shrubland. No physical structures were identified on the Project footprint, except for some temporary huts or wooden cabins for site farm workers.
- Other activities such as collection of Non-timber Forest Products (NTFP) are also practiced by the locals in the Project area.
- The land in the Project footprint is mostly grassland / shrubland / young crops (48 %) and agricultural land (40 %) these uses vary from one plot to another.
- In most of the villages the stakeholders have reported to have limitations and obstacles accessing cultivable land because of limited land available in the area.

6.4.2.3 Embedded Measures

In addition to the embedded controls stated in section 4.7, the following measures regarding the land and livelihood topics are considered by ARISE as well. In addition, relevant Project design elements and company policies that may potentially influence impacts are summarised as follows:

- *ARISE has a Grievance Mechanism in place for communities* and specifically for this Project, making sure there is a valid, reliable, and consistent process in place for formal complaints or issues that might develop as a direct result of ARISE operations to be received, investigated, consulted on, addressed, and resolved. This includes land claims and grievances related to land acquisition.

6.4.2.4 Feedback from Stakeholders

Stakeholders that participated in the consultation activities expressed great concern regarding displacement and compensation matters:

- Stakeholders raised concerns and reservations about the land acquisition activities for the Project, as they have reported that agricultural activities are being performed in the area. Stakeholders expect that the Project has all the documentation about customary rights, compensations and compensation for farmers. Expectations to contact the chiefdoms of Attinguié, Akoupé-Zeudji and Allokoi to have all the documentation on the industrial zone (customary rights, compensations that were made before the transfer of land, etc.).
- Although most of the people interviewed during the site visit confirmed having received compensation from AGEDI for their losses, some people complained about not having been compensated for their loss of land.
- Stakeholders raised questions about the nature and duration of the land ownership contract ARISE has with the state.

6.4.2.5 Impact Assessment

Construction & Operation Phases

Permanent Loss of Livelihoods and/or Household Income due to Permanent Loss of Access to Land in the Project Footprint

Due to the loss of access to land in the Project footprint during construction and operation, there will be restrictions to crop trees plantation, seasonal crops cultivation, resulting in a loss of crops and access to land for agricultural purposes. These restrictions will result in reduced areas available for cultivation and other livelihoods.

AGEDI confirmed that the evaluation and payment have already been done. Nevertheless, limited information on the resettlement and livelihood restoration processes conducted was made available to ARISE and ERM during this ESIA phase. Thus, the compliance of this process with national and international regulations is unsure at this stage.

As the process of compensation is unsure, there is potential that PAPs have not been compensated and supported according to applicable standards for their resettlement and livelihood restoration. Therefore, there is potential for loss of access to land and possible to crops, trees and NTFP before the construction starts. Thus, ARISE plans to conduct the audit compliance in regard to IFC PS5, once the ESIA Report will be submitted to ANDE.

There is presence of agricultural activities in the Project footprint, around 120 ha (e.g., land for crop cultivation, pasture, tree plantations, etc.). Assuming an average land parcel size of 0.5 ha, potentially around 242 plots may be affected within the Project footprint. Of this affected agricultural land, the north plots of the Project are the most affected receptor.

This affected agricultural land, crops and trees will be entirely cleared for the construction of the Project. Land users will be affected facing the loss of livelihood source through permanent land take leading to economic displacement. Additionally, the Project will cause severance and fragmentation of agricultural fields and possibly other holdings making them less viable through limited access. This impact will mostly affect the North Part of the Project area where there is the highest presence of agricultural plots. Their number is not available at this stage.

Taking into account the nature of the Project, as it will cause restrictions to access land, the magnitude of the impact is to be high; the scope will be local (as its limited to the Project footprint), and the duration, long, as these restrictions will be permanent.

The permanent loss of access to land in the Project footprint is anticipated to have a **major negative** economic impact on local communities, especially for vulnerable groups and households with particularly low incomes and high land dependency for subsistence and income generation. This also applies to disabled and elderly household members or if they are female-headed as they might not be able to afford land and might have to move. In addition, these groups may have more difficulties to access information and less access to employment and other opportunities. This impact will be higher in the north plot, where most of the land is agricultural land (40 %).

To summarise, villagers often reported a lack of sufficient land for agriculture. The Project footprint is currently (December 2022) used by many persons for farming. The clearance of the Project area may therefore put many families at risk if they have been relying heavily on the subsistence and/or income from the on-site farming. A future Resettlement Action Plan/Livelihood Restoration Plan (RAP/LRP) would be needed to better understand the risks and impacts associated with the PAPs.

Impact on Natural Resources and Related Livelihoods due to the loss of access to natural resources provisions and uses as water streams or collection of NTFPs

A number of restrictions will apply to natural resources including agricultural land as well as communal natural resources located inside the Project footprint. Local land users will experience loss of access to agricultural land, loss of crops and trees, and loss of access to communal natural resources as a result of Project land take.

Land take may also impact those households that are engaged in animal husbandry/ grazing of livestock or rely on the services provided by natural resources in the Project area. In this way, people in adjacent communities can use the provisioning services, i.e., collection of NTFP for construction or cooking and heating, materials and fibres (for clothing, etc.), cooking and heating (wood), use of water streams to drink, cleaning or irrigation, traditional medicine, livestock, grazing, hunting, fishing, wild fruits, and mushrooms, etc. Therefore, the communities provisioning through the natural resources of the area may suffer economic impacts and loss of related livelihoods.

Collection of NTFP was specifically confirmed in the village of Agoussi, as the community reported to be collecting wood in the Project area. In addition, it was also reported by stakeholders that the villages of Akoupé-Zeudji and Attinguié used the water of the different rivers in a vicinity of the PK24 for drinking and irrigation, but since the creation of the industrial zone with the untreated discharge of wastewater of the companies, these waters became dirty and changed colours.

Natural land located within the Project footprint will be temporarily affected by the construction activities and will also be permanent during operation of the Project. The proportion of natural resources is very high, as within the Project footprint there are 43 % of land classified as natural resource (40 % agriculture and 3 % of forest / tree plantation).

Whereas agricultural/cultivated land may be either under customary land tenure or public lands, the grazing lands are either registered as community land or as official pastureland. Households who might lose access to local communal grazing areas may suffer economic impact if alternative areas are not readily available nearby.

Therefore, as local communities are likely to be affected by access restrictions to provisioning services from natural resources, the magnitude of the impact is considered to be medium; the scope will be local (as its limited to the Project footprint), and the duration, long, as these restrictions will be permanent.

Refer to section 6.3 for more information about the assessment of the Ecosystem Services impacts.

Based on the Project description and the environmental and social assessment undertaken during the scoping and ESIA phases of this Project the loss of access to ecosystem services estimated to be **moderate**.

6.4.3 Community Health, Safety and Security

6.4.3.1 Potential Impacts

Even though the Project is located in an uninhabited area, workers cross through the Project area on the way between their villages and nearby factories (e.g., industries, plants). Therefore, the implementation of the Project could affect the health, safety and security of the communities both during construction and operation phases.

The presence of the Project could affect the health and safety and security of the communities in the Project Aol and in the villages as a result of worker-community interactions, the risk of injury associated with construction activities, increased road accidents, and competition for access to health care resources.

Table 6-16 presents the potentially significant community health and safety impacts that may occur during the construction and operation phases.

Table 6-16 Potential Impacts on Community Health and Safety

Construction Phase	Operation Phase
<ul style="list-style-type: none"> ■ Site trespass and injury ■ Traffic injuries and Road Safety ■ Environmental health and nuisance to community (dust, vibration, noise, and water-based risks) and grazing animals due to construction activities. ■ Increased transmission of communicable and non-communicable diseases. ■ Increased transmission of Sexually Transmitted Diseases (STDs) ■ Increased pressure on healthcare ■ Community/workforce interactions and use of security personnel. 	<ul style="list-style-type: none"> ■ Environmental health and Nuisance to community (vibration noise, and water-based risks) and grazing animals due to the operation of the Project. ■ Increased transmission of communicable and non-communicable diseases. ■ Increased transmission of Sexually Transmitted Diseases (STDs)

6.4.3.2 Baseline Conditions

Relevant baseline conditions that may potentially influence impacts are summarised as follows:

- In 2018, Malaria accounted for 300 cases per 1,000 population, with 3.4 million estimated cases across the country and about 3,222 Reported deaths in 2017 (with an estimated of 9,600 deaths).²¹⁵ According to a study published in 2018 the US Department of State, about 30% of

²¹⁵ US Department of State (2018) Gender-based violence among stateless and national populations in Côte d'Ivoire . Available from: https://reliefweb.int/sites/reliefweb.int/files/resources/FY%2014_%20Gender-based%20violence%20among%20stateless%20and%20national%20populations%20in%20Cote%20d%27Ivoire.pdf

women in Côte d'Ivoire Report violence during their childhood (before the age of 15) and 7% Report sexual abuse during their childhood.²¹⁶

- During construction, there will be an increase in vehicles travelling through or adjacent to communities. Safety issues may arise from this increased traffic.
- Health infrastructure and the health profile of the communities in the Aol is poor. The number of health facilities is generally low. There are six (6) health facilities in total in all the villages, including urban health centres. There are three infirmaries, five pharmacies and one pharmacy depot. The communities of each village access at least one (1) health facility; There are no hospitals in any village in the Aol.
- Malaria is the main health problem for the population living in the Aol, as it was reported in all of the villages, and affecting in a higher level to women, except in Abadjin-Kouté, where it affects more to men. Diabetes, and blood pressure were also identified in Anguédedou, affecting both men and women, and Typhoid fever was reported in Abadjin-Kouté as a disease affecting women. Children are in general less affected by health problems in the Aol, although malaria is recurrent in children in five (5) out of the eight (8) villages.
- the main cause of death in the Aol are due to illnesses, mostly malaria, as is the main health problem in the villages. Pregnancy at risk, inadequate health services and equipment, traffic accidents and non-compliance with traffic regulations, and poor sanitary treatment were also identified by villagers during field survey.
- the pandemic is being managed by the community in compliance with barrier measures and following the pertinent measures. In all the villages it has been confirmed that communities are vaccinated against COVID-19.

6.4.3.3 Embedded Measures

In addition to the embedded controls stated in section 4.7, the following measures regarding the community health, safety and security topics are considered by ARISE as well. Relevant Project design elements that may potentially influence impacts are summarised as follows:

- All the necessary permanent and temporary routes will be adequately signalled and upgraded in order to secure safety to enable continuous vehicle and pedestrian traffic flow at all times with highest safety standards;
- Establishment of a fence that defines the limits of the Project;
- Establishment of good construction working practices (i.e., routing of construction traffic, dust suppression);
- Maximisation of workers originating from the Aol settlements to avoid influx and associated impacts;
- Contractors and industrial units will be required to operate according to best international practice.
- Some of the essential infrastructure that will be built as part of the Project can lead to an improved access to infrastructure and health conditions, such as internal road networks, drainage and sewerage, and the construction of a first aid centre, fire station and a police station. The police and fire station will be available to respond to security or emergency situations.

ARISE is committed to managing business activities in such a way that risks to the environment and the communities where they operate are minimised and to providing a healthy and safe workplace for

²¹⁶ US Department of State (2018) Gender-based violence among stateless and national populations in Côte d'Ivoire . Available from: https://reliefweb.int/sites/reliefweb.int/files/resources/FY%2014_%20Gender-based%20violence%20among%20stateless%20and%20national%20populations%20in%20Cote%20d%27Ivoire.pdf

all the workforce. ARISE is committed to align with environmental, health and safety, and social and governance practices and international standards through the following policies:

- *Environmental, Social & Governance Policy*, by which ARISE undertakes in Côte d'Ivoire to mitigate risks through better governance, create socially beneficial effects and lessen influence on the environment.
- *Emergency Preparedness and Response Plan* specific for this Project, by which ARISE undertakes the measures to respond to security or emergency situations
- *Subcontractor Management Policy*, as presented in previous sections (Section 6.4.1.3).
- *ARISE has a Grievance Mechanism in place for communities* and specifically for this Project, as presented in previous sections (6.4.2.3)
- *Health and Safety Policy*, by which ARISE is committed in Côte d'Ivoire to provide a healthy and secure working environment for its employees, subcontractors and visitors
- *Smoking, Drug & Alcohol Use Policy*, by which ARISE achieves a working environment that complies with the highest standards for staff, as well as for visitors and members of the public, in terms of health, safety, comfort, and productivity
- *ARISE IPP Commitment to Making Africa Thrive*, as presented in previous sections (Section 6.4.1.3). Some of the initiatives carried out as part of this commitment include the following:
 - ARISE is committed to promote benefits for communities through various social programmes.
 - ARISE is committed to the Sustainable Development Goals (SDGs) through four (4) sustainability pillars and nine (9) strategic initiatives towards them.
 - The first pillar, Carbon Neutrality, includes initiatives as invest in solar farms close to industrial zones, ensure that renewable energy resources can be used for businesses and provide incentives to industries that promote renewable energy.
 - The second pillar, Circular Economy, include initiatives to provide incentives to industries promoting circular economy, to integrate circular economy measures into business strategy and operations, and to strive to become zero waste and effluent discharge facilities.

6.4.3.4 Feedback from Stakeholders

Stakeholders that participated in the consultation activities expressed following feedback:

- Concerns in Akoupé-Zeudji and Attinguïé villages: about the water quality of the rivers which in the vicinity of the PK24, namely the Gobouet, the Gnintchi, Aboffi Seûfi for Akoupé Zeudji community and Gobouet, Seunan (red water) and Agboffi rivers for Attinguïé community which surround the village (see Chapter 11). These waters were previously used as drinking water for the community. But since the creation of the PK24 with the increased discharges of the wastewater of the companies, these waters they became dirty and changed colors. Consequently, the problem of water arises in Akoupé-Zeudji. Indeed, the whole community does not benefit from running water due to a problem of connection. Therefore, these rivers were beneficial for some people e.g., for irrigation purposes. . This also poses a reputational risk to ARISE. Even if it is not related directly to the Project site, it still may reflect negatively on the Project and ARISE.
- Suggestions made around dust management, noise and water management, wastewater, finding a structure for wastewater management; find ways of channelling noise; to carry out a collective waste management of the zone with the other industries
- Recommendations from stakeholders to be contacted in order to provide ARISE with the regulations and all the necessary documents, both during the construction and operation phases.

Because the waste management system depends on the type of waste produced and the service providers involved in the field.

- Questions about the responsibility of ARISE in terms of water resources management since drilling and withdrawals are subject to authorization in accordance with the water code according to the law on water code.
- Concerns by the fact that the water will be discharged to the environment, especially since the Project is not far from the SODECI area of operation and therefore from the groundwater resources. Because the Project is in the north and that can thus involve pollutions. Even if they are treated. And recommendations to contact the Ministry of Water and Forestry which is the manager of this resource in order to follow the procedure and the ONEP which is an institutional water collector.
- Recommendations for this Economic and Industrial Zone to be compartmentalised according to the activities of the operators, taking into account the proximity of the Anguédedou forest and the discharge of effluents into the zone.

6.4.3.5 Impact Assessment

Construction Phase

Road Safety and traffic injury

During construction, there will be an increase in vehicles travelling through or adjacent to communities. Safety issues may arise from this increased traffic. Thus, traffic accidents involving pedestrians during Project's construction and operations are likely to affect people of all ages, but children and elderly could be most affected. As an increase in traffic is considered, that could have impacts on community health and safety.

The construction phase of the Project is likely to have a **Moderate** negative impact on road safety and community health as it involves a high number of vehicles travelling on the unsurfaced or low-quality asphalt road networks adjacent to the construction of the Project.

The impact is a direct result of interaction with the increased traffic associated with construction activities, and the potential risk to community safety related to construction activities. The impact is temporary in nature and limited to the workers of other companies in the AoI and the surrounding road network. However, considering the potential risk posed to communities, the magnitude is considered medium, the scope will be occasional and medium duration, resulting in **Moderate** impact significance.

Site Intrusion and Injury

There is a potential risk of site trespass at work fronts for the duration of construction and maintenance and repair operations. As the site will all be fenced, site trespassing should be very limited and the risk for intrusion on site will be from unauthorised people.

Site intrusion could result in accidents leading to injuries or even fatalities especially due to the presence of large pieces of machinery. Young people and children are most likely to trespass onto sites and are most at risk of getting injured.

Considering that the Project site will be fenced off to manage public health and safety risks during construction and operation, this potential impact will be quite limited. Therefore, the magnitude of the impact will be low, the scope will be occasional and short duration related only for the construction phase. This represents a **Minor** negative impact.

Environmental Health

Impacts on the health of the community as a result of environmental change may arise during construction as a result of noise, dust and other emissions from construction activities. This could result in nuisance to community (dust, vibration, noise, fear) and grazing animals due to construction works.

Noise impacts may occur during construction. The main sources of noise include the construction of the basic infrastructure developed by ARISE within the Project area (such as standard factories, warehouses, administrative buildings, logistics and parking centres, commercial buildings, internal road networks, drainage and sewerage, etc.), as well as increased vehicular traffic due to the delivery of construction materials.

These receptors have a direct impact on the well-being of communities. However, any noise impacts will be temporary, are limited to the construction phase and to the workers of other companies in the Aol, as the Project area is distant from residential areas (the nearest community is located at Palmafrique V2 (1.9 kms from the Project area). Therefore, noise impacts due to construction traffic and activities are unlikely. For more details about noise impacts refer to Section 6.2.3.

The low-quality asphalt road network used across the Project site prior to works completion can be particularly dusty when disturbed by vehicle movements. Increase of dust and reduced air quality levels will also affect environmental community health, due to the potential effect of dust arising from the construction of the Project (site, construction camps and laydown areas), and the use of unpaved roads by vehicles. For more details about air quality impacts refer to Section 6.2.2.

Water-related disease risks could arise from the degradation of surface and groundwater resources and quality impacts of the Project due to construction activities. These are mostly related to construction activities such as clearance of the working strip, earthworks and reinstatement activities, use of/construction of access roads and other associated facilities, and the potential presence of contaminated soils/earths. Water contamination can result in increased risk of transmission of water borne communicable diseases such as hepatitis A and E and typhoid through increased risk of contamination of water and food.

Water-related disease can affect the quality of the water quality of the rivers which shelter the industrial zone, namely the Gobouet, the Gnintchi, Aboffi Seûfi for Akoupé-Zeudji community and Gobouet, Seunan (red water) and Agboffi rivers for Attinguié community which surround the village. According to stakeholders, this problem arises since the creation of the PK24 with the increased discharges of the wastewater of the companies, these waters they became dirty and changed colors.

Therefore, the potential impact that the use of groundwater will have on the community is analyzed in terms of pollution of the groundwater. If mismanaged it can affect water quality, resulting in water-related diseases risks. For further details on groundwater resources and water quality please refer to Section 6.2.1.

Some of the essential infrastructure that will be built as part of the Project may affect positively the health conditions of the communities, like the construction of sewerage and water supply systems (boreholes, piping, manholes, water storage tanks; the construction of a wastewater treatment plant and a pumping station; and the construction of a first aid centre, fire station and a police station). Nevertheless, it is unsure how communities will benefit from these.

The impacts on environmental health during construction are directly **negative** and temporary in nature for the duration of the construction phase. Considering the temporary nature of the works and the sequential approach, the magnitude is considered high, as receptors will include children, older people and others that may be susceptible to changes to environmental quality; scope is considered local, and the duration medium, taking into account the nature of the impacts. The impact significance is therefore considered **moderate**.

Increased Transmission of Communicable Diseases

During the construction phase, at the beginning ARISE might have maximum 30 workers but at pick time around 700 (including workforce of subcontractors). The Project is expected to hire between 250 and 500 local workers in total during the construction phase, distributed throughout 48 months of construction, divided in two phases of 24 months of duration, one starting in 2023 and other in 2025, although this will depend on the detailed manpower plan that is yet to be produced. It is anticipated it will be possible to hire the majority of workers (both skilled and unskilled) nationally.

Based on the construction schedule and required workforce, and the Project's proximity to the city of Abidjan, it is anticipated that no work camps or purpose-built housing will be required. Therefore, it is not envisaged that the Project may attract an influx of people looking for work, avoiding an influx of workers that would have the potential to lead to the spread of bacterial disease and infection, as well as the spread of Sexually Transmitted Infections (STIs) and HIV.

As the majority of the workforce is expected to be sourced locally, the potential impact of the increased transmission of communicable diseases within the workforce and the nearby communities is expected to be limited. However, if opportunistic workers (those hoping to find employment on the Project or from related activities) migrate to work fronts, could impact on the transmission of communicable diseases.

Communicable diseases of concern are likely to include malaria, HIV/AIDS, diarrheal, tuberculosis and respiratory diseases. The recent outbreak of COVID-19 disease should be considered a high risk for the spread of pandemics. There is the potential for increased transmission between workers living and working in close quarters and then onwards into local workers' families and the communities through interactions. Children will be at particular risk of malaria and diarrheal diseases due to their poor sanitary behaviors, while the elderly will be at risk of more severe health outcomes as a result of their frailty.

Malaria was identified as a major health concern in all the villages of the Aol during the field survey carried out in June and November 2022, and indigestion due to water consumption was flagged in Palmafrique V2. In addition, health infrastructure in the Aol is reported to be poor, which could worsen the implications of the outburst spread of diseases.

During construction, modifications to the environment and immigration (although this is expected to be limited) into the area are likely to increase the risk of transmission of malaria. Modifications to the environment can create small water pools (e.g., wheel ruts and footprints) offering new mosquito breeding grounds and leading to increased vector densities and human-vector interaction. Any influx of people into the area (although in this case this is expected to be limited) may play an indirect role in increasing the malaria burden. This may result from an increase in pressure on medical facilities, inadequate waste management and establishment of make-shift housing (reducing natural protection from mosquitoes). The highly endemic nature of malaria means that the proposed Project is unlikely to significantly add to the already high disease burden of the community during the wet season. However, modifications to the environment may change the breeding patterns of mosquitoes extending the high-risk malaria season for transmission from its peak.

Water contamination can result in increased risk of transmission of water borne communicable diseases such as hepatitis A and E and typhoid through increased risk of contamination of water and food. This can affect the quality of the water quality of the rivers which shelter the industrial zone, namely the Gobouet, the Gnintchi, Aboffi Seûfi for Akoupé Zeudji community and Gobouet, Seunan (red water) and Agboffi rivers for Attinguié community which surround the village. According to stakeholders, this problem arises since the creation of the PK24 with the increased discharges of the wastewater of the industries, these waters they became dirty and changed colours.

The profile of the diseases will be influenced by the existing disease profile of communities along the Aol and the disease profile of the country's workers are sourced from. Considering majority of the workforce will be sourced locally, the disease profile of the workforce is expected to be similar to the current conditions, as very limited influx of people is expected. Although expatriate workforce will be

very limited, any influx will add to the risk of disease spread. Therefore, the magnitude of the impact is considered low, the scope will be local, and short duration limited to the construction phase. The assessment results in a **minor** impact significance on community health.

Increased Transmission of Sexually Transmitted Diseases (STD)

The Project could result in increased transmission of STDs including HIV/AIDS during construction due to the following factors:

- Shifts in power dynamics between community members and within households can result in increased Gender-Based Violence (GBV). Male jealousy, a key driver of GBV, can be triggered by labour influx on a project when workers are believed to be interacting with community women.
- Presence of a large workforce including males with higher incomes engaging in high-risk sexual activities with Commercial Sex Workers (CSWs), in particular in larger urban centres (Abidjan). Also, there is a possibility that women in settlements near the sites will resort to prostitution for short-term economic gain;
- Workers establishing casual relationships with young girls in communities near the construction sites;
- Increased numbers of CSWs, who may have higher infection rates of STDs and HIV, near construction sites, worker camps and at truck stops;

Increased transmission of STDs including HIV/AIDS has the potential to affect households in the proposed Aol and the presence of CSWs in larger towns. The increase in risk of STDs including HIV/AIDS will be long-term, as it can take time for prevalence/ incident rates to return to baseline levels. Furthermore, those infected with HIV/AIDS will have health effects, which last beyond the duration of the construction activities.

Nevertheless, as the workforce will be sourced locally and no significant influx of workforce is expected, this impact is of low intensity, the scope will be local, and short duration limited to the construction phase. Therefore, absolute importance rating of the impact is of **minor negative** significance.

These impacts will be negative affecting both women and men, but with different incidence; as women are the most involved in these activities, this impact will affect significantly more women than men.

Increased Pressure on Health Care

Influx of workers for construction of the Project may place further strain on health facilities and detrimentally affect health care services and health status for communities (700 workers at peak). This risk will decrease during the operations phase, as the nature of operational activities involves fewer staff and that will result in less pressure on health care needs. Any decrease in access to health care facilities including longer waiting times is likely to be associated with worse health outcomes. This is a particular risk in the case of incidents involving multiple casualties or patients from both the workforce and community where hospital level care is required or in the case of a disease epidemic (COVID-19).

Some of the essential infrastructure that will be built as part of the Project may help to the increased pressure on health, as the construction of a first aid centre, fire station and a police station. Nevertheless, it is unsure how communities will benefit from these.

As the workforce will be sourced locally and no significant influx of workforce is expected, this impact is of low intensity, the scope will be local, and short duration limited to the construction phase. Therefore, the resulting impact is of **minor** significance to local communities. As most of the people involved in the construction phase will be local, and the essential infrastructure that will be built, the Project will not result in increased strain on health facilities.

Use of Security Personnel

ARISE will hire security personnel mainly during construction to prevent unauthorised access to the construction site. They will primarily be responsible for controlling site access and perimeter security.

Security personnel might constitute risks to the community if they are not appropriately trained, as they may misuse their status and be abusive to local persons or apply excessive force in their handling/apprehension of potential trespassers or other unauthorised persons.²¹⁷

Nevertheless, as the workforce will be unarmed and trained in non-violent practices this impact is considered to be of **minor** significance.

Operation Phase

Environmental Health and Nuisance to community (air, noise, and water-based risks) and grazing animals due to the operation of the Project

The Project is located in open countryside, but also in a very transit area by workers and in the vicinity of seven (7) communities. Therefore, the operation of the Project has the potential to result in air quality, noise, and physical impacts due to operational traffic and operation activities at nearby receptors and at specific locations.

Some of the essential infrastructure that will be built as part of the Project can lead to an improved access to infrastructure and health conditions, such as internal road networks, drainage and sewerage, and the construction of a first aid centre, fire station and a police station. The police and fire station will be available to respond to security or emergency situations. Nevertheless, it is unclear at this stage if local villages will benefit from these new facilities.

In terms of air quality (see section 6.2.2), the impact during operations of the Project will be related to the increase in operational traffic, and the ARISE operations, which are assessed as minor significance impact.

Noise impacts could arise during the operation of the Project (see section 6.2.3). The operations can cause noise effects which may result in nuisance and annoyance for workers of nearby companies and other sensitive land uses.

Water-related disease risks could arise from the degradation of surface and groundwater resources and quality impacts of the Project due to operation activities. If mismanaged, it can affect water quality and water pollution, resulting in water-related diseases and water-based risks.

In addition, stakeholders have reported to be using some water streams in the Project vicinity that are changing colours and degrading since the implementation of PK24. Water contamination can result in increased risk of transmission of water borne communicable diseases such as hepatitis A and E and typhoid through increased risk of contamination of water and food. Therefore, the quality of the water quality of the rivers which shelter the industrial zone, namely the Gobouet, the Gnintchi, Aboffi Seûfi for Akoupé Zeudji community and Gobouet, Seunan (red water) and Agboffi rivers for Attinguié community can be severely affected.

Therefore, the potential impact that the use of groundwater will have on the community is analyzed in terms of pollution of the groundwater. For further details on groundwater resources and water quality during operations please refer to Section 6.2.1.

Thus, this impact is considered direct long-term negative, as it will have an effect on communities' health and will generate nuisance to the community. Considering the distance and type of activities of the Project, the direct impact from the Project operations will be **minor**. Nevertheless, the indirect risks on the environmental health caused by the establishment of the industrial units within the Project area, being at least 100 tenant companies with different activities, are considered of medium

²¹⁷ EBRD. PR4: Community Health, Safety and Security. Available from:
https://www.ebrd.com/downloads/about/sustainability/ESP_PR04_Eng.pdf

magnitude, local scope and long duration, due to the nature of the Project and the impact. Therefore, the resulting impact on community health is considered of **moderate** significance.

Increased Transmission of Communicable Diseases

The workforce required for the operations, maintenance, cleaning and security of the Project site will be significantly lower than the workforce expected for construction. Nevertheless, the Project is expected to have the capacity to accommodate up to 100 tenant companies inside the Project area, and the employment that will be required to operate these industrial units is expected to be high: around 800 workers of the subcontractors during peak construction time. In addition, the required workforce for the operation of the industrial units is unsure at this stage, as operators within the zone will manage their own workforce.

The number of staff required for the operation phase can only be defined after elaboration of operation plan. Although the exact size of the workforce needed for operation of the Project is not clear at this stage, recruitment is not expected to be extensive. Therefore, the direct impacts of the Project during operations are expected to be **minor**.

The required workforce for the operators of the industrial units is unsure at this stage, as operators within the zone will manage their own workforce. Thus, it is envisaged that the Project may attract an influx of people looking for work, and if opportunistic workers (those hoping to find employment on the Project or from related activities) migrate to work fronts, could impact on the transmission of communicable diseases. Therefore, the high workforce required for the industrial units can generate an influx of workers that would have the potential to lead to the spread of bacterial disease and infection, as well as the spread of Sexually Transmitted Infections (STIs) and HIV.

Communicable diseases of concern are likely to include malaria, HIV/AIDS, diarrheal, tuberculosis and respiratory diseases. The recent outbreak of SARS CoV-2 disease should be considered a high risk for the spread of pandemics. There is the potential for increased transmission between workers living and working in close quarters and then onwards into local workers' families and the communities through interactions. Children will be at particular risk of malaria and diarrheal diseases due to their poor sanitary behaviors, while the elderly will be at risk of more severe health outcomes as a result of their frailty. Health infrastructure in the Aol is reported to be poor, which could worsen the implications of the outburst spread of diseases.

During operations, modifications to the environment and immigration into the area are likely to increase the risk of transmission of malaria. Even though most of modifications to the environment will be done as part of the construction phase, the operational activities and movement of trucks can also create small water pools (e.g., wheel ruts and footprints) offering new mosquito breeding grounds and leading to increased vector densities and human-vector interaction. Any influx of people into the area (which is expected to be high) may play an indirect role in increasing the malaria burden. This may result from an increase in pressure on medical facilities, inadequate waste management and establishment of make-shift housing (reducing natural protection from mosquitoes). The highly endemic nature of malaria means that the proposed Project is unlikely to significantly add to the already high disease burden of the community during the wet season. However, modifications to the environment may change the breeding patterns of mosquitoes extending the high-risk malaria season for transmission from its peak.

Water contamination can result in increased risk of transmission of water borne communicable diseases such as hepatitis A and E and typhoid through increased risk of contamination of water and food. The confirmed presence of rivers and streams used by the communities of Akoupé-Zeudji and Attinguié in the Project area might have an impact in the health conditions of the community, who is using this waters for consumption and irrigation although it is highly polluted. In addition, these factors can also result in increased number of pests, such as rats, which can contribute to disease transmission.

Malaria was identified as a major health concern in all the villages of the Aol during the field survey carried out in June and November 2022, and indigestion due to water consumption was flagged in Palmafrique V2. In addition, health infrastructure in the Aol is reported to be poor, which could worsen the implications of the outburst spread of diseases.

Some of the essential infrastructure that will be built as part of the Project can lead to an improved access to infrastructure and health conditions that can avoid the increased burden of communicable diseases, such as internal road networks, drainage and sewerage, and the construction of a first aid centre. Nevertheless, it is unsure how communities will benefit from these improvements.

The profile of the diseases will be influenced by the existing disease profile of communities along the Aol and the disease profile of the countries' workers are sourced from. Considering majority of the workforce will be sourced locally, the disease profile of the workforce is expected to be similar to the current conditions, as very limited influx of people is expected. Although expatriate workforce will be very limited, any influx will add to the risk of disease spread. Although the direct impacts are considered minor, the indirect risks on the environmental health caused by the establishment of the industrial units within the Project area, being at least 100 tenant companies with different activities, are considered of medium magnitude, local scope and long duration, due to the nature of the Project and the impact. Therefore, the resulting impact on community health is considered of **Moderate** significance.

Increased Transmission of Sexually Transmitted Diseases (STD)

The Project could result in increased transmission of STDs including HIV/AIDS during operations due to the following factors:

- Shifts in power dynamics between community members and within households can result in increased Gender-Based Violence (GBV). Male jealousy, a key driver of GBV, can be triggered by labour influx on a project when workers are believed to be interacting with community women.
- Presence of a large workforce including males with higher incomes engaging in high risk sexual activities with Commercial Sex Workers (CSWs), in particular in larger urban centres (Abidjan). Also there is a possibility that women in settlements near the sites will resort to prostitution for short-term economic gain;
- Workers establishing casual relationships with young girls in communities near the construction sites;
- Increased numbers of CSWs, who may have higher infection rates of STDs and HIV, near the Project area and at truck stops;

Increased transmission of STDs including HIV/AIDS has the potential to affect households in the proposed Aol and the presence of CSWs in larger towns. The increase in risk of STDs including HIV/AIDS will be long-term, as it can take time for prevalence/ incident rates to return to baseline levels. Furthermore, those infected with HIV/AIDS will have health effects, which last beyond the duration of the construction activities.

Some of the essential infrastructure that will be built as part of the Project can lead to an improved access to healthcare, such as the construction of a first aid centre. Nevertheless, it is unsure if the communities will directly or indirectly benefit from these improvements.

Although the direct impacts are considered minor, there are indirect risks on the environmental health caused by the establishment of the industrial units within the Project area. The influx of workforce expected is high, this indirect impact is of medium magnitude, local scope and long duration, due to the nature of the Project and the impact. Therefore, the resulting impact on community health is considered of **Moderate** negative significance.

These impacts will be negative affecting both women and men, but with different incidence; as women are the most involved in these activities, this impact will affect significantly more women than men.

6.4.4 Labour and Working Conditions

6.4.4.1 Potential Impacts

Workers' rights including occupational health and safety need to be considered to avoid accidents and injuries, loss of man-hours, labour abuses and to ensure fair treatment, remuneration and working or living conditions. These issues should be considered not only for those who are directly employed by ARISE but also its contractors (including sub-contractors) and within the supply chain.

The Project could potentially lead to workforce-related social and health issues throughout the life cycle of the Project if worker management and rights do not meet Ivoirian law or international best practice.

Table 6-17 presents the potentially significant impacts associated with occupational health and safety and worker management during the construction and operation phases. The potential for occupational health and safety incidents throughout the life cycle of the Project is higher during construction phase.

Table 6-17 Potential Impacts on Labour and Working Conditions

Construction Phase	Operation Phase
<ul style="list-style-type: none"> ■ Labour and working conditions / workers' rights; ■ Worker health and safety; ■ Forced child labour in the supply chain. ■ Women's rights (GBVH, approach to recruitment, promotion, and treatment with respect to equal opportunity) 	<ul style="list-style-type: none"> ■ Labour and working conditions / workers' rights. ■ Worker health and safety ■ Forced child labour in the supply chain.

6.4.4.2 Baseline Conditions

Relevant baseline conditions that may potentially influence impacts are summarised as follows:

- In practice, working conditions and labour rights in Côte d'Ivoire are not always fully respected. This is the case, for example, of the high level of informal work in the country (about 80%), frustrating workers to exercise their rights fully and profit of benefits of formal working conditions.
- Women may also be at risk of being discriminated against, as they are often not offered the same opportunities to get paid employment or are limited to taking on certain roles such as cooking food.
- The use of forced child labour is illegal in Côte d'Ivoire but is known to be a widespread problem all over the country. As of 2020, 25.6 % of children aged 5 to 14 were working in Côte d'Ivoire. Forced and compulsory labour is still an issue in Côte d'Ivoire in the production of agricultural products. As this is not the sector in which workers will be recruited for the Project, it is therefore unlikely that the Project will be utilising child labour. Formal employment for the Project will be in adherence with ARISE policies which is why the risk having child labour will be low. For indirect employment such as suppliers ARISE will have little direct control over employment policies which is why the risk of child labour is higher.

6.4.4.3 Embedded Measures

Labour and working conditions as compared to relevant in country laws and the Lenders Requirements needs to be respected. The Project will comply to a set of human resources related policies of ARISE as well as international performance standards. For instance, working hours will be thoroughly managed and child labour as well as forced labour will be prohibited within the Project's workforce.

In addition, relevant Project design elements and company policies that may potentially influence impacts are summarised as follows:

- *Health and Safety Policy*, as presented in previous sections (Section 6.4.3.3)
- *Environmental, Social & Governance Policy*, as presented in previous sections (Section 6.4.3.3)
- There is an *Employee Grievance Mechanism* put in place by ARISE to collect workers' grievances and concerns and to handle formal employee complaints.
- *Subcontractor Management Policy*, as presented in previous sections (Section 6.4.1.3)
- *Smoking, Drug & Alcohol Use Policy*, as presented in previous sections (Section 6.4.3.3)
- *Supplier Code*, as presented in previous sections (Section 6.4.1.3)
- *Anti-Bribery & Corruption*, by which ARISE is to carry out all of its operations in a morally and honestly manner approaching bribery and corruption with zero tolerance;
- *Anti-Money Laundering & Financing of Terrorism*, under which transactions must be investigated in order to confirm the legitimacy of the sources of those cash flows.
- *Language Policy*, as presented in previous sections (Section 6.4.1.3)
- *Fair Employment Policy*, as presented in previous sections (Section 6.4.1.3)
- *Recruitment Policy*, as presented in previous sections (Section 6.4.1.3)
- *Sexual Harassment Policy*, under which ARISE is dedicated to giving all of its workers a secure work environment so that no one, regardless of gender or sexual orientation, will experience harassment at work, including sexual harassment.
- *Conflict of Interest Policy*, where ARISE is devoted to acting honestly and morally in all aspects of the operations.
- *Whistleblowing Policy*, where ARISE with regard to its rules and procedures, strives to uphold the highest standards of honesty and accountability so that staff members can raise any reasonable concerns about any aspect of its business and operations in confidence as soon as possible.
- *ARISE IPP Commitment to Making Africa Thrive*, as presented in previous sections (Section 6.4.1.3). Some of the initiatives carried out as part of this commitment include the following:
 - ARISE is committed to promote women inclusion in the African labour market by bringing solutions to the hurdles they encounter, providing training to women and include them in the logistics sector
 - Also, ARISE has launched the Future Leaders Program, a one-year programme designed for African post-graduates of leading universities willing to participate in shaping the continent's economic future. In 2021 ARISE IIP launched a new Finance Trainee Programme, a one-year learning journey providing exposure across the different portfolio of the business for talented finance graduates.
 - ARISE is committed to the Sustainable Development Goals (SDGs) through four (4) sustainability pillars and nine (9) strategic initiatives towards them. The third pillar, Diversity & Inclusion, include initiatives to increase ratio of female employees at all levels, to increase diversity at senior management level, to implement dedicated training program on diversity & inclusion, and to reach parity within the next 5-10 years with the industry averages. The fourth pillar, Responsible Supply Chain Management, include initiatives to implement supply chain traceability software for each commodity, ensure legality through independent third-party groups, and comply with certification schemes.

6.4.4.4 Feedback from Stakeholders

The stakeholders interviewed during the social fieldwork did not express any concerns or feedback regarding labour and working conditions and workers' rights.

6.4.4.5 Impact Assessment

Construction Phase

Labour and Working Conditions / Workers' Rights

As a result of the policies and procedures worker rights should be protected. However, issues with implementation and capacity may result in some breaches of workers' rights especially within the supply chain and among casual labourers. If issues arise, there is the opportunity for these to be identified and addressed through the worker grievance mechanism. However, individuals may be unwilling to Report issues, and as such breaches may go unnoticed.

There is the potential for positive legacy in terms of strengthening knowledge and practice of worker rights of contracted and supplier companies and their employees.

During construction, local employment will be subject to local labour laws and applicable international standards to which Côte d'Ivoire is party (ILO conventions) in particular with respect to safeguarding the health and safety of workers. In addition, contractors will need to comply with ARISE's HSE Policy standards aimed at safeguarding the health and safety of its employees and subcontractors. These include the use of appropriate equipment and facilities to allow employees to undertake their duties in a professional and safe manner ensuring rights and working conditions as well as providing a safe and sound work environment for workers. The employer / contractor is therefore expected to develop and implement appropriate health and safety measures for its workforce including always enforcing the use of appropriate PPE.

ARISE is committed to managing business activities in such a way that risks to the environment and the communities where they operate are minimised and to providing a healthy and safe workplace for all the workforces. ARISE is committed to align with environmental, health and safety, and social and governance practices and international standards through its policies.

All employees and contractors are required to acknowledge and adopt ARISE's environmental and social work practices and comply with all HSE policies and procedures as well as the Code of Conduct, Reporting safety hazards, unsafe work practices, unacceptable conditions, and environmental and social issues.

All contractor contracts will include explicit reference to the need to abide by Ivoirian law and ARISE standards and policies in relation to health and safety.

During construction, the direct interaction between the Project and the workforce if not managed properly, may result in negative impacts on the workers' working conditions. This can potentially lead to permanent impacts on their health and safety, resulting in medium magnitude, occasional scope and medium duration due to the nature of the Project and the Impact. Therefore, the impact is considered **Moderate** as local communities may not have an understanding of their labour rights as enshrined in the law or may be willing to waive these rights in order to earn incomes.

Workers' Health and Safety

Activities of the site personnel will involve typical construction risks such as risks due to moving equipment.

Accidents resulting in injuries or fatalities remain a possibility albeit with reduced likelihood due to the implementation of the management system. Injuries and fatalities could have long-term impacts on workers and their families. Potential for positive legacy in terms of strengthening knowledge and practice of worker health and safety of contracted and supplier companies and their employees.

The rate of accidents will be dependent on the consciousness and cautiousness of the personnel regarding the specific hazards of the construction work they are involved in. These risks may be managed with adequate trainings in accordance with the good management approaches and international construction site practices avoiding problems with the worker-employer relations and

significant occupational health and safety risks. The impact of accidents resulting in injuries or fatalities is considered of medium magnitude, the scope is considered occasional and will have a medium duration. Therefore, the impact on workers' health and safety is considered **Moderate**.

Women's Rights (GBVH, approach to recruitment, promotion, and treatment with respect to equal opportunity)

The general principle of equality and non-discrimination is a fundamental element of international human rights law. Discrimination of workers and members of the community may be on the basis of their race, gender, sexuality, religion, political affiliation, etc. Women might face indirect forms of discrimination with respect to their right to work (i.e., access to job opportunities, unequal access to promotions, GBV and harassment, discrimination upon recruitment, and others. Therefore, due to the nature of the Project, there is potential of occupational management risks to arise in the recruitment process, which can result in impacts to women workers' rights. A major influx of male workers may pose a threat for women workers and community in terms of safety and GBVH. This may also translate to heightened tension leading to violence.

There is a risk of association with workforce providers (e.g., recruitment agencies) using abusive recruitment practices (i.e., recruitment fees) which may increase the risk of bonded labour.

ARISE is committed to having a grievance mechanism in place that should allow workers to introduce any grievance they may have regarding issues with equal opportunity and discrimination in the workplace. However, women might also be unable or less likely to access workers grievance mechanisms and might not be willing to raise their concerns due to fear of repercussions. This limits the women workers' ability to readily access remedy without fear of retaliation.

The magnitude of the impact on vulnerability of women's rights is considered medium as management measures are in place, reducing the likelihood of this impacts to occur. However, should incidences occur the impacts on the individuals affected will remain unchanged. the scope of the impact is considered occasional, and with medium duration, resulting in a **Moderate** impact.

Child Labour and Forced Labour in the Supply Chain

The use of child labour or youths aged 16-18 in hazardous work within the supply chain remains a possibility albeit with reduced likelihood due to the implementation of mitigation measures. If there are incidences of child labour, the magnitude of the effect to the individual affected will remain unchanged. However, taking into account that there will be 700 workers at peak (including workforce and subcontractors) during the construction phase, there is potential for child labour or youths 16-18 to be involved in hazardous work in the supply chain.

ARISE has the potential to have a positive impact by increasing awareness and improving methods for preventing and addressing child labour within contracted and supplier companies.

The likelihood of the use of forced labour is of low magnitude and will be significantly reduced as a result of the proposed mitigation, such that it will become a non-routine event. However, should incidences occur the impacts on the individuals affected will remain unchanged. In addition, the scope is considered occasional, and of medium duration, resulting in a **Minor** significance impact.

Operations Phase

Labour and Working Conditions / Workers' Rights

As a result of the policies and procedures worker rights should be protected. However, issues with implementation and capacity may result in some breaches of workers' rights especially within the supply chain and amongst casual labourers. If issues arise there is the opportunity for these to be identified and addressed through the worker grievance mechanism.

Potential for positive legacy in terms of strengthening knowledge and practice of worker rights of contracted and supplier companies and their employees.

Thus, the magnitude of the impact is considered medium, local scope, and medium duration, resulting in a **Moderate** impact on violations to labour rights as workforce number and use of contractors will decrease and as such there is a less likelihood of impacts occurring.

Workers' Health and Safety

Accidents resulting in injuries or fatalities remain a possibility albeit with reduced likelihood due to the implementation of the management system and nature of work being undertaken. Injuries and fatalities could have long term impacts on workers and their families.

Potential for positive legacy in terms of strengthening knowledge and practice of worker health and safety of contracted and supplier companies and their employees.

Thus, the magnitude of the impact is considered medium, local scope, and medium duration, resulting in a **Moderate** impact on accidents resulting in injuries or fatalities as operations activities will be less intense and will involve less workforce. However, accidents resulting in injuries or fatalities remain a possibility albeit with reduced likelihood.

Child Labour and Forced Labour in the Supply Chain

During operations, the use of child labour or use of people aged 16-18 in hazardous work within the supply chain remains a possibility albeit with reduced likelihood due to the implementation of mitigation measures. If there are incidences of child labour, the magnitude of the effect to the individual affected will remain unchanged.

ARISE has the potential to have a positive impact by increasing awareness and improving methods for preventing and addressing child labour within contracted and supplier companies.

Considering that ARISE will employ 40 workers for the operation of the Project, the magnitude of the impact is considered low, the scope is considered occasional, and of medium duration. Therefore, although the use of child labour or use of people aged 16-18 to be involved in hazardous work in the supply chain remains a possibility, the likelihood of the use of forced labour is of **Minor** significance and will be significantly reduced as a result of the proposed mitigation such that it will become a non-routine event. However, should incidences occur the impacts on the individuals affected will remain unchanged.

6.4.5 Access to Infrastructure and Services

6.4.5.1 Potential Impacts

Construction activities of the sites may induce impacts on utilities and infrastructure, mainly due to site clearance works, excavation and movement of soil, embankment construction, and construction of the various elements of the Project and its essential infrastructure to be built. This is likely to generate pressure on existing local utility supplies (which already have temporary disruption), disturbance to traffic and transportation due to increase of traffic and movements, and short-term planned and unplanned supply disruption during construction and localised flood events due to insufficient drainage.

Local communities will benefit from long-term infrastructure improvements made during construction and throughout the Project itself. ARISE will develop essential infrastructure within the Project area (such as standard factories, warehouses, administrative buildings, logistics and parking centres, commercial buildings, internal road networks, drainage and sewerage, etc.). Additionally, ARISE will develop on-site roads and drainage systems, of sewerage and water supply systems (boreholes, piping, manholes, water storage tanks), of electrical distribution (power poles, transformer platforms...), several facilities (industrial, logistics, offices, first aid centre, fire station, police station)

and potentially a wastewater treatment plant and a pumping station for the Project and future tenants of 429 ha needs. This will result in improved access to infrastructures in the Project area. Nevertheless, it is unclear if the communities will directly or indirectly benefit from these improvements.

Table 6-18 summarises the potentially significant impacts on access to Infrastructure and Services during the construction and operation phases of the Project.

Table 6-18 Potential Impacts on Access to Infrastructure and Services

Construction Phase	Operation Phase
<ul style="list-style-type: none"> Disruption to infrastructure and utilities during construction; 	<ul style="list-style-type: none"> Benefits from improvements to infrastructure and services

6.4.5.2 Baseline Conditions

Relevant baseline conditions that may potentially influence impacts are summarised as follows

- Côte d'IvoireWaste management is a serious health and sanitation problem, especially with the rapid growth of the population that the country has been seeing in the past decade. In 2002, the government of Côte d'Ivoire defined its National Waste Management Strategy and implemented the National Sustainable Waste Management Programme during which this TLC construction project was launched²¹⁸.
- Running water is present and common in three (3) out the seven (7) villages in the Aol: Akoupé-Zeudji, Allokoï and Attinguié, but it is not the only source of water. Adonkoï I village do not have running water but takes the water through a connection that the village have done from another village, Palmafrique V2 has a water tower/tank, and Anguédedou community takes water from drilling.
- None of the domestic water used in all the villages in the Aol is treated water, except for Adonkoï I, whose water is treated by SODECI.
- With respect to the sewage or sanitation infrastructure in place, the most common infrastructure used by communities in the Aol is the septic tank, as all the villages have identified individual septic tanks as the sewage system present in the villages. Traditional or improved latrines are also very common in the Aol. Six (6) out of the Eight (8) villages have septic tanks as the current wastewater treatment; there is no data available for the other two (2) Attinguié and Agoussi.
- The most common method of waste disposal is burning and dumping of waste, but wild dumps, disposal of waste in landfills and collection in a container and delivery to municipal collection trucks are also methods present in the Aol.
- All the villages in the Aol have access to electricity, except for Palmafrique V2, where they do not have electricity, and use a generator set instead. In addition to electricity, firewood, coal and gas are also very common source of lightning used in the villages in the Aol.
- Housing in the Aol is made mostly in stone and clay and wood, but the roofs differ from one to another (tiles and metal sheets).
- The operation of the Project might result in increased traffic disruption, temporary increases in traffic flows, potential for delays and congestion, and conflicts between Project employees and public road users and workers of the adjacent companies. Nevertheless, the plans of the Project show that a direct connection of the Project area with the harbor and the port of Abidjan will be

²¹⁸ African Development Bank Group. 2019. Côte d'Ivoire - Project for the construction and operation of a technical landfill centre in Kossihouen for the disposal of household and similar solid waste in the Abidjan Autonomous District (DAA) - Esia Summary. Available at: <https://www.afdb.org/en/documents/cote-divoire-project-construction-and-operation-technical-landfill-centre-kossihouen-disposal-household-and-similar-solid-waste-abidjan-autonomous-district-daa-esia-summary>

built. The government has planned to build a road intersection (Y4) to ensure good traffic flow around the Project area.

- Poor conditions of the road and a high presence of unpaved roads (about 97%) were identified as major concerns. All the villages reported to have damaged and unpaved roads in the village, which can cause accidents or problems of accessibility to the village.
- High cost of transportation, the scarcity of transport vehicles and aging car fleet were also identified as transportation problems in Allokoi, Anguédédou and Abadjin-Kouté.

6.4.5.3 Embedded Measures

ARISE intends to reduce the risks and negative impact to infrastructure and utilities by adopting the following embedded measures in the Project design with the development of essential infrastructure within the Project site. This includes standard factories, warehouses, administrative buildings, logistics and parking centres, commercial buildings, internal road networks, drainage and sewerage, etc.. Furthermore, it includes the construction of on-site roads and drainage systems, of sewerage and water supply systems (boreholes, piping, manholes, water storage tanks), of electrical distribution (power poles, transformer platforms...), several facilities (industrial, logistics, offices, first aid centre, fire station, police station) and potentially a wastewater treatment plant and a pumping station for the Project and future tenants of 429 ha needs.

In addition, relevant Project design elements and company policies that may potentially influence impacts are summarised as follows:

- ARISE IPP Commitment to Making Africa Thrive, regarding the Company vision based in three (3) pillars: ensure massive job creation, develop high value-added industrial activities for local economies, and contribute to global fight against climate change. Some of the initiatives carried out as part of this commitment ARISE is committed to the Sustainable Development Goals (SDGs) through four (4) sustainability pillars and nine (9) strategic initiatives.

6.4.5.4 Stakeholder Feedback

As detailed in Chapter 11 of this ESIA, stakeholder feedback related to infrastructures and services gathered during consultations with the stakeholders includes the following:

- Concerns from the chief of Adonkoi I about the destruction of roads and crosswalks due to the crossing of heavy vehicles through the village. Expectations to put in place a plan to develop or restore roads or tracks;
- Expectations and concerns about asphaltting the road that connects the village to the Project site to facilitate access to workers on the site;
- Concerns in Akoupé-Zeudji and Attinguie villages about the water quality of the rivers which bordering the Project area, namely the Gobouet, the Gnintchi, Aboffi Seûfi for the Akoupé-Zeudji community and Gobouet, Seunan (red water) and Agboffi rivers for Attinguie community which surround the village. These waters were previously used as drinking water for the community, but since the creation of the industrial zone with the uncontrolled discharge of wastewater of the companies, these waters became dirty and changed colours. Consequently, the problem of water arises in Akoupé-Zeudji. Indeed, the whole community does not benefit from running water due to a problem of connection. Nonetheless, these rivers were beneficial for some people e.g., used for irrigation
- The Director of the Private School "Alliance Anyama" in the village of Allokoi requested to be engaged, as power and electricity cuts have been reported by the Director to be happening in the education centre; there are recommendations about the installation of a solar power panel in the school.

- Expectations of benefiting communities from facilities such as schools; urban health centres (see feedback from stakeholders in Section 6.4.6.4 below to understand specifically these expectations)
- Expectations about the reinforcement of the electrical network and drinking water supply network
- Expectations about the construction of water towers and wastewater drainage channels

6.4.5.5 Impact Assessment

Construction Phase

Disruption to infrastructure and utilities during construction

Potential impacts on utilities and infrastructure during Project construction will stem from construction activities including site clearance works, excavation and movement of soil, and construction of the various elements of the Project.

The main potential impacts on local infrastructure and utilities as a result of these Project activities are disturbance to traffic and transportation due to increase of traffic and movements during construction, pressure on existing local utility supplies and short-term planned and unplanned supply disruption during construction and localised flood events due to insufficient drainage.

With regard to road and traffic disruption specifically, ARISE plans to use existing roads where applicable. This might result in increased traffic disruption, temporary increases in traffic flows, potential for delays and congestion, and conflicts between Project employees and public road users and workers of the adjacent companies. The use of the existing roads could also lead to access restrictions, short-term closures/diversions of existing transport routes (e.g., roads, paths, railways) where routes crossed, traffic accidents and dust and noise nuisance can increase.

Disruption to infrastructure and utilities could result in impacts to local livelihoods or quality of life and, if left unmanaged, could result in negative health impacts (e.g., water restrictions, electricity disruptions, etc.).

If unmanaged, disruption to services might result in community distrust and resentment towards the Project, especially in those areas where access to infrastructure and utilities is already deficient, such as Adonkoi I, Palmafrique, Anguédedou and Akoupé-zeudji villages. Considering the above and the distance of the Project from the nearest communities and the embedded measures in place, the magnitude of the impact is considered low, the scope occasional and of short duration, resulting in an overall impact to disruption to infrastructures and utilities is expected to be **Minor** negative in significance.

Operations Phase

Benefits from improvements to infrastructure and services

The Project is mainly intended to develop industrial activities with high added value for the national economy. The development of competitive industrial infrastructure in the country for the processing of the main local Ivorian agricultural export-oriented products, and the improvements to local infrastructure and services will bring socioeconomic opportunities and increased well-being of the communities.

The operation of the Project might result in increased traffic disruption, temporary increases in traffic flows, potential for delays and congestion, and conflicts between Project employees and public road users and workers of the adjacent companies. Nevertheless, the plans of the Project show that a direct connection of the Project site with the harbor and the port of Abidjan will be built. The government has planned to build a road intersection (Y4) to ensure good traffic flow around the Project area. This will might alleviate traffic congestion, which is a very important problem in the city of

Abidjan. This will save time on the Projects operations as well as the road users of the Y4 road which surrounds Abidjan and passes over the site, which will be highly affected by the increase of traffic.

In addition, local communities will benefit from long-term infrastructure improvements made during construction and throughout the Project itself. The essential infrastructure developed by ARISE within the Project area (such as standard factories, warehouses, administrative buildings, logistics and parking centres, commercial buildings, internal road networks, drainage and sewerage, etc.) ARISE will also construct on-site roads and drainage systems, of sewerage and water supply systems (boreholes, piping, manholes, water storage tanks), of electrical distribution (power poles, transformer platforms...), several facilities (industrial, logistics, offices, first aid centre, fire station, police station) and potentially a wastewater treatment plant and a pumping station for the Project and future tenants of 429 ha needs. This will result in improved access to infrastructures in the Project area. Nevertheless, it is unsure if the community will directly or indirectly benefit from these improvements.

Thus, the improvement and promotion of access to infrastructures will bring a significant development regarding economic and social conditions of the communities, improving the quality of life and economic development of the local communities in the Aol, and thus, the magnitude of the impact is considered high, with a regional scope and of long duration. The resulting impact is expected to be of a **long-term direct Major positive** significance.

6.4.6 Community Cohesion

6.4.6.1 Potential Impacts

Impacts to community cohesion are of particular importance to industrial projects that may attract a large influx of workforce, which can often raise tensions within communities (intra-community tension) and between communities (inter-community tension).

The installation of the Project will most certainly lead to a mixing of the indigenous communities with foreigners attracted by the work opportunities offered or induced by the Project. This new situation could induce social deviations (alcoholism, etc.), that can promote community severance and cohesion impacts.

Table 6-19 presents the potential impacts associated with disruptions to community cohesion during the construction and operation phases.

Table 6-19 Potential Impacts on Community Cohesion

Construction Phase	Operation Phase
<ul style="list-style-type: none"> ■ Unmet expectations of benefits. 	<ul style="list-style-type: none"> ■ Disturbance from the presence of workforce.

6.4.6.2 Baseline Conditions

Relevant baseline conditions that may potentially influence impacts are summarised as follows:

- Unemployment and dispossession of cultivable land and access to land were named during the field survey conducted in June and November 2022 as some of the key economic challenges faced by the community in the villages in the Aol.
- Access to employment opportunities for communities from the local area of each site and especially the youth was a key issue identified in the settlements in the Aol and raised by different stakeholders. Most of the villages explained that companies in the area are not hiring, even though promises of employability were made with the establishment of the PK24 Industrial Zone. The lack of compliance with the commitments following the promises of employability of the structures was reported as a major concern in several villages in the Aol.
- The development of the PK24 was seen as a major opportunity for economic development in several villages in the Aol; this was reported by some communities, such as Akoupé-Zeudji,

Allokoï and Attinguï villages. The construction of roads to access the village was also reported as a major development opportunity in Adonkoï I and Palmafrigue V2. Other development opportunities identified in the Aol are the construction of a school and a health centre (in Anguédédou) and a maternity hospital (in Abadjin-Kouté), the electrification of the village (in Palmafrigue V2), or the establishment of a SODECI's Water Treatment Centre and the housing development project in Adonkoï I. Communities met during the site visit reported high expectations in terms of employment and local development directly and indirectly associated to the Project.

6.4.6.3 Embedded Measures

As it is anticipated that skilled and unskilled roles will be available to local communities during construction, ARISE intends to contribute to the development of local companies and Abidjan District's economy. Also, through local sourcing of supplies including construction materials, equipment, water sourcing, medical equipment, fuel, engineering tools as well as services.

ARISE HSEQ-SR Team will deliver inductions and training to workforce, promoting competencies and technical content.

Embedded measures supporting benefits to the local economy and local employment include ARISE's contractual commitments to meeting specific local employment targets for Ivorian Nationals. In this regard, ARISE has committed to create between 250 and 500 new employment opportunities, most of them for Ivorian Nationals during the 48 months of construction.

One of the key considerations of the construction phase is the prioritisation of the use of local workforce and the implementation of adequate system of communication and shared services throughout the lifecycle.

In addition, relevant Project design elements and company policies that may potentially influence impacts are summarised as follows:

- All the necessary permanent and temporary routes will be adequately signalled and upgraded in order to secure safety to enable continuous vehicle and pedestrian traffic flow at all times with highest safety standards;
- Establishment of a fence that defines the limits of the Project site;
- Establishment of good construction working practices (e.g., routing of construction traffic, dust suppression);
- Maximisation of workers originating from the Aol settlements to avoid influx and associated impacts
- Contractors will be required to operate according to best international practice.
- *Environmental, Social & Governance Policy*, by which ARISE undertakes in Côte d'Ivoire to mitigate risks through better governance, create socially beneficial effects and lessen influence on the environment.
- *ARISE has a Grievance Mechanism in place for communities* and specifically for this Project, making sure there is a valid, reliable, and consistent process in place for formal complaints or issues that might develop as a direct result of ARISE operations to be received, looked into, consulted on, addressed, and resolved. This includes grievances related to community nuisances and health, safety and security.
- *Subcontractor Management Policy*, developed by ARISE, aims to provide a safe and healthy workplace for workers and anyone who visits or carries out work on its site. This policy describes the rules, responsibilities and procedures for managing subcontractors
- *Health and Safety Policy*, by which ARISE is committed in Côte d'Ivoire to provide a healthy and secure working environment for its employees, subcontractors and visitors

- *Smoking, Drug & Alcohol Use Policy*, by which ARISE achieves a working environment that complies with the highest standards for staff, as well as for visitors and members of the public, in terms of health, safety, comfort, and productivity
- *ARISE IPP Commitment to Making Africa Thrive*, regarding the Company vision based in three (3) pillars: ensure massive job creation, develop high value-added industrial activities for local economies, and contribute to global fight against climate change. Some of the initiatives carried out as part of this commitment include the following:
 - ARISE is committed to promote women inclusion in the African labour market by bringing solutions to the hurdles they encounter. ARISE launched in Gabon the "Com'Elles" Program in partnership with BII to provide training to Gabonese women and include them in the logistics sector.
 - ARISE has carried out various social programmes such as the covid-19 support through the massive supply of medical equipment carried out in ARISE five (5) countries of operation: Benin, Côte d'Ivoire, Gabon, Mauritania and Togo. In addition, ARISE provided a mobile eye clinic in Gabon and Togo to diagnose and treat pathologies of the vision.

6.4.6.4 Feedback from Stakeholders

As detailed in Section 0, stakeholder feedback related to community cohesion includes the following:

- Uncertainty and mistrust about the benefits of the Project to the communities, as most of the villages explained that companies in the area are not hiring, even though promises of employability were made with the establishment of the PK24 Industrial Zone.
- Stakeholders expect that the Project will establish initiatives to promote benefits and development to the adjacent communities. Stakeholders identified several infrastructural needs within the villages in the AoI and expect to be provided with some improvements, such as health facilities, educational facilities, the improvement of roads and electrification, water and sanitation infrastructure.
- Expectations about the reinforcement of the technical platform of the urban health centre of the village and the Construction of an integrated medical centre in Akoupé-Zeudji and the construction of buildings (gynaecology, radiology, operating module and many others), which is intended to be preventive in order to reduce or neutralise maternal and infant mortality and morbidity. In return, the representatives of ARISE reassured them that their grievances are in line with the development policy of ARISE when it settles in a country.
- Allokoi Village: need for an ambulance for the Urban Health Centre (Centre Santé Urbain – CSU), and expectations about the extension of the electrical network
- Abadjin-Kouté Village: expectations about the construction of a laboratory for the health centre, expectations to undertake social actions in favour of widows and orphans, expectations to set up a store as a supermarket to sell their local products, expectations to provide social actions to accompany the youth in their activities, expectations about the construction of a maternity hospital and the extension of the nursery school
- Adonkoi I Village: expectations about the construction of a health centre, expectations about the construction of a nursery school and a school lunchroom, expectations about the construction of a cultural centre and a market, expectations to fence of the elementary school
- Palmafrique V2 Village: expectations about the construction of an integrated health centre at the village level, expectations about opening of a road linking the village to N'Droté, expectations about the electrification of the village, expectations about the construction of a water tower, expectations about the construction of a police station or a gendarmerie in the industrial zone for the security of the community and the workers.

- Anguédédou Village: expectations about the construction of a hospital, expectations about the construction of a police station to ensure the security of goods and people, expectations about the construction of a primary school, a vocational high school and a college in the village, expectations about the construction of a youth stadium
- Akoupé-Zeudji Village: expectations and concerns about asphaltting the road that connects the village to the Project site to facilitate access to workers on the site, concerns and expectations of the construction of a fence in the school as a priority, as the pupils are exposed to accidents. In addition, the construction of this fence could promote its use as a examination centre in order to avoid any massive displacement of pupils. Expectations about the reinforcement of the electrical network and drinking water supply network, expectations about the construction of a health centre in the Industrial Zone, expectations to provide a police station and/or a gendarmerie in the area for the security of goods and people, expectations to provide an emergency rescue centre (Military Fire Brigade Group) in case of accident, incident or fire in the Industrial Zone, and expectations about the construction of an elementary school in the village.
- Anguédédou Village: expectations about the widening of the road, about the construction of water towers and wastewater drainage channels
- Agoussi village: expectations about the construction of a water tower, an integrated health centre, an elementary school, a youth centre, the electrification of the village, the widening of the village roads, asphaltting of the village roads and the entrance to the village, and the need for tricycle to collect garbage.

6.4.6.5 Impact Assessment

Construction Phase

Unmet Expectations of Benefits

As the implementation of the Project is considered a large development project, there is a high degree of expectation that the proposed Project will bring local and municipal/district level benefits. The main expectation for benefits is access to employment opportunities, construction of infrastructure and development centers in the villages, and economic and livelihood benefits thanks to the establishment of the Project. In addition, there is a lot of expectations about employment opportunities and economic development due to the Project.

Due to the extent of these expectations, and the potential for unmet expectations from the Project, the magnitude of the impact is considered medium, the scope is local, and the duration is medium term. Therefore, the significance of the impact before mitigation is **moderate**.

Operation Phase

Disturbance from the presence of workforce

The Project is expected to have the capacity to accommodate a high number of industrial units that will attract a large workforce, which can create potential disturbances regarding inter-community and intra-community tensions. This is likely to cause communities, households, and individuals to be affected due to severance in community cohesion.

The workforce required for the operations, maintenance, cleaning, and security workers of the Project will be significantly lower than the workforce expected for construction, only 40 workers. Nevertheless, the Project is expected to have the capacity to accommodate up to 100 tenant companies inside the Project area, and the employment that will be required to operate these industrial units is expected to be high; around 800 workers of the subcontractors during peak construction time. In addition, the required workforce for the operation of the industrial units is unsure at this stage, as operators within the zone will manage their own workforce (but will likely be several 1000s of workers in total).

The construction of the Project will result in changes in local communities and villages in the Aol, including worker influx and changes in households' dynamics that can be exacerbated such as alcoholism or drug use and social disturbances. Shifts in power dynamics between workers and community members and within households can result in increased violence and tensions.

In order to limit disturbances related to the influx of outside workers into the Project area, the Employment Strategy and Recruitment Process will clearly communicate to stakeholders that local candidates will be prioritised to the fullest extent possible.

Information will also be shared on the number of local unskilled and semi-skilled positions available to local residents, along with the recruitment methods used to identify potential candidates.

Taking into account the above, the magnitude of the impact is considered medium, local scope and of long duration. Therefore, the significance of the impact before mitigation is **moderate** on the potential disturbances regarding inter-community and intra-community tensions.

6.4.7 Summary of Socio-economic Impacts of the Project

This section presents a summary of the impact assessment for each of the defined socio-economic impact topics/sub-topics, per the assessment methodology given in section 6.1 above. The socio-economic impacts that can potentially arise from the implementation of the Project are summarised in the Table 6-20 below.

Note: the corresponding mitigation measures for the impacts are described in Section 7.3, and the summary of residual impacts is presented in Table 7-7.

Table 6-20 Socio-economic Impact Assessment

Project phase	Source of impact		Social component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
Development & construction phase	Temporary Direct and Indirect Employment Opportunities	250-500 workers recruited, from which approximately 80% unskilled	Economy and Employment	Both	Positive	High	Occasional	Medium	Positive	Between 250 to 500 workers (80% unskilled) will be recruited with a focus on locally sourced workers. Other workers may benefit indirectly.
	Taxes and fees, procurement and worker spending	Profit generation from taxes/fees, procurement and worker spending.	Economy and Employment	Both	Positive	High	Occasional	Medium	Positive	Impact on in-country and local profit generation from taxes/fees, procurement and worker spending.
	Capacity Enhancement	Promoted capacity enhancement of local individuals and businesses.	Economy and Employment	Both	Positive	High	Occasional	Long	Positive	The number of individuals benefiting from enhanced capacity development both directly and indirectly is high as well as the potential to source local contracts.

Project phase	Source of impact		Social component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
	Permanent Loss of Livelihoods and/or Household Income	Permanent loss of access to Land in the Project footprint	Land Use and Livelihoods	Direct	Negative	High	Local	Long	Major	Agricultural Activities reported in the Project footprint, involving crop fields of rubber or cassava. Communities may not have other land to cultivate.
	Permanent loss of access to Natural Resources and Related Livelihoods	Loss of access to natural resources provisions and uses as water streams or collection of NTFPs	Land Use and Livelihoods	Direct	Negative	Medium	Local	Long	Moderate	Livelihood activities related to collection of NTFPs, and wood reported in the Project footprint. Communities may not have other land to access and use. In addition, it was reported that communities use the water streams that shelter the Project area for drinking and irrigation.
	Road Safety	Increased traffic accidents due to traffic increase	Community Health, Safety and Security	Direct	Negative	Medium	Occasional	Medium	Moderate	Increased traffic associated with construction activities, and the potential risk to

Project phase	Source of impact		Social component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
										community safety related to construction activities.
	Site Trespass and Injury	Accidents resulting from trespass onto project sites	Community Health, Safety and Security	Direct	Negative	Low	Occasional	Short	Minor	The Project site will be fenced prior to start of construction, so site trespassing will be very limited and the risk for intrusion low.
	Environmental Health	Environmental changes as a result of noise, changes on the landscape, dust and other emissions from construction activities	Community Health, Safety and Security	Direct	Negative	High	Local	Medium	Moderate	Impacts on the health of the community as a result of environmental changes from construction activities, including changes on the landscape that can affect water quantity and/or quality. Some of the water streams that cross the Project footprint are used by communities.

Project phase	Source of impact		Social component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
	Transmission of Communicable Diseases	Increased Transmission of Communicable Diseases	Community Health, Safety and Security	Both	Negative	Low	Local	Short	Minor	As the majority of the workforce is expected to be sourced locally, the potential impact of the increased transmission of communicable diseases within the workforce and the nearby communities is expected to be limited.
	Transmission of STDs	Increased Transmission of STDs	Community Health, Safety and Security	Both	Negative	Low	Local	Short	Minor	The workforce will be sourced locally and no significant influx of workforce is expected
	Pressure on Healthcare	Increased Pressure on Healthcare due to influx of workers	Community Health, Safety and Security	Both	Negative	Low	Local	Short	Minor	The workforce influx is expected to be limited and sourced locally.
	Use of Security Personnel	Risk of abuse and/or excessive use of force	Community Health, Safety and Security	Direct	Negative	Low	Local	Short	Minor	Misuse of the authority and application of excessive measures

Project phase	Source of impact		Social component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
	Worker's Rights and Labour and Working Conditions	Violations to labour rights as workers may not be aware of their rights	Labour and Working Conditions	Both	Negative	Medium	Occasional	Medium	Moderate	If labour is not managed properly, it may result in negative impacts on the workers' working conditions
	Workers' Health and Safety	Increased occupational Accidents and Injuries	Labour and Working Conditions	Both	Negative	Medium	Occasional	Medium	Moderate	Accidents resulting in injuries or fatalities remain a possibility, as activities of the site personnel will involve typical construction risks such as risks due to moving equipment
	Women's rights	Increased GBVH, approach to recruitment, promotion, and treatment with respect to equal opportunity	Labour and Working Conditions	Both	Negative	Medium	Occasional	Medium	Moderate	Women might face indirect forms of discrimination with respect to their right to work and harassment (ie. access to job opportunities, unequal access to promotions, GBV and harassment, discrimination upon recruitment, and others

Project phase	Source of impact		Social component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
	Child Labour and Forced Labour	Use of Child Labour and Forced Labour	Labour and Working Conditions	Both	Negative	Low	Occasional	Medium	Minor	The use of child labour or use of people aged 16-18 in hazardous work within the supply chain remains a possibility
	Disruption to infrastructure and utilities	Disruption to infrastructure and utilities	Access to infrastructures and services	Direct	Negative	Low	Occasional	Short	Moderate	Impacts on utilities and infrastructure, mainly due to site clearance works, excavation and movement of soil, embankment construction, and construction of the various elements of the Project
	Unmet Expectations of Benefits	Demands and expectations of benefits from the Project.	Community Cohesion	Both	Negative	Medium	Local	Medium	Moderate	There is a high degree of expectation that the proposed Project will bring local and municipal/district level benefits.

Project phase	Source of impact		Social component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
Operation phase	Temporary Direct and Indirect Employment Opportunities	40 workers recruited directly and around 800 workers of the subcontractors during peak construction time.	Economy and Employment	Both	Positive	High	Regional	Long	Positive	The operation of the Project will directly recruit 40 workers. Regarding the impact on indirect employment, the Project is expected to have the capacity to accommodate up to 100 tenant companies inside the Project area, and the employment that will be required to operate these industrial units is expected to be around 800 workers of the subcontractors during peak construction time.
	Regional and National economic development	Increased economic development and improved socioeconomic conditions	Economy and Employment	Both	Positive	High	Regional	Long	Positive	The nature of the Project will strengthen the local production, transforming local commodities and logistics services into exportable goods and products. The operation activities associated with

Project phase	Source of impact		Social component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
										the Project will generate economic and development benefits
	Permanent Loss of Livelihoods and/or Household Income	Permanent loss of access to Land in the Project footprint	Land Use and Livelihoods	Direct	Negative	High	Local	Long	Major	Agricultural Activities reported in the Project footprint, involving crop fields of rubber or cassava. Communities may not have other land to cultivate.
	Permanent loss of access to Natural Resources and Related Livelihoods	Loss of access to natural resources provisions and uses as water streams or collection of NTFPs	Land Use and Livelihoods	Direct	Negative	Medium	Local	Long	Moderate	Livelihood activities related to collection of NTFPs and wood reported in the Project footprint. Communities may not have other land to access and use. In addition, it was reported that communities use the water streams that shelter the Project area for drinking and irrigation.

Project phase	Source of impact		Social component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
	Environmental Health	Environmental changes as a result of the operation of the Project as noise, dust and other emissions from industrial activities	Community Health, Safety and Security	Both	Negative	Medium	Local	Long	Moderate	Impacts on the health of the community as a result of environmental changes from operation activities
	Transmission of Communicable Diseases	Increased Transmission of Communicable Diseases due to the influx workforce	Community Health, Safety and Security	Indirect	Negative	Medium	Local	Long	Moderate	The increased transmission of communicable diseases within the workforce and the nearby communities is expected to be limited.
	Transmission of STDs	Increased Transmission of STDs due to the influx workforce	Community Health, Safety and Security	Indirect	Negative	Medium	Local	Long	Moderate	Eventhough a significant influx of workforce is expected to operate the industrial units, the workforce will be sourced locally.
	Workers' Rights	Breaches of workers rights especially within	Labour and Working Conditions	Both	Negative	Medium	Local	Medium	Moderate	Limited impact on violations to labour rights as workforce

Project phase	Source of impact		Social component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
		the supply chain and amongst casual labourers								number and use of contractors will decrease
	Workers' Health and Safety	Increased Labour Accidents and Injuries	Labour and Working Conditions	Both	Negative	Medium	Local	Medium	Moderate	Impact on accidents resulting in injuries or fatalities as operations activities will be less intense and will involve less workforce
	Forced Child Labour	Use of Child Labour	Labour and Working Conditions	Both	Negative	Low	Occasional	Medium	Moderate	The use of child labour or use of people aged 16-18 in hazardous work within the supply chain remains a possibility
	Benefits from improvements to infrastructure and services	Developed industrial infrastructure and activities with high added value for the national economy	Access to infrastructures and services	Both	Positive	High	Regional	Long	Positive	The improvements to local infrastructure and services will bring socioeconomic opportunities and increased well-being of the communities.

Project phase	Source of impact		Social component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Duration	Significance of the Impact	
	Disturbance from the presence of the workforce	A large workforce, can create potential disturbances regarding inter-community and intra-community tensions	Community Cohesion	Indirect	Negative	Medium	Local	Long	Moderate	Changes in local communities and villages in the Aol, including worker influx and changes in households' dynamics, including community tensions and exacerbated use of alcohol and drugs. Nevertheless, the workforce is expected to be sourced locally,
Closure or rehabilitation phase	With regard to the decommissioning phase, impacts to economy and employment are anticipated to be negative. Presumably the closure is in many years in the future. It is unlikely that all companies close at the same time and there will be a turnover of tenants for many decades.									

6.4.8 Cultural Heritage

6.4.8.1 Baseline conditions

The baseline study identified three tangible Cultural Heritage non-designated resources within the Project Aol. Each of the three Cultural Heritage resources is classified to have a “Medium” sensitivity (according to the ERM Impact Assessment Methodology). In the absence of more detailed information on Cultural Heritage resources identified in the baseline, the impact assessment takes a conservative, precautionary approach to the assessment of sensitivity and impact.

The Project Aol and construction corridor for cultural heritage are outlined in Table 6-21. For the impact assessment it is assumed that any identified cultural heritage resources located within the construction corridor will be wholly removed²¹⁹ during the construction phase.

Table 6-21 Spatial scope of the Impact Assessment

Project Phase	Area of Influence	Construction Corridor
Construction	500 metres from the proposed development and associated infrastructure.	The footprint of the proposed development and associated infrastructure.
Operation	500 metres from the proposed development and associated infrastructure.	The footprint of the proposed development and associated infrastructure.

6.4.8.2 Potential Impacts

The potential impacts of the Project to both tangible and intangible cultural heritage resources are described below:

- Tangible cultural heritage – such as (but not limited to) archaeological sites, built heritage (historic or culturally significant buildings or structures), places of worship, historic enclosures and potential settlements; and
- Intangible cultural heritage – such as (but not limited to) places that hold cultural, artistic, or religious values, knowledge, innovations, and practices of communities embodying traditional lifestyles, and living heritage resources (shrines, cemeteries, religious/ritual sites) etc.

6.4.8.3 Direct, Indirect and Cumulative impacts

Three types of impacts to cultural heritage resources are considered in this assessment:

- Direct: ground disturbance due to earthworks are the most likely source of direct, physical impacts to known and unknown cultural heritage resources, with the potential to partially or wholly remove these resources. Direct impacts have the potential to be once off, non-reversible and permanent. Unless the principle of avoidance is adopted in the first instance, mitigation measures will not significantly reduce the predicted residual effect of this impact on the cultural heritage.
- Indirect: cultural heritage resources are susceptible to indirect impacts through the introduction of intrusive visual, auditory or dust elements to their physical environment or ‘setting’. Indirect impacts also include restricted access to existing cultural heritage resources as a result of construction or operation phases; and
- Cumulative: impacts to cultural heritage resulting from incremental change caused by surrounding projects in the past, present, or reasonably foreseeable future, combined with this Project.

²¹⁹ “Removed” here means the resource will need to be physically removed in its totality for construction of the Project, and no trace will survive in-situ beyond the construction phase

6.4.8.4 Impact Magnitude for Cultural heritage

Magnitude of impact is assessed using the following definitions (Table 6-22).

Table 6-22 Impact Magnitude definitions for cultural heritage

Magnitude	Cultural heritage resources
Negligible	No discernible change in the physical condition, setting or accessibility of the site
Low	Small part of the site is lost or damaged, resulting in a loss of scientific or cultural value; Setting undergoes temporary or permanent change that has limited effect on the site's perceived value to stakeholders; Stakeholder/public or scientific access to site is temporarily impeded; and/or Historic building suffers minor, repairable, structural damage.
Medium	A significant portion of the site is lost or damaged, resulting in a loss of scientific or cultural value; Setting undergoes permanent change that permanently diminishes the site's perceived value to stakeholders; Site becomes inaccessible for the life of the Project to stakeholders including traditional users or researchers; and/or Historic building suffers major structural damage that is not repairable.
High	The entire site is damaged or lost, resulting in a nearly complete or complete loss of scientific or cultural value; Setting is sufficiently impact to cause site to lose nearly all or all cultural value or functionality; Site becomes permanently inaccessible to stakeholders including traditional users or researchers; and/or Historic building suffers major structural failure.

Source: ERM, 2021

6.4.8.5 Impact Assessment

Construction Phase

Following types of potential impacts are considered during the construction phase:

- **Physical ground disturbance through earthworks:** a direct impact, ground disturbance and earthworks associated with the construction phase have the potential to partially or wholly remove cultural heritage resources, such as:
 - Buried archaeology, including undiscovered archaeological sites;
 - Built heritage including historic buildings, places of worship tombs;
 - Buried human remains, including graves or cemeteries; and
 - Industrial heritage including historic railways, rail and road bridges.
- **Restriction of access:** restriction zones associated with the construction phase in the form of physical barriers or fencing have the potential to temporarily or permanently restrict the access for traditional users or researchers to existing cultural heritage resources;
- **Visual:** The construction of temporary or permanent structures (bridges, fly-over, embankments etc.) has the potential indirectly impact built and living cultural heritage through the introduction of intrusive visual elements to the physical environment or 'setting' where the resource draws value from its surroundings;
- **Auditorial:** The construction phase has the potential to introduce intrusive auditorial (noise) elements through associated construction works to the physical environment or 'setting' of cultural heritage resources; and
- **Dust:** The construction phase has the potential to introduce intrusive dust elements through associated works to the physical environment or 'setting' of cultural heritage resources.

Operation Phase

Following types of indirect impacts are considered during the operation phase:

- **Restriction of access:** the potential to permanently restrict access for traditional users or researchers to existing cultural heritage resources;
- **Visual:** the potential to introduce mobile intermittent intrusive visual elements to the physical environment or 'setting' of cultural heritage resources; and
- **Auditorial:** the potential to introduce intermittent intrusive auditorial elements to the physical environment or 'setting' of cultural heritage resources.

Summary of Impact Assessment

A summary of the impact assessment considering the above factors for Cultural Heritage resources is set out in Table 6-23. Mitigation measures for identified potential impacts, as deemed necessary, are outlined in Section 7.3.8 of the mitigation Chapter 7. The Project construction will result in full disturbance of the three tangible identified CH resources. Additionally, non-tangible cultural heritage resources that were not identified during the cultural heritage survey could be destroyed.

Table 6-23 Cultural Heritage Impact Assessment

Project phase	Source of impact		Environmental component affected	Nature of impact		Impact significance assessment				Summary of Reasoning
	Activity	Criteria		Direct/ Indirect	Positive / Negative	Magnitude	Scope	Durati on	Significanc e of the Impact	
Constr uction phase	Physical ground disturban ce through earthwor k activities	500 metres from the physical limits of the proposed develop ment and associate d infrastruc ture	Cultural Heritage	Direct	Negative	High	Local	Long	Major	<p>The three tangible cultural heritage resources (IEZ_CH_01, 02, 03) are situated within the construction corridor. Physical ground disturbance through earthwork activities have the potential to partially or wholly remove the resource during the construction phase,</p> <p>Furthermore, there is the possibility of destroying not identified non-tangible cultural heritage.</p> <p>Note: This significance is based on the assumption that the cultural heritage is in fact present in the Project area. IF subsequent studies/checks confirm that it is NOT present, then the significance will be Minor (neglectable)</p>
Operati on phase	The impact from construction will have wholly removed the identified potential cultural heritage resources and therefore there will be no impact at operation phase.									

6.5 Cumulative Impact

6.5.1 Introduction

This Chapter presents a cumulative impact assessment (CIA) of the Project, comprising an initial description of the identified potential cumulative impacts with respect to other identified significant existing or (known) future projects within or near the sphere of influence of the Project. It also sets out, where applicable, the mitigation measures to either prevent or minimize risks related to potential cumulative impacts in consideration also of those mitigation measures already planned within other topics of the ESIA.

The IFC PS1 specifies that risks and impacts of a project are to be analyzed in such a CIA, *inter alia*, with respect to cumulative impacts from

- (i) other existing projects or conditions gathered from baseline surveys, review of available published information and stakeholder engagement activities, and
- (ii) other future developments (including future stages of the project itself) that are realistically defined at the time the ESIA is undertaken and for which the sphere of influence of the various projects or developments may overlap.

Depending on the type/characteristics of other identified projects and their specific impacts, the main issues of concern with respect to the CIA can thus include any type of impact that is considered in the ESIA.

6.5.2 Objectives and Scope

The objectives of this CIA are to:

- Identify other existing and planned projects that could cumulatively impact the Project area
- Identify the “Valued Environmental and Social Components” (VECs) that could be impacted cumulatively
- Assess the cumulative impacts on VECs, considering the other projects
- Proposing a Management Framework to avoid or minimise the cumulative impacts.

The scope of this CIA is from the perspective of the Project, namely for the construction and operations of the basic infrastructure of the 429 ha IEZ. These Project activities and potential cumulative impacts must be viewed in the wider context of the overall site, namely (i) the future development of the 429 ha IEZ (including the expected 100 or so tenants on the Project area), and (ii) the overall 940 ha PK24.

There is presently very little information regarding the future tenants or the type of the industries that will settle in the 429 ha IEZ of the Project, or in the other parts of PK24 IEZ (whereby the several facilities existing or currently under construction are considered below in this CIA). ARISE has developed the Master Plan for the Project area and decided on the targeted industry sectors for the future tenants (see section 4.3.2). Thus, the whole basic infrastructure of the 429 ha IEZ (i.e. related to the Project) is being designed and built in anticipation of the future full occupation of the IEZ, including the electric utilities, water-wastewater provisions, roadways etc. In addition, the overall PK24 is similarly being planned in anticipation of the future occupancy (Figure 6-6), including the construction of new roadways and access points to the existing highways nearby. At present, within PK24 some industries are already operational, some are under construction, and others are still on the design stage (refer to section 4.2.2).



Figure 6-6 PK24 Master Plan Overview

Source: Made available to ESIA team by ARISE, May 2022

6.5.3 Key Terminology

The following are definitions for key terms used in the CIA (after IFC, 2013)²²⁰:

- **Cumulative Impact:** Impacts that result from the successive, incremental, and/or combined effects of an action, project, or activity added to other existing, planned, and/or reasonably anticipated actions, projects, or activities. For practical reasons, the identification, assessment, and management of cumulative impacts are limited to those effects generally recognized as important on the basis of scientific concern and/or concerns of affected communities.
- **CIA trigger projects:** Existing, planned, or reasonably expected future developments, projects and/or activities potentially affecting VECs.
- **External Stressors or Drivers:** Sources or conditions that could affect or cause physical, biological, or social stress on VECs, such as natural environmental and social drivers, human activities, and external stressors. These can include climate change, population influx, natural disasters, or deforestation, among others.

⁽²²⁰⁾ The definition is based on the IFC Good Practice Handbook "Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets", 2013, which has been used to inform the assessment process.

- **VEC:** Valued Social and Environmental Components (VEC) that are considered as important by the scientific community and/or potentially affected communities. VECs may include:
 - Physical features, habitats, wildlife populations (e.g., biodiversity, water supply);
 - Ecosystem services (e.g., protection from natural hazards, provision of food);
 - Natural processes (e.g., water and nutrient cycles, microclimate);
 - Social conditions (e.g., community health, economic conditions); and
 - Cultural heritage or cultural resources aspects (e.g., archaeological, historic, traditional sites).

VECs reflect the public and scientific community's "concern" or special interest about environmental, social, cultural, economic, or aesthetic values. VECs are considered the ultimate recipients of cumulative impacts because they tend to be at the ends of ecological pathways

6.5.4 Assessment Methodology

The evaluation of potential cumulative impacts is highly dependent on the particular locations and activities under review, and therefore each situation will be assessed qualitatively on a case-by-case basis.

The approach to the CIA is undertaken follows the *IFC Good Practice Handbook: Cumulative Impact Assessment and Management Guidance for the Private Sector in Emerging Markets*. In line with the Handbook's guidance, a Rapid Cumulative Impact Assessment (RCIA) approach is considered appropriate for the Project, as it considers the challenges to conducting a CIA in an emerging market, which apply in this case, namely:

- Lack of baseline data related to the other project developments;
- Uncertainties associated with anticipated developments; Limited and emergent, strategic regional, sectoral, or integrated resource planning schemes.

In line with IFC PS 1 guidance notes (GN41) that the assessment should be "*commensurate with the incremental contribution, source, extent, and severity of cumulative impacts anticipated*", this assessment attempts to focus only on the potentially significant cumulative impacts, and where the Project's contribution to the cumulative impact is considered to be significant. In line guidance provided in Section 2 and 3 of the IFC handbook, potential mitigation measures are designed to focus on cooperation and information-sharing, in recognition of the limited control and direct influence/ decision-making ability of this private sector sponsor.

The CIA typically adheres to the five-step methodology:

- **Step 1:** Definition of the relevant spatial and temporal boundaries
- **Step 2:** Identification of key VECs and screening/Identification of potentially relevant other projects in the region
- **Step 3:** Determine present conditions of the VECs
- **Step 4 & 5 & 6:** Assessment of potential cumulative impacts and identification of appropriate mitigation measures²²¹

These steps are carried out in the following sections.

The technical background information presented in this CIA is drawn from the baseline information gathered through the ESIA process, including primary data collection, review of relevant existing

²²¹ Note that Steps 4, 5 and 6 are included as one element here within the approach as the results of assessment and proposed mitigation are presented (in one table) for each of the projects where there are considered to be overlapping VECs.

scientific sources and regional planning documentation. The key potential cumulative impacts are screened also considering the outcomes of the impacts assessment process.

The CIA also cross-references the stakeholder engagement process and outcomes from discussions and inputs from public and statutory stakeholders is considered. The scoping engagement discussions have provided inputs regarding the identification of key issues, as applicable to the VEC confirmation.

Information on other potential projects has frequently been obtained from publicly available sources.

6.5.5 Assumptions and Limitations

The following limitations and caveats apply to this CIA:

- The CIA is only for the basic infrastructure of the 429 ha IEZ (i.e., the Project), as there is limited information regarding the future tenants or the specific activities of the industries that will settle in the 429 ha of the Project. Separate CIAs should be done for each new tenant on 429 ha (once the exact industry (i.e., tenant) is identified) with a consideration of the up to date E&S settings.
- Incomplete information about other projects and/or activities in the PK24 and Project proximity (e.g., the information which may not yet be available in the public domain or where only short excerpts of survey findings are available);
- For the purpose of this CIA it was assumed that condition of the VECs in the Aol is similar for the various projects in the PK24 given the close proximity of the sites to one another;
- Incomplete baseline information for selected VECs;
- Uncertainty with respect to the implementation of future projects in the wider area.

6.5.6 Cumulative Impact Assessment

6.5.6.1 Step 1 – Defining Spatial and Temporal Boundaries of the CIA

Cumulative impacts are contextual and encompass a broad spectrum of impacts at different spatial and temporal scales (IFC, 2013). It is therefore important to establish upfront the spatial and temporal boundaries of the study.

Spatial Boundaries of the CIA

The relevant spatial boundaries for this CIA are essentially the same as the specific Area of Influence (Aol) defined in Section 5.1.1 of this ESIA Report for each relevant topic:

- The environmental Aol of this Project includes the footprint of all Project activities within a radius of 500 m of the Project;
- The social and cultural Aol of 5 km radius around the Project.

Temporal Boundaries of the CIA

The temporal boundary of the CIA formally encompasses the entire Project life cycle, from construction through long-term operations. Nevertheless, the CIA process is inherently constrained by the ability to reasonably predict future events and trends, including the planning/implementation of other relevant projects in the region. Therefore, for the purpose of this CIA, consideration is given of the construction phase and, for operations – to the extent feasible for discussion and assessment of cumulative impacts with the other projects in the PK24 and proximity.

6.5.6.2 Step 2 – Identification of VECs and Screening of other Projects in Region

VECs were identified through the ESIA process based on the outcomes of the baseline biodiversity and social assessment findings (refer to Chapter 5), as well as any stakeholder and expert consultations (refer to Chapter 11).

VECs are defined as follows per the Handbook: “*VECs are environmental and social attributes that are considered to be important in assessing risks; they may be:*

- *Physical features, habitats, wildlife populations (e.g., biodiversity),*
- *Ecosystem services,*
- *Natural processes (e.g., water and nutrient cycles, microclimate),*
- *Social conditions (e.g., health, economics), or*
- *Cultural aspects (e.g., traditional spiritual ceremonies).”*

Importantly, the IFC (2013) states clearly “*VECs for which the project will have no direct or indirect impact do not need to be the subject of CIA*”. Priority should rather be given to those VECs that are likely to be at the greatest risk from the development’s contribution to cumulative impacts.

The ESIA process identified several VECs in the Project area that may be subject of potential impacts from the Project – and other relevant projects in a cumulative manner. The outcomes of the impact assessments were reviewed to identified VECs that are impacted by the Project, and further narrowed by considering those where the Project would be a significant contributor to any cumulative impact realized. These significant impacts are considered to represent the development’s contribution to cumulative impacts. Full details of all receptors and potential impacts are described in the respective ESIA sections.

Relevant VECs to be assessed within the present CIA are therefore considered to be:

- **Physical features:** air, noise and natural resources / waste.
- **Social conditions:** communities’ health and safety, and communities’ cohesion.

In order to contextualize and inform the CIA and VEC identification and selection process, the key findings of the environmental and social baseline and impact assessments included in the present document have been taken. The approach and logic used to identify the VECs is shown in Table 6-24 below:

Table 6-24 Key VECs Identification

Aspect	Impact	Residual Impact after Mitigation	Receptor/Resource	Affecting VEC
Air Quality	Disturbance due to dust (construction) and disturbance due to vehicle emissions (construction and operation)	Minor	Social sensitive receptors in the immediate vicinity of all sites	Yes <i>Physical features</i> Air quality in general can be influenced by the development of other projects in the PK24 and surrounding area and related traffic.
Noise	Work of construction equipment (construction) Work of operational equipment (operation)	Negligible / Minor	Social sensitive receptors in the immediate vicinity of all sites.	Yes <i>Physical features</i> Noise levels can be increased by the joint activities of other projects in the PK24 and surrounding area.
Resources and Waste	Resources and waste generation, disposal of excavated waste soil (construction)	Minor	Communities in the immediate vicinity of the sites	Yes <i>Physical features</i> Waste production can be influenced by the development of other projects in the PK24 and surrounding area.
Economy and Employment	Employment Opportunities, Taxes and fees, procurement and worker spending, Capacity enhancement (construction) Employment Opportunities (operation)	Positive	Direct and Indirect Areas of Influence	Yes <i>Social conditions</i> Economy and employment can be impacted by the development of other projects in the PK24 and surrounding area.
Land and livelihoods / access to natural resources	Loss of agricultural (construction) Loss of land and livelihoods (operation)	High / Moderate	Identified affected households	No <i>Social conditions</i> Loss of livelihood and access to natural resources have been determined by the setting up of the industrial area (i.e., PK24), hence independent of the projects and services implemented.
Community Health and Safety	Road safety, site trespass and injury, environmental health, increased transmission of communicable diseases, transmission of STDs, Increased pressure on healthcare, Use of security personnel (construction) Road safety (operation)	Minor to Moderate	Communities in the immediate vicinity of the sites	Yes <i>Social conditions</i> Traffic conditions may change when considering the development of additional projects in the PK24 and surrounding area.

Aspect	Impact	Residual Impact after Mitigation	Receptor/Resource	Affecting VEC
Labour and Working Conditions	Effects on Workers' rights, Effects on Workers' health and safety, Child labour and forced labour in the supply chain (construction) Child labour and forced labour in the supply chain (operation)	Minor to Moderate	Contractor's workforce	No <i>Social conditions</i> No potential for cumulative effects on labour rights of workforce will apply.
Access to Infrastructure and Services	Disruption to infrastructure and utilities (construction). Improvement to infrastructure and services (operation)	Minor Positive	Communities in the immediate vicinity of the sites	No <i>Social conditions</i> Access to infrastructure and services are not expected to significantly change by the development of additional projects in the area since all projects are concentrated in the same confined industrial area (i.e., PK24).
Community Cohesion	Presence of workforce, Community severance, Unmet expectations of benefits (construction) Community severance, Business infrastructure, Loss of access to communal resources as well as infrastructure and social services (operation)	Moderate	Communities in the immediate vicinity of the sites	Yes <i>Social conditions</i> Impacts on community cohesion might worsen through the joined effect by the project and other developments in the PK24 and surrounding area.
Cultural Heritage	Earthworks and ground disturbance partially or wholly removing cultural heritage resource; Construction- related restriction zones (construction) Operation- related restriction zones (operation)	Negligible to Moderate	Communities in the vicinity of the sites.	No <i>Social conditions</i> Cultural Heritage related impacts on local communities is not expected to be significantly changed by the implementation of other projects given the concentration of these in the same industrial area (i.e., PK24).
Climate Risk	Climate risk associated impacts (construction) Climate risk associated impacts (operation)	Negligible to Moderate Negligible to Moderate	Direct and Indirect Areas of Influence	No <i>Physical features</i> No significant cumulative impacts are expected from additional projects on the matter.

CIA trigger projects

As expounded in Chapter 4 the Project is located within the 940 ha PK24 industry area, in which several industries are currently under development or operation (see in Figure 4-2). Given the general close distance of these developments to the Project, these have been considered as potentially impacting the Project VOCs in terms of cumulative impacts. To evaluate this potential, these projects have been grouped in two main industry sectors according to their core activities, reflecting their associated potential environmental and social impacts and risks derived from their implementation and operation:

Transformation and manufacturing industry

- Animal food production
- Construction materials production
- Construction works company
- Electrical equipment production
- Food production
- Incineration plant
- Plastics, writing, hygiene, and cosmetics products
- Metallurgical plant

Services industry

- Gas bottles retailer
- Logistics company
- Printing plant
- Storage
- Vehicle workshop

For each industry sector the following aspects of the VECs that may be cumulatively affected by both projects (i.e., the Project and the CIA trigger project) have been identified for the construction and the operation phase:

Table 6-25 CIA trigger projects - Screening Step 3

Industry sector	Common VECs – construction phase	Common VECs – operation phase
Transformation and manufacturing	Physical features: Air Quality Noise Resources and waste Social conditions: Economy and employment Community H&S Community cohesion	Physical features: Air Quality Noise Resources and waste Social conditions: Economy and employment Community H&S Community cohesion
Services	Physical features: Air Quality Noise Resource and waste Social conditions: Economy and employment Community H&S Community cohesion	Social conditions: Economy and employment Community cohesion

6.5.6.3 Step 3 – Determine Present Conditions of the VECs

The present conditions of the VECs identified are described in the respective baseline sections of this ESIA – refer to the relevant sections for these descriptions.

The current understanding of baseline conditions has been used to identify and assess the potential cumulative impacts presented below.

6.5.6.4 Steps 4 & 5 & 6 – Assessment of cumulative impacts and identification of mitigation measures

For each of industry sector identified in the preceding Step 2, a qualitative assessment of potential cumulative impacts on the identified VECs is undertaken per the following sequence:

- Brief description of the expected activities and with reference made to respective ESIA sections for further information regarding baseline conditions and other relevant data (if applicable);
- Assessment of key potential types of cumulative impacts on the VECs identified and estimation of significance and magnitude (as compared to the impacts of the Project on its own);
- Description of potential mitigation measures and residual cumulative impacts.

Depending on the specific impact characteristics, it may or may not be feasible to assign a specific significance to the cumulative impacts. Where feasible, the significance criteria is referred to for the corresponding types of impacts in the respective ESIA sections

Transformation and Manufacturing Industry Projects

The transformation and manufacturing projects identified in the PK24 industrial area are dedicated to the production of electrical equipment, animal food, plastics, writing, hygiene and cosmetics products, cement, and metals, as well as incineration. The CIA for transformation and manufacturing projects is presented in Table 6-26. The mitigation measures recommended based on identified cumulative impacts are:

- During construction phase:
 - ARISE needs to engage with the engineering, procurement, and construction contractors (EPCs) presented in the PK24 IEZ to align the implementation of specific management plans (emergency and preparedness, traffic, among others) and to evaluate potential grievances received, analysing causes for those and plan for integrated interventions.
 - ARISE's Project Community Liaison Officers (CLO) should pay special attention to landowners/ residents in this area and should reach out early to the PK24 EPCs representatives to ensure a mutual understanding of the commonly affected persons. The SEP should include and maintain PK24 EPCs as an interested stakeholder.
- During Operation:
 - ARISE needs to engage with the EPCs presented in the PK24 IEZ to align the implementation of specific management plans (emergency and preparedness, traffic, waste, drainage among others) and to evaluate potential grievances received, analysing causes for those and plan for integrated interventions.
 - On the areas identified as having high potential for significant severance impacts, detailed analysis should be developed to minimize mobility constraints for the affected populations.
 - Emergency Preparedness and Response Plans should be aligned, and drills should be performed.
 - ARISE needs to engage with local public to better understand impacts on them specially those related to noise and air quality.
 - ARISE needs to require the tenants for the 429 ha Project area to conduct proper E&S assessment & CIA study prior construction phase as per national and international requirements applied to this ESIA and other industry specific GIIPs.

Table 6-27 provides a resulting residual cumulative impact significance after implementation of above-mentioned mitigation actions. Based on the results shown in the table, the proposed mitigation measures are anticipated to reduce the residual impacts to acceptable levels.

Table 6-26 Cumulative Assessment: Transformation and Manufacturing Industry Projects

Applicable VECs	Aspect	Cumulative Impact Analysis	Sensitivity of Receptors	Residual Impact Significance of Project ²²²	Resulting Cumulative Impact Significance ²²³
<i>Physical features</i>	Air Quality	<ul style="list-style-type: none"> Dust and emissions during construction phase should be considered on different projects cumulatively. During operation, air quality related impacts might result in significant cumulative impacts due to emissions of the manufacturing process. 	High	Minor	Moderate / Minor
	Noise	<ul style="list-style-type: none"> During construction of the different projects, it is expected a cumulative effect on the disturbance due to noise and vibration on human sensitive receptors. Operational activities can also contribute to significant cumulative noise impacts. 	High	Minor (Neglectable)	Moderate
	Nat. resources and waste	<ul style="list-style-type: none"> Estimated volumes of waste to be produced during the construction of the projects as well as the waste management facilities that will receive that waste is currently unknown. However, the volume and types of wastes to be produced by several projects together will be substantially higher. During operation, it is also expected a cumulative effect on waste and wastewater, both during construction and operation. 	High	Minor	Moderate
Social Conditions	Community Health and Safety	<ul style="list-style-type: none"> Community health and safety will be impacted cumulatively both in construction and operation. However, it is assumed that all sites will be fenced, with proper security measures. In addition, the Grievance Mechanism and other communication protocols will contribute to develop community awareness on potential risks. 	High	Moderate	Moderate
	Community cohesion	<ul style="list-style-type: none"> Social dissatisfaction can increase by the cumulative negative impacts of several projects together in the area due to foreign workforce, unmet expectations of benefits (construction) and social services, etc. (operation) 	High	Moderate	Moderate / High

²²² The residual impact significance for each topic mentioned in the Chapter 7 under relevant topic-specific section.

²²³ Resulting cumulative impact significance of the Project and other projects in the PK24 IEZ and surrounding area (prior mitigation measures)

Table 6-27 Residual Cumulative Impact Significance: Transformation and Manufacturing Industry Projects

VECs	Aspects	Resulting Cumulative Impact Significance	Resulting Residual Cumulative Impact Significance
<i>Physical features</i>	Air Quality	Moderate / Minor	Minor / Minor (Negligible)
	Noise	Moderate	Minor
	Nat. resources and waste.	Moderate	Minor (Negligible)
<i>Social conditions</i>	Community Health and Safety	Moderate	Minor
	Community cohesion	Moderate / High	Minor / Moderate

Services Industry Projects

The services industry projects identified in the PK24 IEZ are dedicated to the supply of gas bottles retailer, logistics company, printing plant, storage and vehicle workshops.

The CIA for transformation and manufacturing projects is presented in Table 6-28. The mitigation measures recommended based on identified cumulative impacts are:

- During construction phase:
 - ARISE needs to engage with the EPCs presented in the PK24 IEZ to align the implementation of specific management plans (emergency and preparedness, traffic, among others) and to evaluate potential grievances received, analyzing causes for those and plan for integrated interventions.
 - ARISE’s Project Community Liaison Officers should pay special attention to landowners/ residents in this area and should reach out early to the PK24 EPC representatives to ensure a mutual understanding of the commonly affected persons. The SEP should include and maintain PK24 EPC as an interested stakeholder.
- During Operation:
 - ARISE needs to engage with the EPCs presented in the PK24 IEZ to align the implementation of specific management plans (emergency and preparedness, traffic, waste, drainage among others) and to evaluate potential grievances received, analyzing causes for those and plan for integrated interventions.
 - On the areas identified as having high potential for significant severance impacts, detailed analysis should be developed to minimize mobility constraints for the affected populations.
 - Emergency Preparedness and Response Plans should be aligned, and drills should be performed.
 - ARISE needs to engage with local public to better understand impacts on them specially those related to community cohesion. Monitoring noise and air quality impact on local communities.
 - ARISE needs to require the tenants for the 429 ha Project area to conduct proper E&S assessment & CIA study prior construction phase as per national and international requirements applied to this ESIA and other industry specific GIIPs.

Table 6-27 provides a resulting residual cumulative impact significance after implementation of above mentioned mitigation actions. Based on the results shown in the table, the proposed mitigation measures are anticipated to reduce the residual impacts to acceptable levels..

Table 6-28 Cumulative Assessment: Services Industry Projects

Applicable VECs	Aspect	Cumulative Impact Analysis	Sensitivity of Receptors	Residual Impact Significance of Project ²²⁴	Resulting Cumulative Impact Significance ²²⁵
Physical features	Air Quality	<ul style="list-style-type: none"> Dust and emissions during construction phase should be considered on different projects cumulatively. During operation, air quality related impacts are expected to be negligible. 	High	Minor	Moderate / Minor
	Noise	<ul style="list-style-type: none"> During construction of the different projects, it is expected a cumulative effect on the disturbance due to noise and vibration on human sensitive receptors. Operational activities are not expected to contribute to significant cumulative noise impacts. 	High	Minor (Negligible)	Moderate
	Natural resources and waste	<ul style="list-style-type: none"> Estimated volumes of waste to be produced during the construction of the projects as well as the waste management facilities that will receive that waste is currently unknown. However, the volume and types of wastes to be produced by several projects together will be substantially higher. During operation, it is also expected a cumulative effect on waste and wastewater, both during construction and operation. 	High	Minor	Moderate
Social Conditions	Community Health and Safety	<ul style="list-style-type: none"> Community Health and safety will be impacted cumulatively both in construction and operation. However, it is assumed that all sites will be fenced, with proper security measures. In addition, the Grievance Mechanism and other communication protocols will contribute to develop community awareness on potential risks. 	High	Moderate	Moderate
	Community cohesion	<ul style="list-style-type: none"> Social dissatisfaction can increase by the cumulative negative impacts of several projects together in the area due to foreign workforce, unmet expectations of benefits (construction) and social services, etc. (operation) 	High	Moderate	Moderate / High

²²⁴ The residual impact significance for each topic mentioned in the Chapter 7 under relevant topic-specific section.

²²⁵ Resulting cumulative impact significance of the Project and other projects in the PK24 IEZ and surrounding area (prior mitigation measures)

**Table 6-29 Residual Cumulative Impact Significance: Services Industry
 Projects**

VECs	Aspects	Resulting Cumulative Impact Significance	Resulting Residual Cumulative Impact Significance
<i>Physical features</i>	Air Quality	Moderate / Minor	Minor
	Noise	Moderate	Minor
	Nat. resources and waste.	Moderate	Minor (Negligible)
<i>Social conditions</i>	Community Health and Safety	Moderate	Minor
	Community cohesion	Moderate / High	Minor / Moderate

7. MITIGATION MEASURES

7.1 Physical Environment

7.1.1 Hydrology & Hydrogeology

The impacts related to the Project area easement are inherent to the Project itself and its location, and cannot be fully avoided. These impacts must be therefore managed using the mitigation hierarchy (refer to Figure 6 3) prioritising avoidance when possible

7.1.1.1 Construction Phase

Soil movement during land cleaning and preparation, excavations for constructions and other structures

The impacts identified and discussed in the section 6.2.2 tend to occur in the immediate vicinity of the exposed areas, being easily avoided with control measures during the works.

To prevent such an impact, the embankments formed during the earthworks works will be equipped with protection devices to channel rainwater, thereby reducing the erosion of the slopes. In addition, the drainage system will be designed to protect the embankments against erosion, ensure road trafficability, as well as keep the construction site areas and service fronts in good operating conditions, collecting and conducting this water safely to the receiving body, or natural drainage lines. Furthermore, the following mitigation measures are required for the construction team:

- Ensure that activities take place only in the locations defined for construction. The area of soil exposure and disturbance shall be limited to the construction site only;
- Measures to divert external 'clean' runoff around the construction area to prevent mixing of 'clean' and 'dirty' runoff and reduce the size of the required sediment-drainage basins;
- Prevent materials from the development area from spilling into conserved areas; and
- Promote the planting of grasses on the slopes and cuts in the soil as a preventive measure against erosion processes.

The arrangement of the Project drainage network will be connected to the PK24 system and will be designed in such a way as to lead the flow of the different drainage basins to the main channel that crosses the Project area, at three points upstream, intermediate and downstream with the final section with the Gobouet River, which flows into Ebriè Lagoon. To keep the impacts on the quality of such bodies of water of a potential nature, ARISE will develop and implement an internal control systems of the industries or areas of common use in the IEZ. Monitoring the quality of water bodies should follow the guidelines of the Monitoring Program for follow-up (part of the Environmental and Social Management Plan) and to ensure compliance with legal and environmental requirements, in order to verify the relevance and effectiveness of the proposed environmental protection measures.

Generation of liquid and oily effluents, solid waste and sanitary sewage

Hazardous wastes will be clearly marked and disposed in bins used to collect hazardous waste materials (solvents, paints, cleaning fluids, greases, acids and alkali materials). The hazardous waste would then be disposed in licensed hazardous waste disposal sites, by licensed subcontractors. The Project contractors will subcontract a licensed and reputable waste management company for the collection, transport and disposal of waste produced at site. Wastes at the sites and the accommodation areas will be segregated and collected at temporary waste collection areas (WCA). Therefore, at this stage, the impact on the quality of water bodies will be limited to the event of an accidental leak.

In addition to the importance of the aforementioned control measures to avoid impacts, monitoring of the water quality of the streams and water bodies surrounding the Project area will be carried out, through the Monitoring Program, as a way of verifying the efficiency of the control systems

Drinking water will be obtained from municipal grids via connection lines, where locally available or from borehole wells and then subject to the obligatory water quality testing and approvals/licenses.

Summarised mitigation measures for the construction phase of the Project include:

- Implement a Construction Management Plan (CMP) with views for:
 - Optimise the design of Project Master Plan layout to limit the gradient in order to reduce runoff-induced erosion, and provide adequate drainage based on site dimensions, surface material used, compaction and maintenance.
 - Limit the area of soil exposure and disturbance to the construction site only.
 - Prevent erosion from excavated areas and soil storage heaps to reduce sediments flowing into surface waters and drainage channels implementing localised control measures (e.g. sediment fences, check dams, mulch barriers, rock groynes, or geofabric barriers, sediment basins), appropriate contouring to optimise slope angle and steepness.
 - Divert external 'clean' runoff around the construction area to prevent mixing of 'clean' and 'dirty' runoff and reduce the size of the required sediment basins.
 - Re-use top soil which must be stockpiled separate from subsoil.
 - Renaturation as soon as feasible and cover the slope areas with grass
- Implement a Hazardous Materials Management Plan (HMMP) for:
 - Handling and storage raw materials and wastes.
 - Inventory of hazardous materials.
 - Provision of personal protective equipment (PPE) to staff who are required to handle certain chemicals.
 - Provision of adequate spill kits in areas for chemical storage, chemical handling and refuelling.
 - Protect public from major hazards associated with hazardous materials incidents or process.
 - Safe fuelling and gasoline handling guidelines will be developed in the construction areas. No fuelling of vehicles or equipment will take place within excavated areas.
 - Include an Emergency Response Plan (ERP). It will be developed for handling spills of hazardous materials including fuels that will be handled during construction works
- Measure related to preserve the water quality and with a focus on the local streams and consequently Gobouet River are:
 - Water permits will be obtained for the groundwater or surface water usage as it is required by the Project activities.
 - Machinery used to work in the area close to the local streams (boats, barges, pontoons and related cranes and excavators, when and if is necessary) will be maintained in good condition ensuring that oily water (bilge) and oily water drains are treated before discharge.
 - Fuelling of machineries used in the construction works and to be used close to the local streams shall be carried out in areas delimited with containment.
- Ensure pollution prevention at surface and groundwater:
 - Implement a Waste Management Plan (WMP) for: (1) application of waste hierarchy to avoid, segregate, re-use, recycle wastes as much as possible and as last option safely dispose wastes; (2) collection and segregation of waste according to its type; (3) storage of wastes according to international best practice (IFC EHS General Guideline) using appropriate labelling and containers for different categories of wastes; (4) re-use of

- excavated soils in the Project area as far as possible and seeking alternative uses for surplus spoil where practicable (e.g. landscaping and earth works for other projects) to minimise the requirements for off-site disposal; (5) transport and dispose wastes at licenced waste management sites; (6) maintaining full records of the waste management; and (7) dispoene the appropriate storage areas..
- Prevention of disposal of hazardous materials (raw material and/or waste) outside the designated sites and into any surface or groundwater source, or any other location that would potentially affect the environment and human settlement.
 - Drainage from excavations will be collected and settled to remove suspended materials before discharge by required permits. Local perimeter drains will be constructed around working areas to collect potentially suspended runoff and direct it to a system of settlement basins before discharge by required permits.
 - There will be no direct discharge of contaminated runoff from worksites to any watercourse along the alignment.
 - Channels, bunds and sandbag barriers will be provided on-site to direct run-off to the collection system.
 - Construction equipment will be cleaned away from surface waters.
 - All facilities and structures will be regularly inspected and maintained to ensure proper and efficient operation at all times, and especially after heavy rainfall. Sediment deposits will be regularly removed and disposed of either by spreading onsite (if uncontaminated) or at a suitably licensed facility.
 - Spoil and soil storage areas and open stores of construction materials will be designed and managed to control the loss of sediments into run-off by minimizing the length and angle of slopes.
- Working Close to Streams/River:
 - Sensitive areas of water streams will be protected from impacts of vehicles and other construction activities via fencing or other appropriate means.
 - Driving within streams or on their banks will be forbidden except if unavoidable to construct a particular structure. Then appropriate measures will be implemented to protect the sensitive areas, for example by placing with metal plates to drive on.
 - Water quality will be visually monitored at the local streams for bridge and access road construction sites during construction activities. Continuous visual check by construction HSE responsible will be carried out to avoid and promptly act in case of need with particular focus on presence of oil, fuel, lubricants sheens on water, presence of garbage and any other solid or liquid material.
 - No fuelling of vehicles or equipment will take place within excavated areas and/or within 50 meters of water resources, if practically feasible.
 - The requirements contained in the Water Code (Law n° 98-755) to avoid any liquid discharge that may degrade surface water will be complied. These measures must be recorded in an Emergency Response Plan (ERP), in line with the good practices also proposes by International Agencies; such as the General EHS guidelines of International Finance Corporation (IFC 2007) for handling spills of hazardous materials including fuels that will be handled during operational works.
 - Planning and implementing water conservation awareness and training programs for workers, supervisors and managers as well as engagement in water resources management.
 - Training of staff on hazardous materials and waste management.

- Undertake daily on-site and off-site water streams – drainage inspection around the work areas to monitor erosion process, water flows and instabilities and record inspection results

7.1.1.2 Operation Phase

Generation of liquid effluents, solid waste and sanitary sewage

To mitigate this impact, some measures and operational procedures are foreseen, such as:

- Operations involving the handling of chemical products will be carried out in impermeable areas with a containment basin.
- Sites subject to the presence of oily waste will be equipped with water and oil separators in order to prevent contaminated flows from dispersing over the ground or being sent to storm drainage.
- Paved and/or covered areas for temporary storage with management and control procedures in accordance with the specific rules for the activity.
- Provision of adequate spill kits in areas for chemical storage, chemical handling and refuelling

Drinking water will be obtained from municipal grids via connection lines, where locally available or from borehole wells and then subject to the obligatory water quality testing and approvals/licenses.

Groundwater demand

To reduce the impact on the groundwater demand the execution of proper hydrogeological studies to evaluate water demands, removable resources and balances is recommended. The ultimate objective would be to have a management plan that would allow the sustainable use of the resources. These studies should be led by AGEDI and SODECI as the responsible agencies.

Summarised mitigation measures for the operational phase for surface and groundwater impacts of the Project include:

- Water Resource Management Plan (WRMP) with the overall objective of:
 - Ensure an adequate management of water resources.
 - Minimise the risks associated with water resource selection and consumption for the Project activities.
 - Ensure water will be used and disposed of in a manner consistent with Côte d'Ivoire legislation and where appropriate, international good practices.
 - Ensure pollution prevention at surface and groundwater at Project operational site (Stations, Depots, Water Resources Management Plan, Waste Management Plan):
 - Ensure water will be used and disposed of in a manner consistent with Côte d'Ivoire legislation and where appropriate, international good practices and track any deviation from estimated Project water use.
 - Development and implementation of a surface and groundwater quality monitoring programme to closely monitor changes in aquifer water levels and groundwater quality and availability; .
- Waste Management Plan (WMP) shall consider
 - All wastewater discharges must comply with relevant Côte d'Ivoire legal requirements (Environment Code - Law n°96-766) and follow the Project Master Plan before disposal, and relevant permits shall be in place;
 - Wastes and any other product containing hazardous chemical substances (i.e. fuel) will not be stored in the proximity of freshwater features. Their management will consider among their objectives the avoidance of any spill affecting to the freshwater ecosystems;

- All waste will be collected, treated and disposed of in an environmentally sound manner in order to prevent, eliminate or reduce its harmful effects on human health, natural resources, fauna and flora and the quality of the environment
- All facilities and structures will be regularly inspected and maintained to ensure proper and efficient operation at all times, and especially after heavy rainfall.

Development and implementation of a surface and groundwater quality monitoring programme.

- Enhancing the implementation of water governance programs to optimise process water efficiency considering water-efficient technologies and reusing water as an extension to zero liquid discharge approach.
- Engagement with the local community and verification of registered and unregistered wells (including hand dug wells) surrounding the water resources used by the Project to ensure that local wells and boreholes are not negatively affected.
- The requirements contained in the Water Code (Law n° 98-755) to avoid any liquid discharge that may degrade surface water will be complied. These measures must be recorded in an Emergency Response Plan (ERP), in line with the good practices also proposed by International Agencies; such as the General EHS guidelines of International Finance Corporation (IFC 2007) for handling spills of hazardous materials including fuels that will be handled during operational works.
- Enhancing the implementation of water governance programs to optimise process water efficiency considering water-efficient technologies and reusing water as an extension to zero liquid discharge approach.
- Planning and implementing water conservation awareness and training programs for workers, supervisors and managers as well as engagement in water resources management

Table 7-1 Hydrology & Hydrogeology Mitigation Measures and Residual Impact Assessment

Project phase	Activity/ Source of impact	Environmental component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
Development & construction phase	Soil movement during land cleaning and preparation, excavations for constructions and other structures	Hydrology & Hydrogeology	Direct	Construction Management Plan,	Medium	Low	Moderate	Minor
	Generation of liquid and oily effluents, solid waste and sanitary sewage	Hydrology & Hydrogeology	Direct	Hazardous Material Management Plan	Low	Low	Minor	Minor (Neglectible)
Operation phase	Land alteration	Hydrology	Direct	Construction Management Plan	Low	Low	Moderate	Minor
	Generation of liquid effluents, solid waste and sanitary sewage	Hydrology & Hydrogeology	Direct	Hazardous Material Management Plan	Medium	Low	Moderate	Minor
	Groundwater demand	Hydrogeology	Direct	Water Resources Management Plan	Medium	Low	Major	Minor

7.1.2 Air Quality

Without mitigation there is the potential for substantial dust emissions to arise from the Project activities, particularly from the construction phase. The measures required to mitigate dust during construction and operation phases are set out below. Alongside these mitigations, the Project boundary monitoring should be undertaken during the construction phase to allow dust emissions to be actively quantified and controlled.

Table 7-2 Air Quality Mitigation Measures

Topic	Measures
Management Measures	Develop and implement an Air Quality Management Procedure (with a Dust management plan (DMP) including dust deposition, dust flux, real-time PM ₁₀ continuous monitoring and visual inspections. The DMP should also include 'action levels' for triggering further dust mitigation when exceeded (feed-back loop).
	Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
	Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in a logbook.
Monitoring	Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust and record inspection results.
	Carry out regular site inspections to monitor compliance with the Air Quality Management Procedure, record inspection results and identify any events that require further investigation or actions.
	Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
	Undertake real-time PM ₁₀ monitoring around the Project boundary.
Site Planning	Plan Project layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
	Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
	Consider fences and enclosures around specific operations where there is a high potential for dust production and the site is active for an extensive period.
	Limit site runoff (of water or mud) to prevent egress of material to other areas which can create dust emissions when dried.
	Keep site fencing, barriers and scaffolding clean using wet methods
	Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below
	Impose and signpost a maximum-speed-limit of 30 kph on surfaced and 10 kph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided). Implement awareness training for drivers.
General Operational Measures	Where construction compounds cannot be hardstanding, use lignin-based surface sealants or watering as required to suppress dust generation
	Only use cutting, grinding, or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems

Topic	Measures
	<p>Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate</p> <p>Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate</p> <p>Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods</p> <p>Avoid bonfires and burning of waste materials</p>
Mitigation Specific to Earthworks	<p>Re-vegetate or hard stand earthworks and exposed areas and open soils to stabilise surfaces as soon as practicable</p> <p>Use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable</p> <p>Only remove the cover in small areas during work and not all at once</p>
Mitigation Specific to Construction	<p>Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place</p> <p>Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery</p> <p>For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.</p>
Mitigation specific to Track out on Hardstanding Public Roads	<p>Use water-assisted dust sweeper(s) on hardstanding access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.</p> <p>Avoid dry sweeping of large areas.</p> <p>Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport</p> <p>Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.</p> <p>Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).</p>

All suggested measures will allow to reduce the residual impact of the Project on the air quality as shown in Table 7-3.

Table 7-3 Air Quality Mitigation Measures and Residual Impact Assessment

Project phase	Activity/ Source of impact	Environmental component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
Development & construction phase	Dust generation from construction activities	Air Quality	Direct	Control of dust from construction	Medium	Low	Medium	Minor
	Vehicles on unpaved roads and surfaces	Air Quality	Direct	Control of dust from construction	Medium	Low	Medium	Minor
Operation phase	Operation of basic infrastructure	Air Quality	Direct	Control of dust from operations	Medium	Low	Medium	Minor
	Vehicle movement and track out	Air Quality	Direct	Vehicle movement and track out dust and emissions controls	Medium	Low	Minor	Minor (Negligible)
Closure or rehabilitation phase	Dust from demolition activities and traffic accessing the site.	Air Quality	Direct	Mitigation are similar to the construction phase for dust.	Medium	Low	Medium	Minor

7.1.3 Noise

Noise impacts during construction are anticipated to be minor. Nevertheless, the following mitigation measures should be used where necessary to keep the noise levels below the applicable standards at the closest sensitive receptors to the source:

- Where practicable noisy equipment will be sited as far away as possible from receptors.
- Where practicable noisy equipment will be orientated to face away from the receptors at which significant noise impacts are predicted.
- Construction contractors will use alternatives to audible reversing alarms, such as visual and/ or broadband noise emitting alarm-models that provide a safe system of work; or configuring the Project work sites to maximise forward movements of mobile plant.
- Alternatives to diesel and petrol engines and pneumatic units, such as hydraulic or electric-controlled units, will be used, where practicable.
- Where practicable, stationary equipment will be located in an acoustically treated enclosure.
- Throttle settings will be reduced and equipment and plant turned off, when not being used.
- Onsite chutes and bins will be lined with damping material.
- Equipment will be regularly inspected and maintained to ensure it is in good working order. The condition of mufflers will also be checked. Equipment will not be operated until it is maintained or repaired, where maintenance or repair would address the annoying character of noise identified.
- Use of compressors, generators and pumps fitted with properly lined and sealed acoustic covers or enclosures, which will be kept closed whenever the machines are in use, and positioning of all ancillary plant (e.g., generators, compressors) so as to cause minimum noise disturbance.
- Fitting of mufflers or silencers of the type recommended by manufacturers.
- Storage of excavated material between the construction site and the sensitive use building to form a noise barrier (with cover to avoid dust erosion) or installation of other (temporary) noise barriers.
- Taking advantage of the natural topography for noise shielding.
- Limiting hours of operation for specific equipment or operations.

Based on the successful implementation of the noise control mitigation and management measures described above, it is envisaged that a reduction in the overall noise from construction plant teams of 5 dBA is achievable from the noise data provided in BS 5228. For a reduction of more than 5 dBA, noise shielding is required. In addition, site office structures/containers or noise screens, earth mounds or rock piles can provide a typical reduction up to 15 dBA.

Table 7-4 includes a summary for the noise topic of the impact assessment for the all phases of the Project - pre and post mitigation.

As evident from the table, noise impacts are predicted to be of minor-negligible impact significance

Table 7-4 Noise Mitigation Measures and Residual Impact Assessment

Project phase	Activity/ Source of impact	Environmenta l component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre- mitigation	Post- mitigation (Residual)	Pre- mitigation	Post- mitigation
Development & construction phase	Construction equipment and generators	Noise	Direct	Control of noise level from equipment	Low	Low	Minor	Minor (Negligible)
Operation phase	Operational Activities	Noise	Direct	Control of noise level from equipment	Low	Low	Minor	Minor (Negligible)
Closure or rehabilitation phase	Noise emissions form demolishing equipment and works.	Noise	Direct	Control of noise level from equipment	Low	Low	Minor	Minor (Negligible)

7.1.4 Resources & Waste

As outlined in Section 6.2.4, it was concluded that the construction phase of the Project is likely to result in moderate impacts, and as such, additional mitigation measures will be necessary. Conversely, it was determined that the operational phase is expected to result in minor impacts, and thus, additional mitigation measures are not deemed to be as critical. The purpose of the following section is to provide a comprehensive overview of the mitigation measures that will be implemented to address the potential impacts identified for the Project.

7.1.4.1 Construction Phase

In addition to the embedded controls stated in sections 4.7 and 6.2.4.2, the following measures regarding the waste and resource management are considered by ARISE as well

- An E&S due diligence will be conducted by ARISE for existing quarries to ensure permits are valid and operations are in compliance and international guidelines. Relevant suggestions will be made to improve current standards of the quarry and quarries will be monitored frequently.
- In case ARISE decides to open a new quarry, ARISE will develop and implement a **Borrow Pit Management Plan** to ensure compliance with applicable Ivorian environmental standards and IFC Guidelines for Construction Materials Extraction (IFC, 2007). The procedure will include criteria for selecting quarry and spoil disposal sites that integrates the relevant international requirements and include environmental and community H&S factors like site sensitivity, travel routes, mining methods etc. in the decision-making process.
- Re-use of excavated soils in the Project area as far as possible and seek alternative uses of surplus spoil where practicable (e.g., landscaping and earth works for other projects) to minimise the requirements for off-site disposal.
- The disposal of wastewater generated during the construction activities shall not leak or be disposed of into water sources near the Project site or downstream of Project site. Among others the minimum mitigation measure to be undertaken by ARISE include the following:
 - ARISE shall ensure accessibility to toilets for workers;
 - Cover and seal off all water collection tanks and septic tanks at the end of construction works;
 - Runoff from the Project site shall be controlled to ensure that adjacent areas are not affected and disturbance to the public is to minimum; and
 - ARISE shall ensure that under no circumstances foul sewage flow can be diverted into a storm water drains and vice versa.

Compliance with Ivorian environmental regulations and implementation of embedded mitigation measures will be adequate to minimise the waste related risks.

7.1.4.2 Operation Phase

Compliance with Ivorian environmental regulations and implementation of embedded mitigation measures as well as those mentioned for the construction phase will be adequate to minimise the waste related risks.

7.1.4.3 Summary

Table 7-5 includes a summary for the waste topic of the impact assessment for the all phases of the Project - pre and post mitigation.

Table 7-5 Resources & Waste Mitigation Measures and Residual Impact Assessment

Project phase	Activity/ Source of impact	Environmental component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
Development & construction phase	Construction works & excavations	Resources & Waste	Direct	Waste Management Plan	Medium	Low	Moderate	Minor
Operation phase	Routine maintenance of equipment and upkeep of the properties	Resources & Waste	Direct	Waste Management Plan	Low	Low	Minor	Minor (Negligible)
Closure or rehabilitation phase	The closure of the Project will generate waste from the demolishing of the buildings and facilities. However, this assessment has not been undertaken in the absence of closure data.							

7.2 Biological Environment

The impacts related to the Project area are inherent to the Project itself and its location, and cannot be fully avoided. These impacts must be therefore managed using the mitigation hierarchy (refer to Figure 6-3) prioritising avoidance when possible.

7.2.1 Construction Phase

Some measures applicable to all biodiversity aspects of the construction phase are:

- Employment/appointment of an **Ecological Clerk of Works (ECoW)**²²⁶, who will prepare the environmental documentation on delivery of ecological requirements on the Project before construction activities commence (including tree inventory). The ECoW will monitor construction activities to ensure that all activities are delivered in accordance to relevant laws and Project commitments.
- Biodiversity education will be given to all field workers.
- Consider using a single construction camp and avoid developing multiple camp sites if possible.
- Driving offroad (i.e., outside of the access roads) will not be allowed.
- Accessing highly sensitive areas will be forbidden.

Waste generated will be managed under site-specific **Waste Management Plan**. Construction waste generated due to Project activities will first be stored at designated storage areas and then disposed. Solid waste will not be allowed to be left at natural habitats, neither will this be buried or burned onsite.

Habitat loss, degradation, and fragmentation; Loss of Flora and spread of invasive species

- Project construction sites, access roads, borrow pits, storage areas and camps will be separated from other areas with appropriate signboards, signs, and fences. Similarly, areas of medium to high sensitivity (i.e., the wetland on Phase 2) will be fenced-off and any activities in that area will be avoided. Use existing access roads or upgrade existing roads wherever possible before considering new access road construction.
- Limit the clearing of natural vegetation, particularly near the wetland on Phase 2, to the absolute minimum necessary. If possible, gradual vegetation clearance will be undertaken, to allow fauna the opportunity to move to adjacent areas outside of the construction zone. It is recommended that 'green' space allocated to the Project according to the Master Plan layout (see Section 4.3.2) be used to restore forest habitat or woodland on these sites where conditions allow.
- Felling of trees will be kept to the strict minimum whenever feasible, especially the specimens of yellow iroko (*Milicia regia*, VU) will not be removed from the area. Set back distances of 2 m to the trees will be maintained during construction works to avoid any damage to them. If this distance cannot be kept for technical reasons, temporary fences around the specimens will be kept to protect them.
- Revegetation will be undertaken already during the construction phase since the Project has green areas planned within the Project area. Only indigenous plants species will be used in re-vegetation and landscaping. Furthermore, ARISE has a tree plantation initiative (carbon sequestration) in which the design team will consider setting up tree plantation on land areas near right of way, boundary wall, and inside green spaces provisioned as per regulation. local plantation species with optimum spacing aligned with a viable carbon credit strategy shall be

²²⁶ Or an equal specialist.

worked out by ARISE ESG Team (Carbon Team). Temporary soil stockpiles are to be retained for use in post-construction restoration / rehabilitation of habitats.

Spread of invasive species-monitoring

- Monitoring will be conducted during and after construction to ensure that proper vegetation growth, prevent or limit spread of new alien plants and inform what further actions may be required.
- Compile and implement a suitable **Invasive Alien Plant (IAP) species control plan** and programme to eradicate dense colonies of alien plants and control the spread of minor species and weeds within the construction zone and adjacent areas that may be disturbed by construction activities.
- A monitoring plan will be prepared and implemented to record alien species populations in the Project Aol and aimed at removing new populations and preventing them from spreading throughout the Aol. In addition, prompt revegetation (i.e., sowing of native herbaceous species and/or planting native shrubs/trees) on bare soil with natural or semi-natural vegetation will reduce the spread of alien species.
- A monitoring plan will be carried out to record alien species populations in the Project area of influence and aimed at removing new populations and preventing them from spreading throughout the Aol. In addition, prompt revegetation (i.e., sowing of native herbaceous species and/or planting native shrubs/trees) on bare soil with natural or semi-natural vegetation will reduce the spread of alien species.

Loss of fauna; disturbance and displacement of fauna

- Preferably allow fauna to leave the area and relocate themselves to adjacent habitat without the need for further intervention. If no active nests, roosts, nests, burrows or dens are present, vegetation clearing should be completed gradually, and within a few days of the initial wildlife checks / inspections. All cuttings are raked off and removed from site on the same day they are generated, to avoid creating refugia for wildlife. After the flushing of wildlife from the Project area, the area that will be disturbed adjacent to natural habitats during construction and at Project specific locations will be fenced off appropriately to exclude re-entry by wildlife.
- Activities such as hunting, trapping, fishing, and general disturbance of wild animals will be prohibited. Informative and warning signs will be placed at construction sites. ARISE staff who are responsible for monitoring sub-contractor staff in this regard will be instructed on prohibitions regarding hunting and poaching control.
- Any injured animals of protected species are to be transported carefully but efficiently to a local wildlife authority.
- Maintain vehicles and equipment in good working condition. Use noise minimizing technology where possible. Maintain speed limits to reduce disturbance and risks related to wildlife.
- Limit construction activities to daytime hours to limit impacts to nocturnal species. Where works need to take place at night, use low intensity lighting (within safe and legal limits) and/or aim lights down and away from nearby habitats. Use non-UV sources of lighting to avoid attracting wildlife.
- Provide protection against animal entry on any excavated trenches, pipes, overflow lines, drains, and vents on tanks and vessels. Prevent egress by wildlife to construction areas e.g., by capping pipes at night, fencing off ditches. Any excavations which are to be left overnight are to be filled in/ or covered and ramps installed (e.g., an earthen ramp or wooden board) to allow any trapped animals to escape. All excavations are to be checked daily prior to the commencement of work.

7.2.2 Operation Phase

Loss of fauna; disturbance and displacement of fauna

- Reduce the speed limit within the IEZ, especially near forest patches and wetlands, particularly at blind rises or corners, in order to reduce the risk of collisions with fauna.
- Fence off the section of road in the vicinity of the wetland to direct fauna away from the IEZ and access roads.
- Proper sustainable urban drainage design to be implemented to reduce direct discharge to watercourses (e.g., storm water to drain through vegetated swales, bunds or detention ponds).
- Limit (within legal and safety limits) the intensity of lighting in the vicinity of the wetland on Phase 2 and remaining forest patches to minimise light disturbance to nocturnal fauna, such as small mammals and bats.
- Workers will strictly be prevented from hunting and poaching, and any other kind of illegal activities related to hunting and poaching. Informative and warning signs will be placed at relevant construction sites. The contractor who is liable to control labour in this regard will be instructed strictly for application of specification regarding hunting and poaching control.

7.2.3 Summary of Biological Residual Impacts

The Table 7-6 below builds upon the impacts originally characterised in Table 6-13. As evident from the table, the mitigation measures are predicted to be successful in reducing the significance of impacts from the previously “Moderate” significance to acceptable levels of “Minor” or “Minor (Negligible)”.

Table 7-6 Biodiversity Mitigation Measures and Residual Impact Assessment

Project phase	Activity/ Source of impact	Environment al component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre- mitigation	Post- mitigation (Residual)	Pre- mitigation	Post- mitigation
Development & construction phase	Habitat Loss Degradation and Fragmentation	Habitats	Direct	<ul style="list-style-type: none"> Project construction sites, access roads and camps will be separated from other areas. Use existing access roads or upgrade existing roads wherever possible Sensitive areas will be fenced-off before considered new access road construction. Temporary soil stockpiles are to be retained for use in post-construction restoration / rehabilitation of habitats. 	Medium	Low	Moderate	Minor (Negligible)
	Loss of Flora	Flora	Direct	<ul style="list-style-type: none"> Limit the clearing of natural vegetation to the absolute minimum. Wetland on Phase 2 is to be left uncleared. Clearing will be gradual. Felling of trees will be kept to the strict minimum. All Yellow iroko trees (<i>Milicia regia</i>, VU) will be left intact and protected. 	Medium	Low	Moderate	Minor
	Loss, disturbance, and displacement of Fauna	Fauna	Direct	<ul style="list-style-type: none"> Allow fauna to leave the area by gradually clearing vegetation. After the flushing of wildlife from the area, Project specific locations will be fenced off to exclude re-entry. 	Medium	Low	Moderate	Minor

Project phase	Activity/ Source of impact	Environment al component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre- mitigation	Post- mitigation (Residual)	Pre- mitigation	Post- mitigation
				<ul style="list-style-type: none"> ■ Activities such as hunting, trapping, fishing, and general disturbance of wild animals are to be prohibited. ■ Any injured animals of protected species are to be transported carefully but efficiently to a local wildlife authority. ■ Maintain vehicles and equipment in good working condition. Use noise minimizing technology and maintain low speed limits. ■ Limit construction activities to daytime hours to limit impacts to nocturnal species. Use low intensity lighting and non-UV lighting, aimed away from habitats (within safe and legal limits). ■ Prevent egress by wildlife to construction areas and trenches. Any excavations which are to be left overnight are to be filled in/ or covered and ramps installed, and are to be checked daily prior to the commencement of work. 				
	Introduction of invasive species	Habitats, flora	Direct	<ul style="list-style-type: none"> ■ Revegetation will be undertaken right after construction, using only indigenous plants species. 	Medium	Low	Moderate	Minor

Project phase	Activity/ Source of impact	Environment al component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre- mitigation	Post- mitigation (Residual)	Pre- mitigation	Post- mitigation
				<ul style="list-style-type: none"> Monitor and remove any populations of invasive plants 				
Operation phase	Loss, disturbance, and displacement of Fauna	Biological receptors (Flora and Fauna)	Direct	<ul style="list-style-type: none"> Reduce the speed limit within the IEZ, especially near forest patches and wetlands. Fence off the section of road in the vicinity of the wetland to direct fauna away from the IEZ and access roads. Proper sustainable urban drainage design to be implemented, to reduce direct discharge to watercourses Limit (within legal and safety limits) the intensity of lighting in the vicinity of the wetland on Phase 2 and remaining forest patches to minimise light disturbance to nocturnal fauna. Workers will strictly be prevented from hunting and poaching, and any other kind of illegal activities related to hunting and poaching. 	Medium	Low	Moderate	Minor

7.3 Socio-economic and Cultural Environment

7.3.1 Economy and Employment

7.3.1.1 Construction Phase

Temporary Direct and Indirect Employment Opportunities

A **Recruitment and Employment Plan** will be developed by ARISE, which will define the process to be followed for the recruitment, training and development of local personnel, concretely:

- ARISE will work with local authorities and employment organizations to ensure that all positions are advertised in a manner that is accessible to the communities in the AoI;
- ARISE will ensure that the recruitment process is fair and transparent, public and open to all regardless of ethnicity, religion or gender;
- ARISE will continue to develop specific measures to facilitate access to employment of women and youth.

A **Stakeholder Engagement Plan (SEP)** will be implemented to outline how ARISE will ensure regular, open and transparent communication with all stakeholders, concretely:

- To provide clear information on the number and limited timescales of employment opportunities.
- To ensure information on the employment and the procurement strategies is disclosed at all settlements within the AoI.
- To plan an engagement with stakeholders through early, inclusive dialogue to build a shared understanding of the potential positive and negative impacts of workers' influx, and the associated risks and opportunities.
- Continuing to engage local people in the employment opportunities and work with suppliers to enable capacity building, procurement, employment and contracting opportunities at a settlement-level, as part of maximizing the positive benefits.

A **Community Grievance Management Procedure (GMP)** will be implemented, to promote the integration of the Project into the social and economic environment and to ensure that individuals who wish to Report their potential expectations or concerns related to local economy and employment can communicate directly with ARISE.

Temporary Economic Impacts from Taxes and Fees, Procurement and Worker Spending

A **Local Content and Procurement Plan** will be developed to inform the Project's in-country value planning, specifically, with respect to the employment potential for multiple positions and the local provisioning potential through local suppliers from the area, concretely:

- As part of the tendering process, ARISE's contractors will be required to develop a procurement strategy that stipulates how national and local procurement of goods will be optimised. The procurement strategy will be required to adhere to all ARISE HSE policies and procedures. Agreed measures will be monitored and reported on;
- ARISE will enhance national supplier capacity through a comprehensive demand and supply analysis; phased capacity building program; targeted training agreed with local government and other organizations.
- ARISE will implement a phased capacity building program (sector by sector) that will enable local companies to achieve qualifications and potentially certification with the relevant standards and requirements well in advance of the tendering process;

- ARISE will engage with local government, and other organizations to determine opportunities for targeted training. Any selected potential suppliers will have to meet health, safety and quality standards;
- ARISE will require the contractors develop their own E&S and H&S policies or apply ARISE's as relevant. ARISE will develop a contractor management plan to pass on E&S requirements to its contractors and monitor their effective implementation.

Long-term benefits of capacity enhancement (on-the-job and formal training opportunities)

The **Local Content and Procurement Plan** will include the following:

- ARISE will carry out training of contractors on Project Health and Safety Requirements (aligned with internal ARISE HSE Management Plan) and socioeconomic policies prior to the start of construction activities and during operations when needed.
- ARISE will require the contractors develop their own E&S and H&S policies or apply ARISE's as relevant. ARISE will develop a contractor management plan to pass on E&S requirements to its contractors and monitor their effective implementation.
- To maximise capacity enhancement and transfer of knowledge to local contractors and their employees, ARISE will develop formal training programs and formalise on-the-job trainings to the extent possible, including learning targets and performance monitoring.

7.3.1.2 Operation Phase

Temporary Direct and Indirect Employment Opportunities

As operator of the 429 ha IEZ, ARISE will develop a Recruitment and Employment Plan ensuring that the recruitment process is fair and transparent, public and open to all regardless of ethnicity, religion or gender.

The **Stakeholder Engagement Plan (SEP)** will continue to be implemented during site operations to outline how ARISE will ensure regular, open and transparent communication with all stakeholders, concretely:

- To provide clear information on the number and limited timescales of employment opportunities.
- To advertise all openings in ways that are accessible to local communities

The **Community Grievance Management Procedure (GMP)** will continue to be implemented during site operations to ensure that individuals who have concerns or complaints about the Project or wish to Report their potential expectations or concerns related to local economy and employment can communicate directly with the Project.

Furthermore, ARISE will use its leverage and encourage the IEZ tenants to develop and implement their own Recruitment and Employment Plan, SEP and GMP based on the respective documents prepared by ARISE for the Project and applicable standards.

Regional economic development and strengthening of local production

The above-mentioned measures to enhance the "Temporary Direct and Indirect Employment Opportunities" will also serve to maximise positive impacts of Project on the Regional economic development and strengthening of local production.

7.3.2 Land Use and Livelihood Activities

7.3.2.1 Construction Phases

Permanent Loss of Livelihoods and/or Household Income due to Permanent loss of access to Land in the Project footprint

As a first step in the process for managing displacement impacts, ARISE will carry out a detailed Due Diligence of the land acquisition and compensation processes that have been carried out to date as compared to both national regulations and international standards (particularly IFC PS5).

Based on the Due Diligence findings, ARISE will develop a **Resettlement Action Plan (RAP)** and a **Livelihood Restoration Plan (LRP)** in line with IFC PS5 to address the gaps identified. The LRP will outline ARISE's commitment to mitigate adverse socio-economic impacts from land acquisition or restrictions on affected persons' use of or access to land and livelihoods. The LRP will provide the foundation for the livelihood restoration process including an entitlement matrix that will ensure adequate compensation and livelihood restoration options are provided to Project Affected Peoples (PAPs).

In line with the applicable international standards of the IFC, there are several key elements to this mitigation approach including:

- Providing compensation for loss of assets at full replacement cost;
- Ensuring that livelihood restoration activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected;
- Improving or, at a minimum, restoring the livelihoods and standards of living of affected persons to pre-project levels, so as to facilitate sustainable improvements to socio-economic status; and
- Paying particular attention to the needs of vulnerable groups.
- Resettlement options provided by the Project will ensure that households are able to continue to access the same livelihood resources or otherwise livelihood restoration measures will be provided to adequately manage economic displacement impacts.
- Land users will be compensated at full cost for the loss of their specific interest in that asset for a period of time and assisted in their re-establishment.
- Affected Communities are addressed through the process of stakeholder engagement. A grievance management procedure (GMP) will be established as early as possible in the Project development phase.

Furthermore, as villages often reported a lack of sufficient land for agriculture, this impact will be addressed by the model farm initiative from ARISE. This initiative ARISE Group has already implemented in other IEZ developed.

Impact on Natural Resources and Related Livelihoods

The **Livelihood Restoration Plan (LRP)** includes key compensation and livelihood restoration measures to restore land-based livelihood sources, specifically agricultural activities. ARISE will ensure that alternative land is made available to affected households and that temporary income losses through the clearance of crops are compensated for.

- In recognition of the importance of land for subsistence and income generation, where possible, ARISE will seek to provide replacement land *"that has a combination of productive potential, locational advantages, and other factors at least equivalent to that being lost."*²²⁷

²²⁷ IFC PS5 (parag. 28). Available at: https://www.ifc.org/wps/wcm/connect/75de96d4-ed36-4bdb-8050-400be02bf2d9/PS5_English_2012.pdf?MOD=AJPERES&CVID=iqex59b

- To the fullest extent possible, asset surveys will include all land belonging to a household to allow ARISE to determine impacts to households as a percentage of the total land owned. Households with the greatest net loss of agricultural land will be prioritised in receiving replacement land.
- The availability of replacement land will be confirmed by more detailed studies undertaken by ARISE during the LRP preparation phase. In the event that replacement land is not available, PAPs may receive cash compensation at full replacement cost. ARISE will also assist farmers through livelihoods restoration programs, including measures to increase productivity of residual landholdings, or measures to transition PAPs to alternative livelihoods.
- Impacts to agricultural and pasture lands will be minimised by keeping the Project construction footprint as narrow as possible and efficiently restoring any damaged areas. ARISE will seek to replace the lost agricultural land plots within the same area (in-fill resettlement)²²⁸.
- Where replacement land is provided, the ARISE will assure security of tenure.
- ARISE will compensate for all eligible crops identified and valued in the asset inventory. Compensation payments for crops, trees and other agricultural assets will be awarded according to official government rates, or based on full replacement value, whichever rate is higher and in line with applicable law.
- The value of perennial crops and economic trees will include compensation for production lost during the time it will take for replacement crops and trees to reach the same maturity / productivity level as the plants being lost.
- The asset inventory will be designed to identify the different crop categories and crop owners, and to ensure that compensation is calculated in accordance with agreed upon rates for compensation of crops and economic trees

7.3.2.2 Operations Phase

Permanent Loss of Livelihoods and/or Household Income due to Permanent loss of access to Land in the Project footprint

Impacts originally triggered during the construction phase will continue to be managed by ARISE during operations. Mitigation measures will include: monitoring, evaluating, and providing the necessary follow-up to support households to restore their livelihoods. The goal is to help affected families achieve a socio-economic situation that is better than the pre-Project conditions.

The GMP established during the construction phase will be maintained during operations to ensure that local communities and stakeholders have an adequate channel to voice concerns.

7.3.3 Community Health Safety and Security

7.3.3.1 Construction Phase

Road Safety

As per ARISE's HSE management system, the HSEQ Team will establish corporate-and-Project-level management procedures and plans, including a **Traffic Management Plan**.

ARISE will develop an engagement program with affected communities and land users, as well as appropriate signage/information boards (with consideration for illiteracy levels) will be required to minimise risks associated with increased traffic.

²²⁸ Affected people with titles will be offered replacement land. The allocation of the land is to be assessed during LRP study. The expectation is that if available the priority will be to offer in-fill land close-by. For those that no longer have a title because they were expropriated, ARISE will identify available community land to be offered at affordable lease

Drivers of Project vehicles will be trained/briefed about safe driving with respect to other drivers, pedestrians and livestock;

- Project vehicles to be identifiable to the Project (e.g., an easy to read/see sign or symbol on vehicles which shows that they are connected to the Project); and
- Address how the ARISE can reduce the exposure of vehicle drivers, their passengers and other road users from the hazards of road-related accidents.

A Project GMP will be developed and implemented, and information about this mechanism will be shared amongst local communities. ARISE will also be responsible for managing a grievance mechanism that allows communities and employees to raise complaints. This will be a key monitoring and Reporting requirement of the Project. The grievance mechanism will be implemented prior to commencement of the construction phase, with all relevant staff fully cognizant of their roles in the grievance resolution process so that quick and effective response is provided to the concerns raised by local stakeholders.

During operations, ARISE will maintain the GMP that will be accessible to all communities.

Site intrusion and Injury

As part of the SEP, ARISE will undertake a program of stakeholder engagement and consultation to educate local communities of the risks of intruding onto sites, the meaning of signs, the dangers of playing on or near equipment or entering fenced areas, as part of an awareness raising programme on community health and safety behaviours.

ARISE will select a security provider that is well versed in international conventions pertaining to security and human rights. The security contractor will undergo a due diligence process and an induction prior to working on site. They shall primarily be responsible for controlling site access and perimeter security.

Appropriate signage and information boards will be required to minimise risks associated with restricted access in a culturally appropriate manner.

A community meeting regarding Project intrusion will also be held in each of the villages concerned by the Project. Records of the meeting and attendees should be kept within the SEP.

ARISE will provide access to health care for those injured by its activities. ARISE will ensure that signs are put up around work fronts and construction sites advising people of the risks associated with trespassing.

Environmental Health

As per ARISE's HSE management system, the HSEQ Team will establish corporate-and-Project-level management procedures and plans, including the following:

- Aspects, impacts, hazards and risks,
- Guidelines for environmental, safety and health monitoring
- Grievance mechanism (external and internal)
- Community Health and Safety Procedure
- Stakeholder Engagement Plan

As part of the **SEP** implemented by ARISE, awareness sessions to explain the type of noise, dust and emissions from Project activities, the mitigation measures implemented and a point person to contact in case of emergency etc. in order to alleviate potential concerns.

In addition, the Project will need to engage with the neighbouring communities to ensure they are not disturbed by air quality, water quality or noise impacts. In case air quality levels differ from time to time, depending on the activities, the Project will need to inform communities in advance.

The mitigation measures identified under the sections on noise, air quality, resource and waste management, and hydrology and hydrogeology will minimise the potential negative impacts on human receptors and are thus not repeated here. Please refer to the relevant sections under Chapter 7 of this Report.

Increased Transmission of Communicable Diseases

As part of ARISE's HSE management system and its **Occupational Health and Safety Management Plan (OHSMP)**, ARISE will ensure the following actions:

- Workforce, including contractors and subcontractors, will be provided with health awareness training, including a significant briefing of hygiene practices (such as hand washing), implementation of educational outreach to increase awareness of major communicable disease and how to protect against infection and about transmission routes and the symptoms of the communicable diseases of concerns (including STDs and SARS CoV-2).
- Workers will also have access to an on-site medical team for first aid, occupational health concerns and advice.

As part of its **Emergency Preparedness and Response Plan (EPRP)**, ARISE will establish preparedness medical services in case of severe illness, e.g., malaria (especially in workers without semi-immunity), and Covid-19.

Increased Transmission of Sexually Transmitted Diseases (STD)

As part of the **OHSMP** to be developed by ARISE, the following measures will be included:

- ARISE will provide training on the worker code of conduct to all employees including contractors and subcontractors as part of the induction process.
- ARISE will consult with local leaders such as village elders among others. The consultations should be aimed at finding ways of ensuring social vices such as prostitution are minimised either through punitive measures for clients, in particular Project workers, or rehabilitative measures for the Commercial Sex Workers (CSWs).

Increased Pressure on Health Care

A **Community Health and Safety Management Plan (CHSMP)** will be developed by ARISE, including the following health issues:

- ARISE will undertake a health facility assessment of medical infrastructure as part of the ARISE Health and Safety Management System to determine if facilities have sufficient resources and equipment to deal with emergencies. Agreements will be entered into with suitable hospitals to provide health care in emergency situations. These agreements will include provision of additional equipment or training for staff if required by ARISE. Project-dedicated international medical providers will complement the services of the local medical facilities that could be utilised by the Project and/or training of local medical personnel.
- ARISE will monitor the emergence of major pandemics through World Health Organization (WHO) alerts. When the WHO Pandemic Alert Scale Reaches Level 4, ARISE will implement the relevant **Emergency Preparedness and Response Plans**.
- An **EPRP** will be developed by ARISE, covering the emergency situations (involving vehicles and pedestrians) that may occur during the Project construction, should be prepared and implemented by trained personnel in order to avoid significant risks. The EPRP to include:
 - The emergency response in the event of fire, accidents, earthquake, flood etc.
 - Procedure for staff and subcontractors to report any incidents and the investigation and preventive actions taken;

- Regular emergency response training including in the use of response equipment;
 - Emergency Communication Procedure (under the SEP and the EPRP) including with local communities and authorities.
- A first aid centre, fire station and a police station will be built as part of the Project. ARISE should clarify and communicate if these facilities can also be used by the population of the local villages.

Use of Security Personnel

ARISE will select a security provider that is well versed in international conventions pertaining to security and human rights. The security contractor will undergo a due diligence process and an induction prior to working on site. They shall primarily be responsible for controlling site access and perimeter security. As a general rule, ARISE does not permit private security providers to handle firearms.

A **Security Management Plan** will be implemented by ARISE, including the following measures:

- A Security Management training will be provided to security personnel. Security Arrangements will be based on the Voluntary Principles for Security and Human Rights, which are international best practice. This involves e.g., the selection based on a careful background screening of security forces, their training with regard to Human Rights and a careful monitoring of their services. ARISE will make security arrangement transparent to the local communities and consult regularly with them about the impact of arrangements on communities;
- Violation of the required standards will result in corrective actions, including termination of sub-contracts with security firms. Sufficient training including clear instructions on the objectives and the permissible actions will be provided to the security personnel. The instructions will be based on the relevant Ivoirian law and will be communicated as terms of employment and reinforced through periodic professional training. Given regular contact with the local communities, training on Grievance Mechanism, such as handling of community grievance will also be provided to the security staff as part of their periodic professional training.
- Complaints by the public (or other workers) with respect to behaviour of Security Personnel can be made via the **GMP**.
- As part of the **SEP**, ARISE and contractors will have an engagement meeting with chiefs and traditional leaders informing about the safety management plan and the procedures adopted. ARISE and contractors will consider and incorporate feedback and concerns of chiefs and traditional leaders into the safety management plan.
- ARISE will engage with public security services on a regular basis to assess security risks, monitor, and evaluate security and human rights arrangements.
- ARISE will only call Ivoirian police and/or military services in a situation involving a level of threat the security provider is not able to deal with (such as armed intruders);
- ARISE will assess the risks associated with public security providers' involvement and take appropriate actions to mitigate those risks, following these considerations:
 - The likely scenarios where they may be involved.
 - Their locations/postings.
 - Their reputation and capabilities.
 - Their relationship/ reputation with the local community.
 - The risks of the Project being associated with inappropriate behaviour by the public security providers.

7.3.3.2 Operations Phase

Environmental Health

During operations, ARISE will maintain all provisions of the existing HSE management system and will develop a **CHSMP**. In addition, as part of **SEP** implemented by ARISE, awareness sessions are foreseen to explain the type of noise, dust and emissions and water-related impacts from Project activities, the mitigation measures implemented and a point person to contact in case of emergency etc. in order to alleviate potential concerns.

In addition, ARISE will maintain the **GMP** that will be accessible to all communities and will be implemented to ensure that individuals who have concerns or complaints about the Project or wish to Report their potential expectations or concerns related to local community Health and Safety concerns can communicate directly with the Project.

The mitigation measures identified under the sections on noise, air quality, resource and waste management, and hydrology and hydrogeology will minimise the potential negative impacts on human receptors and are thus not repeated here. Please refer to the relevant sections in Chapter 7 of this Report.

Increased Transmission of Communicable Diseases

During operations, ARISE will maintain all provisions of the existing HSE management system and its **OHSMP**, **CHSMP** and **EPRP** in line with Ivoirian regulations which are specified in the construction phase section above. ARISE will ensure that all industrial units, as well as other contractors and subcontractors, are aligned with environmental, health and safety, and social and governance practices of the national and international standards.

Furthermore, ARISE will use its leverage and encourage the IEZ tenants to develop and implement their own plans (e.g., OHSMP, CHSMP, EPRP etc.) based on the respective documents prepared by ARISE for the Project and applicable standards.

ARISE will maintain a GMP that will be accessible to all communities, to ensure that all health and safety concerns are addressed.

Increased Transmission of Sexually Transmitted Diseases (STD)

During operations, ARISE will maintain all provisions of the existing HSE management system and its **OHSMP**, **CHSMP** and **EPRP** in line with Ivoirian regulations which are specified in the construction phase section above. ARISE is responsible for setting up the basic infrastructure and operating their offices and facilities. Each tenant is responsible for their own permits and compliance with E&S standards. ARISE will encourage that all industrial units, as well as other contractors and subcontractors are aligned with environmental, health and safety, and social and governance practices of the national standards.

ARISE will maintain a **GMP** that will be accessible to all communities, to ensure that all health and safety concerns of the communities regarding STDs are addressed.

7.3.4 Labour and Working Conditions

Workers' rights including occupational health and safety need to be considered to avoid accidents and injuries, loss of man-hours, labour abuses and to ensure fair treatment, remuneration and working or living conditions. These issues should be considered not only for those who are directly employed by ARISE, but also its contractors (including sub-contractors) and within the supply chain.

7.3.4.1 Construction Phase

The following mitigation measures should be implemented during the construction phase to reduce any impacts on workers' health and safety and labour rights.

Labour and Working Conditions / Workers' Rights

As per ARISE's HSE management system, ARISE will develop a **Human Resources Policy** to ensure the following:

- Access to clear and understandable information regarding workers' labour and working conditions;
- Provision of reasonable working conditions and terms of employment;
- Provision of employment, compensation/remuneration and working conditions, including working hours, based on equal opportunity and fair treatment, avoiding discrimination on any aspects;
- Implementation of a grievance mechanism for the Project workers including subcontractor workforce;
- Adoption of open attitude towards freedom of association and in conformance with Ivoirian laws.
- Retrenchment preventive measures will be implemented to reduce adverse impacts as a result of termination of contracts which will consider benefits to boost worker's employment opportunities post construction where possible. Notice of dismissals will be done in due time and will manage employment expectations of the construction workforce.

In addition, a **Labour Management Procedure** will be developed by ARISE considering the following elements:

- No employee or job applicant will be discriminated against on the basis of his or her gender, marital status, nationality, age, religion or sexual orientation;
- All workers will, as part of their induction, receive training on worker rights in line with Ivoirian legislation to ensure that positive benefits around understanding labour rights are enhanced;
- All workers (including those of contractors and subcontractors) will be able to join unions of their choice and have the right to collective bargaining;
- All workers (including those of contractors and subcontractors) will have contracts which clearly state the terms and conditions of their employment and their legal rights;
- Contracts will be verbally explained to all workers where this is necessary to ensure that workers understand their rights;
- As part of the contractor and supplier selection process ARISE will take into consideration performance with regard to worker management, worker rights, health and safety as outlined in Ivoirian law, international standards and ARISE policies;
- ARISE will provide support to contractors and subcontractors to ensure that labour and working conditions are in line with Ivoirian law and any standard applicable to ARISE through gap analysis and capacity building;
- Contractor contracts will establish the right for ARISE monitoring and auditing of all contractors and subcontractors and the consequences for the contractor if they are found to be breaching national legal requirements, international standards, ARISE's policies or clauses in the contract. Contractor contracts will specify that the same standards will be met by their sub-contractors and suppliers;

ARISE and contractors' will implement a program of socio-economic compliance monitoring to inform internal auditing and monitoring process in the framework of the ESMP. As such, key performance indicators (KPIs) will be developed around worker rights, discrimination and management, workforce grievance mechanism and monitoring of outcomes. As part of the contractor and supplier selection process, ARISE will take into consideration performance with regard to worker management, worker rights, health and safety as outlined in Ivoirian law and ILO international standards;

As part of the contractor and supplier selection process, ARISE will take into consideration performance with regard to worker management and rights as outlined in Ivoirian law and international standards;

ARISE and its contractors (and subcontractors) will oversee whether suppliers comply with all applicable child labour laws and only employ workers who meet the applicable minimum legal age requirement in accordance with international standards.

ARISE will put in place a **GMP** that will be accessible to all workers, whether permanent or temporary, directly or indirectly employed including contractor workers.

As part of stakeholder monitoring, ARISE will review and monitor the outcomes of community engagement, media coverage and its workforce and GMP for additional indications of labour-related issues that may arise.

The Project ESMS and applicable standards will be put as contractual commitments in all contracts of contractors and subcontractors.

Workers Health and Safety

ARISE will develop an **OHSMP** as part of ARISE's Health and Safety Management System for the Project. This management system will be enforced throughout the Project including all Project personnel (including direct hire employees, advisors and consultants, contractors and sub-contractor personnel). It will include aspects such as regular training and monitoring, as well as inspections and audits.

Within the **OHSMP**, the following measures will be included:

- Identification and provision of personal protective equipment (PPE) to all concerned workers during activities to avoid health implications (e.g., dust masks, protective clothing for handling waste materials etc.);
- Pre-employment screening protocols for all employees, including contractors and subcontractors, which will include medical checks of SARS CoV 2 history and symptoms, Tuberculosis (TB) and other diseases appropriate to WHO recommendations, the individual's country of origin and vaccinations.
- Workers will be provided with primary health care and basic first aid at worksites;
- All work of persons under the age of 18 will be subject to an appropriate risk assessment and regular monitoring of health, working conditions, and hours of work.
- Regular medical check-ups and centralised medical treatment for all workers of the Project (ARISE, contractors and subcontractors) will be provided;
- Workforce, including contractors and subcontractors, will be provided with health awareness training, including hazardous works, a significant briefing of hygiene practices (such as hand washing), implementation of educational outreach to increase awareness of major communicable diseases and how to protect against infection and about transmission routes and the symptoms of the communicable diseases of concerns (including STDs and SARS CoV-2);
- Contractor contracts will specify monitoring to be undertaken by the contractor, establish the right for the Project monitoring and auditing of all contractors and subcontractors and the consequences for the contractor if they are found to be breaching national legal requirements, international standards, policies or clauses in the contract. Contractor contracts will specify that the same standards will be met by their sub-contractors and suppliers;
- As part of the contractor and supplier selection process, ARISE will take into consideration performance with regard to worker health and safety as outlined in Ivoirian law, international standards and ARISE policies;

- Any appointed contractors should establish their own Emergency Response Plan and communicate key information to the Project workforce prior to work commencing on any site.

Women's Rights (GBVH, approach to recruitment, promotion, and treatment with respect to equal opportunity)

In the event that ARISE engages a third-party recruiting firm to support in the hiring of the Project workforce, the **Recruitment and Employment Plan** to be developed by ARISE has to address the aspects and risks associated with their involvement, and workforce providers have to abide to its rules.

ARISE will develop and implement a **Human Resources Policy** aligned with relevant international standards with respect to recruitment, promotion, and access to remedy.

ARISE will ensure that the recruitment process is fair and transparent, public, and open to all without discrimination, paying heightened attention to ethnic minorities and vulnerable groups. This should include a gender quota to ensure women are represented in the pool of candidates or workers, the use of inclusive vocabulary in job descriptions, as well as collaboration with local unemployment agencies.

The **Labour Management Procedure** will include mitigation measures in relation to Gender-Based Violence and Harassment (GBVH). The strategy will include *inter alia* the following points:

- In consultation with workers and their representatives, a workplace policy on violence and harassment will be adopted and implemented;
- Violence and harassment and associated psychosocial risks in the management of occupational health and safety will be taken into account;
- Hazards will be identified and the risks of violence and harassment will be assessed, with the participation of workers and their representatives, and to prevent and control them measures, such as ensuring access to clean, safe, secure and separate toilet and welfare facilities at work, will be taken. Lack of access can create or exacerbate health problems for workers as well as put them at risk of violence, including sexual violence;
- Workers and other persons will be provided concerned information and training, in accessible formats as appropriate, on the identified hazards and risks of violence and harassment and the associated prevention and protection measures, including on the rights and responsibilities of workers; and
- Effective means of inspection and investigation of cases of violence and harassment will be ensured, including through labour inspectorates or monitoring.

Specific provisions will be implemented in the **GMP** to manage grievances related to GBVH (e.g., the complainant will be able to communicate the grievance to a person of its preferred gender, for example, if a woman prefers to explain the grievance to another woman, that will be possible).

Child Labour and Forced Labour in the Supply Chain

The **Contractor Management Plan** and **Labour Management Plan** that will be developed by ARISE will provide for measures to avoid child and forced labour among contractors and in the supply chain and will consider the following elements:

- ARISE will oversee if suppliers, contractors and subcontractors comply with all applicable child labour laws and only employ workers who meet the applicable minimum legal age requirement in accordance with international standards;
- Contractor contracts will specify monitoring to be undertaken by the contractor, establish the right for the Project monitoring and auditing of all contractors and subcontractors and the consequences for the contractor if they are found to be breaching national legal requirements,

international standards, policies or clauses in the contract regarding forced and/or child labour. Contractor contracts will specify that the same standards will be met by their sub-contractors and suppliers;

- In all contractor contracts the Project will make explicit reference to the need to abide by Ivoirian law and international standards in relation to child labour and forced labour; and
- Contractors and subcontractors will need to monitor closely the potential existence of irregular forms of child and forced labour in the supply chain. Action measures and notice to ARISE will be carried out immediately if this is found.

7.3.4.2 Operations Phase

Labour and Working Conditions / Workers' Rights

During the operations phase, ARISE will maintain all provisions of the existing **Labour Management Procedure** in line with Ivoirian regulations. ARISE will maintain a **GMP** that will be accessible to all workers, whether permanent or temporary, directly or indirectly employed. Contractors and sub-contractors will be required to put in place a worker grievance mechanism. The ARISE worker grievance mechanism shall be open to the contractor and subcontractor workforce in the event that their grievance is not adequately resolved by their direct employer. ARISE will then have the authority to act to resolve this grievance.

Workers' Health and Safety

Operations phase will be led by ARISE, following its internal management frameworks. ARISE will maintain the specific **OHSMP**. In addition, ARISE will maintain the grievance mechanism that will ensure the delivery of grievances and community concerns.

Child Labour and Forced Labour in the Supply Chain

ARISE will maintain the **Contractor Management Plan** and **Labour Management Plan** for the operations phase with the provision for measures to avoid child and forced labour among contractors and in the supply chain.

7.3.5 Access to Infrastructure and Services

7.3.5.1 Construction Phase

Disruption to infrastructure and utilities during construction

The following mitigation measures will be implemented:

- Where infrastructure supply is suffering disruption episodes, ARISE will find local solutions to be put in place.
- ARISE will liaise and engage with local authorities and utilities companies to ensure continuity of supply to communities. Only short term "planned" disruption to drinking water or electricity services will be allowed.
- ARISE will work with local utilities companies to ensure coordinated and rapid response to unplanned events such as damage to electric lines and water pipes.
- Community Liaison Officers (CLOs) will be present at work fronts to ensure that impacts from planned disruptions are minimised and that unplanned disruptions are properly managed.
- **GMP** will be in place ensuring rapid response time and access to a compensation process should unplanned disruption result in loss of livelihoods that could not otherwise be avoided

7.3.5.2 Operations Phase

Benefits from improvements to infrastructure and services (maximization measure)

The following maximization and enhancement measures will be taken into account to maximise the positive outcomes that will stem from the improvement of the infrastructure and service's quality:

- The Project will promote and carry out programs and initiatives to promote employment and social benefits to neighbouring communities, especially to the villages in the AoI.
- As part of the **Stakeholder Engagement Plan** maintained by ARISE, awareness sessions will be held with local villages to explain the benefits from Project development and the mitigation measures implemented, and a point person will be designated (could be the CLO) to contact in case of emergency etc. in order to alleviate potential concerns.

ARISE will ensure through its **GMP** that all concerns or problems of the villages regarding the infrastructure operation are being managed and acknowledged.

7.3.6 Community Cohesion

Construction Phase

Unmet Expectations of Benefits

Communities will be engaged in the preparation of the **Social Investment and Development Programme** activities to be taken forward in the vicinity of their communities. The village leaders will then be kept informed on the progress of such activities and opportunities for their involvement will be maximised.

ARISE will release leaflets with information emphasizing the limited nature of employment and the recruitment processes and the progress of the Social Investment and Development Programme.

Operations Phase

Disturbance from Presence of Workforce

The **SEP** developed by ARISE will consider the following:

- Communication will be based on the principle of transparency and clarity, clearly explaining the selection process and criteria.
- Ongoing dialogue between the Project, through its CLO and local communities to assist in information sharing with regard to employment practices and the use of non-local staff. Local communities to be provided information on the number of non-locals to be brought to the area, their housing arrangements, and the measures that the Project is putting in place to ensure that all workers abide by local customary practices. Information will also be shared on the number of local unskilled and semi-skilled positions available to local residents, along with the recruitment methods used to identify potential candidates.
- Relevant Project information in particular those related to environmental and socioeconomic impacts, employment and project benefits will be disclosed at the local level in a manner that is accessible, understandable and culturally appropriate for those affected. This will be facilitated by the CLO. The CLO will proactively and regularly engage with local stakeholders prior to commencement of construction activities and during the operation phase, providing updates and answering their queries. The CLO will be present on the ground during the whole construction process and available to the affected communities. The aim of this is to ensure that all working practices are transparent and any issues between local residents and non-local workers are communicated and dealt with early on.

A **Social Investment and Development Programme** will be developed by the Project in consultation with local communities, with active engagement required to determine the location and nature of investments. All stakeholders will be kept informed on the progress of investment activities and opportunities.

Information about the **GMP** will be shared amongst local communities. The contractors will also be responsible for managing a grievance mechanism that allows communities and employees to raise complaints.

7.3.7 Summary of Socio-economic Mitigation Measures and Assessment of Residual Impact

This section presents a summary of the assessment of the effects of the above-described mitigation measures for each of the defined socio-economic impact topics/sub-topics, per the assessment methodology given in section 6.1 above. The mitigations and residual impact significance are summarised in the table below. Essentially this table builds upon the impacts shown in Table 6-20.

As can be seen in the table, the mitigation measures are expected to be successful in reducing each of the negative impacts down to acceptable levels.

.

Table 7-7 Socio-economic Mitigation Measures and Residual Impact Assessment

Project phase	Activity/ Source of impact	Social component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
Development & construction phase	Temporary Direct and Indirect Employment Opportunities	Economy and Employment	Both	<ul style="list-style-type: none"> Development of a Recruitment and Employment Plan Development of a Stakeholder Engagement Plan Establishment of a Community Grievance Mechanism Procedure 	High	High	Positive	Positive
	Taxes and fees, procurement and worker spending	Economy and Employment	Both	<ul style="list-style-type: none"> Development of a Local Content and Procurement Plan 	High	High	Positive	Positive
	Capacity Enhancement	Economy and Employment	Both	<ul style="list-style-type: none"> Development of a Local Content and Procurement Plan 	High	High	Positive	Positive
	Permanent Loss of Livelihoods and/or Household Income due to Permanent loss of access to Land in the Project footprint	Land Use and Livelihoods	Direct	<ul style="list-style-type: none"> Due Diligence Process of the land acquisition and compensation process and livelihood restoration process Livelihood Restoration Plan Establishment of a Community Grievance Mechanism Procedure 	High	Medium	Major	Moderate
	Impact on Natural Resources and Related	Land Use and Livelihoods	Direct	<ul style="list-style-type: none"> Due Diligence Process of the land acquisition and compensation process and 	High	Medium	Moderate	Minor

Project phase	Activity/ Source of impact	Social component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
	Livelihoods due to the loss of access to natural resources provisions and uses as water streams or collection of NTFPs			livelihood restoration process <ul style="list-style-type: none"> ■ Livelihood Restoration Plan ■ Establishment of a Community Grievance Mechanism Procedure 				
	Road Safety	Community Health, Safety and Security	Direct	<ul style="list-style-type: none"> ■ Development of a Traffic Management Plan ■ Development of a Stakeholder Engagement program to minimise risks associated with increased traffic. ■ Establishment of a Community Grievance Mechanism Procedure ■ Drivers of Project vehicles will be trained/briefed about safe driving 	Medium	Low	Moderate	Minor
	Site Trespass and Injury	Community Health, Safety and Security	Direct	<ul style="list-style-type: none"> ■ Stakeholder engagement program through awareness on community health and safety behaviour ■ Signage and information boards will be required to minimise risks associated with restricted access ■ Selection and due diligence process of the security workforce. 	Low	Low	Minor	Minor (Negligible)

Project phase	Activity/ Source of impact	Social component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
	Environmental Health	Community Health, Safety and Security	Direct	<ul style="list-style-type: none"> ■ HSE management system ■ Community Grievance Mechanism Procedure ■ Stakeholder Engagement Plan ■ Mitigations proposed in other related sections (air quality, noise, resources and waste, and hydrology and hydrogeology). 	High	Low	Moderate	Minor
	Transmission of Communicable Diseases	Community Health, Safety and Security	Both	<ul style="list-style-type: none"> ■ HSE management system ■ Community Health and Safety Management Plan ■ Occupational Health and Safety Management Plan ■ Emergency Preparedness and Response Plan 	Low	Low	Minor	Minor (Negligible)
	Transmission of STDs	Community Health, Safety and Security	Indirect	<ul style="list-style-type: none"> ■ HSE management system ■ Community Health and Safety Management Plan ■ Occupational Health and Safety Management Plan ■ Emergency Preparedness and Response Plan 	Low	Low	Minor	Minor (Negligible)
	Pressure on Healthcare	Community Health, Safety and Security	Both	<ul style="list-style-type: none"> ■ HSE management system ■ Community Health and Safety Management Plan ■ Occupational Health and Safety Management Plan 	Low	Low	Minor	Minor (Negligible)

Project phase	Activity/ Source of impact	Social component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
				<ul style="list-style-type: none"> Emergency Preparedness and Response Plan 				
	Use of Security Personnel	Community Health, Safety and Security	Direct	<ul style="list-style-type: none"> Security Management Plan Selection and due diligence process of the security workforce. 	Low	Low	Minor	Minor (Negligible)
	Worker's Rights and Labour and Working Conditions	Labour and Working Conditions	Direct	<ul style="list-style-type: none"> Human Resources Policies Labour Management Procedure Grievance Mechanism Ensuring compliance with Ivorian and International requirements in contractor and supplier selection process considering worker management and rights 	Medium	Low	Moderate	Minor
	Workers' Health and Safety	Labour and Working Conditions	Direct	<ul style="list-style-type: none"> Occupational Health and Safety (OHS) Plan Human Resources Policies Labour Management Procedure Grievance Mechanism Ensuring compliance with Ivorian and International requirements in contractor and supplier selection process considering worker management and rights 	Medium	Low	Moderate	Minor

Project phase	Activity/ Source of impact	Social component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
	Child Labour and Forced Labour	Labour and Working Conditions	Both	<ul style="list-style-type: none"> ■ Contractor Management Plan ■ Labour Management Procedure ■ Grievance Mechanism ■ Ensuring compliance with Ivorian and International requirements in contractor and supplier selection process considering worker management and rights 	Low	Low	Minor	Minor (Negligible)
	Women's Rights (GBVH, approach to recruitment, promotion, and treatment with respect to equal opportunity)	Labour and Working Conditions	Both	<ul style="list-style-type: none"> ■ Recruitment and Employment Plan to address the aspects and risks associated with the provision of workforce by workforce providers ■ Human Resources Policy aligned with relevant international standards with respect to recruitment, promotion, and access to remedy. ■ ARISE should ensure that the recruitment process is fair and transparent, public, and open to all without discrimination, paying heightened attention to ethnic minorities and vulnerable groups. 	Medium	Low	Moderate	Minor (Negligible)

Project phase	Activity/ Source of impact	Social component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
				<ul style="list-style-type: none"> ■ Workforce Code of Conduct will include commitments for the prevention of sexual exploitation and abuse and sexual harassment at workplace and will be signed by all Project contractors. ■ ARISE will develop a package of trainings for construction workforce on respecting local communities and vulnerable people, with a special focus on gender, Human rights and GBVH risks awareness. ■ ARISE will encourage the submission of grievances/ complaints related to GBVH. 				
	Disruption to infrastructure and utilities	Access to infrastructures and services	Direct	<ul style="list-style-type: none"> ■ Find local solutions if infrastructure suffers disruption ■ Liaise and engage with local authorities and utilities companies ■ Intervention from CLOs ■ Grievance Mechanism 	Low	Low	Minor	Minor (Negligible)
	Unmet Expectations of Benefits	Community Cohesion	Both	<ul style="list-style-type: none"> ■ Development of a Social Investment and Development Programme ■ Releasing information about employment and recruitment processes and the Social 	Medium	Low	Moderate	Minor

Project phase	Activity/ Source of impact	Social component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
				Investment and Development Programme				
Operation phase	Temporary Direct and Indirect Employment Opportunities	Economy and Employment	Both	<ul style="list-style-type: none"> ■ Development of a Recruitment and Employment Plan ■ Development of a Stakeholder Engagement Plan ■ Establishment of a Community Grievance Mechanism Procedure 	High	High	Positive	Positive
	Regional and National economic development	Economy and Employment	Both	<ul style="list-style-type: none"> ■ Development of a Recruitment and Employment Plan ■ Development of a Stakeholder Engagement Plan ■ Establishment of a Community Grievance Mechanism Procedure 	High	High	Positive	Positive
	Permanent Loss of Livelihoods and/or Household Income due to Permanent loss of access to Land in the Project footprint	Land Use and Livelihoods	Direct	<ul style="list-style-type: none"> ■ Due Diligence Process of the land acquisition and compensation process and livelihood restoration process ■ Livelihood Restoration Plan ■ Establishment of a Community Grievance Mechanism Procedure 	High	Medium	Major	Moderate

Project phase	Activity/ Source of impact	Social component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
	Impact on Natural Resources and Related Livelihoods due to the loss of access to natural resources provisions and uses as water streams or collection of NTFPs	Land Use and Livelihoods	Direct	<ul style="list-style-type: none"> ■ Due Diligence Process of the land acquisition and compensation process and livelihood restoration process ■ Livelihood Restoration Plan ■ Establishment of a Community Grievance Mechanism Procedure 	High	Medium	Moderate	Minor
	Environmental Health	Community Health, Safety and Security	Both	<ul style="list-style-type: none"> ■ Community Health, Safety and Security Management Plan ■ Stakeholder Engagement Plan ■ Grievance Mechanism ■ Mitigations proposed in other related sections (air quality, noise, resources and waste, and hydrology and hydrogeology). 	Medium	Low	Moderate	Minor
	Transmission of Communicable Diseases	Community Health, Safety and Security	Indirect	<ul style="list-style-type: none"> ■ HSE management system ■ Community Health and Safety Management Plan ■ Occupational Health and Safety Management Plan ■ Emergency Preparedness and Response Plan ■ Grievance Mechanism 	Medium	Low	Moderate	Minor

Project phase	Activity/ Source of impact	Social component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
	Transmission of STDs	Community Health, Safety and Security	Indirect	<ul style="list-style-type: none"> ■ HSE management system ■ Community Health and Safety Management Plan ■ Occupational Health and Safety Management Plan ■ Emergency Preparedness and Response Plan ■ Grievance Mechanism 	Medium	Low	Moderate	Minor
	Workers' Rights	Labour and Working Conditions	Both	<ul style="list-style-type: none"> ■ Workers Management Plan ■ Workers Grievance Mechanism 	Medium	Low	Moderate	Minor
	Workers' Health and Safety	Labour and Working Conditions	Both	<ul style="list-style-type: none"> ■ Occupational Health and Safety (OHS) Plan ■ Grievance Mechanism 	Medium	Low	Moderate	Minor
	Child Labour and Forced Labour	Labour and Working Conditions	Both	<ul style="list-style-type: none"> ■ Contractor Management Plan ■ Labour Management Procedure ■ Grievance Mechanism ■ Ensuring compliance with Ivorian and International requirements in contractor and supplier selection process considering worker management and rights 	Low	Low	Minor	Minor (Negligible)
	Benefits from improvements to	Access to infrastructures and services	Both	<ul style="list-style-type: none"> ■ Stakeholder Engagement Plan ■ Grievance Mechanism 	High	High	Positive	Positive

Project phase	Activity/ Source of impact	Social component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
	infrastructure and services			<ul style="list-style-type: none"> Promote and carry out programs and initiatives to promote employment and social benefits to neighbouring communities 				
	Disturbance from the presence of the workforce	Community Cohesion	Indirect	<ul style="list-style-type: none"> Stakeholder Engagement Plan Social Investment and Development Programme Community Grievance Mechanism Procedure 	Medium	Low	Moderate	Minor
Closure or rehabilitation phase	The significance of the impact to employment and community health indicators during decommissioning will need to be assessed prior to starting this phase, based on an updated socioeconomic baseline.							

7.3.8 Cultural Heritage

As described in Section 5.4.9 three suspected-potential cultural heritage sites were found within the Project footprint, i.e., within the construction area of the Project. This means that these sites will be destroyed by the planned site construction works.

The only mitigation measure that would be effective in reducing the significance of direct physical impact would be avoidance via ring-fencing the cultural heritage sites and redeveloping the site layout to avoid destroying those sites²²⁹. A Cultural Heritage Management Plan (CHMP) is needed to evaluate the three cultural heritage sites. In case these three sites are very important, they could remain a “green area” within the Project site. Otherwise, a salvage excavation would be an option to reconstruct the site elsewhere (e.g., in a museum or pavilion) at or near the Project site which is open to the public. If this were to be applied, the resulting impact significance after the adapted mitigation measures would be negligible.

Direct impacts presented in Section 6.4.8 have the potential to be once off, non-reversible and permanent. Unless the principle of avoidance is adopted in the first instance, mitigation measures will not significantly reduce the predicted residual effect of this impact on the cultural heritage.

A comprehensive Cultural Heritage Management Plan (CHMP) will be developed for the Project to ensure all Cultural Heritage resources are addressed and managed adequately. The plan will be developed and agreed pre-construction, to allow appropriate mitigation measures to be applied before any impact occurs. Items to be covered in the CHMP include (but not limited to):

- Specific design measures, such as screening bunds or noise reduction measures, to address indirect impacts on tangible and intangible cultural heritage (if required);
- Regulator engagement with the relevant cultural heritage authorities from the Ministry to agree site-specific mitigation measures;
- Further field survey and assessment for potentially impacted resources. An additional field survey will be required under the CHMP to determine the full extents and significance of Project impacts on both tangible and intangible cultural heritage. This survey has to be undertaken by an appropriately qualified Cultural Heritage specialist. The CHMP will need to be updated to reflect the findings of this additional survey;
- Access management (Memorandum of Understanding with local communities regarding access and activities). Access arrangements will be made to the satisfaction of identified stakeholders through a Memorandum of Understanding agreed to by authorities and identified stakeholders, which will allow unrestricted access to Cultural Heritage resources. This memorandum should be in place before construction begins;
- Cultural Heritage input into the Community Grievance Mechanism;
- In case cemeteries are identified in the Aol a Grave Relocation Plan is necessary. This will be designed and implemented with the agreement of the local communities (if the cemeteries identified in the Aol);
- Chance Finds Procedure. A Chance Finds Procedure will be designed and implemented to manage any unexpected discovery of archaeological material in-line with international requirements and guidelines IFC PS8;
- Detailed site-specific Archaeological mitigation, such as pre-construction investigations, archaeological excavations, etc.;
- Built heritage recording; and Monitoring of mitigation measures and Mitigation Control.

Table 7 9 shows the cultural heritage mitigation measures and residual impact of the Project

²²⁹ For the purposes of this Impact Assessment, it is assumed ring-fencing the cultural heritage sites and redeveloping the site layout to avoid impact is not possible as a mitigation measure

Table 7-8 Cultural Heritage Mitigation Measures and Residual Impact Assessment

Project phase	Activity/ Source of impact	Environmental component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
Development & construction phase	Physical ground disturbance through earthwork activities	Cultural Heritage	Direct	Direct impacts presented in Section 6.4.8 have the potential to be once off, non-reversible and permanent. <i>Unless the principle of avoidance is adopted in the first instance, mitigation measures will not reduce the predicted residual effect of this impact on the cultural heritage.</i>	High	High	Major	Major ²³⁰
Operation phase	The impact from construction will have wholly removed the identified potential cultural heritage resources and therefore there will be no impact at operation phase							
	The impact from construction phase will have wholly removed the identified potential cultural heritage resources and therefore there will be no impact at Closure or rehabilitation phase							

²³⁰ **Note:** This significance is based on the assumption that the cultural heritage is in fact present in the Project area. IF subsequent studies/checks confirm that it is NOT present, then the significance will be Minor (neglectable)

8. CLIMATE CHANGE

This chapter provides an overview of the climate change aspects of the Project as required per Ivorian legislation and ToR issued by ANDE.

Furthermore, the Physical Climate Change Risk Assessment (CCRA) and Greenhouse Gas (GHG) Inventory assessment, as per IFC standard²³¹ and EP4 requirements²³², are included in Appendix J and Appendix K respectively.

The CCRA includes:

- An identification and evaluation of the physical climate risks affecting the Project under current baseline and future climatic conditions;
- An assessment of the Project areas that are at risk of being impacted by climate hazards; and
- Key recommendations based on communication with the Project design team on how to adapt to such climate change impacts.

The GHG Inventory includes:

- A description of the Project GHG generating sources;
- A calculation of the Project carbon footprint; and
- Key recommendations of GHG mitigation measures.

For the GHG inventory only Scope 1 (Direct GHG emissions) and Scope 2 (indirect GHG emissions from the use of purchased electricity) emissions were assessed, as this represents industry best practice.

8.1 Activities to be carried out within the Project

The Project activities include the construction and operation of the basic infrastructure on 429 ha for the industrial economic zone (IEZ) within the PK24. The full list of activities and further information on the Project description is provided in Chapter 4 (section 4.6). As this ESIA Report covers only ARISE's construction and operation of the basic infrastructure for the 429 ha IEZ, the climate change aspects assessed in this Chapter refer to these activities. At this stage the exact industries (i.e., tenants) are not defined, so there was no assessment conducted of the potential influence or impact on the climate change aspects from that prospective. The respective climate change assessment should be conducted for each industry that will decide to settle in the Project area, following Ivorian requirements and international standards (i.e., IFC standard²³¹ and EP4²³²).

8.2 List of Greenhouse Gases Generated by the Project and their Sources

The following Table 8-1 describes the main GHGs emitted by the Project and their different sources of emissions.

²³¹ IFC, 2007

²³² Equator Principles, 2020. EP4

Table 8-1 GHGs Generated by the Project

Greenhouse gases generated by the Project	Project activity source of GHG emissions
Carbon Dioxide (CO ₂)	<ul style="list-style-type: none"> ■ Diesel engines during construction; ■ Diesel engines during operation; ■ Electricity generation from the grid during construction; and ■ Electricity generation from the grid during operation.
Sulphur Oxides (SO)	<ul style="list-style-type: none"> ■ Diesel engines during construction; and ■ Diesel engines during operation.

8.3 Ranking of Most Significant GHG Emissions

Based on the GHG assessment, Table 8-2 below shows the ranking of the most significant GHG emissions from the Project.

Table 8-2 Ranking of Most Significant GHG Emissions of Activities

Ranking of Most Polluting Activities in Decreasing Order
a. Diesel engines during construction
b. Electricity consumption during operation
c. Diesel engines during operation
d. Electricity consumption during construction

The most CO₂ emissions can be mitigated through general fuel saving methods or energy saving methods and technologies during construction and operation.

8.4 Carbon footprint of the Project

The calculations for the carbon footprint of the Project are presented in Appendix K. To summarise, on basis of the estimated data, it can be assumed that about 118,000 t CO₂e will be produced in Scope 1 and 2²³³ during the whole four-year construction phase. During the operation phase, about 150 t CO₂e will be released in Scope 1 & 2 each year (Table 8-3).

Table 8-3 Summary of all Annual Emissions for Scope 1 and 2

Phase	Emissions per year	Total Emissions (4 years)
	[t CO ₂ e]	[t CO ₂ e]
Construction	~ 29,500	~120,000
Scope 1	~ 29,500	~120,000
Scope 2	~1	~3
Operation	140	-
Scope 1	70	-
Scope 2	70	-

²³³ In accordance with GHG protocol: Scope 1: Direct GHG emissions; Scope 2: Indirect GHG emissions from the use of purchased electricity, heat or steam; Available online at : <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>

8.5 Recommendations and Mitigation Measures

Construction Phase

During the four years of construction, the main source of emissions is from fuel combustion of vehicles and other construction equipment (118,000 t CO₂e). ARISE will encourage fuel efficiency of its contractors during construction as far as reasonably feasible. This can be achieved, for example, by optimising the transport routes on the construction site. Furthermore, it should be ensured that no machines are running when they are not needed. In general, given that fuel is expensive and reduces the profit margins of the contractors, there is a natural economic incentive for contractors to operate their vehicles and other equipment in a fuel-efficient manner.

Operation Phase

During operation the Project causes approximately 140 t CO₂e which is very low compared to the construction emissions. Around half of the operation emissions per year will come from fuel combustion (70 t CO₂e) and the other half (70 t CO₂e) from electricity use.

Therefore, ARISE should consider installing energy-saving lightning system within the Project site and encourage the tenants to do so as well. In a future scenario of low carbon transition, it is likely that the grid electricity supplied to the Project site in the operational lifetime will be from 'greener' energy sources such as renewables, thus minimising future GHG emissions.

ARISE as a standard Group practice seeks to lessen their reliance on carbon-intensive energy sources in their projects by allocating funds to decarbonisation and climate change adaptation techniques. ARISE is working on a design and implementation of a Carbon Neutral Strategy²³⁴ which will:

- Establish a carbon baseline across global operations;
- Determine areas of opportunity and emission reduction;
- Promote knowledge sharing with business partners such as host governments, employees, contractors, and local communities; and
- Create a Carbon Neutral Action Plan to become carbon neutral by 2030.

Furthermore, regarding the industrial zones projects of ARISE, the strategic initiatives towards carbon neutral goal includes:

- Invest in solar farms in proximity to industrial zones;
- Ensure that businesses may utilize renewable energy resources; and
- Provide incentives to industries that promote renewable energy.

The assessment of climate change and its impacts on the Project components discussed in the Physical CCRA (Appendix J). The Physical Risks Screening identified the high-level physical climate risks affecting the Project in its construction and operation phase. These have to be taken into account by the Project design team of ARISE; for example, the risk of wildfires and flooding identified as high risks have to be considered Project specific Emergency Preparedness Response Plans.

²³⁴ „ARISE IIP Brochure - Committed to making Africa Thrive“, ARISE, 2022. More information on <https://www.ariseiip.com/carbon-neutral-initiatives-in-africa/>

Table 8-4 Climate Change Mitigation Measures and Residual Impact Assessment

Project phase	Activity/ Source of impact	Environmenta l component affected	Nature of impact (Direct/ Indirect)	Mitigation measure recommended	Magnitude		Significance	
					Pre-mitigation	Post-mitigation (Residual)	Pre-mitigation	Post-mitigation
Development & construction phase	Fuel Consumption and Electricity use	Climate Change	Direct	<ul style="list-style-type: none"> ■ Refuelling will be done from authorised fuel stations; ■ Transport logistics (locations/routes) will be optimised to ensure efficient carriage of raw materials and promote fuel efficiency; ■ Vehicle idling times will be reduced through focus on scheduling of construction operations; ■ The use of fuel-efficient transportation vehicles will be prioritised, and regular maintenance of vehicles ensured; ■ Energy efficiency specifications for new and retrofitted site accommodation will be created; ■ Sourcing renewable energy will be considered if feasible; and ■ Energy efficiency usage among workers will be promoted. 	Medium	Medium	Medium	Minor
Operation phase	Fuel Consumption and Electricity use	Climate Change	Direct	<ul style="list-style-type: none"> ■ The use of fuel-efficient transportation vehicles will be prioritised, and regular maintenance of vehicles ensured; ■ Sourcing renewable energy will be considered if feasible; and ■ Energy efficiency usage among workers will be promoted. 	Negligible	Negligible	Negligible	Negligible

9. RISK AND ACCIDENT MANAGEMENT

9.1 Unplanned Events

9.1.1 Overview

The previously described methodology for assessment of Project impacts (Section 6.1) applies to routine activities during construction and operations of the Project. For impacts resulting from unplanned events (typically accidents, such as a major fuel spill or other event that cannot be reasonably foreseen), this methodology is also applied, but the factor “likelihood” is also considered when assigning the magnitude designation, as classified in 6.1.5.1. The Likelihood of an unplanned event is determined as *unlikely*, *possible*, or *likely* based on professional judgement and quantitative information where available.

The following Chapter presents the assessment of impacts resulting from unplanned or non-routine accidental events. These are different to impacts that would reasonably be predicted to occur in the normal course of activities during construction.

Given the nature of Project activities, unplanned and accidental events might include:

- Vehicle traffic accidents (mainly related to construction traffic); and
- Accidental spills of equipment fuel and oils;

If unplanned and accidental events did occur, there would be effects on the biophysical and social environment. The risks of unplanned and accidental events and the potential impacts are described in this Chapter.

9.1.2 Potential Impacts Associated with Construction Traffic

9.1.2.1 Risks of Construction Traffic

Road traffic accidents may be common due to poor driver skills, speeding and the poor condition of the roads. Given the urban nature of the Project area, there are many pedestrians and traffic parties.

Traffic generated during construction of the Project will arise as a result of the following construction activities:

- Delivery of construction materials and equipment to the construction sites;
- Delivery of operational infrastructure (service areas etc.); and
- Worker movements to the sites, including potential mobilisation from outside of the Project area and local movements from construction sites.

Construction traffic will use the existing local road network to access the sites. The additional traffic movements increase the potential for road accidents between vehicles or between vehicles and pedestrians. Accidents involving pedestrians are more likely away from the populated towns where people will be less used to movement of large vehicles and may have taken risks when crossing the road. This risk is further increased by the fact that many of the pedestrians are young children, who may have limited road safety awareness. Furthermore, there is also a risk of both intentional and unintentional trespass into construction sites, which may lead into injuries or fatalities.

Communities have limited ability to access healthcare and therefore seek treatment in the event of an accident, and thus may not receive the required treatment in a timely manner, with the potential for significant changes in quality of life for them or their families, or an accident resulting in a fatality. As such, the population in general is considered to have High vulnerability, with children being in particularly vulnerable as they walk along the road to school. Finally, youth and young men in particular are also considered vulnerable in terms of trespassing into construction sites.

9.1.2.2 Mitigation Measures

The following mitigation measures will be implemented to reduce and minimise the potential impacts associated with construction traffic:

- ARISE will develop and implement a **Traffic Management Plan** (with vehicle movements, frequency/times of day, likely routes, and associated risk assessment), including consideration of the following points:
 - Safe worksite layouts;
 - Vehicle safety equipment standards (e.g., seat belts and first aid kits);
 - Driving rules (e.g., speed limits, hours of driving, required breaks, carrying passengers and use of mobile phones/ radios);
 - Driver qualifications and selection (e.g., defensive driving courses, accident history and 'practical' interviews to test skills);
 - Driver education and training (awareness raising, information on required standards and review of incidents);
 - Vehicle inspection and maintenance (in line with international standards for vehicle roadworthiness);
 - Site layout maps which include traffic movement flow paths, pedestrian crossing points, right of ways, signage, etc.;
 - Accident/ incident Reporting and investigation; and
 - Disciplinary procedures.
- During the construction phase, arrangements and routes for heavy vehicles and unusual/ wide loads (if required) must be agreed in advance with the relevant authorities and the appropriate permit should be obtained (if needed) for the use of public roads.
- All construction sites should be appropriately marked with high visibility signage, cones and barriers, and guarded 24/7 to minimise unintentional or intentional trespass, and keep community members and outsiders away from the construction areas.
- Community traffic safety awareness campaigns should be conducted during the construction period, particularly in those communities where construction vehicles will be most active. The campaign should also be rolled out in schools in order to sensitise the children, who frequently walk along the roads to reach school.
- ARISE should undertake mass transport of workers (if any foreseen) in the safest way possible to construction areas as part of mobilisation and daily movements from collecting points to worksites.
- In the event of an accident in which a community member is harmed, ARISE will organise transport for the injured person to an appropriate health facility capable of dealing with the injuries and facilitate access to medical treatment.

Accident Reporting and investigation procedures will be developed to determine root causes and identify corrective measures to reduce the risk of the accident happening again.

9.1.3 Potential Impacts Associated with Accidental Oil and Chemical Spills

9.1.3.1 Risks of Spills

Some hazardous materials will be used in the course of carrying out Project activities, the main ones being hydrocarbon fuels (diesel), lubricating oils, and chemicals. There is the potential for accidental release in the course of storage and handling of these fuels.

During construction, there is the potential for spills of fuels and oils during fuelling and maintenance of machinery and vehicles. Spills could occur in a number of locations around the sites including areas used for maintenance, material and equipment laydown, parking, fuel storage, and fuelling. Spills could also occur along the roads adjacent to the Project site. Spills on the site have the potential to affect the terrestrial environment.

Any major spills from the storage areas may potentially affect the terrestrial environments and result in potential deterioration of the quality of groundwater, surface water, and soil. This would in turn have adverse effects on flora and fauna and local water users.

9.1.3.2 Mitigation Measures

The following mitigation measures will be implemented to reduce and minimise the potential impacts associated with accidental oil and chemical spills:

- Contractors will adhere to best practice principles for storage and handling of hazardous liquids;
- Equipment should be up to industry standard and serviced regularly to prevent oil spills;
- ARISE will develop and implement a **Spill Prevention and Response Plan (SPRP)** and construction workers will be trained accordingly;
- The SPRP will describe the measures to minimise the likelihood of spills and potential consequences, including inter alia the following points:
 - On-site storage areas for hydrocarbons and other chemicals should be constructed in a way that potential tank failures can be contained including bunds and surface hardstanding;
 - Hazardous material storage will be constructed on an impermeable surface and the bulk storage facility will be bunded. The Project will restrict storage and handling of hazardous materials and fuels to bunded areas of sufficient capacity to contain a release;
 - Refuelling of equipment and vehicles will be carried out in designated areas on hard standing ground to prevent seepage of any spillages into the ground. Collection systems will be installed in these areas to manage any spills, fuels will be collected and either reused, treated by incineration, or removed by a local business partner. Drip trays must be used when refuelling and servicing vehicles or equipment, where it is not on a hardstanding surface;
 - Malfunctioning equipment must be repaired immediately or be removed from site to facilitate repair;
- ARISE will develop a **Hazardous Material Spill Response Plan**, which includes community sensitisation/ notifications when required. This Plan can be integrated within the **SPRP**. Considerations will include, e.g.:
 - Maintaining spill clean-up and response capability adequate for addressing spills for all phases of the expansion. All spills will be immediately contained and cleaned up. Contaminated areas will be remediated, and post remediation verification will be carried out; and
 - Appropriately sized spill kit kept onsite relevant to the scale of the activity taking place must be available.

9.2 Health and Safety Policies and Standards

ARISE has a corporate **Environment, Safety & Governance Policy Manual** for its global activities based on which the Project will be implemented and will be audited externally on an annual basis.

Prior to commencement of construction activities, the ARISE QHSE Team will implement a Project-specific **Safety Management Programme** based on safe systems of work, including but not limited to

Risk Assessment and Mitigation, Standard Operating Procedures, Emergency Preparedness and Response Plan and Permit to Work System creating the foundation for managing occupational risk in line with the ARISE Policies²³⁵. These plans will be developed before the start of construction and underpinned by a number of corporate- and Project-level management procedures (see section 4.1.3.4),:

9.3 Emergency Preparedness and Response Planning

ARISE will develop prior the construction phase a **Project Emergency Preparedness Response Plan (EPRP)** as per ARISE Health and Safety Policy, as well as part of an ESIA requirement. ARISE will assess its needs for emergency response capabilities during mobilisation prior to construction. Emergency response and preparedness planning will be based on the Project's aspect and impacts / hazards and risks assessment. The type of emergency scenarios requiring contingency and emergency preparedness will be informed by the ESIA process, however, are likely to include the following topics (subject to modification):

Medical emergencies

- Road-traffic accidents involving workers and/or road users / community members
- Work accidents (Asphyxiation, falls at level or from height, foreign objects in the eye, wounds, fractures, insect bites, snake bites, fainting, among others)
- Electric shock
- Burns
- Emergency in confined spaces
- Severe illness, e.g., malaria (especially in workers without semi-immunity), Covid-19

Environmental emergencies

- Spillage of oil or fuel in soil and / or water
- Spillage of hazardous substances when being transported
- Spillage of stored dangerous substances
- Spilling of concrete in progress or water channel by concrete wash
- Wastewater spill

Environmental and occupational health and safety emergencies

- Fire or Explosion
- Flood or natural hazard

The EPRP will include organisational structure for emergency response along with emergency contacts and escalation protocols. The EPRP will also consider external factors and impacts, such as on local communities. Where applicable, a scenario-specific emergency response procedure or protocol will be communicated to the local communities.

The management of emergency preparedness and response during operation of the plants shall be defined by ARISE as well as the resident companies. Further information about ARISE's emergency response planning will be available at later stages of the Project.

²³⁵ ARISE Health and Safety Policy

9.4 Worker medical assistance

In line with Ivorian law^{236,237}, ARISE has a duty to provide the following medical examination services:

- A pre-employment medical examination for new workers or for workers finishing their probationary period, to ensure they are fit to work;
- Annual medical examinations for workers in order to ensure their good health and the maintenance of their ability to do the assigned work;
- A medical examination prior to resumption of work duties following suspension (for a month or more) of their contract due to disease.

Should serious or significant injuries or illnesses occur in the workplace, ARISE shall be responsible for the arrangement and provision of medical treatment, and where needed, evacuation to a medical facility.

ARISE and workers shall pay statutory social security contributions to the Caisse Nationale de Prévoyance Sociale²³⁸, which manages compensation and payments to workers covering family allowances, maternity, occupational injury or illness. In case of occupational injury or illness leading to inability to carry out work duties or time away from work, the Caisse Nationale de Prévoyance Sociale provides an allowance based on the worker's salary for five years.

Workers will also have access to an on-site medical team for first aid, occupational health concerns and advice.

²³⁶ Loi no 95-15 du 12 janvier 1995 portant Code du travail. (Art. 43.1)
<https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/39815/77490/F93129811/NER-39815.pdf> accessed 18/12/2020

²³⁷ Décret no 67-321 du 21 juillet 1967 portant codification des dispositions réglementaires prises pour l'application du Titre VI "Hygiène et Sécurité - Service médical" de la loi no 64-290 du 1er août 1964 portant Code du travail. (Art. 4D 536) accessed 18/12/2020

²³⁸ Loi n° 99-477 du 2 août 1999 portant modification du Code de prévoyance sociale. (Art, 124)
<https://www.ilo.org/safework/countries/africa/ivory-coast/lang--en/index.htm> accessed 18/12/2020

10. ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN

10.1 Introduction

This Chapter presents a provisional Environmental and Social Management Plan (ESMP) for the construction and operation of the Project, with the purpose to specify standards, and controls required to manage and monitor the environmental and social impacts. To achieve this the ESMP compiles the potential adverse impacts from the planned activities as identified in the ESIA and outlines mitigation measures required to reduce the likely negative impacts on the biophysical and social environment.

The tenants of the Project IEZ (i.e., future resident industry units within 429 ha) will be responsible to develop their own industry/project specific ESMP considering the provisions and requirements listed in the Project ESMP (see Table 10-2) and the applicable national standards and guidelines.

10.2 Overview and Scope

The ESMP is intended to cover the Project activities described in Chapter 4 of this ESIA Report. It covers Project activities during construction and operation and will be subject to thorough reviews prior to the commencement of activities to ensure completeness.

The ESMP details roles and responsibilities that will be assumed by each relevant entity as leader and/or supporter. ARISE acknowledges its commitments in this regard.

ARISE will have responsibility for the implementation of the measures outlined in the ESMP during construction, but may delegate responsibility to its contractors, where appropriate. In cases where other individuals or organisations have responsibility for mitigation measures, this is clearly indicated within the ESMP (see Table 10-2).

Capacity building and training requirements are also described within this Chapter, where these relate to specific skills required to deliver the ESMP action in question. General training, which will be provided to staff (and contractors' staff as appropriate), is not specifically indicated in the plan.

10.3 Objectives

The ESMP is essential for successfully implementing the Project's environmental and social performance throughout the life of the Project. Having this ESMP in place ensures a systematic approach to bringing environmental and social considerations into decision-making and day-to-day operations. It establishes a framework for tracking, evaluating, and communicating environmental and social performance and helps ensure that environmental risks and liabilities are identified, minimised and managed.

The ESMP must be viewed as a living document, which will continue to develop during the construction phase to enable continuous improvement of the Project's social and environmental performance.

The core objectives of this ESMP are as follows:

- Ensuring compliance with regulatory authority stipulations and guidelines, which include local, national and international;
- Ensuring that there is sufficient allocation of resources on the Project budget so that the scale of the ESMP-related activities is consistent with the significance of Project impacts;
- Verifying environmental and social performance through information on impacts as they occur;
- Periodically updating the ESMP as the Project activities progress;
- Responding to unforeseen events; and
- Providing feedback for continual improvement in environmental performance.

10.4 Principles

The ESMP was developed on the basis of three major groups of general principles: Principles of Sustainable Development, Principles of Ethics and Quality and Principles of Best Practice. These key principles are described below.

10.4.1 Principles of Sustainable Development

- Protection of public health, welfare and safety – activities on site should be contained and will not impact on human health and well-being. The benefits of the port activities should be realised by the communities during all phases.
- Maintenance of ecological processes – natural resources should be conserved or improved and not decreased in value. The resources are managed in such a way that will provide for present and future needs.
- Avoidance, mitigation and management of pollution - existing or possible future contamination of surface, ground water and soil and air pollution is avoided where possible and mitigated and managed within the standards set. Waste generated will be eliminated, reduced or minimised, reused or recycled and the residual finally disposed of, if no other option is available.
- Precautionary Principle – in the absence of scientific data confirming a complete evaluation if the risk a cautious approach will be adopted to protect human, animal or plant health, or to protect the environment.

10.4.2 Principles of Ethics and Quality

- Consistency with legal and planning context – through all phases of the development of the Project, activities will comply with local, national and international legal and regulatory requirements.
- ESMP implementation and proactive management – the ESMP is implemented at the start of the activities and aims at continual improvement during all phases of the development.
- Clear and easily understood Reporting – the ESMP should be easily understood, clearly laid out, an accepted documentation style should be used and all tables, figures and illustrations should be appropriate and necessary.
- Cost effectiveness – ensure that there is a balance between the financial constraints of achieving a maximum return on investment and the reduction of present and future risks and liabilities.

10.4.3 Principles of Best Practice

- Continuous improvement – the Project Proponent should be committed to review and continually improve environmental management, with the objective of improving overall environmental and social performance.
- Broad level of commitment – commitment is sought from all levels of management as well as the workforce in order for the development and implementation of the ESMP to be successful and effective.
- Participative process – consultation will and has been undertaken with all Project Affected Persons (PAPs) to seek their input into the environmental and social management of the Project.

10.5 General Requirements

This ESMP has been developed in line with applicable legal and policy requirements. These included the national requirements in terms of the Environmental Assessment Regulations and the requirements of the IFC Performance Standards. The ESMP aligns to:

- ESIA ToR issued by ANDE, 2022;
- IFC Performance Standard 1; and
- World Bank Group General EHS Guidelines (2007).

Where specific additional standards and guidelines are used, these are noted in the ESMP table.

10.6 Plan-Do-Check-Act

The structure of this ESMP is set out according to the Plan, Do, Check, Act (PDCA) process. The PDCA is a well-known management tool that allows for a methodical and ongoing approach to managing environmental and social risks. Each of the primary sections in this Section relate to key components of the process.

Plan, Do, Check, Act is part of international frameworks for quality and environmental management systems including ISO 14 001. This process is described in *Box 10.1*.

Box 10.1 ESMP Process

Plan

- Define policies and objectives for environmental and social performance;
- Identify environmental and social impacts and risks of the operations;
- Develop mitigations and operational controls to address impacts and risks; and
- Develop a management plan to achieve these objectives.

Do

- Implement management plan; and
- Implement mitigations and operational controls.

Check

- Monitor performance against policies and objectives; and
- Check that mitigations and operational controls are effective.

Act

- Make corrections to plans, mitigations, or controls in response to performance monitoring or out of control events.

10.7 ARISE Corporate Sustainability System, Policies and Processes

ARISE is a global infrastructure group specialised in conceiving, financing, building and operating integrated and tailor-made industrial zones. Section 4.1.3 provides further information about the company.

ARISE is committed to align environmental, health and safety, as well as social and governance practices with international standards. ARISE strives to minimise the risks to the environment and the communities they operate in and to provide a healthy and safe workplace for all their workforce. ARISE has four sustainability pillars contributing to the sustainable development goals namely, carbon neutrality, circular economy, diversity and inclusion as well as responsible supply chain management. To fulfill its corporate mission, the ARISE Group is guided by the principles of sustainable development in every aspect of their business strategy and growth.

During the execution of the Projects, ARISE believes in strong relationships with partners including investors, governments and local communities.

ARISE's vision is to ensure job creation, developing high value-added industrial activities for local economies and to contribute to the global fight against climate change²³⁹.

The Environment, Safety & Governance Policy of ARISE comprises of rules and mechanisms to ensure compliance with highest possible standards in health, safety, comfort and productivity for staff, visitors and the public.

ARISE's policies, procedures and guidelines related to anti-bribery and corruption as well as anti-money laundering and financing of terrorism have been implemented in all areas of operation and countries in which the company operates.

The **Human Resources Policies** were prepared to maintain the corporate unit and is the strategic guide to achieve its goals of productivity and solid growth, with respect to the diversity and balance of the workforce at the service of ARISE companies. The policies of the Fair Employment and Sexual Harassment, establish that high ethical standards are followed, not admitting any form of discrimination or abuse of authority. All normative documents clearly and objectively express that the organisation will not accept any form of discrimination.

The **Risk and Governance Policies** establishes commitments to conflicts of interest and whistleblowing in accordance with the business model of the ARISE Group, providing the Projects with guidance, tools and knowledge necessary to ensure compliance with its management regulations.

The sourcing and processing of natural commodities is one of the ARISE's core operations. Therefore, ARISE recognises the importance of understanding the sustainability dimensions of each commodity's supply chain and managing the risks and opportunities along the supply chain.

10.8 Planning

10.8.1 Impact Assessment

The Project has utilised the impact assessment through the ESIA process as a tool within the planning process to identify key impacts of the Project and associated mitigation and management measures for the construction and operation phases. The Project will continue to use the impact assessment process as a planning tool for any future development activities. The mitigation hierarchy applied in this ESIA will also be applied.

10.8.2 Environmental and Social Commitments

Through the Project development and ESIA process, mitigation measures have been identified to address environmental and social impacts associated with Project activities. ARISE has made a commitment to implement these measures to ensure or improve environmental and social performance.

The commitments take a number of forms as summarised in Box 10.2, with the specific actions intended to address a particular environmental or social issue.

²³⁹ ARISE. Committed to Making Africa Thrive

Box 10.2 Type of Commitments

Avoidance

During the planning phases, potential impacts to sensitive resources are identified. Where feasible, locations or processes can be changed during the planning or design phases to avoid impact to these areas.

Minimisation

Minimisation involves measures to reduce proposed impacts to a resource.

Management

Management commitments include development of plans and procedures for ensuring that measures to protect the environment actually take place and are of the desired standard of practice. Training is another commitment in this category.

Monitoring

Commitments to monitoring are primarily to ensure the above measures are working properly and delivering the desired (and anticipated) results.

Additionally

Additionally involves actions and contributions which are designed to provide a positive benefit. Examples include assisting with additional domestic water supply to surrounding towns.

10.8.3 Supporting Environmental and Social Management Plans

Following the completion of ESIA studies, the ESMP will outline the supporting management plans that will be developed for each topic. These plans will set out how the mitigation measures will be put into practice, monitored and upheld.

Environmental:

- Dust Management Plan
- Waste Management Plan;
- Borrow Pit Management Plan;
- Hazardous Materials Management Plan (incl. Hazardous Material Spill Response Plan);
- Invasive Alien Plant (IAP) Species Control Plan
- Emergency Preparedness and Response Plan;
- Traffic Management Plan;
- Occupational Health and Safety Plan; and
- Chance Find Procedure.

Social:

- Stakeholder Engagement Plan (SEP);
- Labour Management Plan;
- Community Health and Safety Plan;
- Occupational Health and Safety Management Plan;
- Security Management Plan;
- Community Grievance Mechanism Procedure (GMP);

- Recruitment and Employment Plan;
- Cultural Heritage Management Plan;
- Livelihood Restoration Plans (LRPs); and
- Local Content and Procurement Plan.

Together with this ESMP, these specific plans will form the overall Environmental and Social Management System (ESMS) for the Project.

The plans have been listed in Table 10-1, alongside with how they related to Project activities and impacts, as well as the identified responsible party for each specific plan.

Table 10-1 Management Plans

Plan Name	Includes	Plan Owner
Specific Management Plans - Environmental		
Construction Management Plan	Plan outlines how the Project will be executed, controlled, and monitored.	Project Manager
Hazardous Materials Management Plan	Plan for the management of the hazardous substances used during Project lifetime.	HSE Manager/Office r
Water Resource Management Plan	Plan outlines the steps necessary to ensure a reliable supply of water for the Project and the preservation and improvement of the surrounding environment.	HSE Manager/Office r
Dust Management Plan	Plan outlines potential sources of dust emissions, potential impacts, and measures to prevent and reduce dust and particulate emissions.	HSE Manager/Office r
Traffic Management Plan	Controls over prescribed routes, driver training, vehicle maintenance, speed restrictions, appropriate road safety signage, and vehicle loading and maintenance measures and vetting procedures. Will also include specification for community awareness and safety programmes.	Chief ESG Officer of ARISE IIP
Waste Management Plan	Project-related waste handling procedures for hazardous and non-hazardous wastes.	HSE Manager/Office r
Invasive Alien Plant Species Control Plan	The Invasive Alien Plant Species Control Plan will take the form of an operational document for use by site managers and ARISE, that aims at providing means of managing invasive alien species (as per ESMP requirements)	HSE Manager/Office r
Emergency Preparedness and Response Plan	Administration (policy, purpose, distribution, definitions, etc.), organisation of emergency areas (command centres, medical stations, etc.), roles and responsibilities, communication systems, emergency response procedures, emergency resources, training and updating, checklists (role and action list and equipment checklist) and business continuity and contingency. The Plan will also include specifications for emergency communications as well as on-going public and community communication and disclosure.	Chief ESG Officer of ARISE IIP

Plan Name	Includes	Plan Owner
Specific Management Plans - Social		
Stakeholder Engagement Plan (SEP)	SEP will build on engagement undertaken to date and specify interactions with community and other stakeholders, as well as the grievance procedure to be used throughout the Project. Community and Employee awareness training and code of conduct procedures.	HSE Manager/Office r
Community Health and Safety Management Plan (CHSMP)	The purpose of the CHSMP is to provide a clear set of actions and responsibilities for the control of impacts affecting the health and safety of the communities within the Project's area of influence. The plan includes measures to respond to exposure to diseases due to worker interaction, environmental change and safety (traffic, unplanned events, etc.). An Informed Consultation and Participation (ICP) will inform the development of the CHSMP by integrating feedback diagnosis on road safety and related issues	HSE Manager/Office r
Occupational Health and Safety Management Plan (OHSMP)	Procedures on chemical hazards, fire and explosions, confined spaces and on site-traffic hazards. Communication and training programmes. Safety analysis and industrial hygiene surveys procedures. Monitoring, record-keeping and audit procedures.	Chief ESG Officer of ARISE IIP
Community Grievance Mechanism Procedure	Procedure for efficiently handling, examining, addressing and resolving complaints or issues raised by impacted communities in a just, prompt and consistent manner.	HSE Manager/Office r
Local Content and Procurement Plan	Plan that defines the procedures to be established by the Project to create jobs, promote enterprise development and accelerate the transfer of skills and technologies.	HSE Manager/Office r
Recruitment and Employment Plan	Plan for local training and procurement for operations. Also specifies requirements for ARISE during construction. The Plan will include policies and procedures for hiring of local labour, unskilled, semi-skilled and skilled labour.	Chief ESG Officer of ARISE IIP
Livelihood Restoration Plans (LRPs)	This plan defines the procedures and the actions that will be taken to mitigate adverse effects, compensate losses, and provide development benefits to persons and communities affected by the land acquisition process.	HSE Manager/Office r
Security Management Plan	Plan coordinates, assigns personnel, directs, and oversees corporate security, communicating the security approach to both internal security personnel and external parties such as the board of directors, top management, and other managers.	HSE Manager/Office r
Chance Finds Procedure	Procedure specific to the Project that outlines steps to take if unexpected heritage resources, particularly archaeological ones, are discovered during the Project's construction or operation."	HSE Manager/Office r
Cultural Heritage Management Plan	The CHMP is required to ensure all heritage issues are addressed and managed adequately. Items to be addressed in the plan include Regulator Engagement, Access Management, Mitigation control and management of Intangible heritage through community engagement.	HSE Manager/Office r

As a contractual requirement, the contractors will be required to demonstrate compliance of their activities against the ESMP. This includes providing resources to ensure compliance of next tier contractors and a process for emergency stop-work orders in response to monitoring triggers. Contractors will be responsible for performing all work:

- In compliance with relevant national and international EHS legislation and regulations, and with other requirements to which the Project subscribes;
- In conformance with the Project ESMP, and related management plans for specific aspects; and
- In accordance with contractual technical and quality specifications.

The Project's ESMP and related documentation will be the main contractual documentation to which the contractor(s) will be bound. Contractors will be required to develop their own management plans which show how they will comply with these environmental and social requirements.

In this way, the ESMP will be implemented and controlled using both ARISE and the contractor management systems. The contractor management systems will therefore:

- Provide the framework that regulates their activities;
- Define responsibilities and Reporting relationships for expediting, mitigation and monitoring actions detailed in the ESMP; and
- Specify the mechanisms for inspecting and auditing to ensure that the agreed actions are implemented.

Contractors will be required to self-monitor against their plan and compliance with the plan will be routinely monitored by ARISE directly or by third parties. Contractors will be required to submit regular Reports of monitoring activities and the Project will review these on a regular basis.

Contractors will be reviewed and approved by ARISE. An external audit and assurance process will be conducted of the contractors' and tenants' EHS documentation on an annual basis, the results of which will be disclosed at completion of the process.

10.9 Implementation

Construction: ARISE is ultimately responsible for the management and supervision of all Project activities during the construction phase and will have principal responsibility for implementing this ESMP and the mitigation measures.

Operations: ARISE is responsible for the management and supervision of all Project activities during the operational phase and will have principal responsibility for implementing this ESMP and the mitigation measures.

ARISE is committed to providing resources and establishing the systems and components essential to the implementation and control of the ESMP. These include appropriate human resources and specialised skills, training programmes, communication procedures, documentation control and a procedure for the management of change. ARISE will support the process and have a QHSE team with competent staff on the basis of appropriate education, training and experience.

10.9.1 Roles and Responsibilities

The effective implementation of the ESMP (in alignment with the Stakeholder Engagement Plan and Livelihood Restoration Plan implementation) is dependent on established and clear roles, responsibilities and Reporting lines within ARISE's institutional framework. The organisational structure for environmental and social management for the Project is defined below. The structure will be maintained throughout the construction and operation phases, whilst being reviewed on a regular basis to adapt the structure as necessary. Section 4.1.3.3 includes an organigram for ARISE's key roles and responsibilities in the QHSE team.

10.9.2 Training and Awareness

ARISE will identify, plan, monitor, and record training needs for personnel whose work may have a significant adverse impact upon the environment or social conditions. ARISE recognises that it is important that employees at each relevant function and level are aware of the Project's environmental

and social policy; potential impacts of their activities; and roles and responsibilities in achieving conformance with the policy and procedures. Training and awareness-raising therefore forms a key element of both EHS and the expediting of this ESMP.

Key staff will, therefore, be appropriately trained in key areas of EHS management and operational control with core skills and competencies being validated on an on-going basis. The identification of training and awareness requirements and expediting of the identified training/awareness events will be the responsibility of the HSE Manager/Officer.

Training and awareness are not a requisite only of ARISE personnel (and subcontractors).

This will be achieved through a formal training process. Employee training will include awareness and competency with respect to:

- Environmental and social impacts that could potentially arise from their activities (including, biodiversity and noise);
- Legal requirements in relation to environmental and social performance;
- Necessity of conforming to the requirements of the ESIA and ESMP, in order to avoid or reduce those impacts;
- Activity-specific training on waste management practices, documentation systems and community interactions; and
- Roles and responsibilities to achieve that conformity, including those in respect of change management and emergency response.

The HSE Manager/Officer is responsible for coordinating training, maintaining employee-training records, ensuring that these are monitored and reviewed on a regular basis. The HSE Manager/Officer will also periodically verify that staff are performing competently through discussion and observation.

Employees responsible for performing site inspections will receive training by drawing on external resources as necessary. The HSE Manager/Officer will coordinate training prior to commissioning of the facilities. Upon completion of training and once deemed competent by management, staff will be ready to train other people.

Similarly, the Project will require that each of the contractors organises training programmes for its personnel. Each contractor is responsible for site EHS awareness training for personnel working on the job sites. The contractors are also responsible for identification of any additional training requirements to maintain required competency levels.

The contractor training program will be subject to approval by ARISE and it will be audited to ensure that:

- Training programs are adequate;
- All personnel requiring training have been trained; and
- Competency is being verified.

10.9.3 Communication

ARISE will maintain a formal procedure for communications with the regulatory authorities and communities. The HSE Manager/Officer is responsible for communication of EHS issues to and from regulatory authorities whenever required. The HSE Manager/Officer is kept informed of such communications and pertinent information arising from such interactions will be communicated to contractors through the HSE Manager/Officer.

Meetings will be held, as required, between ARISE and the appropriate regulatory agency and community representatives to review EHS performance, areas of concern and emerging issues.

Dealings will be transparent, and stakeholders will have access to personnel and information to address concerns raised.

ARISE will implement a grievance management procedure whereby community members can raise any issues of concern. Grievances may be verbal or written and are usually either specific claims for damages/injury or complaints or suggestions about the way that the Project is being implemented. When a grievance has been brought to the attention of the Project team it will be logged and evaluated. The person or group with the grievance is required to present grounds for making a complaint or claiming loss so that a proper and informed evaluation can be made.

Where a complaint or claim is considered to be valid, then steps are required to be undertaken to rectify the issue or agree compensation for the loss. In all cases the decision made and the reason for the decision will be communicated to the relevant stakeholders and recorded. Where there remains disagreement on the outcome then an arbitration procedure may be required to be overseen by a third party (e.g., government official). Local community stakeholders will be informed on how to implement the grievance procedures. The grievance mechanisms currently in use is provided in the Stakeholder Engagement Plan (SEP) and described in Section 11.6 of this Report.

10.9.4 Documentation

ARISE will control EHS documentation, including management plans; associated procedures; and checklists, forms, and Reports, through a formal procedure. All records will be kept on site and will be backed up at several offsite locations (including secure cloud storage facilities). Records will be kept in both hard copy and soft copy formats. And all records will be archived for the life of the Project.

Furthermore, the **document control procedure** will describe the processes that the Project will employ for official communication of both hardcopy and electronic (through the internet) document deliverables. In addition, it will describe the requirement for electronic filing and posting and for assignment of document tracking and control numbers (including revision codes).

The HSE Manager/Officer is responsible for maintaining a master list of applicable EHS documents and making sure that this list is communicated to the appropriate parties. The HSE Manager/Officer is responsible for providing notice to the affected parties of changes or revisions to documents, for issuing revised copies and for checking that the information is communicated within that party's organisation appropriately.

The contractors will be required to develop a system for maintaining and controlling its own EHS documentation and describe these systems in their respective EHS plans.

10.9.5 Operational Control Procedures

Each activity for which a potentially significant environmental or socioeconomic risk or impact is expected will have an operational control associated with it that specifies appropriate procedures, work instructions, best management practices, roles, responsibilities, authorities, monitoring, measurement and record keeping for avoiding or reducing impacts. Operational controls are monitored for compliance and effectiveness on a regular basis through a monitoring and auditing procedure described in the ESMP.

Operational control procedures will be reviewed and, where appropriate, amended to include instructions for planning and minimising impacts, or to at least reference relevant documents that address impact avoidance and mitigation.

10.9.6 Managing Changes to Project Activities

Changes in the Project may occur due to unanticipated situations. Adaptive changes may also occur during the course of the Project life cycle. The Project will implement a formal procedure to manage changes in the Project that will apply to all Project activities.

The objective of the procedure is to ensure that the impact of changes on the health and safety of personnel, the environment, the Project site, and equipment are identified and assessed prior to changes being implemented.

The management of change procedure will ensure that:

- Proposed changes have a sound technical, safety, environmental, and commercial justification;
- Changes are reviewed by competent personnel and the impact of changes is reflected in documentation, including operating procedures and drawings;
- Hazards resulting from changes that alter the conditions assessed in the ESIA have been identified and assessed and the impact(s) of changes do not adversely affect the management of health, safety or the environment;
- Changes are communicated to personnel who are provided with the necessary skills, via training, to effectively implement changes; and
- The appropriate ARISE person accepts the responsibility for the change.

As information regarding the uncertainties becomes available, the Project ESMP will be updated to include that information in subsequent revisions. Environmental and social, as well as engineering feasibility and cost, considerations will be taken into account when choosing between possible alternatives.

10.9.7 Stakeholder Engagement and Grievance Management

In addressing the different needs of stakeholders, the Project has a stand-alone Stakeholder Engagement Plan (SEP), which will be modified and updated as required. Implementation will rest with the ARISE Vice President, the ARISE ESG Manager and the Community Liaison Officer.

The stakeholder engagement activities will include the following:

- Community engagement – recognising and ensuring active participation of differentiated interest groups within the affected communities. Engagement frequently during pre-construction and during site preparation and construction with support of local leaders.
- Engagement with Government Authorities – this will facilitate integration between Project activities with ongoing Provincial and municipal planning and implementation. It will also allow partnerships where appropriate (e.g., HIV/AIDS prevention programmes).

Project information will be provided in a local manner appropriate for the Project phases and activities. In addition, ongoing verification and monitoring activities will be a key component of continued stakeholder engagement, ensuring reporting on compliance and performance regarding environmental and social commitments.

The GMP as defined in the SEP will be established. This procedure will be implemented by the Project to manage and address all public grievances.

Labour-related grievances will be dealt with internally through specific GMP (i.e., **Workers Grievance Mechanism**) for the Project workforce including contractors and subcontractor workers. ARISE will manage grievances of its employees in accordance with national regulatory requirements. As above, contractors will be expected to comply with national labour regulations.

10.9.8 Checking and Corrective Action during Construction and Operation of the Project

Introduction

Checking includes inspections and monitoring as well as audit activities to confirm proper implementation of checking systems as well as effectiveness of mitigations. Corrective actions include

response to out-of-control situations, non-compliances, and non-conformances. Actions also include those intended to improve performance.

Inspection

EHS inspections (by internal and/or external auditors) will be conducted weekly on an *ad hoc* basis and formally at least once every six months. The results of the inspection activities will be reported to ARISE management to be addressed.

Monitoring

Monitoring will be conducted to (by internal and/or external auditors) ensure compliance with regulatory requirements as well as to evaluate the effectiveness of operational controls and other measures intended to mitigate potential impacts. Monitoring parameters are included in the ESMP.

Monitoring methodologies or processes will be put in place in order to ensure the efficacy of the mitigation measures identified in the ESIA. Monitoring methodologies will be established to address the following:

- Environmental and social impacts determined in this ESIA;
- Alterations in the interactions between Project activities and environmental sensitivities;
- Monitor the effectiveness of the mitigation measures;
- Determination of long term and residual effects; and
- Identification of Project specific cumulative environmental effects.

The national guidelines require an environmental monitoring plan as part of an ESIA. The aim of the monitoring programme is to ensure that the negative environmental impacts identified in this ESIA are effectively mitigated in the establishment, installation, operations and decommissioning stages of the Project.

Auditing

Beyond the routine inspection and monitoring activities conducted, audits will be carried out internally by ARISE to ensure compliance with regulatory requirements. Audits to be conducted will also cover the contractor self-reported monitoring and inspection activities. The audits will be performed by qualified staff and the results reported to ARISE management to be addressed.

The audits will include a review of compliance with the requirements of the ESIA and ESMP and include, at a minimum, the following:

- Completeness of EHS documentation, including planning documents and inspection records;
- Conformance with monitoring requirements;
- Efficacy of activities to address any non-conformance with monitoring requirements; and
- Training activities and record keeping.

There will also be a cycle of audits into specific areas or activities of the Project. The frequency of audits will be risk based and will vary with the stage of the Project and will depend on the results of previous audits.

Corrective Action

ARISE will implement a formal non-compliance and corrective action tracking procedure for investigating the causes of, and identifying corrective actions to, accidents or environmental or social non-compliances. This will ensure coordinated action between ARISE and its contractors. The HSE Manager/Officer will be responsible for keeping records of corrective actions and for overseeing the

modification of environmental or social protection procedures and/or training programs to avoid repetition of non-conformances and non-compliances.

Reporting

Throughout the construction period, ARISE will keep the regulatory authorities informed of the Project performance with respect to EHS matters by way of written status Reports and face-to-face meetings. ARISE will prepare a Report on environmental and social performance and submit it to ANDE. The frequency of this Reporting will be agreed upon between ARISE and the ANDE.

If required, ARISE will provide appropriate documentation of EHS related activities, including internal inspection records, training records, and Reports to the relevant authorities. Contractors are also required to provide EHS performance Reporting to ARISE on a regular basis through weekly and monthly Reports. These Reports will be used as inputs to the ARISE Reports to ANDE.

10.10 Environmental and Social Management Plan (ESMP)

Table 10-2 presents the ESMP for the Project, which summarises all of the various mitigation measures that is set out in this ESIA Report. The table shows the responsible entities for implementation for each item, the required timing by which the measure must be implemented, the indicator to demonstrate completion.

The overall, ultimate responsibility for implementation of a given measure for the construction and operation phase rests with ARISE. All contractors and subcontractors must adopt and comply with the policies and plans required as part of this ESMP. Furthermore, this ESMP should be used as a start point (i.e., guidance for the general measures before the development industry specific ESMP) for the industries that plans to settle within the 429 ha of the Project.

As stated previously, the Project will be designed, built, and operated in accordance with the applicable Ivorian regulations and the international standards and guidelines of the lending institutions, including IFC Performance Standards and EHS Guidelines. Together, the applicable standards for the Project are referred to in the ESMP as the Lender Standards

Table 10-2 Environmental and Social Management Plan

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
Construction phase (C)									
C1	Construction, Equipment movement and Earthworks	Hydrology & Hydrogeology	Direct	<ul style="list-style-type: none"> ■ Optimise the design of the Project layout to limit the gradient in order to reduce runoff-induced erosion, and provide adequate drainage based on site dimensions, surface material used, compaction and maintenance; ■ Limit the area of soil exposure and disturbance to the construction site only; ■ Prevent erosion from excavated areas and soil storage heaps to reduce sediments flowing into surface waters and drainage channels implementing localised control measures (e.g. sediment fences, check dams, mulch barriers, rock groynes, or geofabric barriers, sediment basins), appropriate contouring to optimise slope angle and steepness; ■ Divert external 'clean' runoff around the construction area to prevent mixing of 'clean' and 'dirty' runoff and reduce the size of the required sediment basins; ■ Re-use top soil, which must be stockpiled separate from subsoil. ■ Land clearance should only be undertaken immediately prior to construction activities taking place there. So unnecessary land clearance should be avoided. ■ Early construction of all drainage structures (i.e., culverts, sediment basins and catch drains). ■ Inspections will be carried out to identify areas where erosion is occurring as a result of construction activities. Such monitoring will be carried out on a daily basis during the rain seasons and on a periodically scheduled basis during the dry seasons. ■ Should erosion events be identified, appropriate remedial action, including the restoration of the eroded areas, and where necessary, the relocation of the paths causing the erosion, should be undertaken. ■ Implement the Land Contamination Notification Procedure in case unexpected encounter of contaminated soils during construction. ■ Implement a Hazardous Materials Management Plan (HMMP) for: (1) handling and storage raw materials and wastes; (2) inventory of hazardous materials; (3) provision of personal protective equipment (PPE) to staff who are required to handle certain chemicals; (4) provision of adequate spill kits in areas for chemical storage, chemical handling and refuelling; (5) protect public from major hazards associated with hazardous materials incidents or process; (6) safe fuelling and gasoline handling guidelines will be developed in the construction areas. No fuelling of vehicles or equipment will take place within excavated areas; and (7) include respective sections for handling spills of hazardous materials including fuels that will be handled during construction works (e.g., Hazardous Material Spill Response Plan). ■ Implement a Waste Management Plan (WMP) for: (1) application of waste hierarchy to avoid, segregate, re-use, recycle wastes as much as possible and as last option safely dispose wastes; (2) collection and segregation of waste according to its type; (3) storage of wastes according to international best practice (IFC EHS General Guideline) using appropriate labelling and containers for different categories of wastes; (4) re-use of excavated soils in the Project area as far as possible and seeking alternative uses for surplus spoil where practicable (e.g. landscaping and earth works for other projects) to minimise the requirements for off-site disposal; (5) transport and dispose wastes at licenced waste management sites; (6) maintaining full records of the waste management; and (7) dispense the appropriate storage areas. ■ Training of staff on hazardous materials and waste management. ■ Prevention of disposal of hazardous materials (raw material and/or waste) outside the designated sites and into any surface or groundwater source, or any other location that would potentially affect the environment and human settlement. ■ Undertake daily on-site and off-site water streams – drainage inspection around the work areas to monitor erosion process, water flows and instabilities and record inspection results. ■ Carry out regular site inspections to monitor compliance with the Plans, record inspection results and identify any events that require further investigation or actions. Increase the frequency of site inspections by the person accountable for water quality on site when activities with a high potential to produce sediments are being carried out and during prolonged rainfall conditions. 	ARISE	ARISE's QHSE Manager	<ul style="list-style-type: none"> ■ Completion and implementation of the Hazardous Materials Management Plan (HMMP), the Waste Management Plan (WMP) and the Water Resources Management Plan (WRMP). ■ Implementation of the Stakeholder Engagement Plan (SEP) ■ Chemical and turbidity results from water monitoring program. Close monitoring of number of complaints regarding of visual/chemical alteration of water quality. ■ Waste records of the type, quantity, composition, origin, disposal destination and method of transport for all wastes. ■ Internal environmental audits to evaluate mitigations measures implementation, take note of non-conformities and implement corrective measures. ■ Result of inspections to identify areas where erosion is occurring as a result of construction activities. Such monitoring will be carried out on a daily basis during the rain seasons and on a periodically scheduled basis during the dry seasons. ■ Compliance with national and international standards. ■ Close monitoring of any grievances received related to community water supply. 	<ul style="list-style-type: none"> ■ Continuous monitoring (analytics and visual). ■ Weekly Inspection Cycle Audit ■ Monthly reporting, to be included in the Monthly E&S Monitoring Report. ■ Records of training provided ■ Data to be included in the Biannual E&S Report. 	4 000 000

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
				<ul style="list-style-type: none"> Execution of a proper hydrogeological study to evaluate water availability, the potential impact on the water resources and a thorough understanding of the aquifer recharge will be determine the sustainable abstraction rates. Because of the depth of the exploited aquifer, a catchment level understanding of recharge is indispensable to updated regional information on current water users and determine the balance of the aquifer capacity vs. current exploitation taking into account potential informal users. Implement a Water Resources Management Plan (WRMP) for: (1) ensure water will be used and disposed of in a manner consistent with Côte d'Ivoire legislation and where appropriate, international good practices; (2) adopt measures related to preserve the water quality and with a focus on the local streams and consequently Gobouet River; (3) record water supply source and consumption; (4) provision of alternative water supplies to the local community in the case the Project affects the local sources of water supply in a negative way; (5) close monitoring of any grievances received related to community water supply; (6) water permit will be obtained for water uses or water/wastewater discharges; and (7) to assess potential impacts periodic water control of surficial waters through visual and analytical observations (physical-chemical parameters, turbidity and potential pollutants) and groundwater readings (water levels). Engagement with the local community (per the Stakeholder Engagement Plan – SEP) and verification of registered and unregistered wells (including hand dug wells) surrounding the water resources used by the Project to ensure that local wells and boreholes are not negatively affected. 					
C2	Earthworks, construction and track-out	Air Quality	Direct	<ul style="list-style-type: none"> Develop and implement a Dust Management Plan (DMP). Carry out regular site inspections to monitor compliance with the DMP, record inspection results and identify any events that require further investigation or actions Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust and record inspection results Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site. Consider fences and enclosures around specific operations where there is a high potential for dust production and the site is active for an extensive period Avoid site runoff of water or mud Keep site fencing, barriers and scaffolding clean using wet methods Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below Develop and implement a Traffic Management Plan Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided) Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust. Use water-assisted dust sweeper(s) on hardstanding access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. Avoid dry sweeping of large areas. Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. 	ARISE	ARISE	<ul style="list-style-type: none"> Site boundary dust monitoring (dust deposition) Air Quality Management Plan Traffic Management Plan Compliance with national and international standards 	<ul style="list-style-type: none"> Daily visible inspections to avoid visual dust clouds Bi-annual Internal Audit Weekly Inspection Cycle Audit 	25 000 000

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
				<ul style="list-style-type: none"> Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). 					
C3	Construction road traffic	Air Quality	Direct	<ul style="list-style-type: none"> Implement Traffic Management Plan to optimising the management of traffic flows. Manage of junctions to avoid excessive queuing traffic on the public highway. Implement management of traffic scheduling to avoid peak hours as much as feasible. Traffic routing to avoid congested locations and junctions as far as practicable. Management of construction activities to avoid short periods of peak traffic flows. Use of modern, lower emissions vehicles as much as practicable. Ensure vehicles are well maintained and services, as far as practicable. Using variable speed limits in order to maintain smooth traffic flow will reduce the overall emissions of airborne pollutants. Maintaining good quality road surfaces. Undertaking wet road cleaning as needed 	ARISE	ARISE	<ul style="list-style-type: none"> Traffic Management Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 500 000
C4	Construction Equipment and Earthworks	Noise	Direct	<ul style="list-style-type: none"> Where practicable, noisy equipment will be sited as far away as possible from receptors and orientated away from receptors. Construction contractors will use alternatives to audible reversing alarms, such as visual and/ or broadband noise emitting models, that provide a safe system of work; or configuring the Project work sites to maximise forward movements of mobile plant. Where practicable, alternatives to noisy diesel and petrol engines and pneumatic units will be used, such as hydraulic or electric-controlled units. Where practicable, stationary equipment (such as compressors, generators etc.) will be fitted with an acoustically treated enclosures. Throttle settings will be reduced and equipment and plant turned off, when not being used. Onsite chutes and bins will be lined with damping material. Equipment will be regularly inspected and maintained to ensure it is in good working order. The condition of mufflers will also be checked. Equipment will not be operated until it is maintained or repaired, where maintenance or repair would address the annoying character of noise identified. Equipment and vehicles will be fitted with mufflers or silencers of the type recommended by manufacturers. Storage of excavated material between the construction site and the sensitive use building to form a noise barrier (with cover to avoid dust erosion) or installation of other (temporary) noise barriers. Minimise drop height of materials. Take advantage of the natural topography for noise shielding. Ensure all vehicles switch off engines when stationary - no idling vehicles 	ARISE	ARISE	<ul style="list-style-type: none"> Noise monitoring results compliant to noise regulatory standards Number of penalties issued by authorities Recommendations and corrective actions taken when high audible incidents are noted. Number of complaints pertaining to excessive noise. 	<ul style="list-style-type: none"> Weekly Inspection Cycle Audit 	500 000
C5	Construction works & excavations will create different waste streams that will need to be managed	Resources and Waste	Direct	<ul style="list-style-type: none"> Conduct an E&S due diligence for existing quarries to ensure permits are valid and operations are in compliance and international guidelines. In case a new quarry is opened, develop and implement a Borrow Pit Management Plan. Develop and Implement a Waste Management Plan. The Plan will state all procedures and name designate places and operators for the waste generated. Re-use of excavated soils in the Project area as far as possible and seek alternative uses of surplus spoil where practicable. Management of hazardous waste should be carried out by an appropriate licensed contractor. The disposal of wastewater generated during the construction activities shall not leak or be disposed of into water sources near the Project site. Ensure accessibility to toilets for workers. Discharge of wastewater from toilets directly into any water body is not allowed. Cover and seal off all water collection tanks and septic tanks at the end of construction works. Runoff from the <i>Project</i> site shall be controlled to ensure that adjacent areas are not affected and disturbance to the public is to minimum. Ensure that under no circumstances foul sewage flow can be diverted into a storm water drains and vice versa. 	ARISE	ARISE	<ul style="list-style-type: none"> Waste Management Plan completion and implementation Regular site inspections to evaluate mitigation measures implementation, take note of non-conformities and implement corrective measures Compliance with national and international standards Borrow Pit Management Plan (if needed) 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	6 000 000

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
C6	Biological resources and receptors-general measures for all construction impacts	Biological receptors (Habitats, Flora, Fauna)	Direct	<ul style="list-style-type: none"> Employment of an Ecological Clerk of Works (ECoW), who will prepare the environmental documentation on delivery of ecological requirements on site before construction activities commence (including tree inventory). The ECoW will monitor construction activities to ensure that construction activities are delivered in accordance with relevant laws and Project commitments; Biodiversity education will be given to all field workers; Consider using a single construction camp and avoid developing multiple camp sites if possible; Driving offroad (i.e., outside of the access roads) will not be allowed. Accessing highly sensitive areas will be forbidden; Waste generated will be managed under a Waste Management Plan. Construction waste generated due to project activities will first be stored at designated storage areas and then disposed. Solid waste will not be allowed to be left at natural habitats, neither will this be buried or burned. 	ARISE	ARISE	<ul style="list-style-type: none"> Evidence to be logged. Regular site inspections to evaluate mitigations measures implementation, take note of non-conformities and implement corrective measures Compliance with national and international standards 	<ul style="list-style-type: none"> Weekly Inspection Cycle Audit 	10 000 000
C7	Habitat loss, degradation, and fragmentation; Loss of Flora and spread of invasive species	Biological receptors (Habitats, Flora)	Direct	<ul style="list-style-type: none"> Project construction sites, access roads, borrow pits, storage areas and camps will be separated from other areas with appropriate signboards, signs, and fences. Similarly, areas of medium to high sensitivity (the wetland on Phase 2) will be fenced-off and any activities in that area will be avoided. Use existing access roads or upgrade existing roads wherever possible before considered new access road construction; Limit the clearing of natural vegetation, particularly near the wetland on Phase 2, to the absolute minimum necessary. If possible, gradual vegetation clearance will be undertaken, to allow fauna the opportunity to move to adjacent areas outside of the construction zone; Felling of trees will be kept to the strict minimum whenever feasible, especially the specimens of yellow iroko (<i>Milicia regia</i>, VU) will not be removed from the area. Set back distances of 2 m to the trees will be maintained during construction works to avoid any damage to them. If this distance cannot be kept for technical reasons, temporary fences around the specimens will be kept protecting them; and Revegetation will be undertaken as soon as possible after construction has been completed. Only indigenous plants species will be used in re-vegetation and landscaping. Temporary soil stockpiles are to be retained for use in post-construction restoration / rehabilitation of habitats. 	ARISE	ARISE	<ul style="list-style-type: none"> Evidence to be logged. Regular site inspections to evaluate mitigations measures implementation, take note of non-conformities and implement corrective measures Internal and external training Compliance with national and international standards 	<ul style="list-style-type: none"> Weekly Inspection Cycle Audit 	6 000 000
C8	Loss of fauna; disturbance and displacement of fauna	Biological receptors (Fauna)	Direct	<ul style="list-style-type: none"> Preferably allow fauna to leave the area and relocate themselves to adjacent habitat without the need for further intervention. If no active nests, roosts, nests, burrows or dens are present, vegetation clearing should be completed gradually, and within a few days of the initial wildlife checks / inspections. All cuttings are raked off and removed from site on the same day they are generated, to avoid creating refugia for wildlife. After the flushing of wildlife from the Project area, the area that will be disturbed adjacent to natural habitats during construction and at project specific locations will be fenced off appropriately to exclude re-entry by wildlife; Activities such as hunting, trapping, fishing, and general disturbance of wild animals are to be prohibited. Informative and warning signs will be placed at construction sites. The EPC Contractor who is liable to control labour and any sub-contractor staff in this regard will be instructed strictly on prohibitions regarding hunting and poaching control; Any injured animals of protected species are to be transported carefully but efficiently to a local wildlife authority; Maintain vehicles and equipment in good working condition. Use noise minimizing technology where possible. Maintain speed limits to reduce disturbance and risks related to wildlife; Limit construction activities to daytime hours to limit impacts to nocturnal species. Where works need to take place at night, use low intensity lighting (within safe and legal limits) and/or aim lights down and away from nearby habitats. Use non-UV sources of lighting to avoid attracting wildlife; and Provide protection against animal entry on any excavated trenches, pipes, overflow lines, drains, and vents on tanks and vessels. Prevent egress by wildlife to construction areas e.g., by capping pipes at night, fencing off ditches. Any excavations which are to be left overnight are to be filled in/ or covered and ramps installed (e.g., an earthen ramp or wooden board) to allow any trapped animals to escape. All excavations are to be checked daily prior to the commencement of work. 	ARISE	ARISE	<ul style="list-style-type: none"> Evidence to be logged. Regular site inspections to evaluate mitigations measures implementation, take note of non-conformities and implement corrective measures Internal and external training Compliance with national and international standards 	<ul style="list-style-type: none"> Weekly Inspection Cycle Audit 	1 000 000

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
C9	Spread of invasive species (monitoring)	Biological receptors (Habitats, Flora)	Direct	<ul style="list-style-type: none"> Monitoring will be conducted during and after construction to ensure that proper vegetation growth, prevent or limit spread of new alien plants and inform what further actions may be required; Compile and implement a suitable Invasive Alien Plant (IAP) Species Control Plan and programme to eradicate dense colonies of alien plants and control the spread of minor species and weeds within the construction zone and adjacent areas that may be disturbed by construction activities; A monitoring plan will be prepared and implemented to record alien species populations in the project Aol and aimed at removing new populations and preventing them from spreading throughout the Aol. In addition, prompt revegetation (i.e., sowing of native herbaceous species and/or planting native shrubs/trees) on bare soil with natural or semi-natural vegetation will reduce the spread of alien species; and A monitoring plan will be carried out to record alien species populations in the Project area of influence and aimed at removing new populations and preventing them from spreading throughout the Aol. In addition, prompt revegetation (i.e., sowing of native herbaceous species and/or planting native shrubs/trees) on bare soil with natural or semi-natural vegetation will reduce the spread of alien species. 	ARISE	ARISE	<ul style="list-style-type: none"> Evidence to be logged. Invasive Alien Plant (IAP) Species Control Plan Regular site inspections to evaluate mitigations measures implementation, take note of onset of invasive species and implement corrective measures Internal and external training Compliance with national and international standards 	<ul style="list-style-type: none"> Weekly Inspection 	1 000 000
C10	Temporary Direct and Indirect Employment Opportunities	Economy and Employment	Both (positive)	<ul style="list-style-type: none"> Develop a Recruitment and Employment Plan (REP) A Stakeholder Engagement Plan (SEP) will be implemented to outline how ARISE will ensure regular, open and transparent communication with all stakeholders. Establishment of a Community Grievance Management Procedure (GMP), to promote the integration of the project into the social and economic environment and to ensure can communicate directly their concerns or complaints 	ARISE	ARISE	<ul style="list-style-type: none"> Development of a Recruitment and Employment Plan (REP) Development of a Stakeholder Engagement Plan (SEP) Establishment of a Community Grievance Management Procedure (GMP) 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	5 000 000
C11	Taxes and fees, procurement and worker spending	Economy and Employment	Both (positive)	<ul style="list-style-type: none"> A Local Content and Procurement Plan (LCPP) will be developed to inform the Project's in-country value planning, specifically, with respect to the employment potential for multiple positions and the local provisioning potential through local suppliers from the area. 	ARISE	ARISE	<ul style="list-style-type: none"> Development of a Local Content and Procurement Plan (LCPP) 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	3 000 000
C12	Capacity Enhancement	Economy and Employment	Both (positive)	<ul style="list-style-type: none"> Develop and implement a Contractor Management Plan Carry out training of contractors on Project Health and Safety Requirements (aligned with internal ARISE HSE Management Plan) and socioeconomic policies prior to the start of construction activities and during operations when needed. Require the contractors develop their own E&S and H&S policies or apply ARISE's as relevant. ARISE will develop a contractor management plan to pass on E&S requirements to its contractors and monitor their effective implementation. To maximise capacity enhancement and transfer of knowledge to local contractors and their employees, ARISE will develop formal training programs and formalise on-the-job trainings to the extent possible, including learning targets and performance monitoring. 	ARISE	ARISE	<ul style="list-style-type: none"> Development of a Local Content and Procurement Plan Contractor Management Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 500 000
C13	Permanent Loss of Livelihoods and/or Household Income due to Permanent loss of access to Land in the Project footprint	Land Use and Livelihoods	Direct	<ul style="list-style-type: none"> Due Diligence Process of the land acquisition and compensation process and livelihood restoration process that have been commissioned. Develop a Livelihood Restoration Plan (LRP) that provides the foundation for the restoration and compensation process including an entitlement matrix that will ensure adequate compensation, replacement and livelihood restoration options are provided to Project Affected People (PAPs). Resettlement options provided by the Project will ensure that households are able to continue to access the same livelihood resources or otherwise livelihood restoration measures will be provided to adequately manage economic displacement impacts. Land users will be compensated for the loss of their specific interest in that asset for a period of time and assisted in their re-establishment. Engagement will be maintained with Affected Communities through the process of stakeholder engagement. A grievance mechanism will be established as early as possible in the Project development phase. 	ARISE	ARISE	<ul style="list-style-type: none"> Due Diligence of the land acquisition and compensation and livelihood restoration processes Development of a Livelihood Restoration Plan (LRP) 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	20 000 000

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
C14	Impact on Natural Resources and Related Livelihoods due to the loss of access	Land Use and Livelihoods	Direct	<ul style="list-style-type: none"> Conduct a due diligence on the compensation efforts done up to date Develop and Implement a Resettlement Action Plan (RAP), to inform and navigate the resettlement process (if due diligence will highlight the need for the physical/economical displacement) Develop and implement a Livelihood Restoration Plan (LRP) includes key compensation and livelihood restoration measure to restore land-based livelihood sources, as collection of NTFPs and wood activities, and water-related uses. Ensure that alternative land is made available to affected households and that losses through the clearance of lands are compensated for. 	ARISE	ARISE	<ul style="list-style-type: none"> Due Diligence of the land acquisition and compensation and livelihood restoration processes Development of a Resettlement Action Plan (RAP) and Livelihood Restoration Plan (LRP) 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	30 000 000
C15	Road Safety	Community Health, Safety and Security	Direct	<ul style="list-style-type: none"> Develop and implement a Traffic Management Plan and a Community Health and Safety Management Plan. ARISE will develop a Stakeholder Engagement Programme (SEP) with affected communities and land users, as well as appropriate signage/information boards (with consideration for illiteracy levels) will be required to minimise risks associated with increased traffic. 	ARISE	ARISE	<ul style="list-style-type: none"> Development of a Traffic Management Plan Development of a Stakeholder Engagement program to minimise risks associated with increased traffic. Establishment of a Community Grievance Mechanism Procedure Community Health and Safety Management Plan Drivers of Project vehicles will be trained/briefed about safe driving 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	3 000 000
C16	Site Trespass and Injury	Community Health, Safety and Security	Direct	<ul style="list-style-type: none"> Undertake a programme of stakeholder engagement and consultation to educate local communities of the risks of intruding onto sites, the meaning of signs, the dangers of playing on or near equipment or entering fenced areas, as part of an awareness raising programme on community health and safety behaviours. Select a security provider that is well versed in international conventions pertaining to security and human rights. The security contractor will undergo a due diligence process and an induction prior to working on site. They shall primarily be responsible for controlling site access and perimeter security. Appropriate signage and information boards will be required to minimise risks associated with restricted access in a culturally appropriate manner. A community meeting will also be given in each of the villages concerned by the six (6) sites in the Aol. Records of the meeting and attendees should be kept. Provide access to health care for those injured by its activities. Ensure that signs are put up around work fronts and construction sites advising people of the risks associated with trespassing. 	ARISE	ARISE	<ul style="list-style-type: none"> Stakeholder engagement program through awareness on community health and safety behaviour Signage and information boards will be required to minimise risks associated with restricted access Selection and due diligence process of the security workforce. 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	5 000 000
C17	Environmental Health	Community Health, Safety and Security	Direct	<ul style="list-style-type: none"> Engage with the neighbouring communities to ensure they are not disturbed by air quality or noise impacts. In case air quality levels differ from time to time, depending on the activities, the Project will need to inform communities in advance. Mitigations proposed in other related sections (air quality, noise, resources and waste, and hydrology and hydrogeology). 	ARISE	ARISE	<ul style="list-style-type: none"> HSE management system Community Grievance Management Procedure Stakeholder Engagement Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 000 000
C18	Transmission of Communicable Diseases	Community Health, Safety and Security	Both	<ul style="list-style-type: none"> Workforce, including contractors and subcontractors, will be provided with health awareness training, including a briefing of hygiene practices (such as hand washing), implementation of educational outreach to increase awareness of major communicable disease and how to protect against infection and about transmission routes and the symptoms of the communicable diseases of concerns (including STDs and SARS CoV-2). Workers will also have access to an on-site medical team for first aid, occupational health concerns and advice. 	ARISE	ARISE	<ul style="list-style-type: none"> HSE management system Community Health and Safety Management Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	6 000 000

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
				<ul style="list-style-type: none"> As part of its Emergency Preparedness and Response Plan (EPRP), establish preparedness medical services in case of severe illness, e.g., malaria (especially in workers without semi-immunity), and Covid-19. 			<ul style="list-style-type: none"> Emergency Preparedness and Response Plan (EPRP) 		
C19	Transmission of STDs	Community Health, Safety and Security	Indirect	<ul style="list-style-type: none"> Develop and Implement an Occupational Health and Safety Management Plan, Provide training on the worker code of conduct to all employees including contractors and subcontractors as part of the induction process. Consult with local leaders such as village elders among others. The consultations should be aimed at finding ways of ensuring social vices such as prostitution are minimised either through punitive measures for clients, in particular Project workers, or rehabilitative measures for the CSWs. 	ARISE	ARISE	<ul style="list-style-type: none"> HSE management system Community Health and Safety Management Plan Occupational Health and Safety Management Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 000 000
C20	Pressure on Healthcare	Community Health, Safety and Security	Both	<ul style="list-style-type: none"> Develop and implement a Community Health and Safety Management Plan (CHSMP) Undertake a health facility assessment of medical infrastructure as part of the ARISE Health and Safety Management System to determine if facilities have sufficient resources and equipment to deal with emergencies. Agreements will be entered into with suitable hospitals to provide health care in emergency situations. These agreements will include provision of additional equipment or training for staff if required by ARISE. Project-dedicated international medical providers will complement the services of the local medical facilities that could be utilised by the Project and/or Monitor the emergence of major pandemics through WHO alerts. When the WHO Pandemic Alert Scale Reaches Level 4 ARISE will implement the relevant ERPs. Develop and implement an Emergency Preparedness and Response Plan (EPRP) covering the emergency situations (involving vehicles and pedestrians) that may occur during the Project construction, should be prepared and implemented by trained personnel in order to avoid significant risks. 	ARISE	ARISE	<ul style="list-style-type: none"> HSE management system Community Health and Safety Management Plan (CHSMP) Emergency Preparedness and Response Plan (EPRP) 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	3 000 000
C21	Use of Security Personnel	Community Health, Safety and Security	Direct	<ul style="list-style-type: none"> Develop and implement a Security Management Plan (SMP) 	ARISE	ARISE	<ul style="list-style-type: none"> Security Management Plan (SMP) Selection and due diligence process of the security workforce. 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 000 000
C22	Worker's Rights and Labour and Working Conditions	Labour and Working Conditions	Direct	<ul style="list-style-type: none"> Develop and implement a Human Resources Policy to ensure the following: <ul style="list-style-type: none"> Access to clear and understandable information regarding worker's labour and working conditions; Provision of reasonable working conditions and terms of employment; Provision of employment, compensation/remuneration and working conditions, including working hours, based on equal opportunity and fair treatment, avoiding discrimination on any aspects; Implementation of a grievance mechanism for the Project workers including subcontractor workforce; Adoption of open attitude towards freedom of association and in conformance with Ivorian laws. Retrenchment preventive measures will be implemented to reduce adverse impacts as a result of termination of contracts which will consider benefits to boost worker's employment opportunities post construction where possible. Notice of dismissals will be done in due time and will manage employment expectations of the construction workforce. Develop and implement a Labour Management Procedure Contractor contracts will establish the right for ARISE monitoring and auditing of all contractors and subcontractors and the consequences for the contractor if they are found to be breaching national legal requirements, international standards, ARISE's policies or clauses in the contract. Contractor contracts will specify that the same standards will be met by their sub-contractors and suppliers; 	ARISE	ARISE	<ul style="list-style-type: none"> Human Resources Policies Labour Management Procedure Grievance Mechanism Program of socioeconomic compliance monitoring to inform internal auditing and monitoring process in the framework of an Environmental and Social Management System Ensuring compliance with Ivorian and International requirements in contractor and supplier selection process considering worker management and rights 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	2 000 000

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
				<ul style="list-style-type: none"> ARISE and Contractors' will implement a program of socioeconomic compliance monitoring to inform internal auditing and monitoring process in the framework of an Environmental and Social Management System 					
C23	Workers' Health and Safety	Labour and Working Conditions	Direct	<ul style="list-style-type: none"> Develop an Occupational Health and Safety Management Plan (OHSMP). This management system will be enforced throughout the Project including all Project personnel (including direct hire employees, advisors and consultants, contractors and sub-contractor personnel). It will include aspects such as regular training and monitoring, as well as inspections and audits. Within the OHSMP, the following measures will be included: <ul style="list-style-type: none"> Identification and provision of personal protective equipment (PPE) to all concerned workers during activities to avoid health implications (e.g., dust masks, protective clothing for handling waste materials etc.); Pre-employment screening protocols for all employees including contractors and subcontractors which will include medical checks of SARS CoV 2 history and symptoms TB and other diseases appropriate to WHO recommendations, the individual's country of origin and vaccinations. Workers will be provided with primary health care and basic first aid at worksites; All work of persons under the age of 18 will be subject to an appropriate risk assessment and regular monitoring of health, working conditions, and hours of work. Regular medical check-ups and centralised medical treatment for all workers of the Project (ARISE, contractors and subcontractors) will be provided; Workforce, including contractors and subcontractors, will be provided with health awareness training, including hazardous works, a significant briefing of hygiene practices (such as hand washing), implementation of educational outreach to increase awareness of major communicable diseases and how to protect against infection and about transmission routes and the symptoms of the communicable diseases of concerns (including STDs and SARS CoV-2); 	ARISE	ARISE	<ul style="list-style-type: none"> Occupational Health and Safety Plan (OHSMP) Human Resources Policies Labour Management Procedure Grievance Management Procedure Ensuring compliance with Ivorian and International requirements in contractor and supplier selection process considering worker management and rights 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 500 000
C24	Child Labour and Forced Labour	Labour and Working Conditions	Both	<ul style="list-style-type: none"> Develop and Implement a Contractor management plan which will provision for measures to avoid child and forced labour among contractors and in the supply chain Oversee if suppliers, contractors and subcontractors comply with all applicable child labour laws and only employ workers who meet the applicable minimum legal age requirement in accordance with Ivorian laws and international standards; Contractor contracts will specify monitoring to be undertaken by the contractor, establish the right for the Project monitoring and auditing of all contractors and subcontractors and the consequences for the contractor if they are found to be breaching national legal requirements, international standards, policies or clauses in the contract regarding forced and/or child labour. Contractor contracts will specify that the same standards will be met by their sub-contractors and suppliers; and In all contractor contracts the Project will make explicit reference to the need to abide by Ivorian law and international standards in relation to child labour and forced labour Contractors and subcontractors will need to monitor closely the potential existence of irregular forms of child and forced labour in the supply chain. Action measures and notice to ARISE will be carried out immediately if this is found. 	ARISE	ARISE	<ul style="list-style-type: none"> Labour Management Plan Contractor Management Plan Grievance Management Procedure Ensuring compliance with Ivorian and International requirements in contractor and supplier selection process considering worker management and rights 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 000 000
C25	Women's Rights (GBVH, approach to recruitment, promotion, and treatment with respect to equal opportunity)	Labour and Working Conditions	Both	<ul style="list-style-type: none"> Recruitment and Employment Plan to be developed has to address the aspects and risks associated with the involvement of workforce providers. Ensure that the recruitment process is fair and transparent, public, and open to all without discrimination, paying heightened attention to ethnic minorities and vulnerable groups. This should include a gender quota to ensure women are represented in the pool of candidates or workers, the use of inclusive vocabulary in job descriptions, as well as collaboration with local unemployment agencies. The Labour Management Plan will include mitigation measures in relation to Gender-Based Violence and Harassment (GBVH). In consultation with workers and their representatives, a workplace policy on violence and harassment will be adopted and implemented; 	ARISE	ARISE	<ul style="list-style-type: none"> Recruitment and Employment Plan in place 100% workers (direct employees, subcontractors and suppliers) that have received task specific training on Gender Based Violence, Harassment and Inequalities 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 000 000

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
				<ul style="list-style-type: none"> Violence and harassment and associated psychosocial risks in the management of occupational health and safety will be taken into account; Hazards will be identified and the risks of violence and harassment will be assessed, with the participation of workers and their representatives, and to prevent and control them measures, such as ensuring access to clean, safe, secure and separate toilet and welfare facilities at work, will be taken. Lack of access can create or exacerbate health problems for workers as well as put them at risk of violence, including sexual violence; Workers and other persons will be provided concerned information and training, in accessible formats as appropriate, on the identified hazards and risks of violence and harassment and the associated prevention and protection measures, including on the rights and responsibilities of workers; and Effective means of inspection and investigation of cases of violence and harassment will be ensured, including through labour inspectorates or monitoring. Specific provisions will be implemented in the Grievance Management Procedure to manage grievances related to GBVH (e.g., the complainant will be able to communicate the grievance to a person of its preferred gender, for example, if a woman prefers to explain the grievance to another woman, that will be possible). 			<ul style="list-style-type: none"> Number of grievances received Code of Conduct in place Zero Tolerance Policy in place 		
C26	Disruption to infrastructure and utilities	Access to infrastructures and services	Direct	<ul style="list-style-type: none"> Where infrastructure supply is suffering disruption episodes, find local solutions to be put in place. Liaise and engage with local authorities and utilities companies to ensure continuity of supply to communities. Only short term "planned" disruption to drinking water or electricity services will be allowed. Work with local utilities companies to ensure coordinated and rapid response to unplanned events such as damage to electric lines and water pipes. Community Liaison Officers (CLOs) will be present at work fronts to ensure that impacts from planned disruptions are minimised and that unplanned disruptions are properly managed. Grievance mechanism will be in place ensuring rapid response time and access to a compensation process should unplanned disruption result in loss of livelihoods that could not otherwise be avoided 	ARISE	ARISE	<ul style="list-style-type: none"> Find local solutions if infrastructure suffers disruption Liaise and engage with local authorities and utilities companies Intervention from CLOs Grievance Mechanism 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	500 000
C27	Unmet Expectations of Benefits	Community Cohesion	Both	<ul style="list-style-type: none"> Communities will be engaged in the preparation of the Social Investment and Development Programme activities to be taken forward in the vicinity of their communities. They will then be kept informed on the progress of such activities and opportunities for their involvement will be maximised. Release leaflets with information emphasizing the limited nature of employment and the recruitment processes and the progress of the Social Investment and Development Programme. 	ARISE	ARISE	<ul style="list-style-type: none"> Development of a Social Investment and Development Programme 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	500 000
C28	Physical ground disturbance through earthwork activities	Cultural Heritage	Direct	<ul style="list-style-type: none"> A comprehensive Cultural heritage Management Plan (CHMP) will be appropriately developed for the Project to ensure all cultural heritage resources are addressed and managed adequately. The plan will be developed and agreed pre-construction, to allow appropriate mitigation measures to be applied before any impact occurs. Items to be covered in the CHMP include (but not limited to): Specific design measures, such as screening bunds or noise reduction measures, to address indirect impacts; Regulator engagement with the Ministry of Antiquities to agree site-specific mitigation measures; Further field survey and assessment for potentially impacted resources. In the absence of more detailed information on Cultural Heritage resources identified in the baseline, additional field survey will be required under the CHMP to determine the full extents and significance of Project impacts to be undertaken by an appropriately qualified Cultural Heritage specialist. The CHMP will need to be updated to reflect the findings of this additional survey. Access management (Memorandum of Understanding with local communities regarding access and activities). Access arrangements will be made to the satisfaction of identified stakeholders through a Memorandum of Understanding agreed to by 	ARISE	ARISE	<ul style="list-style-type: none"> Evidence to be logged. Cultural heritage Management Plan (CHMP) Grave Relocation Plan Chance Finds Procedure Regular site inspections to evaluate mitigations measures implementation, take note of non-conformities and implement corrective measures Compliance with national and international standards 	<ul style="list-style-type: none"> Weekly Inspection Cycle Audit 	2 000 000

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
				<p>authorities and identified stakeholders, which will allow unrestricted access to Cultural Heritage resources. This memorandum should be in place before construction begins.</p> <ul style="list-style-type: none"> ■ Cultural Heritage input into the Community Grievance Management Procedure; ■ A Grave Relocation Plan. This will be designed and implemented with the agreement of the local communities (for the cemeteries identified in the Aol). ■ A Chance Finds Procedure will be designed and implemented to manage any unexpected discovery of archaeological material in-line with international requirements and guidelines IFC PS8. ■ Detailed site-specific archaeological mitigation, such as pre-construction investigations, archaeological excavations, etc. ■ Built heritage recording; and ■ Monitoring of mitigation measures and Mitigation Control. 					
C29	Greenhouse Gas Emissions from Construction activities	Climate Change	Direct	<ul style="list-style-type: none"> ■ Optimising the transport routes on the construction site ■ Ensured that no machines are running when they are not needed ■ Operate vehicles and other equipment in a fuel-efficient manner 	ARISE	ARISE	<ul style="list-style-type: none"> ■ Regular site inspections to evaluate mitigations measures implementation, take note of non-conformities and implement corrective measures 	<ul style="list-style-type: none"> ■ Bi-annual Internal Audit ■ Weekly Inspection Cycle Audit 	100 000
C30	Construction works within IEZ	Cumulative Impact	Both	<ul style="list-style-type: none"> ■ Engage with the Engineering, procurement, and construction contractors (EPCs) presented in the PK24 IEZ to align the implementation of specific management plans (emergency and preparedness, traffic, among others) and to evaluate potential grievances received, analysing causes for those and plan for integrated interventions. ■ Pay special attention to landowners/ residents in this area and should reach out early to the PK24 EPCs representatives to ensure a mutual understanding of the commonly affected persons. The SEP should include and maintain PK24 EPCs as an interested stakeholder. 	ARISE Project Community Liaison Officers	ARISE	<ul style="list-style-type: none"> ■ Evidence to be logged ■ Regular site inspections to evaluate mitigations measures implementation, take note of non-conformities and implement corrective measures 	<ul style="list-style-type: none"> ■ Bi-annual Internal Audit 	200 000
Operation Phase (O)									
O1	Degradation of quality water resources and depletion of the renewable resources of the CT aquifer	Surface water and Groundwater	Direct	<ul style="list-style-type: none"> ■ Apply the Water Resources Management Plan (WRMP) including regular updates to hydrogeological baseline conditions. ■ Ensure water will be used and disposed of in a manner consistent with Côte d'Ivoire legislation and where appropriate, international good practices and track any deviation from estimated Project water use.; ■ Development and implementation of a Surface and groundwater quality monitoring programme to closely monitor changes in aquifer water levels and groundwater quality and availability; (■ Assess changes in water availability, taking the effects of climate change as well as future additional users into account; ■ Consider provision of alternative water supplies to the local community in the case the Project affects the local sources of water supply in a negative way; ■ Monitor closely any grievances received related to community water supply ■ Engage with the local community and verify registered and unregistered wells (including hand dug wells) surrounding the water resources used by the Project to ensure that local wells and boreholes are not negatively affected. ■ Waste Management Plan (WMP), wastewater and chemical management procedures shall be developed for (1) all wastewater discharges must comply with relevant Côte d'Ivoire legal requirements (Environment Code - Law n°96-766) and follow the Project Waste Management Plan before disposal, and relevant permits shall be in place; (2) wastes and any other product containing hazardous chemical substances (i.e. fuel) will not be stored in the proximity of freshwater features. Their management will consider among their objectives the avoidance of any spill affecting to the freshwater ecosystems; and (3) all waste will be collected, treated and disposed of in an environmentally sound manner in order to prevent, eliminate or reduce its harmful effects on human health, natural resources, fauna and flora and the quality of the environment. 	ARISE	ARISE's QHSE Manager	<ul style="list-style-type: none"> ■ Number of complaints regarding the monitoring program of waters and discharges. ■ Material evidence on the implementation of the Waste Management Plan (WMP) and the Water Resources Management Plan (WRMP). ■ Waste records of the type, quantity, composition, origin, disposal destination and method of transport for all wastes. ■ Internal environmental audits to evaluate mitigations measures implementation, take note of non-conformities and implement corrective measures. 	<ul style="list-style-type: none"> ■ Continuous monitoring (analytics and visual). ■ Weekly Inspection Cycle Audit ■ Monthly reporting, to be included in the Monthly E&S Monitoring Report. ■ Records of training provided ■ Data to be included in the Biannual E&S Report. 	5 000 000 / year

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
				<ul style="list-style-type: none"> The requirements contained in the Water Code (Law n° 98-755) to avoid any liquid discharge that may degrade surface water will be complied. These measures must be recorded in an Emergency Preparedness and Response Plan (EPRP), in line with the good practices also proposed by International standards; such as the General EHS guidelines of International Finance Corporation (IFC 2007) for handling spills of hazardous materials including fuels that will be handled during operational works. Enhancing the implementation of water governance programs to optimise process water efficiency considering water-efficient technologies and reusing water as an extension to zero liquid discharge approach. Planning and implementing water conservation awareness and training programs for workers, supervisors and managers as well as engagement in water resources management. 			<ul style="list-style-type: none"> Compliance with national and international standards. Close monitoring of any grievances received related to community water supply 		
O2	Disturbance due to dust and disturbance due to vehicle emissions	Air Quality	Direct	<ul style="list-style-type: none"> Implement a Traffic Management Plan to optimize the management of traffic flows. Manage of junctions to avoid excessive queuing traffic on the public highway. Implement traffic routing to avoid congested locations and junctions as far as practicable. .Use of modern, lower emissions vehicles as much as practicable. Ensuring vehicles are well maintained and services, as far as practicable. Maintaining good quality road surfaces. 	ARISE	ARISE	<ul style="list-style-type: none"> Material evidence on how this mitigation measure is being considered. Evidences to be logged. 	<ul style="list-style-type: none"> Air Quality Management Plan Traffic Management Plan 	1 000 000 / year
O3	Routine maintenance of equipment and upkeep of the properties	Resources and Waste	Direct	<ul style="list-style-type: none"> Prepare a Waste Management Plan for the Project site in accordance with Ivorian laws and IFC guidelines. The Plan will state all procedures and name designate places and operators for the waste generated. Management of hazardous waste should be carried out by an appropriate licensed contractor. The disposal of wastewater generated during the operation shall not leak or be disposed of into water sources near the Project site or downstream of Project site. Normally all process wastewater within the IEZ will be treated ultimately in the designated WWTP built for PK24. 	ARISE	ARISE	<ul style="list-style-type: none"> Regular site inspections to evaluate mitigations measures implementation, take note of non-conformities and implement corrective measures 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	2 000 000 / year
O4	Loss of fauna; disturbance and displacement of fauna	Biological receptors (Fauna)	Direct	<ul style="list-style-type: none"> Reduce the speed limit within the Project IEZ, especially near patches of tree and wetlands, particularly at blind rises or corners, in order to reduce the risk of collisions with fauna; Fence off the section of road in the vicinity of the wetland to direct fauna away from the IEZ and access roads; Proper sustainable urban drainage design to be implemented, to reduce direct discharge to watercourses (e.g., storm water to drain through vegetated swales, bunds or detention ponds); No planting of alien species will occur in any areas within the AoI, including landscaping of re-vegetated areas; Limit (within legal and safety limits) the intensity of lighting in the vicinity of the wetland on Phase 2 and remaining forest patches to minimise light disturbance to nocturnal fauna, such as small mammals and bats; Workers will strictly be prevented from hunting and poaching, and any other kind of illegal activities related to hunting and poaching. 	ARISE	ARISE	<ul style="list-style-type: none"> Material evidence on how the potential overflow scenarios are being assessed. Evidence to be logged. 	<ul style="list-style-type: none"> Weekly Inspection Cycle Audit, particularly during rainy season 	1 000 000 / year
O5	Temporary Direct and Indirect Employment Opportunities	Economy and Employment	Both	<ul style="list-style-type: none"> A Recruitment and Employment Plan ensuring that the recruitment process is fair and transparent, public and open to all regardless of ethnicity, religion or gender. A Stakeholder Engagement Plan (SEP) will be implemented to outline how ARISE will ensure regular, open and transparent communication with all stakeholders, concretely: To provide clear information on the number and limited timescales of employment opportunities. To advertise all openings in ways that are accessible to local communities A Community Grievance Management Procedure will be implemented to ensure that individuals who have concerns or complaints about the Project or wish to Report their potential expectations or concerns related to local economy and employment can communicate directly with the Project. 	ARISE	ARISE	<ul style="list-style-type: none"> Recruitment and Employment Plan developed and implemented Stakeholder Engagement Plan and Community Grievance Management Procedure 	<ul style="list-style-type: none"> Bi-annual Internal Audit 	1 000 000

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
O6	Regional and National economic development	Economy and Employment	Both	<ul style="list-style-type: none"> The maximization measures that will be established in order to manage the “Temporary Direct and Indirect Employment Opportunities” above, will be also used to address this impact, through the Recruitment and Employment Plan (REP), the Stakeholder Engagement Plan (SEP), and the Grievance Mechanism. 	ARISE	ARISE	<ul style="list-style-type: none"> Recruitment and Employment Plan developed and implemented Stakeholder Engagement Plan and Community Grievance Management Procedure developed and implemented 		500 000 / year
O7	Permanent Loss of Livelihoods and/or Household Income due to Permanent loss of access to Land in the Project footprint	Land Use and Livelihoods	Direct	<ul style="list-style-type: none"> Implement a Livelihood Restoration Plan (LRP) that provides the foundation for the restoration and compensation process including an entitlement matrix that will ensure adequate compensation, replacement and livelihood restoration options are provided to Project Affected People (PAPs). Resettlement options provided will ensure that households are able to continue to access the same livelihood resources or otherwise livelihood restoration measures will be provided to adequately manage economic displacement impacts. Land users will be compensated for the loss of their specific interest in that asset for a period of time and assisted in their re-establishment. Engagement will be maintained with Affected Communities through the process of stakeholder engagement. A grievance mechanism will be established as early as possible in the Project development phase. 	ARISE	ARISE	<ul style="list-style-type: none"> Livelihood Restoration Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	3 000 000 / year
O8	Impact on Natural Resources and Related Livelihoods due to the loss of access to natural resources provisions and uses as water streams or collection of NTFPs	Land Use and Livelihoods	Direct	<ul style="list-style-type: none"> Implement a Livelihood Restoration Plan (LRP) includes key compensation and livelihood restoration measure to restore land-based livelihood sources, as collection of Non-Timber Forest Products (NTFPs) and wood activities and water-related uses. The Project will ensure that alternative land is made available to affected households and that losses through the clearance of lands are compensated for. 	ARISE	ARISE	<ul style="list-style-type: none"> Livelihood Restoration Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 000 000 / year
O9	Environmental Health	Community Health, Safety and Security	Both	<ul style="list-style-type: none"> Implement a Community Health, Safety Management Plan (CHSMP) A Stakeholder Engagement Plan will be implemented to outline how ARISE will ensure regular, open and transparent communication with all stakeholders. A Community Grievance Management Procedure will be implemented to ensure that individuals who have concerns or complaints about the Project or wish to Report their potential expectations or concerns related to local community Health and Safety concerns can communicate directly with the Project. Mitigations proposed in other related sections (air quality, noise, resources and waste, and hydrology and hydrogeology). 	ARISE	ARISE	<ul style="list-style-type: none"> Community Health, Safety and Security Management Plan, Stakeholder Engagement Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 000 000 / year
O10	Transmission of Communicable Diseases and STDs	Community Health, Safety and Security	Indirect	<ul style="list-style-type: none"> ARISE will maintain all provisions of the existing HSE management system and its Occupational Health and Safety Management Plan, Community Health and Safety Management Plan (CHSMP) and Emergency Preparedness and Response Plan in line with Ivorian regulations. Encourage that all industrial units, as well as other contractors and subcontractors, are aligned with environmental, health and safety, and social and governance practices of the national. 	ARISE	ARISE	<ul style="list-style-type: none"> HSE management system Community Health and Safety Management Plan Emergency Preparedness and Response Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 000 000 / year

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
O11	Pressure on Healthcare	Community Health, Safety and Security	Indirect	<ul style="list-style-type: none"> ARISE will maintain all provisions of the existing HSE management system and its Occupational Health and Safety Management Plan, Community Health and Safety Management Plan (CHSMP) and Emergency Preparedness and Response Plan in line with Ivorian regulations Encourage that all industrial units, as well as other contractors and subcontractors, are aligned with environmental, health and safety, and social and governance practices of the national. 	ARISE	ARISE	<ul style="list-style-type: none"> HSE management system Community Health and Safety Management Plan Emergency Preparedness and Response Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	5 000 000 / year
O12	Workers' Rights	Labour and Working Conditions	Both	<ul style="list-style-type: none"> Ensure that operations comply with Ivorian regulations. Maintain a Worker grievance mechanism that will be accessible to all workers, whether permanent or temporary, directly or indirectly employed. Contractors and sub-contractors will be required to put in place a worker grievance mechanism. The ARISE worker grievance mechanism shall be open to the contractor and subcontractor workforce in the event that their grievance is not adequately resolved by their direct employer. ARISE will then have the authority to act to resolve this grievance. 	ARISE	ARISE	<ul style="list-style-type: none"> Workers Management Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	5 000 000 / year
O13	Workers' Health and Safety	Labour and Working Conditions	Both	<ul style="list-style-type: none"> Implement an Occupational Health and Safety Management Plan (OHSMP) Maintain the Grievance Management Plan that will ensure the delivery of grievances and workers concerns. 	ARISE	ARISE	<ul style="list-style-type: none"> Occupational Health and Safety Management Plan (OHSMP) Grievance Management Plan 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	2 000 000 / year
O14	Child Labour and Forced Labour	Labour and Working Conditions	Both	<ul style="list-style-type: none"> Implement a Contractor Management Plan which will provision for measures to avoid child and forced labour among contractors and in the supply chain. Oversee if suppliers, contractors and subcontractors comply with all applicable child labour laws and only employ workers who meet the applicable minimum legal age requirement in accordance with national standards; Contracts will specify monitoring to be undertaken by the contractor, establish the right for the Project monitoring and auditing of all contractors and subcontractors and the consequences for the contractor if they are found to be breaching national legal requirements, international standards, policies or clauses in the contract regarding forced and/or child labour. Contractor contracts will specify that the same standards will be met by their sub-contractors and suppliers; and In all contractor contracts the Project will make explicit reference to the need to abide by Ivorian law and international standards in relation to child labour and forced labour Contractors and subcontractors will need to monitor closely the potential existence of irregular forms of child and forced labour in the supply chain. Action measures and notice to ARISE will be carried out immediately if this is found. 	ARISE	ARISE	<ul style="list-style-type: none"> Labour Management Plan Contractor Management Plan Grievance Management Procedure Compliance with Ivorian and International requirements in contractor and supplier selection process considering worker management and rights 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 000 000 / year
O15	Benefits from improvements to infrastructure and services	Access to infrastructures and services	Both	<ul style="list-style-type: none"> Carry out programs and initiatives to promote employment and social benefits to neighbouring communities, specially to the villages in the Aol. As part of the Stakeholder Engagement Plan conduct awareness sessions to explain the benefits from Project development, the mitigation measures implemented and a point person to contact in case of emergency etc. in order to alleviate potential concerns. Ensure through Grievance Management Procedure that all concerns or problems regarding the infrastructure operation are being managed and acknowledged 	ARISE	ARISE	<ul style="list-style-type: none"> Establishment of programs and initiatives to promote social benefits Stakeholder Engagement Plan including awareness sessions about the benefits Grievance Management Procedure 	<ul style="list-style-type: none"> Bi-annual Internal Audit Weekly Inspection Cycle Audit 	1 000 000 / year

Item	Activities (source of impact)	Environmental component affected	Nature of impact (D/I)	Recommended mitigation measures (Summary)	Implementation manager	Monitoring manager	Environmental monitoring indicators	Source of verification	Estimated Cost (F CFA)
O16	Disturbance from the presence of the workforce	Community Cohesion	Indirect	<ul style="list-style-type: none"> ■ Communication will be based on the principle of transparency and clarity, clearly explaining the selection process and criteria. ■ Ongoing dialogue between the Project, through its Community Liaison Officers (CLOs) and local communities to assist in information sharing with regard to employment practices and the use of non-local staff. ■ Relevant Project information in particular those related to environmental and socioeconomic impacts, employment and project benefits will be disclosed at the local level in a manner that is accessible, understandable and culturally appropriate for those affected. ■ A Social Investment and Development Programme will be developed by ARISE in consultation with local communities, with active engagement required to determine the location and nature of investments. All stakeholders will be kept informed on the progress of investment activities and opportunities. ■ Information about the Community Grievance Mechanism Procedure will be shared amongst local communities. Ensure proper management of a grievance mechanism that allows communities and employees to raise complaints. 	ARISE	ARISE	<ul style="list-style-type: none"> ■ Stakeholder Engagement Plan including awareness sessions about the benefits ■ Social Investment and Development Programme ■ Community Grievance Mechanism Procedure 	<ul style="list-style-type: none"> ■ Bi-annual Internal Audit ■ Weekly Inspection Cycle Audit 	1 500 000 / year
O17	Operation of the basic infrastructure within IEZ	Cumulative Impact	Both	<ul style="list-style-type: none"> ■ Engage with the other Contractors/developers in the PK24 IEZ to align the implementation of specific management plans (emergency and preparedness, traffic, waste, drainage among others) and to evaluate potential grievances received, analysing causes for those and plan for integrated interventions. ■ On the areas identified as having high potential for significant severance impacts, detailed analysis should be developed to minimize mobility constraints for the affected populations. ■ Emergency Preparedness and Response Plans should be aligned, and common drills should be performed. ■ Engage with local public to better understand impacts on them specially those related to noise and air quality. ■ Require the tenants for the 429 ha Project area to conduct proper E&S assessment & Cumulative Impact Assessment (CIA) study prior construction phase as per national requirements applied to this ESIA (including ESMP). 	ARISE Project Community Liaison Officers	ARISE	<ul style="list-style-type: none"> ■ Evidence to be logged ■ Regular site inspections to evaluate mitigations measures implementation, take note of non-conformities and implement corrective measures 	<ul style="list-style-type: none"> ■ Bi-annual Internal Audit 	2 000 000 / year

11. STAKEHOLDER CONSULTATIONS

11.1 Introduction

This Chapter provides a summary of the stakeholder engagement activities undertaken during the ESIA process. This includes a description of stakeholder mapping and consultation undertaken during the ESIA (scoping and detailed ESIA phases). An overview of the key issues raised by stakeholders during both scoping and detailed ESIA phase is also provided, as well as an outline of stakeholder engagement activities that will be undertaken in future by the Project owners during Project construction and operation phases. Full description/details are given in the separate Stakeholder Engagement Plan (SEP) of the Project.

A grievance management procedure (GMP) was also developed as part of the ESIA process and is described in the SEP.

11.2 Objectives

Stakeholder engagement is a key component of sustainable development and the ESIA process. It involves those stakeholders interested in, or affected by, a proposed development working to actively identify opportunities, risks and issues of concern. The primary objectives of stakeholder engagement are as follows:

- Ensure that adequate and timely information about the Project is provided to stakeholders;
- Provide sufficient opportunity to stakeholders to voice their opinions and concerns, and to ensure that these concerns influence Project decisions;
- Establish a relationship and form of communication between the Project and affected communities in particular during the construction phase of the Project; and
- Conform with Ivorian ESIA requirements and those of international lenders.

Stakeholder engagement is a specific requirement of the Ivorian ESIA regulations. It is also a requirement of international lenders as it is recognised that failure to engage stakeholders can create significant risks to a project development.

11.3 Engagement in the ESIA Process

This Section provides a summary of the stakeholder engagement disclosure activities undertaken to date, before (pre-scoping) and during the ESIA process (scoping and detailed ESIA phases). An overview of the key issues raised by stakeholders during this phase is provided in the following section.

All engagements to date have been conducted in a culturally appropriate manner, involving the representatives of communities in the preparation of the meetings and accounting for the participation of women.

Pre-scoping consultations were organised in 2020 and 2021, and ESIA scoping engagement was undertaken in June 2022. The list of stakeholders engaged during scoping as well as their main requests and concerns are presented in Section 11.3.2 of this Report.

Detailed ESIA engagement was undertaken in November and December 2022 with a wide range of stakeholders. The list of stakeholders engaged during the ESIA development phase and the main requests and concerns they raised are presented in Section 11.3.3 of this Report.

Considering these two phases of primary data collection, during the scoping phase in June 2022, ENVAL consultants deployed the questionnaires with stakeholders through the survey settlement profiling. Therefore, by the ESIA phase in November and December 2022, the baseline information on the socio-economic conditions of the villages in the Area of Influence had already been collected

recently. In addition, complaints about time constraints were frequent, for example, during the scoping phase two public consultations were not carried out due to chief's complaints about the number of tools they had to fill in, as it takes time to fill in the questions. Thus, during this ESIA phase, the team asked stakeholders to review their responses, update them if appropriate, and fill in unanswered questions. Therefore, information provided in this section is referred to and sourced as November 2022, as it is the latest updated information available.

11.3.1 Pre-scoping Consultations

Prior to Project commencement and the Scoping phase of the ESIA study, ARISE performed a set of stakeholder engagements to better identify and understand preliminary major environmental and social risks. The meetings held with different stakeholders are summarised in Table 11-1.

Table 11-1 Engagements Undertaken prior to Scoping phase

Date	Stakeholder ID	Representatives	Purpose of the engagement/Issues raised
Periodic meetings (around once a month) with a committee that gathers all the stakeholders, starting August 26, 2020	National and Local Government Stakeholders	<ul style="list-style-type: none"> ■ AGEDI ■ CNPP (Comité National de Pilotage des Partenariats Publics Privés) ■ FODI (Fond de Développement des Infrastructures Industrielles) ■ BNETD (Structure technique pour le compte de l'Etat) ■ Cabinet du Ministre du Commerce et de l'Industrie ■ Structures techniques telles que Cote 'd'ivoire Energie, ONEP (Office Nation de l'eau potable), ONAD (Office national de l'assainissement de drainage) 	The purpose is to track the implementation of the Project

Source: ARISE, 2022

11.3.2 Stakeholder Engagement Undertaken during Scoping Phase

11.3.2.1 Overview of scoping engagement activities

Stakeholder engagement activities during Scoping phase consisted of public consultations and meetings with a range of institutional and community members in Abidjan and in the villages that are near the Project site. The Team that led the first consultations with national, district and sub-prefecture stakeholders was composed of two (2) social specialists from ERM, in collaboration with two (2) social specialists from ENVAL. Then the two (2) specialists from ENVAL carried out the following consultations that were held with the local communities and representatives of the villages in the Project Aol. Official invitation letters were sent to administrative representatives as per local procedure to organise the consultation meetings.

A total of 16 meetings with National and District government officials, with Sub-prefecture and Local government authorities, and with chieftaincies and local communities in the Project Aol were organised. In total, approximately 90 people attended the meetings, of which approximately 11 women. The complete list of meetings organised during scoping phase is presented in Section 11.3.2.2 and Section 11.3.2.4 below. Detailed minutes of the meetings, attendance lists and pictures for each meeting held are presented in 0.

The meetings began with the description of the Project, presentation of the ESIA process and followed with discussions to collect feedback. A Background Information Document (BID) was communicated and shared with all stakeholders during the consultation meetings, presented in Appendix H.

Concerns related to the Project impacts were also raised during the meetings. The overview of concerns and issues raised by stakeholders is presented in Section 11.3.2.3 and Section 11.3.2.5 below.

The grievance process was actively communicated to Project Stakeholders during the mentioned consultations so that stakeholders:

- Aware of the process and have the opportunity to provide feedback on it;
- Know that they have the right to submit a grievance or provide feedback to the team;
- Understand how the mechanism will work, and
- How their grievance will be addressed.

The stakeholder engagement activities carried out as part of the scoping phase were organised as it was planned in early stages of the engagement process. Some new villages as Anguédedou (which belongs to Abadjin-Kouté) and Palmafrique V2 were identified by stakeholders during the consultations with the Anyama and Songon subprefectures, and these villages and their community representatives were directly invited and included in the following consultations held with local communities and villages in the Project Aol. In addition, even though Adonkoi I and Adonkoi II public consultations did not take place during the scoping phase due to schedule and timing problems, these villages were contacted and engaged for the ESIA phase. See Section 11.3.3 for more details

11.3.2.2 Meetings with National, District and Sub-prefecture Government Stakeholders

A total of ten (11) meetings were organised, of which:

- three (3) with National and District government officials,
- two (2) with Sub-prefecture and Local government authorities,
- two (2) with the Directorate Departments of Agriculture of the two (2) Sub-Prefectures,
- two (2) with the Water and Forests Department of the two (2) Sub-Prefectures, and

- two (2) with the Directorate Departments of Construction of the two (2) Sub-Prefectures.

In total, approximately 50 persons attended the meetings, of which approximately 10 were women (see Table 11-2).

Table 11-2 List of Scoping Engagement Meetings with National, District, and Subprefecture Government Stakeholders

Date	Location	Activity	Participants	
07-June-22	ANDE, Head Office	Meeting with ANDE	ENVAL ERM	ANDE Head of Department
08-June-22	Abidjan Prefecture	Public Consultation with Abidjan District and National government Authorities	ENVAL ARISE ERM	<ul style="list-style-type: none"> ■ General Secretary of the Prefecture of Abidjan ■ Three (3) Representatives of the Prefecture of Abidjan ■ AGEDI ■ General Management of Sustainable Development (DGDD) ■ Environmental and Sustainable Development Department (DEDD) ■ General Directorate of Water Resources (DGRE) ■ General Management of the Environment (DGE) ■ Ivorian Office of Cultural Heritage (OIPC) ■ National Agency for Waste Management (ANAGED) ■ Ministry of Water and Forests ■ Chamber of Commerce and Industry of Côte d'Ivoire (CCI CI)
22-June-22	ANDE, Head Office	Meeting with ANDE	ARISE ENVAL	<ul style="list-style-type: none"> ■ General Director of ANDE ■ Deputy Director of EIA (Environmental Impact Assessments)
09-June-22	Anyama Subprefecture	Public Consultation with Local Authorities Anyama Town Hall	ENVAL ARISE ERM	<ul style="list-style-type: none"> ■ Representative of the Sub-Prefect of Anyama ■ Mayor of Anyama ■ Water and Forest Anyama ■ President of the Women Anyama ■ President of the Youth Anyama ■ Chiefdom, President of the women, President of the youth of Akoupé-Zeudji village ■ Department of Industry and exploitation of Water and Forests ■ Two (2) representatives of the Chiefdom of Attinguié
27 June-22	Anyama Departmental Directorate of Agriculture	Meeting with Anyama Departmental Directorate of Agriculture	ENVAL	<ul style="list-style-type: none"> ■ Anyama Agricultural Development Sector ■ Reporting Officer of the Ministry of Agriculture and Rural Development (MINADER)
27 June-22	Anyama Water and Forestry Department	Meeting with Anyama Water and Forestry Department	ENVAL	<ul style="list-style-type: none"> ■ Department of Industry and exploitation of Water and Forests Anyama

Date	Location	Activity	Participants	
27 June-22	Departmental Directorate of the Ministry of Construction, Housing and Urban Planning (MCLU)	Meeting with the MCLU of Anyama	ENVAL	<ul style="list-style-type: none"> ■ Construction, Housing and Urbanism Sector (Secteur de la Construction, du Logement et de l'Urbanisme - SCLU)
09- June-22	Songon Sub prefecture	Public Consultation with Local Authorities Songon Town Hall	ENVAL ERM	<ul style="list-style-type: none"> ■ Songon Sub-Prefect ■ Mayor of Songon ■ Water and Forest Songon ■ President of the Women ■ Chief of the Agriculture sector ■ Chiefdom Abadjin-Kouté ■ Water and Forests Songon ■ Songon Construction Sector ■ The village chief and the president of Anguédédou ■ Member of the Institute of Geography ■ Two (2) Representatives of Palmafrique
30 June-22	Songon Departmental Directorate of Agriculture and Sustainable Development	Meeting with Songon Departmental Directorate of Agriculture and Sustainable Development	ENVAL	<ul style="list-style-type: none"> ■ Ministry of Agriculture and Rural Development (MINADER)
30 June-22	Songon Departmental Directorate of Construction	Meeting with Songon Departmental Directorate of Construction	ENVAL	<ul style="list-style-type: none"> ■ Two (2) Representatives of the Ministry of Construction
24 June-22	Songon Water and Forestry Department	Meeting with Songon Water and Forestry Department	ENVAL	<ul style="list-style-type: none"> ■ Two (2) Representatives of Songon Water and Forestry Department

Source: ERM and ENVAL, 2022

11.3.2.3 Preliminary overview of concerns and issues raised by national and local government stakeholders

This section presents a summary of the main issues and concerns raised by local and national government representatives in the scoping phase. A detailed account of what was discussed at each meeting is presented in 0. The summary of these concerns and issues raised by stakeholders is presented in Table 11-3 below.

Table 11-3 Summary of Concerns and Issues Raised by National and Local Government Stakeholders in the Scoping Phase

Subject	Key outcomes and concerns
Positive Aspects of the Project	<ul style="list-style-type: none"> ■ General favourable opinion because of the employment, national development opportunities and increase of the State revenues through taxes. ■ Project seen as major promoter of Economic Development ■ Favourable opinions regarding a better modernization of national industries.
Employment	<ul style="list-style-type: none"> ■ Recommendations to promote and prioritise employment among local workers.
Access issues	<ul style="list-style-type: none"> ■ Recommendations to consider the question of waste management, water supply and electricity
Land and economic displacement	<ul style="list-style-type: none"> ■ Necessity to confirm from AGEDI that there are not residential areas in the vicinity of the industrial zone. On this issue, the BNETD was invited, but did not come. The process must be in concert with the Ministry of Construction. ■ Questions regarding if the land acquisition process is already completed. In 2017, there was the compensation of customary rights on the 940 ha and given the space of ARISE is part of the 940 ha, but the land acquisition and compensation process must be confirmed by AGEDI. ■ Concerns about the risk of resettlement and land acquisition impacts on the inhabitants.
Environment, Air pollution, Nuisance, Wastewater	<ul style="list-style-type: none"> ■ Concerns regarding the environmental impacts the Project could have ■ Questions on whether the Project has anticipated the issues of environmental impacts on the Project environment. ■ Concerns about the lack of consideration of the waste management component. It is ANAGED and CIAPOL that manages these aspects. ANAGED and CIAPOL were invited to the consultation, but they did not attend. It is necessary to foresee the construction of waste bins, and to avoid putting the waste together. Because there are different types of waste, the management must be different for each type of waste, and a frequent follow-up must be done. ■ Concerns with the fact that waste management is not done by category. Everything is managed together. In Côte d'Ivoire there are no specialised structures for the major waste families. Most of our incinerators are defective and the pre-collectors do not have these capacities to make the removals in the CHU. ■ Recommendations to create a protection perimeter for the Project area (940ha industrial zone) ■ Concerns regarding the installation of industries, as this has affected the trees in the area, which have not produced flowers for 3 years now. This must be considered in the management of waste. ■ Concern for the destruction of the existing vegetation which constitutes the habitat of a certain fauna, alteration or phreatic pollution. ■ Recommendations to set aside an area for reforestation to balance the air polluting emissions, construction of sewage pipes. ■ Concerns about the impact radius that will be more than 3 km, because the wastewater from the industrial zone, part of it passes through the Nétchi River and the major part goes to Anguédedou, part of it exits at Kassamblé and Diapodoumé. ■ Concerns about the management of liquid wastes from the factories, as Songon and its lagoon were the discharge of all the waters from the north in the Industrial Zone. ■ Recommendations to build a treatment basin before discharge into the watercourses.

Subject	Key outcomes and concerns
Ecosystem Services	<ul style="list-style-type: none"> ■ Recommendations looking at the approaches to the Project site to see the areas that will be revegetated and to see if there are any medicinal plants and plants of a certain property that are used by the populations. This recommendation was already included in the visit to the Project site that took place in June 2022. The team recruited a botanist professor for the plant species issue and a sociologist for the relationship with community use of the resources. ■ Recommendations to take into account the rare species that are in the Project area, especially since the Project will be carried out on 429ha, it is necessary to check to see the resources that are present, if there are rivers, important elements that must be taken into account to avoid future problems.
Cultural Heritage	<ul style="list-style-type: none"> ■ Concerns about Cultural Heritage impacts, given that the Project is located near a world heritage site (UNESCO), there is passage (transhumance) of wild animals in the Banco Forest.
ESIA	<ul style="list-style-type: none"> ■ Establish a partnership with the technical structures of the State in the implementation of the ESIA plan, especially the water and forests to mitigate the impacts on the area during construction and operation.
Other	<ul style="list-style-type: none"> ■ During the first meeting with ANDE Head Office representative, ANDE recommended that as part of the national requirements a Strategic Environmental Assessment should be performed for the Project (instead of ESIA). However, ENVAL pointed out that an extended Strategic Environmental Assessment (SEA) was already carried out by the National Bureau of Technical Studies and Development (BNETD) in 2015 for the whole PK24 Industrial Zone of 940 ha. It was revealed that this study apparently has not reached ANDE's hands and was not registered in the system. During the second meeting with ANDE ARISE representative were present and agreed that ARISE will contact AGEDI (who initiated the SEA) and request a copy of the study for ANDE. At the moment of finalising this Scoping Report (August 2022), AGEDI did not share the SEA copy and ANDE did not make a decision how the Project should proceed: perform SEA or ESIA. This requirement should be decided throughout the course of the preparation for the ESIA phase. ■ AGEDI have concerns about the presence of some companies installed outside the industrial zone on the east, and on the west side (a rubber plantation). Although there are no houses, but there are people who have bought spaces there to make warehouses. The control of these installations is not the responsibility of AGEDI but of the Ministry of Construction and Urbanism. ■ Recommendations to consider what had not been considered in previous studies and development of projects. Many mistakes have been made in this Industrial Zone. ■ Expectations regarding the prioritization of local companies to be set up in the Industrial Zone. ■ Confusion over the title of the Project. The consultation assistants do not understand why the title of the Project is PK24-Abidjan if the 940 ha industrial zone in which the Project is located is called PK24-Akoupé-Zeudji. They ask that the title of the Project be corrected for the next consultations. ■ Concerns about the anarchic installation of companies without considering their activities and impacts. The non-respect of the required norms of construction and the non-conformity of the buildings in the rules. ■ Recommendations to respect the master plan of the Industrial Zone: to install good access and roads, to carry out a good sanitation; to fill up and distribute the zones in a proper manner.

11.3.2.4 Meetings with Communities in the Project Aol

A total of six (6) meetings were organised, five (5) with the representatives of the villages in the Project Aol, and one (1) with the representatives of the Palmafrigue Company. The meetings were attended by representatives of Akoupé-Zeudji, Allokoi, Attinguié, Anguédedou (which belongs to Abadjin-Kouté) and Palmafrigue V2 local communities. Palmafrigue is a settlement where the workers for the Palmafrigue palm oil factory live, so the representatives of the company were also interviewed. In total, approximately 40 persons attended the meetings, of which only one (1) woman (in Akoupé-Zeudji consultation). The complete list of meetings organised during scoping phase is presented in

Table 11-4 below. Participants to these community meetings include local assembly representatives and chieftaincies.

The meeting with the representatives of Adonkoi I and Adonkoi II villages could not take place because of timing and availability reasons from the chiefdoms.

Table 11-4 List of Scoping Meetings with Local Community Representatives of Villages in the Project Area

Date	Location	Activity	Participants	
06-Jul-22	Village of Akoupé-Zeudji	Consultation with Akoupé-Zeudji Community	ENVAL	<ul style="list-style-type: none"> ■ 17 Representatives of the village chiefdom: Deputy village chief, notables, councilors, women's representative, youth representative, etc.
28 June-22	Village of Allokoi	Consultation with Allokoi Community	ENVAL	<ul style="list-style-type: none"> ■ Six (6) Representatives of the village chiefdom: Village chief, Secretary, Councillor, Land chief, Notable, etc.
29 June-22	Village of Attinguie	Consultation with Attinguie Community	ENVAL	<ul style="list-style-type: none"> ■ Five (5) Representatives of the village chiefdom: Village chief, General Secretary, Notable, Customary chief, etc.
24 June-22	Anguededou settlement (belonging to Abadjin-Kouté)	Consultation with Anguededou Community	ENVAL	<ul style="list-style-type: none"> ■ Village Chief ■ Deputy Chief ■ President
30 June-22	PALMAFRIQUE V2 Village	Consultation with V2 PALMAFRIQUE Community	ENVAL	<ul style="list-style-type: none"> ■ Village Chief ■ Secretary ■ Notable
28 June-22	PALMAFRIQUE E	Meeting with PALMAFRIQUE Palm Oil Company	ENVAL	<ul style="list-style-type: none"> ■ Five (5) Palmafrique staff including staff in charge of Quality, Health, Safety and Environment (QHSE).

Source: ERM and ENVAL, 2022

11.3.2.5 Preliminary overview of concerns and issues raised by local community representatives

This section presents a summary of the main issues and concerns raised by local community representatives in the scoping phase. A detailed account of what was discussed at each meeting is presented in 0. The summary of these concerns and issues raised by stakeholders is presented in Table 11-5 below.

Table 11-5 Summary of Concerns and Issues Raised by Local Community Representatives in the Scoping Phase

Subject	Key outcomes and concerns
Positive Aspects of the Project	<ul style="list-style-type: none"> All the villages interviewed had a favourable opinion regarding the implementation of the Project, as it will provide job opportunities and economic development of the area.
Employment	<ul style="list-style-type: none"> Recruit local workforce, favour local employment for youth. Promote training of locally employed workers. Expectation for building of a training centre and reinforcement of technical skills.
Access issues	<ul style="list-style-type: none"> Expectations to build roads surrounding the villages and improving the conditions of the roads. Expectations of electrification of the village Palmafrigue V2. Expectations to have access to drinking water, and construction of water tanks or towers.
Health	<ul style="list-style-type: none"> Expectations to build a health centre with equipment and medicalised ambulances
Land and economic displacement	<ul style="list-style-type: none"> Although most of the people interviewed during the site visit confirmed having received compensation from AGEDI for their losses, some people complained about not having been compensated for their loss of land.
Environment, Air pollution, Nuisance, Wastewater	<ul style="list-style-type: none"> Expectations about the reduction of the emission of odours and debris from the processing plants in the industrial zone.
Ecosystem Services	<ul style="list-style-type: none"> Concerns because the population of Attinguié consumes water from the Gobouet, Seunan (red water) and Agboffi rivers that cross the PK24 industrial zone. Unfortunately, these waters are being polluted because of the wastewater discharged by companies into these rivers.
Cultural Heritage	<ul style="list-style-type: none"> No information was provided by the consulted stakeholders on this regard
ESIA	<ul style="list-style-type: none"> No information was provided by the consulted stakeholders on this regard
Other	<ul style="list-style-type: none"> Expectation to build schools and classrooms, kindergartens in the villages Expectation for the Project to be in close collaboration with the surrounding villages. Expectations to build a garbage bin depot and placement of a garbage collection structure.

11.3.3 Stakeholder Engagement Undertaken during ESIA Phase

11.3.3.1 Overview of ESIA Engagement activities

Stakeholder engagement during the ESIA phase consisted of (i) briefing Project stakeholders on the details of the Project and the ESIA process, the associated timeline; (ii) consulting stakeholders of the Project on the potential impacts of the Project on their living conditions and their activities to collect their opinions, fears, and suggestions; and (iii) collect primary socio-economic data to inform the ESIA.

Engagement activities were undertaken between November 7th and December 19th, 2022, through Focus Group Discussions (FGDs), Key Informant Interviews (KIIs) and public participation and consultation which will involve a series of public gatherings/ hearing with a range of stakeholders including affected communities. The engagement with National and local Authorities and community representatives will collect information and views of the key stakeholders. These consultations were led by a team of specialists from ENVAL. Official invitation letters were sent to administrative representatives as per local procedure to organise the consultation meetings.

As with previous engagement activities, all necessary protection and preventive measures against COVID-19 have been taken during field work.

For the detailed ESIA, a total of 11 public consultations and 11 KII have been conducted in November and December with National and District government representatives from Abidjan District, as well as representatives of the Anyama sub-prefecture and Songon subprefecture, and the villages of Adonkoi I, Akoupé-Zeudji, Allokoi, Attinguié, Anguédedou (which belongs to Abadjin-Kouté) Abadjin-Kouté, Agoussi and Palmafrique V2 local communities.

The stakeholder engagement activities carried out as part of the ESIA phase were organised as it was planned in early stages of the engagement process. Some new villages as Agoussi were identified by stakeholders during the consultations with the Palmafrique Village, where stakeholders reported the presence of Agoussi located near the Project area (2km), and therefore, these villages and their community representatives were directly invited and included in the following consultations held with local communities and villages in the Project Aol.

In total, approximately 155 people attended the meetings. Regarding gender disaggregation, there is a significant differentiation between men and women attendees, as approximately 126 men were consulted and 29 women.

Specifically, the 22 meetings that were held are the following:

- In Abidjan District, one (1) Public Consultation and five (5) KII.
- Five (5) meetings with Sub-prefecture and Local government authorities, of which two (2) public consultation in Anyama and Songon subprefectures, and three (3) KII with the Directorate Departments of Construction, Agriculture and Water and Forests of Anyama Sub-prefecture,
- In Anyama Sub-prefecture, five (5) public consultations and one (1) KII in the villages in the Aol:
 - In Akoupé-Zeudji village, (2) Public consultations ;
 - In Agoussi village, one (1) Public consultation ;
 - In Allokoi village, (1) Public consultation and (1) KII;
 - In Adonkoi I village, (1) Public consultation;
- In Songon Sub-prefecture, three (3) Public consultations and one (1) KII, of which:
 - In Abadjin-Kouté village, (1) Public consultation and one (1) KII;
 - In Palmafrique V2 village, (1) Public consultation ;
 - In Anguédedou village, (1) Public consultation ; and

- One (1) KII with the representatives of the CHEC Company.

The complete list of meetings organised during ESIA phase is presented in Section 11.3.3.2 and Section 11.3.3.4 below. Detailed minutes of the meetings, attendance lists and pictures for each meeting held are presented in 0:

The meetings included key stakeholders from National government structures and structures in the subprefectures, including District, subprefecture and local Authorities and community members from the Aol of the Project. Meetings were held with Head of the villages and local community representatives. The purpose of the meetings was to engage with key stakeholders and local community representatives to provide updates on the Project and collect feedback, especially about their concerns regarding the Project's potential impacts.

Specifically, the types of engagement activities that have been conducted include the following:

- *Key Informant Interviews and Public Consultations*: KIIs were undertaken to collect District and community level information from National, District and local authorities and specifically to collect information for *Settlement Profiling* to inform the baseline. Public Consultations have been organised with representatives of the same communities to collect information and informed opinions on key socio-economic aspects for the communities and to get additional general information on livelihoods.
- *Ground truthing and Field Observations*: Field team visited key locations where KII and Public consultations have been conducted.

The meetings began with the description of the Project, presentation of the ESIA process and followed with discussions to collect feedback. A Background Information Document (BID) was communicated and shared with all stakeholders during the consultation meetings, presented in Appendix H.

Concerns related to the Project impacts were also raised during the meetings. The overview of concerns and issues raised by stakeholders is presented in Section 11.3.3.3 and Section 11.3.3.5 below.

The grievance process was actively communicated to Project Stakeholders during the mentioned consultations so that stakeholders:

- Aware of the process and have the opportunity to provide feedback on it;
- Know that they have the right to submit a grievance or provide feedback to the team;
- Understand how the mechanism will work, and
- How their grievance will be addressed.

The meetings started with a Project introduction and purpose of the meeting, followed with discussions to collect feedback. The gender ratio has also been reported for each meeting. The majority of attendees were men as most of the local representatives are men, (they are elected by the communities). Nevertheless, the Project encouraged women participation, and female attendees and women representatives from women associations were present in all the meetings. The Media (Radio Anyama) also attended one of the meetings. The meetings were conducted in French.

11.3.3.2 Meetings with National, District and Sub-prefecture Government Stakeholders

A total of 12 meetings were organised, Three (3) Public Consultations and 9 KII of which:

- Eight (8) meetings with National and District government officials
 - One (1) Public Consultation in Abidjan Prefecture
 - Seven (7) KII with the DGRE, DGE, CCI CI, CRO, ANAGED and two (2) with the OIPC.



- Five (5) meetings with Sub-prefecture and Local government authorities
 - Two (2) public consultation in Anyama and Songon subprefectures,
 - One (1) KII with the Directorate Departments of Construction of Anyama Sub-Prefecture.
 - One (1) with the Directorate Departments of Agriculture of Anyama, Sub-Prefecture, and
 - One (1) KII with the Water and Forests Department of the Anyama Sub-Prefecture.



In total, approximately 67 persons attended the meetings, of which approximately 18 women and 49 men. (Table 11-6).



Table 11-6 List of ESIA Engagement Meetings with National, District, and Subprefecture Government Stakeholders



Date	Location	Activity	Participants	Photographic Evidence	General Opinion about the Project
<i>Meetings with National and District Government (Abidjan)</i>					
25 November 2022	Abidjan Prefecture	Public Consultation with Abidjan District and National government Authorities	ENVAL ARISE <ul style="list-style-type: none"> ■ General Secretary of the Prefecture of Abidjan ■ Three (3) Representatives of the Prefecture of Abidjan ■ General Directorate of Water Resources (DGRE) ■ Project Manager of the General Management of the Environment (DGE) ■ Department of Research of the Oceanological Research Centre (CRO) ■ Project Manager of the District of Abidjan ■ Project Manager of the SOGEDI (previously called AGEDI) ■ Representative of the Chamber of Commerce and Industry of Côte d'Ivoire (CCI CI) ■ Project Manager of the National Agency for Waste Management (ANAGED) ■ Two (2) representatives of the Directorate of Cultural Heritage (DPC); Deputy Director and assistant. ■ Planning Director of the Ivorian Office of Cultural Heritage (OIPC) 		Favourable



Date	Location	Activity	Participants		Photographic Evidence	General Opinion about the Project
25 November 2022	Abidjan Prefecture	KII with the DGRE	ENVAL ARISE	<ul style="list-style-type: none"> ■ One (1) Representative of the General Directorate of Water Resources (DGRE) 	No photo	Favourable subject to the consideration of recommendations
25 November 2022	Abidjan Prefecture	KII with the CCI CI	ENVAL ARISE	<ul style="list-style-type: none"> ■ Representative of the Chamber of Commerce and Industry of Côte d'Ivoire (CCI CI) 	No photo	Favourable
25 November 2022	Abidjan Prefecture	KII with the CRO	ENVAL ARISE	<ul style="list-style-type: none"> ■ Department of Research of the Oceanological Research Center (CRO) 	No photo	Favourable
25 November 2022	Abidjan Prefecture	KII with the ANAGED	ENVAL ARISE	<ul style="list-style-type: none"> ■ Project Manager of the National Agency for Waste Management (ANAGED) 	No photo	Favourable

Date	Location	Activity	Participants		Photographic Evidence	General Opinion about the Project
02 December 2022	Abidjan Prefecture	KII with the OIPC	ENVAL	<ul style="list-style-type: none"> Four (4) Representatives of the General Directorate of the Ivorian Office of Cultural Heritage (OIPC) 		<p>Favourable</p>
22 December 2022	Abidjan Prefecture	KII with the OIPC	ENVAL ARISE	<ul style="list-style-type: none"> Five (5) Representatives of the General Directorate of the Ivorian Office of Cultural Heritage (OIPC) 		

Date	Location	Activity	Participants		Photographic Evidence	General Opinion about the Project
30 December 2022	Abidjan Prefecture	KIII with the DGE	ENVAL	<ul style="list-style-type: none"> ■ Three (3) Representatives of the DGE 		
Meetings with Sub-Prefecture and Local Government (Anyama and Songon)						
Anyama Sub prefecture						
22 November 22	Anyama Sub prefecture	Public Consultation with Local Authorities Anyama Town Hall	ENVAL ARISE	<ul style="list-style-type: none"> ■ Two (2) Secretaries of the Sub-Prefect of Anyama ■ Mayor of Anyama ■ One (1) Representative of the Agriculture Directorate of Anyama ■ Three (3) representatives of the Chiefdom of Adonkoi I; ■ Three (3) representatives of the Chiefdom of Allokoi ■ Two (2) Imams from the Superior Council of Imams of Mosques and Islamic Affairs in Côte d'Ivoire (COSIM) ■ Radio Anyama Director 		Favourable

Date	Location	Activity	Participants		Photographic Evidence	General Opinion about the Project
07 November 2022	Anyama Departmental Directorate of the Ministry of Construction, Housing and Urbanism (MCLU)	KII with the Anyama Departmental Directorate of the Ministry of Construction, Housing and Urbanism (MCLU)	ENVAL	<ul style="list-style-type: none"> One (1) Representative of the Anyama Directorate of the MCLU (Department Manager) 		Favourable
07 November 2022	Anyama Departmental Directorate of the Ministry of Agriculture and Sustainable Development (MEMINADE R) of Anyama Sector	KII with the Anyama Departmental Directorate of the Ministry of Agriculture and Sustainable Development	ENVAL	<ul style="list-style-type: none"> Three (3) Representatives of the Directorate of Agriculture and Sustainable Development (Department Manager, Department Agent, and Assistant) 		Favourable

Date	Location	Activity	Participants	Photographic Evidence	General Opinion about the Project
07 November 2022	Anyama Water and Forestry Department (<i>Eaux et Forêts</i>)	KII with Anyama Water and Forestry Department	ENVAL <ul style="list-style-type: none"> ■ Two (2) Representatives of the Anyama Water and Forestry Department (Department Manager and Water Service Department) 		Favourable subject to the consideration of recommendations
Songon Sub prefecture					
19 December	Songon Sub prefecture	Public Consultation with Local Authorities Songon Town Hall	ENVAL ARISE <ul style="list-style-type: none"> ■ The Sub-Prefect of Songon ■ Mayor of Songon ■ One (1) Representative of Water and Forestry Department of Songon ■ Four (4) representatives of the Chiefdom of Anguédedou ■ Five (5) representatives of the Chiefdom of Abadjin Kouté 		Favourable

Date	Location	Activity	Participants		Photographic Evidence	General Opinion about the Project
14 November 2022	Songon Departmental Directorate of the Ministry of Construction, Housing and Urbanism (MCLU)	Meeting with the Songon Departmental Directorate of the Ministry of Construction, Housing and Urbanism (MCLU)	ENVAL	<ul style="list-style-type: none"> Two (2) Representatives of the Directorate of the MCLU (Department Manager and Assistant Department Manager) 		Favourable subject to the consideration of recommendations
07 November 2022	Songon Departmental Directorate of the Ministry of State, Ministry of Agriculture and Sustainable Development (MEMINADER)	Meeting with the Songon Departmental Directorate of the Ministry of Agriculture and Sustainable Development	ENVAL	<ul style="list-style-type: none"> One (1) Representative of the Directorate of the Ministry of Agriculture and Sustainable Development (MEMINADER Department Manager) 		Favourable

Source: ERM and ENVAL, 2022

11.3.3.3 Preliminary overview of concerns and issues raised by national and subprefecture government stakeholders

This section presents a summary of the main issues and concerns raised by national and subprefecture government representatives in the ESIA phase. A detail account of what was discussed at each meeting is presented in 0. The summary of these feedbacks, concerns, questions and expectations raised by stakeholders is presented in Table 11-3 below.

- **Perception Towards the Project.** Consultation activities with the various stakeholders showed that their perception towards the Project is positive and that it represents a significant development that will bring local, regional and national benefits, promoting the local transformation of raw materials and economic development. Despite this positive perception, questions and concerns were raised during the consultation activities, which are summarised as follows:
 - Stakeholders raised concerns and reservations about the land acquisition activities for the Project, as they have reported that agricultural activities are being performed in the area.
 - Stakeholders raised concerns and reservations about the potential impacts of the Project to the environment and the management measures to be put in place.
- **Expectations from the Project.** The results of the consultation revealed the following expectations of the stakeholders:
 - Stakeholders expect that the Project has all the documentation about customary rights, compensation for landowners and users.
 - Stakeholders expect that the Project will prioritise the local employability of the youth, as well as establish initiatives to promote benefits and development to the adjacent populations.
- **Position towards the Project.** In general, the vast majority of stakeholder's position towards the Project is positive, with the exception of stakeholders that have concerns about the environmental management and potential impacts of the Project. Several stakeholders expect management measures related to waste, water resources, air pollution, dust, noise to be implemented in order to avoid potential nuisances due to the modification of the landscape.
- **Cooperate with the Project.** Field observations and the results of the consultation activities showed that the vast majority of stakeholders are cooperating with the Project, and suggests to be contacted to collaborate more deeply with the Project; despite the many questions and concerns that were raised about compensation and land acquisition procedures, they affirmed their confidence in the Project owners as it's the Ivorian Government, but their concerns come from the lack of clear and specific information in this regard not out of mistrust.

Table 11-7 Summary of Concerns and Issues Raised by National and Local Government Stakeholders in the ESIA Phase

Subject	Key outcomes and concerns
Positive Aspects of the Project	<ul style="list-style-type: none"> ■ General favourable opinion because of the local transformation of raw materials and economic development of the country that will allow to decrease the unemployment rate, increase local consumption, increase the qualification and training of the communities, and massive job creation. ■ Project seen as a major development project for the area, innovative and promoter of improvements the living conditions of the Ivorian population and of the AAD. ■ Favourable opinions regarding a better modernization of national industries.
Employment	<ul style="list-style-type: none"> ■ Recommendations about the reservation of management positions for the youth of the village. ■ Concerns about the unfair recruitment of the workers from the villages, as the recruitment is done according to the relations between the applicant and the leaders, harming the rest of the community that does not enjoy this opportunity.

Subject	Key outcomes and concerns
	<ul style="list-style-type: none"> ■ Expectations to strengthen and accompany the farmers, other producers and women in the area and to prioritise the local youth in the various recruitments.
Access issues	<ul style="list-style-type: none"> ■ Concerns about the cost of access to the facilities in the Project area ■ Concerns about the destruction of roads and crosswalks due to the crossing of heavy vehicles through the village. Expectations to put in place a plan to develop or restore roads or tracks.
Health	<ul style="list-style-type: none"> ■ No information was provided by the consulted stakeholders on this regard
Land and economic displacement	<ul style="list-style-type: none"> ■ Questions about the nature of the contract at the land ownership level with the state and the duration of that contract. ■ Concerns about the land use plan and impacts in the construction phase ■ Concerns about the assumption of responsibilities for providing compensation to farmers in the Project area. ■ Request for clarification on the exact location of the Project footprint ■ Questions about the process of procurement of the parcel through SOGEDI (former AGEDI), and the boundaries of PK24, as it was 940 ha at the beginning but then an addition of 61 ha was made, bringing an area of 1001 ha. ■ Recommendations and expectations about the promoters, to contact the chiefdoms of Attinguié, Akoupé-Zeudji and Allokoi to have all the documentation on the industrial zone (customary rights, compensations that were made before the transfer of land, etc.). ■ Questions about the considerations on the existing scheme and agreement and the structuring of business activities defined by AGEDI/SOGEDI. ■ Recommendations to carry an identification of parcels and occupants. As the area was bare land for a while but then was occupied by farmers. A decision needs to be made on compensation or direct procurement of materials from producers. ■ Concerns about the way in which ARISE acquired the land, specifically the plots of land that used to be part of the former SAPH plantations. Recommendations to solve the issue of land acquisition and the planned compensation, as it is not clear what are ARISE plans are for the affected communities, and additional context is needed to accurately address this question. Questions about who will address this matter, SOGEDI or ARISE, as ARISE has stated that it procured the 429ha of land, provided by the state through a public-private partnership between the state and SOGEDI, rather than being procured outright. ■ Suggestions that ARISE should reach out to community leaders to provide information on job openings and recruitment to young people in the area.
Environment, Air pollution, Nuisance, Wastewater	<ul style="list-style-type: none"> ■ Suggestions to carry out a collective waste management of the zone with the other industries. ■ Questions about why ARISE has initiate an autonomous waste management, as there is a failure at the level of management system in Côte d'Ivoire. Since companies will come to settle there will be the rejection of effluents, dust, water and air pollution and also the position of the forest of Anguédedou, one of the catchment areas of the Water Distribution Company of Côte d'Ivoire (SODECI). ■ Recommendations about the ESIA Report to study and emphasise the issue of waste and the consequences and nuisances. Recommendations from ANAGED to be contacted in order to provide the firm with the regulations and all the necessary documents, both during the construction and operation phases, as the waste management system depends on the type of waste produced and the service providers involved in the field. ■ Concerns about water abstraction and wastewater and all effluents management and questions about the responsibility of ARISE in terms of water resources management since drilling and withdrawals are subject to authorization in accordance with the water code according to the law on water code. Recommendations to contact the General Directorate of Water Resources, and to obtain an authorisation from the Ministry of Water and Forests for any water withdrawal. Recommendations to provide document attesting the tax exempt of the Project. ■ Concerns by the fact that the water will be discharged, especially since the Project is not far from the SODECI catchment area and therefore from the groundwater.

Subject	Key outcomes and concerns
	<p>Because the Project is in the North and that can thus involve pollutions, even if they are treated. In addition, recommendations were made to contact the Ministry of Water and Forestry which is the manager of this resource in order to follow the procedure and the ONEP which is an institutional water collector.</p> <ul style="list-style-type: none"> ■ Recommendations for this Project to be compartmentalised according to the activities of the operators, taking into account the proximity of the Anguédedou forest and the discharge of effluents into the zone. ARISE explained that there is a specific map of the classification of the activities on the zone so that is already considered according to the direction of the dominant winds. ■ Recommendations made about dust management, noise and water management, wastewater, finding a structure for wastewater management; find ways of channelling noise; consider a gender approach into its activities, and provide detailed savings in the applicable fiscal intervention and cost of access to facilities. ■ Concerns about the difficulty in autonomous waste management, and dust discharges. Recommendations to establish a collective management method to guarantee a minimum pollution threshold. Favourable opinion subject to Collective management of waste and effluents. ■ Questions regarding the types of waste to be produced and suggestions to contact ANAGED to file the management regulations of solid waste, have information available for the implementation of a solid waste management plan (collection service provider, etc.), consider the collection, transport and disposal of waste in all phases of the Project, and provide for measures against all kinds of nuisances. ■ Concerns about the waste management in the operational phase. ■ Recommendations about the construction of buildings and infrastructure and the treatment of waste, which must be carried out in accordance with standards. ■ Concerns about the degradation of forest cover and the contamination of waterways and groundwater. Expectations of compensatory reforestation and the adequate treatment of wastewater before discharge. ■ Recommendations to respect the standards at the level of the installation of the various companies on the site according to the activities (to group together the companies carrying out the same activities). ■ Concerns about wastewater management and recommendations about establishing a distribution of companies according to activities (group together companies carrying out the same activities). ■ Recommendations to foresee sanitation facilities in the Project area; ■ Recommendations about the respect for the environment ■ Concerns about the mitigation measures that will be established to avoid the modification of the landscape due to the installation of factories and destruction of fields. ■ Concerns about the impacts from the establishment of food industries and its facilities and recommendations around noise measures and environmental impacts. Mitigation measures to be recommended in the ESIA and presented at the public inquiry.
<p>Ecosystem Services</p>	<ul style="list-style-type: none"> ■ No information was provided by the consulted stakeholders on this regard
<p>Cultural Heritage</p>	<ul style="list-style-type: none"> ■ Concerns about the fact that the area is likely to be an archaeological zone. Historically, this area is quite important in the lives of the people who passed through, and it's called "Molière Gôh" because of its historical character in terms of settlement. Suggestions to carry out preventive archaeological surveys, and to contact the ministry following the discovery of the remains so that their conservation can be effective. ■ Concerns about the lack of knowledge about the area, as it has been little studied, so that the knowledge relating to archaeology and cultural heritage remains incomplete. However, it is likely to be an area where the presence of archaeological remains is certain, as it is likely to have been occupied several times over the years. Hence the need to identify clues that could suggest the presence of sacred and archaeological sites. Thus, as far as archaeology is concerned, suggestions were made about the experts to carry out surface surveys and soundings in order to reveal the richness of the archaeological heritage of the area. In other words, suggestions were made about

Subject	Key outcomes and concerns
	<p>the study of the cultural heritage to be accompanied by a more thorough study of the archaeological heritage.</p> <ul style="list-style-type: none"> ■ Concerns about the likeliness of the area to contain a number of archaeological remains of the peoples who passed through it, as according to some historical works (Allou Kouamé and others), the large part of the area (sites to host the Project and the surrounding localities) has experienced several occupations. Moreover, the archaeological studies of the localities impacted by the Project are insufficient, according to the literature at his disposal. Therefore, suggestions to conduct, as part of the investigations on heritage, understand oral traditions in the localities, as well as archaeological surveys and polls on the sites so as not to lose any useful archaeological data for the Ivorian heritage. ■ Suggestions to follow the new law in Côte d'Ivoire that requires that for any project of public or private utility a study of preventive archaeology is henceforth initiated and stressed the importance of preventive archaeology so that existing remains are not destroyed during development work. Recommendations were made about ARISE to take into contact with the requirements of the law on preventive archaeology, as the oral tradition is not always able to affirm or deny the content of the sites to be developed. Note: the referred law is only on the draft stage. The law project is adopted by the National Assembly (December 2022 status) but still has to go to the Senate before being eligible, thus it is not applicable to the Project yet. ■ Recommendations to obtain a copy of the report of the study on the archaeological heritage carried out for Section 2 of the Y4 project, establishing the non-existence of cultural and archaeological heritage in the area, in order to use the archaeological results for other future recommendations. In the absence of obtaining this previous report, an archaeological study in the preventive sense should be carried out before the beginning of the activities of ARISE.
ESIA	<ul style="list-style-type: none"> ■ Expectations about the validation of the Environmental and Social Impact Assessment Report at ANDE ■ Recommendations to consider in the drafting of the ESIA Report: <ul style="list-style-type: none"> ○ Describe project activities and their impacts and propose mitigation measures ○ Describe the infrastructure that will be on the site; ○ To monitor and evaluate the management of environmental and nature protection matrices and preservation of the quality of environmental features ○ To take into account the ISO 9001 standard of the Environmental standard; ○ Describe the characteristics of the internal traffic routes in the Industrial Zone; ○ Describe the sewage system that will be put in place. ○ Give the elements that constitute the site base and annex the agreement between the Arise Company and the State of Côte d'Ivoire. If not, explain the mode of acquisition or annex the letter of attribution. ○ Recommendations about the description of the waste management process and the management of the different wastes assuring proper management of waste generated in all phases of the Project ○ Recommendations to specify the area that covers each phase and mention the type of contract and the method of recruitment. In addition, the ratio of 25 men for one toilet and 15 women for one toilet. ○ Provide workers with PPE adapted to the activity and ensure the use of this PPE ○ Recommendations about the description of the emergency sanitary infrastructure in case of incident, accident and emergency. ○ Give the mode of supply and materials: <ul style="list-style-type: none"> ■ The origin of the materials used for asphaltting and their place of origin by subcontractors. ■ Recommendations about the description of the way of supplying the machines with hydrocarbons and the water supply of the workers and the companies in the Report. ○ Recommendations to mention the existing watercourses, to be located taking into account the radius of impact and to specify its use or its utility for the community.
Other	<ul style="list-style-type: none"> ■ Questions about the economic model (in terms of remuneration and billing) that will be in place. and about the cost of accessing the allocated space or infrastructure.

Subject	Key outcomes and concerns
	<ul style="list-style-type: none"> ■ Questions about the existence of any special benefits that are not written into the contract code and what is the state's share of the promotion coverage, taking into account that the Project is initially tax exempt. ■ Expectations of benefiting communities from facilities such as schools; urban health centres. ■ Expectations and recommendations to contact the forestry service. ■ Concerns about fulfilling commitments on public consultations and engagements with farmers and agricultural cooperatives. ■ Questions about whether the payments of the industries to be installed are received by ARISE as promoter, or if these fees go to the State. ■ Questions about the involvement of ARISE in the construction of the enterprises. ■ Concerns regarding the creation of any development projects like schools, health centres, land provision, etc. for the surrounding villages. ■ Questions about the size of the Project of ARISE and exact location and if the area is already being exploited. ■ Recommendations to the chief of the villages, around keeping a record of requirements during discussions with the promoters once in the village to avoid any situations of non-compliance on the part of the promoter.

11.3.3.4 Meetings with Communities in the Project Aol

A total of nine (9) meetings were organised with the local communities and one (1) KII with the China Harbour Engineering Company (CHEC), of which:

- In Anyama Sub-prefecture, five (5) public consultations and one (1) KII in the villages in the Aol:
 - In Akoupé-Zeudji village, two (2) Public Consultations
 - In Agoussi village, one (1) Public consultation
 - In Allokoi village, one (1) Public Consultation and (1) KII
 - In Adonkoi I village, one (1) Public Consultation
- In Songon Sub-prefecture, three (3) Public consultations and one (1) KII, of which:
 - In Abadjin-Kouté village, one (1) Public Consultation and one (1) KII
 - In Palmafrigue V2 village, one (1) Public Consultation
 - In Anguédédou village, one (1) Public Consultation
- One (1) KII with the representatives of the CHEC

In total, approximately 88 persons attended the meetings, of which only 11 women. The complete list of meetings organised during ESIA phase is presented in Table 11-8 below. The meetings were attended by representatives of Akoupé-Zeudji, Allokoi, Adonkoi I Attinguié, Abadjin-Kouté, Anguédédou, and Palmafrigue V2 communities. Palmafrigue is a settlement where the workers for the Palmafrigue palm oil factory live.

The meeting with the representatives of Attinguié villages could not take place.


Even though the meeting with Attinguié did not take place, the village community was consulted during the scoping phase and was part of the settlement profiling survey that was conducted during scoping in June 2022 to inform the baseline. See Section 11.3.2 for more information on the consultations that took place during scoping.



In addition, the objective with the KII meeting with the CHEC Wastewater Treatment Plant (WWTP) Company was to establish relation and cooperation with the WWTP that will be established in the Project area. The WWTP is located at 3 km from the Project.



As for the management of TRCI and Palmafrique Companies, although the stakeholders answered to the invitation letters, the parties involved were not available to maintain the exchanges. These two companies were also engaged as part of the scoping phase.



Table 11-8 presents the list of ESIA meetings. The full content of these conversations and the minutes of the meetings undertaken during the ESIA phase that inform this section are presented in 0.



Table 11-8 List of ESIA Meetings with Local Community Representatives of Villages in the Project Area



Date	Location	Activity	Participants	Photographic Evidence	General Opinion about the Project
Meetings with Local Community Representatives					
Anyama Sub prefecture					
09 November 2022	Village of Akoupé-Zeudji	Consultation with Akoupé-Zeudji Community	ENVAL <ul style="list-style-type: none"> ■ 10 Representatives of the village chiefdom: deputy village chief, notables, general secretary, youth representative, etc. 		Favourable

Date	Location	Activity	Participants	Photographic Evidence	General Opinion about the Project
30 November 2022	Village of Akoupé-Zeudji	Consultation with Akoupé-Zeudji Community	ENVAL ARISE <ul style="list-style-type: none"> ■ 12 Representatives of the village chieftom: deputy village chief, notables, general secretary, three (3) youth representatives, etc. 		Favourable
December 2022	Village of Agoussi	Consultation with Agoussi Community	ENVAL <ul style="list-style-type: none"> ■ Six (6) Representatives of the village chieftom: village chief, notables and youth representatives ■ 15 local people. 		Favourable

Date	Location	Activity	Participants		Photographic Evidence	General Opinion about the Project
08 November 2022	Village of Allokoi	Consultation with Allokoi Community	ENVAL	<ul style="list-style-type: none"> Six (6) Representatives of the village chiefdom: deputy village chief, secretary, councillor, land chief, notables, etc. 		Favourable
08 November 2022	Alliance Anyama Private High school (Allokoi Village)	KII with the Director of the Alliance Anyama Private High school	ENVAL	<ul style="list-style-type: none"> Director of the Alliance Anyama Private High school 		

Date	Location	Activity	Participants	Photographic Evidence	General Opinion about the Project
08 November 2022	Village of Adonkoi I	Consultation with Adonkoi I Community	ENVAL <ul style="list-style-type: none"> ■ Seven (7) Representatives of the village chiefdom: village chief, general secretary, councillor, Land chief, notables, etc ■ Attinguié's Village chief 		Favourable
Songon Sub prefecture					
14 November 2022	Abadjin-Kouté village	Consultation with Abadjin-Kouté Community	ENVAL <ul style="list-style-type: none"> ■ Seven (7) representatives of the village chiefdom: deputy chief, notable, treasurer and vice treasurer, president of the youth association (<i>Union de Jeunesse d'Abadjin-Kouté</i> (UJAK)), secretary general of the youth, president of the association of women Abagnon. 		Favourable

Date	Location	Activity	Participants		Photographic Evidence	General Opinion about the Project
1 December 2022	Abadjin-Kouté village	Consultation with Abadjin-Kouté Community	ENVAL ARISE	<ul style="list-style-type: none"> ■ Two (2) Representatives of the village chiefdom: Land representatives. 		Favorable
09 November 2022	PALMAFRIQUE V2 Village	Consultation with V2 PALMAFRIQUE Community	ENVAL	<ul style="list-style-type: none"> ■ Two (2) representatives of the village chiefdom: chief and general secretary ■ Three (3) representatives of the youth 		Favourable

Date	Location	Activity	Participants		Photographic Evidence	General Opinion about the Project
17 November 2022	Anguédédou settlement (belonging to Abadjin-Kouté)	Consultation with Anguédédou Community	ENVAL	<ul style="list-style-type: none"> ■ Two (2) representatives of the village chiefdom: chief and deputy Chief ■ President and two (2) representatives of the Youth 		Favourable
Meetings with Business and Companies in the Project Aol						
14 December 2022	CHEC	Meeting with CHEC Wastewater Treatment Plant Company	ENVAL ARISE	<ul style="list-style-type: none"> ■ Two (2) Representatives of the Direction of the CHEC Company 		Favourable

Source: ERM and ENVAL, 2022

11.3.3.5 Preliminary overview of concerns and issues raised by local community representatives

This section presents a summary of the main issues and concerns raised by local community representatives in the ESIA phase. A detailed account of what was discussed at each meeting is presented in 0. The summary of these feedbacks, concerns, questions and expectations raised by stakeholders is presented in Table 11-5 below.

- *Perception Towards the Project.* Consultation activities with the various stakeholders showed that their perception towards the Project is positive and that it represents a breakthrough in the well being of the community as it's a major development project. Nevertheless, they are uncertain about the benefits of the Project to the communities, as most of the villages explained that companies in the area are not hiring, even though promises of employability were made with the implementation of the PK24 Industrial Zone (940 ha). Despite this overall positive perception, many questions and concerns were raised during the consultation activities, which are summarised as follows:
 - Stakeholders raised concerns and reservations about the impacts of the Project on the environment and the communities of the villages. The discharge of wastewater of the whole PK24 is worsening the waters used by communities, and the occupation of the site is leaving the villages without land.
- *Expectations from the Project.* The results of the consultation revealed the following expectations of the stakeholders:
 - Stakeholders have high expectations about the local employability of the youth and the local communities;
 - Stakeholders expect that the Project has undertaken the compensation and land acquisition and compensation processes accordingly, and
 - Stakeholders expect that the Project will establish initiatives to promote benefits and development to the adjacent communities. Stakeholders identified several infrastructural needs within the villages in the AoI and expect to be provided with some improvements, such as health facilities, educational facilities, the improvement of roads and electrification, water and sanitation infrastructure,
- *Position towards the Project.* In general, the vast majority of stakeholder's position towards the Project is positive, with the exception of stakeholders that have concerns about the unmet hiring promises and the potential impact of the Project to the water resources.
- *Cooperate with the Project.* Field observations and the results of the consultation activities showed that the vast majority of stakeholders are cooperating with the Project and suggests being contacted to collaborate more deeply with the Project and to have mutual benefit.

Table 11-9 Summary of Concerns and Issues Raised by Local Community Representatives in the ESIA Phase

Subject	Key outcomes and concerns
Positive Aspects of the Project	<ul style="list-style-type: none"> ■ General expectations about the opportunities of employment and economic development that the implementation of the Project can attract.
Employment	<ul style="list-style-type: none"> ■ General concerns about the lack of fulfilment of employment promises made by other industries located in the rest of the industrial zone (940ha). ■ General expectations about local employability of the youth of the villages.
Health	<ul style="list-style-type: none"> ■ Expectations about the reinforcement of the technical platform of the urban health center of the village and the Construction of an integrated medical center in Akoupé Zeudji and the construction of buildings (gynaecology, radiology, operating module

Subject	Key outcomes and concerns
	<p>and many others), which is intended to be preventive in order to reduce or neutralise maternal and infant mortality and morbidity.</p> <ul style="list-style-type: none"> ■ General expectations about the provision of a health center, an ambulance and laboratory for the CSU (Urban Health Center), a hospital and a maternity hospital.
Access issues	<ul style="list-style-type: none"> ■ As power and electricity cuts have been reported to be happening in the education center Alliance Anyama High school, there are recommendations about the installation of a solar power panel in the school. ■ Concerns about the water quality of the rivers which shelter the industrial zone, namely the Gobouet, the Gnintchi, Aboffi Seûfi which waters were previously used as drinking water for the community. But since the creation of the industrial zone with the anarchic rejection of the wastewater of the companies, these waters they became dirty and changed colours. Consequently, the problem of water arises as the community does not benefit from running water due to a problem of connection. Therefore, these rivers were beneficial for some people. And others use them because they have fields near or a few hours away from this water. ■ Expectations and concerns about asphaltting the road that connects the village to the Project site to facilitate access to workers on the site, and of the construction of a fence in the school as a priority, as the pupils are exposed to accidents. In addition, the construction of this fence could promote its use as an examination centre in order to avoid any massive displacement of pupils. Expectations about the reinforcement of the electrical network and drinking water supply network ■ Expectations about the extension of the electrical network ■ Expectations about opening of a road linking the village to N'Droté, about the electrification of the village, the construction of a water tower, and the widening of the road. ■ Expectations about the construction of water towers and wastewater drainage channels ■ Expectations about the construction of a water tower, the electrification of the village, the widening of the village roads, asphaltting of the village roads and the entrance to the village.
Land and economic displacement	<ul style="list-style-type: none"> ■ Concerns about the lack of information about the occupation of the site. For this reason, recommendations have been made to meet ARISE promoter and then schedule a site visit. (ARISE noted this complaint and re-engaged them for a second time as part of this ESIA, and the site visit was done in December 2022. See the list of stakeholders' meetings above). Recommendations from the chiefdom to consider the future generation in terms of housing when exploiting its site. As there is no more land in the village, their plot of land on the Project site is becoming a priority for the village. ■ A site visit was done on December 1st with the representatives of the village chiefdom in order to clarify the discussions around the potential existence of land belonging to the village and its cooperative inside the Project area. During the site visit, It turned out that the parcel they had in their possession had been ceded to African Rubber Plantation Company (SAPH) at the time. As a result, it was not necessary to make a site visit. The plot no longer exists and SAPH has bought back their plot, which is not in the domain conceded to ARISE by the State of Côte d'Ivoire. The village had signed a partnership agreement with TRCI in order to transfer their plot to it. ■ Expectations to compensation of land rights if this had not been done
Environment, Air pollution, Nuisance, Wastewater	<ul style="list-style-type: none"> ■ No information was provided by the consulted stakeholders on this regard
ESIA	<ul style="list-style-type: none"> ■ Concerns about the fact that ARISE has not made any return regarding their grievances. ARISE noted this complaint and re-engaged them for a second time as part of this ESIA (see the list of stakeholders' meetings above).
Cultural Heritage	<ul style="list-style-type: none"> ■ No information was provided by the consulted stakeholders on this regard
Other	<ul style="list-style-type: none"> ■ General expectations about the construction of a health centre in the Industrial Zone, to provide a police station and/or a gendarmerie in the area for the security of goods

Subject	Key outcomes and concerns
	<p>and people, and to provide an emergency rescue centre (Military Fire Brigade Group) in case of accident, incident or fire in the Industrial Zone.</p> <ul style="list-style-type: none">■ General expectations about the construction of an elementary school in the villages, youth centres, nursery schools, school lunchroom, the construction of a cultural centre, a primary school, a vocational high school and a college, and to fence the elementary school of the village.■ Expectations from the chiefdom to meet the promoter for possible exchanges and about the Project to establish collaboration with the Chiefdom and the village■ Concerns about women needing financing support to undertake income-generating activities. Expectations to undertake social actions in favour of widows and orphans, and to provide social actions to accompany the youth in their activities.■ Expectations to set up a store as a supermarket to sell their local products■ Expectations about the provision of a tricycle to collect garbage.

11.4 Review of Key Considerations for Future Engagement Activities

Based on the previous summary of the consultation activities results, the key lessons learned from the participation activities include the following:

- There is a lack of information about the Project. Several stakeholders requested more information on the procedures followed for land acquisition and compensation, information about the economic involvement of the different parties, as well as job opportunities to local communities.
- Project information should be clear and allow stakeholders to understand the development opportunities and management measures affecting them.
- Particular attention should be paid to consulting with communities affected by economic displacement before starting any activities related to livelihood, prior to the beginning of the agricultural season.
- Consultation activities with the affected communities should begin before construction and land acquisition activities.

11.5 Planned Engagement during the ESIA Disclosure Process

The last stage of the ESIA process is “Disclosure”, which consists of publicly disclosing a draft version of the complete impact assessment, i.e., the Final Draft ESIA Report. The Final Draft ESIA Report and supplementing documents (“ESIA package”), including the Non-Technical Summary and ESMP, will be made widely available to the public for comment via the Project website and hard copies available (at least the summaries in case of large documents) for inspection at a number of specified locations.

Public Consultation and Disclosure events will be organised by the ESIA consultant in close cooperation with ARISE and other key relevant organizations. The main objective of the Public Consultation is to engage local key stakeholders and involve them in the revision of the draft findings of the ESIA including the study of the various alternatives. Public Consultation sessions are a key requirement for the IFC as part of the Disclosure and Information Sharing Policy. It is also a key condition stipulated by law under the national regulations ruling environmental and social impact assessment and stakeholder engagement.

In accordance with the Environment Code of the Republic of Côte d’Ivoire, and EIA regulations, the ESIA Report will be submitted to the ANDE in support of an application for a *Certificat de Conformité Environnementale*.

In line with the requirements as per EIA law, ARISE will implement a programme of disclosure and stakeholder engagement designed to provide all interested parties with an opportunity to understand and comment on the proposals and their impacts. The program will involve meetings with national, district and local level stakeholders including local communities to provide the following information:

- Updates regarding the nature of the Project
- Disclosure of Draft ESIA findings, including a non-technical summary (NTS) and identification of impacts and proposed mitigation measures; and
- SEP and Grievance mechanism and company contact details.

All comments, questions and other input from the public will be logged and then considered by ARISE and the ESIA team in the Final ESIA, especially those related to mitigation and compensation. Where feasible and relevant, changes will be made in the Project planning/design/ implementation to address concerns raised. These changes will be reflected in revisions to the Project as appropriate, and the revised final ESIA Report.

11.6 Grievance Mechanisms

11.6.1 Overview

Stakeholder engagement is a two-way process. It is therefore important to ensure that there is a mechanism to allow stakeholders affected by or interested in the Project to present their input²⁴⁰ (e.g. opinions, requests, suggestions, feedback and grievances) for consideration and, if required, seek redress. Even where not all grievances are deemed 'valid' or applicable to the context of the Project, the Grievance Mechanism (GM) needs to function in a non-judgemental manner and record all feedback received. In the case of this Project, there is a need for a Grievance Mechanism. The GM will enable stakeholders to make a complaint or a suggestion regarding the way the Project is being managed.

The IFC's Good Practice Guide to addressing grievances from Project-affected communities describes a grievance as:

'...A concern or complaint raised by an individual or a group within communities affected by company operations. Both concerns and complaints can result from either real or perceived impacts of a company's operations and may be filed in the same manner and handled with the same procedure.'

It describes a Project-level grievance mechanism for affected communities as:

'...A process for receiving, evaluating, and addressing project-related grievances from affected communities at the level of the company, or project.'

The GM will be designed to identify and manage issues throughout the entire Project lifecycle. Prior to the start of construction, the GM should be fully implemented with a representative to be appointed for the Project, who will be responsible for grievance management. Grievances will be passed through the representative in the first instance, who will be responsible for passing the grievance on to the appropriate person in line with the Project GM. Personnel responsible for grievance management during construction and operation have not currently been identified.

The GM outlines the approach to accepting, assessing, resolving and monitoring grievances from stakeholders regarding the Project. Timely redress or resolution of grievances is vital to ensure successful implementation of the Project.

Grievances can encompass minor concerns as well as serious or long-term issues. They might be felt and expressed by a variety of parties including individuals, groups, communities, entities, or other parties affected or likely to be affected by the social or environmental impacts of the Project. Grievances may take the form of specific complaints for damages/injury, concerns about the Project activities, perceived incidents or impacts or requests for more information / clarity about the Project. It is essential to have a robust and credible mechanism to systematically handle and resolve any complaints that might arise in order that they do not escalate and present a risk to operations or the reputation of the company (nationally or internationally). If well-handled, an effective GM can help foster positive relationships and build trust with stakeholders.

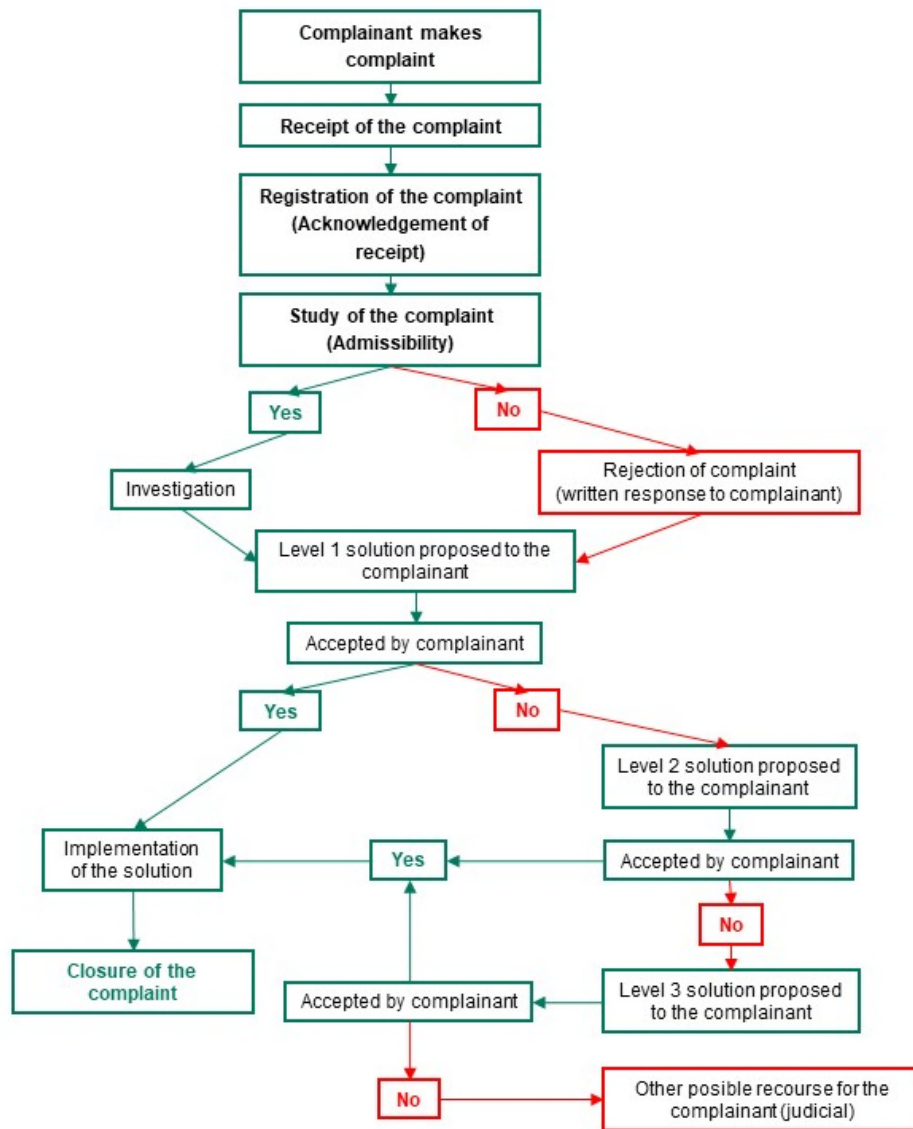
During the ESIA process, ERM and ENVAL will support ARISE with feedback and grievances raised by stakeholders by:

- Reporting to ARISE any feedback or grievance in a timely manner for its adequate management by ARISE during the ESIA process;
- Reporting stakeholder feedback in the updated SEP and in the ESIA and informing the impact assessment.

²⁴⁰ All types of the stakeholders input are generalised in this SEP and referred as "grievances".

11.6.2 Grievance Management

External grievances and feedback from stakeholders will be managed in line with ARISE’s Internal Grievance Mechanism Procedure. It defines how both external and internal complaints and grievances are to be managed across ARISE operations. The scope of the GM for external stakeholders shall address all types of grievances. This GM operates according to the logic illustrated in the graph below:



Source: ARISE; 2022

Figure 11-1 ARISE Grievance Process

For more information about the Grievance Process, since the reception and registration until the close-out, refer to the SEP.

11.6.3 Contacts to provide feedback and grievances

Contacts will be the Community Liaison Officer (CLO) and the E&S Manager (which is being recruited) during Project construction and commissioning.

During the ESIA phase (including Scoping phase), ARISE set up a dedicated email address for the Project, so that stakeholders can contact ARISE directly. Stakeholders are also able to use ARISE's Grievance Mechanism. A dedicated local phone number are also communicated to stakeholders.

Any feedback or grievance raised during the ESIA phase (including scoping phase) can be submitted directly to ENVAL during the consultation meetings, or to ARISE by email to zic.abidjan@arisenet.com or by phone (+225 05 95 00 00 08). These contacts will be communicated to stakeholders during the consultation meetings through the Background Information Document in Appendix H.

11.7 Monitoring and Reporting

11.7.1 Introduction

Stakeholder engagement will be monitored throughout the ESIA process to ensure that the desired outcomes are being achieved.

11.7.2 Monitoring Stakeholder Engagement Activities

There are two methods through which the stakeholder engagement process will be (and has been) monitored:

1. Review of engagement activities in the field:

- During engagement with stakeholders, the ESIA team will assess meetings using a feedback evaluation form or by asking questions to participants, depending on the stakeholder group, to ensure that messages are being conveyed clearly.
- The ESIA team will conduct debriefing sessions while in the field. This method will be used to assess whether the required outcomes of the stakeholder engagement process are being achieved, and to provide the opportunity to amend the process where necessary.
- The approach to engagement and messages to be used will also be discussed with Project staff to gain their feedback.

2. The use of engagement tools developed through the ESIA engagement including the:

- Stakeholder list;/database; and
- Meeting records of all consultations held.

11.7.3 Reporting Stakeholder Engagement Activities

Evaluation of performance will assess the extent to which the engagement activities and outputs met those outlined in the SEP. In assessing performance, the following will be considered:

- materials disseminated: types, frequency, and location;
- place and time of formal engagement events and level of participation by specific stakeholder groups (e.g., women, youth);
- number of comments received, type of stakeholder and details of feedback provided;
- numbers and type of stakeholders who come into contact with the Project team by mail, phone call or any other means of communication;
- meeting minutes, attendance registers and photographic evidence;
- comments received by government authorities, and other parties and passed on to the Project; and
- numbers and types of feedback and / or grievances and the nature and timing of their resolution

APPENDIX A ESIA TOR FROM ANDE

MINISTÈRE DE L'ENVIRONNEMENT
ET DU DEVELOPPEMENT DURABLE

REPUBLIQUE DE CÔTE D'IVOIRE

Union – Discipline - Travail



Agence Nationale De l'Environnement (ANDE)

TERMES DE REFERENCE

ETUDE D'IMPACT ENVIRONNEMENTAL ET SOCIAL

PROJET DE CONSTRUCTION D'UNE ZONE
ÉCONOMIQUE INDUSTRIELLE DE 422 HECTARES
PRÈS D'ABIDJAN, PK24-ABIDJAN, CÔTE D'IVOIRE

PROMOTEUR : **ARISE IVOIRE**

Septembre 2022



TDR EIES N° -213-0922/dd

ANDE
Tél: 22 46 75 90

GLOSSAIRE ET ACRONYMES

ANDE	:	Agence Nationale De l'Environnement
BEEA	:	Bureau d'Études Environnementales Agréé par le Ministère de l'Environnement et du Développement Durable
CIAPOL	:	Centre Ivoirien Antipollution
DGDD	:	Direction Générale du Développement Durable
DGE	:	Direction Générale de l'Environnement
EIES	:	Études d'Impact Environnemental et Social
MINEDD	:	Ministère de l'Environnement et du Développement Durable
PGES	:	Plan de Gestion Environnementale et Sociale
ARISE IVOIRE	:	Promoteur du projet
TDR	:	Termes De Référence

SOMMAIRE

GLOSSAIRE ET ACRONYMES	1
INTRODUCTION	3
I. CONTEXTE DE L'ÉTUDE	4
II. CONSIDÉRATIONS D'ORDRE MÉTHODOLOGIQUE ET OBJECTIFS DE L'ÉTUDE.....	4
II.1. CONSIDÉRATIONS D'ORDRE MÉTHODOLOGIQUE.....	4
II.2. OBJECTIFS DE L'ÉTUDE.....	4
III. TÂCHES DU BUREAU D'ÉTUDES ENVIRONNEMENTALES CHARGÉ DE L'EXÉCUTION DE L'EIES.....	5
III.1. PRESENTATION DU CADRE INSTITUTIONNEL ET JURIDIQUE.....	5
III.1.1. Cadre institutionnel.....	5
III.1.2. Cadre juridique.....	6
III.2. DESCRIPTION DU PROJET	8
III.2.1. Contexte du projet.....	8
III.2.2. Analyse des alternatives ou options du projet.....	9
III.2.3. Localisation géographique du projet.....	9
III.2.4. Justification du choix du site du projet.....	9
III.2.5. Plan d'aménagement du site du projet	9
III.2.6. Description du processus de mise en œuvre du projet	10
III.3. DESCRIPTION DE L'ETAT INITIAL DU SITE	11
III.3.1. Détermination de la zone d'étude	12
III.3.2. Description des différentes composantes de l'environnement initial du projet.....	12
III.4. IDENTIFICATION ET ANALYSE DES IMPACTS POTENTIELS DU PROJET.....	14
III.4.1. Identification et analyse des impacts.....	14
III.4.2. Évaluation de l'importance des impacts.....	15
III.5. CHANGEMENT CLIMATIQUE.....	18
III.5.1. Introduction.....	18
III.5.2. Objectifs.....	18
III.5.3. Étapes du processus d'évaluation de l'impact par les gaz à effet de serre des projets de développement.....	19
III.5.4. Contenu des étapes	19
III.6. MESURES DE PROTECTION DE L'ENVIRONNEMENT	24
III.7. GESTION DES RISQUES ET DES ACCIDENTS	26
III.8. PLAN DE GESTION ENVIRONNEMENTALE ET SOCIALE.....	27
III.9. PARTICIPATION DU PUBLIC	30
IV. DURÉE DE L'ÉTUDE	32
V. VALIDITÉ DES TERMES DE RÉFÉRENCES	32
VI. ÉQUIPE D'EXPERTS	32
VII. CONTENU ET PRÉSENTATION DU RAPPORT DE L'EIES	33
VIII. SOURCES DE DONNÉES ET D'INFORMATIONS	34
IX. RÉFÉRENCES BIBLIOGRAPHIQUES.....	34

INTRODUCTION

Le projet de construction d'une Zone Economique Industrielle de 422 hectares au PK24, initié par la société **ARISE IVOIRE** rentre dans le cadre de la relance économique, c'est-à-dire participer de façon active à la reconstruction de la Côte d'Ivoire à travers le développement du secteur industriel.

L'adoption de la Loi n° 96-766 du 03 octobre 1996, portant Code de l'Environnement et la promulgation du décret n° 96-894 du 08 novembre 1996 relatif aux règles et procédures applicables aux études d'impact environnemental par la République de Côte d'Ivoire, impliquent une obligation pour les projets d'investissement publics ou privés susceptibles de porter atteinte à l'environnement, d'être soumis soit à une Étude d'Impact Environnemental et Social (EIES), soit à un Constat d'impact ou soit à une exclusion catégorielle selon leur nature technique, leur ampleur et selon la sensibilité de leurs milieux d'implication.

Dans le cadre des dispositions légales et réglementaires susvisées, l'aménagement d'une zone industrielle telle qu'envisagé par la société **ARISE IVOIRE** fait l'objet d'Étude d'Impact Environnemental et Social (EIES) (annexe 1 du décret d'application n° 96 – 894 du 08 novembre 1996).

Dans ce contexte, ce présent document, Termes De Référence (TDR) est élaboré pour la réalisation de ladite étude et constitue une référence, un guide pour la société **ARISE IVOIRE** qui projette l'aménagement de 422 hectares à la zone industrielle d'Akoupé-Zeudji PK24 en vue de la poursuite des travaux d'aménagement de ladite zone industrielle.

L'EIES est un outil de gestion de l'environnement ; non seulement elle aide le promoteur à concevoir un projet plus soucieux du milieu récepteur sans remettre en cause sa faisabilité technique et économique, mais elle contribue aussi à déterminer les éléments cruciaux sur lesquels s'appuieront les choix et les prises de décision.

I. CONTEXTE DE L'ÉTUDE

Le présent document, Termes De Référence (TDR) pour la réalisation de l'EIES constitue une référence, un guide pour ARISE IVOIRE qui projette l'aménagement de 422 hectares en zone industrielle de d'Akoupé-Zeudji.

Mais au-delà des intérêts multiples et des opportunités économiques et sociales que pourrait offrir ce projet, il n'est pas sans conséquences dommageables sur l'environnement naturel et humain. Il est important de ne pas occulter les impacts négatifs que sa réalisation pourrait engendrer.

C'est pourquoi, l'Étude d'Impact Environnemental et Social (EIES) apparaît comme une approche indispensable pour identifier les effets du projet sur l'environnement, tant naturel qu'humain et proposer des solutions alternatives.

Ce présent document, Termes de Référence (TDR), a pour objectif, d'une part d'amener le promoteur du projet à élaborer un rapport d'EIES conforme à la législation en vigueur, et d'autre part de définir un canevas méthodologique de l'EIES incluant les enjeux majeurs du projet.

En effet, les TDR décrivent les actions à entreprendre pour faire face à toutes les exigences techniques, légales, procédurales du promoteur dans le cadre de l'élaboration d'un rapport d'EIES. Ces TDR décriront en outre la portée du travail à accomplir par le Bureau d'Études Environnementales Agréé (BEEA) choisi par la société **ARISE IVOIRE**.

Aussi, ces TDR ont été élaborés sur la base des spécificités de l'environnement du site du projet après une visite de reconnaissance effectuée par une équipe de l'ANDE le mardi 20 septembre 2022 en vue d'appréhender les enjeux environnementaux qu'implique cette activité.

II. CONSIDÉRATIONS D'ORDRE MÉTHODOLOGIQUE ET OBJECTIFS DE L'ÉTUDE

II.1. CONSIDÉRATIONS D'ORDRE MÉTHODOLOGIQUE

L'Étude d'Impact doit être présentée d'une façon claire et concise et se limiter aux éléments pertinents permettant la bonne compréhension du projet et de ses impacts. Ce qui peut être schématisé ou cartographié doit l'être, et ce, à des échelles adéquates. Les méthodes et les critères utilisés doivent être présentés et explicités en mentionnant, lorsque cela est possible, leur fiabilité, leur degré de précision et leurs limites d'interprétation. En ce qui concerne les descriptions du milieu, on doit retrouver les éléments permettant d'apprécier leur qualité (localisation des stations d'inventaire et d'échantillonnage, dates d'inventaire, techniques utilisées, limitations). Les sources de renseignements doivent être données en référence.

Le nom, la profession et la fonction des personnes ayant contribué à la réalisation de l'étude d'impact doivent être indiqués ainsi que le nom des villages concernés.

II.2. OBJECTIFS DE L'ÉTUDE

Cette étude, de façon globale est destinée à identifier les éléments sensibles existant dans l'environnement du projet, à déterminer les parties du projet susceptibles d'avoir des effets sur l'environnement, à évaluer l'importance de ces impacts, et à recommander des mesures et actions d'atténuation là où cela est nécessaire.

De manière spécifique, et conformément au Décret n° 96 – 894 du 08 novembre 1996, déterminant les règles et procédures applicable aux études relatives à l'impact environnemental des projets de développement, l'étude consistera à :

- Décrire de façon synthétique l'ensemble du projet en incluant les rejets et nuisances et expliquer le contexte de sa réalisation (raison et justification environnementales et techniques du choix du projet) ;
- Présenter et décrire l'ensemble des composantes des milieux naturels et humain (état initial) du site du projet susceptible d'être affecté ;
- Démontrer comment le projet s'intègre dans le milieu, en présentant l'analyse détaillée des impacts potentiels (positifs et négatifs) et en définissant les mesures destinées à corriger les impacts néfastes à la qualité de l'environnement et à maximiser ceux susceptibles de l'améliorer ;
- Développer une méthodologie d'évaluation de l'importance des impacts de manière qualitative et/ou quantitative en utilisant, le cas échéant, l'outil d'évaluation économique des dommages environnementaux ;
- Prendre en considération les opinions, les réactions et les principales préoccupations des populations, des groupes et des collectivités ;
- Prévoir des programmes de surveillances et de suivi (Plan de Gestion Environnementale et Sociale) pour assurer le respect des exigences légales et environnementale et pour vérifier pour l'essentiel, la pertinence et l'efficacité des mesures de protection de l'environnement qui ont été proposées.

Le contenu de cette étude exige un certain nombre de tâches au BEEA chargé de son exécution.

III. TÂCHES DU BUREAU D'ÉTUDES ENVIRONNEMENTALES CHARGÉ DE L'EXÉCUTION DE L'EIES

Au regard du contexte et des objectifs de l'étude, les tâches du BEEA chargé de l'EIES porteront sur les points suivants :

III.1. PRESENTATION DU CADRE INSTITUTIONNEL ET JURIDIQUE

Cette partie de l'étude a pour objectif de présenter le cadre institutionnel, législatif et réglementaire qui sous-tend ce type de projet. Les aspects suivants seront présentés.

III.1.1. Cadre institutionnel

Le cadre institutionnel concerne les institutions publiques nationales, privées et autres dont les types d'intervention seront divers, à tous les stades de mise en œuvre du projet. Ces interventions se feront sous forme de contrôle et de vérification de conformité environnementale, d'assistance et d'appui lors de la mise en œuvre des mesures visant à supprimer, réduire, compenser les conséquences dommageables du projet sur l'environnement.

Le BEEA procédera à la description du cadre institutionnel à travers un inventaire des différents départements ministériels, du secteur privé, des administrations locales. Leurs activités spécifiques doivent être également décrites de manière succincte, en insistant sur leur intérêt dans la mise en œuvre du présent projet.

Dans le cas du Ministère de l'Environnement et du Développement Durable (MINEDD), il s'agira de prendre en compte les structures impliquées directement dans la mise en œuvre du présent projet, notamment la Direction Générale de l'Environnement (DGE), la Direction Générale du Développement Durable (DGDD), l'Agence Nationale De l'Environnement (ANDE), le Centre Ivoirien Antipollution (CIAPOL).

Les Services et Directions des différents Ministères suivants devront être pris en compte dans le processus :

- Ministère des Mines et de la Géologie ;
- Ministère du Pétrole, de l'Énergie et du Développement des Énergies Renouvelables telle la Direction Générale des Hydrocarbures ;
- Ministère en charge de la Santé, notamment la Direction de l'Hygiène Publique et de Santé-Environnement (DHPSE) ;
- Ministère des Eaux et Forêts telles que la Direction Générale des Ressources en Eau ;
- Ministère de l'Hydraulique ;
- Ministère de l'Administration du Territoire et de la Décentralisation à travers les Préfecture d'Abidjan et la Sous-Préfecture d'Anyama ;
- Ministère en charge de la Construction pour se conformer avec le Plan Directeur de la zone du projet ;
- Ministère en charge de l'Industrie à travers la SOGEDI ;
- Ministère de l'Équipement et de l'Entretien Routier ;
- Ministère de l'Agriculture et du Développement Rural ;
- Etc.

Il s'agira, pour l'essentiel, de faire des consultations auprès de tous ces Ministères sectoriels et services techniques, à travers aussi les services déconcentrés en vue de recueillir les informations utiles pour une exécution efficace et efficiente de ce projet, relativement en sa composante environnementale.

Cette liste de structures à consulter est loin d'être exhaustive. Elle doit être complétée par le promoteur et son BEEA chargé de réaliser l'EIES.

III.1.2. Cadre juridique

Le BEEA fournira une synthèse de la réglementation ivoirienne relative à la qualité de l'environnement, à la santé, à la sécurité, à la protection des milieux sensibles, aux mesures de contrôle de l'occupation des sols et aux ouvrages. Il devra également se procurer des textes juridiques dans le domaine de l'aménagement urbain et des travaux publics.

De même, le BEEA fera une description des réglementations, normes et standards au regard de la politique environnementale de société **ARISE IVOIRE** dont il faut tenir compte dans le domaine de la sécurité au travail et pour assurer la qualité du milieu (protection de l'environnement) aussi bien au plan national qu'à l'échelon régional et local lors des travaux.

Le BEEA doit se référer aux textes ci-dessous en présentant tous les articles qui se rapportent aux activités du projet :

- La Constitution Ivoirienne ;
- Loi portant Code de l'Environnement ;
- Loi portant Code Minier ;
- Loi portant Code de l'Eau ;
- Loi portant Code du Travail ;
- Loi portant Protection de la Santé Publique et de l'Environnement contre les effets des déchets industriels, toxiques, nucléaires et des substances toxiques nocives ;

- Loi portant Code de la Prévoyance Sociale ;
- Loi d'Orientation sur le Développement Durable ;
- Loi portant Transfert et Répartition des Compétences de l'État aux Collectivités Territoriales ;
- Décret relatif au Comité d'Hygiène, de Sécurité et des Conditions de Travail ;
- Décret déterminant les règles et procédures applicable aux études relatives à l'impact environnemental des projets de développement ;
- Décret portant régime juridique des substances explosives ;
- Décret relatif aux installations classées pour la protection de l'environnement ;
- Décret relatif aux procédures domaniales et foncières ;
- Décret relatif à la purge des droits coutumiers sur le sol pour intérêt général ;
- Décret portant Audit Environnemental ;
- Etc.

Cette liste est loin d'être exhaustive. Elle doit être complétée en prenant attache avec les différents Ministères et les autres structures administratives impliquées dans le projet.

En somme, au niveau du cadre réglementaire, le BEEA déterminera les textes, les articles ou dispositions correspondantes et précisera clairement les aspects du projet se rapportant à ces articles.

Intitulés des textes réglementaires	Dispositions ou articles se rapportant aux activités du projet
Loi portant Constitution de la République de Côte d'Ivoire	
Loi cadre n°96-776 du 3 octobre 1996, portant Code de l'Environnement	

Au niveau des Conventions ou accords internationaux ratifiés par la Côte d'Ivoire

Plusieurs conventions ou accords ont été signés par la Côte d'Ivoire dans le domaine de protection de l'environnement et du transport transfrontalier de produits miniers (minerais). Le BEEA fera un inventaire de ces différents textes. On citera notamment :

- Convention Cadre relative aux changements climatiques ;
- Convention de Montego Bay relative à la protection des zones humides ;
- Convention de BÂLE sur le contrôle des mouvements transfrontaliers des déchets dangereux et de leur élimination ;
- Convention cadre des Nations Unies sur la diversité biologique ;
- Convention de BAMAKO sur l'interdiction d'importer en Afrique des déchets dangereux ;
- Protocole relatif à la coopération dans le cadre de la lutte contre la pollution en cas de situation critique ;
- Accord de coopération au sein de l'UEMOA portant sur les produits miniers ;
- Etc.

Cette liste, loin d'être exhaustive, doit être également complétée par le promoteur et son BEEA.

Par ailleurs, les textes inventoriés doivent être présentés dans une matrice comme suit :

Intitulés de la convention ou accord	Date de ratification par la Côte d'Ivoire	Objectif visé par la convention ou accord	Aspects liés aux activités du projet
Convention...			

III.2. DESCRIPTION DU PROJET

Le projet concerne l'aménagement de 422 hectares en zone industrielle d'Akoupé-Zeudji PK24. Le BEEA procédera à la description des activités de mise en œuvre du projet. Cette description du projet devra inclure tous les détails utiles à l'identification des sources d'impacts et à la compréhension de leurs effets sur les composantes pertinentes de l'environnement susceptibles d'être affectées ainsi qu'à la caractérisation et à l'évaluation des impacts potentiels.

À cet égard, les éléments à décrire porteront sur les composantes, caractéristiques techniques, fonctionnements et activités pendant les différentes phases du projet ou étapes d'aménagement des 422 ha en zone industrielle d'Akoupé-Zeudji PK24 à savoir : la phase de préparation et d'aménagement, la phase d'exploitation et la phase de fermeture, y compris les activités connexes impliquées.

Cette description prendra en compte les points suivants :

III.2.1. Contexte du projet

Cette section de l'étude vise à faire connaître les éléments à l'origine du projet, les raisons qui ont motivé la réalisation du projet et à dégager les enjeux environnementaux, sociaux, économiques, sanitaires et techniques du projet à l'échelle locale, régionale et internationale.

La description du contexte du projet, comprend une courte présentation de l'initiateur, ainsi qu'un exposé du contexte du projet de façon à situer celui-ci dans son environnement.

- *Présentation de l'initiateur*

Cette étude présentera la société **ARISE IVOIRE**, initiatrice du projet et le BEEA, en indiquant leurs coordonnées, les partenaires et sous-traitants sur le projet. Cette présentation inclut des renseignements généraux sur les antécédents de l'initiateur en relation avec le projet envisagé, les secteurs d'activités dans lesquels se situent le projet, et, le cas échéant, sur les grands principes de la politique environnementale et de développement durable du promoteur.

NB : Annexer au rapport le Registre de Commerce et de Crédit Mobilier (RCCM)

- *Présentation du contexte du projet*

Les informations ou données utiles à recueillir pour l'exposé du contexte du projet sont :

- La mention de la superficie totale du site du projet en précisant celle qui fera l'objet d'exploitation
- L'historique du projet, les problèmes à résoudre, les besoins à combler ;
- Les objectifs liés au projet ;

- Les aspects favorables ou défavorables du projet en relation avec ces problèmes ou besoins ;
- Les intérêts et les principales préoccupations des diverses parties concernées ;
- Les exigences techniques et économiques du projet pour sa mise en œuvre.

III.2.2. Analyse des alternatives ou options du projet

L'analyse des alternatives ou options du projet est une étape très importante du processus d'évaluation environnementale. Il s'agit ici de mettre en évidence les raisons pour lesquelles, parmi les options envisagées, le projet a été retenu. Il sera ainsi démontré que l'option choisie est en accord total avec les prescriptions environnementales.

L'étude doit donc faire ressortir clairement les objectifs et les critères de choix de la variante privilégiée par la société **ARISE IVOIRE**.

III.2.3. Localisation géographique du projet

La localisation géographique du projet concerne l'emplacement du site du projet. Le BEEA procédera à la présentation de la Sous-Préfecture d'Anyama en prenant en compte l'emplacement du site, sur une carte topographique récente ou un plan de situation à une échelle soigneusement déterminée. L'emplacement du projet doit apparaître clairement sur la carte, avec en évidence la surface totale du site concerné, les voies d'accès, les villages Akoupé-Zeudji, Allokoi et Attinguié, les installations ou types d'activités adjacents au site ainsi que les éléments sensibles et/ou vulnérables situés dans le milieu environnant.

Cette carte doit surtout mettre en exergue les limites géographiques des villages Akoupé-Zeudji, Allokoi et Attinguié ainsi que la Sous-Préfecture d'Anyama concerné par le projet.

III.2.4. Justification du choix du site du projet

Le BEEA procédera à une justification du choix du site du projet et indiquera comment la parcelle qui abritera le site du projet a été sélectionnée. Ce choix devra tenir compte des caractéristiques de l'écosystème, avec pour but de minimiser les impacts sur les espèces sensibles, l'occupation locale de la zone, la qualité du milieu, etc. Il présentera les critères utilisés par le promoteur pour arriver au choix des emplacements retenus, en indiquant précisément comment les critères environnementaux ont été considérés.

En d'autres termes, il s'agira d'évaluer les avantages tant sur les plans environnemental et social que technique et économique du site choisi. Cette justification tiendra compte notamment :

- des contraintes physiques ;
- des contraintes techniques et financières possibles ;
- de l'ampleur de certains impacts qui leur sont associés (risques pour la santé et la sécurité, incompatibilité avec les usages, etc.) ;
- des contraintes sociales et économiques (préoccupations majeures, retombées économiques, sources d'emploi, etc.).

III.2.5. Plan d'aménagement du site du projet

Le BEEA élaborera un plan d'aménagement du site du projet. Ce plan élaboré à une échelle appropriée, doit mettre en évidence les différentes installations prévues sur le site de réalisation du projet.

III.2.6. Description du processus de mise en œuvre du projet

Elle se fera à travers les points suivants :

Présentation de la technologie

Le BEEA présentera de façon précise les avantages et les inconvénients des principales technologies envisagées par la société **ARISE IVOIRE** en tenant compte de la technologie qui apparaît a priori la plus favorable à la protection de l'environnement. Cette présentation concernera autant les technologies de production que celles relatives à l'atténuation ou l'élimination des impacts.

Cette description de technologie devra mettre en exergue les innovations apportées dans l'aménagement de la zone industrielle.

Description des caractéristiques techniques

Une fois la technologie retenue, l'étude décrira l'ensemble des caractéristiques connues et prévisibles associées au projet, incluant les activités, les aménagements et les travaux prévus, pendant les différentes phases de réalisation du projet, de même que les installations et les équipements majeurs retenus.

Cette description doit prendre en compte l'ensemble du projet : développement de l'activité, réalisation des infrastructures, ainsi que le mode de gestion des rejets incluant l'entreposage, le transport et l'élimination des déchets et des autres résidus.

Toutes les activités susceptibles de provoquer l'émission de contaminants dans l'environnement seront alors indiquées, décrites et localisées, de même que les moyens et les mécanismes prévus pour diminuer la présence de contaminants dans l'environnement.

Le BEEA devra présenter et décrire les caractéristiques et le fonctionnement de chaque composante du projet de la phase de préparation (occupation du site, recrutement de la main d'œuvre, l'ouverture des voies d'accès au site, l'installation de la base chantier, le transport des équipements, ...) à la phase de fermeture (nettoyage du site d'exploitation, démontage puis enlèvement des installations, traitement et réhabilitation du site, surveillance post-réhabilitation du site, reconversion du site, ...) en passant par la phase de construction (site1, Site 2, conduites d'hydrocarbures, ... et la phase d'exploitation (décapage ou découverte des sols, ouverture des voies d'accès, assainissement, approvisionnement en eau et en énergie, morcellement de la parcelle, mode d'attribution et de livraison des lots, ...). Les équipements devront être également listés et décrits.

Description des différentes phases du projet

Le BEEA devra décrire les activités, les aménagements, les travaux et les équipements prévus, pendant les différentes phases de réalisation du projet, de même que les installations et les ouvrages temporaires, permanentes et connexes.

Le BEEA présentera les différentes phases de réalisation du projet à savoir :

Les phases de préparation ou d'aménagement ou terrassement et de construction

- L'occupation du site ;
- Les activités d'aménagement (déboisement, défrichage, excavation, enlèvement du sol arable, utilisation de machinerie lourde, etc.) ;
- Les installations de chantier et autres infrastructures temporaires (chemin d'accès, hébergement du personnel, bureaux administratifs, stationnements, etc.) ;

- La gestion des déblais et remblais (volume, lieux, collecte, transport, entreposage, etc.) ;
- La gestion des eaux de ruissellement et de drainage (collecte, contrôle, dérivation, confinement) ;
- Voies d'accès, amenées d'énergie, prises d'eau, aires de réception, de manipulation et d'entreposage, etc.

La phase d'exploitation

- Usage, mode d'attribution et de livraison des lots ;
- Mode de gestion des déchets ;
- Les sources d'énergie (alimentation électrique) et d'approvisionnement en eau ;
- Etc.

La phase fermeture ou réhabilitation

- L'engagement à préparer, quelques années avant l'arrêt des activités, les plans de fermeture des installations ;
- Le mode d'exécution des activités de fermeture du site du projet (restauration du sol, reboisement, etc.).

Au cours de ces différentes phases, les éléments ci-dessous non exhaustifs seront déterminés et caractérisés par le BEEA :

- Le calendrier de réalisation selon les différentes phases ;
- La durée des travaux (date et séquence généralement suivie) ;
- La main d'œuvre requise et les horaires quotidiens de travail ;
- Les moyens matériels.

Description des rejets et des nuisances

Le BEEA fera une description des aspects environnementaux du projet, ensuite une description technique des installations et des techniques de traitement des rejets liquides, solides et gazeux et le mode de leur élimination. On indiquera la destination finale de chaque rejet.

Un plan/schéma type du processus de fonctionnement de l'ensemble des installations devra être fourni et une évaluation du coût du projet doit être présentée.

NB : Le BEEA :

- **Décrira clairement les différentes installations (ouvrages, équipements et autres) sur le site et leur fonctionnement ;**
- **Évaluera les besoins en énergie et en eau ainsi que leurs sources d'approvisionnement dans les différentes phases du projet ;**
- **Fera une description claire et détaillée du système d'assainissement prévu dans le cadre de ce projet ;**
- **Etc.**

III.3. DESCRIPTION DE L'ETAT INITIAL DU SITE

La description du milieu récepteur est importante, car un projet est évalué non seulement en fonction des normes réglementaires existantes, mais aussi en fonction des caractéristiques du milieu. Cette section de l'étude comprend la délimitation d'une zone d'étude et la description des composantes des milieux naturels et humain pertinentes au projet.

Lors de cette visite, les constats suivants ont été fait :

- Les 422 hectares sont subdivisés en trois ;
- La voie Y4 qui ceinture Abidjan passe sur le site ;
- Une station d'épuration est en cours construction sur le site par l'entreprise CHEC;

- Il y a un cours d'eau à proximité du site ;
- Une plantation d'hévéa existe sur le site ;
- Un parking a été construit sur le site.

III.3.1. Détermination de la zone d'étude

La délimitation ou définition d'une zone d'étude est indispensable pour cerner tous les milieux touchés directement ou indirectement par le projet. Elle est également nécessaire pour apprécier l'étendue des données à collecter (relevés, mesures, enquêtes, entretiens à faire) afin d'éviter d'omettre des personnes affectées par le projet ou de prendre en compte des personnes qui ne sont pas affectées par le projet.

Il sera fait état de l'étendue de l'aire d'influence du projet en se référant au site identifié.

Le BEEA devra déterminer la zone d'influence du projet de dimensions suffisamment grandes pour couvrir l'ensemble du territoire susceptible d'être influencé par les activités projetées, incluant les activités connexes liées à la réalisation du projet. En apportant ainsi des informations relatives à une zone géographique beaucoup plus étendue que celle visée directement par les travaux, l'étude permettra d'évaluer l'importance relative des incidences, non seulement au niveau de la zone concédée mais également au niveau de l'ensemble du territoire sous influence du projet.

Par ailleurs, les limites seront justifiées par l'étude car elles peuvent varier en fonction des composantes à considérer et des impacts appréhendés. En outre, cette zone peut être subdivisée en distinguant les effets directs et indirects du projet sur les milieux naturel et humain.

III.3.2. Description des différentes composantes de l'environnement initial du projet

Au plan méthodologique, le BEEA fera une analyse ciblée des différentes composantes de l'environnement naturel et socio-économique susceptibles d'être modifiées par l'aménagement du site ainsi que le stockage, le traitement et le transport des matériaux. Cette analyse sera complétée par des enquêtes auprès des différentes administrations et personnes-ressources et se situera à trois niveaux :

- Généralité sur l'environnement du District Autonome d'Abidjan ;
- L'environnement au niveau de la Sous-Préfecture d'Anyama ;
- L'environnement immédiat du site du projet.

III.3.2.1. Généralités sur l'environnement du District Autonome d'Abidjan

À ce niveau l'analyse sera focalisée sur trois axes pour cerner les caractéristiques générales du Département :

- Le milieu physique ;
- Le milieu biologique ;
- Le milieu socio-économique.

III.3.2.2. Environnement au niveau de la Sous-Préfecture d'Anyama

À ce niveau l'étude présentera les caractéristiques majeures de la Sous-Préfecture. Un accent sera mis sur les infrastructures existantes. Ce qui aidera à justifier davantage l'installation du projet.

III.3.2.3. Environnement immédiat du site du projet



L'analyse de l'environnement immédiat du site fera apparaître, autant que faire se peut, le niveau de sensibilité de chaque composante et l'évolution prévisible du milieu en l'absence d'aménagement. La description du milieu doit aussi, autant que possible exposer les relations et interactions entre les différentes composantes du milieu, de façon à permettre de délimiter la zone à potentiel élevé ou présentant un intérêt particulier.

Ainsi, le BEEA décrira les composantes de l'environnement à travers les aspects suivants :

- **Milieu physique** : climat, géologie, géomorphologie, topographie, pédologie, hydrogéologie, hydrologie de surface.
NB : le BEEA présentera spécifiquement le système de drainage des eaux pluviales dans la zone du projet et déterminera les distances qui séparent le site des cours d'eau les plus proches ;
- **Milieu biologique** : faune, flore, espèces rares ou en danger de disparition, habitats naturels et habitats sensibles. Il s'agit pour le BEEA de décrire la couverture végétale et les différents types et groupes d'espèces animales, et de mettre en évidence, les espèces menacées ou les contraintes éventuelles mettant en péril la faune ou la flore ;
- **Milieu socio-économique et culturel** : zones d'habitats, établissements humains et tendances des nouveaux habitats, état des infrastructures et équipements de base, démographie, ethnies et organisation sociale, secteurs d'activités et leur importance relative, sources de revenus, moyens de production, utilisation et propriété des terres, alimentation et utilisation de l'eau, contrôle de l'utilisation des ressources, caractérisation du transport, patrimoine culturel, etc.

En particulier, l'étude devra :

- Préciser la démographie des villages d'Akoupé-Zeudji, Attinguié et Allokoï et de tout autre village ou hameaux touché par le projet, ainsi que la Sous-Préfecture d'Anyama ;
- Décrire les formes d'occupation actuelle des sols et les occupants des terres au niveau de **la Sous-Préfecture d'Anyama** et aux alentours de ceux-ci, ainsi que les activités socio-économiques et touristiques qui y sont menées.

NB : La description des composantes ci-dessus comprendra non seulement une description de leur état actuel, mais aussi une évaluation des potentialités et des sensibilités de ces milieux compte tenu de leur état initial et de leur dynamique propre.

Ainsi, le BEEA décrira les éléments suivants à leur état initial :

- **Le contexte hydrogéologique (classification des eaux souterraines, qualité physico-chimique des eaux souterraines, identification des formations aquifères, vulnérabilité des eaux souterraines à la pollution, direction de l'écoulement des eaux souterraines) ;**
- **L'air ambiant (concentration actuelle des contaminants, odeurs présentes), ainsi que la rose des vents (directions des vents et leur analyse par rapport à la situation aux villages Akoupé-Zeudji, Attinguié et Allokoï ;**
- **L'état sanitaire initial de la zone du projet avec les différentes pathologies, les infrastructures de base existantes doivent être décrites ;**
- **L'analyse des bruits à l'état initial ;**
- **Le devenir du camp de prière sur le site ;**
- **Le mode d'accession à la propriété foncière et son mode de gestion.**
- **Etc.**

III.4. IDENTIFICATION ET ANALYSE DES IMPACTS POTENTIELS DU PROJET

Cette section porte sur :

- L'identification et l'analyse des impacts ;
- L'évaluation de l'importance des impacts du projet, lors des différentes phases de réalisation du projet.

III.4.1. Identification et analyse des impacts

Le BEEA procédera à l'identification et à l'analyse des impacts à travers une description des relations entre le projet (activités sources d'impact) et les différentes composantes de l'environnement (éléments du milieu récepteur affectés). Il décrira les outils ou méthodes utilisés : matrices, réseaux, etc. et expliquera ce choix. Il procédera également à l'analyse de ces impacts identifiés afin de les catégoriser selon qu'ils sont positifs ou négatifs, directs ou indirects et, le cas échéant, déterminer les impacts cumulatifs, synergiques et irréversibles liés à la réalisation du projet.

En d'autres termes, cette partie de l'étude comporte une analyse des conséquences prévisibles directes et indirectes du projet sur l'environnement et en particulier, sur les ressources et milieux naturels sur le site et les paysages, les équilibres biologiques, le cadre de vie de la population.

Conformément à l'approche méthodologique requise pour une étude d'impact, les impacts seront classés en distinguant les phases des travaux de réalisation du projet :

- La phase de préparation ou aménagement du site et de construction des installations ;
- La phase d'exploitation du projet ;
- La phase de fermeture ou de réhabilitation du site du projet.

Le tableau ci-dessous dresse une liste des principaux aspects à prendre en compte dans l'identification et l'analyse des impacts.

TABLEAU : Principaux aspects des impacts à analyser

Site du projet

Décrire comment le milieu, ses ressources et ses habitats seront modifiés par le projet et comment ces modifications affecteront les habitudes des populations vivant dans la zone concernée.

Phase d'installation du projet

Examiner les modifications écologiques et sociales induites par l'acheminement et la mise en place des équipements et matériels du projet.

Les impacts liés à l'arrivée massive de travailleurs, les risques d'accidents, de nuisances et de modifications du cadre de vie des riverains et des zones naturelles traversées devront être pris en compte.

Phase d'exploitation

Analyser les impacts de l'aménagement sur le paysage naturel, la topographie, l'érosion, la qualité de l'eau, la qualité de l'air, l'environnement acoustique, la faune et la flore, les comportements des êtres vivants, la santé et la sécurité, l'utilisation potentielle des ressources du territoire par les habitants ;

Analyser les impacts directs et/ou indirects, des travaux d'aménagement sur le milieu naturel (sol, flore, faune, ressources en eau, etc.), le cadre de vie et le bien-être, l'hygiène, la santé et la sécurité ;

Analyser les impacts liés à l'arrivée massive de travailleurs, les risques d'accidents, de nuisances et de modifications du cadre de vie, les risques de pollution ;

Analyser l'impact éventuel du projet d'une part sur les exploitations agricoles et d'autres cultures saisonnières existant dans le voisinage du site éventuellement et sur la production locale de ces produits puis d'autre part sur la perturbation du système de drainage des eaux pluviales dans le voisinage du site compte tenu du fait que le site prévu pour être exploité par le projet est voisin des cours d'eau.

Phase fermeture

Examiner les modifications écologiques et sociales induites par le démantèlement des équipements et autres infrastructures.

Sur le plan social

Mettre en exergue les retombées pour les populations locales en général et les groupes sociaux les plus vulnérables (femmes, jeunes) en particulier ;

Analyser les options retenues par le promoteur en matière de politique sociale au bénéfice des populations locales ;

Analyser les risques sociaux du projet et autres déviations sociales. En effet, l'installation du projet conduira très certainement à un brassage des populations autochtones avec des personnes étrangères attirées par les opportunités de travail offertes ou induites par le projet. Cette nouvelle situation pourrait provoquer des risques de propagation de certaines maladies et induire des déviations sociales (alcoolisme, etc.). Le BEEA devra analyser ces problèmes dans l'étude.

Le BEEA synthétisera dans une matrice, présentée ci-dessous, tous les impacts significatifs sur chaque composante de l'environnement.

Matrice de synthèse des impacts

Phase du projet	Zone concernée	Activités/source d'impact	Composante du milieu affectée	Nature de l'impact

III.4.2. Évaluation de l'importance des impacts

Cette étape porte sur l'évaluation des impacts dans le but de déterminer si les impacts potentiels identifiés sont suffisamment significatifs pour justifier l'application des mesures d'atténuation, de surveillance et de suivi. L'évaluation se réalise en prenant en compte des critères les plus objectifs possibles qui conduiront à déterminer l'importance des impacts. L'évaluation de l'importance d'un impact dépend d'abord de la composante affectée, c'est-à-dire de sa valeur intrinsèque pour l'écosystème (sensibilité, unicité, rareté, réversibilité), de même que des valeurs sociales, culturelles, économiques et esthétiques attribuées à ces composantes par la population.

L'évaluation de l'importance d'un impact dépend aussi de l'intensité du changement subi par les composantes environnementales affectées. Ainsi, plus un impact est étendu, fréquent, durable ou intense, plus il sera important.

L'étude doit décrire la méthodologie utilisée pour évaluer les impacts. Les méthodes, techniques et critères utilisés doivent être suffisamment explicites et objectifs. Elle présentera un outil de contrôle pour mettre en relation les activités du projet et la présence des ouvrages avec les composantes du milieu. Il peut s'agir de tableaux synoptiques, de grille d'évaluation, de listes de vérification ou de fiches d'impact.

Des critères tels que ceux présentés ci-dessous peuvent aider à évaluer l'importance des impacts potentiels :

- La nature de l'impact qui peut être positif ou négatif ;
- L'intensité ou l'ampleur de l'impact relatif au degré de perturbation du milieu, de la sensibilité, de la vulnérabilité, de l'unicité ou de la rareté de la composante affectée ;
- L'étendue ou la portée de l'impact liée à la dimension spatiale telle que la longueur ou la superficie affectée ;
- La durée de l'impact : aspect temporel ;
- Le caractère cumulatif de l'impact ;
- La réversibilité de l'impact indiquant son caractère réversible ou irréversible ;
- La fréquence de l'impact et la probabilité que l'impact se produise : caractère intermittent, occasionnel ;
- La valeur de la composante pour les concernés (population potentiellement affectée) ;
- Les risques pour la santé, la sécurité et le bien-être de la population ;
- L'effet d'entraînement : lien entre la composante affectée et d'autres composantes.

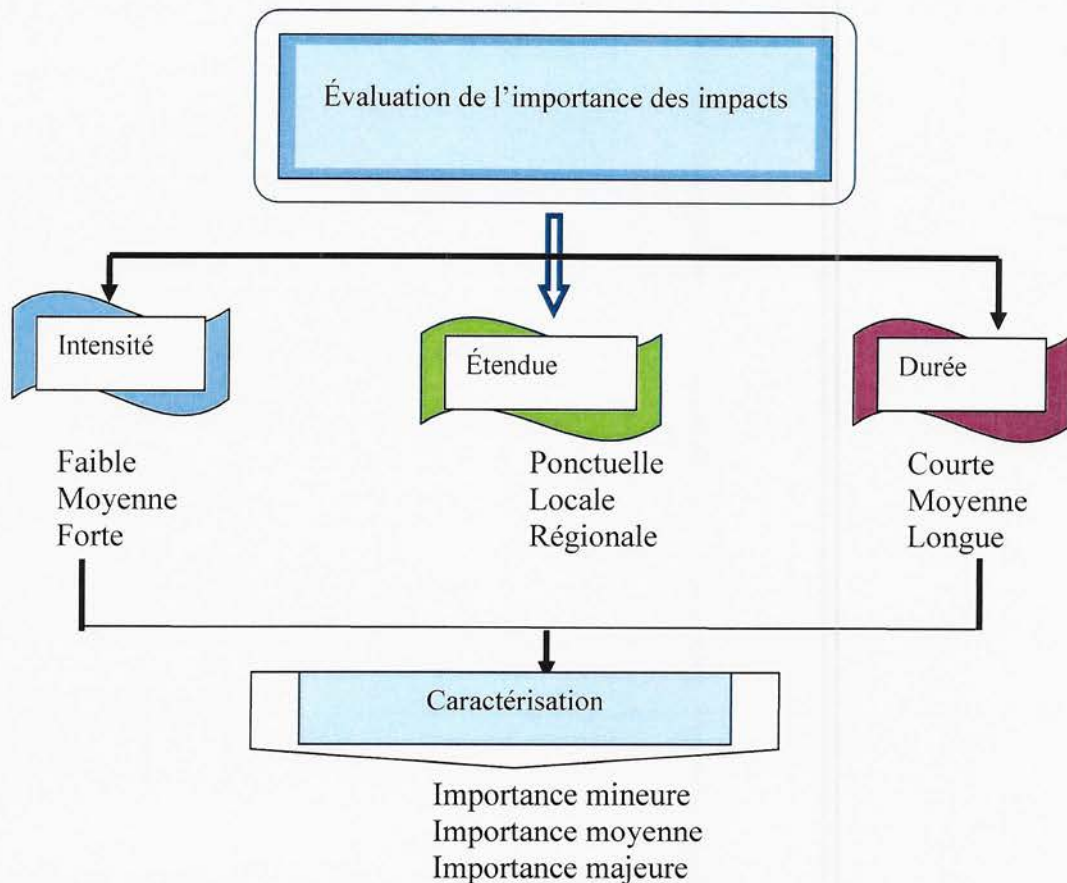
L'importance absolue de chaque impact potentiel du projet peut être déterminée à partir de la combinaison de certains de ces indicateurs ou critères présentés ci-dessus (par exemple : intensité, étendue et durée). Cette importance absolue représente l'importance qu'aurait l'impact considéré si aucune mesure d'atténuation n'est appliquée, contrairement à l'importance relative qui représente l'importance de l'impact résiduel après application des mesures d'atténuation proposées.

Les critères à considérer porteront notamment sur :

- L'intensité ou l'ampleur de l'impact ;
- L'étendue ou portée de l'impact ;
- La durée de l'impact.

En fonction de ces critères, le BEEA appréciera chaque impact à travers des hypothèses qu'il devra définir et expliquer. Sur la base des critères et hypothèses d'appréciation, il déterminera un niveau d'importance de l'impact selon que l'impact est mineur, moyen ou majeur.

Le schéma ci-dessous peut aider à mettre en évidence la méthodologie proposée.



Pour l'évaluation de l'importance des impacts on retiendra ceci :

Intensité	Étendue	Durée	Importance
Fa : Faible	Po : Ponctuelle	Co : Courte	Mi : Mineure
Mo : Moyenne	Lo : Locale	Mo : Moyenne	Mo : Moyenne
Fo : Forte	Re : Régionale	Lg : Longue	Ma : Majeure

Le BEEA devra se servir de la grille de détermination de l'importance des impacts de Fecteau, 1997 pour déterminer l'importance absolue de l'impact. Dans l'élaboration de la grille, Fecteau a respecté les principes suivants :

- Les critères "Intensité", "Étendue" et "Durée" utilisés pour déterminer l'importance absolue de l'impact ;
- Chaque critère utilisé pour déterminer l'importance a le même poids ;
- Si les valeurs de deux critères ont le même niveau de gravité, on accorde la cote d'importance correspondant à ce niveau, indépendamment du niveau de gravité du troisième critère ;
- Si les valeurs des trois critères sont différentes on accorde la cote d'importance moyenne.

La grille résultant de ces règles comporte autant de cotes d'importance majeure que mineure. Cet agencement des critères, discutable, offre l'avantage d'être transparent et d'éviter les distorsions en faveur des impacts mineurs ou majeurs.

Grille de détermination de l'importance absolue (Fecteau, 1997)

Intensité	Étendue	Durée	Importance absolue
Forte	Régionale	Longue	Majeure
		Moyenne	Majeure
		Courte	Majeure
	Locale	Longue	Majeure
		Moyenne	Moyenne
		Courte	Moyenne
	Ponctuelle	Longue	Majeure
		Moyenne	Moyenne
		Courte	Mineure
Moyenne	Régionale	Longue	Majeure
		Moyenne	Moyenne
		Courte	Moyenne
	Locale	Longue	Moyenne
		Moyenne	Moyenne
		Courte	Moyenne
	Ponctuelle	Longue	Moyenne
		Moyenne	Moyenne
		Courte	Mineure
Faible	Régionale	Longue	Majeure
		Moyenne	Moyenne
		Courte	Mineure
	Locale	Longue	Moyenne
		Moyenne	Moyenne
		Courte	Mineure
	Ponctuelle	Longue	Mineure
		Moyenne	Mineure
		Courte	Mineure

Cette grille est présentée dans le tableau suivant :

La matrice ci-dessous met

en évidence la présentation générale. Cette présentation devra concerner chaque phase du projet.

Phase du projet	Zone concernée	Activités/source d'impact	Composante du milieu affectée	Nature de l'impact	Évaluation de l'importance de l'impact			
					Intensité	Portée	Durée	Importance de l'Impact

III.5. CHANGEMENT CLIMATIQUE

II.5.1. Introduction

Le BEEA rappellera :

- les engagements pris par l'État de Côte d'Ivoire en matière de lutte contre le Changement Climatique ;
- le rôle de l'Agence Nationale De l'Environnement dans ce processus ;
- l'importance de la prise en compte de l'évaluation de l'impact par les Gaz à Effet de Serre (GES) dans les projets de développement et pour les entreprises.

II.5.2. Objectifs

Le BEEA réalisera **une cartographie exhaustive de l'ensemble des émissions potentielles de Gaz à Effet de Serre (cas de l'EIES) d'une organisation ou d'un territoire** afin de maîtriser son empreinte carbone. Il proposera **un plan de gestion des émissions** de GES aux entreprises pour une transition bas carbone par le biais de stratégies de réduction d'émissions déclinées en plans d'actions.

II.5.3. Étapes du processus d'évaluation de l'impact par les gaz à effet de serre des projets de développement

Sept (07) étapes principales peuvent permettre d'effectuer cette évaluation :

- **Étape 1** : Identifier les activités à mener (EIES) dans le cadre du projet ou par une organisation ;
- **Étape 2** : Identifier les sources de production des gaz à effet de serre de chacune des activités à mener /menées ;
- **Étape 3** : Identifier les types de GES associés aux sources ;
- **Étape 4** : Quantifier les émissions de GES ;
- **Étape 5** : Identifier les postes d'émissions significatifs ;
- **Étape 6** : Établir un plan d'action de réduction des émissions basé sur l'action spécifique au niveau des postes d'émissions significatifs ;
- **Étape 7** : Synthèse de la démarche.

III.5.4. Contenu des étapes

ÉTAPE 1 : IDENTIFIER LES ACTIVITÉS À MENER / MENÉES DANS LE CADRE DU PROJET

On parlera d'**activités à mener** en général dans le cadre d'une EIES puisque les études sont conduites par anticipation, avant la mise en place du projet. Pour les **activités menées**, il s'agira d'un cas d'Audit Environnemental.

Du fait de la diversité des secteurs d'activités dans lesquels sont conduites les EES, il sera difficile de lister ici toutes les activités potentielles d'un projet.

Pour aider à l'identification des Activités dans le cadre d'un projet, un exemple est pris dans le secteur de l'Agriculture.

Titre du projet : Développement d'une exploitation agricole dans le département de Bouaké (cas d'une EIES).

Activités potentielles : Plantation de cultures de rente et vivrière et utilisation d'engrais chimiques, Construction d'un Bâtiment administratif, construction d'un entrepôt de stockage, Utilisation de machines agricoles pour le labour, Utilisation de véhicules pour la commercialisation des produits, etc.

ÉTAPE 2 : IDENTIFIER LES SOURCES DE PRODUCTION DES GAZ À EFFET DE SERRE DE CHACUNE DES ACTIVITÉS MENÉES

En ayant à l'esprit que toutes les activités (celles identifiées à l'Étape 1) ne sont pas sources d'émissions de GES, il faut pouvoir identifier celles qui sont émettrices de GES.

Pour l'identification des sources de production de GES, il faut identifier au niveau des activités menées dans le cadre du projet, celles qui engendrent :

- Des consommations d'énergie (gaz, fioul, bois, vapeur, électricité) dans les bâtiments mobilisés pour le projet et les processus ;
- Des consommations de carburants pour les déplacements professionnels des agents : flotte de véhicules légers, flotte de véhicules lourds, autres déplacements professionnels (véhicules personnels, avion, train, bus...) ;
- Une climatisation des locaux (émissions indirectes dues à la consommation de fluides frigorigènes) ;
- Des déchets
- Etc.

Exemple de Postes d'émissions de GES

1. Postes correspondants aux émissions directes	2. Postes correspondants aux émissions indirectes liées à la consommation d'énergie	3. Postes correspondants aux autres émissions indirectes
<p>Poste 1 : Émissions directes des sources fixes de combustion Brûleurs, fours, turbines, torchères, chaudières, groupes électrogènes, etc.</p> <p>Poste 2 : Émissions directes des sources mobiles de combustion Véhicules terrestres, aériens, ferroviaires, maritimes ou fluviaux.</p> <p>Poste 3 : Émissions directes des procédés Décarbonatation du calcaire, production d'aluminium par électrolyse, fabrication de certains composants électroniques, épandage d'engrais, etc.</p> <p>Poste 4 : Émissions directes fugitives Utilisation de GES, réactions anaérobies, réactions de nitrification et dénitrification, émissions de méthane, etc.</p> <p>Poste 5 : Émissions directes issues de l'Utilisation des Terres, leurs Changements et la Forêt (UTCf).</p>	<p>Poste 6 : Émissions indirectes liées à la consommation d'électricité Couvre la phase de production de l'électricité (combustibles, sauf émissions en amont de la station de production, émissions dues à la construction de la station de production et émissions allouées au transport et aux pertes en ligne).</p> <p>Poste 7 : Émissions indirectes liées à la consommation d'énergie de réseau (hors électricité) Émissions dues à la construction de la station de production et émissions allouées au transport et aux pertes en ligne.</p>	<p>Poste 8 : Émissions liées à l'énergie non incluses dans les postes 1 à 7 Proviennent de la chaîne de production d'énergie finale (extraction, transport, raffinage/ traitement et distribution de combustible).</p> <p>Poste 9 : Achat de produits et services Proviennent de la fabrication de biens et de services achetés par l'organisation et consommés rapidement (extraction des matières premières, consommation d'énergie pour les étapes de transformation, activités agricoles, transport des produits entre toutes les étapes de transformation, traitement des rebus de production).</p> <p>Poste 10 : Biens immobilisés Proviennent de la production de biens et services immobilisés par l'organisation (équipement, machines, constructions et véhicules utilisés pendant 5 à 50 ans).</p>

ÉTAPE 3 : IDENTIFIER LES TYPES DE GES ASSOCIÉS AUX SOURCES

Les GES pris en compte dans le cadre du Changement Climatique sont essentiellement ceux définis dans le Protocole de Kyoto – initiative internationale phare en matière de réduction des émissions de gaz à effet de serre – à savoir : **le dioxyde de carbone (CO₂), le méthane (CH₄), l'oxyde nitreux (N₂O), les hydrofluorocarbures (C_nH_mF_p), les perfluorocarbures (C_nF_{2n+2}) et l'hexafluorure de soufre (SF₆).**

Pour coller à la réalité du terrain ou des projets, d'autres types gaz à effet de serre tels que les chlorofluorocarbures (CFC), la vapeur d'eau stratosphérique, les oxydes d'azote (NO_x), etc. peuvent être pris en compte.

Il faut pouvoir identifier les types de GES émis par chaque activité.

Type de gaz concerné	Type de procédé concerné	Quelles informations nécessaires se trouvent chez vous ? (exemples)	Quelles informations seront peut-être à chercher à l'extérieur (exemples)	Où les trouver ? (exemples)
CO ₂ Dioxyde de Carbone	Production de Matériaux de construction (décarbonisation)	Production réalisée	Nature et volume de gaz à effet de serre produit par unité de production	Mesures internes ; Centre de recherche ; Organismes professionnels...
	Pétrochimie(torchères)	Volume de gaz brûlé (compteur de la torchère)	Contenu en carbone du gaz brûlé	Mesures internes ; Centre de recherche ; Organismes professionnels...
	Assainissement	Volume ou tonnage	Émissions de gaz	Mesures internes ;

	(décomposition)	de déchet traité	carbonique par unité de poids ou par volume	Centre de recherche ; Organismes professionnels...
CH ₄ Méthane	Élevage : digestion des ruminants	Composition de cheptel. Éventuellement masse de l'alimentation	Émissions en fonction du type d'alimentation. Émissions en fonction du type de système de traitement des déjections	INRA, GIEC, Centres techniques de la profession, Universités
	Traitement de déchets	Tonnage de déchets traités	émissions en fonction du type de traitement et du type de déchets	Mesures internes ; Centre de recherche ; Organismes professionnels...
	Exploitation gazière	Fuites : différence de compteur	Équivalent carbone de gaz qui fuit	ADEME, MIES, GIEC
N ₂ O Oxyde nitreux	Sources industrielles	Volumes achetés ou produits	Nature et volume de gaz à effet de serre produit par unité de production	Union des industries chimiques Mesures internes ; Centre de recherche
	Utilisation d'engrais	Tonnage répandus - surface fertilisées	Facteurs d'émissions en fonction du type de culture et la nature du sol	INRA, GIEC, Centres techniques de la profession, Universités
HFC, PFC Hydrofluorocarbures et Perfluorocarbones	Chaîne du froid	Facture de rechange de fluide réfrigérant	Équivalent carbone de gaz qui fuit	ADEME, GIEC , syndicat professionnel des frigoristes
	Émissions d'électrolyse de l'alumine	Chiffres de la production	Émissions par unité de poids en fonction de la nature du procédé utilisé	Mesures internes ; Centre de recherche ; syndicat professionnel des fondeurs d'aluminium
	Industrie des semi - conducteurs	Factures d'achats de composés chimiques	Équivalent carbone des gaz émis	ADEME, GIEC , syndicat professionnel
SF ₆ Hexafluorure de Soufre	Doubles virages, fabrication de matériel électrique	Facture d'achat de SF ₆	Taux de fuites lors des procédés industriels ; taux de fuite en fin de vie lors des produits vendus	Mesures internes ; Centre de recherche

NB : Les différents gaz ne contribuent pas tous à la même hauteur à l'effet de serre. En effet, certains ont un pouvoir de réchauffement plus important que d'autres et/ou une durée de vie plus longue au niveau de l'atmosphère.

Sachez que le CO₂ est choisi comme le gaz de référence et les autres GES à savoir le CH₄, le N₂O, le HFC, PFC et le SF₆ sont convertis en CO₂ en tenant compte de leur pouvoir de réchauffement, d'où l'expression de tonne équivalent CO₂ (teqCO₂).

Sur cette base, il faut donc comprendre par le tableau ci-dessous que le CH₄ réchauffe 21 fois plus que le CO₂ et que le N₂O réchauffe 310 fois plus que le CO₂, etc.

Formule chimique	Durée de vie dans l'atmosphère	Pouvoir de réchauffement Global sur 100 ans
CO ₂	variable §	1
CH ₄	12±3	21
N ₂ O	120	310
HFC	3.7 - 264	150 - 11700
PFC	2600 - 50000	6500 - 9200
SF ₆	3200	23900

Source : unfccc.int, (GIEC, 2^{ème} rapport d'Évaluation), 2021

ETAPE 4 : QUANTIFIER LES ÉMISSIONS DE GES

La formule simplifiée pour quantifier les émissions de GES est la suivante :

$$E = DA \times FE$$

Avec :

E : Émissions de GES en teqCO_2

DA : Donnée d'activité ou quantité consommée

FE : Facteur d'émission

(Utiliser les facteurs d'émission existantes ou celles par défaut. (Voir FE du GIEC)

- **La Donnée d'activité** correspond Ici à la quantité consommée et elle s'exprime dans l'unité du produit (**litres d'essence, m² de surface, kg d'ananas, etc.**).
- **Un facteur d'émission** est un coefficient permettant de convertir les données d'activité en émissions de GES. **Il précise la quantité de CO₂ émise par une unité consommée.** C'est le taux d'émission moyen d'une source donnée, par rapport aux unités d'activité ou aux processus.

NB : L'estimation des émissions de teqCO_2 se fait en général sur une base annuelle ce qui correspond aux émissions cumulées de teqCO_2 sur toute l'année de l'activité, du projet ou du programme. Si le projet ou l'activité dure par exemple 10 ans, l'émission totale générée sur toute la durée de vie du projet correspondra à l'émission annuelle multipliée par la durée de vie du projet.

Où trouver le facteur d'émission ?

Il faudra utiliser prioritairement des Facteurs d'émissions nationaux, propres au pays. En l'absence de données nationales, utiliser des facteurs d'émission par défaut en tenant compte de conditions climatiques et environnementales similaires d'un pays voisin par exemple. Mais, il faudra justifier le choix du facteur choisi par défaut.

Les données nationales peuvent être disponibles au Ministère en charge de l'Environnement, au niveau des Directions en Charge du Changement Climatique, notamment la Direction de la Lutte contre les Changements Climatiques qui abrite le Point Focal National Changement Climatique. Ou bien en consultant les documents ci-dessous disponibles sur le site Web de la Convention Cadre des Nations Unies sur le Changement Climatique (unfccc.int).

- Communication Nationale sur les inventaires GES de la Côte d'Ivoire ;
- Rapport des BURs, BUR1, etc.

Pour les Facteurs d'émission par défaut, vous pouvez consulter également le site unfccc.int, celui du GIEC et <https://www.ipcc-nggip.iges.or.jp/EFDB/main.php>.

Prendre en compte les Incertitudes associées aux données d'activités

Il revient à l'utilisateur de déterminer les incertitudes associées aux données d'activités, Il doit donc définir des règles d'attributions d'incertitudes cohérentes entre elles et avec la réalité physique des choses pour assurer la qualité de la donnée.

L'incertitude doit être fixée à partir de seuils empiriques et réalistes transcrivant des situations-types en valeurs quantifiées.

Les principes suivants doivent être respectés :

- **2 données dont la qualité est comparable doivent présenter une incertitude égale ou proche ;**
- Plus la qualité de la donnée est dégradée, plus l'incertitude relative doit être élevée.

À titre d'exemple, voici une grille pouvant être appliquée (Source ADEME) :

- 0% à 5% pour une donnée issue d'une mesure directe (factures ou compteurs) ;
- 15% pour une donnée fiable non mesurée ;
- 30% pour une donnée recalculée (extrapolation) ;
- 50% pour une donnée approximative (donnée statistique) ;
- 80% pour une donnée connue en ordre de grandeur.

Appliquer les incertitudes liées aux facteurs d'émission

Prendre également en compte les incertitudes portant sur les facteurs d'émission. À partir des incertitudes associées à la valeur d'une donnée d'activité et d'un facteur d'émissions, nous pouvons les combiner pour obtenir l'incertitude du résultat de la multiplication. Des formules de modélisation sont alors utilisées.

Un intervalle de confiance de 95% généralement utilisé pour les inventaires, soit 95% de probabilité d'englober la vraie valeur.

Remarque : Les émissions de CO₂ liées à la combustion de la biomasse s'inscrivent dans le cycle naturel du carbone : le carbone présent dans l'atmosphère est capté par la biomasse végétale par photosynthèse, puis rejeté dans l'atmosphère par décomposition ou combustion. Néanmoins, le bilan étant finalement neutre pour l'effet de serre, il faut utiliser un facteur d'émission nul pour les émissions de CO₂ liées à la combustion de biomasse.

ÉTAPE 5 : IDENTIFIER LES POSTES D'ÉMISSIONS SIGNIFICATIFS

Étape importante afin de fixer des objectifs de réduction sur les postes d'émissions importants sans se disperser sur les postes secondaires. Pour cela, il faudra :

- Ranger les postes d'émissions par ordre décroissant, soit de l'activité la plus émettrice vers la moins émettrice ;
- Trouver le pourcentage de contribution aux émissions de chacune des activités ;
- Sélectionner toutes les activités cumulées par ordre décroissant et dont le total représente 95% des émissions totales de GES.

ÉTAPE 6 : ÉTABLIR UN PLAN D'ACTION DE RÉDUCTION DES ÉMISSIONS BASE SUR L'ACTION SPÉCIFIQUE AU NIVEAU DES POSTES D'ÉMISSIONS SIGNIFICATIFS

Chaque action sera caractérisée par :

- **Une estimation quantitative** : du gain potentiel en CO₂eq ; des économies réalisées ; des ressources humaines et financières nécessaires à son application.
- **Une estimation qualitative de la difficulté de mise en œuvre grâce à** : Une estimation des ressources humaines et financières nécessaires ; Une analyse de la nature de la modification (changement de comportement, réorientation du cœur de métier, etc.).

Par exemple : Énergie dans les bâtiments :

- Action 1 : Réaliser les diagnostics de performance énergétique (DPE) obligatoires ;

- Action 2 : Maîtriser les consommations et dépenses d'électricité ;
- Action 3 : Développer durablement le recours aux énergies renouvelables (utilisation de technologies nouvelles) ;
- Action 4 : Sensibiliser les agents et usagers des bâtiments aux enjeux de la maîtrise de l'énergie et de la qualité de l'air intérieur.

NB : Il faut noter que ce Plan de Gestion de Réduction de Gaz à Effet de Serre doit également apparaître dans le Plan de Gestion Environnementale et Sociale (PGES) du rapport EIES. Il va permettre de faire le suivi des activités menées.

ETAPE 7 : SYNTHÈSE DE LA DEMARCHE

- Rapport sur les émissions de GES ;
- Rapport d'amélioration.

Tableau de synthèse

NB : n'y inclure que les activités sources de production de GES

Activités menées dans le cadre du projet	Sources de production des gaz à effet de serre de chacune des activités menées	Types de GES associés aux sources	Émissions de GES (teqCO ₂)	Plan d'action de réduction des émissions basé sur l'action spécifique au niveau des postes d'émissions significatifs

III.6. MESURES DE PROTECTION DE L'ENVIRONNEMENT

Il est question dans ce chapitre de présenter les actions ou les mesures appropriées à mettre en œuvre pour prévenir, supprimer ou réduire les impacts négatifs, ou bien pour accroître les bénéfiques des impacts positifs sur l'environnement.

Ce chapitre, dans la réalisation de l'Étude d'Impact Environnemental et Social, vise trois principaux objectifs à savoir :

- Rechercher les meilleures alternatives de mise en œuvre du projet ;
- Définir un programme d'actions cohérent visant à atténuer, réduire les impacts négatifs les plus significatifs ou à compenser les préjudices subis par les personnes affectées par le projet ;
- Rechercher la rentabilité environnementale du projet pour une gestion durable des ouvrages et des équipements réalisés.

En d'autres termes, les mesures de protection de l'environnement doivent être techniquement faisables, économiquement appropriées et socialement acceptables.

Les mesures d'atténuation des impacts potentiels négatifs peuvent être, selon le cas, proposées par phase d'activité, par source d'impacts, par action ou activité qui a une incidence négative sur une ou plusieurs composantes de l'environnement. L'étude devra préciser pour chacun de ces impacts, les actions ou mesures prévues aux différentes phases du projet.

De même, l'étude doit présenter les impacts résiduels c'est-à-dire les impacts qui subsisteront après l'application des mesures d'atténuation. Ces impacts générés par le projet devront faire l'objet d'un programme de suivi environnemental à produire dans l'EIES.

Les mesures d'atténuation peuvent être générales ou spécifiques. Les mesures générales seront destinées à atténuer les effets négatifs d'un projet pris dans son ensemble. Les mesures spécifiques viseront l'atténuation des impacts négatifs sur une composante de l'environnement en particulier.

Au titre des mesures générales

On peut citer par exemple ce qui suit :

- Prévoir un mécanisme de concertation avec les populations locales et les administrations locales pour favoriser l'insertion harmonieuse du projet dans l'environnement social et économique ;
- Préserver les atouts exceptionnels d'intérêt local ou national ;
- Proposer un système de gestion de la totalité des déchets liquide, solide, toxique produits par les activités ;
- Former/sensibiliser tout le personnel sur les comportements ayant le minimum d'impact sur l'environnement ;
- Former/sensibiliser tout le personnel sur les risques et dangers liés à l'activité ;
- Concevoir et appliquer des mesures de sécurité (limitations d'accès, installations de sécurité, entreposage des produits toxiques et dangereux, programme de gestion des risques, programme de révision des mesures de sécurité établie au besoin, ...) et un plan d'urgence pour éviter tout risque et danger ;
- Former tout le personnel sur ces mesures de sécurité et plan d'urgence ;
- Établir des calendriers et horaires de travaux ;
- Etc.

Au titre des mesures spécifiques

- Sur le milieu naturel, par exemple, l'étude devra préciser les actions et les ouvrages, les correctifs et les ajouts prévus aux différentes phases, pour prévenir, réduire ou éliminer les impacts négatifs du projet. Le cas échéant, l'étude décrira les mesures envisagées pour favoriser ou optimiser les impacts positifs.

Pour les impacts résiduels, elle présentera des mesures de compensation. En particulier l'étude devra proposer un plan de restauration adaptée à la zone à la fin de l'exploitation.

- Sur le plan social, l'étude devra proposer des mesures de compensation. Le BEEA étudiera donc toutes les possibilités d'identification des besoins essentiels des populations (activités agricoles, domaines fonciers, etc.) et proposera, **si nécessaire**, un mode de compensation des populations affectées. En effet, de par sa localisation, le projet entraînera la perte de biens des populations (activités agricoles, terres agricoles, etc.).

Toutes les mesures préconisées pour la maîtrise des impacts seront également synthétisées par le BEEA dans une matrice, donnant une vue synoptique de la situation décrite pour chaque composante de l'environnement.

Matrice de Synthèse des mesures préconisées

Phase du projet	Zone concernée	Activités/source d'impact	Composante du milieu affectée	Nature de l'impact	Mesure d'atténuation Préconisées

Par ailleurs, l'étude devra estimer, autant que faire se peut, des coûts pour ces mesures de prévention, d'atténuation, de compensation et d'optimisation proposées.

En outre le promoteur devra tenir compte des effets du projet sur le climat comme suit :

III.7. GESTION DES RISQUES ET DES ACCIDENTS

La mise en œuvre et l'exploitation du présent projet peut être à l'origine d'accidents aux conséquences majeures. Le BEEA analysera les dangers associés au projet, présentera un bilan des accidents passés dans de projets similaires, établira les scénarios d'accidents majeurs potentiels, en estimera les conséquences, les fréquences et le risque. Cette analyse tiendra compte des lois, des règlements et des codes de pratiques auxquels doit se conformer le projet envisagé. Les exigences du Code du Travail en Côte d'Ivoire seront d'une importance capitale dans cette analyse. Au cours de l'analyse de ces risques, le BEEA accordera une attention particulière aux éléments sensibles du milieu pouvant être affectés lors d'un accident.

D'une manière spécifique, le BEEA procédera à :

- L'estimation des risques qui concerne les aspects suivants :
 - Risques d'accident lors de l'utilisation des engins de chargement et d'évacuation des matériaux et engins de transport ainsi que ceux du traitement ;
 - Risques, liés à l'explosion, à l'utilisation des substances explosives, etc. ;
- L'élaboration des mesures de sécurité (présentation des mesures de sécurité prévues sur le site d'exploitation, incluant les installations connexes localisées à l'extérieur de l'emplacement principal) :
 - Limitations d'accès au site du projet ;
 - Programme d'entretien et de suivi de l'intégrité du site ;
 - Programme de gestion des risques (protection du personnel, consultation ou suivi médical des employés, formation adéquate) ;
 - Liste des règles ou codes de pratiques comme référence.
- L'élaboration d'un plan de mesure d'urgence en cas d'accident. Ce plan doit identifier les situations d'urgence et les réponses en cas d'urgence. Ce plan doit inclure par exemple :
 - Les mesures de sécurité en vigueur sur le site ;
 - Les structures d'intervention en urgence et les mécanismes de décision à l'intérieur de l'entreprise ;
 - Le mode de communication interne et externe, etc.

Le BEEA présentera un Plan d'Opération Interne (POI) sommaire qui intégrera entre autres les aspects suivants :



- La circulation ou les déplacements sur le chantier ;
- Le matériel de protection individuelle ;
- Les consignes relatives à l'emploi et à la circulation des engins ;
- Les mesures de protection contre les dangers des machines ;
- Les mesures relatives à la bonne pratique contre le bruit ;
- Les mesures relatives à l'usage des explosifs ;
- Les mesures relatives à la bonne pratique contre les poussières ;
- La formation du personnel ;
- Les plans de simulation des exercices d'évacuation en cas de sinistre ;
- Le plan de lutte contre les sinistres (incendie, etc.).

La présentation de ces aspects énumérés ci-dessus devra permettre au BEEA de faire une analyse de la politique environnementale du promoteur en matière d'hygiène sécurité Environnement, santé et environnement. Le BEEA mettra également en exergue le code de bonnes pratiques environnementales et sécuritaires, en précisant les normes internationalement reconnues disponibles ayant servis de base à la mise en œuvre de cette politique environnementale.

III.8. PLAN DE GESTION ENVIRONNEMENTALE ET SOCIALE

L'objectif majeur étant d'améliorer les conditions environnementales du projet, il est indispensable de proposer un Plan de Gestion Environnementale et Sociale (PGES) qui devra traduire les recommandations de l'EIES sous forme de plan opérationnel.

Par conséquent, le BEEA décrira les mécanismes mis en place (actions requises) pour assurer le respect des exigences environnementales et le bon fonctionnement des travaux, des équipements et des installations. Il présentera la méthode de suivi de l'évolution de certaines composantes du milieu naturel et humain affectées par le projet.

III.8.1. Plan de mise en œuvre des mesures proposées

L'EIES doit déboucher sur la production d'un Plan de Gestion Environnementale et Sociale (PGES) qui comprendra le plan de mise en œuvre des mesures proposées, déterminera les responsabilités pour leur mise en œuvre et estimera les coûts nécessaires à l'application de ces mesures.

III.8.2. Surveillance et suivi environnemental

Conformément à la réglementation en vigueur, tout projet ayant fait l'objet d'une EIES doit être soumis à la surveillance administrative et technique, et au suivi environnemental durant toutes les phases de sa mise en œuvre et, le cas échéant, après sa fermeture.

La surveillance consiste à s'assurer que le promoteur respecte ses engagements et ses obligations de prise en compte de l'environnement et d'application des mesures d'atténuation des impacts négatifs requises pendant toute la durée du projet. Le plan de surveillance doit comporter entre autres:

- La liste des exigences et des obligations légales et réglementaires de prise en compte de l'environnement pour la réalisation du projet ;
- La description de l'ensemble des mesures et moyens destinés à protéger l'environnement ;
- Les engagements pris par le promoteur pour l'application des mesures d'atténuation et de compensation des impacts négatifs du projet ;

- Le chronogramme ou l'échéancier de mise en œuvre de ces mesures ;
- Les mécanismes et la fréquence d'envoi des rapports périodiques sur les résultats des programmes de surveillance aux autorités compétentes (Ministère chargé de l'Environnement et Ministères sectoriels concernés).

Le suivi quant à lui consiste à suivre l'évolution de certaines composantes de l'environnement affectées par la réalisation du projet. Cette activité vise à vérifier l'efficacité des mesures d'atténuation préconisées et la performance environnementale du projet. Le plan de suivi environnemental doit comporter entre autres:

- L'identification des actions et composantes devant faire l'objet d'un suivi ;
- La description des activités et moyens prévus pour suivre les effets réels du projet sur les composantes de l'environnement les plus sensibles ;
- Les méthodes d'échantillonnage et d'analyse requises ;
- Le chronogramme de mise en œuvre des mesures de suivi ;
- L'ensemble des mesures et moyens pour faire face aux circonstances imprévues et apporter les changements appropriés ;
- Les responsables, mécanismes et la fréquence d'exécution et de diffusion des résultats du plan de suivi environnemental.

Une matrice de synthèse sera élaborée par le BEEA et tiendra compte des aspects suivants : les impacts et les mesures d'atténuation en fonction des différentes phases de mise en œuvre du projet et des indicateurs environnementaux pertinents et judicieusement identifiés. Cette matrice est présentée ci-après.

Matrice du Plan de Gestion Environnementale et Sociale

Phase du projet	Zone concernée	Activités/ source d'impact	Composante du milieu affectée	Nature de l'impact	Mesures d'atténuation préconisées	Responsable d'exécution ou de surveillance	Responsable de suivi	Indicateurs de suivi environnementaux	Coût	Source de financement

NB : Le coût de chaque mesure d'atténuation sera évalué et le coût total de ces mesures doit être intégré au rapport de l'EIES

III.9. PARTICIPATION DU PUBLIC

Un projet conçu dans la perspective du développement durable doit intégrer le principe d'équité sociale en même temps que l'intégrité de l'environnement et l'amélioration de l'efficacité économique. Sur cette base, la participation des populations dans le processus de planification et de décision est une exigence dans la mise en œuvre des projets de développement.

Il est important d'amorcer la consultation le plus tôt possible dans le processus de planification. En effet, plus la consultation intervient tôt dans le processus qui mène à une décision, plus grande est l'influence des citoyens sur l'ensemble du projet et nécessairement, le projet devient plus acceptable socialement.

Dans le cas du présent projet, le BEEA précisera l'étendue des consultations qu'il aura entreprises en vue de recueillir les points de vue et les préoccupations de toutes les parties intéressées par la réalisation du projet.

À cet effet, il mettra en place un processus efficace d'information et de consultation des populations des zones directes et indirectes d'influence du projet.

Compte tenu de l'envergure du projet, la consultation du public devra être la plus large et inclusive possible. Elle pourra s'étendre aux autorités traditionnelles, aux associations de jeunes, de femmes et aux mutuelles des villages ayant cédé les terres **notamment Akoupé-Zeudji, Attinguié et Allokoi**, les Autorités Religieuses, les Chefs de Terre, les propriétaires terriens **ainsi que tous les occupants actuels du site (notamment la société CHEC qui construit une station d'épuration sur le site)**. En outre, les villages et campements environnants susceptibles d'être impactés dans la localité de la zone du projet devront être associés à la consultation du public dudit projet. Par ailleurs, l'étude relèvera toutes les initiatives de développement existants ou en cours d'exécution susceptibles d'être impactés ou susceptibles d'influencer le projet.

Des réunions d'information et de consultation du public doivent être tenues avant et pendant la réalisation de l'Étude d'Impact Environnemental et Social. En effet, seule une approche participative pourra conduire à un développement durable du projet et à des solutions comprises et acceptées par tous.

Ainsi, le BEEA décrira les préoccupations et attentes de la population concernant le projet, les éléments controversés qui ont été soulevés et les réponses apportées à ces préoccupations.

Pour ce projet, le BEEA justifiera avec des documents officiels la propriété du site. La consultation du public doit faire ressortir les cas de litiges fonciers existants et latents dans la zone du projet.

Tout protocole d'accord signé en présence de l'Autorité Préfectorale d'Abidjan dans le cadre dudit projet devra être annexé au rapport de l'EIES.

IMPORTANT

Le BEEA présentera de façon claire **la méthodologie de la consultation des parties prenantes et la manière dont les résultats de ces consultations ont été documentés :**

a. Méthodologie de la consultation

À ce niveau, le BEEA présentera :

- **le calendrier ou programme de réalisation des consultations.** Il s'agit de présenter les différentes étapes de la consultation en mettant en exergue le temps nécessaire et les entités rencontrées ;

- **les supports ayant servis pour la consultation.** Ces supports qui devront comporter entre autres un résumé de l'objectif du projet proposé, la description du projet et les impacts potentiels. Les différents supports utilisés seront annexés au rapport de l'étude ;

- **les voies appropriées pour consulter.** Selon les caractéristiques des différents groupes de personnes consultées, les problèmes à débattre, la tradition locale et autres considérations spécifiques de la zone du projet, le BEEA présentera les moyens utilisés, les techniques et les instruments de collecte de données. Il s'agira par exemple de réunions publiques, de discussions de groupe (focus groupes), d'enquêtes auprès des ménages ;

- **le contenu des consultations.** Le BEEA décrira de manière exhaustive :

- les aspects avantageux ou impacts positifs du projet à discuter ;
- les impacts négatifs du projet pouvant engendrer une dégradation de la qualité de vie qui doivent être connus par les parties prenantes.

b. Documentation des résultats des consultations

Il s'agira ici, pour le BEEA de donner les résultats de la consultation à travers les procès-verbaux des réunions publiques, des discussions de groupe, des enquêtes auprès des ménages, etc. Ces procès-verbaux, annexés au rapport, présenteront en détail les éléments majeurs suivants :

- les informations communiquées ou discutées ;
- les questions ou préoccupations soulevées par les parties prenantes ;
- les réponses apportées aux préoccupations soulevées ;
- la manière dont les commentaires et suggestions reçus pendant les consultations ont été prises en compte dans les décisions concernant la conception du projet et les modalités de mise en œuvre ;
- les accords conclus ou les désaccords avec les parties prenantes.

Le BEEA annexera également au rapport les accusés de réception du courrier adressé aux différentes parties prenantes.

NB : Les listes de présence des structures, des personnes rencontrées et des différentes composantes du village et autre hameau voisin, les procès-verbaux et comptes rendus dument signés des consultations du public doivent être annexés au rapport.

IV. DURÉE DE L'ÉTUDE

La durée probable de l'étude est laissée à l'appréciation de la société **ARISE IVOIRE**. Le BEEA proposera un planning d'exécution de l'étude en tenant compte des aspects indicatifs suivants :

- la consultation des autorités administratives locales,
- la consultation des populations des villages riverains ou touchés par le projet ;
- les enquêtes socio-économiques ;
- l'inventaire d'un éventuel recensement agraire ;
- l'acquisition des données physiques, biologiques, physico-chimique etc. ;
- la compilation des données ;
- etc.

V. VALIDITÉ DES TERMES DE RÉFÉRENCES

Les présents TDR ont une durée de validité d'un (01) an à compter de la date de transmission au promoteur. Passé ce délai le promoteur doit prendre attache avec l'ANDE pour son actualisation.

VI. ÉQUIPE D'EXPERTS

L'Étude doit être réalisée par un consultant ou Bureau d'Études Environnementales Agréé par le Ministère de l'Environnement et du Développement Durable. Les experts requis pour la réalisation de l'étude auront une qualification suffisante et justifié d'au moins cinq (5) années d'expérience pour le Chef d'équipe EIES et trois (3) années pour les autres experts. Une expérience dans les études ou projets connexes est requise.

L'équipe chargée de l'élaboration de l'étude d'impact sera composée des profils suivants :

- **Un Gestionnaire en Environnement, spécialiste en EIES** : Chef d'équipe, il sera chargé de coordonner les activités des membres de l'équipe et de la rédaction des différents rapports d'étape. En particulier, il orientera les membres de l'équipe sur les activités à prendre en compte. Il précisera la méthodologie à mettre en œuvre et organisera les échanges. Il sera chargé en collaboration avec les autres consultants d'assurer la présentation de l'EIES auprès de l'ANDE ;
- **Un Socio-économiste** : il sera chargé d'identifier les déterminants sociaux et économiques et analyser les répercussions possibles des activités sur les activités socio-économiques ;
- **Un hydrogéologue** : il sera chargé d'étudier le niveau de la nappe souterraine, la qualité des eaux et les différentes sources d'approvisionnement en eau (puits, forages etc.) ;
- **Un Ingénieur, spécialiste de l'aménagement urbain, de la sécurité, et des risques de pollutions**: il sera chargé d'apprécier les incidences des activités sur l'environnement naturel et humain et de proposer les mesures qui s'imposent.

Outre ces profils de base, le BEEA peut s'adjoindre, le cas échéant, d'autres consultants spécialisés.

VII. CONTENU ET PRÉSENTATION DU RAPPORT DE L'EIES

Pour la rédaction du rapport d'EIES et son contenu, le BEEA devra se référer au model indicatif de l'annexe 4 du décret n°96-894 du 08 novembre 1996, déterminant les règles et procédures applicables aux études relatives à l'Impact Environnemental des projets de développement :

- **Résumé non technique**
- **Introduction**
 - Objectifs de l'étude ;
 - Responsables de l'EIES ;
 - Procédure et portée de l'EIES ;
 - Politique nationale en matière d'environnement ;
 - Cadre institutionnel et réglementaire des EIES ;
 - Méthodologie et programme de travail.
- **Description du projet**
 - Promoteur du projet ;
 - Site du projet ;
 - Justification du projet ;
 - Description du projet et de ses alternatives (incluant la situation sans le projet) ;
 - Chronogramme de mise en œuvre des activités ;
 - Nécessité d'une EIES.
- **État initial de l'environnement**
 - Méthodes de collecte des données ;
 - Données de base sur le cadre physique, biologique et le contexte socio-économique ;
 - Relations entre le projet et les autres activités de développement dans la Région ;
 - Tendances de l'état de l'environnement ;
 - Lacunes de données.
- **Identification, analyse/prédiction et évaluation de l'importance des impacts induits par le projet**
 - Description et analyse des incidences potentielles des activités du projet sur les composantes biophysiques et socio-économiques (phases de construction et d'exploitation) ;
 - Évaluation de l'importance des impacts ;
 - Évaluation comparative des variantes ;
 - Méthodes et techniques utilisées ;
 - Incertitudes et insuffisances des connaissances.
- **Mesures de protection de l'environnement**
 - Description des mesures de protection envisagées (prévention, atténuation, compensation, restauration).
- **Plan de gestion environnementale et sociale**
 - Plan de surveillance de l'environnement ;
 - Plan de suivi de l'environnement ;
 - Programme de formation et de sensibilisation.
- **Références bibliographiques**
- **Annexes**
 - Liste des personnes rencontrées ;
 - Participation du public (enquêtes publiques, consultations publiques, etc.) ;
 - Support de communication (coupures de presse, opinions écrites, etc.) ;
 - Programme de collecte des données sur le terrain ;
 - Contrat de cession du terrain ;
 - Carte de situation du projet ;

- Plan général du site avec les différentes installations (Bureau, unité de traitement, de stockage, etc.).

VIII. SOURCES DE DONNÉES ET D'INFORMATIONS

Les personnes rencontrées, les Ministères et structures consultés, le programme de collecte de données sur le terrain, les opinions écrites et la participation du public seront consignés dans l'étude.

Les principales difficultés rencontrées dans la collecte des données seront aussi mentionnées dans cette partie de l'étude.

IX. RÉFÉRENCES BIBLIOGRAPHIQUES

Le BEEA mentionnera toute la documentation ayant servi à l'élaboration du rapport de l'EIES.

**Le Sous-Directeur des EIES
Et du Contrôle des Projets**



KOUASSI Brou N'Gbin

Le Directeur



Camus ATTAH

APPENDIX B SCOPING STUDY SUMMARY TABLE

Table 1 Scoping Table

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
Air Quality	Construction	<ul style="list-style-type: none"> ■ Construction dust: Construction activities such as excavations can lead to emissions of dust. ■ Construction traffic: the construction of the Project can generate traffic on nearby roads and thereby associated combustion emissions and dust raising. ■ Construction associated combustion emissions (mobile plant and on-site power generation) 	<p>Sensitive human receptors are close (1km away) to the construction activities. There is relevant traffic and residential emissions in the study area, therefore air quality may currently be elevated, especially with regards to dust in the dry season(s).</p> <p>As complete control of dust emissions due to construction activities and construction traffic is difficult, the impact of construction is expected to be of minor significance at worst.</p> <p>Impacts on air quality caused by combustion emissions from construction related road and on-site traffic and onsite generators have the potential to impact human health and can be significant.</p> <p>On this basis, the ESIA will focus on identifying the potential for dust impacts due to the construction and on this basis make recommendations for appropriate mitigation.</p>		500 m from construction site	Human health of workers and local communities, (Note: all air quality impacts to ecology receptors have been scoped out as these are situated outside the spatial scope) ¹

¹ Due to the nature of emissions from mobile equipment and vehicles, and the relatively short stacks that they are discharged from, dispersion should be localized (i.e. within 1 km) to the site of emission. This has been scoped out on the basis that the anticipated volumes will not exceed the WHO guidelines (Air Quality Guidelines for Europe, Second Edition, World Health Organization, 2000.) for the protection of vegetation.

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
	Operation	<ul style="list-style-type: none"> ■ Operational traffic: the project will attract increased traffic and generate vehicular related emissions. ■ Process emissions from the operation of the industries located within the Project 429 ha 	<p>A key aspect for the operational phase will be vehicular emissions (Particulate matter (PM₁₀ and PM_{2.5}) and NO₂) due to increased traffic. Sensitive human receptors are close to the main road (Northern Motorway). Due to emissions from existing traffic baseline nitrogen dioxide and PM₁₀/PM_{2.5} is expected to be elevated above the general regional baseline.</p> <p>Air quality impacts associated with vehicular emissions from increased traffic will need to be considered and possible mitigation options investigated if potentially significant impacts are identified.</p> <p>Process emissions from combustion sources and process itself will be considered. It is assumed that industries to be located within the Project will use boilers fuelled by natural gas, and generators that use diesel fuel. Electricity will ultimately be provided by connection to the national grid. Key emissions are likely to be particulate matter, NO₂ and potentially volatile organic compounds (VOC).</p> <p>Air emissions from process stacks will arise based on the type of industry and activity being conducted. Estimations on the emissions from these sources are speculative until quantitative process descriptions are available.</p>		200 m from access roads to the PK24 plots and 2,500 m from the PK24 plots.	

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
Noise and Vibration	Construction	<ul style="list-style-type: none"> Noise propagation from construction equipment and construction/installation works. 	Potential likely noise impacts may affect Noise Sensitive Receptors (residential properties, schools, health facilities and places of worship), as a result of the construction and operation of the Project.	During construction, vibration may be noticeable at times when construction equipment passes close to individual receptors. Vibratory rollers, which may be required during construction, can generate significant vibration levels which may be noticeable at residential receptors within approximately 50 m. Most other equipment is likely to generate lower levels of vibration. Vibration effects from construction are expected to be short-lived at individual receptors as works progress along the route of the proposed roads and on the processing site and are therefore scoped out of assessment. However, the selected Civil Contractor will need to monitor the ground-born vibration and identify structures that are potentially vulnerable.	1000 m from construction equipment sources.	Human health (Note: all Noise impacts to ecology receptors have been scoped out) ²

² Construction noise impacts on fauna have been scoped out on the basis that the Project is in an area which already experiences noise disturbance from the existing operations and the incremental construction noise will be minimal. Operational noise impacts on fauna have been scoped out on the basis that the Project is in an area which already experiences noise disturbance from the existing operations and the incremental operation noise will be minimal. Fauna present are already tolerant of noise levels experienced.

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
	Operation	<ul style="list-style-type: none"> Noise propagation from the operation of the development. Traffic noise will be increased due to operation. 		<p>Operational noise impacts on fauna have been scoped out on the basis that the Project is located in an area which already experiences noise disturbance from the existing operations and the incremental operation noise will be minimal. Fauna present are already tolerant of noise levels experienced.</p> <p>During operation, vibration is expected to be below screening thresholds for potentially significant impacts, and this topic will not be considered in any detail.</p>	1000 m from the project's boundaries	
Biodiversity	Construction	<ul style="list-style-type: none"> Workers and equipment mobilisation Vehicle movement within and outside Project direct AoI Preparatory works (topsoil removal and stockpiling, etc.) Demobilisation and removal of temporary facilities (camps, borrow pits, access roads, etc.). No demolition works. 	<p>The preparatory works (site clearance, topsoil removal, earthworks, tree felling, etc.) performed in the context of the construction will likely affect vegetation and potentially fauna, by removing-killing individuals, direct disturbances (e.g. noise, dust) and by overall degradation of their living environment. Worker and equipment and mobilization and demobilisation, and movement of machinery will likely affect fauna due to increased vehicle movement, causing roadkill. More detailed studies are required to understand the presence of avifauna in the wetland to the north of the Project area.</p>	<p>Impacts from noise and vehicle movement will be drastically reduced if a few basic measures are adopted during the construction works. These are scoped out, although a series of measures will be given in the ESIA phase to ensure a minimal impact from the activities in this phase.</p>	<p>Direct: 1 km buffer around Physical footprint of construction works, laydown area.</p> <p>Indirect: Air Quality/Noise and Construction Area of Influence.</p>	Biological sensitive receptors

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
			Impacts derived from these activities on Relevant Flora, Relevant Fauna and Ecosystem connectivity are therefore scoped in,			
	Operation	<ul style="list-style-type: none"> ■ Movement of vehicles and machinery may lead to collisions with fauna, ■ Changes in noise and lightning, and odour propagation may have an impact on fauna 	-	Impacts from noise, smell and vehicle movement are unlikely to be important if a few basic measures are adopted during the construction works. These are scoped out, although a series of measures will be given in the ESIA phase to ensure a minimal impact from these activities.	<p>Direct: 1 km buffer around the plants and discharge point.</p> <p>Indirect: Air Quality/Noise and Surface Water Construction Area of Influence.</p>	

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
Soil	Construction	<ul style="list-style-type: none"> ■ Construction of underground utilities. ■ Impact on soil integrity and stability, mainly loss of topsoil, excavation, mixing horizons, input of pollutants and compaction, due to vehicle and construction equipment movement, earthworks, arrangement of access roads and various facilities and waste management. ■ Soil contamination due to spillage of oil or other chemical substances, pollution by waste as a result of routine activities. ■ Water stagnation can occur due to changes in soil profile, paving or gradient. Stockpiling of excavated soil Washing away of soil by rainfall or storm water causing highly turbid water and siltation / sedimentation of riverbed/stream. 	<p>The preparatory works (site clearance, topsoil removal, earthworks) performed in the context of the construction affect directly to the pedogenic horizon of the soil by removing the organic layer.</p> <p>Impact can be mitigated if the excavated soils are re-used in the Project area as far as possible and seeking alternative uses for surplus spoil where practicable (e.g. landscaping and earth works for other projects) to minimise the requirements for off-site disposal</p>	<p>It is not expected that construction activities such as heavy vehicular movement will result in significant soil compaction or erosion, as the existing public road network will be used as much as possible. Also, the laydown area selected will meet the geotechnical requirements and the rest of the Project site where earthworks will occur is located within the footprint of the existing villages.</p> <p>Therefore, impacts on soils are not considered significant and will not be assessed further in the ESIA and no baseline soil data collection is proposed.</p>	Physical footprint of construction works and laydown area.	Soil, land uses and nearest biological sensitive receptors. Also, community health and safety.
	Operation	<ul style="list-style-type: none"> ■ Soil contamination due to spillage of oil or other chemical substances, pollution by waste. ■ Soil contamination to potential leakage in the operation of underground utilities. 	<p>The effect of soil sealing and compactation will be permanent during the whole project life, altering the natural drainage of the area.</p>	<p>No earthworks are planned during operation. During operation, impacts on soils are not considered to be significant, as no earth movement is expected.</p> <p>Soil surfaces already exposed within the plots</p>	Physical footprint of the operation area.	Surface and groundwater

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
		<ul style="list-style-type: none"> Soil sealing, soil compactation and alteration of natural drainage 		<p>after construction can increase the risk of erosion because of runoff after rainfall events. Due to the plain topography of the project site the impacts related to soil erosion and soil instability are however estimated to be limited.</p> <p>Spills are included under unplanned events.</p>		
Surface Water	Construction	<ul style="list-style-type: none"> Contamination of nearby water bodies with suspended particles (contaminated surface runoff, construction works close to the river-bed), hydrocarbons (chemical substances due to their spillage, inflow of contaminated surface water runoff, or their spillage in the water bodies) and other substances (construction or household solid / liquid waste generated from construction camps). Significance of the impact also depends on the catchment size and increased effluent generation (if the capacity of the recipient is exceeded, e.g. during the rainy season). 	<p>Sensitive surface water receptors are close to the construction activities.</p> <p>Assuming that there is a possibility of unexpected discharges during construction, surface water quality could be affected. And there is a risk of damage to freshwater ecosystems through a change in water quality as a result of runoff from the construction site into surface water courses.</p> <p>Scenarios of discharged wastewater should be presented and discussed.</p> <p>Surface water should be better evaluated in the ESIA. A detailed hydrological assessment should be undertaken using a quantitative approach where possible, considering (among others) the hydrological and biological (water quality) impact of the discharges on an early cycle.</p>		Nearest inland rivers in the Project area (i.e. Gobouet River at the northern edge of the 940 ha polygon).	Freshwater and water users. Damage aquatic ecosystems.

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
		<ul style="list-style-type: none"> Supply disruption during construction and localized flood events due to insufficient drainage. Consumption of water resources and reduced water availability. 				
	Operation	<ul style="list-style-type: none"> Contamination of nearby water bodies with suspended particles as a result of wastewater discharged into the water streams from treatment plant and from stormwater discharges. Use of raw materials, chemicals and processes that give rise to liquid effluents whose uncontrolled or poorly-treated discharge can contaminate surface and groundwater. Damage to freshwater ecosystems through a change in water quality as a result of the discharge into surface water courses. 	<p>The industry sector in general has an enormous water footprint with an intense consumption of water.</p> <p>Scenarios of discharged wastewater should be presented and discussed.</p> <p>Surface water should be better evaluated in the ESIA. A detailed hydrological assessment should be undertaken using a quantitative approach where possible, considering (among others) the hydrological and biological (water quality) impact of the discharges on an early cycle.</p> <p>Surface water sampling should be considered (physical, chemical and biological parameters) on the discharge points. The flood risk and soil erosion assessment should be based in previous studies in the area, including site observations. Recommend measures to mitigate the identified impacts along with a description of their implementation.</p> <p>In addition, the fact that the current discharge points are located in perennial water streams, the environmental and community health</p>		Nearest inland rivers in the Project area (i.e., Gobouet River at the northern edge of the 940 ha polygon).	

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
			impacts should be considered when those discharges occur on the dry season.			
Groundwater	Construction	<ul style="list-style-type: none"> ■ Deterioration of groundwater quality as a result of pollutants movement into the deep layers of soil, or contamination of surface waters; earth works. ■ Groundwater contamination due to spillage of oil or other chemical substances, pollution by waste as a result of routine activities. 	-	The Project is not considering groundwater dewatering and the use of this resource as a source of water for construction. Unplanned events should be considered on this regard.	Underlying aquifers for Project area (CT aquifer)	Groundwater users and nearest biological sensitive receptors related groundwater.
	Operation	<ul style="list-style-type: none"> ■ Changes in groundwater balance; impacts of groundwater quality as a result of pollutants movement into the deep layers of soil, or 	Groundwater resources should be better evaluated in the ESIA. A detailed hydrological assessment should be undertaken using a quantitative approach where possible, considering (among others)	It is assumed that the Project is considering using water from public resources during operation phase. Demand from the industrial activities will intensify the	Underlying aquifers for Project area (CT aquifer)	

Topic	Temporal Scope	Potential Source(s) of Impact	<i>Scoped in</i>	<i>Scoped Out</i>	Spatial Scope	Potential affected receptors
		<p>contamination of surface waters.</p> <ul style="list-style-type: none"> ■ Groundwater contamination due to potential leakage in the operation of underground utilities. ■ Potential contamination of groundwater aquifers or surface water sources in the event of inadequate wastewater management. ■ Increase the groundwater demand that can favour the overexploitation of resources, the decrease of water levels and modify the groundwater flow. 	<p>the resources and water demands, the climate change effect in the availability of water, and the potential ecosystems related with groundwater (i.e., wetlands, springs, etc.).</p> <p>Chemical analyses of groundwater of potential receptors (i.e., wells located in the area). An inventory of wells and potential points of groundwater contamination should be considered.</p>	<p>competition with other water uses, such as domestic and agricultural water use. The expected growth of the industrial sector will further exacerbate the current gap between water supply and demand and contribute to declining water quality.</p> <p>An increase in pumping due to new abstraction wells or increase the demand from public resources may result in the following adverse effects: salt-water intrusion in the South boundary of aquifer, degradation or modifications of the water table in the Banco forest (one significant groundwater recharge area), with possible consequences for the ecosystems and generate tensions with the local communities in the long term between the proposed new economic activities (demand for water for industrial needs) and the traditional uses (household consumption and irrigation), especially during the dry seasons.</p>		

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
Indigenous Peoples	Construction/Operation	<ul style="list-style-type: none"> ■ Impacts on Indigenous People 		<p>The definition of "indigenous peoples" provided by the United Nations puts the emphasis on the aspects of vulnerability and marginalization by other groups. IFC Performance Standard 7 - Indigenous Peoples - recognizes indigenous peoples as "social groups with identities that differ from the mainstream groups in national societies and that are quite often marginalized and vulnerable. Their social, economic and legal status usually prevent them from defending themselves, their land titles, their rights on natural and cultural resources and could also limit their ability to participate in the development and take benefit of it" (WTO, 1989). The Project will not affect indigenous communities as defined above and no assessment will be undertaken as part of the ESIA.</p>	Social Aol	Resident populations of Social Aol

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
Cultural Heritage (Tangible and Intangible)	Construction	<ul style="list-style-type: none"> ■ Site clearance and earthworks can physically damage tangible heritage. Inorganic dust deposition (due to earth works, transportation operation, inert material loading/unloading, and construction works) can also have an impact. ■ Ground disturbing activities associated with construction are the most likely source of direct physical impacts to undiscovered archaeological resource, if present. ■ Built heritage and living heritage resources are susceptible to direct physical impacts if buildings, shrines, or other resources will be removed or damaged during construction. ■ Impacts could occur if resources are removed during construction or due to ancillary impacts from increased vibration and pollutants caused by increased vehicle traffic; ■ Built and living heritage resources are susceptible to indirect impacts through the introduction of intrusive 	<p>Based on the information gathered to date, the impact of the Project will need to be assessed for the following:</p> <ul style="list-style-type: none"> ■ Tangible cultural heritage- the potential for identified and unknown cultural heritage within the Project AoI to be impacted by the Project needs to be assessed. This will require the collation of a baseline compliant to IFC Performance Standard 8 (Cultural Heritage) ■ Intangible cultural heritage - The potential for identified and unknown Intangible Cultural Heritage within the Project AoI to be impacted by the Project needs to be assessed. This will require the collation of a baseline compliant to IFC Performance Standard 8 (Cultural Heritage) 		Physical footprint of construction works and associated infrastructure, 500m Project AoI.	Tangible / intangible cultural heritage

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
		<p>visual or auditory elements to their physical environment or “setting”. These impacts could include increased noise and/or exhaust and dust during construction.</p> <ul style="list-style-type: none"> ■ The influx of construction workers from outside the local area can impact on local intangible practices, such as religious rituals etc., ■ Land Acquisition can have an impact on intangible cultural heritage if access is restricted with the purchase, or if title is disputed. 				
	Operation	<ul style="list-style-type: none"> ■ Operation of equipment can physically damage tangible heritage or impact the people’s movement towards cultural heritage sites. ■ Operation of the road and textile park can impact people’s access to cultural heritage sites through increased traffic levels. ■ Pollution related to operation can have an impact on intangible cultural heritage in the surrounding areas. The influx of construction 	<p>The impact of the Project operations on any identified intangible cultural heritage at Phase 2 and Phase 1 Zone 1, through restriction of access or inaccessibility, will need to be assessed.</p> <p>Based on the information gathered to date, the impact of the project will need to be assessed for the following:</p> <p>Intangible cultural heritage - The potential for identified and unknown Intangible cultural heritage within the Project Aol to be impacted by the Project needs to be assessed. This will require the collation of a baseline compliant to IFC Performance</p>		Physical footprint of construction works and associated infrastructure, 500 m Project Aol	

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
		workers from outside the local area can impact on local intangible practices, such as religious rituals etc, as well as spark modern development in the wider area leading to a replacement in architectural traditions and styles.	Standard 8 (Cultural Heritage)			
Local Employment	Construction	<ul style="list-style-type: none"> ■ Temporary direct and indirect employment opportunities (primarily unskilled); ■ Temporary economic impacts from taxes and fees, procurement, and worker spending. ■ Long-term benefits from capacity enhancement of local labour through on-the-job and formal training opportunities. ■ Indirect opportunities through the procurement of goods and services, such as food supplies and construction materials 	The impact of the Project on employment and the local economy is expected to be positive (250 to 500 workers depending on the period). It is anticipated that skilled and unskilled roles will be available to local communities during construction. These will be temporary posts and will be advertised in local communities. The number of opportunities during operation will be significantly less but will be filled by both skilled and unskilled workers. A team of security guards will also be employed during the construction and operation. Indirect opportunities will also arise through the procurement of goods and services, such as food supplies and construction materials. Potential impacts on the local economy will be considered further through the ESIA and subsequent ESMP.		Social Aol	Regional / local economy
	Operation	<ul style="list-style-type: none"> ■ Permanent and temporary direct and indirect employment opportunities (primarily unskilled); 	The workforce required to operate the Project should be assessed.		Social Aol	

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
Community Health and Safety	All phases	<ul style="list-style-type: none"> ■ Noise, dust and air emissions ■ Increased transmission of communicable and non-communicable diseases ■ Site trespass and injury ■ Road safety ■ Community/workforce interactions. ■ Improper management of waste and hazardous materials ■ Emergency situations (fire, explosions, etc.) 	<p>Noise Disturbance Noise impacts may occur during construction. The main sources of noise include the Project construction as well as wider industries within PK24 IEZ, as well as increased vehicular traffic due to the delivery of construction materials.</p> <p>Communicable and Non-Communicable Diseases Based on the required workforce and construction schedule, it is not envisaged that the Project may attract an influx of people looking for work. Otherwise this influx would have the potential to lead to the spread of bacterial disease and infection, as well as the spread of Sexually Transmitted Infections (STIs) and HIV. During operation, the risk of these impacts is likely to be inexistent as the workforce size will significantly decrease.</p> <p>Site trespass and injury Considering that the Project site will be fenced off and guarded to manage public health and safety risks during construction and operation, this potential impact will be quite limited. An engagement programme with affected communities, as well as appropriate signage / information boards will be required to minimize risks associated with restricted access. This will be considered further through the ESIA.</p>	-	Social AoI for direct impacts. District level for indirect impacts (linked to supply chain and contractors)	Local population of Social AoI

Topic	Temporal Scope	Potential Source(s) of Impact	<i>Scoped in</i>	<i>Scoped Out</i>	Spatial Scope	Potential affected receptors
			<p>Road Safety During construction, there will be an increase in vehicles travelling through or adjacent to communities. Safety issues and traffic injuries are possible during the construction phase due to increased traffic and circulation of vehicles and machinery outside of the Project footprint. Young people and children are most likely at risk of getting injured. An engagement programme with affected communities and land users, as well as appropriate signage/information boards (with consideration for illiteracy levels) will be required to minimize risks associated with increased traffic.</p> <p>Waste and hazardous materials There is the potential for the public and the workers to be exposed to hazardous materials associated with the project construction and operation. For this an appropriate Waste and Hazardous Materials Management system shall be implemented,</p> <p>Emergency events The local communities will be exposed to potential accidental and emergency situations associated with the project, for which an Emergency Preparedness and Response Plan shall be established.</p>			

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
Land and Livelihoods	Construction	<ul style="list-style-type: none"> ■ Economic displacement resulting of loss of crops and fields, loss of associated livelihoods; ■ Loss of access to communal resources as well as infrastructure and social services; 	In 2017, the Government through AGEDI carried out a compensation process on the 940 ha previewed for the industrial zone (the Project footprint is part of the 940 ha). However, no information was shared to ARISE and ERM during the scoping phase of the Project. For the ESIA phase ARISE must seek information from the Government to carry out a due diligence of the government-led compensation process against international standards for the Project site and its associated infrastructures, and develop measures to bridge any gaps. The due diligence will confirm the need for developing a Livelihood Restoration Plan (LRP – if only economic displacement) or a Resettlement Action Plan (RAP – if physical displacement involved) compliant to IFC PS5 requirements.		Social Aol	Local population within Social Aol
	Operation		-		Social Aol	
Access to Infrastructure and Services	All phases	<ul style="list-style-type: none"> ■ Increased pressure on local services and infrastructures including education and health (primarily for construction). 	Disruption to infrastructure and utilities could result in impacts to livelihoods or quality of life and if unmanaged could result in health impacts (e.g. water or electricity		Severance of the existing roads/footpath network within the Project area will not affect social	Social Aol

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
		<ul style="list-style-type: none"> ■ Increased traffic disturbances due to circulation of Project vehicles and machinery in A2 highway and local access roads. ■ Disruptions on supply of public utilities, e.g. electricity, water supply due to Project consumption ■ Overflow on external waste management facilities ■ Benefits from improvements to infrastructure services including sanitation and wastewater infrastructures 	<p>restrictions, inability to pass roads in an emergency etc.).</p> <p>Any Project-specific impact on ecosystem services affecting will be assessed as Project design evolves during the ESIA development phase.</p>	<p>connectivity, particularly during construction.</p> <p>The extent of the impact is highly dependent on the PK24 footprint (as the Project is located within existing IEZ), the siting of access roads (no access roads will be created outside the PK24 boundary), and the location of worker accommodation (within the Project boundaries or in private facilities close by).</p> <p>Impacts on access to community services and facilities such as cult places, water deliveries and mobile healthcare units are not anticipated to be significant.</p>		
Worker Health, Safety, Security and Labour and Working Conditions	All phases	<ul style="list-style-type: none"> ■ Workers health and safety and security ■ Labour and working conditions ■ Forced labour and/or Child labour in the supply chain 	<p>Workers' rights including occupational health and safety need to be considered to avoid accidents and injuries, loss of man-hours, labour abuses and to ensure fair treatment, remuneration and working or living conditions. These issues should be considered not only for those who are directly employed by ARISE but also its contractors (including sub-contractors) and within the supply chain.</p> <p>Labour and working conditions as compared to relevant in Country</p>	-	Social Aol and Regional (contractors and supply chain)	Direct and indirect workers of the Project

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
			laws and the Lenders Requirements should be assessed in the ESIA			
Community Cohesion	All phases	<ul style="list-style-type: none"> ■ Inter-intra community tension ■ Unmet expectations regarding project benefits (i.e. employment opportunities) ■ Influx of job seekers 	<p>Due to the presence of limited the workforce and that influx of job seekers is not expected, the potential for impacts to community cohesion is not considered significant (this includes grievances and tension within communities and between communities (traditional leaders, landowners and users) and the government, the EPC and third parties.</p> <p>Expectations regarding job opportunities and Project benefits, such as community investment, are considered high. Any opportunities of employment will be carefully managed and, where offered, will be done so as not to create tension in areas where benefits are perceived to be higher than in others. Measures to manage community engagement and reduce the likelihood of tension between communities will be explored as part of the ESIA.</p> <p>Community investment offered by this Project is not known at this stage.</p>	-	Social Aol	Local population within Social Aol

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
Climate Risk Assessment	Construction	<ul style="list-style-type: none"> Physical climate-related risks that might have an impact on the Project during construction phase (i.e. flooding and other risks resulting from change in climate patterns) 	<p>According to the Equator Principle 4, the Climate Risk Assessment (CRA) for such a (assumed) Category A project must include (i) consideration of physical risks and (ii). The Scope 1 and Scope 2 GHG emissions caused by the Project activities (construction and operation stages) will be calculated to the international requirements. These emissions are assumed to not exceed the annual 100,000 t of CO₂ e threshold.</p> <p>if combined Scope 1 and Scope 2 Emissions are expected to be more than 100,000 t of CO₂ e annually – then also transition risks must be assessed as well as an evaluation of GHG-saving alternatives.</p> <p>The CRA must address the following questions at a high level:</p> <ul style="list-style-type: none"> Develop a concise understanding of current and anticipated climate change risk in the area; Conduct a risk assessment (generally involving expert judgement) to identify specific risks that may become problematic under future climate change; and Understand magnitude, frequency, likelihood and vulnerability of the Project when exposed to climate change–related hazards. 		Physical footprint of construction works and laydown area.	Residents of nearby settlements, staff, biological environment
Transition Risk Assessment	Operation	<ul style="list-style-type: none"> Physical climate-related risks that might have an impact on the Project during operation phase by assets damage or operation disruption of the Project (i.e. flooding and other risks resulting from change in climate patterns). 			Physical footprint of operation area.	

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
GHG Emissions	Construction	<ul style="list-style-type: none"> Increased GHG emissions (CO2 equivalent) during construction, associated with fuel combustion and power consumption due to the operation of machinery equipment and vehicles owned by the company. 	<p>Assessment is necessary to understand if Project related activities would have a direct effect on increased GHG levels in the atmosphere. If these emissions are significant, proportional measures will be implemented.</p> <p>For the GHG Assessment, direct emissions and emissions associated with purchased electricity/steam/heat/cooling will be considered and quantified (Scope 1 and Scope 2).</p>	<p>Scope 3 emissions as per Greenhouse Gas (GHG) Protocol³.</p> <p>Decommissioning stage.</p>	Physical footprint of operation area.	Increase of GHG emission levels in the atmosphere leading to climate change and global warming.
	Operation	<ul style="list-style-type: none"> Increased GHG emissions (CO2 equivalent) during operation, associated with fuel combustion and power consumption due to the operation of machinery equipment and vehicles owned by the company and enterprises located within the Project. 				
Visual Amenity	All Phases	<ul style="list-style-type: none"> Visual and landscape impact due to construction camp and temporary structures; waste disposal and works related to construction and transportation 	-	<p>The Project area is located within the PK24 industrial zone, which is partly highly developed. Therefore, it is anticipated that the nearby settlements will not experience a significant in visual amenity during construction, as these area is already impacted by PK24. The PK24 area is quite modified, and the existence of the villages will absorb the visual impact. No detailed assessment will</p>	Physical footprint of construction works and laydown area and 500m from access road.	Residents of nearby settlements

³ [Corporate Value Chain \(Scope 3\) Standard | Greenhouse Gas Protocol \(ghgprotocol.org\)](https://ghgprotocol.org/)

Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
				be undertaken as part of the ESIA.		
Ecosystem Services	Construction	<ul style="list-style-type: none"> ■ Degradation of services associated to the current state of the plot, including those associated to loss of forested patches and agricultural lands, the wetland to the north of the Project area and increased site runoff, reduced agricultural land surface, reduced wood extraction, limited hunting, discharges waste effluents, and reduced water availability. 	<ul style="list-style-type: none"> ■ An evaluation of ecosystem services associated to the Project area in its pre-construction state is necessary to better understand how these will be affected. 		Project AoI	Local and Regional population dependent on forest services and agriculture
	Operation	<ul style="list-style-type: none"> ■ Degradation of surface water quality from site runoff and discharges of sanitary effluent. 			Project AoI	



Topic	Temporal Scope	Potential Source(s) of Impact	Scoped in	Scoped Out	Spatial Scope	Potential affected receptors
Tourism	All phases	<ul style="list-style-type: none"> ■ Contribution to touristic activities attractiveness. 		The Aol currently have no known touristic vocation. Therefore, impacts on tourism are not considered significant and will not be assessed further in the ESIA.	Regional	Regional / Local Economy
Cumulative Impacts	All phases	<ul style="list-style-type: none"> ■ Sanitation, noise and air quality 	Cumulative Impact Assessment (CIA) is mandatory as per international guidelines and best practices. The CIA should take into consideration the current and projected industries within PK24. The CIA should also assess the scenarios of possible industries entering the Project 429 ha..			Various

APPENDIX C PHOTOLOG FROM THE SITE VISITS

**FICHE THEMATIQUE DE COLLECTE DE DONNEES SUR LES ASPECTS SOCIOECONOMIQUES PAR WAYPOINT –
PROJET DE CONSTRUCTION D'UNE ZONE ÉCONOMIQUE INDUSTRIELLE (ZEI) DE 429 HA QUI FAIT PARTIE DE LA
ZEI PK24 D'AKOUBE-ZEUDJI DE 940 HA, DANS LE DISTRICT AUTONOME D'ABIDJAN, CÔTE D'IVOIRE**

Nom de l'Industrie	Description de l'activité ou secteur	Occupant le site du Projet / Entourant le site du Projet	Coordonnées	Photo
MIPA	Fabrication de casier	Entourant le site du projet	Latitude :5 ;25 ;51.7518 Longitude :4 ;9 ;50.2816	
Q10	Production d'aliments de volaille	Entourant le site du projet	Latitude :5 ;25 ;58.9376 Longitude :4 ;9 ;50.1373	


Habitation	Dortoir	Entourant le site du projet	Latitude :5 ;25 ;57.22 Longitude :4 ;9 ;56.6211	
Garage	Reparation de véhicules	Entourant le site du projet	Latitude :5 ;25 ;56.74772 Longitude :4 :9 ;598603	

<p>FER IVOIRE SARLU</p>	<p>Constructeur, importateur et exportateur d'Acier</p>	<p>Entourant le site du projet</p>	<p>Latitude : 5 ;25 ;54.4366 Longitude :4 ;10 ;4.7646</p>	
<p>Entrepôt</p>	<p>Exposition de produits finis de l'acier</p>	<p>Entourant le site du projet</p>	<p>Latitude :5 ;25 ;54.4366 Longitude :4 ;10 ;4.7646</p>	

<p>Poste CI-Energies</p>	<p>Source d'alimentation en électricité</p>	<p>Entourant le site du projet</p>	<p>Latitude :5 ;25 ;52.1294 Longitude :4 ;10 ;8.8399</p>	
<p>SCCI 2(Société de Ciment)</p>	<p>Production de ciment</p>	<p>Entourant le site du projet</p>	<p>Latitude :5 ;25 ;11.5144 Longitude :4 ;2 ;44.8871</p>	

Guépard CI	Production de ciment	Entourant le site du projet	Latitude : 5 ;25 ;38.7125 Longitude : 4 ;8 ;38.1049	
Société chinoise	Fabrication de fer	Entourant le site du projet	Latitude :5 ;25 ;58.5187 Longitude :4 ;9 ;25.8559	


KEI SPIROLL Precast production	En chantier	Entourant le site du projet	Latitude :5 ;26 ;8.1713 Longitude :4 ;8 ;56.6082	
Inconnu	En chantier	Entourant le site du projet	Latitude :5 ;26 ;16.5884 Longitude :4 ;8 ;57.7687	

Inconnu	En chantier	Entourant le site du projet	Latitude :5 ;26 ;2.4428 Longitude :4 ;8 ;58.0913	

**FICHE THEMATIQUE DE COLLECTE DE DONNEES SUR LES ASPECTS SOCIOECONOMIQUES PAR WAYPOINT –
PROJET DE CONSTRUCTION D'UNE ZONE ÉCONOMIQUE INDUSTRIELLE (ZEI) DE 429 HA QUI FAIT PARTIE DE LA
ZEI PK24 D'AKOUBE-ZEUDJI DE 940 HA, DANS LE DISTRICT AUTONOME D'ABIDJAN, CÔTE D'IVOIRE**

Village	Type de structure de Santé (Hôpital, Centre de Santé, pharmacie, etc.)	Nom	Coordonnées	Photo
Akoupé- Zeudji	Centre de santé urbain (CSU)	Centre de Santé Urbain d'Akoupé/Anyama	Latitude :5 ;28 ;45 ;45.4 078 Longitude :4 ;9 ;18.4078	
Allokoi	Centre de santé urbain (CSU)	Centre de Santé Urbain d'Allokoi	Latitude :5 ;23 ;47.8569 Longitude :4 ;8 ;45.0606	
Adonkoi I	Centre de santé Urbain	Centre de santé Urbain d'Attinguié	En attente de la consultation à Attinguié	En attente de la consultation à Attinguié

<p>Angueded ou village</p>	<p>Centre de santé urbain (CSU)</p>	<p>Centre de Santé Urbain de Songon</p>	<p>Latitude : 5°19'6.63" Longitude : 4°12'8.81"</p>	
<p>V2 Palmafrique</p>	<p>Infirmierie</p>	<p>Infirmierie du village V2 Palmafrique</p>	<p>Latitude : 5 ; 26 ; 20.4724 Longitude : 4 ; 7 ; 40.5915</p>	

<p>Abadjin-Kouté</p>	<p>Centre de santé urbain (CSU)</p>	<p>Centre de Santé Urbain de Songon</p>	<p>Latitude : 5°19'6.63" Longitude : 4°12'8.81"</p>	
----------------------	-------------------------------------	---	---	---

**APPENDIX D AGREEMENT FOR PROGRESSIVE LAND ACQUISITION OF
AND COMPENSATION FOR THE PK24**

**CONVENTION DE PURGE DES DROITS
COUTUMIERS DE LA PARCELLE DE
940 HECTARES SISE AU « PK 24 » DE
L'AUTOROUTE DU NORD**

SAS

LOC

Entre les soussignés

L'Etat de Côte d'Ivoire, représenté par :

- Le Ministre de la Construction, du Logement, de l'Assainissement et de l'Urbanisme, ou son représentant ;
- le Ministre de l'Industrie et des Mines, ou son représentant ;
- le Ministre d'Etat, Ministre de l'Intérieur et de la Sécurité, ou son représentant ;

Ci-après désigné « **L'ETAT** »

D'UNE PART,

ET,

Le collectif des détenteurs de droits coutumiers sur la parcelle de 940 hectares, représenté par :

- Monsieur : **SEKA AGBA JEAN**
Résident à : **AKOUPÉ-ZEUDJI**
CNI n° : **C 0031 29 4690**
Validité : **6/7/2019**
au titre des ressortissants du village d'Akoupé-Zeudji,
- Monsieur : **ACHEGNAN OSSEPE CONSTANT**
Résident à : **ALLOKOI**
CNI n° : **C 0031 378172**
Validité : **5/7/2019**
au titre des ressortissants du village d'Allokoï,
- Monsieur : **ANDOH N'DE MOISE**
Résident à : **ATINGUEE**
CNI n° : **C 0038 189874**
Validité : **25/8/2019**
au titre des ressortissants du village d'Attinguïé,

ci-après désigné « **LE COLLECTIF DES DETENEURS DE DROITS COUTUMIERS** », **D'AUTRE PART.**

Il a été préalablement exposé ce qui suit :

- Considérant que l'Etat, désireux d'aménager des terrains industriels en bordure de l'Autoroute du Nord au point kilométrique 24, a identifié un site d'une superficie de neuf cent quarante (940) hectares et s'est rapproché des Communautés villageoises concernées afin de procéder à la purge des droits coutumiers ;
- Considérant que lors des négociations qui se sont engagées avec les Communautés villageoises, celles-ci ont manifesté leur volonté d'accompagner l'Etat dans la réalisation de cette infrastructure de développement économique de la région ;
- Considérant que pour réaliser le projet d'aménagement d'une zone industrielle sur le site identifié, l'Etat a pris le décret n°2014-98 du 12 mars 2014 portant

déclaration d'utilité publique du site PK 24, d'une superficie de 940 hectares situé en bordure de l'Autoroute du Nord ;

- Considérant que le décret précité prévoit que les détenteurs de droits coutumiers recensés percevront, conformément à la réglementation en vigueur en la matière, une indemnisation au moment de la réalisation du projet sur l'espace déclaré d'utilité publique ;
- Considérant que le décret n°2013-224 du 22 mars 2013 portant réglementation de la purge des droits coutumiers sur le sol pour intérêt général, tel que modifié par le décret n°2014-25 du 22 janvier 2014, prévoit l'indemnisation des cultures et des impenses détruites ;
- Considérant que l'Etat et les Communautés villageoises se sont rapprochés afin de fixer les conditions et modalités de la purge des droits coutumiers, à travers la signature de la présente convention ;

Il a été convenu et arrêté ce qui suit :

Article 1 : OBJET DE LA CONVENTION

La présente convention a pour objet d'arrêter les modalités pratiques de la purge des droits coutumiers convenues entre l'Etat et les détenteurs de droits coutumiers sur la parcelle de 940 hectares.

Article 2 : DESIGNATION DE LA PARCELLE

La présente convention de purge de droits coutumiers porte sur la parcelle de terrain non viabilisée, d'une superficie de 940 hectares soit **9 400 000 mètres carrés**, telle que délimitée sur l'extrait topographique ci-joint.

Article 3 : DETERMINATION DU MONTANT DE LA PURGE

Le coût de la purge pour la perte des droits liés à l'usage du sol de la parcelle ci-dessus désignée, est fixé à **deux mille cinq cents (2 500) francs CFA** le mètre carré.

Article 4 : MODALITES PRATIQUES DE LA PURGE

L'Etat consent procéder à la purge des droits coutumiers de façon fractionnée en fonction de l'occupation progressive de la parcelle.
A cet effet, la parcelle est divisée en trois entités qui ont chacune leur modalité de purge.

1- En ce qui concerne la parcelle dénommée « Programme d'urgence », d'une superficie totale de soixante deux (62) hectares, les modalités sont les suivantes :

- ✓ Montant total à purger : 1 550 000 000 F CFA ;
- ✓ Durée totale de la purge : 01 an ;
- ✓ Echancier de la purge :
 - ✓ 1 000 000 000 FCFA à la signature de la présente convention ;
 - ✓ 550 000 000 au premier semestre de l'année 2016.

SAT

AOC

2 En ce qui concerne la parcelle dénommée « Mise en concession », d'une superficie totale de deux cent vingt sept (227) hectares, les modalités sont les suivantes :

- ✓ Montant total à purger : 5 675 000 000 F CFA ;
- ✓ Durée totale de la purge : 03 ans ;
- ✓ Echancier de la purge :
 - ✓ **Première tranche** : 1 000 000 000 F CFA à la signature de la présente convention.
 - ✓ **Deuxième tranche** : 2 337 500 000 F CFA répartis comme suit :
 - Premier paiement au premier semestre de l'année 2016 : 1 200 000 000 F CFA ;
 - Deuxième paiement au deuxième semestre de l'année 2016 : 1 137 500 000 F CFA.
 - ✓ **Troisième tranche** : 2 337 500 000 F CFA répartis comme suit :
 - Premier paiement au premier semestre de l'année 2017 : 1 200 000 000 F CFA ;
 - Deuxième paiement au deuxième semestre de l'année 2017 : 1 137 500 000 F CFA.

3 En ce qui concerne la parcelle dénommée « Solde des 940 ha », d'une superficie totale de six cent cinquante et un (651) hectares, les modalités sont les suivantes :

- ✓ Montant total à purger : 16 275 000 000 F CFA ;
- ✓ Durée totale de la purge : 05 ans ;
- ✓ Echancier de la purge :
 - ✓ **Première tranche** : 500 000 000 F CFA à la signature de la présente convention.
 - ✓ **Deuxième tranche** : 1 662 500 000 CFA répartis comme suit :
 - Premier paiement au premier semestre de l'année 2016 : 900 000 000 F CFA ;
 - Deuxième paiement au deuxième semestre de l'année 2016 : 762 500 000 F CFA.
 - ✓ **Troisième tranche** : 3 337 500 000 F CFA répartis comme suit :
 - Premier paiement au premier semestre de l'année 2017 : 1 700 000 000 F CFA ;
 - Deuxième paiement au deuxième semestre de l'année 2017 : 1 637 500 000 F CFA.
 - ✓ **Quatrième tranche** : 5 500 000 000 F CFA répartis comme suit :
 - Premier paiement au premier semestre de l'année 2018 : 2 750 000 000 F CFA ;
 - Deuxième paiement au deuxième semestre de l'année 2018 : 2 750 000 000 F CFA.

SAJ
Aoc

- ✓ **Cinquième tranche** : 5 275 000 000F CFA répartis comme suit :
 - Premier paiement au premier semestre de l'année 2019 :
2 750 000 000 F CFA ;
 - Deuxième paiement au deuxième semestre de l'année 2019 :
2 525 000 000 F CFA.

Article 5 : REGLEMENT DES PAIEMENTS

Le paiement du montant de la purge est fait au détenteur des droits coutumiers dont l'identité est entièrement déclinée lors de l'enquête foncière ou à toute autre personne désignée par lui. Le règlement se fait par chèque.

Afin de constituer un fonds du village, les parties conviennent de prélever la somme de 50 FCFA par mètre carré, sur le montant dû à chaque détenteur de droits coutumiers. A cet effet, un chèque du montant total de la somme due à ce titre, sera établi au nom du Comité de Gestion Foncière de chaque village.

Article 6 : OBLIGATIONS DES PARTIES

6.1 : Obligations de L'ETAT

- a. L'Etat s'engage à régler la totalité de la purge de la parcelle selon les modalités définies à l'article 4 ci-dessus.
- b. L'Etat s'engage à prendre livraison de la parcelle dans l'état où elle se trouve lors de la remise effective du premier chèque. La réception ainsi effectuée entraîne le transfert de la responsabilité de la parcelle à l'Etat et de la garde de celle-ci par l'Etat.

6.2 : Obligations du DETENTEUR DES DROITS COUTUMIERS

- a. Le détenteur des droits coutumiers s'interdit de vendre, de louer à des tiers la parcelle. Dans ce cas de figure, toute personne qui se rendrait coupable d'un tel acte serait passible de poursuites judiciaires ;
- b. Le détenteur des droits coutumiers s'engage à ne perturber de quelque manière que ce soit, les travaux de construction et d'aménagement de la Zone Industrielle sur le site, sous peine de poursuites judiciaires ;
- c. Le détenteur des droits coutumiers s'engage à ne réclamer aucun retour des terrains mis à la disposition de l'Etat.

Article 7 : INDEMNISATION DES CULTURES ET DES IMPENSES

Les cultures et les impenses présentes sur le sol seront évaluées par les services compétents et indemnisées selon la réglementation en vigueur.

Article 8 : RESILIATION DE LA CONVENTION

La présente convention, ainsi que les avenants qui pourraient lui être annexés, ne peuvent être remis en cause par les parties.

Article 9 : MODIFICATION

Toute modification de la présente convention se fera par voie d'avenant.

SAT
Aoc

Article 10 : COMITE DE SUIVI DE LA CONVENTION

Pour la mise en œuvre de la présente convention, il est créé un comité de suivi, composé des représentants des parties signataires.

Ce comité est chargé, notamment de veiller au respect des modalités de la purge et des conditions de règlement des paiements.

Les chefs de village et le collectif des détenteurs de droits coutumiers désignent leurs représentants.

Article 11 : REGLEMENT DES DIFFERENDS

En cas de différend relatif à l'interprétation ou à l'exécution de la présente convention, les parties conviennent de recourir à un règlement amiable dans un délai qui ne peut excéder trois (03) mois devant les services du Ministère en charge de la Construction et du Ministère en charge de l'Industrie.

Article 12 : NOTIFICATION

Les notifications seront faites aux adresses susmentionnées.

Tout changement d'adresse devra faire l'objet de notification à l'autre partie.

Fait en six (06) exemplaires originaux, à Abidjan, le **17 MAI 2015**

**POUR LE COLLECTIF DE
DETENTEURS DES DROITS
COUTUMIERS**

Représentant Akoupé-Zeudji

Nom : **SEKA**

Prénoms : **AGBA JEAN**

Signature : *[Signature]*

Représentant Allokoï

Nom : **ACHEGNAN**

Prénoms : **DASSE PE**

Signature : *[Signature]*

Représentant Attinguïé

Nom : **ANDOH**

Prénoms : **NDE MOÏSE**

Signature :



Exécutif Coutumier
d'Attinguïé SIP d'Anyama
Le Chef de Village
ANDOH N. MOÏSE



POUR L'ETAT,

Le Représentant du Ministre de la
Construction, du Logement et de
l'Urbanisme



**TRAORE
MEFOUA**

Le Représentant du Ministre de l'Industrie
et des Mines

Camara Kinaya



Le Représentant du Ministre d'Etat,
Ministre de l'Intérieur et de la Sécurité



Fatogona Yeo
FATOGONA YEO

REPUBLIQUE DE CÔTE D'IVOIRE
Carte Nationale d'Identité
Immatriculation : C 0031 3781 72

ACHEGNAN
Nom

OSSEPE CONSTANT
Prénoms



M 1,68
Sexe Taille (m)

08/09/1965
Date de Naissance

EBIMPE ANYAMA (CIV)
Lieu de Naissance

Etabli le : 06/07/2009 Valable jusqu'au : 05/07/2019

A ANYAMA



Ako Kwi

Domicile : AKOUBE ZEUDJI

Ad. Postale : BP 243 ANYAMA

Profession : TECHNICIEN

Signature du Titulaire 

Père : ACHEGNAN PAUL
Né le : 01/01/1932

Mère : ADOUKO YOMAIN
Née le : 01/01/1935

Numéro de série : 002 0298 009 0001550995



REPUBLIQUE DE CÔTE D'IVOIRE
 Carte Nationale d'Identité
 Immatriculation : C 0031 2946 90



SEKA
 Nom
 AGBA JEAN
 Prénoms

M 1.68
 Sexe Taille (m)

06/06/1957
 Date de Naissance

AKOUE ANYAMA (CIV)
 Lieu de Naissance

Etablie le 06/07/2009 Valable jusqu'au 05/07/2019
 A ANYAMA

Chief du village d'Akoupe - Zoudji
 Résident à Akoupe - Zoudji

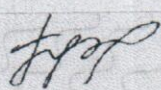

Numero de série : 002 0298 009 0001652090

Née le 01/01/1940
 Mere : YAHO AYE
 Né le 01/01/1932
 Pere : AGBA SEKA

Signature
 du
 Titulaire

Ad Postale : CP 03 BP 2325 ANYAMA ZERO TROIS
 Profession : CADRE POSTE COTE D'IVOIRE

Domicile : AKOUE ZEUDI

REPUBLICQUE DE CÔTE D'IVOIRE
Carte Nationale d'Identité
Immatriculation : C 0038 1898 74

ANDOH
Nom
N'DE MOISE
Prénoms



M 1,70
Sexe Taille (m)

01/01/1958
Date de Naissance

ATTINGUIE (CIV)
Lieu de Naissance

Etablie le 26/08/2009 Valable jusqu'au 25/08/2019

A ANYAMA




Attinguie

Domicile : ATTINGUIE AUTOROUTE

Ad. Postale : CP 04 BP 1727 ABIDJAN


Profession : PROFESSEUR

Signature du Titulaire



Père : OKAKO ANDOH
Né le : 01/01/1932
Mère : AKO APO
Née le : 01/01/1937

Numéro de série : 002.0298 007.0001515589



Attinguie

APPENDIX E SPECIES INVENTORIED IN THE PROJECT AREA

Table 1 List of Flora Species in the Project area

Species	Family	IUCN Status ¹
<i>Abrus precatorius</i> Linn.	Fabaceae	-
<i>Acalypha ciliata</i> Forsk.	Euphorbiaceae	-
<i>Acroceras zizanioides</i> (Kunth) Dandy	Poaceae	LC
<i>Adenia lobata</i> (Jacq.) Engl.	Passifloraceae	-
<i>Ageratum conyzoides</i> Linn.	Asteraceae	LC
<i>Albizia adianthifolia</i> (Schumach.) W.F. Wright	Fabaceae	LC
<i>Albizia zygia</i> (DC.) J.F. Macbr.	Fabaceae	LC
<i>Alchornea cordifolia</i> (Schum. & Thonn.) Müll.Arg.	Euphorbiaceae	LC
<i>Alstonia boonei</i> De Wild.	Apocynaceae	LC
<i>Alternanthera brasiliana</i> (L.) Kuntze	Amaranthaceae	-
<i>Anchomanes difformis</i> (Blume) Engl	Araceae	LC
<i>Andropogon gayanus</i> Kunth	Poaceae	-
<i>Andropogon tectorum</i> Schumach. & Thonn.	Poaceae	-
<i>Annona muricata</i> Linn.	Annonaceae	LC
<i>Anthocleista djalonensis</i> A. Chev.	Gentianaceae	LC
<i>Anthocleista nobilis</i> G. Don	Gentianaceae	LC
<i>Antiaris toxicaria</i> Lesch.	Moraceae	LC
<i>Aspilia bussei</i> O.Hoffm. & Muschl.	Asteraceae	-
<i>Axonopus compressus</i> P. Beauv.	Poaceae	LC
<i>Bambusa vulgaris</i> Schrad. ex J. C. Wendel.	Poaceae	-
<i>Baphia nitida</i> Lodd.	Fabaceae	LC
<i>Bidens pilosa</i> Linn.	Asteraceae	-
<i>Boerhavia coccinea</i> Mill	Nyctaginaceae	-
<i>Boerhavia diffusa</i> Linn.	Nyctaginaceae	-
<i>Boerhavia erecta</i> Linn.	Nyctaginaceae	-
<i>Bombax buenopozense</i> P. Beauv.	Malvaceae	-
<i>Borreria verticillata</i> (L.) G. F. W. Mey.	Rubiaceae	-
<i>Breynia disticha</i> J. R. & G. Forst	Euphorbiaceae	
<i>Bridelia ferruginea</i> Benth.	Euphorbiaceae	LC
<i>Cardiospermum grandiflorum</i> Sw.	Sapindaceae	-
<i>Carica papaya</i> Linn.	Caricaceae	DD
<i>Cassia hirsuta</i> Linn.	Fabaceae	-
<i>Catharanthus roseus</i> (Linn.) G. Don	Apocynaceae	-

¹ IUCN, 2023. IUCN Red List of Threatened Species. Available at: [IUCN Red List of Threatened Species](https://www.iucn.org/redlist)

Species	Family	IUCN Status ¹
<i>Cecropia peltata</i> Linn.	Cecropiaceae	LC
<i>Ceiba pentandra</i> (Linn.) Gaerth.	Malvaceae	LC
<i>Chromolaena odorata</i> (L.) R. M. King & H. Rob.	Asteraceae	-
<i>Cissus aralioides</i> (Welw. ex Baker) Planch.	Vitaceae	-
<i>Cnestis ferruginea</i> DC.	Connaraceae	-
<i>Cola millenii</i> K. Schum.	Malvaceae	LC
<i>Cola nitida</i> (Vent.) Schott & Endl.	Malvaceae	LC
<i>Combretum zenkeri</i> Engl. & Diels	Combretaceae	-
<i>Corchorus tridens</i> L.	Malvaceae	-
<i>Crotalaria retusa</i> Linn.	Fabaceae	-
<i>Cyrtosperma senegalense</i> (Schott) Engl.	Araceae	LC
<i>Dalbergia afzeliana</i> G. Don	Fabaceae	LC
<i>Dalbergia hostilis</i> Benth.	Fabaceae	LC
<i>Dalbergiella welwitschii</i> (Bak.) Bak.f.	Fabaceae	-
<i>Desmodium adscendens</i> (Sw.) DC.	Fabaceae	LC
<i>Dracaena ovata</i> Ker Gawl.	Agavaceae	-
<i>Dracaena surculosa</i> Lindl.	Agavaceae	-
<i>Eclipta prostrata</i> (Linn.) Linn.	Asteraceae	LC
<i>Elaeis guineensis</i> Jacq.	Arecaceae	LC
<i>Eleusine indica</i> (Linn.) Gaertn.	Poaceae	LC
<i>Emilia sonchifolia</i> (Linn.) DC.	Asteraceae	-
<i>Euphorbia heterophylla</i> Linn.	Euphorbiaceae	LC
<i>Euphorbia hirta</i> L.	Euphorbiaceae	-
<i>Ficus exasperata</i> Vahl	Moraceae	LC
<i>Ficus lutea</i> Vahl	Moraceae	LC
<i>Ficus mucoso</i> Welw. ex Ficalho	Moraceae	LC
<i>Ficus sur</i> Forssk.	Moraceae	LC
<i>Griffonia simplicifolia</i> (Vahl ex DC.) Baill .	Fabaceae	-
<i>Harungana madagascariensis</i> Lam. ex Poir.	Hypericaceae	LC
<i>Heliotropium indicum</i> L.	Boraginaceae	-
<i>Heterotis rotundifolia</i> (Sim.) Jacq.-Féli	Melastomataceae	LC
<i>Hevea brasiliensis</i> (Kunth) Müll.Arg	Euphorbiaceae	LC
<i>Hibiscus sabdariffa</i> Linn.	Malvaceae	-
<i>Ipomoea asarifolia</i> (Ders.) Roen. & Schult.	Convolvulaceae	-
<i>Isolona campanulata</i> Engl. & Diels	Annonaceae	LC

Species	Family	IUCN Status ¹
<i>Justicia flava</i> (Forssk.) Vahl	Acanthaceae	VU
<i>Lantana camara</i> Linn.	Verbenaceae	-
<i>Laportea aestuans</i> (Linn.) Chew	Urticaceae	-
<i>Lecaniodiscus cupanioides</i> Planch.	Sapindaceae	LC
<i>Leptoderris miegei</i> Aké Assi & Mangenot	Fabaceae	-
<i>Lonchocarpus cyanescens</i> (Schummach & Thonn.) Benth.	Fabaceae	-
<i>Lonchocarpus sericeus</i> (Poir.) Khunt.	Fabaceae	LC
<i>Ludwigia octovalvis</i> (Jacq.) P. Raven	Onagraceae	LC
<i>Macaranga barteri</i> Müll. Arg.	Euphorbiaceae	LC
<i>Macaranga spinosa</i> Müll. Arg.	Euphorbiaceae	LC
<i>Mangifera indica</i> L.	Anacardiaceae	DD
<i>Manihot esculenta</i> Crantz	Euphorbiaceae	DD
<i>Margaritaria discoidea</i> (Baill.) Webster	Euphorbiaceae	LC
<i>Melanthera scandens</i> (Schum. & Thonn.)	Asteraceae	-
<i>Mezoneurum benthamianum</i> Baill.	Fabaceae	-
<i>Mikania cordata</i> (Burm.f.) B.L. Rob.	Asteraceae	-
<i>Milicia regia</i> (A. Chev.) C. C. Berg	Moraceae	VU
<i>Millettia zechiana</i> Harms	Fabaceae	LC
<i>Mimosa pudica</i> Linn.	Fabaceae	LC
<i>Morinda lucida</i> Benth.	Rubiaceae	LC
<i>Musa paradisiaca</i> Linn.	Musaceae	-
<i>Musanga cecropioides</i> R. Br.	Cecropiaceae	LC
<i>Myrianthus libericus</i> Rendle	Urticaceae	LC
<i>Nauclea pobeguinii</i> (Pobég. ex Pellegr.) E. M. A. Petit	Rubiaceae	-
<i>Nephrolepis biserrata</i> (Sw.) Schott	Dryopteridaceae	-
<i>Newbouldia laevis</i> (P. Beauv.) Seemann ex Bureau	Bignoniaceae	LC
<i>Palisota barteri</i> Hook.	Commelinaceae	-
<i>Panicum maximum</i> Jacq.	Poaceae	-
<i>Panicum repens</i> Linn	Poaceae	LC
<i>Paspalum vaginatum</i> Sw.	Poaceae	LC
<i>Passiflora foetida</i> Linn.	Passifloraceae	-
<i>Persea americana</i> Mill.	Lauraceae	LC
<i>Phyllanthus amarus</i> Schum. & Thonn.	Euphorbiaceae	-
<i>Physalis angulata</i> Linn.	Solanaceae	LC
<i>Porophyllum ruderale</i> (Jacq.) Cass.	Asteraceae	-

Species	Family	IUCN Status ¹
<i>Pouteria alnifolia</i> (Bak.) Roberty	Sapotaceae	LC
<i>Psidium guajava</i> Linn.	Myrtaceae	LC
<i>Psyrax subcordata</i> (DC.) Bridson	Rubiaceae	-
<i>Pteridium aquilinum</i> (Linn.) Kuhn	Dennstaedtiaceae	-
<i>Pueraria phaseoloides</i> (Roxb.) Benth. var <i>javanica</i> (Benth) Baker	Fabaceae	-
<i>Pycnanthus angolensis</i> (Welw.) Warb.	Myristicaceae	-
<i>Rauvolfia vomitoria</i> Afzel.	Apocynaceae	LC
<i>Ricinodendron heudelotii</i> (Baill.) Heckel	Euphorbiaceae	LC
<i>Rinorea microdon</i> M. Brandt	Violaceae	-
<i>Rottboellia cochinchinensis</i> (Lour.) Clayton	Poaceae	-
<i>Schrankia leptocarpa</i> DC.	Fabaceae	-
<i>Setaria barbata</i> (Lam.) Kunth	Poaceae	-
<i>Setaria pumila</i> (Poir.) Roem. & Schult	Poaceae	-
<i>Sida acuta</i> Burm.f.	Malvaceae	-
<i>Sida rhombifolia</i> Linn.	Malvaceae	-
<i>Sida urens</i> Linn.	Malvaceae	-
<i>Smeathmannia pubescens</i> Sol .ex R.Br.	Passifloraceae	LC
<i>Solanum erianthum</i> D.Don	Solanaceae	LC
<i>Solanum torvum</i> Sw.	Solanaceae	-
<i>Solenostemon monostachyus</i> (P.Beauv.) Briq.	Lamiaceae	-
<i>Spermacoce latifolia</i> Aubl.	Rubiaceae	-
<i>Stephania dinklagei</i> (Engl.) Diels	Menispermaceae	-
<i>Sterculia tragacantha</i> Lindl.	Malvaceae	LC
<i>Tabernaemontana crassa</i> Benth.	Apocynaceae	LC
<i>Terminalia superba</i> Engl. & Diels	Combretaceae	-
<i>Thaumatococcus daniellii</i> (Benn.) Benth.	Marantaceae	-
<i>Tithonia diversifolia</i> A. Gray	Asteraceae	-
<i>Trema orientalis</i> (Schum. & Thonn.) Ficalho	Cannabaceae	LC
<i>Trichilia prieureana</i> A. Juss.	Meliaceae	-
<i>Trichilia tessmannii</i> Harms	Meliaceae	LC
<i>Tridax procombens</i> L.	Asteraceae	-
<i>Urena lobata</i> Linn.	Malvaceae	LC
<i>Urera keayi</i> Letouzey	Urticaceae	-
<i>Vernonia colorata</i> (Willd.) Drake	Asteraceae	LC
<i>Vitex grandifolia</i> Gürke	Verbenaceae	LC

Species	Family	IUCN Status¹
<i>Zea mays</i> L.	Poaceae	LC

Note: DD = Data Deficient, LC = Least Concern, , VU = Vulnerable
Source: ENVAL, 2022

Table 2 List of Fauna Species List in the Project area

Class / Species	Common name	IUCN Status²
Mammals		
<i>Cricetomys gambianus</i>	Gambian Rat	LC
<i>Crocidura olivieri</i>	Olivier's Shrew	LC
<i>Galerella sanguinea</i>	Common Slender Mongoose	LC
<i>Heliosciurus rufobrachium</i>	Red-legged Sun Squirrel	LC
<i>Lemnyscomys striatus</i>	Typical striped Grass Mouse	LC
<i>Lophuromys sikapusi</i>	Rusty-bellied Brush-furred Rat	LC
<i>Mastomys erythroleucus</i>	Guinea Multimammate Mouse	LC
<i>Mus musculoides</i>	Temminck's Mouse	LC
<i>Philantomba maxwelli</i>	Maxwell's Duiker	LC
<i>Praomys rostratus</i>	West African praomys	LC
<i>Thryonomys swinderianus</i>	Greater Cane Rat	LC
<i>Bos taurus</i>	Cattle	-
<i>Uranomys ruddi</i>	Rudd's Mouse	LC
<i>Xerus erythropus</i>	Striped Ground Squirrel	LC
Birds		
<i>Bubulcus ibis</i>	Cattle Egret	LC
<i>Lonchura cucullata</i>	Bronze Mannikin	LC
<i>Ploceus cucullatus</i>	Village Weaver	LC
<i>Corvus albus</i>	Pied Crow	LC
<i>Pycnonotus barbatus</i>	Common Bulbul	LC
<i>Streptopelia semitorquata</i>	Red-eyed Dove	LC
Snakes		
<i>Dendroaspis angusticeps</i>	Green Mamba	LC

Note: LC = Least Concern.

Source: ENVAL, 2022

² IUCN, 2023. IUCN Red List of Threatened Species. Available at: [IUCN Red List of Threatened Species](https://www.iucn.org/red-list)

APPENDIX F STAKEHOLDER ENGAGEMENT SCOPING MEETING MINUTES

ARISE Cote D'Ivoire Project
22/06/2022 – Minute of Meeting



Participants:

- **ARISE Cote D'Ivoire** : Youssef.
- **ENVAL** : Gedeon Savane
- **ANDE** :
 - First meeting : Camus ATTAH, Directeur Général de l'ANDE
 - Second meeting : Kouassi N'GBIN Sous-directeur des EIE

Speaking Language : French.

Speaker	Object
ARISE (1ere rencontre avec le directeur de l'ANDE)	<p>M. Youssef a d'abord présenté les activités de ARISE en Afrique notamment :</p> <ul style="list-style-type: none"> ■ Au Gabon pour le développement de l'industrie du bois qui permet au Gabon en l'espace de 8 ans de devenir le premier exportateur mondial de contre-plaqués et autres produits du bois ■ Au Benin pour le cajou et le textile. Très prochaine, ce fera une inauguration d'usines de cajou permettant la transformation de la production nationale sur place ■ Au Togo, dans le textile ainsi que plusieurs industries de substitution
ARISE	<ul style="list-style-type: none"> ■ A présenté le prochain développement de ses activités en Côte d'Ivoire qui seront à Ferkessedougou (au port sec pour recevoir les matières premières des pays de l'Hinterland), à San-Pedro et au PK24 à Abidjan. Pour ce dernier un contrat public-privé pour le développement d'une zone économique sur environ 422 ha au PK24. Cette zone recevra principalement des entreprises agro-industrielles et de substitutions de produits d'importation ■ Le début des travaux préliminaires est prévu pour début août 2022 et d'après la volonté du gouvernement, les travaux lourds devront commencer en septembre.
ANDE	<ul style="list-style-type: none"> ■ Qu'attendez-vous de nous ?
ARISE	<ul style="list-style-type: none"> ■ Nous sommes présents pour des civilités, afin de présenter l'entreprise ARISE au Directeur de l'ANDE à la suite des courriers échangés. ■ En second lieu, c'est pour la situation de l'étude environnementale à réaliser dans le cadre du développement du projet.
ANDE	<ul style="list-style-type: none"> ■ Si une Evaluation Environnementale et Sociale Stratégique (EESS) a été réalisée, elle n'a pas été validée par l'ANDE sauf erreur de leur part. Il s'agit donc de retrouver la trace des études antérieures, voir si cela avait été validé et par quel mécanisme ensuite, l'ANDE pourra se prononcer sur la suite. Le type d'étude à mener. ■ Le directeur est revenu sur le fait que certains projets qui n'ont pas été validés par l'ANDE ont débouché sur des conflits que l'ANDE est obligé de gérer jusqu'à présent. ■ Par ailleurs, le directeur a mentionné que la loi n'est pas rétroactive. Si l'EESS rédigé par le BNETD a été validé, ils verront comment statuer sur la question.

Speaker	Object
ARISE	<ul style="list-style-type: none"> ■ A mentionné que son projet s'intègre dans la zone de 940ha dont les travaux d'aménagement de VRD sont en cours de finalisation et sur laquelle plusieurs industries sont installées. Arise a également marqué sont étonnement qu'une étude EESS lui soit réclamé après la fin de l'aménagement de la zone et l'opérationnalisation de plusieurs unités industrielles sur plusieurs dizaines d'hectares. EN tout état de cause, Arise a informé l'ANDE qu'il dispose d'une copie du rapport provisoire d'EESS datant de 2015 initié par l'AGEDI et réalisé par le BNETD pour les 940HA. Cependant, Il ne dispose pas de la version finale dont il ignore l'état d'avancement. Ne disposant pas de droit de propriété sur le rapport, il ne peut pas partager le rapport avec l'ANDE. Pour cela, il se rapprochera de l'AGEDI devenu SOGEDI pour qu'une copie puisse être transmise à l'ANDE si cela est possible. ■ A mentionné qu'il ne pouvait pas intervenir dans les discussions entre des structures de l'Etat. Arise fera un retour aux interlocuteur étatique sur la question de l'étude environnementale à réaliser afin que la situation soit clarifiée vu que ARISE de façon contractuelle, doit réaliser une EIES.
	La séance a pris fin sur une note de courtoisie
ARISE (2e rencontre avec le Sous-directeur des EIE de l'ANDE)	M. Youssef a présenté à nouveau les activités de ARISE au Gabon, au Bénin et au Togo. Il a insisté sur le développement du projet en Côte d'Ivoire (PK24, San-Pedro et Ferké). Il a fait le résumé de la discussion avec le Directeur.
ANDE	M. Kouassi a mentionné le fait d'avoir eu connaissance d'une EESS d'un site de 100 ha au PK24. En faisant l'historique de cette étude, il a mentionné que des discussions houleuses ont éclaté entre les populations et le promoteur relativement aux limites de la parcelle. L'ANDE a dû solliciter le préfet comme médiateur. A part cette étude, de mémoire, il ne se souvient pas d'une EESS de 940 ha.
ARISE / ENVAL	Nous lui avons présenté la page de garde de l'EESS qui a été rédigé par le BNETD en 2015 pour confirmer que cette étude existe réellement.
ANDE	Vu le document, M. Kouassi a dit n'avoir pas connaissance de cette étude. Ils vont rechercher en interne les traces de l'étude. Tout comme le directeur, M. Kouassi a mentionné le risque qu'il y a de ne pas respecter les textes en matière d'environnement.
ARISE	A mentionné que selon le décret relatif aux EESS, cette dernière doit servir à l'élaboration de plan, programme ou politiques et qu'il ne revenait pas à ARISE de faire une telle étude de surcoût sur un site où les travaux d'aménagement sont presque terminés et plusieurs industries déjà installées. La mission de concevoir les plans, programmes ou politiques revient traditionnellement aux services étatiques.
ANDE	M. Kouassi a acquiescé cela. Il a renchérit pour dire que toutes les autres zones industrielles devraient faire l'objet d'une EESS afin que les promoteurs venant s'installer réaliser les EIES, ou les Constats d'Impact Environnemental et Social (CIES).
ARISE	Il ferait mieux de clarifier la situation du site de Ferké afin de prendre de l'avance.
Prochaine étape	
ARISE	Arise fera un retour à la AGEDI/SOGEDI ainsi qu'au gouvernement afin de savoir quelle sera la conduite à tenir. La SOGEDI pourrait partager les documents avec l'ANDE pour accélérer les analyses de l'existant.

Projet :

**CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE
PRES D'ABIDJAN, PK24 ABIDJAN, CÔTE D'IVOIRE**

Phase : Champ d'application

Client : ARISE IVOIRE

Détails de la réunion

Acteur(s) : Chefferie d'Akoupé-Zeudji
Localisation : Commune d'ANYAMA
Date : 06/07/2022
ENVAL Présence : LATTO APIE CARRINE
Liste de présence : Annexe 1
Photos : Oui X Annexe 2

Copie de la liste de présence Oui, ci-joint X
Oui

Auteur : Enval

Approbation : ROSELINE CHAMBRIER

Notes de reunion

Responsable	Sujet	Contenu	Actions / Résultats
<u>ENVAL</u>	<u>Préoccupati ons</u>	<p>L'arrivée de l'équipe a été ponctuée par la traditionnelle cérémonie de bienvenue prononcée par le Chef du village, en la personne de GBAKRE SIKA.</p> <p>A sa suite, le président des jeunes Mr AKA SERGE, porte-parole de la séance. a demandé les nouvelles qu'il a transmis au chef. Il a par la suite demandé la deuxième nouvelle qui consistait à présenter le projet.</p> <p>Après cette présentation, Mr N'CHO AKICHI a rectifié l'appellation de la zone industrielle et nous demande de prendre cela en compte (ZONE INDUSTRIELLE AKOUPE-ZEUDJI PK 24).</p> <p>Aussi a-t-il souligné le fait que la zone industrielle abrite des rivières d'Akoupé-Zeudji dont le Gobouet, le Gnintchi, Aboffi Seûfi qui entourent le village. Ces eaux auparavant servaient d'eaux de boisson à la population.</p> <p>Mais depuis la création de la zone industrielle avec le rejet anarchique des eaux usées des entreprises, ces eaux ont changé de couleurs car elles sont devenues sales.</p>	<u>Etude de cadrage</u>

		<p>Par conséquent, le problème d'eau se pose à Akoupé -Zeudji.En effet toute la population ne bénéficie de l'eau courante pour un souci de raccordement. De ce fait ces rivières étaient bénéfiques pour certains.</p> <p>La Z.I représente 80 % des terres d'Akoupé-zeudji contre 15% pour ALLOKOI et 5% pour ATTINGUIE.</p> <p>Il ya également des lotissements au niveau de Belleville Résidentiel et résidentiel SCI les oliviers.</p> <p><u>Doléances (voire fiche procès-verbal)</u></p>	
--	--	---	--

**ETUDE DE CADRAGE DU PROJET DE CONSTRUCTION D'UNE ZONE
ECONOMIQUE INDUSTRIELLE PRES D'ABIDJAN
PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE**

Date : 06/07/2022

Heure de début : 14h 25

Lieu de rencontre : Village « Akoué » - Zandji

ORDRE DU JOUR :

1-Information ;

2-Préoccupations et recommandation ;

3-Avis du projet

INFORMATIONS

Projet de construction d'une zone économique industrielle d'Abidjan

Préoccupations et recommandations

Déléances

- Besoin de formation qualifiée pour la jeunesse d'Akoué - Zandji.
- Construction d'un Centre Intégré et le renforcement du plateau technique.
- Extension du réseau hydraulique afin d'alimenter tout le village.
- construction d'une école primaire pour le village
- construction de bâtiments en surplus au niveau du collège
- Bitumage de la voie depuis la cimenterie SCI jusqu'au village d'Akoué - Zandji
- organiser un planting d'arbre afin d'amorcer les émissions atmosphériques des usines.

Avis sur le projet

Favorable pour le projet

Consultant(e) Socio-économiste

LATTO



Chef du village



Ministère de la Promotion de la Jeunesse,
de l'Insertion Professionnelle et du Service Civique

République de Côte d'Ivoire
Union - Discipline - Travail

Union des Jeunes d'Akoupé Zeudji
05 76 43 72 88 / 05 76 85 76 22
Président Secrétaire



Akoupé Zeudji, le 16 juin 2022



A
MONSIEUR LE RESPONSABLE
DE ARISE CÔTE D'IVOIRE

Objet : Demande d'aide

Monsieur le Responsable,

L'Union des Jeunes d'Akoupé Zeudji en abrégé UJAZ a pour but de promouvoir l'éducation, le vivre ensemble, la gaieté et l'épanouissement entre les jeunes d'Akoupé Zeudji.

A ce titre, nous projetons organiser des activités socioculturelles et sportives pendant ces vacances dans le but de permettre à la jeunesse d'Akoupé Zeudji de passer des vacances saines et éducatives.

Pour le bon déroulement de nos activités et donner une bonne visibilité à notre action, nous aurions besoin d'un important appui financier ou matériel d'une référence telle que votre entreprise.

Nous serions très honorés si vous acceptiez de nous accompagner et rehausser notre événement grâce à votre image de marque.

Dans l'espérance d'une suite favorable, nous vous prions d'agréer, Monsieur le Responsable, l'assurance de notre considération.

Le Président

UNION DES JEUNES
D'AKOUPÉ ZEUDJI UJAZ
LE PRÉSIDENT
SERGE AGBASSI



⑤

ENREGISTREMENT	ENR 01 RH	
	Version : 00	
LISTE DE PRESENCE	23/09/2019	
	Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Audit (Interne ou externe à préciser)

Visite..... préciser le nom de l'entreprise)

autre (préciser): Consultation communautaire

DATE : 06/07/2022 DEPARTEMENT : ABIDJAN LIEU: Akoupe Zandji HEURE DEBUT: 11R25 HEURE FIN: 12R30

2. THEME(S) ABORDE(S)

2.1 présentation du projet

2.2 Echanges recueil d'avis, préoccupations, suggestions, doléances

2.3 Recueil de données socio-économiques

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>Bibakri SIKOU P</u>	<u>Adjoint chef de village</u>	<u>AKOUPÉ-Z</u>	<u>0141976377</u>		<u>[Signature]</u>
2. <u>ASOUKO AKUI MOE</u>	<u>NOTABLE</u>	<u>AKOUPÉ-Z</u>	<u>0768514278</u>		<u>[Signature]</u>
3. <u>ANON ABBA ITOUB</u>	<u>NOTABLE</u>	<u>"</u>	<u>0594120421</u>		<u>[Signature]</u>
4. <u>AKICHI KOUOUI AKOU</u>	<u>NOTABLE</u>	<u>"</u>			<u>[Signature]</u>
5. <u>Kobi NCHO ROISE</u>	<u>NANOM B</u>	<u>AKOUPÉ-Z</u>	<u>0103453626</u>		<u>[Signature]</u>
6. <u>NCHO AKICHI</u>	<u>conseiller</u>	<u>AKOUPÉ-Z</u>			<u>[Signature]</u>
7. <u>ACRI MANGUI</u>					<u>[Signature]</u>
8. <u>MOUSSO AKON PAUL</u>	<u>Notable</u>	<u>A/Z</u>	<u>0102108537</u>		<u>[Signature]</u>
9. <u>KOUOUIAN ACHO</u>	<u>Notable</u>	<u>"</u>	<u>0140478778</u>		<u>[Signature]</u>
10. <u>OBO LOGBOU A</u>	<u>Adjoint chef de village</u>	<u>AKOUPÉ-Z</u>	<u>0151665439</u>		<u>[Signature]</u>

(Veuillez joindre cette fiche au compte rendu s'il en existe)

②

	ENREGISTREMENT	ENR 01 RH	
	LISTE DE PRESENCE	Version : 00	
		23/09/2019	
		Créé le 19/09/19	1/1

1. **OBJET** : (cochez la case correspondante)

- comité de pilotage
 Visite..... (préciser le nom de l'entreprise)
- Audit (interne ou externe à préciser)
 autre (préciser): Conseil technique communautaire

DATE : 06/07/2022
 DEPARTEMENT AKOUPE
 LIEU: Village Akoupe-Zendje
 HEURE DEBUT: 10h25
 HEURE FIN: 12h30

2. **THEME(S) ABORDE(S)**

- 2.1.....
- 2.2.....
- 2.3.....

3. **PARTICIPANTS**

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>Akichi Hubert</u>	<u>Notable</u>	<u>AK-Z</u>	<u>0102435966</u>		<u>[Signature]</u>
2. <u>Yobouet Ahou</u>	<u>Notable chef lieu</u>	<u>AK-Z</u>	<u>01031865</u>		<u>[Signature]</u>
3. <u>Aka Serge</u>	<u>Jeuneuse</u>	<u>AKoupe-Z</u>	<u>05.75.536037</u> <u>07.58.25.12.44</u>		<u>[Signature]</u>
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette liste au compte rendu s'il en existe)

UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE D'AKOUBE-ZEUDJI





ETUDE DE CADRAGE DU PROJET DE CONSTRUCTION D'UNE ZONE
ECONOMIQUE INDUSTRIELLE PRES D'ABIDJAN

PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE

Date : 28/06/2022.

Heure de début :

Lieu de rencontre : Le village d'Allokoï

ORDRE DU JOUR :

1-Information ;

2-Préoccupations et recommandation ;

3-Avis du projet

INFORMATIONS

Projet de construction d'une zone économique industrielle d'Abidjan

Préoccupations et recommandations

Délégués

- Employabilité locale de la jeunesse
- Etablir une franche collaboration avec la chefferie d'Allokoï
- Construction d'une école maternelle
- Construction d'un château
- Extension du courant.

Avis sur le projet

FAVORABLE

Consultant(s) Socio-économiste

LARTO

Chef du village

PO
ANOUSSAN JOSEPH
DE ASSO CHIEF.

UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE DU VILLAGE D'ALLOKOI





ENREGISTREMENT

ENR 01 RH

Version : 00

23/09/2019

LISTE DE PRESENCE

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): Consultation Communautaire

DATE : 22/06/2022

DEPARTEMENT : Abidjan

LIEU : Village Aleda

HEURE DEBUT : 08h16

HEURE FIN : 10h45

2. THEME(S) ABORDE(S)

2.1 présentation du projet

2.2 échange (recueil d'avis, observations, suggestions recommandations)

2.3 collecte de données socio-économiques

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>GBESSO MOUTOUAN ABDOU</u>	<u>NOTABLE</u>	<u>Allokin'</u>	<u>0555000991</u>		<u>GT</u>
2. <u>GOTI PIERRE</u>	<u>Joueur</u>	<u>Allokin'</u>	<u>0757779447</u>		<u>3/10/22</u>
3. <u>OSSENE JOS</u>	<u>Conseiller</u>	<u>Allokin'</u>	<u>0709867300</u>		<u>[Signature]</u>
4. <u>ACHEGNAN LEON</u>	<u>Chef de Terre</u>	<u>Allokin'</u>	<u>0707666392</u>		<u>[Signature]</u>
5. <u>ACHEGNAN JACQUES</u>	<u>Porte Comm</u>	<u>Allokin'</u>	<u>0554663744</u>		<u>[Signature]</u>
6. <u>AMOUSSAN JOSEPH</u>	<u>[Signature]</u>	<u>Allokin'</u>	<u>0102347840</u>		<u>[Signature]</u>
7. <u>LATIO ABIE CAROLINE</u>	<u>Consultante sociologue</u>	<u>ENVAL</u>	<u>0706375352</u>	<u>latiocaroline@yaho.fr</u>	<u>[Signature]</u>
8.					
9.					
10.					

Projet :

**CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE
PRES D'ABIDJAN, PK24 ABIDJAN, CÔTE D'IVOIRE**

Phase : Champ application

Client : ARISE IVOIRE

Détails de la réunion

Acteur(s) : Chefferie d'Anguededou village
Localisation : Commune de SONGON
Date : 24/06/2022
ENVAL Présence : LATTO APIE CARRINE
Liste de présence : Annexe 1
Photos : Oui X Annexe 2

Copie de la liste de présence Oui, ci-joint X
Oui

Auteur : Enval

Approbation : ROSELINE CHAMBRIER

Notes de reunion

Responsable	Sujet	Contenu	Actions / Résultats
<u>ENVAL</u>	<u>Préoccupati ons</u>	<p>L'arrivée de l'équipe a été ponctuée par la traditionnelle cérémonie de bienvenue prononcée par le Chef du village, en la personne de Konan K François.</p> <p>A sa suite, le chef Adjoint, Mr Konan Brou Mathurin, porte-parole de la séance. a demandé les nouvelles qu'il a transmis au chef. Après cette première partie. Après quoi nous leur avons présenté le projet qui a suscité un certain nombre de préoccupations. Mais bien avant ils nous ont fait savoir qu'Anguededou était situé à 10KM. de la Zone Industrielle.</p> <p>Aussi a-t-il souligné le fait que la communauté villageoise n'ait pas de terre ce qui explique l'absence de cimetière dans le village</p> <p>Konan Brou Mathurin</p> <p>Est-ce que des canalisations sont prévues et comment se fera le traitement des eaux qui proviendront de ces usines ?</p>	<u>Etude de cadrage</u>

		<p>Latto Carrine</p> <p>Pour l'instant nous ne sommes qu'à la phase de cadrage nous venons vous présenter le projet qui constitue l'étude préliminaire de l'EIES qui se fera plus tard avec plus de détails.</p> <p><u>Recommandations</u></p> <ul style="list-style-type: none">-Elargir les voies d'accès à cause de l'extension des entreprises.-Prévoir des logements à 3km de la zone industrielle afin de faciliter le déplacement des employés de ces Entreprises. <p><u>Doléances (voire fiche procès-verbal)</u></p>	
--	--	--	--



ETUDE DE CADRAGE DU PROJET DE CONSTRUCTION D'UNE ZONE
ECONOMIQUE INDUSTRIELLE PRES D'ABIDJAN
PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE

Date : 24/06/2022

Heure de début : 08h35

Lieu de rencontre : Village Amguedou.

ORDRE DU JOUR :

1-Information ;

2-Préoccupations et recommandation ;

3-Avis du projet

INFORMATIONS

Projet de construction d'une zone économique industrielle d'Abidjan

Préoccupations et recommandations

Démarcs

- Construction d'un collège a base(4) et une école primaire(02)
- création d'un cimetière municipal.
- Emploi jeunes
- Manque de canalisation dans le village
- extension de l'électricité dans le village
- Un chateau d'eau pour la population
- Construction d'un Foyer des jeunes.

Avis sur le projet

Avis favorable pour le projet

Consultant(e) Socio-économiste

LATTO CARRIVE

Chef du village



UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE DU VILLAGE D'ANGUEDOU





ENREGISTREMENT

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite..... préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): consultation communautaire

DATE : 24/06/2022

DEPARTEMENT : ABIDJAN

LIEU :

village d'Anguedou

HEURE DEBUT : 08h35 HEURE FIN : 08h45

2. THEME(S) ABORDE(S)

2.1 présentation projet

2.2 Echanges recueils d'avis, préoccupations, suggestions, observations ou recommandations

2.3 collecte de données pour le diagnostic

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. KONAN K. François	chef	ANGUEDEDOU	0708370212		<u>[Signature]</u>
2. KONAN Brou Mathurin	Adj chef	ANGUEDEDOU	070487068		<u>[Signature]</u>
3. KONAN JEAN SERGE	Ad. Président	ANGUEDEDOU	0757274305		<u>[Signature]</u>
4. LATOARIE CARRIVE	Consultante	ENVAL	0708395572	<u>latocariva@ynval.org</u>	<u>[Signature]</u>
5.					
6.					
7.					
8.					
9.					
10.					

Projet :	CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE PRES D'ABIDJAN, PK24 ABIDJAN, CÔTE D'IVOIRE
Phase :	Champ d'application
Client :	ARISE IVOIRE

Détails de la réunion	
Acteur(s) :	Chefferie d'ATTINGUIE
Localisation :	Commune de SONGON
Date :	29/06/2022
ENVAL Présence :	LATTO APIE CARRINE
Liste de présence :	Annexe 1
Photos :	Oui X Annexe 2
Copie de la liste de présence	Oui, ci-joint X Oui
Auteur :	Enval
Approbation :	Rodrigo Ferreira

Notes de reunion			
Responsable	Sujet	Contenu	Actions / Résultats
<u>ENVAL</u>		<p>A mon arrivée, le secrétaire général de la chefferie, "Mr N'CHO SEKA OLIVIER a prit de mes nouvelles avant de me permettre de présenter le projet.</p> <p>Suite à cette présentation, Mr M'BO AMON JEAN MARIE m'a fait savoir que la population d'ATTINGUIE consomme l'eau des rivières Gobouet, Seunan (eau rouge), Agboffi qui traversent la zone Industrielle de PK24. Malheureusement, ces eaux sont en train d'être polluées à causes des rejets d'eaux usées des entreprises qui se déversent dans ces rivières.</p>	Etude de cadrage

**ETUDE DE CADRAGE DU PROJET DE CONSTRUCTION D'UNE ZONE
ECONOMIQUE INDUSTRIELLE PRES D'ABIDJAN
PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE**

Date: 30/06/2022

Heure de début: 12h00

Lieu de rencontre: chefferie d'Attinkoué

ORDRE DU JOUR :

1-Information ;

2-Préoccupations et recommandation ;

3-Avis du projet

INFORMATIONS

Projet de construction d'une zone économique Industrielle d'Abidjan

Préoccupations et recommandations

Doléances

- Equiper notre Centre de Santé en équipement de soins et en ambulance médicalisé
- Se pencher sur l'emploi de nos jeunes
- Nous aider à avoir plus d'infrastructures scolaires

Avis sur le projet

Consultant(e) Socio-économiste

 LATO

Chef du Milieu





ENREGISTREMENT

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): consultation communautaire

DATE : 23/09/2019

DEPARTEMENT : ABIDJAN

LIEU: Village d'Attinguié

HEURE DEBUT: 18h00 HEURE FIN: 19h00

2. THEME(S) ABORDE(S)

2.1.....

2.2.....

2.3.....

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. N'CHO SOKA OLIVIER	Sec. Gen.	Chefferie Attinguié	075557086	nchoolivier@yahoofr	
2. AMON N'GBO GUSTAVE	Chef Costumier	Chefferie All.	0143 198 38		
3. ANTOINE MIBLE LUCIEN	Secrétaire Fin	Mairie Attinguié	0779249885		
4. HIBO AMON JEAN-MARIE	Porte-paroles	Porte-paroles	0778 14 29 70		
5. KOUASSI DESIRE	S.G.A	Chefferie	072608283		
6. LATO ARIE CARROUE	Consultante sociologue	ENVAL	07.08.33.5392	latocarroue@yahoofr	
7.					
8.					
9.					
10.					

UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE D'ATTINGUIE



Projet :	CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE PRES D'ABIDJAN, PK24 ABIDJAN, CÔTE D'IVOIRE
Phase :	Champ d'application
Client :	ARISE IVOIRE

Détails de la réunion

Acteur(s) :	Chefferie du village V2 de Palmafrique		
Localisation :	Commune d'ANYAMA		
Date :	3006/2022		
ENVAL Présence :	LATTO APIE CARRINE		
Liste de présence :	Annexe 1		
Photos :	Oui	X	Annexe 2
Copie de la liste de présence	Oui, ci-joint	X	
	Oui		
Auteur :	Enval		
Approbation :	Rodrigo Ferreira		

Notes de reunion

Responsable	Sujet	Contenu	Actions / Résultats
<u>ENVAL</u>		<p>Nous étions dans le village V2 de Palmafrique à la date citée à l'entête.</p> <p>Accueillis par le Chef et ses collaborateurs, le projet leur a été présenté.</p> <p>Le secrétaire, Mr Gbizié Sokoury s'est attelé à nous faire une petite historique de Palmafrique résume en ces mots.</p> <p>V2 Palmafrique est situé à 6km de l'autoroute, à 1,5km de la Z I de PK24 et à 7km de la Z I de Yopougon.</p> <p>Il est le 2^{ème} village de Palmafrique au niveau d'Anguededou.</p> <p>Palmafrique, crée depuis 1967 d'où le début de l'existence de ce village. La majorité de la population est ouvrière et employée.</p> <p>Au départ c'était Palminindustrie et depuis 1988, elle a été cédée à un entrepreneur qui a donné le nom Palmafrique.</p> <p>Juste à côté de V2 se trouve un village appelé derrière rail qui est séparé de V2</p>	Etude de cadrage

		par une voie et appartient à Akoupé-Zeudji.	
--	--	--	--



ETUDE DE CADRAGE DU PROJET DE CONSTRUCTION D'UNE ZONE
ECONOMIQUE INDUSTRIELLE PRES D'ABIDJAN
PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE

Date: 30/06/2022

Heure de début: 14h30

Lieu de rencontre: village v2 polymafricaine

ORDRE DU JOUR:

1-Information;

2-Préoccupations et recommandation;

3-Avis du projet

INFORMATIONS

Projet de construction d'une zone économique industrielle d'Abidjan

Préoccupations et recommandations

Délégués

- Voirie débouchant sur Abobo N'dobré
- besoin d'électrification
- augmentation des classe pour l'école
- centre de santé
- réduire l'émission des odeurs, et déchets des usines de transformation (usine) zone industriel.
- eau potable.

Favorable

Avis sur le projet

Consultant(e) Socio-économiste

LATIO

Chef du village

Huy
30-6-2022



ENREGISTREMENT	ENR 01 RH	
	Version : 00	
LISTE DE PRESENCE	23/09/2019	
	Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
- Audit (interne ou externe à préciser)
 autre (préciser): Consultation communautaire
- DATE : 30/06/2022 DEPARTEMENT : ABIDJAN LIEU: Village HEURE DEBUT: 14h 20 HEURE FIN : 15h 16

2. THEME(S) ABORDE(S)

- 2.1. présentation du projet
 2.2. échanges (recueil d'avis, de préoccupations, suggestions, recommandations)
 2.3. collecte de données socio-économiques

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. Kouakou Konan	chef de village	PALM V2	0937928269		114
2. Glizie Sokoury	secrétaire	PALM - V2	0758539038		<i>[Signature]</i>
3. Koua N'goran Léon	NOTABLE	PALM - V2	0789517556		<i>[Signature]</i>
4. LATO APTÉ CARPINE	Consultant	ENVAL	07.82.39.53.92	latoapite@yahoo.fr	<i>[Signature]</i>
5.					
6.					
7.					
8.					
9.					
10.					

UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE DE V 2 PALMAFRIQUE





Projet de construction d'une Zone Économique Industrielle près d'Abidjan, PK24-Abidjan, Côte d'Ivoire

PROCES VERBAL DE LA REUNION DE CONSULTATION PUBLIQUE D'INFORMATION D'ABIDJAN

L'An deux mil Vingt-deux, le Mercredi 08 Juin de 10 heures 30 minutes à 11 heures 50 minutes, a eu lieu à la préfecture d'Abidjan (Plateau) une réunion de consultation publique initiée par les Cabinets ENVAL et ERM dans le cadre de l'Etude de Cadrage d'impact Environnemental et Social du Projet de construction d'une zone Economique Industrielle près d'Abidjan, PK24-Abidjan, Côte d'Ivoire. La présidence était assurée par Madame Paule Bénédicte SAGOU, Secrétaire Générale de la préfecture d'Abidjan,

D'entrée, la présidente de séance a souhaité la bienvenue à toutes les parties prenantes (les représentants des services Etatique, aux membres de la Mission des Cabinets ENVAL et ERM et aux représentants de la société ARISE (commanditaire du projet).

Ensuite, elle a ouvert la réunion en situant l'importance du projet sur le développement de la Côte d'ivoire au plan Macro et de la zone industrielle PK24 d'Attinguié au plan micro et sur la vie sociale des populations d'environnantes des communes d'Anyama et de Songon, a déroulé l'ordre du jour de la séance de consultation publique qui comprenait deux points : Informations et échanges.

Prenant la parole, Dr ABOLI NOËL consultant (ENVAL) a présenté les membres de l'équipe des cabinets ENVAL et ERM et les Membres de la société ARISE (commanditaire du projet). En plus, il a donné le plan du déroulement de la réunion dans le cadre de cette étude au tour de trois points :

1. Présentation du projet ;
2. Présentations des enjeux de la Consultation publique ;
3. Echanges avec les participants.

La liste des participants est annexée à ce PV de Consultation publique.

1. PRESENTATION DU PROJET

Abordant le premier point de l'ordre du jour, Mlle Clara ROLBES, Consultante environnementaliste du Cabinet International ERM, a présenté, à l'aide d'un support Power point, les objectifs de cette réunion, le contexte et l'aperçu du projet et la chronologie d'élaboration de l'EIES.

1.1. Les objectifs de la réunion



Les objectifs de la réunion se déclinent en Trois points essentiels :

- informer les parties prenantes, les populations affectées par le projet et les communautés de la zone d'influence sur le projet ses phases et son développement ;
- rapporter le processus des consultations et les mécanismes mis en place pour recueillir les plaintes, les griefs et les réclamations ;
- recueillir les commentaires des parties prenantes sur le projet.

1.2. CONTEXTE DU PROJET

La zone industrielle sera constituée d'industries de Transformation et de Substitution visant à augmenter la valeur ajoutée agricole et industrielle produite sur le territoire national et diminuer la dépendance vis-à-vis des importations.

Pour se faire, Arise Ivoire, entité locale d'ARISE a été mandaté pour réaliser la conception/ingénierie et gestion d'une Zone Économique Industrielle (ZEI) près d'Abidjan, PK24-Abidjan (« le Projet »).

ARISE développe le Projet PK24 dans le cadre d'un partenariat Public-Privé avec le Gouvernement Ivoirien représenté Par le Ministère du commerce et de l'industrie. La ZEI est principalement destinée à alléger la pression sur les zones industrielles autour du centre économique du pays, et favorisera également les résultats suivants :

- le développement d'infrastructures industrielles compétitives dans le pays pour la transformation des principaux produits agricoles ivoiriens ; et
- la substitution des biens importés par des produits issus des industries locales installées dans la zone industrielle de PK24.

Arise Ivoire s'est vu attribuer 422 ha de terrain pour le développement des infrastructures essentielles, afin d'accueillir les unités industrielles citées auparavant. En ce sens, ARISE gèrera le parc industriel au sein duquel chacune des unités industrielles aura la charge de l'exploitation de sa propre installation.

2. LA CONSULTATION PUBLIQUE

Les consultations publiques consistent à informer le public et le faire participer à la prise de décision. De ce fait, le bureau d'étude ENVAL devra s'entretenir avec les parties prenantes lors de cette mission afin de recueillir leurs avis et préoccupations sur le projet et les impacts que pourrait causer ce projet sur leurs vies sociales et leurs activités économiques.

Cette étape présente trois enjeux essentiels :

- Prévoir les interactions probables entre le Projet et l'environnement (Rapport de Cadrage)
Organiser des consultations avec les principales parties prenantes afin de recevoir leurs commentaires et de les prendre en considération pour le développement de l'étude EIES



- Étudier des conditions environnementales, culturelles et socio-économiques actuelles dans les zones du Projet.
Identifier et évaluer les impacts potentiels du Projet conformément aux normes internationales
- Organiser des réunions de divulgation publique pour présenter les résultats de l'étude EIES et les retours d'informations.

2.1 Mécanisme de gestion des plaintes

Le mécanisme de règlement des griefs décrit l'approche d'acceptation, d'évaluation, de résolution et de suivi des griefs des parties prenantes concernant le Projet. La réparation ou la résolution rapide des griefs est essentielle pour assurer la réussite de la mise en œuvre du projet.

Tout **commentaire ou réclamation** soulevé pendant la phase de cadrage peut être soumis par les moyens suivants à :

✚ **ARISE : Larissa Atta**

zic.abidjan@arisenet.com

+225 05 95 00 00 08

✚ **ENVAL : Gédéon Savané**

b.savane@enval-group.com

+225 07 77 43 26 36

3. ECHANGES AVEC LES PARTICIPANTS

La Présidente de séance a invité par la suite, les parties prenantes à s'exprimer ouvertement, vue l'importance du projet. Elle a donc demandé aux participants de poser les questions constructives et d'apporter les additifs à la présentation si cela s'avère nécessaire. Mais avant tout invité chaque participant à une présentation générale afin de savoir d'établir un lien entre l'intervenant et la structure qu'il représente. A sa suite, les participants ont exprimé leurs préoccupations et contribution pour la bonne marche du projet.

Les interventions sont résumées dans le tableau suivant :

N°	Nom et Prénom(s)	Communauté ou structure	Question(s), recommandation(s) ou doléance(s)	Nom Prénom de l'intervenant pour la réponse	Structure	Réponses
1	Madame N'Guessan Philomène Aurélie	Direction de culture et de la Francophonie (Direction de l'office ivoirienne du patrimoine culturel) chargée de la planification et du suivi évaluation des projets	<p>-elle voulait savoir pourquoi son collègue de la sous-direction du patrimoine archéologique n'est pas présent ? vue que pour un tel projet il faut faire des fouilles archéologiques, donc ne pas voir son collègue de l'archéologie est un déplorable car c'est lui qui serait bien placée pour la gestion de ces questions.</p> <p>Poursuit pour signifier, qu'à une telle séance passée, il avait été convié, mais elle ne sait pas pourquoi cette fois, il n'a pas été associé ?</p> <p>La sous-direction de l'archéologie est sous la direction du Patrimoine culturel, nous allons donc remonté</p>	Mm Sagou Paule Bénédicte SG de préfecture	Préfecture d'Abidjan	<p>La préfecture a adressé le courrier au ministère de tutelle, c'est en interne que le service compétant devait être identifié et convié à la rencontre. Ce n'est pas donc à la préfecture d'identifier le service indiqué.</p> <p>Un courrier a été adressé à la direction du patrimoine culturel.</p>

			l'information pour que la sous-direction du patrimoine culturel soit associée au projet.			
2	Dogo claud	Chef de département District d'Abidjan	<p>Il a décrit le fait qu'il n'y ait aucun village représentant quand bien même qu'il a été dit que le projet concerne 5 villages.</p> <p>-Il voulait savoir s'ils ont été invités ou pas ?</p> <p>Il souligne qu'au niveau environnemental, le projet va opérer beaucoup de changement lorsque les travaux de terrassement vont débuter.</p> <p>Il aurait souhaité alors que ces populations soient dès le départ associés aux différentes démarches.</p> <p>-il voulait également savoir si le projet a</p>	<p>-1 Atta Larissa</p> <p>-2 Mm Sagou Paule Bénédicte</p> <p>SG de préfecture</p>	<p>ARISE</p> <p>Préfecture d'Abidjan</p>	<p>-1 Elle a fait une précision sur le projet. C'est dire que le projet de ARISE s'inscrit dans la zone industrielle déjà existante du côté de Brissivoire.</p> <p>-2 c'est vrai qu'on pouvait inviter les villages pour partager les mêmes informations que nous, le cabinet a souhaité leur rencontre se faire au niveau des Sous-Préfectures et dans les villages.</p> <p>La remarque c'est que lorsqu'ils sont conviés avec les autorités, ils n'arrivent pas à s'exprimer véritablement. Or avec le cabinet d'étude ils s'arrivent à s'exprimer.</p>

			anticipé sur les questions d'impacts environnementaux sur l'environnement du projet ? car cela n'a pas été abordé dans la présentation.	-3 Dr Aboli	-3 ENVAL	<p>Mais le projet sera suivi, aujourd'hui n'est que la réunion de consultation publique, on aura le moment de l'ouverture de l'enquête. A cette séance, ils seront là et on aura le temps de les convier à cette étape pour participer au même titre que nous.</p> <p>-concernant les levés de poussière c'est au moment de l'étude que cette question sera gérée.</p> <p>-3 Il y a des réunions d'informations qui vont se tenir dans les différentes sous-préfectures concernées par le projet, là-bas les chefs de villages seront conviés pour participer à ces séances.</p>
3	M.Kouadio Kirine	Chef de service District d'Abidjan	Vue que le projet se déroule à proximité d'un patrimoine mondial (UNESCO), il y a le passage (la transhumance) des	-1 Atta Larissa	ARISE	-1 La zone existe déjà depuis 2015, il y a des lotissements qui ont été approuvés, elle est pratiquée déjà, donc pour les espèces en voie de disparition il sera difficile de les trouver. Sur l'espace de ARISE, les industries qui vont

			<p>animaux sauvages dans la forêt du Banco.</p> <p>-il ne voit pas non plus de responsable de commune, mais cela pourrait être rattraper dans la phase de l'EIES. Aussi, sur la carte présentée, il n'y a pas certes certains villages, mais il faut être un peu plus large dans les consultations pour tenir compte de tous les villages environnants.</p> <p>-Il aurait souhaité également que le projet prenne attache avec des universitaires pour voir, en se rapprochant des villageois, les zones qui seront dévégétalisées il faut voire les plantes médicinales et les plantes d'une certaine propriété qui sont utilisées par les</p>	<p>-2 Mm Sagou Paule Bénédicte SG de préfecture</p> <p>-3 Dr ABOLI</p>	<p>Préfecture d'Abidjan</p> <p>-3 ENVAL</p>	<p>être développer sont les industries Agro-alimentaire, dans le textile, industries chimiques, dans la pharmacie etc. donc ce sont des dispositions qu'il faut prendre pour pallier aux différents déficits qui pourraient se présenter.</p> <p>-2 la zone du projet n'est pas un territoire communal, mais une sous-préfecture. A cet effet le Cabinet ira rencontrer les Sous-Préfets dans leurs circonscriptions, donc il n'était pas de question d'inviter les responsables de communes à cette rencontre.</p> <p>-3 Monsieur Kouadio a souhaité que le projet prenne attache avec les universitaires, il faut dire que le projet en a déjà pensé. Il a été recruté dans ce sens un professeur botaniste pour la gestion des questions des espèces végétales et un sociologue pour la question</p>
--	--	--	---	--	---	---

			populations. L'EIES doit prendre en compte tous aspects environnementaux soulevés dans la phase de consultation.			de la sauvegarde environnementale et sociale.
4	M. Kouassi	GDE (Environnement)	<p>Il faut tenir compte des espèces rares qui sont dans la zone du projet, surtout que le projet va se réaliser sur 422 ha il faut vérifier pour voir les ressources qui sont présentes, s'il y a des cours d'eaux, des éléments importants dont on doit tenir compte pour éviter des problèmes demain. Il également prendre en compte la question de la gestion des déchets, l'adduction en eaux et de l'électricité etc.</p> <p>-généralement au cours des projets, le volet de la gestion des déchets n'est pris en compte. C'est l'ANAGEP qui</p>	<p>-1 Mm Sagou Paule Bénédicte SG de préfecture</p> <p>-2 Ohoue Éric</p>	<p>-1 Préfecture d'Abidjan</p> <p>-2 Chargé d'étude DGDD</p>	<p>-1 Généralement quand on parle des projets, on dit que le volet gestion de déchets est pris en compte, et cela étonne aujourd'hui qu'on parle de cette question. L'ANAGEP a été invité dans ce sens, ils ne sont pas arrivés. La grande question c'est qui doit faire le suivi ?</p> <p>-2 pour le suivi plusieurs aspects rentrent en ligne de compte.</p> <p>AU cours des EIES on parle de la gestion des déchets, mais quelques années plus tard les problèmes soulevés surviennent. C'est un combat d'ensemble. Aujourd'hui on en parle pour que tout le monde soit informé</p>

			<p>gère ces volets-là. Il faut prévoir la construction des Bacs à déchets, et éviter de mettre les déchets ensemble. Car il y a différents déchets (déchets ménagers, des déchets industriels etc.) donc la gestion doit être différente par type de déchet. Le problème se situe au niveau du suivi</p>	<p>-3 M. Kouadio Kirine</p>	<p>-3 Chef de service District d'Abidjan</p>	<p>sensibiliser. Il y a également le CIAPOL qui a à charge de la gestion des déchets.</p> <p>-3 Sans toutefois indexer le ministère de l'environnement, mais l'observation c'est la gestion des déchets n'est pas faite par catégorie. Tout est géré ensemble. En Côte d'ivoire il n'y a pas de structures spécialisées pour les grandes familles de déchets. Aujourd'hui dans nos différentes décharges, nous nous retrouvons avec des déchets biomédicaux, des restes humains. Ces déchets n'ont aucune raison d'être là. La plupart de nos incinérateurs sont défectueux et les prés collecteurs n'ont pas ces capacités de faire les enlèvements dans les CHU.</p> <p>On a parler d'industries chimique, il y a là des déchets issus de l'activité, on gère mal le stockage. C'est la même chose qui se passe en Inde aujourd'hui. Même dans les</p>
--	--	--	--	-----------------------------	--	--

				-4 Latto Karine	ENVAL	<p>quartiers les déchets des infirmeries de quartier sont ramassés par les pré-collecteurs, or normalement le ministère de la santé qui devait implanter des unités pour s'en charger.</p> <p>Il faut retenir que le projet est en sa phase de cadrage, donc dans cette optique, cette étape demande à recueillir des informations afin de les capitaliser. A propos, beaucoup d'informations et suggestions ont été donné pour accompagner le projet.</p> <p>Le cabinet Enval a été recruté pour l'étude d'impact, à cet effet, on ira vers les populations pour les informer, les consulter, avoir leurs avis et suggestions, faire des observation, et s'il y a des impacts potentiels, on pourra proposer des mesures d'atténuation que nous</p>
--	--	--	--	-----------------	-------	--

						mettrons dans le rapport de cette étude.
5	Madame N'Guessan Philomène Aurélie	Direction de culture et de la Francophonie (Direction de l'office ivoirienne du patrimoine culturel) chargée de la planification et du suivi évaluation des projets	Elle attire l'attention sur la question des fouilles archéologiques, généralement dans la réalisation des projets, c'est un aspect dont l'on ne tient pas compte, or c'est très important. Il faut que ce volet archéologique soit confié à la direction de l'archéologie pour ces fouilles soient faites avant les autres étapes du projet. Il va falloir aussi tenir compte de l'environnement pour la protection des essences naturelles, car dans ce genre de projet, on enregistre de nombreuses pertes des acquis naturels. La question du recrutement de la main	-1 Mm Sagou Paule Bénédicte SG de préfecture	-1 Préfecture d'Abidjan	-1 La question du recrutement de la main d'œuvre locale doit être traitée lors de l'enquête -les habitations à proximité de la zone industrielle. Cette question doit être posée à l'AGEDI, car il est inadmissible que l'AGEDI accepte qu'il ait des zones d'habitation à proximité de la zone industrielle. Sur cette question il y a le BNETD qui a été convié, mais n'est pas venu. -L'AGEDI est garant de son patrimoine, elle a quand même son mot à dire surtout quand une entité s'installe hors zone industrielle. Mais je pense que ceux sont des questions qui vont se gérer. La zone industrielle faisant partir la zone différée du grand Abidjan en principe, des lotissements dans cette

			d'œuvre locale doit être une priorité.	-2 M. Doumbia	-2 AGEDI	<p>zone ne devait pas être approuvés. Donc de concert avec le ministère de la construction je pense qu'il y a beaucoup de travail à faire dans ce sens</p> <p>-2 la zone a été morcelé et approuvée avant d'être déclaré zone industrielle malheureusement. Nous avons également constaté que des entreprises ont été installé hors zone industrielle du côté droit de la zone industrielle. Et du côté gauche c'est une plantation d'hévéa, il n'y a pas d'habitations, mais il y a des gens qui ont acheté des espaces là-bas pour faire des entrepôts. Ce n'est pas du ressort de l'AGEDI de contrôler ces installations hors zone industrielle, c'est du ressort du ministère de la construction et de l'urbanisme.</p>
--	--	--	--	---------------	----------	---

				-3 Latto Carine	-3 ENVAL	-3 la préoccupation concernant la fouille archéologique, nous prenons bonne note, et allons prendre attache avec la Sous-Direction de l'Archéologie pour en tenir compte dans cette étude. Car il y arrive de fois où des projets par ignorance vont jusqu'à profaner des sites sacrés. Concernant ce projet nous allons approcher les populations pour voir s'il existe des sites sacrés afin de trouver des alternatives pour proposer au promoteur.
6	M. Kouadio Kirine	Chef de service District d'Abidjan	Il demande que le Cabinet qui sera chargé de mener l'EIES prévoit un périmètre de protection de la zone du projet (Zone industrielle) comme on le fait dans les adductions en eau potable. Il existe des zones d'habitation, il	-1 Mm Sagou Paule Bénédicte SG de préfecture	-1 Préfecture d'Abidjan	-L'AGEDI est garant de son patrimoine, elle a quand-même son mot à dire surtout quand une entité s'installe hors zone industrielle. Mais je pense que ceux sont des questions qui vont se gérer. La zone industrielle faisant partir la zone différée du grand Abidjan en principe, des lotissements dans cette

			<p>faut identifier et en tenir compte des impacts que pourrait avoir les unités de production sur les lieux d'habitation.</p> <p>-la question c'est dans la perspective de prendre en compte ce qui n'avait pas été pris en compte dans études antérieures. Beaucoup d'erreurs ont été commises sur cette zones industrielle en particulier, donc si l'on a la possibilité des corriger, il faut le faire. C'est pourquoi j'invite le Cabinet Enval que je connais très compétant dans ce domaine des EIES à prendre en compte ce dimensionnement.</p>			<p>zone ne devait pas être approuvés. Donc de concert avec le ministère de la construction je pense qu'il y a beaucoup de travail à faire dans ce sens</p>
7	Kola Marius	Eaux et forêts	<p>La crainte du ministère des eaux et forêts c'est que à cause de l'installation des</p>	-1 Mm Sagou Paule Bénédicte	-1 Préfecture d'Abidjan	<p>A cet effet, on interpelle Monsieur Doumbia de l'AGEDI, car vers la forêt du Banco, il y a beaucoup de</p>

			<p>industries, cela fait maintenant 3ans que les arbres ne produisent pas de fleurs. Il faut qu'on en tienne compte dans la gestion des déchets.</p>	<p>SG de préfecture</p>		<p>cimenteries qui sont installées hors zone industrielle. C'est vraiment inquiétant. On attire l'attention de toutes les directions ici présentes sur la question. Des études sont menées pour installer des unités industrielles hors zone.</p>
--	--	--	--	-------------------------	--	---

8	-1 Mm Sagou Paule Bénédicte SG de préfecture	-1 Préfecture d'Abidjan	Dans la présentation j'ai cru entendre que le processus d'acquisition des terres était à la charge du ministère de l'industrie et du commerce et AGEDI. Est-ce que ce processus est déjà bouclé ? La première phase porte sur combien d'hectare ?	Atta Larissa	ARISE	En 2017, il y a eu la pure des droits coutumiers sur les 940 ha et étant donné l'espace de ARISE fait partie des 940 ha et avec les populations qui sont sur place ont confirmé que cela a été fait. Les autres séances nous donneront plus d'informations. -La première phase porte sur 185 ha
9	M. Youssef	DG ARISE	Arise Ivoire, est une entité locale mandaté pour gestion d'une Zone Économique Industrielle près d'Abidjan, PK24-Abidjan (« le Projet »). Le projet s'inscrit dans le cadre d'un partenariat Public-Privé avec le			

		<p>Gouvernement Ivoirien. Le projet favorisera le développement d'infrastructures industrielles compétitives dans le pays pour la transformation des principaux produits agricoles ivoiriens. Arise Ivoire s'est vu attribuer 422 ha de terrain pour le développement des infrastructures essentielles, afin d'accueillir les unités industrielles désireuses de s'installer dans cette partie de la zone industrielle qui est une partie des 940 ha de la zone industrielle d'Akoupé-Zeudji.</p> <p>En ce sens, ARISE gèrera le parc industriel au sein duquel chacune des unités industrielles aura la charge de</p>			
--	--	--	--	--	--

			<p>l'exploitation de sa propre installation.</p> <p>Il site pour exemple le Gabon qui quelques années en arrière, exportait le bois brut non transformé. Aujourd'hui 100% du bois Gabonais est transformé avant exportation grâce à la Société ARISE. Ce qui fait du Gabon le deuxième producteur du plaquage de bois au monde. ARISE développe des projets au Togo au Bénin etc. ils aident les industriels à s'installer et développer des activités au niveau local.</p>			
--	--	--	---	--	--	--

Par		
<i>Entreprise</i>	<i>Nom</i>	<i>Signature</i>
<i>Enval</i>	<i>Dr ABOLI Noël</i>	

<i>Préfecture d'Abidjan</i>		
-----------------------------	--	--

L'analyse des avis par groupe social est présentée comme suit :

Acteurs			
KOUADIO YAO FAUSTIN			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
SECTEUR CONSTRUCTION ANYAMA			
Les impacts du projet		Installation anarchique des Entreprises sans tenir compte leurs activités. Le non-respect des normes requises de la construction et la non-conformité des bâtis dans les règles de l'	
Les recommandations et autres mesures		-	-Respecter le plan directeur de la Zone Industrielle ; -laisser une bonne emprise de la voirie ; -Réaliser un bon assainissement ; -bien remblayer les zones
Avis relativement au projet	Avis Favorable en raison de l'installation des entreprises ; -don de travail ; -Réduction de la pauvreté ; -accroissement des recettes de l'Etat à travers les impôts.		

Acteurs			
SERI SERGE PACOME			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
CANTONNEMENT DES EAUX ET FORETS D'ANYAMA			
Les impacts du projet	-	- Destruction de la végétation existante	

		qui constitue l'habitat d'une certaine faune ; -l'altération ou la pollution Phréatique	
Les recommandations et autres mesure			- Réserver un espace afin d'y effectuer un reboisement ; -construire des conduits d'évacuation des eaux usées.
Avis relativement au projet	-		

Acteurs			
TAH ARMAND Assistant des PVA			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
SECTEUR DE DEVELOPPEMENT AGRICOLE ANYAMA			
Les impacts du projet		Aucune préoccupation	
Les recommandations et autres mesures			Respecter le recadrage des entreprises sur le terrain
Avis relativement au projet	Avis favorable parce qu'il y aura un développement économique		
Acteurs			
KANGA KOUA JEAN SERGE, CHEF SECTEUR AGRICULTURE SONGON			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
MINISTERE DE L'AGRICULTURE ET DU DEVELOPPEMENT DURABLE			
Les impacts du projet		-La gestion des déchets liquides des usines vue que Songon et sa lagune constituent le déversement de toutes les eaux du Nord (Z.I).	Bassin de traitement avant rejet dans les cours D'eaux .
Recommandations et mesures			
Avis relativement au projet	-		

Acteurs			
KOUAKOU KOUADIO NARCISSE TECHNICIEN TRAVAUX PUBLIQUES			
	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
MINISTERE DE LA CONSTRUCTION			
Les impacts du projet	-	.	
Recommandation et mesures			
Avis relativement au projet			

Acteurs			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
INSTITUTIONS PUBLIQUES			
Impacts du projet		-Risque de réinstallation des habitants	
Recommandations et autres mesures			-Faire un assainissement bien défini et un état des lieux.
Avis relativement au projet	Avis favorable pour une meilleure modernisation de nos industries.		

Acteurs			
GBADJI MARCELLIN			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
EAUX ET FORÊTS SONGON			
Les impacts du projet	-	-Impact négatif	

Les recommandations et autres mesure			Tisser un partenariat avec les structures techniques de l'Etat dans la mise en œuvre du plan de L'EIES, surtout les eaux et forêts en vue d'embellir l'espace après les travaux.
Avis relativement au projet	Avis favorable		

Acteurs			
N'CHO SEKA OLIVIER			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS DOLEANCES ET ATTENTES
CHEFFERIE D'ATTINGUIE			
Les impacts du projet	-	-	-
Les doléances			-Equiper le Centre de santé en équipement et en ambulances médicalisées -Employabilité de la jeunesse locale ; -Construction d'établissements scolaires -
Avis relativement au projet	Avis favorable		

Acteurs			
N'GUESSAN Y ROGER			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS DOLEANCES ET ATTENTES
VILLAGE V2 PALMAFRIQUE			
Les impacts du projet	-	-	

Les doléances			-Construction de route débouchant sur Abobo N'dotré -Electrification du village ; -Construction de classes pour l'école et d'un centre de poche de sang ; -Reduction de l'émission des odeurs et débris des usines de transformation(usine)zone industrielle.
Avis relativement au projet	Avis favorable		

Acteurs			
AMOOUSSAN JOSEPH			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
VILLAGE ALLOKOI			
Les impacts du projet	-	-	
Les doléances			-Employabilité locale des jeunes ; -Etablir une franche collaboration avec la chefferie d'Allokoï ; -Construction d'une école maternelle ; -Construction d'un château ; -Extension de l'électricité.
Avis relativement au projet	Avis favorable		

Acteurs			
YAPI GBESSO ISAAC			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES

VILLAGES D'ADONKOI I			
Les impacts du projet	-		-
Les doléances			<ul style="list-style-type: none"> -Construction d'un centre de santé -Construction d'une école maternelle et de la clôture de l'école primaire ; -Construction d'un collège ou Lycée et d'un foyer des jeunes ; -Construction -Dépôt de bacs à ordures et placement de structure de ramassage d'ordures. -Employabilité locale de la jeunesse
Avis relativement au projet	Avis favorable		

Acteurs			
GBAKRE SIKA.P			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
VILLAGE AKOUBE-ZEUDJI			
Les impacts du projet	-		.
Les doléances			<ul style="list-style-type: none"> -Besoin de formation qualifiée pour la jeunesse d'Akoupé-Zeudji. -Construction d'un centre intégré et le renforcement du plateau technique. -Extension du réseau hydraulique afin d'alimenter tout le village -Construction d'une école primaire pour le village.

			-Construction de bâtiments en surplus au niveau du village -
Avis relativement au projet			

Acteurs			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
INSTITUTIONS PUBLIQUES			
Les impacts du projet	-	-	
Les doléances			
Avis relativement au projet			

Acteurs			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
INSTITUTIONS PUBLIQUES			
Les impacts du projet	-		
Les recommandations et autres mesure			
Avis relativement au projet			

Acteurs

POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
INSTITUTIONS			
Les impacts du projet		-	
Les recommandations et autres mesure			
Avis relativement au projet			

VUES DES DIFFERENTES CONSULTATIONS PUBLIQUES AVEC LES STRUCTURES



Rencontre avec la Direction
Départementale de la construction de
Songon



Séance de travail avec la Direction
Départementale de l'Agriculture de
Songon



Rencontre avec le cantonnement des
eaux et forêts d'Anyama



Echange avec la Direction
Départementale de la Construction
d'Anyama



Interview avec la Direction Départementale de l'Agriculture d'Anyama

Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	Kouakou Kouadio NARCISSE Technicien des T. P
Organisme rencontré	ministère de la Construction
Date et lieu :	le 30/06/2011 à Songon
Durée :	30 mn
Nom du Consultant	
Objectif de la rencontre	
informations, sondage d'opinion	

Résumé des échanges	
1. Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle près d'Abidjan, PK 24-Abidjan, Côte d'Ivoire	
a) Oui	<input checked="" type="checkbox"/>
b) Non	<input type="checkbox"/>
Si oui, par quel canal ? Précisez.	
2. Quelles sont les différentes missions de votre structure se rapportant au projet ?	suivre le projet pour qu'il y ait un bon encaissement
3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation	Oui pour ne pas impacter des habitations
4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?	un aménagement bien défini faire un état des lieux.

5. Quel est votre avis relativement au projet ?

- a) Favorable
- b) Favorable sous réserve de
- c) Refus

6. Raisons de cet avis :

pour mieux moderniser nos industries

Signature et cachet



Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	KANGA KOUA JEAN SERGE Chef Secteur Agriculture de Songon
Organisme rencontré	MINISTÈRE de l'Agriculture et du Développement Rural
Date et lieu :	Songon, le 30/06/2022
Durée :	
Nom du Consultant	
Objectif de la rencontre Informations, sondage d'opinion	

Résumé des échanges

1. Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle près d'Abidjan, PK 24-Abidjan, Côte d'Ivoire

a) Oui

b) Non

Si oui, par quel canal ? Précisez. *AGEDI, FODI, Ministère de l'Industrie*

2. Quelles sont les différentes missions de votre structure se rapportant au projet ?

Évaluation financière des cultures

3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation

La gestion des déchets liquides des usines, vue que Songon et sa lagune constituent le déversoir de tous les eaux du Nord (Z.I)

4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?

Bassins de traitement avant rejet dans les cours d'eau.

5. Quel est votre avis relativement au projet ?

- a) Favorable
b) Favorable sous réserve de
c) Refus

6. Raisons de cet avis :

Parce que lorsque les avis sont favorables d'office, les ouvrages et engagements pris ne sont plus respectés et mis en place par la suite.

Signature et cachet



Ministère de l'Agriculture
Secteur de Développement
Le Chef
Agricole de Soignon
et du Développement Rural

Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	TAH ARMAND Assistant des PVA.
Organisme rencontré	secteur de développement Agricole Anyama.
Date et lieu :	27/06/2022.
Durée :	40 minutes
Nom du Consultant	LATIO APIS CARRIVE.
Objectif de la rencontre	présentation du projet
Informations, sondage d'opinion	

Résumé des échanges

1. Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle près d'Abidjan, PK 24-Abidjan, Côte d'Ivoire

a) Oui

b) Non

Si oui, par quel canal ? Précisez.

2. Quelles sont les différentes missions de votre structure se rapportant au projet ?

Evaluation de cultures et de biens.

3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation

Respect des engagements.

4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?

- Respecter le recadrage des entreprises sur le terrain. (site).

5. Quel est votre avis relativement au projet ?

- a) Favorable
- b) Favorable sous réserve de
- c) Refus

6. Raisons de cet avis :

Development Economique.

Signature et cachet



Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	S/lt SERI Serge Facome chef service Industries & exploitation forestière
Organisme rencontré	Cantonnement des Eaux & Forêts ANYAMA
Date et lieu :	27 Juin 2022 à Anyama
Durée :	53 min
Nom du Consultant	LATO APE CARRINE
Objectif de la rencontre	présentation du projet
Informations, sondage d'opinion	

Résumé des échanges

- Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle près d'Abidjan, PK 24-Abidjan, Côte d'Ivoire
 - Oui
 - Non

Si oui, par quel canal ? Précisez. Réunion de Consultation publique à la mairie d'Anyama
- Quelles sont les différentes missions de votre structure se rapportant au projet ?

Notre mission étant la protection de la biodiversité; la réalisation de ce projet aura un impact sur la flore & la faune existantes sur la parcelle.
- Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation

Oui; la destruction de la végétation existante qui constitue l'habitat d'une certaine faune.
- l'altération ou la pollution de la nappe freatique
- Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?

- Réserver un espace afin d'y effectuer un reboisement
- Construire des conduits d'évacuation des eaux usées

5. Quel est votre avis relativement au projet ?

- a) Favorable
- b) Favorable sous réserve de
- c) Refus

6. Raisons de cet avis :

- Aménagement des espaces verts issus d'un reboisement
- Construction des canaux d'écoulement des eaux usées afin d'éviter la pollution du sous-sol.

Signature et cachet



S/Lt SERT Serge Pacôme
Officier des Eaux et Forêts

Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	GIBADJI GITY Kouator
Organisme rencontré	Eaux et Forêts sonson
Date et lieu :	24/06/2022
Durée :	55 min
Nom du Consultant	LATIO ARIE CARRINE
Objectif de la rencontre	présentation de projet
Informations, sondage d'opinion	

<p>Résumé des échanges</p> <p>1. Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle près d'Abidjan, PK 24-Abidjan, Côte d'Ivoire</p> <p>a) Oui <input checked="" type="checkbox"/></p> <p>b) Non <input type="checkbox"/></p> <p>Si oui, par quel canal ? Précisez.</p> <p>Reunion de consultation publique</p> <p>2. Quelles sont les différentes missions de votre structure se rapportant au projet ?</p> <p>Reboisement.</p> <p>3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation</p> <p>Oui, puisque cela aura un impact sur l'environnement</p> <p>4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?</p> <p>Vouloir un partenariat avec la structure dans la mise en œuvre du plan EE I ES en vue de reverdissement après les travaux.</p>
--

5. Quel est votre avis relativement au projet ?

- a) Favorable
- b) Favorable sous réserve de
- c) Refus

6. Raisons de cet avis :

Signature et Cachet



5. Quel est votre avis relativement au projet ?

- a) Favorable
- b) Favorable sous réserve de
- c) Refus

6. Raisons de cet avis :

Signature et Cachet



	ENREGISTREMENT	ENR 01 RH	
	LISTE DE PRESENCE	Version : 00	
		23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Audit (interne ou externe à préciser)

Visite (préciser le nom de l'entreprise)

autre (préciser): consultation publique

DATE: 27/09/2022 DEPARTEMENT: ABIDJAN LIEU: PALM AFRIQUE HEURE DEBUT: 14H56 HEURE FIN: 15H33

2. THEME(S) ABORDE(S)

2.1. présentation du projet

2.2. Echanges (recueil d'avis, préoccupations, suggestions, recommandations)

2.3.

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. N'GUESSAN J. ROGER	DDP	PALM AFRIQUE	0707534357	roger.nguessan@palmfric.ci	NR
2. Diabogate Baba Ali	A DGD	II	0767780858	ali.diabogate@palmfric.ci	PA
3. Wilson AGRERO	DPE	PALM AFRIQUE	0777884497	agnero.wilson@palmfric.ci	PA
4. DAGD Richard	A D'HSIE	PALM AFRIQUE	0707613533	richard.dagd@palmfric.ci	PA
5. Manuël Koffi	Assistant	PALM AFRIQUE	0749671206	Kankouinmanuel@gnoril.ci	PA
6. LATTO ARIE CARRIVE	Consultant	ENVAL	0708335352	lattoarive@ynoril.ci	PA
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
		23/09/2019	
	LISTE DE PRESENCE	Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): consultation publique

DATE : 30/06/2022 DEPARTEMENT : N'DJIAN LIEU : direction départementale des constructions HEURE DEBUT : 12h15 HEURE FIN : 12h30

2. THEME(S) ABORDE(S)

2.1. Présentation du projet

2.2. Echange/recueil d'avis, préoccupations, suggestions, recommandations.

2.3.

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>Mme Konan et Agoussi Nani</u>	<u>Chf de bureau</u>	<u>Ministère de la Construction</u>	<u>0505928831</u>	<u>konanmarcelline@yahoo.fr</u>	<u>[Signature]</u>
2. <u>Kouakou Kouadio NARENE</u>	<u>technicien des TP</u>	<u>Ministère de la Construction</u>	<u>0707824660</u>	<u>narcinebet1@gmail.com</u>	<u>[Signature]</u>
3. <u>LATIO APIECARRINE</u>	<u>Consultant</u>	<u>ENVAL</u>	<u>0708-33-5332</u>	<u>latiocarrine@yahoofr</u>	<u>[Signature]</u>
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

**ENREGISTREMENT**

Version : 00

LISTE DE PRESENCE**23/09/2019**

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante) comité de pilotage Visite.....préciser le nom de l'entreprise) Audit..... (interne ou externe à préciser) autre (préciser): **Consultation publique**DATE : **27/06/2022**DEPARTEMENT : **ABIDJAN**LIEU : **DIRECTION**HEURE DEBUT : **09H 50**HEURE FIN : **12H 30****2. THEME(S) ABORDE(S)**2.1. **présentation du projet**2.2. **Echanges (recueil d'avis, préoccupations, suggestions et recommandations)**

2.3.

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1.					
2. LATO ARIE CARRIVE	Consultant	ENVAL	07 08 39 53 82	latocarrive@yahoo.fr	[Signature]
3. TAH ARMAND	Assistant de PRA	secteur de developpement agricole ANADER	07 67 98 56 61	tahrehn@yahoo.com	[Signature]
4. DAPPA MARTIAL	Agent de contact	MINADER	07 08 52 25 82	Martial@gmail.com	[Signature]
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

	ENREGISTREMENT		ENR 01 RH	
			Version : 00	
	LISTE DE PRESENCE		23/09/2019	
			Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage Visite.....préciser le nom de l'entreprise)

Audit..... (interne ou externe à préciser) autre (préciser): Consultation publique

DATE : 23 / 09 / 2019 DEPARTEMENT : MOUSTOU LIEU : Boulevard de Yamama HEURE DEBUT : 12H30 HEURE FIN : 12H25

2. THEME(S) ABORDE(S)

2.1 présentation du projet

2.2 Echanges recueil d'avis, préoccupations, suggestions, recommandations

2.3

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>S/lt Seri Serge Pacome</u>	<u>Eau et Forêt</u>	<u>Industrie d'exploitation For</u>	<u>01 02 77 80 68</u>	<u>kyli.mozu@gmail.com</u>	<u>[Signature]</u>
2. <u>LATTO APSE CARRINE</u>	<u>Consultant</u>	<u>ENVAL</u>	<u>01 83 39 53 92</u>	<u>lattelocarrine@yahoo.fr</u>	<u>[Signature]</u>
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					



ENREGISTREMENT

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): Consultation publique

DATE : 27/09/2022 DEPARTEMENT : ABIDJAN

LIEU: Direction de parlementaire de N.C.L.S d'Anyama HEURE DEBUT: 10h15 HEURE FIN: 11h30

2. THEME(S) ABORDE(S)

2.1. présentation du projet

2.2. Echanges/échange d'avis, participation, suggestions et recommandations.

2.3.

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. Kouadio Yao Faustin	Assistante du chef de section	SCW	0752713439		
2. LATO APIE CARLINE	consultante	ENVAL	0708-395382	latocandine@yakoos.fr	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)



ENREGISTREMENT

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): consultation publique

DATE : 24/06/2022

DEPARTEMENT : ABIDJAN

LIEU: LES EAUX
et Forêts
de Songon

HEURE DEBUT: 11H

HEURE FIN : 11H30

2. THEME(S) ABORDE(S)

2.1. présentation du projet

2.2. Echanges (recueil d'avis, préoccupations, suggestions, recommandations)

2.3.....

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>GBADJI Betty Davalén</u>	<u>chef de poste EAUX et F</u>	<u>EAUX et Forêts Songon</u>	<u>0708983925</u>	<u>gbamarcelin@gmail.com</u>	<u>[Signature]</u>
2. <u>KA Kouadi Jo</u>	<u>chef de service</u>	<u>Eaux et Forêts</u>	<u>070007076</u>	<u>ka.kouadi.jan@gmail.com</u>	<u>[Signature]</u>
3. <u>LATIO APIE CARRINE</u>	<u>Consultante</u>	<u>ENVAL</u>	<u>0708355352</u>	<u>latiocarrine@gmail.com</u>	<u>[Signature]</u>
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

	ENREGISTREMENT	ENR 01 RH	
	LISTE DE PRESENCE	Version : 00	
		23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Audit (interne ou externe à préciser)

Visite..... préciser le nom de l'entreprise)

autre (préciser) :

Reduction d'information et de consultation

DATE : 09/06/2022

DEPARTEMENT : ABIDJAN

LIEU : Sous-préfecture de Songon.

HEURE DEBUT : 16h00

HEURE FIN : 17h30 publique




2. THEME(S) ABORDE(S)

2.1 Information sur le projet

2.2 Echanges

2.3 Recueil d'avis, préoccupations, suggestions et recommandations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. Stephane GURIGA	Sous-Péfet	SP SONGON	0707811340	sp.songon@gmail.com	
2. COULIBALY ISSA Visato	Assistant du Sous-Péfet	SP de Songon	070947420		
3. LATO ABECARINE	Consultante	Enval	0706305150	latob@enval.com	
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)



ENREGISTREMENT

ENR 01 RH

Version : 00

23/09/2019

LISTE DE PRESENCE

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): Réunion d'information et de consultation publique

DATE : 23/09/2019

DEPARTEMENT : ABIDJAN

LIEU : Sous-préfecture de Songon

HEURE DEBUT : 16h00

HEURE FIN : 19h00

2. THEME(S) ABORDE(S)

2.1. Information sur le projet

2.2. Evénement

2.3. Recueil d'avis, préoccupations, suggestions et recommandations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. LANGA Koua J. Serge	Chef secteur	Agriculture	0759236886	sergekoua@gmail.com	[Signature]
2. GRABE ABOUSSOU FERDINAND	Secrétaire gb	Chèrerie Abdine Kane	070851111	ferdinandaboussou@gmail.com	[Signature]
3. N'koumo Jean Louis	Docteurant Géo	Institut de géographie tropicale	07077779	jkoumo@yahoo.fr	[Signature]
4. KA KOWIME JB	chef service Recherche	posteur et Fup sonlas	07070050%	ka.kowidjean@gmail.com	[Signature]
5. DIOMANKE ISADE	Associé Développement Infra	AFRIKAFRIQUE	0799001341	isade.diomanke@afrikafrique.ci	[Signature]
6. Diabagala Baba Ali	Assistent qualité	PALMATHRIQUE	0767780858	ali.diabagala@palmathrique.ci	[Signature]
7. Kouakou Kouadio NARCISSE	Technicien des T.S	Construction Sonjion	0709834460	narcisse.kouakou@gmail.com	[Signature]
8. WAZO Fatouma	chef stage	Amquedou	01 01489068		[Signature]
9. Mon Kouadio-ROSE	président	Amquedou	05-05-93-2900		[Signature]
10. Abali Amani Abiel	Coordinateur	Enval	0709624398	abali.amani@enval.ci	[Signature]

	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1







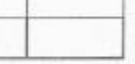

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
 Audit (Interne ou externe à préciser)
 autre (préciser): Réunion d'information et de consultation
- DATE : 09/06/2022 DEPARTEMENT : Anyama LIEU : Mairie d'Anyama HEURE DEBUT : 11h30 HEURE FIN : 12h30

2. THEME(S) ABORDE(S)

- 2.1 Information sur le projet
 2.2 Echanges
 2.3 Recueil d'avis, observations, suggestions et recommandations.

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. Kou Toua Achi	représentant du chef	AKoupe-Zouly	0140478778		
2. OBO Logbochi André	Pde des femmes	AKoupe-Zouly	0575536037 0151665431		
3. Aka Serge	Représentant Jeunesse	AKoupe-Zouly	0575536037		
4. SUTSERI Serge Pacome	Eaux ET FORETS	industrie d'exploit For.	0102488068	laplume304@gmail.com	
5. GIBAKRE AKPOSSAN	chef de file	Athénique	0707519719		
6. AMON NGBO Gustave	Chef de file	Athénique	0143706633		
7. Soumahora Mamama	représentant	Jeunesse d'Any	0778961633		
8. Bouché Suce Serego	Représentante	femmes d'Any	0753480751		
9.					
10.					

(Insérer l'adresse cette fiche au compte rendu s'il en existe)



ENREGISTREMENT

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage Visite.....préciser le nom de l'entreprise)
- Audit (interne ou externe à préciser) autre (préciser): Réunion d'information et de consultation publique
- DATE : 09/09/2022 DEPARTEMENT : Anyama LIEU : Terrain d'Anyama HEURE DEBUT : 11h30 HEURE FIN : 12h30

2. THEME(S) ABORDE(S)

- 2.1. Information sur le projet
- 2.2. Echanges
- 2.3. Recueil d'avis, préoccupations, suggestions et recommandations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. HIE ARNOLD KATA TIMOLEON. O	Assistant	Sous-Prefecture d'Anyama	07-07844265	arnoldkatas@gmail.com	<input checked="" type="checkbox"/>
2. GUE GASTON	Coordinateur	Terrain d'Anyama	09 3979 66 04	gaston.gue 50 @ gsa 050	<input checked="" type="checkbox"/>
3. DJIRI Youssef	IP	ARISE IIP	05 9500 3040	youssef.djiri@arise.net.com	<input checked="" type="checkbox"/>
4. ATTA LARISSA	Interface Manager	ARISE IIP	05-9500 51-35	larissa.atta@arisenet.com	<input checked="" type="checkbox"/>
5. ROBLES CLARA	Consultant	ERM	+34 673 853 12	clara.robles11@erm.com	<input checked="" type="checkbox"/>
6. Anna Kalashnyk	Consultant	ERM	+49 1515494 1853	annakalashnyk@erm.com	<input checked="" type="checkbox"/>
7. Abeli Amani Noel	Consultant	ENVAL	0709624398	abeliamaninoel@yahoo.fr	<input checked="" type="checkbox"/>
8. LATTO ABIE CARLINE	Consultante	ENVAL	07-0939-5332	lattoabie@yahoofr	<input checked="" type="checkbox"/>
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)



ENREGISTREMENT

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): *réunion d'information et de consultation*

DATE : *02 / 06 / 2022* DEPARTEMENT : *ABIDJAN* LIEU : *préfecture d'Abidjan* HEURE DEBUT : *18h45* HEURE FIN : *22h01*

2. THEME(S) ABORDE(S)

- 2.1.....
- 2.2.....
- 2.3.....

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. KOUASSI KIRINE I- ROBE	chef Dept	CCI CR	0259038471	KKirine@cci.ci	<i>[Signature]</i>
2. DOGO CLAUDE	chef de service	District Anka Abj DSDD	0707046444	claudedogo@yahoo.fr	<i>[Signature]</i>
3. Kouassi Konan Mathieu	chef de service	DGE	0102398826	mathieukouassi80@yahoo.fr	<i>[Signature]</i>
4. OHOUE ERIC CHRISTIAN	chargé d'étude	DGD	0799039187	erichristian@orange.com	<i>[Signature]</i>
5. DOUMBIA IDAÏS	chef de service	AGEN	0767304290	idindombia@yahoo.fr	<i>[Signature]</i>
6. Kuen'Guessem Philemane Audele	Directrice Dep. planification	Office Ivoirien du patrimoine Culturel	0707034690	anguessan895@gmail.com	<i>[Signature]</i>
7. Che KOLIA Muriel	chef de service	Min Enx et Foits	0708074600	murielkolian@yahoo.fr	<i>[Signature]</i>
8. LATO APTIE CARLINE	consultante	ENVAL	0708355332	latoacarline@yahoo.fr	<i>[Signature]</i>
9. Abali Amami Abo'Il	Consultant	ENVAL	0709626398	abaliamaninod@yahoo.fr	<i>[Signature]</i>
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage
 Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)
 autre (préciser): Réunion d'Information et de Consultation Publique

DATE : 28/06/2022 DEPARTEMENT : ABIDJAN LIEU: Préfecture d'Abidjan HEURE DEBUT: 10h15 HEURE FIN: 12h01

2. THEME(S) ABORDE(S)

2.1.....

2.2.....

2.3.....

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. PAULE BENEDECITE SAGOU	SG	Préfecture Abidjan	0708099160	paule.sagou@gmail.com	
2. Wayoro G. Charles	C.E	Préfecture	0757843448	Wayoroguycharles@gmail.com	
3. OUAATTARA K. JENN	CE	Préfecture d'Abj	0707364894	ouattarakamissa@gmail.com	
4. MOUNET née OUAATTARA C. NAB	CE	Préfecture Abidjan	0758013329	molette.ouattara@gmail.com	
5. ROBLES CLARA	Consultant	ERM	+3467325378	clara.robles1@gmail.com	
6. Kalashnyk Anna	Consultant	ERM	+4915154974233	anna.kalashnyk@erm.com	
7. ATTA LARISSA	IM	ARISE	05-95-00-5135	lariissa.atta@arisenet.com	
8. DROUAI Youssef	D.G	ARISE	091007040	drouai.youssef@arisenet.com	
9.					
10.					



ENREGISTREMENT

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. **OBJET** : (cochez la case correspondante)

comité de pilotage

Audit

Visite

(interne ou externe à préciser)

préciser le nom de l'entreprise

DATE : 30 / 06 / 2022 DEPARTEMENT : ABIDJAN

autre (préciser) : Consultation publique
LIEU : Direction départementale de l'agriculture et du développement durable
SICONG
HEURE DEBUT : 10h33 HEURE FIN : 10h45

2. **THEME(S) ABORDE(S)**

2.1 présentation du projet

2.2 échanges / recueil de vis, préoccupations, suggestions et recommandations

3. **PARTICIPANTS**

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. KANGA Koua Jean Serge	Chef secteur	NINABER	0759236866	serge.koua@ymail.com	[Signature]
2. LATTO-APIE CARRIVE	Consultant	ENVAL	07-08-355392	laticarive@yahoo.fr	[Signature]
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)



Projet de construction d'une Zone Économique Industrielle près d'Abidjan, PK24-Abidjan, Côte d'Ivoire

PROCES VERBAL DE LA REUNION DE CONSULTATION PUBLIQUE D'INFORMATION D'ABIDJAN

L'An deux mil Vingt-deux, le Jeudi 11 Juin de 26 heures 30 minutes à 12 heures 14 minutes, a eu lieu à la Mairie d'Anyama une réunion de consultation publique initiée par les Cabinets ENVAL et ERM dans le cadre de l'Etude de Cadrage d'impact Environnemental et Social du Projet de construction d'une zone Economique Industrielle près d'Abidjan, PK24-Abidjan, Côte d'Ivoire. La présidence était assurée par M Hié Kata, Assistant Générale de la préfecture d'Abidjan,

D'entrée, le conseiller municipal de la mairie d'Anyama entant que hôte de la séance a salué et souhaité la bienvenue à tous les invités et a par la suite passé la parole au président de séance pour la suite de la réunion. Le président de séance a par la suite souhaité la bienvenue à toutes les parties prenantes (les représentants des services déconcentrés et décentralisés, les autorités coutumières des villages d'Attinguié, d'Akoupé-Zeudji, la représentante des femmes et le président des jeunes d'Anyama etc.), aux membres de la Mission des Cabinets ENVAL et ERM et aux représentants de la société ARISE (commanditaire du projet).

Il a ouvert la réunion en situant l'importance du projet sur le développement de la Côte d'Ivoire au plan Macro et de la zone industrielle PK24 d'Attinguié au plan micro et sur la vie sociale des populations d'environnantes des communes d'Anyama et de Songon.

Prenant la parole, Dr ABOLI NOËL consultant (ENVAL) a présenté les membres de l'équipe des cabinets ENVAL et ERM et les Membres de la société ARISE (commanditaire du projet). En plus, il a donné le plan du déroulement de la réunion dans le cadre de cette étude au tour de trois points :

1. Présentation du projet ;
2. Présentations des enjeux de la Consultation publique ;
3. Echanges avec les participants.

La liste des participants est annexée à ce PV de Consultation publique.

1. PRESENTATION DU PROJET

Abordant le premier point de l'ordre du jour, Dr ABOLI NOËL, Consultant Socio économiste du Cabinet Enval, a présenté, à l'aide d'un support Power point, les objectifs de cette réunion, le contexte et l'aperçu du projet et la chronologie d'élaboration de l'EIES.

1.1. Les objectifs de la réunion

Les objectifs de la réunion se déclinent en Trois points essentiels :

-informer les parties prenantes, les populations affectées par le projet et les communautés de la zone d'influence sur le projet ses phases et son développement ;



-rapporter le processus des consultations et les mécanismes mis en place pour recueillir les plaintes, les griefs et les réclamations ;

-recueillir les commentaires des parties prenantes sur le projet.

1.2. CONTEXTE DU PROJET

La zone industrielle sera constituée d'industries de Transformation et de Substitution visant à augmenter la valeur ajoutée agricole et industrielle produite sur le territoire national et diminuer la dépendance vis-à-vis des importations.

Pour se faire, Arise Ivoire, entité locale d'ARISE a été mandaté pour réaliser la conception/ingénierie et gestion d'une Zone Économique Industrielle (ZEI) près d'Abidjan, PK24-Abidjan (« le Projet »).

ARISE développe le Projet PK24 dans le cadre d'un partenariat Public-Privé avec le Gouvernement Ivoirien représenté Par le Ministère du commerce et de l'industrie. La ZEI est principalement destinée à alléger la pression sur les zones industrielles autour du centre économique du pays, et favorisera également les résultats suivants :

-le développement d'infrastructures industrielles compétitives dans le pays pour la transformation des principaux produits agricoles ivoiriens ; et
-la substitution des biens importés par des produits issus des industries locales installées dans la zone industrielle de PK24.

Arise Ivoire s'est vu attribuer 422 ha de terrain pour le développement des infrastructures essentielles, afin d'accueillir les unités industrielles citées auparavant.

En ce sens, ARISE gèrera le parc industriel au sein duquel chacune des unités industrielles aura la charge de l'exploitation de sa propre installation.

2. LA CONSULTATION PUBLIQUE

Les consultations publiques consistent à informer le public et le faire participer à la prise de décision. De ce fait, le bureau d'étude ENVAL devra s'entretenir avec les parties prenantes lors de cette mission afin de recueillir leurs avis et préoccupations sur le projet et les impacts que pourrait causer ce projet sur leurs vies sociales et leurs activités économiques.

Cette étape présente trois enjeux essentiels :

- Prévoir les interactions probables entre le Projet et l'environnement (Rapport de Cadrage)
Organiser des consultations avec les principales parties prenantes afin de recevoir leurs commentaires et de les prendre en considération pour le développement de l'étude EIES
- Étudier des conditions environnementales, culturelles et socio-économiques actuelles dans les zones du Projet.
Identifier et évaluer les impacts potentiels du Projet conformément aux normes internationales
- Organiser des réunions de divulgation publique pour présenter les résultats de l'étude EIES et les retours d'informations.



2.1 Mécanisme de gestion des plaintes

Le mécanisme de règlement des griefs décrit l'approche d'acceptation, d'évaluation, de résolution et de suivi des griefs des parties prenantes concernant le Projet.

La réparation ou la résolution rapide des griefs est essentielle pour assurer la réussite de la mise en œuvre du projet.

Tout **commentaire ou réclamation** soulevé pendant la phase de cadrage peut être soumis par les moyens suivants à :

📍 **ARISE : Larissa Atta**

zic.abidjan@arisenet.com

+225 05 95 00 00 08

📍 **ENVAL : Gédéon Savané**

b.savane@enval-group.com

+225 07 77 43 26 36

3. ECHANGES AVEC LES PARTICIPANTS

Le Président de séance a invité par la suite, les parties prenantes à s'exprimer ouvertement, vue l'importance du projet. A sa suite, les participants ont exprimé leurs préoccupations et contribution pour la bonne marche du projet.

Les interventions sont résumées dans le tableau suivant :

N°	Nom et Prénom(s)	Communauté ou structure	Question(s), recommandation(s) ou doléance(s)	Nom Prénom de l'intervenant pour la réponse	Structure	Réponses
1	Monsieur Hié Kata	Préfecture d'Anyama	-Il voulait une clarification sur le domaine d'activité de la société ARISE	Représentant ARISE	ARISE	<p>Arise Ivoire, est une entité locale mandaté pour gestion d'une Zone Économique Industrielle près d'Abidjan, PK24-Abidjan (« le Projet »).</p> <p>Le projet s'inscrit dans le cadre d'un partenariat Public-Privé avec le Gouvernement Ivoirien. Le projet favorisera le développement d'infrastructures industrielles compétitives dans le pays pour la transformation des principaux produits agricoles ivoiriens. Arise Ivoire s'est vu attribuer 422 ha de terrain pour le développement des infrastructures essentielles, afin d'accueillir les unités industrielles désireuses de s'installer dans cette partie de la zone industrielle qui est une partie des 940 ha de la zone industrielle d'Akoupé-Zeudji.</p>

						<p>En ce sens, ARISE gérera le parc industriel au sein duquel chacune des unités industrielles aura la charge de l'exploitation de sa propre installation.</p> <p>Il site pour exemple le Gabon qui quelques années en arrière, exportait le bois brut non transformé. Aujourd'hui 100% du bois Gabonais est transformé avant exportation grâce à la Société ARISE. Ce qui fait du Gabon le deuxième producteur du plaquage de bois au monde. ARISE développe des projets au Togo au Bénin etc. ils aident les industriels à s'installer et développer des activités au niveau local.</p>
2	Monsieur Aka Serge	Président des jeunes d'Akoupé-Zeudji	Vouait savoir l'entreprise ARISE est venue pour aider les entreprises locales à s'installer.	Monsieur Le représentant de ARISE	ARISE	<p>Lors que quelqu'un vient s'installer, il a besoin d'un environnement qui le sécurise. Donc au niveau de l'approvisionnement à l'eau en électricité etc., ARISE permet aux entreprises de l'obtenir déjà avant leur installation. ARISE aide également les entreprises à accéder aux banques pour des crédits.</p>

3	KOUTOUAN Acho	Représentant Chef du village d'Akoupé-Zeudji	<p>-Il a demandé de rectifier le titre du projet. Car selon lui le nom de la zone industrielle a été écorché. Le nom qui convient est la zone industrielle d'Akooupé-Zeudji PK 24.</p> <p>-vue que le Cabinet doit consulter les villages riverains, il précise qu'un village vient de se créer. Il s'agit du village d'Achokoi. Donc, il est important d'intégrer ce village parmi les villages à visiter lors des séances de consultation. Car Achokoi, vient d'être reconnu comme un village par un arrêté.</p> <p>-si la Société ARISE seule veut occuper 422 ha sur les 940 ha prévu pour la zone industrielle, c'est qu'elle seule pris la moitié de toute la zone. Cela suscite une inquiétude. Car, ça voudrait dire que c'est ARISE qui va céder</p>	<p>1- Monsieur Hié Kata</p> <p>-2 M.Youssef</p> <p>-3 Latto Carine</p>	<p>1-Représentant du Sous-préfet d'Anyama</p> <p>-2 DG ARISE.</p> <p>-3Cabinet ENVAL</p>	<p>1-Il a demandé au Cabinet de tenir compte d'Achokoi pour les prochaines étapes de l'étude sur le projet.</p> <p>-Il a expliqué que selon ce qu'il a compris, ARISE n'est pas vendeuse de terre, mais plutôt elle veut aider les autres sociétés à s'installer sur l'espace qui lui été confié pour gestion.</p> <p>-lorsque AGEDI installe les sociétés, elle récupère, donc c'est normal que ceux qui vont aménager, viabiliser récupèrent ce qu'ils vont investis. Et en même temps, ARISE va accompagner à la transformation des produits agricoles en produits finis avant exportation.</p> <p>-En principe, les consultations publiques se font à la Sous-préfecture sans les populations. Mais la sous-préfecture a bien voulu que les populations y participent en Amon. Après ici le Cabinet se déplacera dans les villages pour faire ces consultations publiques.</p>
---	------------------	--	---	--	--	--

		<p>la terre aux autres sociétés qui vont venir.</p> <p>-une préoccupation, c'est que ARISE va aider les entreprises à s'installer. Et donc les entreprises qui veulent s'installer vont payer des taxes à la structure. Ces taxes seront-elles versées à ARISE ou à l'Etat ?</p> <p>-Généralement lorsqu'on invite les populations à ces genres de réunions, c'est pour l'EIES, ils n'ont vu le Cabinet dans les villages, consulter les populations avant cette rencontre.</p> <p>Vue que c'est un aménagement qui sera fait, il faut bien que le cabinet se déplace pour aller consulter les populations échanger avant toute activité. Il faut une consultation publique dans les villages, cela n'a pas encore été fait.</p>			<p>-2 ARISE est là dans l'optique d'aider les sociétés à s'installer en aménageant les terrains nus en espace praticable, viabilisé. Sinon ARISE ne vend pas de terre. L'espace n'est pris pour être revendu. C'est une zone de l'Etat, c'est une zone industrielle.</p> <p>-l'idée c'est d'aménager l'espace et le mettre à la disposition des entreprises. C'est une manière de se substituer à la partie étatique. Lorsque AGDI aménage elle récupère, pareille pour ARISE, c'est normal que celui qui aménage récupère ce qu'il a dépensé. Mais l'objectif, c'est de ramener des sociétés qui vont s'installer et transformer les produits agricoles ivoiriens sur place.</p> <p>-3 Dr Aboli :</p> <p>Il a précisé que c'est la semaine qui suit la réunion de consultation publique que le Cabinet prévoyait de commencer les consultations dans les villages. Il a par la suite demandé au président de séance d'aider les représentants</p>
--	--	--	--	--	--

			<p>Également, il voulait avoir la date à laquelle le cabinet doit passer pour la consultation publique.</p> <p>-3 Après cette rencontre le cabinet aura à se déplacer vers les populations pour les consultations. Cette phase n'est que la phase de cadrage. Le cabinet se servira de la liste de présence appeler les populations pour lui ficher la date et l'heures.</p>			<p>du cabinet à prendre les RDV au près des populations concernées.</p>
4	Monsieur GUE Gaston	Conseiller municipal	<p>Il remercie le Cabinet pour l'organisation de cette rencontre, car cela est très important pour la suite du projet. Cette rencontre permettra de corriger les erreurs qui pourraient survenir dans le futur. Par exemple le titre du projet vient d'être corrigé.</p>			

			<p>Le nom qui convient est la zone industrielle d'Akooupé-Zeudji PK 24</p> <p>Actualiser le nom de la Zone du projet avant les prochaines rencontres.</p> <p>-Aller effectivement dans chaque village</p>			
5	Monsieur Hié Kata	Préfecture d'Anyama	Comme il n'y a plus de préoccupations la séance été levé	Néant	Néant	Néant

Par		
<i>Entreprise</i>	<i>Nom</i>	<i>Signature</i>
<i>Enval</i>	<i>Dr ABOLI Noël</i>	
<i>Préfecture d'Abidjan</i>		



Projet de construction d'une Zone Économique Industrielle près d'Abidjan, PK24-Abidjan, Côte d'Ivoire

PROCES VERBAL DE LA REUNION DE CONSULTATION PUBLIQUE D'INFORMATION D'ABIDJAN

L'An deux mil Vingt-deux, le Jeudi 09 Juin de 16 heures 02 minutes à 16 heures 58 minutes, a eu lieu à la Salle de réunion de la Sous-Préfecture de Songon la réunion de consultation publique dans le cadre de l'Etude de Cadrage d'impact Environnemental et Social du Projet de construction d'une zone Economique Industrielle près d'Abidjan, PK24-Abidjan, Côte d'Ivoire. La présidence était assurée par M. GUIRIGA Stéphane, Sous-Préfet de la commune de Songon,

D'entrée, le président de séance a pris la parole pour souhaiter la bienvenue à toutes les parties prenantes (les représentants des services déconcentrés et décentralisés, les autorités coutumières des villages susceptibles d'être impactés par le projet, les représentants des sociétés privées TRCI et Palmafrique etc.), aux membres de la Mission des Cabinets ENVAL et ERM et aux représentants de la société ARISE (commanditaire du projet).

Il a ouvert la réunion en situant l'importance du projet sur le développement de la Côte d'Ivoire au plan Macro et de la zone industrielle PK24 d'Attinguié au plan micro et sur la vie sociale des populations d'environnantes des communes d'Anyama et de Songon.

Prenant la parole, Dr ABOLI NOËL consultant (ENVAL) a présenté les membres de l'équipe des cabinets ENVAL et ERM et les Membres de la société ARISE (commanditaire du projet). En plus, il a donné le plan du déroulement de la réunion dans le cadre de cette étude au tour de trois points :

1. Présentation du projet ;
2. Présentations des enjeux de la Consultation publique ;
3. Echanges avec les participants.

La liste des participants est annexée à ce PV de Consultation publique.

1. PRESENTATION DU PROJET

Abordant le premier point de l'ordre du jour, Dr ABOLI NOËL, Consultant Socio économiste du Cabinet Enval, a présenté, à l'aide d'un support Power point, les objectifs de cette réunion, le contexte et l'aperçu du projet et la chronologie d'élaboration de l'EIES.

1.1. Les objectifs de la réunion

Les objectifs de la réunion se déclinent en Trois points essentiels :

-informer les parties prenantes, les populations affectées par le projet et les communautés de la zone d'influence sur le projet ses phases et son développement ;



-rapporter le processus des consultations et les mécanismes mis en place pour recueillir les plaintes, les griefs et les réclamations ;

-recueillir les commentaires des parties prenantes sur le projet.

1.2. CONTEXTE DU PROJET

La zone industrielle sera constituée d'industries de Transformation et de Substitution visant à augmenter la valeur ajoutée agricole et industrielle produite sur le territoire national et diminuer la dépendance vis-à-vis des importations.

Pour se faire, Arise Ivoire, entité locale d'ARISE a été mandaté pour réaliser la conception/ingénierie et gestion d'une Zone Économique Industrielle (ZEI) près d'Abidjan, PK24-Abidjan (« le Projet »).

ARISE développe le Projet PK24 dans le cadre d'un partenariat Public-Privé avec le Gouvernement Ivoirien représenté Par le Ministère du commerce et de l'industrie. La ZEI est principalement destinée à alléger la pression sur les zones industrielles autour du centre économique du pays, et favorisera également les résultats suivants :

-le développement d'infrastructures industrielles compétitives dans le pays pour la transformation des principaux produits agricoles ivoiriens ; et

-la substitution des biens importés par des produits issus des industries locales installées dans la zone industrielle de PK24.

Arise Ivoire s'est vu attribuer 422 ha de terrain pour le développement des infrastructures essentielles, afin d'accueillir les unités industrielles citées auparavant.

En ce sens, ARISE gèrera le parc industriel au sein duquel chacune des unités industrielles aura la charge de l'exploitation de sa propre installation.

2. LA CONSULTATION PUBLIQUE

Les consultations publiques consistent à informer le public et le faire participer à la prise de décision. De ce fait, le bureau d'étude ENVAL devra s'entretenir avec les parties prenantes lors de cette mission afin de recueillir leurs avis et préoccupations sur le projet et les impacts que pourrait causer ce projet sur leurs vies sociales et leurs activités économiques.

Cette étape présente trois enjeux essentiels :

- Prévoir les interactions probables entre le Projet et l'environnement (Rapport de Cadrage)
Organiser des consultations avec les principales parties prenantes afin de recevoir leurs commentaires et de les prendre en considération pour le développement de l'étude EIES
- Étudier des conditions environnementales, culturelles et socio-économiques actuelles dans les zones du Projet.
Identifier et évaluer les impacts potentiels du Projet conformément aux normes internationales
- Organiser des réunions de divulgation publique pour présenter les résultats de l'étude EIES et les retours d'informations.




2.1 Mécanisme de gestion des plaintes

Le mécanisme de règlement des griefs décrit l'approche d'acceptation, d'évaluation, de résolution et de suivi des griefs des parties prenantes concernant le Projet.

La réparation ou la résolution rapide des griefs est essentielle pour assurer la réussite de la mise en œuvre du projet.

Tout **commentaire ou réclamation** soulevé pendant la phase de cadrage peut être soumis par les moyens suivants à :

 **ARISE : Larissa Atta**

zic.abidjan@arisenet.com

+225 05 95 00 00 08

 **ENVAL : Gédéon Savané**

b.savane@enval-group.com

+225 07 77 43 26 36

3. ECHANGES AVEC LES PARTICIPANTS

Le Président de séance a invité par la suite, les parties prenantes à s'exprimer ouvertement, vue l'importance du projet. A sa suite, les participants ont exprimé leurs préoccupations et contribution pour la bonne marche du projet.

Les interventions sont résumées dans le tableau suivant :

N°	Nom et Prénom(s)	Communauté ou structure	Question(s), recommandation(s) ou doléance(s)	Nom Prénom de l'intervenant pour la réponse	Structure	Réponses
1	Monsieur GURIGA Stéphane le Sous-préfet	Sous-Préfecture	<p>Il précise que la présentation du projet est une phase préparatoire de l'EIES du projet que va conduire ARISE-Ivoire dans le cadre de l'aménagement de la zone industrielle.</p> <p>Il a remercié les parties prenantes présentes à la rencontre.</p> <p>Il a ajouté que c'est le Cabinet ENVAL qui a en charge l'étude, donc elle viendra consulter les populations environnantes. Il dit que, certes la zone industrielle de PK 24 appartient à la commune d'Anyama, mais pour une étude d'impact environnemental, il est important que les communes voisines</p>	Dr Aboli	ENVAL	<p>Il a donc précisé qu'après cette rencontre, il aura des séances de consultations éclatées dans tous les villages qui sont susceptibles d'être situés dans l'influence du projet. C'est pourquoi, il invite les populations présentes à aider à répertorier tous les villages qui peuvent être concernés par le projet afin de les visiter lors de ces séances de consultations.</p>

			<p>soient consultées, car une zone industrielle construite à la périphérie de leur zone (Songo) peut impacter la commune.</p> <p>Donc il était important que ces populations aient des informations sur le projet. Surtout que le village d'Abadjin-Kouté dispose de terre dans cette partie de la zone industrielle. La société TRCI est également installée dans la zone et paye encore des redevances à Abadjin-Kouté. C'est pour cela qu'il a convié le village d'Anguédedou et les campements de la zone à venir prendre part à cette séance, afin d'être au même niveau d'information. En effet si ces populations ont des préoccupations dans ce</p>			
--	--	--	---	--	--	--

			<p>sens cela serait la bienvenue.</p> <p>Il a par la suite salué l'exposé du Cabinet ENVAL et a invité les différentes parties prenantes à poser des questions nécessaires sur leurs préoccupations.</p>			
2	Monsieur Aboussou	SG de la Chefferie d'Abadjin-Kouté	<p>Selon lui cette zone qu'aujourd'hui occupe TRCI et à un contrat de bon voisinage avec Abadjin-Kouté, est une zone que réclame Abadjin-Kouté. Donc ils semblent être un peu surpris qu'après la présentation, l'on se rende compte que cette zone du projet appartient à Abadjin-Kouté.</p> <p>Est-ce donc l'Etat de CI qui a concédé cet espace à la société ou c'est la société elle-même qui mène ses démarches pour acquérir l'espace ?</p>	Monsieur GUIRIGA Stéphane le Sous-préfet	Sous-préfecture	<p>il a pris la parole recadrer le débat, en précisant que cette zone dont il est question, ne s'agit pas de la zone occupée actuellement par TRCI, mais plutôt la zone du village d'Akoupé-Zeudji qui a déjà fait l'objet d'acquisition par l'Etat avec les droits de purges déjà payés.</p> <p>Seulement qu'étant des voisins avec cette zone, le développement d'activités pourrait impacter les populations voisines, c'est dans ce sens que le Cabinet vient les consulter. Sinon l'espace en question n'est celle de la Commune de Songon.</p>

			-c'est bien que cette précision soit faite et comme le Sous-Préfet a signifié qu'ils soient voisins au projet, lors des consultations publiques, des préoccupations seront adressées au Cabinet (au projet).			
3	Koblan Dominique	Palmafrique	Il remercie le Sous-Préfet pour la précision, étant donné que le projet parle de développement, est-ce qu'à la longue les activités du projet n'impacteront pas leurs plantations ?	-1 M. GUIRIGA Stéphane le Sous-préfet -2 Dr ABOLI	-1 Sous-Préfecture -2 Enval	-1 C'est justement pour cette question qu'il a invité toutes ces parties prenantes à cette réunion. Cela permet à chacun d'avoir toutes les informations, comme ça au cours des séances de consultations publiques, toutes les préoccupations soient soulevées afin que le Cabinet en tienne compte dans son rapport d'EIES. Cela permettra au promoteur de prendre en compte les préoccupations des personnes physiques ou morales afin de prévenir d'éventuels impacts sur elles ou sur leurs activités. Donc le Cabinet a vraiment besoin d'avoir des informations sur ceux qui sont dans la zone d'influence du projet afin de les interroger et prendre en compte leurs préoccupations.

						<p>-2 il a salué la présence des structures comme TRCI et Palmafrique, car dans le processus, il était prévu que ces structures soient visitées, mais le consultant ne savait pas par quelle voie passer pour avoir accès aux responsables pour échanger sur la question.</p> <p>Donc leurs présences est vraiment une opportunité pour une prise de contact et de RDV pour la suite du projet.</p> <p>Et cette phase n'est que l'étude de cadrage qui est un élément de base qui va nous permettre de préparer l'EIES.</p>
4	Monsieur Koua Serge	Ministère de l'Agriculture	Il voulait avoir une orientation sur la situation géographique du projet à partir de carte.	Dr Aboli	Enval	La zone du projet les 422 ha n'est pas déconnectée de la grande zone industrielle d'Akoupé-Zeudji, elle fait partir des 940 ha acquis déjà par l'Etat de CI. Donc le projet se trouve dans la même zone que la société Brassivoire au Kilomètre PK 24.
5	Dr ABOLI	Enval	Demande aux personnes présentes à la séance de cité les noms de tous les villages qui sont	Monsieur GUIRIGA Stéphane le Sous-préfet	Sous-Préfecture	<p>Il y a plusieurs villages qui sont concernés.</p> <p>-Abadjin-Kouté situé certes à plus de 30 Km de la Zone, mais</p>

			susceptibles d'être impacté par le projet.			<p>le village dispose de terres non encore habitées qui sont dans les périphéries de la zone du projet.</p> <ul style="list-style-type: none"> -Agbanattié 1 -Agbanttié 2 -Anguédédou -TRCI -PalmAfrique -V2 Palafrique -V1 Palmafrique
6	Monsieur GUIRIGA Stéphane le Sous-préfet	Sous-préfecture	Il voulait savoir cette zone concerne aussi la zone de CEMOI inaugurée en son temps par le premier ministre ?	Dr ABOLI	Enval	Dr Non il ne s'agit pas de cette zone, mais plutôt de la zone des 940 ha déjà acquis par l'Etat de CI.
7	Latto Carine	Enval	Précise que le rayon d'impact en EIES est de 3 km à vole d'oiseau.	Gbalé Ferdinand	Abadjin-Kouté	Il faut aller au-delà des 3 Km, Car les eaux usées de la zone industrielle, une partie passe par la rivière Nétchi et la grande partie va jusqu'à Anguédédou, une autre partie sort à Kassamblé, il y également le Km 17 (Diapodoumé) qui est concerné.

						<p>Tous ces villages vont se sentir concerner.</p> <p>Donc lors des séances de consultations publiques dans les villages, toutes ces préoccupations seront évoquées.</p>
8	<p>Monsieur GUIRIGA Stéphane le Sous-préfet</p>	Sous-Préfecture	<p>Tout le monde est la disposition du projet pour donner les informations nécessaires pour l'étude.</p> <p>On attend donc le rapport pour aller à l'enquête publique, pour les risques que l'étude aura identifiés et quelles propositions le cabinet aura fait au promoteur pour gérer ces risques identifiés.</p> <p>Il a remercié tous les participants et signifié qu'ils sont en attente des résultats de l'enquête.</p>	Néant	Néant	Néant

Par		
<i>Entreprise</i>	<i>Nom</i>	<i>Signature</i>
<i>Enval</i>	<i>Dr ABOLI Noël</i>	
<i>Préfecture d'Abidjan</i>		

APPENDIX G STAKEHOLDER ENGAGEMENT ESIA MEETING MINUTES

Projet :

Projet de construction d'une zone Economique Industrielle 429 ha qui fait partie de la ZEi PK 24d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan

Phase : Champ d'application

Client : ARISE IVOIRE

Détails de la réunion

Acteur(s) : Chefferie d'Akoupé-Zeudji
Localisation : Commune d'ANYAMA
Date : 09/11/2022
ENVAL Présence : LATTO APIE CARRINE
Liste de présence : Annexe 1
Photos : Oui X Annexe 2

Copie de la liste de présence : Oui, ci-joint X
Oui

Auteur : Enval

Approbation : ROSELINE CHAMBRIER

Notes de reunion

Responsable	Sujet	Contenu	Actions / Résultats
<u>ENVAL</u>	<u>Préoccupati ons</u>	<p>L'arrivée de l'équipe a été ponctuée par la traditionnelle cérémonie de bienvenue prononcée par le Chef du village, en la personne de GBAKRE SIKA.</p> <p>A sa suite, le président des jeunes Mr AKA SERGE, porte-parole de la séance. a demandé les nouvelles qu'il a transmis au chef. Il a par la suite demandé la deuxième nouvelle qui consistait à présenter le projet.</p> <p>Après cette présentation, Mr N'CHO AKICHI est revenu sur l'existence de leurs rivières qu'abrite la zone Industrielle à savoir le Gobouet, le Gnintchi, Aboffi Seûfi qui entourent le village. Ces eaux auparavant servaient d'eaux de boisson à la population.</p> <p>Mais depuis la création de la zone industrielle avec le rejet anarchique des eaux usées des entreprises, ces eaux ont changé de couleurs car elles sont devenues sales.</p> <p>Par conséquent, le problème d'eau se pose à Akoupé -Zeudji. En effet toute la population ne bénéficie pas de l'eau courante pour un souci de raccordement. De ce fait ces rivières</p>	<u>Etude d'Impact Environnem ental et Social</u>

		<p>étaient bénéfiques pour certains. Et d'autres en boivent étant donné qu'ils ont des champs à proximité ou à quelques heures de cette eau.</p> <p>La Z.I représente 80 % des terres d'Akoupé-zeudji contre 15% pour ALLOKOI et 5% pour ATTINGUIE.</p> <p>Mr AKA SERGE, relève le fait qu'Arise n'ait pas fait de retour par rapport à leurs doléances et qu'ils ne se réuniraient plus pour le compte d'Arise si leurs doléances ne sont pas prises en compte.</p> <p>LATTO CARINE, Consultante à Enval</p> <p>Nous ne sommes qu'à la phase des EIES et Arise ne vous a pas oublié.</p> <p>Après nos échanges des recommandations ont été faites par le Chef résident en la personne de M Gbakré Sika. Ce sont entre :</p> <ul style="list-style-type: none">-la construction d'un centre de santé au niveau de la Zone Industrielle-Prévoir un poste de gendarmerie et/ou de police au niveau de la zone pour la sécurité des biens et des personnes-Prévoir un centre de secours d'urgence (Groupement Sapeurs-pompiers Militaires) en cas d'accident, d'incident ou d'incendie à la zone Industrielle. <p><u>Doléances (voire fiche procès-verbal)</u></p>	
--	--	--	--



UNE VUE DE LA RENCONTRE AVEC LA POPULATION DU VILLAGE D'AKOUBE



**ETUDE D'IMPACT ENVIRONNEMENTAL ET SOCIAL DU PROJET DE
CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE 429ha QUI FAIT
PARTIE DE LA ZEI PK 24 D'AKOUE-ZEUDJI DE 940 ha, DANS LE DISTRICT
AUTONOME D'ABIDJAN**

PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE

Date : 09/11/2022

Heure de début : 09h 14

Lieu de rencontre : Le village d'Akoué-Zeudji.

ORDRE DU JOUR :

1-Information ;

2-Préoccupations et recommandation ;

3-Avis du projet

INFORMATIONS
Projet de construction d'une zone économique industrielle d'Abidjan
Préoccupations et recommandations <u>Délégués</u> <ul style="list-style-type: none">- Renforcement du plateau technique du Centre de Santé Urbain d'Akoué-Zeudji- Construction d'une école primaire- Le chef de village souhaiterait rencontrer le promoteur pour d'éventuels échanges.- Le renforcement du réseau électrique- Adduction en eau potable.- Employabilité locale de la jeunesse d'Akoué-Zeudji- Bitumage de la voie qui relie le village d'Akoué-Zeudji pour faciliter l'accès aux travailleurs sur le site.- Construction d'un centre intégré médical à Akoué-Zeudji
Avis sur le projet Favorable au projet

Consultante Socio-économiste

LATO

Chef du village

OUSMANE AKRESIKOU
ADJ

**ENREGISTREMENT**

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante) comité de pilotage Visite.....préciser le nom de l'entreprise) Audit (interne ou externe à préciser) autre (préciser): *consultation communautaire*DATE : *09/11/2022* DEPARTEMENT : *ABIDJAN* LIEU : *village d'Ankou Zoué* HEURE DEBUT : *09h14* HEURE FIN : *16h34***2. THEME(S) ABORDE(S)**

- 2.1 *présentation du projet*
2.2 *Echanges (recueil d'avis, préoccupations, suggestions et recommandations)*
2.3 *Collecte de données socioéconomiques*

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <i>Chalke' Jikou</i>	<i>chef d'at</i>		<i>0741771377</i>		<i>[Signature]</i>
2. <i>Koutouan Aho</i>	<i>maître de</i>		<i>0740478778</i>		<i>[Signature]</i>
3. <i>Akichi K. Denis</i>	<i>maître de</i>		<i>057135504</i>		<i>[Signature]</i>
4. <i>Amou Nya Jacobs</i>	<i>chef de service</i>		<i>0703612143</i>		<i>[Signature]</i>
5. <i>Abouke Kou' Kou'</i>	<i>maître de</i>		<i>0703194422</i>		<i>[Signature]</i>
6. <i>Mpouko Akou Paul</i>	<i>maître de</i>		<i>0702108557</i>		<i>[Signature]</i>
7. <i>Akou Serge</i>	<i>jeune de</i>		<i>0758251244</i>		<i>[Signature]</i>
8. <i>Eugène Obo</i>	<i>S.G.</i>		<i>0753203185</i>		<i>[Signature]</i>
9. <i>Grangy Samson</i>	<i>licencié</i>		<i>0741180471</i>		<i>[Signature]</i>
10. <i>Zanthe mangui</i>	<i>(logicien)</i>	<i>G.S Akoué Zoué</i>	<i>07.07.393708</i>	<i>Zanthejean@gmail.com</i>	<i>[Signature]</i>

(Veuillez joindre cette fiche au compte rendu s'il en existe)

Projet :

Projet de construction d'une zone Economique Industrielle 429 ha qui fait partie de la ZEI PK 24d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan

Phase : Champ d'application

Client : ARISE IVOIRE

Détails de la réunion

Acteur(s) : Chefferie d'ALLOKOI village
Localisation : Commune d'ANYAMA
Date : 08/11/2022
ENVAL Présence : LATTO APIE CARRINE
Liste de présence : Annexe 1
Photos : Oui X Annexe 2

Copie de la liste de présence : Oui, ci-joint X
Oui

Auteur: Enval

Approbation : ROSELINE CHAMBRIER

Notes de reunion

Responsable	Sujet	Contenu	Actions / Résultats
<u>ENVAL</u>		<p>L'arrivée de l'équipe a été ponctuée de la traditionnelle cérémonie de bienvenue prononcée par le Secrétaire du Chef du village, en la personne de Mr GOHI PIERRE</p> <p>A sa suite, nous avons pris la parole afin de présenter à nouveau le projet et le travail à effectuer à la suite des échanges.</p> <p>Sans commentaire aucun, il a proposé que la révision du guide se fasse ainsi que la collecte de ces données complémentaires.</p> <p>Hormis ces informations collectées des doléances ont été exprimées par la chefferie.</p> <p><u>Doléances (voire fiche procès-verbal)</u></p>	<u>Etude d'Impact Environnementale</u>



UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE DU VILLAGE D'ALLOKOI



**ETUDE D'IMPACT ENVIRONNEMENTAL ET SOCIAL DU PROJET DE
CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE 429ha QUI FAIT
PARTIE DE LA ZEI PK 24 D'AKOUCHE-ZEUDJI DE 940 ha, DANS LE DISTRICT
AUTONOME D'ABIDJAN**

PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE

Date : 08/11/2022

Heure de début : 11h 15

Lieu de rencontre : Village Akouche

ORDRE DU JOUR :

1-Information ;

2-Préoccupations et recommandation ;

3-Avis du projet

INFORMATIONS
Projet de construction d'une zone économique industrielle d'Abidjan
Préoccupations et recommandations <i>Doléances</i> <ul style="list-style-type: none">- Employabilité locale de la jeunesse- Etablir une collaboration avec la commune- Construction d'une école maternelle et primaire- Foyer des jeunes- Besoin d'une ambulance pour le CSU (Centre de santé urbain).- Extension du réseau électrique.
Avis sur le projet <i>Favorable au projet</i>

Consultante Socio-économiste

LATO

Chef du village

Représentant du chef
DROUSSAN JOSEPH



ENREGISTREMENT

ENR 01 RH

Version : 00

23/09/2019

LISTE DE PRESENCE

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): *Commission Communautaire*

DATE : *07/11/2022* DEPARTEMENT : *Abidjan* LIEU : *Village Alloué* HEURE DEBUT : *14h15* HEURE FIN : *17h45*

2. THEME(S) ABORDE(S)

- 2.1 *présentation du projet*
- 2.2 *Echanges (Recueil d'avis, préoccupations, suggestions et ~~recommandations~~ recommandations)*
- 2.3 *collecte de données socio-économiques*

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. AMOUSSAN JOSEPH	<i>Adjt Chef</i>	<i>Alloué</i>	<i>0102247940</i>		<i>[Signature]</i>
2. GOTTI PIERRE	<i>Secrétaire</i>	<i>Alloué</i>	<i>057271947</i>		<i>[Signature]</i>
3. OSSÉDE JOS	<i>Conseiller</i>	<i>Alloué</i>	<i>070936730</i>		<i>[Signature]</i>
4. ACHÉGNAN LEON	<i>Chef de bureau</i>	<i>Alloué</i>	<i>070766692</i>		<i>[Signature]</i>
5. YAPO SIMON	<i>Porte Parole</i>	<i>Alloué</i>	<i>0554663344</i>		<i>[Signature]</i>
6. ACHÉGNAN JACQUES	<i>Porte Parole</i>	<i>Alloué</i>	<i>0141368068</i>		<i>[Signature]</i>
7. LATO AÏE CARRINE	<i>Sociologue</i>	<i>Cabinet Enval</i>	<i>0708395592</i>	<i>latocarime@yahoo.fr</i>	<i>[Signature]</i>
8.					
9.					
10.					

Projet :

Projet de construction d'une zone Economique Industrielle 429 ha qui fait partie de la ZEI PK 24d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan.

Phase : Champ d'application

Client : ARISE IVOIRE

Détails de la réunion

Acteur(s) : Chefferie d'Anguededou village
Localisation : Commune de SONGON
Date : 17/11/2022
ENVAL Présence : LATTO APIE CARRINE
Liste de présence : Annexe 1
Photos : Oui X Annexe 2

Copie de la liste de présence : Oui, ci-joint X
Oui

Auteur : Enval

Approbation : ROSELINE CHAMBRIER

Notes de reunion

Responsable	Sujet	Contenu	Actions / Résultats
<u>ENVAL</u>		<p>L'arrivée de l'équipe a été ponctuée de la traditionnelle cérémonie de bienvenue prononcée par le Secrétaire du Chef du village, en la personne Mr de KONAN MATHURIN</p> <p>A sa suite, nous avons pris la parole afin de présenter à nouveau le projet et le travail à effectuer à la suite des échanges.</p> <p>Sans commentaire aucun, il a proposé que la révision du guide se fasse. En ce qui concerne les informations supplémentaires à collecter le village est cosmopolite. Du coup nous avons différentes mœurs.</p> <p>Par conséquent le mode d'accession, la personne ressource en charge de la gestion et la manière dont cette propriété est gerée différent d'un groupe ethnique à un autre. Ce qui laisse entrevoir le manque d'informations à ce niveau.</p> <p>Quant aux services écosystémiques les hommes et les femmes n'accèdent pas à la zone industrielle pour des besoins de</p>	<u>Etude d'Impact Environnemental et Social</u>

		subsistance ou de soins parce qu'elles n'ont aucune parcelle ; ni activité aux alentours.	
		<u>Doléances (voire fiche procès-verbal)</u>	



UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE ET QUELQUES JEUNES DU VILLAGE D'ANGUEDOU



**ETUDE D'IMPACT ENVIRONNEMENTAL ET SOCIAL DU PROJET DE
CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE 429ha QUI FAIT
PARTIE DE LA ZEI PK 24 D'AKOUCPE-ZEUDJI DE 940 ha, DANS LE DISTRICT
AUTONOME D'ABIDJAN**

PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE

Date : 17/11/2022

Heure de début : 10h47

Lieu de rencontre : Village Amquedou

ORDRE DU JOUR :

1-Information ;

2-Préoccupations et recommandation ;

3-Avis du projet

INFORMATIONS
Projet de construction d'une zone économique industrielle d'Abidjan
Préoccupations et recommandations <i>Doléances</i> <ul style="list-style-type: none">- Construction d'un poste de police pour assurer la sécurité et des biens et des personnes.- Construction d'une école primaire au niveau du village.- Construction d'un Lycée professionnel et d'un collège.- Construction des châteaux d'eau- Construction d'un centre hospitalier.- Construction des canaux d'évacuation des eaux usées- Construction d'un stade pour la jeunesse.- Elargissement de la voie- Employabilité locale de la jeunesse.
Avis sur le projet Favorable au projet.

Consultante Socio-économiste

LATTO CARRIVE

Chef du village

KONAN K. FAYOLLE
Chef de Village ANGUEDOU
Cot. 08 37 02 12

05 76 40 77 11

	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage Visite.....préciser le nom de l'entreprise)
- Audit (interne ou externe à préciser) autre (préciser): Consultation Communautaire
- DATE : 17/09/2022 DEPARTEMENT : ABIDJAN LIEU: Village Anguedou HEURE DEBUT: 10h00 HEURE FIN: 14h30

2. THEME(S) ABORDE(S)

- 2.1 présentation du projet
- 2.2 Echanges (accueil, plaisir, préoccupations, suggestion et recommandation)
- 2.3 collecte de données socioéconomique

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>KONAN B. TALHOUA</u>	<u>MS chef</u>		<u>01 04 89 06 8</u>		<u>[Signature]</u>
2. <u>KONAN K. FRANCOIS</u>	<u>chef</u>	<u>ANGUEDOU V.</u>	<u>07 08 37 02 12</u>		<u>[Signature]</u>
3. <u>KOUADIO BEKANI</u>			<u>05 98 27 72 9</u>		<u>[Signature]</u>
4. <u>Simone Houdou</u>			<u>05 06 30 76 42</u>		
5. <u>KONAN JEAN SERGE</u>	<u>Vice Président</u>		<u>07 57 27 43 05</u>		<u>[Signature]</u>
6. <u>LATTO ARIE CARRINE</u>	<u>Consultante Sociologue</u>	<u>Cabinet Envol</u>	<u>07 08 39 58 32</u>	<u>lattoarie@yahoofr</u>	<u>[Signature]</u>
7.					
8.					
9.					
10.					

Industrial Economic Zone Construction Project 429

Which is part of the 940ha Akoupé-Zeudji ZEI PK 24, in the Autonomous District of Abidjan.

Minutes of the meeting with the CHEC project management

The year two thousand and twenty-two on Wednesday December 14, from 10:30 to 11:45, took place at the Industrial Zone of Akoupé-Zeudji pk 24 with the CHEC Company a meeting within the framework of the Environmental and Social impact Assessment of the Project of construction of an Industrial Economic Zone 429 which starts from the ZEI PK 24 of Akoupé-Zeudji of 940ha, in the Autonomous District of Abidjan

The aim of this meeting was to :

1. Presenting the project ;
2. Exchange on the project and its environment.
3. To collect CHEC's opinions, concerns, suggestions and recommendations The list of participants is attached to the minutes.

At the outset, the project was presented by Miss Latto Carrine of the Enval firm.

We then began discussions with the CHEC team in charge of the construction of the wastewater treatment plant in the Akoupé-Zeudji PK 24 industrial zone. These discussions focused on the water capacity of the plant, the process used to treat the wastewater, and the surface area occupied by the treatment plant.

The project director, Mr. Gru hui Fong, through Mr. Djékroumane Denis (interpreter), told us that the 127 ha water treatment plant out of the 940 ha defined by SOGEDI, formerly called AGEDI, would be the very first. Because 5 to 6 others are in project. But CHEC does not yet have the market. The wastewater absorption capacity of the treatment plant being finished is one thousand (1000) cubic metres per day and is built on an area of one thousand four hundred (1400) square metres.

It is located 3 km from the factories, almost at the end of the industrial zone.

He then presented the process of collecting the wastewater to be treated before discharging it into nature. According to him, the drainage channels are already installed and each factory wishing to treat its wastewater will be connected to the fixed pipes. Then its water

The water will be led to a manhole which is also connected to the treatment plant where there is a whole mechanism set up for the treatment of the water followed by a separation of the water and the sludge. Once this separation has been made, the water goes into a manhole near the treatment plant, not far from the exit door, which, with the help of drainage channels, will be able to discharge the water into the natural environment after it has been analysed and found acceptable.

It should be noted that the connection of factories or companies to this treatment plant is the responsibility of the SOGEDI, formerly called AGEDI, which is the project owner and manager of this plant, the engineer is the BNETD, and CHEC is only the designer and therefore the executor.

In addition, we visited the construction site of the water treatment plant in order to better appreciate the wastewater treatment process. The construction site of the water tower and the Neutralization and Disinfection Station (NDS), which will treat the water from the tower before distribution, was also visited.



A VIEW OF THE MEETING WITH CHEC



Image showing the site of the wastewater treatment plant at the Pk 24 Akoupé-Zeudji industrial zone



Image showing a water tower and a neutralisation and disinfection station at PK 24 Akoupé-Zeudji



Party consultation report..Pre11Uilte

Prénom, Pr., nom(s), Fonction	DJERHOUMANE DENIS CHCC
Date	24/12/2022 à 16h30
Heure	1h 15 min
Objet de la rencontre Informations, sondage d'opinion	ATTO APTE CARRIAGE

QUESTIONS

1. Avez-vous déjà connaissance du projet ?

Oui
 Non

2. Quelle est la phase de l'étude ?

Sélection du site
 Phase 1
 Phase 2

3. Avez-vous des préoccupations par rapport à l'impact de l'installation ?

Oui
 Non

4. Quelles sont les préoccupations principales ?

Bruit
 Qualité de l'air
 Impact visuel
 Impact paysager
 Impact patrimonial
 Impact culturel
 Impact social
 Impact économique

ARI E



ERM

J-d c;1 O'lte 11vis re!!!i tnaatmu JJroj !!!.

f b l 0
fo,oru!!!'ow mscrvc of D
r(fil6 D

"- Raisuru; tlo eel.nvis:

Contributions au développement
men

signature et cachet





	ENREGISTREMENT	ENR 01 RH	
	LISTE DE PRESENCE	Version : 00	
		23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser)
 autre (préciser): Consultation publique.
- DATE: du 12/09/2022 DEPARTEMENT: Abidjan LIEU: Zona CIEC. HEURE DEBUT: 10h30 HEURE FIN: 11h45

2. THEME(S) ABORDE(S)

- 2.1. présentation du projet
 2.2. Echanges
 2.3. Recueil d'avis, préoccupations, suggestions et recommandations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>Sikoukama Denis</u>	<u>Directeur CIEC</u>	<u>Consultation publique</u>	<u>0277950326</u>		<u>[Signature]</u>
2. <u>Bra hui Fong</u>	<u>CIEC</u>	<u>Directeur projet</u>			<u>[Signature]</u>
3. <u>Beli Carle</u>	<u>ESG MT</u>	<u>ARISE</u>	<u>06500009</u>		<u>[Signature]</u>
4. <u>ATTA LARISSA</u>	<u>ITM</u>	<u>ARISE</u>	<u>0575 00 5135</u>		<u>[Signature]</u>
5. <u>LATTO APIE CARLINE</u>	<u>Consultante sociologue</u>	<u>ENVAL</u>	<u>02-08-395332</u>	<u>lattoapi@yaho.fr</u>	<u>[Signature]</u>
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

B



Projet de construction d'une Zone Économique Industrielle 429

Qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan.

Compte rendu de la rencontre avec la Direction projet CHEC

L'An deux mil Vingt-deux, le Mercredi 14 Décembre de 10H 30 à 11H45 minutes, a eu lieu à La Zone Industrielle d'Akoupé-Zeudji pk 24 avec l'Entreprise CHEC une rencontre dans le cadre de l'Etude d'Impact Environnemental et Social du Projet de construction d'une zone Economique Industrielle 429 qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan.

L'objectif de cette rencontre était de :

1. Présenter le projet ;
2. Echanger sur le projet et son environnement.
3. Recueillir les avis, préoccupations, suggestions et recommandations de CHEC

La liste des participants est annexée au compte rendu.

D'entrée, le projet a été présenté par Mademoiselle Latto Carrine du cabinet Enval.

Par la suite, nous avons débuté les échanges avec l'équipe de CHEC en charge de la construction de la station d'épuration au niveau de la Zone Industrielle d'Akoupé-Zeudji PK 24. Ces échanges ont porté sur la capacité d'eau que peut contenir la station, le procédé utilisé pour le traitement des eaux usées, et la superficie occupée par la station d'épuration.

Le directeur projet M. Gru hui Fong nous a fait par l'entremise de M. Djékroumane Denis(interprète) que la Station d'épuration de 127 ha sur les 940 ha défini par la SOGEDI anciennement appelé L'AGEDI serait la toute première. Car 5 à 6 autres sont en projet. Mais CHEC n'a pas encore le marché. La capacité d'absorption des eaux usées de la station d'épuration en cours de finition est de mille (1000) mètre cube par jour et est bâti sur une superficie de mille quatre cent (1400) mètre carré.

Elle est située à 3 km des usines pratiquement à la fin de la zone Industrielle.

Il a par la suite présenté le procédé de collecte des eaux usées à traiter avant de les rejeter dans la nature. Selon ses propos, les canaux de drainage sont déjà installés et chaque usine désireuse de traiter ses eaux usées sera connectée aux canalisations fixées. Ensuite ses eaux

seront conduites dans un regard qui lui est aussi connecté à la station d'épuration où se trouve tout un mécanisme mis en place pour le traitement des eaux suivie d'une séparation de l'eau et de la boue. Une fois cette séparation faite, l'eau se retrouve dans un regard proche de la station d'épuration non loin de la porte de sortie qui à l'aide des canaux de drainage pourra rejeter l'eau dans le milieu naturel après analyse de ces eaux et jugées recevable.

Il convient de noter que la connexion des usines ou des Entreprises à cette station d'épuration est du ressort de la SOGEDI anciennement appelé AGEDI qui est le maître d'Ouvrage et le gestionnaire de cette station, l'ingénieur c'est le BNETD, CHEC n'est que le concepteur donc l'exécutant.

Par ailleurs, nous avons procédé à une visite sur le chantier de la station d'épuration afin de mieux apprécier le procédé de traitement des eaux usées. Le chantier du château d'eau et du Poste de Neutralisation et de Désinfection (PND) qui permettra de traiter l'eau du château avant distribution a été également visité.



UNE VUE DE LA RENCONTRE AVEC CHEC



Image présentant le site de la station d'épuration à la zone Industrielle Pk 24 Akoupé-Zeudji



Image présentant un chateau d'eau et un poste de neutralisation et de désinfection de PK 24 Akoupé-Zeudji

Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	DJEHOUMANE DENIS
Organisme rencontré	CHCC
Date et lieu :	14/12/2022 à la Zone Industrielle
Durée :	1h 15 min
Nom du Consultant	LATO APE CARIBBE
Objectif de la rencontre	
Informations, sondage d'opinion	

Résumé des échanges

- Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle 429 ha qui fait partie de la ZEI PK 24d' Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan
 - Oui
 - Non

Si oui, par quel canal ? Précisez.
par les Collogues
- Quelles sont les différentes missions de votre structure se rapportant au projet ?
Exécution du projet PK24 phase I
- Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation
En tant que groupe exécuteur des projets, nous n'avons pas de préoccupations
- Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?
pour le moment nous nous en occupons l'avenir si c'est nécessaire, vous pouvez nous contacter



5. Quel est votre avis relativement au projet ?

- a) Favorable
- b) Favorable sous réserve de
- c) Refus

6. Raisons de cet avis :

Contributions au développement commun

Signature et cachet





	ENREGISTREMENT	ENR 01 RH	
	Version : 00		
	LISTE DE PRESENCE		
	23/09/2019		Créé le 19/09/19

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser)
 autre (préciser): consultation publique.

DATE: le 12/09/2022 DEPARTEMENT: Abidjan LIEU: ZIN HEURE DEBUT: 10h30 HEURE FIN: 14h45
CHEC.

2. THEME(S) ABORDE(S)

- 2.1. présentation du projet
 2.2. Echanges
 2.3. Recueil d'avis, préoccupations, suggestions et besoins mandataires

3. PARTICIPANTS

	Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1.	<u>Sikhoumane Kouli</u>	<u>Directeur</u> <u>CHEC</u>	<u>Projet</u> <u>Projet</u>	<u>0272950326</u>		<u>[Signature]</u>
2.	<u>Bra hui Fong</u>	<u>CHEC</u>	<u>Projet</u>			<u>[Signature]</u>
3.	<u>Beli Carle</u>	<u>ESG PI</u>	<u>ARISE</u>	<u>065000099</u>		<u>[Signature]</u>
4.	<u>ATTA LARISSA</u>	<u>IM</u>	<u>ARISE</u>	<u>057505135</u>		<u>[Signature]</u>
5.	<u>LATTO ARIE CARLINE</u>	<u>Consultante</u> <u>Sociologue</u>	<u>ENVAL</u>	<u>21-08-395392</u>	<u>lattoarime@yahoo.fr</u>	<u>[Signature]</u>
6.						
7.						
8.						
9.						
10.						

(Veuillez joindre cette fiche au compte rendu s'il en existe)

B



Projet :	Projet de construction d'une zone Economique Industrielle 429 ha qui fait partie de la zeï PK 24d'Akoupé-Zeudji de 940 ha,dans le District Autonome d'Abidjan.		
Phase :	Champ d'application		
Client :	QGMI		
Détails de la réunion			
Acteur(s) :	Communauté d'ABADJIN-KOUTE)		
Localisation :	Commune de SONGON		
Date :	14/11/2022		
ENVAL Présence :	/ LATTO APIE CARRINE		
Liste de présence :	Annexe 1		
Photos :	Oui	X	Annexe 2
Copie de la liste de présence	Oui, ci-joint	X	
	Non		
Auteur :	Enval		
Approbation :	Rodrigo Ferreira		

Notes de reunion			
Responsable	Sujet	Contenu	Actions / Résultats
ENVAL		<p>La rencontre avec la communauté d'Abadjin kouté s'est accentué autour de trois axes dont la présentation du projet par le cabinet. ENVAL, le recueil d'avis, préoccupations soldées par les doléances et recommandations et pour terminer la collecte de données socioéconomiques et démographiques.</p> <p>Le cabinet a présenté le contexte de la rencontre qui tient d'une part à présenter le projet et l'exercice qui se fera pour la collecte des données démographiques et socioéconomiques. D'autre part. à circonscrire le périmètre du projet.</p> <p>Suite à notre intervention, Mr Mobio Guillaume, Chef Adjoint, nous a fait savoir que PalmafriqueV2 est sur le territoire d'Abadjin-kouté et de Songon Agban.Mais Abadjin -Kouté a la plus grande partie.</p> <p>Acet effet, la coopérative du village a ses plantations au niveau de la zone Industrielle de PK 24</p>	<p><u>Etude D'Impact Environnemental et Social</u></p>

		<p>Il souligne également qu'il n'est pas informé de l'occupation du site. Pour ce fait, des recommandations ont été formulées.</p> <p>-La chefferie souhaiterait rencontrer le promoteur Arise et par la suite programmer une visite de site.</p> <p>La chefferie souhaiterait qu'Arise en exploitant son site pense à la génération future en termes de logements. Car Abadjin-Kouté n'a plus de terre au village. Par conséquent la leur parcelle au niveau la Zone Industrielle devient une priorité pour le village.</p> <p>Doléances (voir fiche de doléances annexée).</p>	
--	--	--	--



UNE VUE DE LA RENCONTRE AVEC LA COMMUNAUTE D'ABADJIN-KOUTE



**ETUDE D'IMPACT ENVIRONNEMENTAL ET SOCIAL DU PROJET DE
CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE 429ha QUI FAIT
PARTIE DE LA ZEI PK 24 D'AKOUBE-ZEUDJI DE 940 ha, DANS LE DISTRICT
AUTONOME D'ABIDJAN**

PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE

Date : 14/11/2022

Heure de début : 10h 10

Lieu de rencontre : Village d'Abadjin Kouté.

ORDRE DU JOUR :

1-Information ;

2-Préoccupations et recommandation ;

3-Avis du projet

INFORMATIONS
Projet de construction d'une zone économique industrielle d'Abidjan
Préoccupations et recommandations
<p><u>Délégués</u></p> <ul style="list-style-type: none">- Les femmes ont besoin d'un financement pour entreprendre une activité génératrice de revenus (AGR).- Entreprendre des actions sociales en faveur des veuves et des orphelins.- Aménager un magasin en guise de supermarché pour commercialiser leurs produits.- Employabilité locale de la jeunesse d'Abadjin-Kouté. (priorité pour cette jeunesse).- prévoir des actions sociales pour accompagner les jeunes dans leurs activités.- purge des droits fonciers s'il en venait que cela n'avait pas été fait.- la construction d'une maternité et d'une école maternelle (extension de l'école maternelle).- construction d'un laboratoire pour le Centre de Santé
Avis sur le projet
Favorable sans réserve de la prise en compte des recommandations

Consultante Socio-économiste

CATTO Carrière

Chef du village





ENREGISTREMENT

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19 1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage Visite.....préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser) autre (préciser): consultation communautaire

DATE : 14/11/2022 DEPARTEMENT : ABIDJAN LIEU : Village d'ABADJAN KOTE HEURE DEBUT : 13h30 HEURE FIN : 16h30

2. THEME(S) ABORDE(S)

- 2.1. présentation du projet
 2.2. échange (recueil d'avis de participants, suggestions et recommandations).
 2.3. collectes de données socioéconomiques

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. MOBIO B. GUILLAUME	chef Adjoint	ABADJAN -KOTE	0709624624		<u>MOB</u>
2. Molio-philippe	chef notable	ABADJAN KOTE	057519576		<u>MOB</u>
3. AKRE GEOFFROY	Président Jeunes	UJAK	09-07-00-7035		<u>AKRE</u>
4. DAGBRE AKRE BERTRAND	S.G Jeunesse	UJAK	0748469330		<u>DAGBRE</u>
5. Mme YAPO Alphonse	Présidente	Ass des femme ABAGNON	0141518962		<u>YAPO</u>
6. DAHO A. MARTHE	Trésorière	- II -	0787173555		<u>DAHO</u>
7. AGASSI BOKO Suzanne	vice-Trésorière	Abadjan Kote	0742198288		<u>AGASSI</u>
8. LATO ADE CARLINE	Consultant Sociologue	COOPMEL ENVAL	0708315392	latoade@yahoofr	<u>LATO</u>
9.					
10.					

Projet de construction d'une Zone Économique Industrielle 429

Qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan.

Compte rendu de la rencontre avec la chefferie d'Akoupé-Zeudji

L'An deux mil Vingt-deux, le Mercredi 30 Novembre de 09H18 à 10H30 minutes, a eu lieu dans la salle de réunion de la chefferie une rencontre dans le cadre de l'Étude d'Impact Environnemental et Social du Projet de construction d'une zone Economique Industrielle 429 qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan. La Modération est assurée par **Latto carrine** du Cabinet Enval.

D'entrée, Mr ; Aka Serge de la jeunesse en tant que porte-parole de la séance a salué et souhaité la bienvenue à la représente du Cabinet d'Enval et aux représentantes d'ARISE en la personne de **Larissa Atta et de Caryle Boli** a par la suite passé la parole à la modératrice pour la suite de la réunion.

Prenant la parole, Latto Carrine consultante (ENVAL) s'est présenté et les membres de la société ARISE (commanditaire du projet) également. L'objectif était de réviser les doléances exprimées par la chefferie d'Akoupé-Zeudji.

1. Rappel de l'ordre du jour ;
2. Echanges ;
3. Révision des doléances.

La liste des participants est annexée à ce compte rendu de la rencontre.

1. PRESENTATION DU PROJET

Abordant le premier point Latto carrine a rappelé l'ordre du jour résumé en une expression de souhait par la chefferie. D'Akoupé-Zeudji. Celle de rencontrer le promoteur Arise.

1.1. CONTEXTE DU PROJET

Lors de l'Étude de Cadrage et de l'Étude Impact Environmental et Social des doléances ont été exprimé par la chefferie d'Akoupé Zeudji à l'endroit du promoteur.
(Voir Annexe).

En effet, la chefferie avait demander à Rencontres le promoteur parce qu'elle se sentait lésé par bon nombre de promoteurs. C'est dans cette optique que la chefferie a exigé cette rencontre afin d'échanger avec le promoteur sur les besoins de la population et l'effectivité de leur prise en compte.

2-Echanges

Au chapitre des échanges l'accent a été mis sur le patrimoine culturel (l'existence d'un site sacré au niveau du site).

Mais le chef Adjoint dont Mr Gbakré Sika nous a rassuré sur l'inexistence de site sacré. C'est juste la rivière Sobohoé qui traverse l'autoroute. Elle prend sa source à Brassivoire et est apparente vers MIPA.

Par ailleurs, le cabinet a demandé à la chefferie de mettre à disposition des documents relatifs à l'accession du site.

3-Revision des doléances

Le mécanisme de règlement des griefs décrit l'approche d'acceptation, d'évaluation, de résolution et de suivi des griefs des parties prenantes concernant le Projet.

La réparation ou la résolution rapide des griefs est essentielle pour assurer la réussite de la mise en œuvre du projet. A cet effet, l'accent a été mis sur les doléances telles que le reprofilage de la voie reliant la Zone Industrielle à Akoupé Zeudji par la voie du cimetière du village sur 3km (permettre aux travailleurs de rejoindre la zone industrielle dans les brefs e renforcement du plateau technique et la construction de bâtiments (gynécologie radiologie ; bloc opératoire et bien d'autres). Selon M. Djoman Wilfried le projet de la prise en charge de la mère et l'enfant se veut préventif afin de réduire ou de neutraliser la mortalité maternelle, infantile et de morbidité. A cela s'ajoute la construction de la clôture qui est un élément important vu que les élèves sont exposés aux accidents.

En effet, la construction de cette clôture pourra faire de cette école un centre d'examens afin d'éviter tout déplacement massif des élèves des classes d'examens vers d'autres contrées pour les compositions.

En retour, les représentantes d'ARISE les ont rassurés sur le fait que leurs doléances s'inscrivent dans la droite ligne de la politique de développement 'd'Arise quant il désire s'installer dans un pays.

Le Chef à par la suite salué l'engagement des cabinets ERM, Enval et ARISE pour leur dévouement et leur promptitude dans la mise en œuvre de cette étude. Sur ces mots, le Chef a levé la séance et nous avons procédé à une visite du Centre de santé, del'école primaire et de la voie à reprofiler (voir photos).

QUELQUES IMAGES PRESENTANT LE CONTENU DES DOLEANCES A PRENDRE EN COMPTE



Le centre de Santé Urbain



La voie menant d'Akoupé-Zeudji o la zone Industrielle



Ecole primaire à clôturer

UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE





	ENREGISTREMENT	ENR 01 RH	
	LISTE DE PRESENCE	Version : 00	
23/09/2019			
Créé le 19/09/19		1/1	

1. OBJET : (cochez la case correspondante)

comité de pilotage Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser) autre (préciser): Rencontre avec la direction d'Akoupe-Zenouzi

DATE : 30/01/2023 DEPARTEMENT : ABIDJAN LIEU: Village d'Akoupe-Zenouzi HEURE DEBUT: 09h18 HEURE FIN: 10h30

2. THEME(S) ABORDE(S)

2.1. Présentation de l'ordre du jour

2.2. Echanges

2.3. Revue des réalisations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. GBAKRÉ SIKI	CHEF du village résident		0141776377		8/1
2. MOUSSO AKON PAUL	NOTABLE		0102108537		AKON
3. ADOUKO AKUI NOÉ	NOTABLE		0768514278		AD
4. AKICHI KOUACI DENIS	NOTABLE		0151135504		AK
5. KOBÉ N'CHO MOÏSE	NANAN		0103453626		MOÏSE
6. ZANHO NANGUI	POT. COGES		0707393708		ZANHO
7. ACTI NANGUI	RSP Génération		0749450815		ACTI
8. OBO BAÏNÉ	S-G		0153203885		OBO
9. DOMINIQUE OBO AKICHI	S-G-Adjoint		0102282010		DOMINIQUE
10. DJOMAN ASTRID	JEUNESSE		0707115544		ASTRID
11. KOUTOUAN KABIKÉ	JEUNESSE		0777577770		KABIKÉ
12. AKA SERGE	JEUNESSE		057536037		AKA

(Veuillez joindre cette fiche au compte rendu s'il en existe)





	ENREGISTREMENT	ENR 01 RH	
	LISTE DE PRESENCE	Version : 00	
23/09/2019			
Créé le 19/09/19		1/1	

1. **OBJET** : (cochez la case correspondante)

comité de pilotage Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser) autre (préciser): **Rencontre avec la cheffe d'ARISE - Zouli**

DATE : **30/11/2022** DEPARTEMENT : **ABIDJAN** LIEU: **Village d'ARISE-Zouli** HEURE DEBUT: **09h18** HEURE FIN : **12h30**

2. **THEME(S) ABORDE(S)**

- 2.1 **Présentation de l'ordre du jour**
- 2.2 **Echanges**
- 2.3 **Révision des délégués**

3. **PARTICIPANTS**

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. Beli Capye	Management Technique	ARISE	05 95 00 00 05	capye.beli@arisenet.com	
2. ATTA LARISSA	Interface Marketing	ARISE	05-95000000	larissa.atta@arisenet.com	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)



Projet de construction d'une Zone Économique Industrielle 429

Qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan.

Compte rendu de la rencontre avec la chefferie d'Akoupé-Zeudji

L'An deux mil Vingt-deux, le Mercredi 30 Novembre de 09H18 à 10H30 minutes, a eu lieu dans la salle de réunion de la chefferie une rencontre dans le cadre de l'Étude d'Impact Environnemental et Social du Projet de construction d'une zone Economique Industrielle 429 qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan. La Modération est assurée par **Latto carrine** du Cabinet Enval.

D'entrée, Mr ; Aka Serge de la jeunesse en tant que porte-parole de la séance a salué et souhaité la bienvenue à la représente du Cabinet d'Enval et aux représentantes d'ARISE en la personne de **Larissa Atta et de Caryle Boli** a par la suite passé la parole à la modératrice pour la suite de la réunion.

Prenant la parole, Latto Carrine consultante (ENVAL) s'est présenté et les membres de la société ARISE (commanditaire du projet) également. L'objectif était de réviser les doléances exprimées par la chefferie d'Akoupé-Zeudji.

1. Rappel de l'ordre du jour ;
2. Echanges ;
3. Révision des doléances.

La liste des participants est annexée à ce compte rendu de la rencontre.

1. PRESENTATION DU PROJET

Abordant le premier point Latto carrine a rappelé l'ordre du jour résumé en une expression de souhait par la chefferie. D'Akoupé-Zeudji. Celle de rencontrer le promoteur Arise.

1.1. CONTEXTE DU PROJET

Lors de l'Étude de Cadrage et de l'Étude Impact Environmental et Social des doléances ont été exprimé par la chefferie d'Akoupé Zeudji à l'endroit du promoteur.
(Voir Annexe).

En effet, la chefferie avait demander à Rencontres le promoteur parce qu'elle se sentait lésé par bon nombre de promoteurs. C'est dans cette optique que la chefferie a exigé cette rencontre afin d'échanger avec le promoteur sur les besoins de la population et l'effectivité de leur prise en compte.

2-Echanges

Au chapitre des échanges l'accent a été mis sur le patrimoine culturel (l'existence d'un site sacré au niveau du site).

Mais le chef Adjoint dont Mr Gbakré Sika nous a rassuré sur l'inexistence de site sacré. C'est juste la rivière Sobohoé qui traverse l'autoroute. Elle prend sa source à Brassivoire et est apparente vers MIPA.

Par ailleurs, le cabinet a demandé à la chefferie de mettre à disposition des documents relatifs à l'accession du site.

3-Revision des doléances

Le mécanisme de règlement des griefs décrit l'approche d'acceptation, d'évaluation, de résolution et de suivi des griefs des parties prenantes concernant le Projet.

La réparation ou la résolution rapide des griefs est essentielle pour assurer la réussite de la mise en œuvre du projet. A cet effet, l'accent a été mis sur les doléances telles que le reprofilage de la voie reliant la Zone Industrielle à Akoupé Zeudji par la voie du cimetière du village sur 3km (permettre aux travailleurs de rejoindre la zone industrielle dans les brefs e renforcement du plateau technique et la construction de bâtiments (gynécologie radiologie ; bloc opératoire et bien d'autres). Selon M. Djoman Wilfried le projet de la prise en charge de la mère et l'enfant se veut préventif afin de réduire ou de neutraliser la mortalité maternelle, infantile et de morbidité. A cela s'ajoute la construction de la clôture qui est un élément important vu que les élèves sont exposés aux accidents.

En effet, la construction de cette clôture pourra faire de cette école un centre d'examens afin d'éviter tout déplacement massif des élèves des classes d'examens vers d'autres contrées pour les compositions.

En retour, les représentantes d'ARISE les ont rassurés sur le fait que leurs doléances s'inscrivent dans la droite ligne de la politique de développement 'd'Arise quant il désire s'installer dans un pays.

Le Chef à par la suite salué l'engagement des cabinets ERM, Enval et ARISE pour leur dévouement et leur promptitude dans la mise en œuvre de cette étude. Sur ces mots, le Chef a levé la séance et nous avons procédé à une visite du Centre de santé, del'école primaire et de la voie à reprofiler (voir photos).

QUELQUES IMAGES PRESENTANT LE CONTENU DES DOLEANCES A PRENDRE EN COMPTE



Le centre de Santé Urbain



La voie menant d'Akoupé-Zeudji o la zone Industrielle



Ecole primaire à clôturer

UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE





	ENREGISTREMENT	ENR 01 RH	
	LISTE DE PRESENCE	Version : 00	
23/09/2019			
Créé le 19/09/19		1/1	

1. OBJET : (cochez la case correspondante)

comité de pilotage Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser) autre (préciser): Rencontre avec la direction d'Akoupe-Zenouzi

DATE : 30/01/2023 DEPARTEMENT : ABIDJAN LIEU: Village d'Akoupe-Zenouzi HEURE DEBUT: 09h18 HEURE FIN: 10h30

2. THEME(S) ABORDE(S)

2.1. Présentation de l'ordre du jour

2.2. Echanges

2.3. Revue des réalisations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. GBAKRÉ SIKA	CHEF du village résident		0141776377		8/8
2. MOUSSO AKON PAUL	NOTABLE		0102108537		AKON
3. ADOUKO AKUI NOÉ	NOTABLE		0768514278		AD
4. AKICHI KOUACI DENIS	NOTABLE		0151135504		AK
5. KOBİ N'CHO MOÏSE	NANAN		0103453626		MOÏSE
6. ZANHO NANGUI	POT. COGES		0707393708		ZANHO
7. ACTI NANGUI	RSP Génération		0749450815		ACTI
8. OBO BAINÉ	S-G		0153203885		OBO
9. DOMINIQUE OBO AKICHI	S-G-Adjoint		0102282010		DOMINIQUE
10. DJOMAN ASTRID	JEUNESSE		0707115544		ASTRID
11. KOUTOUAN KABIKÉ	JEUNESSE		0777577770		KABIKÉ
12. AKA SERGE	JEUNESSE		057536037		AKA

(Veuillez joindre cette fiche au compte rendu s'il en existe)



	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1

1. **OBJET** : (cochez la case correspondante)

comité de pilotage Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser) autre (préciser): *Rencontre avec la chieffe d'ARoupe-Zandji*

DATE : *30/11/2022* DEPARTEMENT : *ABIDJAN* LIEU : *Village d'ARoupe-Zandji* HEURE DEBUT : *09h 18* HEURE FIN : *12h 30*

2. **THEME(S) ABORDE(S)**

- 2.1 *Présentation de l'ordre du jour*
- 2.2 *Echanges*
- 2.3 *Révision des délégués*

3. **PARTICIPANTS**

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <i>Beli Capye</i>	<i>Management Technique</i>	<i>ARISE</i>	<i>05 95 00 00 05</i>	<i>capye.beli@arisenet.com</i>	<i>[Signature]</i>
2. <i>ATTA LARISSA</i>	<i>Interface Manager</i>	<i>ARISE</i>	<i>05-95000009</i>	<i>larissa.atta@arisenet.com</i>	<i>[Signature]</i>
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)



Projet de construction d'une Zone Économique Industrielle 429

Qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan.

Compte rendu de la rencontre avec la Direction Générale de l'Environnement (DGE)

L'An deux mil Vingt-deux, le Vendredi 30 Décembre de 09H 50 à 10H45 minutes, a eu lieu à la Direction Générale de ladite structure une rencontre dans le cadre de l'Etude d'Impact Environnemental et Social du Projet de construction d'une zone Economique Industrielle 429 qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan. Le but de cette rencontre était de recueillir les avis, préoccupations, suggestions et recommandations qui seront faites par la DGE dans le cadre de cette étude.

L'objectif de cette rencontre était de :

1. Présenter le projet ;
2. Echanger sur le projet et son environnement.
3. Recueillir les avis, préoccupations, suggestions et recommandations.

Le Vendredi 30 Décembre 2022, nous avons eut une section d'échange avec la Direction Générale de l'Environnement.

Mlle Latto a situé le contexte en présentant le projet à l'équipe de la DGE avant de leur laisser la latitude de s'exprimer sur le projet.

Mr Diby ayant pris la parole à faire des recommandations à prendre en compte dans la rédaction du rapport. Ce sont entre autres :

- Décrire es infrastructures qui seront sur le site ;
- Prendre en compte de la norme ISO 9001 de la norme Environnementale ;
- donner les caractéristiques des voies internes de circulation sur la Zone Industrielle ;
- Décrire le réseau d'assainissement qui sera mis en place.

Par ailleurs, Mr Diby à insister sur la provenance des matières qui ont servi au bitumage et leur lieu de provenance. Dans le cas d'une sous-traitance fait mention de cela.

-Donner également les éléments qui constituent la base chantier et annexer l'accord entre l'Entreprise Arise et l'Etat de Côte d'Ivoire. A défaut, expliquer le mode d'acquisition ou annexer la lettre d'attribution.

A sa suite, Mr Kouassi souhaite également que le processus de gestion des déchets soit décrit.

Aussi souhaiterait-il que la superficie qui couvre chaque étape soit précisée et mentionné le type de contrat et le mode de recrutement. A cela s'ajoute, la prise en compte du ratio 25 hommes pour une toilette et 15 femmes pour une toilette.

La description des infrastructures sanitaires de secours en cas d'incident, d'accident et d'urgence. Il a insisté sur la description du mode d'approvisionnement des machines en hydrocarbures et l'approvisionnement en eau des ouvriers et des entreprises dans le rapport. Pour terminer, il souhaiterait que les cours d'eaux existant soient mentionnés, les situés en tenant compte du rayon d'impact, préciser son usage ou son utilité pour la population.

UNE VUE DE LA RENCONTRE AVEC LA Direction Générale de l'Environnement





	ENREGISTREMENT	ENR 01 RH
	LISTE DE PRESENCE	Version : 00 23/09/2019 Créé le 19/09/19 1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage Visite préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser) autre (préciser): Consultation publique
DATE : 30/12/2022 DEPARTEMENT : ABIDJAN LIEU : DGE HEURE DEBUT : 09H15 HEURE FIN : 10H45

2. THEME(S) ABORDE(S)

- 2.1. présentation du projet
2.2. Echanges
2.3. recueil d'avis, préoccupations, suggestions et doléances

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
<u>Kouassi Konan Mathias</u>	<u>Chf de Service</u>	<u>DGE</u>	<u>0102358826</u>	<u>mathiekouassi@dyson.fr</u>	<u>✓</u>
<u>DIBI Armand</u>	<u>C.E</u>	<u>DGE</u>	<u>0749782074</u>	<u>armanddibi@gmail.com</u>	<u>✓</u>
<u>SORO PAGAGNIGUI SEYDOU</u>	<u>C.E</u>	<u>DGE</u>	<u>0505821643</u>	<u>pagagniquisoro@gmail.com</u>	<u>✓</u>
<u>LATIO APIE CARLINE</u>	<u>Consultante Sociologue</u>	<u>Enval</u>	<u>0708335392</u>	<u>latiocarline@dyson.fr</u>	<u>✓</u>

(Veuillez joindre cette fiche au compte rendu s'il en existe)



Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	Kouassi Konan Nathana Chef de Service
Organisme rencontré	Direction Générale de l'Environnement
Date et lieu :	30/12/2022 à la DCE
Durée :	1 heure
Nom du Consultant	LATIO CARRINE
Objectif de la rencontre :	
Informations, sondage d'opinion	

Résumé des échanges

1. Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle 429 ha qui fait partie de la ZEI PK 24d' Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan

- a) Oui
- b) Non

Si oui, par quel canal ? Précisez.

2. Quelles sont les différentes missions de votre structure se rapportant au projet ?

- assurer le suivi et l'évaluation de la gestion écologiquement rationnelle des matières environnementales et de protection de la nature

3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation

- préservation de la qualité des matières environnementales
- bonne gestion des déchets produits à toutes les phases du projet.

4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?

- décrire la gestion des différents déchets
- donner le mode d'approvisionnement et des matériaux
- décrire les activités du projet et leurs impacts et proposer des mesures d'atténuation
- mettre à la disposition des travailleurs des EPI adaptés à l'activité et veiller au port de ces EPI

5. Quel est votre avis relativement au projet ?

- a) Favorable
b) Favorable sous réserve de
c) Refus

6. Raisons de cet avis :

- la prise en compte des recommandations



Projet :

Projet de construction d'une zone Economique Industrielle 429 ha qui fait partie de la ZEi PK 24 d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan

Phase : Champ d'application

Client : ARISE IVOIRE

Détails de la réunion

Acteur(s) : Chefferie village AGOUSSI 2
Localisation : Commune de SONGON
Date : 19/12/2022
ENVAL Présence : LATTO APIE CARRINE
Liste de présence : Annexe 1
Photos : Oui X Annexe 2

Copie de la liste de présence : Oui, ci-joint X
Oui

Auteur : Enval

Approbation : ROSELINE CHAMBRIER

Notes de reunion

Responsable	Sujet	Contenu	Actions / Résultats
<u>ENVAL</u>		<p>L'arrivée de l'équipe d'Enval a été ponctuée de la traditionnelle cérémonie de bienvenue prononcée par le Chef du village, en la personne Mr de Kouadja Simplicie</p> <p>A sa suite, nous avons pris la parole afin de présenter à nouveau le projet et le travail à effectuer à la suite des échanges.</p> <p>Sans commentaire aucun, il a proposé que la révision du guide se fasse ainsi que la collecte de ces données complémentaires.</p> <p>Hormis ces informations collectées des doléances ont été exprimées par la chefferie.</p> <p><u>Doléances (voire fiche procès-verbal)</u></p>	<u>Etude d'Impact Environnemental et Social</u>



**ETUDE D'IMPACT ENVIRONNEMENTAL ET SOCIAL DU PROJET DE
CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE 429ha QUI FAIT
PARTIE DE LA ZEI PK 24 D'AKOUBE-ZEUDJI DE 940 ha, DANS LE DISTRICT
AUTONOME D'ABIDJAN**

PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE

Date : 20/12/2022

Heure de début : 16h 30

Lieu de rencontre : Village Agoussi 2.

ORDRE DU JOUR :

1-Information ;

2-Préoccupations et recommandation ;

3-Avis du projet

INFORMATIONS
Projet de construction d'une zone économique Industrielle d'Abidjan
Préoccupations et recommandations <ul style="list-style-type: none">- Construction d'un château d'eau.- Construction d'un centre de santé intégré.- Besoin de tri-cycle pour ramasser les ordures- Bitumage des voies du villages et l'entrée du village- Electrification du village.- Construction d'une école primaire.- Ouverture des voies du village.- Employabilité locale de la jeunesse d'Agoussi 2- Construction d'un foyer des jeunes.
Avis sur le projet

Consultante Socio-économiste

LATTO Corinne

Chef du village

KOUADJA
Simplere

070715 30 16

UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE, QUELQUES JEUNES ET QUELQUES FEMMES DU VILLAGE D'AGOUSS 2





①
ENREGISTREMENT

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): consultation communautaire

DATE : 20/12/2019

DEPARTEMENT : Abidjan

LIEU : Village Agoussi 2

HEURE DEBUT : 15h15 HEURE FIN : 16h20

2. THEME(S) ABORDE(S)

2.1. présentation du projet

2.2. Echange, recueil d'avis, préoccupations, suggestions et doléances.

2.3. collecte de données socioéconomiques

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. IROUADJA SIMPLICE	chef du village	Agoussi 2	0707103016		<u>[Signature]</u>
2. QUATTARA NAHAMA	NOTABLE	Agoussi 2	0789105513		<u>[Signature]</u>
3. Ouedraogo Lucien	Notable	Agoussi 2	01-64-81-8033		<u>[Signature]</u>
4. Kabore François	Notable	Agoussi 2	07-63-03-7650		<u>[Signature]</u>
5. Samé Sankicé		Agoussi 2	05-56280832		<u>[Signature]</u>
6. Sanogo Melegre	Notable	Agoussi 2	05-64-84-6881		<u>[Signature]</u>
7. Sawadogo Adama		Agoussi 2	05-44-58-9021		<u>[Signature]</u>
8. Ouattara Issouf		Agoussi 2	07-6829-0142		<u>[Signature]</u>
9. Kabore Meoussa		Agoussi 2	05-64-28-22-00		<u>[Signature]</u>
10. Ouedraogo Richard	Bureau de la jeunesse	Agoussi 2	05 55 13 14 84		<u>[Signature]</u>



①
ENREGISTREMENT

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): consultation communautaire

DATE : 20/12/2019

DEPARTEMENT : Abidjan

LIEU : Village Agoussi 2

HEURE DEBUT : 15h15 HEURE FIN : 16h20

2. THEME(S) ABORDE(S)

2.1. présentation du projet

2.2. Echange, recueil d'avis, préoccupations, suggestions et doléances.

2.3. collecte de données socioéconomiques

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. ROUADJA SIMPLICE	chef du village	Agoussi 2	0707103016		<u>[Signature]</u>
2. QUATTARA NAHAMA	NOTABLE	Agoussi 2	0789105513		<u>[Signature]</u>
3. Ouedraogo Lucien	Notable	Agoussi 2	01-64-81-8033		<u>[Signature]</u>
4. Kabore François	Notable	Agoussi 2	07-63-03-7650		<u>[Signature]</u>
5. Samé Sankicé		Agoussi 2	05-56280832		<u>[Signature]</u>
6. Sanogo Melegre	Notable	Agoussi 2	05-64-84-6881		<u>[Signature]</u>
7. Sawadogo Adama		Agoussi 2	05-44-58-9021		<u>[Signature]</u>
8. Ouattara Issouf		Agoussi 2	07-6829-0142		<u>[Signature]</u>
9. Kabore Meoussa		Agoussi 2	05-64-28-22-00		<u>[Signature]</u>
10. Ouedraogo Richard	Bureau de la jeunesse	Agoussi 2	05 55 13 14 84		<u>[Signature]</u>



① ENREGISTREMENT

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): consultation communautaire

DATE : 20/12/2012

DEPARTEMENT : Abidjan

LIEU : Village Agoussi

HEURE DEBUT : 15h15 HEURE FIN : 16h20

2. THEME(S) ABORDE(S)

2.1. présentation du projet

2.2. Echange, recueil d'avis, préoccupations, suggestions et doléances.

2.3. collecte de données socioéconomiques

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. ROUADJA SIMPLICE	chef du village	Agoussi 2	0707103016		<u>[Signature]</u>
2. QUATTARA NAHAMA	NOTABLE	Agoussi 2	0789105513		<u>[Signature]</u>
3. Ouedraogo Lucien	Notable	Agoussi 2	01-64-81-8033		<u>[Signature]</u>
4. Kabore François	Notable	Agoussi 2	07-68-07-7650		<u>[Signature]</u>
5. Samé Sankicé		Agoussi 2	05-56280832		<u>[Signature]</u>
6. Sanogo Melegre	Notable	Agoussi 2	05-64-84-6881		<u>[Signature]</u>
7. Sawadogo Adama		Agoussi 2	05-44-58-9021		<u>[Signature]</u>
8. Ouattara Issouf		Agoussi 2	07-68-29-0142		<u>[Signature]</u>
9. Kabore Meoussa		Agoussi 2	05-64-28-22-00		<u>[Signature]</u>
10. Ouedraogo Richard	Bureau de la jeunesse	Agoussi 2	05 55 13 14 84		<u>[Signature]</u>



ENREGISTREMENT	ENR 01 RH	
	Version : 00	
LISTE DE PRESENCE	23/09/2019	
	Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser)
 autre (préciser): Consultation communautaire
- DATE : 20/09/2019 DEPARTEMENT : Abidjan LIEU : village Agoussi HEURE DEBUT : 15h HEURE FIN : 16h 20

2. THEME(S) ABORDE(S)

- 2.1. présentation du projet
 2.2. Echanges (recueil d'avis, négociations, suggestions et doléances)
 2.3. collecte de données socio-économiques

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. DSEBE DOMINIQUE			0596727301		+
2. SPALLMAY SAMPLOU			0506953544		Guany
3. BOLOU AHEDOU			0767594064		E
4. DOMINIQUE			0150035292		+
5. TIENE ROLOU			0544039631		+
6. LATO ADE CARINE	consultante sociologue	Envol	0708795592	latoanine@ychofi	+
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

Projet :

Projet de construction d'une zone Economique Industrielle 429 ha qui fait partie de la ZEI PK 24d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan

Phase : Champ d'application

Client : ARISE IVOIRE

Détails de la réunion

Acteur(s) : Chefferie d'ADONKOI I
Localisation : Commune d'Anyama
Date : 08/11/2022
ENVAL Présence : LATTO APIE CARRINE
Liste de présence : Annexe 1
Photos : Oui X Annexe 2

Copie de la liste de présence : Oui, ci-joint X
Oui

Auteur : Enval

Approbation : ROSELINE CHAMBRIER

Notes de reunion

Responsable	Sujet	Contenu	Actions / Résultats
<u>ENVAL</u>		<p>L'arrivée de l'équipe a été ponctuée de la traditionnelle cérémonie de bienvenue prononcée par le Secrétaire du Chef du village, en la personne Mr de OBE DAFFOU JOSURI</p> <p>A sa suite, nous avons pris la parole afin de présenter à nouveau le projet et le travail à effectuer à la suite des échanges.</p> <p>Sans commentaire aucun, il a proposé que la révision du guide se fasse ainsi que la collecte de ces données complémentaires.</p> <p>Hormis ces informations collectées des doléances ont été exprimées par la chefferie.</p> <p><u>Doléances (voire fiche procès-verbal)</u></p>	<u>Etude d'Impact Environnemental et Social</u>



**UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE ET LA REPRESENTANTE DES FEMMES
DU VILLAGE D'ADONKOI !**



**ETUDE D'IMPACT ENVIRONNEMENTAL ET SOCIAL DU PROJET DE
CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE 429ha QUI FAIT
PARTIE DE LA ZEI PK 24 D'AKOUCPE-ZEUDJI DE 940 ha, DANS LE DISTRICT
AUTONOME D'ABIDJAN**

PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE

Date : 08/11/2022

Heure de début : 13h 15

Lieu de rencontre : Village d'Adonkoï 1.

ORDRE DU JOUR :

1-Information ;

2-Préoccupations et recommandation ;

3-Avis du projet

INFORMATIONS
Projet de construction d'une zone économique industrielle d'Abidjan
Préoccupations et recommandations <u>Délégués</u> <ul style="list-style-type: none">- Construction d'un centre de santé.- Construction d'une école maternelle.- Construction d'une cantine scolaire.- Construction d'un centre culturel.- Construction d'un marché- Construction de la clôture de l'école primaire.
Avis sur le projet Favorable au projet

Consultante Socio-économiste

LATIO

Chef du village





ENREGISTREMENT

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser)
 autre (préciser): *consultation communautaire*

DATE : *01/11/2022* DEPARTEMENT : *BOUYA* LIEU : *Village Adonjo I* HEURE DEBUT : *13h15* HEURE FIN : *13h35*

2. THEME(S) ABORDE(S)

- 2.1 *Présentation du projet*
 2.2 *Echanges/recueil d'avis, préoccupations, suggestions et recommandation*
 2.3 *Collecte de données socioéconomiques*

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. JAPI GBESSO ISAAE	Chf Principale	Chefferie	0747488088	japiisaacs3@gmail.com	<i>[Signature]</i>
2. AGBO JEAN-BAPTISTE	Notable	Chefferie	0747488088		<i>[Signature]</i>
3. AKOSSI NIANDO JOSIAS	Notable	Chefferie	0707807856	niandoja6@gmail.com	<i>[Signature]</i>
4. JAPI ABIKO DANACE	Rep Foncier	Chefferie	0707824187	etsyapi@gmail.com	<i>[Signature]</i>
5. OBE BAFLOU SOUREI	S.C. Chefferie	Chefferie	079975363		<i>[Signature]</i>
6. AGBO Jean-Baptiste	Notable 1	Chefferie	0707870061		<i>[Signature]</i>
7. KOUASSI AMAN	ATTINGUIE	Chefferie	0749112492		<i>[Signature]</i>
8. AISEU OGO JEAN	Route Carrière	Chefferie	0788732865		<i>[Signature]</i>
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

Projet :

Projet de construction d'une zone Economique Industrielle 429 ha qui fait partie de la ZEi PK 24 d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan

Phase : Champ d'application

Client : ARISE IVOIRE

Détails de la réunion

Acteur(s) : Chefferie villageV2 Palmafrique
Localisation : Commune de SONGON
Date : 09/11/2022
ENVAL Présence : LATTO APIE CARRINE
Liste de présence : Annexe 1
Photos : Oui X Annexe 2

Copie de la liste de présence : Oui, ci-joint X
Oui

Auteur : Enval

Approbation : ROSELINE CHAMBRIER

Notes de reunion

Responsable	Sujet	Contenu	Actions / Résultats
<u>ENVAL</u>		<p>L'arrivée de l'équipe a été ponctuée de la traditionnelle cérémonie de bienvenue prononcée par le Secrétaire du Chef du village, en la personne Mr de GBIZI SOKOURY</p> <p>A sa suite, nous avons pris la parole afin de présenter à nouveau le projet et le travail à effectuer à la suite des échanges.</p> <p>Sans commentaire aucun, il a proposé que la révision du guide se fasse ainsi que la collecte de ces données complémentaires.</p> <p>Hormis ces informations collectées des doléances ont été exprimées par la chefferie.</p> <p><u>Doléances (voire fiche procès-verbal)</u></p>	<u>Etude d'Impact Environnemental et Social</u>



UNE VUE DE LA RENCONTRE AVEC LA CHEFFERIE ET QUELQUES JEUNES DU VILLAGE DE V2 PALMAFRIQUE



ETUDE D'IMPACT ENVIRONNEMENTAL ET SOCIAL DU PROJET DE
CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE 429ha QUI FAIT
PARTIE DE LA ZEI PK 24 D'AKOUBE-ZEUDJI DE 940 ha, DANS LE DISTRICT
AUTONOME D'ABIDJAN

PROCES VERBAL DE CONSULTATION COMMUNAUTAIRE

Date : 09/11/2022.

Heure de début :

Lieu de rencontre : Village palmafricain 2.

ORDRE DU JOUR :

1-Information ;

2-Préoccupations et recommandation ;

3-Avis du projet

INFORMATIONS
Projet de construction d'une zone économique industrielle d'Abidjan
Préoccupations et recommandations
<u>Déclançes</u>
- Employabilité locale de la jeunesse
- Construction d'un centre de santé intégré au niveau du village de V2 palmafricain
- Ouverture de voie reliant le village V2 palmafricain à N'Botré.
- Besoin d'un château d'eau.
- Construction d'un poste de police ou d'une gendarmerie au niveau de la zone industrielle pour des questions de sécurité de la population et des travailleurs.
- Electrification du village.
Avis sur le projet :
Favorable au projet.

Consultante Socio-économiste

LATO

Chef du village

09.11.2022.

	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser)
 autre (préciser): Consultation Communautaire
- DATE : 03/14/2022 DEPARTEMENT : ABIDJAN LIEU: Village V2 Plateforme HEURE DEBUT: 14h 28 HEURE FIN : 15h 00

2. THEME(S) ABORDE(S)

- 2.1 présentation du projet
 2.2 Echange de recueil d'avis, préoccupations, suggestions et recommandations
 2.3 collecte de données socioéconomiques

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>Koukou Kouon</u>	<u>chef de village</u>	<u>Plateforme V2</u>	<u>093092526</u>		<u>[Signature]</u>
2. <u>Gloria' Soubry Hwa</u>	<u>secrétaire c.v</u>	<u>V2</u>	<u>0758539038</u>	<u>henklegizic77@gmail.com</u>	<u>[Signature]</u>
3. <u>Komon. Kaman Marcelin</u>	<u>animateur (jeunes)</u>	<u>plateforme V2</u>	<u>01-41-15170</u>		<u>[Signature]</u>
4. <u>NAOUNOU GOTO' Claver</u>	<u>animateur (jeunes)</u>	<u>" "</u>	<u>0769008556</u>		<u>[Signature]</u>
5. <u>IBO Toualy Stéphane</u>	<u>animateur (jeunes)</u>	<u>" "</u>	<u>0586379325</u>		<u>[Signature]</u>
6.					
7.					
8.					
9.					
10.					

Projet de construction d'une Zone Économique Industrielle 429

Qui fait partie de la ZEI PK24 d'Akoupé-Zeudji 940ha, dans le District Autonome d'Abidjan.

Compte rendu de la rencontre avec la Direction Générale de l'Office Ivoirien du Patrimoine Culturel (OIPC)

L'An deux mil Vingt-deux, le Jeudi 22 Décembre de 10H 30 à 11H 27 minutes, a eu lieu dans le bureau du Directeur Général de l'O.I.P.C. une rencontre dans le cadre de l'Etude d'Impact Environnemental et Social (EIES) du Projet de construction d'une zone Economique Industrielle 429 ha qui fait partie de la ZEI PK24 d'Akoupé-Zeudji 940ha, dans le District Autonome d'Abidjan.

Le but de cette rencontre était d'imprégner Arise Ivoire, absente lors de notre première séance de travail, des recommandations faites par OIPC, lesquelles suggéraient la prise en compte de prospections et sondages dans le volet archéologique des investigations qui devront avoir lieu pendant de l'EIES.

Les points de l'ordre du jour étaient les suivants :

- Faire un rappel des recommandations précédentes et;
- Donner les fondements de ces recommandations et des conseils d'usage.

Dans le rôle de modérateur, M. Kra Hilaire Kwassi de l'OIPC s'est acquis nos nouvelles avant d'entrer dans le vif du sujet.

A la suite de monsieur Kra, Mlle Latto Carrine est intervenue en procédant d'abord à la présentation de l'équipe venue rencontrer la direction générale de l'OIPC, puis le projet lui-même ainsi que l'objet de la présence de ladite équipe.

Ensuite, avant le rappel proprement dit des recommandations, la représentante de l'Entreprise Arise, dame Caryle Boli a cherché à savoir si les recommandations prennent en compte tous les villages environnants ou allusion est faite seulement aux différents sites à leur possession. A cette préoccupation, Dr Aliman en tant qu'initiateur desdites recommandations est intervenu pour faire le rappel.

Dr Aliman a fait son rappel sur la base d'un argumentaire historique. Ainsi, a-t-il expliqué que selon certains travaux historiques (Allou Kouamé et autre), la grande partie de la zone (sites devant accueillir le projet et les localités environnantes) a connu plusieurs occupations. Donc, sur cette base, la zone est susceptible d'abriter un certain nombre de vestiges

archéologiques des peuples qui y ont transité. De plus, les études archéologiques des localités impactées par le projet sont insuffisantes, selon la littérature à sa disposition. C'est pourquoi, dira-t-il, il a suggéré lors de la première séance de travail avec Enval, que dans le cadre des investigations sur le patrimoine, il est nécessaire de mener des traditions orales dans les localités, ainsi que des prospections et sondages archéologiques sur les sites pour ne pas perdre d'éventuelles données archéologiques utiles pour le patrimoine ivoirien.

Après ce rappel des recommandations, la représentante d'Arise a révélé que lors de l'EIES pour le compte de la section 2 du projet de la Y4 l'étude sur le patrimoine archéologique ont établi l'inexistence de patrimoine culturel et archéologique au niveau de la Zone qui leur est attribué maintenant. C'est pourquoi, Arise souhaite ne pas faire des études dans ce sens et propose de faire éventuellement des études supplémentaires dans le cas où la phase de construction les travaux révélaient des vestiges, qui est l'application de la « norme 8 » de la SFI sur la protection du patrimoine culturel. Il convient de noter que ces résultats dont parle la représentante ont été obtenus à partir de sources orales (traditions orales de la population de la zone du projet).

Après plusieurs discussions, Monsieur le Directeur Général Dr Aka Konin est intervenu alors pour nous donner les fondements des recommandations. Il nous a fait savoir que la Côte d'Ivoire dispose d'une nouvelle loi qui exige que pour tout projet d'utilité publique ou privée une étude d'archéologie préventive soit désormais initiée.

Après son intervention, Mme N'Guessan, Directrice de la planification a renchérit sur l'importance de l'archéologie préventive de sorte à ce que les vestiges existants ne soient plus détruits lors des travaux d'aménagement. Aussi a-t-elle souligné que le Ministère n'est pas associé dans bon nombre de projets de grande envergure, ce qui est aujourd'hui à la base de la destruction de certains vestiges archéologiques. Elle souhaiterait donc qu'Arise prenne en contact les exigences de la loi sur l'archéologie préventive.

Dr Aliman a terminé son propos sur le fait que la tradition orale n'est pas toujours à mesure d'affirmer ou d'infirmer le contenu des sites à aménager. Il a par ailleurs conseillé le promoteur Arise et le Cabinet Enval se mettent ensemble pour obtenir une copie du rapport de l'étude effectuée pour le projet de la Y4 afin de se servir des résultats archéologiques pour d'autres recommandations ultérieures. Pour lui, à défaut d'obtenir ce rapport antérieur une étude archéologique dans le sens préventif devrait être réalisée avant le début des activités d'Arise.



UNE VUE DE LA RENCONTRE AVEC LA Direction Générale de l'OIPC



	ENREGISTREMENT	ENR 01 RH	
	LISTE DE PRESENCE	Version : 00	
		23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
- Audit (Interne ou externe à préciser)
 autre (préciser): Rencontre avec la Direction Générale de l'OSPC
- DATE : 22/12/2022 DEPARTEMENT : ABIDJAN LIEU : OIPC HEURE DEBUT : 10h30 HEURE FIN : 12h27

2. THEME(S) ABORDE(S)

- 2.1. Rappel du projet.
- 2.2. Echanges
- 2.3. Recommandation

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. DR AKA KALIN	DG	OIPC	0777916143 0102297295	kalin_aka@yaho.com	
2. KRA HILAIRE KWASSY	Dir Con	OIPC	0709799080	krakilaire@gmail.com	
3. Mme NGUESSAN Philémène	Directrice Planif.	DPSEP/OIPC	0707036690	anguessan995@gmail.com	
4. ALIHAN Fabrice	CSCRA	OIPC	0749953339	f.alihan@yahoo.fr	
5. DR TAMM EBOE GUIÉ	DPSEP	OIPC	0748713111	monique.eboe@yaho.fr	
6. BOLA Caroly	Manag. Négoce	ARISE	0595000008	carolybola@arise.net	
7. DR YAO NANCY	Chercheuse	ENVAL	070827-6585	kyamman@gmail.com	
8. LATO APIE CAROLINE	consultante société	ENVAL	0199-39-532	latoapien@yahoo.fr	
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)



Projet de construction d'une Zone Économique Industrielle 429

Qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan.

Compte rendu de la rencontre avec la Direction Générale l'Office Ivoirien du Patrimoine Culturel (OIPC)

L'An deux mil Vingt-deux, le Vendredi 02 Décembre de 10H 11 à 10H55 minutes, a eu lieu dans le bureau du Directeur Général de ladite structure une rencontre dans le cadre de l'Etude d'Impact Environnemental et Social du Projet de construction d'une zone Economique Industrielle 429 qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan. A l'aide d'un Powerpoint, la représentante du cabinet en la personne de Latta carrine en compagnie de Dr Yao Narcisse, expert en patrimoine culturel ont présenté le projet.

L'objectif de cette rencontre était de :

1. Présenter le projet ;
2. Echanger sur le projet et son environnement.
3. Recueil d'avis, préoccupations, suggestions et recommandation

D'entrée, Dr ; Aliman Fabrice a salué l'initiative démontrant la prise en compte du volet culturel. Il a par la suite mentionné le fait que cette zone est susceptible d'être une zone archéologique. Car historiquement, cette zone est assez capitale dans la vie des peuples qui ont transité. Cette zone selon le Professeur Allou Eugène est appelée « Molière Gôh » à cause de son caractère historique en termes de peuplement.

Par conséquent, le volet culturel de cette étude mérite d'être approfondi.

Il souhaiterait donc que des sondages d'archéologie préventive soient réalisés.

A ce niveau, Mme Mouso Assalé Veronique, souhaiterait que le cabinet prenne attache avec le ministère suite à la découverte des vestiges pour que leur conservation soient effectives.



UNE VUE DE LA RENCONTRE AVEC LA Direction Générale de l'OIPC

Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	ALIMATI Fabrice chef de service
Organisme rencontré	OIPC
Date et lieu :	2/12/22 siège OIPC 7 ^e Tchoukè
Durée :	
Nom du Consultant	

Objectif de la rencontre

Informations, sondage d'opinion

Résumé des échanges

1. Avez-vous déjà connaissance du projet de construction d'une zone économique Industrielle près d'Abidjan, PK 24-Abidjan, Côte d'Ivoire

a) Oui

b) Non

Si oui, par quel canal ? Précisez.

2. Quelles sont les différentes missions de votre structure se rapportant au projet ?

INventaire du patrimoine culturel
les sites, les forêts sacrées, les pratiques sociales
et les monuments

3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation -

préservation des vestiges
Faire des sondages archéologiques vu l'intérêt
historique en termes de peuplement de la CE

4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?

obligation de faire un sondage ou
une archéologie préventive de la zone
du projet.

5. Quel est votre avis relativement au projet ?

- a) Favorable
b) Favorable sous réserve de
c) Refus

6. Raisons de cet avis :

Le projet permettra d'être moins
dépendant de l'extérieur et de faire
la promotion de produits locaux et
surtout de valoriser nos savoir-faire
ds

Signature et cachet





	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....(préciser le nom de l'entreprise)
- Audit (interne ou externe à préciser)
 autre (préciser): consultation publique
- DATE : 02/09/2019 DEPARTEMENT : ABIDJAN LIEU : OIPC HEURE DEBUT : 10h 15 HEURE FIN : 10h 55

2. THEME(S) ABORDE(S)

- 2.1 présentation du projet
- 2.2 Echanges
- 2.3 recueil d'avis, de préoccupations, de suggestions et de recommandations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. DR AKA KONIN	DG OIPC	OIPC	077797442 01 01247699	konin_aka@yahoo.com	
2. Mme ROUSSEAU ASSALE VERONIQUE DMC		OIPC	0505998892	assalveron@yahoo.fr	
3. M. PLINDAN Fabrice	CSCRA	OIPC	0749953338	fabriceplindan@yahoo.fr	
4. Dr Yao Narcisse	chercheur	ENVAL	0708974905	kyponarcisse@gmail.com	
5. LATTO ARIE CARINE	consultant société	ENVAL	07-28-395392	lattoariem@orange.cm	
6.					
7.					
8.					
9.					
10.					



(Veuillez joindre cette fiche au compte rendu s'il en existe)



**FICHE THEMATIQUE DE COLLECTE DE DONNEES SUR LES ASPECTS SOCIOECONOMIQUES PAR WAYPOINT –
PROJET DE CONSTRUCTION D'UNE ZONE ÉCONOMIQUE INDUSTRIELLE (ZEI) DE 429 HA QUI FAIT PARTIE DE LA
ZEI PK24 D'AKOUBE-ZEUDJI DE 940 HA, DANS LE DISTRICT AUTONOME D'ABIDJAN, CÔTE D'IVOIRE**

Nom de l'Industrie	Description de l'activité ou secteur	Occupant le site du Projet / Entourant le site du Projet	Coordonnées	Photo
MIPA	Fabrication de casier	Entourant le site du projet	Latitude :5 ;25 ;51.7518 Longitude :4 ;9 ;50.2816	
Q10	Production d'aliments de volaille	Entourant le site du projet	Latitude :5 ;25 ;58.9376 Longitude :4 ;9 ;50.1373	


Habitation	Dortoir	Entourant le site du projet	Latitude :5 ;25 ;57.22 Longitude :4 ;9 ;56.6211	
Garage	Reparation de véhicules	Entourant le site du projet	Latitude :5 ;25 ;56.74772 Longitude :4 ;9 ;598603	

FER IVOIRE SARLU	Constructeur, importateur et exportateur d'Acier	Entourant le site du projet	Latitude : 5 ;25 ;54.4366 Longitude :4 ;10 ;4.7646	
Entrepôt	Exposition de produits finis de l'acier	Entourant le site du projet	Latitude :5 ;25 ;54.4366 Longitude :4 ;10 ;4.7646	

<p>Poste CI-Energies</p>	<p>Source d'alimentation en électricité</p>	<p>Entourant le site du projet</p>	<p>Latitude :5 ;25 ;52.1294 Longitude :4 ;10 ;8.8399</p>	
<p>SCCI 2(Société de Ciment)</p>	<p>Production de ciment</p>	<p>Entourant le site du projet</p>	<p>Latitude :5 ;25 ;11.5144 Longitude :4 ;2 ;44.8871</p>	

Guépard CI	Production de ciment	Entourant le site du projet	Latitude : 5 ;25 ;38.7125 Longitude : 4 ;8 ;38.1049	
Société chinoise	Fabrication de fer	Entourant le site du projet	Latitude :5 ;25 ;58.5187 Longitude :4 ;9 ;25.8559	

KEI SPIROLL Precast production	En chantier	Entourant le site du projet	Latitude :5 ;26 ;8.1713 Longitude :4 ;8 ;56.6082	
Inconnu	En chantier	Entourant le site du projet	Latitude :5 ;26 ;16.5884 Longitude :4 ;8 ;57.7687	

Inconnu	En chantier	Entourant le site du projet	Latitude :5 ;26 ;2.4428 Longitude :4 ;8 ;58.0913	

Principe de la consultation publique

La participation du public se situe dans le cadre réglementaire du décret n°96-894 du 8 novembre 1996, déterminant les règles et procédures applicables aux études relatives à l'impact environnemental des projets de développement. Elle comprend principalement deux phases et des actions préalables. Au niveau des actions préalables, on distingue les séances de travail avec les personnes ressources d'une part et les réunions d'information des Autorités Administratives et Coutumières d'autre part.

Le présent Constat d'Impact Environnemental et Social (EIES), a été réalisé sur la base de cette approche méthodologique participative qui s'est appuyée sur la consultation et la concertation avec les acteurs sociaux directement concernés par la réalisation du projet. A cet effet, des réunions de lancement de l'étude en vue de l'information des parties prenantes se sont tenues les 22 et 25 Novembre 2022. Elles ont permis de présenter à toutes les personnes directement impliquées dans la réalisation effective de ce projet (autorités et structures techniques de l'administration, populations riveraines et autres opérateurs économiques), la nécessité de la prise en compte de l'environnement naturel et humain dans sa conception, sa réalisation et son exploitation. Aussi, ces séances visaient-elles, le recueil des aspirations de ces populations vis-à-vis du projet.

Par ailleurs, des courriers d'informations ont été adressés aux autorités administratives, préfectorales et communales du démarrage effectif de l'Etude d'Impact Environnemental et Social (EIES) du projet et de solliciter leur collaboration pour une bonne participation à l'enquête socio-économique des populations cibles (enquête socio-économique, consultations sous forme de focus group des populations cibles).

0.1. Objectifs des consultations publiques

De façon générale, les consultations des parties prenantes visent à assurer la participation et l'engagement des populations impliquées dans le projet de manière à favoriser la prise en compte de leurs avis, attentes, préoccupations et recommandations dans la phase de la préparation, de la mise en œuvre et de suivi. Dans ce projet, il s'agit spécifiquement de :

- Informer officiellement la population et présenter le projet de façon générale ;

- créer un cadre d'échange avec les populations potentiellement impactées et susceptible d'être affectées ;
- recueillir les avis, les préoccupations et les suggestions des populations concernées afin de collecter des données.

Dans le cadre de cette étude, l'équipe du cabinet ENVAL a rencontré les personnes ressources susceptibles d'interférer dans le projet. Ce sont :

- les Autorités préfectorales (Préfet et Sous-préfets) ;
- l'autorité municipale (Maire) ;
- les responsables des services et structures techniques des Ministères ;
- les communautés locales

0.2. Approche de la Société en matière d'engagement des parties prenantes

Les programmes d'engagement des parties prenantes de ARISE identifient les principales préoccupations et attentes de celles-ci tout en mettant en place une stratégie pour entrer en dialogue et communiquer avec elles.

0.3. Plan d'engagement des parties prenantes

C'est le processus mis en place dans le but de s'assurer que la consultation et la participation averties aient eu lieu et que les points de vue, les préoccupations et les intérêts des parties prenantes sont pris en compte dans l'évaluation du projet. La participation des parties prenantes doit directement éclairer la prise de décisions, en particulier en ce qui concerne le modèle de prévention des impacts et la conception des mesures d'atténuation. L'engagement des parties prenantes à travers le processus de l'EIES vise à améliorer la relation entre le promoteur et les collectivités environnantes, à développer l'appui aux communautés pour le projet et à éviter toute surprise durant les consultations formelles des communautés au cours du processus de l'EIES.

0.3.1. Approche méthodologique de la participation des parties prenantes

L'approche méthodologique de conduite du volet participation des parties prenantes de l'étude comprend les principales phases suivantes :

0.3.1.1. Informations préalables des autorités administratives (prise de contact)

Elle se déroule avant le démarrage effectif des missions d'investigations sur le terrain. Elle a pour but d'informer les autorités administratives et traditionnelles (Services de

l'Administration Publiques ou Chefs de services déconcentrés de l'Etat, personnes affectées de la zone du projet) à la préfecture d'Abidjan, à la Sous-Préfecture d'Anyama du projet sur l'objet de la mission, de présenter la méthodologie de travail, et d'adopter un chronogramme consensuel de déroulement des activités de l'étude (réunions publiques d'information, consultation restreinte, investigations de terrain, collecte des données biophysiques et socio-économiques, etc.). Ainsi, en dehors des rencontres organisées par l'équipe du Cabinet ENVAL et les autorités administratives, des appels téléphones ont été faits, des courriers ont été envoyés via l'internet ou déposés physiquement. Ci-dessous la liste des parties prenantes identifiées à qui des courriers ont été déposés. Le chronogramme des dépôts des différents courriers en vue des rencontres est présenté dans le tableau ci-dessous.

Tableau 01 : Liste des prenantes contactées par voie de courrier

Tableau 1 : Liste des prenantes contactées par voie de courrier

Localité	Structures	Jour et Date de dépôt	Contacts structures
Abidjan	Préfecture d'Abidjan	24/10/2022	07 09 36 44 84
Abidjan	Sous-Préfecture d'Anyama	24/10/2022	07 48 85 94 41
Abidjan	Sous-Préfecture de Songon	24/10/2022	07 07 81 13 40
Abidjan	Ministère de la Construction du Logement et de l'Urbanisme Secteur de Songon	02/11/2022	0505976702
Abidjan	Ministère de la Construction du Logement et de l'Urbanisme Secteur d'Anyama	24/10/2022	07 09 80 91 34
Abidjan	Direction Départementale de l'Agriculture et du Développement	24/10/2022	0747439660

	Rural Secteur de Songon		
Abidjan	Direction Départementale de l'Agriculture et du Développement Rural Secteur d'Anyama	24/10/2022	0709809134
Abidjan	Cantonnement des Eaux et Forêts poste de Songon	28/10/2022	0140871804
Abidjan	Cantonnement des Eaux et Forêts poste d'Anyama	24/10/2022	0709597901
Abidjan	TRCI	02/11/2022	07 07 22 09 39
Abidjan	PALMAFRIQUE	02/11/2022	0707122323
Abidjan	Abadjin-Kouté	02/11/2022	05 55 47 06 06 25 24 00 34 53
Abidjan	Village V2 Palmafrique	02/11/2022	07 97 92 82 67
Abidjan	Adonkoi I	02/11/2022	05 65 03 90 68
Abidjan	Allokoi	24/10/2022	05 65 03 90 68
Abidjan	Akoupé-Zeudji	02/11/2022	0708403955
Abidjan	Attinguié	02/11/2022	0747055059

Les courriers envoyés sont en annexe du présent rapport

0.3.1.2. Identification et analyse des parties prenantes

Une base de données a été élaborée pour référencer les parties prenantes (les autorités)

Tableau 02 : Recapitulatif des rencontres effectuées

Acteurs			
Mr ZIAGO GOGBE			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
Ministère de la Construction du Logement et de l'Urbanisme secteur Anyama			
Les Impacts du projet	Transformation locale des matières premières	En phase de construction ; le plan d'occupation du sol et en phase d'exploitation ; la gestion des déchets.	-La construction des édifices doit respecter les normes. -Traiter les déchets avec beaucoup de professionnalisme. -Les populations doivent bénéficier d'équipement tels que les écoles ; les centres de santé urbains.
Avis relativement au projet	Favorable parce que le projet pourra aider à la transformation sur place des matières premières, la création d'emplois, l'amélioration du pouvoir d'achat dans notre zone et permettra de lutter contre la pauvreté grandissante.		

Acteurs			
TEBY CHEPO DELPHINE EPOUSE SEH			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
Ministère de l'Agriculture et du Développement Durable secteur Anyama			
Les impacts du projet	-Transformation locale des matières premières	Le non-respect des engagements vis-à-vis de la population.	Respecter les normes au niveau de l'installation des

	-Création d'emplois		différentes entreprises sur le site en fonction des activités (regrouper les entreprises exerçant les mêmes activités).
Avis relativement au projet	Favorable parce que le projet favorisera le développement économique du pays qui permettra de réduire le taux de chômage et la consommation locale.		.

Acteurs			
KOUROUMA KARIM			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
Ministère des Eaux et Forêts secteur Anyama			
Les impacts du projet	-Transformation locale des matières premières -Création d'emplois	-La dégradation du couvert forestier -La contamination des cours d'eaux et de la nappe phréatique.	-Faire un reboisement compensatoire -Le traitement des Eaux usées avant rejet. -Prendre attache avec le service forestier. .
Avis relativement au projet	Avis favorable sous réserve de la prise en compte des recommandations suscitées.		

Acteurs			
Mme AGOUSSI NEE KONAN AMOIN MARCELLINE			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
Ministère de la Construction du Logement et de l'Urbanisme secteur Songon.			
Les impacts du projet	-Transformation locale des matières premières -Création d'emplois	La gestion des eaux usées	-Prévoir une répartition des entreprises en fonction des activités (regrouper les entreprises exerçant les mêmes activités).
Avis relativement au projet	- Avis favorable sous réserve de la prise en compte des différents		

	éléments susmentionnés.		-Prévoir des équipements d'assainissement.
--	-------------------------	--	--

Acteurs			
KOUADIO FODIO			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
Ministère de l'Agriculture et du Développement Durable secteur de Songon			
Les impacts du projet	-Transformation locale des matières premières -Création d'emplois	Respect des engagements vis-à-vis de la population	-Respect de l'Environnement -Respect des droits des exploitants agricoles (indemnisation).
Avis relativement au projet	Favorable car le projet est une pièce indispensable au développement du Département.		

Acteurs			
KEY ROLLAND			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
Collège Privé Alliance d'Anyama			
Impacts du projet			Installation d'un panneau solaire si l'étude est prolongée.
Avis relativement au projet	Favorable au projet		

Acteurs			
Allangba née Brou Reine			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
Chambre du commerce et de l'industrie de Côte d'Ivoire			
Impacts du projet		-Gestion de la poussière ; -Gestion de bruit et des Eaux usées	-Trouver une structure pour la gestion des eaux usées ; -Trouver les moyens de la canalisation du bruit ; -Prendre en compte le genre dans l'exécution du projet
Avis relativement au projet	Avis favorable sous réserve, prendre en compte les recommandations formulées		

Acteurs			
Manouan Etienne			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
Direction Générale des Ressources en Eau			
Les impacts du projet		Les prélèvements d'eau et la gestion des eaux usées et l'ensemble des effluents	Se rapprocher de la Direction Générale des Ressources en Eau pour tout prélèvement d'eau. Obtenir une autorisation du Ministère des Eaux et Forêts pour tout prélèvement de la ressource en Eau.
Avis relativement au projet	Avis favorable sous réserve de la validation du rapport de l'Etude d'Impact Environnementale et Sociale à l'ANDE		

Acteurs			
Lago Hervé			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
Chambre de commerce et d'Industrie			
Les impacts du projet			
Avis relativement au projet	Avis favorable sous réserve Coût d'accès des installations	Economie détaillée dans l'intervention fiscale applicable et coût d'accès	Nous vous revenons

Acteurs			
AKA CHARLES			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
Centre de Recherche Océanologique			
Les impacts du projet		-La difficulté au niveau de la gestion autonome des déchets -Les rejets de poussières	Je souhaiterais un mode de gestion collectif pour garantir un seuil minimal de pollution
Avis relativement au projet	Favorable sous réserve D'une gestion collective des déchets et effluents.		

Acteurs			
Beugré née Djedje Edwige			
POINTS DISCUTES	AVANTAGES	PREOCCUPATIONS ET CRAINTES	SUGGESTIONS RECOMMANDATIONS ET ATTENTES
Agence Nationale de Gestion des Déchets			
Les impacts du projet	Le projet contribue inéluctablement au développement du District Autonome d'Abidjan	Quels sont les types de déchets qui seront produits ;	-Prendre contact avec l'ANAGED pour déposer la réglementation en matière de la gestion

Avis relativement au projet	Avis favorable	-	des déchets solides. - Disposer des informations pour la mise en place d'un plan de gestion des déchets solides (prestataire collecte etc.) Prendre en compte la collecte, le transport et l'élimination des déchets à toutes les phases du projet ; -Prévoir les mesures contre toutes sortes de nuisances.
-----------------------------	----------------	---	---

0.3.1.3-Séances de consultations individuelles avec les différentes structures.

Il s'agit des séances de consultation individuelle qui se sont tenues. A cet effet, trois (3) points suivants étaient à l'ordre du jour :

1. Niveau de connaissance du projet.
2. Les différentes missions dans le projet.
3. Préoccupations et recommandations et avis

Elles ont permis à ces différentes parties prenantes d'exposer leurs perceptions du projet mais surtout de faire des recommandations.

Nous avons utilisé un guide d'entretien pendant nos investigations.

Les différents points abordés sont présentés dans le tableau 2.

Quant à Direction de TRCI et de Palmafrique il était question d'un contre temps et d'indisponibilité.

Des photos de consultations individuelles sont présentées dans la planche 1.

Vue des consultations individuelles planche 1



Séance d'échanges avec le Chef Secteur du Ministère de la Construction du logement et de l'Urbanisme d'Anyama



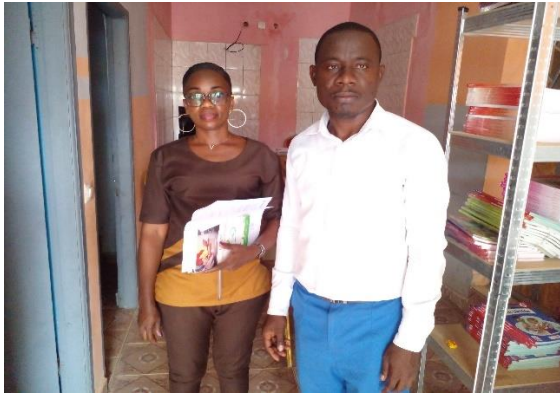
Section d'échange avec le Chef Secteur du Ministère de l'Agriculture et du Développement Durable d'Anyama



Rencontre avec le cantonnement des Eaux et Forêts d'Anyama



Entrevue avec le Chef Secteur du Ministère de l'Agriculture et du Développement Durable de Songon



Rencontre avec le Directeur du Collège Privé Alliance d'Anyama



Séance d'échanges avec le Chef Secteur du Ministère de la Construction du logement et de l'Urbanisme de Songon

[Enquêtes socio-économiques, ENVAL, Novembre 2022](#)



Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	Mme A. Gbessi née Konan Amoin Narcelline
Organisme rencontré	M.C.U (Ministère de Construction et de Urbanisme)
Date et lieu :	14.11.22
Durée :	27 min
Nom du Consultant	LATOPIE CARRINE
Objectif de la rencontre	
Informations, sondage d'opinion	

Résumé des échanges

1. Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle 429 ha qui fait partie de la ZEI PK 24d'Akoupe-Zeudji de 940ha, dans le District Autonome d'Abidjan

- a) Oui
- b) Non

Si oui, par quel canal ? Précisez.

Le cabinet Enval

2. Quelles sont les différentes missions de votre structure se rapportant au projet ?

- Le titre de propriété

3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation

- Gestion des eaux usées.

4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?

- Prévoir un état des lieux du site.
- Prévoir les équipements d'assainissement.



5. Quel est votre avis relativement au projet ?

- a) Favorable
b) Favorable sous réserve de
c) Refus

6. Raisons de cet avis :

Favorable sous réserve de la prise en compte des différents éléments susmentionnés.

Signature et cachet



[Handwritten signature]

Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	KOUROUMA KARIM Chef de Cantonnement Adjoint
Organisme rencontré	Ministère des Eaux & Forêts ANYAMA
Date et lieu :	07/11/2022 ANYAMA.
Durée :	30 min
Nom du Consultant	LATOPIE CARLINE
Objectif de la rencontre	
Informations, sondage d'opinion	

Résumé des échanges	
<p>1. Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle 429 ha qui fait partie de la ZEI PK 24d' Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan</p> <p>a) Oui <input checked="" type="checkbox"/></p> <p>b) Non <input type="checkbox"/></p> <p>Si oui, par quel canal ? Précisez.</p> <p>Cabinet EnVal</p>	
<p>2. Quelles sont les différentes missions de votre structure se rapportant au projet ?</p> <p>La protection du Couvent forestier et des cours d'eau.</p>	
<p>3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation</p> <p>La dégradation du couvent forestier, la contamination des cours d'eau et de la nappe phréatique.</p>	
<p>4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?</p> <p>- Un reboisement compensatoire - le traitement des Eaux usées avant Rejet (prendre attache avec le service forestier)</p>	

5. Quel est votre avis relativement au projet ?

- a) Favorable
b) Favorable sous réserve de
c) Refus

6. Raisons de cet avis :

Favorable sous réserve de la prise en compte des
différents éléments susmentionnés.

Signature et cachet



Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	Mme A. Gouzi née Konan Amoin Marcelline
Organisme rencontré	M.C.U (Ministère de Construction et de Urbanisme)
Date et lieu :	14. 11. 22
Durée :	27 min
Nom du Consultant	LATIOPIE CARRINE
Objectif de la rencontre	
Informations, sondage d'opinion	

Résumé des échanges

1. Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle 429 ha qui fait partie de la ZEI PK 24d' Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan
- a) Oui
- b) Non

Si oui, par quel canal ? Précisez.

Le cabinet Enval

2. Quelles sont les différentes missions de votre structure se rapportant au projet ?

- Le titre de propriété

3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation

- Gestion des eaux usées.

4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?

- Prévoir un état des lieux du site.

- Prévoir les équipements d'assainissement.

5. Quel est votre avis relativement au projet ?

- a) Favorable
- b) Favorable sous réserve de
- c) Refus

6. Raisons de cet avis :

C'est un projet de développement

Signature et cachet



Fodjo

FODJO FODJO
Ingénieur des Techniques
d'Agronomie

Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	Kouadio Fodjo Chef Secteur
Organisme rencontré	Ministère d'Etat, Ministère de l'Agriculture et du Développement Rural
Date et lieu :	07/11/2022 à SOUOGO
Durée :	20 min
Nom du Consultant	LATTO APTE CARINE
Objectif de la rencontre	
Informations, sondage d'opinion	

Résumé des échanges
1. Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle 429 ha qui fait partie de la ZEI PK 24d' Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan
a) Oui <input type="checkbox"/>
b) Non <input checked="" type="checkbox"/>
Si oui, par quel canal ? Précisez.
2. Quelles sont les différentes missions de votre structure se rapportant au projet ?
Enquête foncière : Expertise Agricole
3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation
Prise en charge ou indemnisation des exploitants agricoles.
4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?
- Respect de l'environnement
- Respect des droits des exploitants agricoles (indemnisation)

5. Quel est votre avis relativement au projet ?

- a) Favorable
b) Favorable sous réserve de
c) Refus

6. Raisons de cet avis :

Nous sommes favorable à ce projet parce qu'il pourra aider à la transformation par l'écologie de matière première cela pourrait créer des emplois pour les jeunes et améliorer le pouvoir d'achat dans notre zone et lutter efficacement contre la pauvreté généralisée de nos populations. Aussi une jeunesse occupée est-elle moins susceptible de se livrer à la consommation de stupéfiants et de la banditisme.

Signature et cachet



Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	ZIAGO GOGBE
Organisme rencontré	Ministère de la Construction du logement et de l'Urbanisme secteur Anyama
Date et lieu :	Anyama le 07/11/2022
Durée :	35 minutes
Nom du Consultant	LATO APIE CARRIVE
Objectif de la rencontre	
Informations, sondage d'opinion	

Résumé des échanges	
1. Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle 429 ha qui fait partie de la ZEI PK 24d' Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan	
a) Oui	<input checked="" type="checkbox"/>
b) Non	<input type="checkbox"/>
Si oui, par quel canal ? Précisez.	
par le canal de ma hiérarchie le Ministère de la Construction	
2. Quelles sont les différentes missions de votre structure se rapportant au projet ?	
- les enquête de Commande et Incommodes en vue de la délivrance des Titre de Propriété, les consultation publique - le suivi et contrôle des bâtiment en construction	
3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation	
En phase de construction, la topographie polygonale de des 423 ha, le plan d'occupation du sol En phase d'exploitation, comment sera géré les déchets et quel est l'impact des déchets sur la population	
4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?	
- la construction des édifice doivent respecter le Norms les déchets doivent être traité avec beaucoup de professionnalisme. - la population doivent bénéficier d'équipement tel que la école les centre de santé Urbain	

5. Quel est votre avis relativement au projet ?

- a) Favorable
- b) Favorable sous réserve de
- c) Refus

6. Raisons de cet avis :

Developpement économique du pays qui permettra
de réduire le taux chômage et consommation
local.

Signature et cachet



Rapport de consultation de partie prenante

Nom(s), Prénom(s), Fonction	Tobay chepo Delphine apse Seli chef secteur Agriculture Anyama
Organisme rencontré	secteur de développement agricole d'Anyama
Date et lieu :	07/11/2022 à 10h.
Durée :	10 min
Nom du Consultant	LATTO ADIE CARRINE
Objectif de la rencontre	
Informations, sondage d'opinion	

<p>Résumé des échanges</p> <p>1. Avez-vous déjà connaissance du projet de construction d'une zone économique industrielle 429 ha qui fait partie de la ZEI PK 24d' Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan</p> <p>a) Oui <input type="checkbox"/></p> <p>b) Non <input checked="" type="checkbox"/></p> <p>Si oui, par quel canal ? Précisez.</p> <p>2. Quelles sont les différentes missions de votre structure se rapportant au projet ?</p> <p>- Evaluation des cultures si il y a des ventuels exploitants sur le site. (exploitants sporadiques).</p> <p>3. Avez-vous des préoccupations par rapport aux activités relatives au projet en phase de construction, et phase exploitation</p> <p>- Respecter leurs engagements vis à vis de exploitants et des Cooperatives agricole -</p> <p>4. Quelles sont les recommandations et autres mesures que vous pouvez proposer dans le cadre de la réalisation de ce projet ?</p> <p>- Respecter les normes au niveau de l'installation des différentes entreprises sur le site.</p>

5. Quel est votre avis relativement au projet ?

- a) Favorable
- b) Favorable sous réserve de
- c) Refus

6. Raisons de cet avis :

*La prise en compte des recommandations
suscitées.*

Signature et cachet

**ENREGISTREMENT****ENR 01 RH**

Version : 00

LISTE DE PRESENCE**23/09/2019**

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante) comité de pilotage Visite.....préciser le nom de l'entreprise) Audit (interne ou externe à préciser) autre (préciser): *Consultation publique*DATE : *16/11/2022* DEPARTEMENT : *ABIDJAN* LIEU : *ICLU Secteur Songon* HEURE DEBUT : *13h55* HEURE FIN : *16h23***2. THEME(S) ABORDE(S)**2.1. *présentation du projet*2.2. *Echanges*2.3. *Recueil d'avis, de préoccupations, de suggestions et de recommandations.***3. PARTICIPANTS**

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <i>Mme Agoussi née Konan Annon Marceline</i>	<i>chef de chef</i>	<i>Construction</i>	<i>0707653432</i>	<i>konan.marceline@yahoo.fr</i>	<i>[Signature]</i>
2. <i>Gnong Stéphane-R</i>	<i>Adjoint chef de chef</i>	<i>Construction</i>	<i>074140702</i>	<i>secteur.songon@gmail.com</i>	<i>[Signature]</i>
3. <i>LATTO APIE CARRINE</i>	<i>consultante</i>	<i>cabinet Enval</i>	<i>070835532</i>	<i>lattoapie@yahoo.fr</i>	<i>[Signature]</i>
4.					
5.					
6.					
7.					
8.					
9.					
10.					



ENREGISTREMENT

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19 1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage Visite.....préciser le nom de l'entreprise)
- Audit (interne ou externe à préciser) autre (préciser): consultation publique

DATE: 07/11/2022 DEPARTEMENT: ABIDJAN LIEU: * HEURE DEBUT: 08h07 HEURE FIN: 10h42

2. THEME(S) ABORDE(S)

- 2.1 présentation du projet
- 2.2 Echanges
- 2.3 Banvil d'avis, préoccupations, suggestions et recommandation.

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. ZIAGO GOGBE	<u>PRF directeur</u>	<u>MC LU</u>	<u>07 07 11 29 73</u>	<u>ziagozeb2@gmail.com</u>	<u>[Signature]</u>
2. LATO APE MARTINE	<u>consultante Sociologue</u>	<u>Cabinet Enval</u>	<u>07 08 35 53 52</u>	<u>latoapem@yaho.fr</u>	<u>[Signature]</u>
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

**ENREGISTREMENT**

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante) comité de pilotage Visite..... préciser le nom de l'entreprise) Audit (interne ou externe à préciser) autre (préciser): Consultation publiqueDATE : 07/11/2012 DEPARTEMENT : Bidjan LIEU : Centre municipal des Eaux et Forêts d'Amoyana HEURE DEBUT : 13h40 HEURE FIN : 12h15**2. THEME(S) ABORDE(S)**2.1 présentation du projet2.2 Echanges2.3 recueil d'avis, préoccupations, suggestions et recommandations**3. PARTICIPANTS**

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. KOUROUMA KARIM	CCA	EAUX X FORETS	0707903402	Karouma.kari@gmail.com	
2. LI Niamien G. ABEL	service EAU	EAUX X FORETS	0101453006	Abelin@gmail.com	
3. LATO APE CARINE	Consultante Sociologue	Cabinet Enval	0708395392	latoape@enval.fr	
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)



ENREGISTREMENT

ENR 01 RH

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite.....préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): Consultation publique

DATE : 07/11/2012 DEPARTEMENT : Abidjan LIEU : Centre de l'Eau et des Forêts d'Anyama HEURE DEBUT : 14h40 HEURE FIN : 12h15

2. THEME(S) ABORDE(S)

2.1 présentation du projet

2.2 Echanges

2.3 recueil d'avis, préoccupations, suggestions et recommandations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. KOUROUMA KARIM	CCA	EAUX X FORETS	0707903402	Kourouma.karim@gmail.com	
2. LI Niamien G. ABEL	service EAU	EAUX X FORETS	0101453006	Abelin@gmail.com	
3. LATO ABE CARINE	Consultante Sociologue	Cabinet Enval	0708395392	latoabecarino@enval.fr	
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)



ENREGISTREMENT

Version : 00

LISTE DE PRESENCE

23/09/2019

Créé le 19/09/19

1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage

Visite..... préciser le nom de l'entreprise)

Audit (interne ou externe à préciser)

autre (préciser): consultation publique

DATE : 07/10/2022

DEPARTEMENT : ABIDJAN

LIEU : Direction ou secteur de l'Agriculture d'Anyama

HEURE DEBUT : 10h30

HEURE FIN : 10h40

2. THEME(S) ABORDE(S)

2.1 présentation du projet

2.2 Echanges

2.3 Récueil d'avis, préoccupations, suggestions et recommandations.

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. Teby C. Delphine ette soh	chef secteur	secteur agricole Anyama	0202766955	delphine.teby@gmail.com	<u>Del</u>
2. Mme Dkpo Kouame Apo G.	Agent SDR	" / " / "	0768391518		<u>MDG</u>
3. TATA Armand	Assistant PA	Secteur agricole Anyama	0767965664	tatarehardm@gmail.com	<u>fr</u>
4. LATTO APTÉ CARLINE	consultante sociologue	cabinet ENVAL	0708525322	latticecarline@yahoo.fr	<u>Car</u>
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
- Audit (interne ou externe à préciser)
 autre (préciser): consultation publique
- DATE : 08/11/2022 DEPARTEMENT : ABIDJAN LIEU : Collège Alliance HEURE DEBUT : 15h00 HEURE FIN : 15h30

2. THEME(S) ABORDE(S)

- 2.1. Echanges
- 2.2.
- 2.3.

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>M. KEY ROLAND</u>	<u>DIRECTEUR</u>	<u>COLLEGE PRIVEA</u>	<u>07 08 09 21 99</u>	<u>Keyroland4@gmail.com</u>	<u>[Signature]</u>
2. <u>LATIO NPIE CARLINE</u>	<u>Consultante Sociologue</u>	<u>Collège ENVAL</u>	<u>07 08 39 53 22</u>	<u>latiocarimo@yahoo.fr</u>	<u>[Signature]</u>
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

REPORT OF THE MEETING WITH THE GENERAL MANAGEMENT OF THE OFFICE IVOIRIEN DU PATRIMOINE CULTUREL (O.I.P.C.) CONCERNING THE PROJECT OF CONSTRUCTION OF AN INDUSTRIAL ECONOMIC ZONE.

On Friday 02 December 2022, a meeting was held in the premises of the Ivorian Office of Cultural Heritage (O.I.P.C.) between representatives of the Cabinet Enval and the General Management of the O.I.P.C.

The meeting was attended by :

- **O.I.P.C.:** Dr Aka Konin, Dr Aliman Fabrice and Mrs Mouso Assalé Veronique;
- **Cabinet Enval:** Dr Yao Narcisse (in charge of cultural and archaeological heritage) and Latto Carrine (Sociologist).

The objective of this meeting was to present to the O.I.P.C., the main body for the management of cultural heritage in Côte d'Ivoire, the project for the construction of an Industrial Economic Zone, located at PK 24 of Akoupé-Zeudji, in order to collect their concerns and recommendations, with the aim of carrying out the Environmental and Social Impact Assessment (ESIA).

The presentation of the project was made by the Sociologist of the Cabinet Enval on a PowerPoint support. She took into account the location of the project and the different phases of construction as well as the studies to be carried out.

After listening to the presentation of the project, the Director of ICDO and his collaborator Dr. Aliman Fabrice thanked the audience for the initiative and opened the discussion.

With regard to the heritage studies (cultural and archaeological), Dr Aliman expressed reservations about their implementation.

To this end, he gave clear explanations and made recommendations. According to him, the project area has been very little studied, so that knowledge of archaeology and cultural heritage is still lacking. However, it is likely to be an area where the presence of archaeological remains is certain. It is likely to have been occupied several times over the years. Hence the need to identify clues that could suggest the presence of sacred and archaeological sites.

He therefore suggested that, as far as archaeology is concerned, the experts should carry out surface surveys and test pits in order to reveal probably the quintessence of the archaeological heritage of the area.

In other words, he would like the study of cultural heritage to be accompanied by a more thorough study of archaeological heritage.

COMPTE RENDU DE LA RENCONTRE AVEC LA DIRECTION GENERALE DE L'OFFICE IVOIRIEN DU PATRIMOINE CULTUREL (O.I.P.C.) RELATIVE AU PROJET DE CONSTRUCTION D'UNE ZONE ECONOMIQUE INDUSTRIELLE.

Le Vendredi 02 Décembre 2022 s'est tenue dans les locaux de l'Office Ivoirien du Patrimoine Culturel (O.I.P.C.) une rencontre entre des représentants du Cabinet Enval et la Direction Générale de l'O.I.P.C.

Etaient présents à la rencontre :

- **O.I.P.C.** : Dr Aka Konin, Dr Aliman Fabrice et Mme Mouso Assalé Veronique ;
- **Cabinet Enval** : Dr Yao Narcisse (chargé de patrimoine culturel et archéologique) et Latto Carrine (Sociologue).

L'objectif de cette rencontre était d'aller présenter à l'O.I.P.C., principal organe de gestion du patrimoine culturel en Côte d'Ivoire, le projet de construction d'une Zone Économique Industrielle, sise au PK 24 d'Akoupé-Zeudji, afin de recueillir leurs préoccupations et recommandations, dans le but de réaliser l'Étude d'Impact Environnemental et Social (EIES).

La présentation du projet a été faite par la Sociologue du Cabinet Enval sur un support PowerPoint. Elle a pris en compte la location du projet et les différentes phases de construction ainsi que les études qui doivent être effectuées.

Après avoir écouté la présentation du projet, le Directeur de l'OIPC et son collaborateur Dr Aliman Fabrice ont remercié l'assistance, pour l'initiative et ouvert les échanges.

En ce qui concerne les études sur le patrimoine (culturel et archéologique), Dr Aliman a émis des réserves quant à leur réalisation.

A cet effet, il a donné des explications claires et fait des recommandations. Selon lui, la localité du projet est très peu étudiée en sorte que les connaissances relatives à l'archéologie et au patrimoine culturel demeurent lacunaires. Or, elle est susceptible d'être une zone dont la présence en vestiges archéologiques est certaine. Car, elle aurait connu plusieurs occupations au cours du temps. D'où la nécessité d'identifier des indices qui pourraient suggérer la présence de sites sacrés et archéologiques.

Il a donc suggéré, en ce qui concerne l'archéologie, que les experts fassent des prospections de surface, ainsi que des sondages afin de révéler probablement la quintessence du patrimoine archéologique de la zone. .

Autrement dit, il souhaiterait que l'étude du patrimoine culturel soit accompagnée par une étude du patrimoine archéologique plus approfondie.

Titre de la réunion	REUNION DE PRESENTATION DU PROJET
----------------------------	--

Détails de la réunion	
Date de la réunion	22 Novembre 2022
Lieu de la réunion	Salle de réunion de la Mairie de Anyama
Type de réunion	Réunion de présentation du Projet ARISE : Projet de Construction d'une Zone Economique Industrielle 429 ha qui fait partie de la ZEI PK 24 d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan.

Ordre du jour / objectifs de la réunion
<ol style="list-style-type: none"> 1. Mot de bienvenue 2. Présentation du projet ARISE 3. Echanges (recueil des préoccupations et avis des parties prenantes)

Participants Équipe de la mission			
<i>Structure</i>	<i>Nom</i>	<i>Prénoms</i>	<i>Position</i>
	LATTO	Apie Carrine	Consultant socio-économiste
	AHOUDJI epse DAMADA	Carmelle Myrese	Consultant Biodiversité / Gestion des Ressources Naturelles

Participants Parties Prenantes ¹			
<i>Institution</i>	<i>Nom</i>	<i>Prénoms</i>	<i>Position</i>
Voir la liste de présence, en annexe			

**PROCES VERBAL DE LA REUNION D'INFORMATIONS ET DE
CONSULTATION PUBLIQUE A LA MAIRIE D'ANYAMA**

L'An deux mille vingt-deux et le Mardi 22 Novembre à 11h 00 minutes, a eu lieu à Anyama plus précisément dans la salle de réunion de la Mairie d'Anyama une réunion d'information publique initiée par le Cabinet ENVAL dans le cadre de l'Etude d'Impact Environnemental et Social (EIES) pour le projet de construction d'une Zone Economique et Industrielle 429 ha de la ZEI PK 24 d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan.

Au début de la séance, le représentant du Cabinet ENVAL en la personne de Mlle LATTO Apie Carrine a souhaité la bienvenue et a remercié les autorités administratives, les autorités des différentes localités concernées par le projet, les membres des structures étatiques et également toutes les parties prenantes.

Elle a procédé à la présentation des membres du Cabinet ENVAL et de l'entreprise ARISE et annoncé le plan de déroulement de la séance qui s'articule autour des points suivants :

- Mot de bienvenue du représentant de la Mairie ;
- Ouverture de la séance par le représentant de la sous-préfecture de Anyama ;
- Présentation du projet ARISE et
- Echanges entre l'assistance, les membres du Cabinet et le promoteur (ARISE).

Le mot de bienvenue de Monsieur le Maire a été donné par Monsieur GUE Gaston en sa qualité de représentant de l'autorité Municipale. Ces mots se résument d'une part au souhait de bienvenue et d'autre part, au succès à la réalisation des travaux de réalisation du projet.

Par la même, la parole occasion, le représentant de Monsieur le Sous-préfet, SEDJOU G. Pacôme, a également souhaité la bienvenue à toute l'assistance (les équipes du Cabinet ENVAL, de ARISE, les représentants des collectivités locales, les guides religieux, etc), tout en présentant ses excuses pour le retard accusé tenue. Pour clore ses propos il a présenté le projet avant de déclarer ouverte la séance.

Dans la première partie de la présentation, du projet (objectifs, activités et responsabilités) a été présenté de façon succincte. Ensuite, l'importance du projet sur le développement de la Cote d'Ivoire au plan Macro et de la Zone Industrielle de PK

24 -Abidjan au plan micro et sur la vie sociale des populations environnantes dans la Commune d'Anyama ainsi que les enjeux de la consultation publique.

A la fin de la présentation, l'équipe de ARISE, représentée par Mme BOLI Caryle a pris la parole pour saluer toute l'assistance et présenter ensuite le projet ARISE dans les différentes sous-régions africaines et en particulier en Côte d'Ivoire.

De sa présentation il est à retenir que l'objectif du projet est de procéder à la création des zones industrielles, vecteur de développement dans les localités concernées et par ricochet à l'échelle Nationale. Elle a fini sa présentation par des remerciements adressés à toute l'assistance qui a participé à la séance.

Le président de séance a alors déclaré ouverte la section des échanges. Les interventions qu'il y a eut au cours de cette section d'échanges sont résumées dans le **tableau 1** :

Tableau 1 : Résumé des échanges au cours de la présentation du projet ARISE à la Mairie de ANYAMA

N°	Nom et Prénom(s)	Communauté ou Structure	Question (s) / Recommandation (s) et/ou Doléance (s)	Nom et Prénom (s) de l'intervenant pour la (les) réponse (s)	Structure	Réponse (s)
1.	YAPI Gbesso Isaac	Chef Village Adonkoi 1	<p>Remerciements, raisons de la participation à la réunion (développement de la zone, donc un compte rendu sera fait après).</p> <p>Question :</p> <ol style="list-style-type: none"> 1. Modification du paysage par l'installation des usines, donc destruction des champs. Existe-t-il des mesures pour cet état de choses ? 2. Remarque faite qu'au niveau de ces structures, les fils des villages environnants n'occupent que les postes d'ouvriers parce que le recrutement se fait en fonction de la relation qui existe entre le demandeur et les dirigeants, etc. La population se trouve lésée. Quelles sont les mesures prises à cet effet ? 3. Destruction des voies et des passages piétons ; Traversée du village par les véhicules poids lourds. Pas de projet de 	BOLI Caryle et ATTA Larissa	ARISE	<ol style="list-style-type: none"> 1. Les mesures d'atténuation des impacts seront proposées dans le rapport de l'EIES par le CABINET ENVAL. 2. Les jeunes des communautés voisines doivent être forcément prises en compte par les différentes structures lors des recrutements. 3. Renforcement et accompagnements des agriculteurs de la zone ainsi que des femmes et autres producteurs. La filière a renforcé serait décidée d'un commun

			<p>développement ou de restauration des routes ou des pistes.</p> <p><u>Doléances, Recommandations et suggestions :</u></p> <p>Les jeunes des localités doivent être priorités dans les différents recrutements.</p>			<p>accord avec les parties prenantes.</p> <p>Développement d'un centre de formation dans différents secteurs afin d'obtenir de différents profils (cadres, etc en vue du recrutement a la longue.</p> <p>LES DOLEANCES SERONT PRISES EN COMPTE.</p>
2.	SEDJOU Pacôme	G. Représentant du Sous- Préfet	<p><u>Question :</u></p> <ol style="list-style-type: none"> 1. Eclaircissement concernant la localisation exacte du projet ARISE. Zone Industrielle, délimitations réelles 2. Achat de la parcelle auprès de la SOGEDI OU quel est le processus ? 3. Le schéma existant défini par l'AGEDI maintenant appelé SOGEDI sera pris en compte ? <p><u>Rectificatif de la zone industrielle :</u></p> <p>940 ha au début puis un ajout de 61 ha a été fait en basculant vers le Sud de brassivoire en prenant SIBM, SEA INVEST, le campement kakro et la</p>	ATTA Larissa	ARISE	<ol style="list-style-type: none"> 1. La Zone industrielle est située juste derrière Brassivoire délimitée par SEA INVEST. 2. La Convention a été signé avec l'Etat afin d'exploiter une partie de la zone qui est comprise dans les 940ha et ce que vous venez donner comme indication ne s'inscrit pas dans notre domaine. Arise prendra attache avec la Sous-Préfecture

		<p>nouvelle usine BITSIM Ce qui porte la superficie à 1001 ha.</p> <p><u>Doléances, Recommandations et suggestions :</u></p> <p>Prendre attache avec les chefferies d'Attinguié, d'Akoupé-Zeudji et d'Allokoi afin d'avoir toute la documentation sur la zone Industrielle (les droits coutumiers, les purges qui ont été fait avant la cession des terres).</p>	<p>ATTA Larissa</p> <p>BOLI Caryle</p> <p>ATTA Larissa</p>	<p>d'Anyama afin d'avoir la delimation exacte de la zone Industrielle pour des questions d'enrichissement des documents en notre possession.</p> <p>Aussi ce rajout relève-t-il d'une question de nécessité, parce que lors des visites sur le terrain, nous avons remarqué qu'il y'avaient des industries hors zone.</p> <p>3. L'objectif de ce projet est d'aménager les 429ha pour permettre à des entreprises de s'installer pour la transformation locale des matières premières. Dans cette zone, la matière première de base est l'hévéa.</p> <p>4. C'est un partenariat public privé entre l'état par le biais de la structure</p>
--	--	--	--	--

			<p>ARISE en tant que promoteur, doit-il recevoir des paiements des industries qui doivent s'installer ou c'est à l'ETAT que ces frais sont reversés ?</p>	<p>ATTA Larissa</p>		<p>(SOGEDI) impliquée dans tout le processus. Ce n'est Pas un achat. Mais une mise à disposition des parcelles par l'ETAT. Partenariats multipartites.</p> <p>5. La structuration des activités des entreprises selon la SOGEDI est prise en compte pour ne pas créer des déséquilibres environnementaux.</p> <p>Ces questions sont en cours de discussion toutefois c'est ARISE qui reçoit et verra quelle part verser à l'ETAT.</p> <p>LES DOLEANCES SERONT PRISES EN COMPTE.</p>
3.	GUE Gaston	Représentant du MAIRE	<p><u>Question</u>: ARISE est-elle impliquée dans la construction des entreprises ?</p> <p><u>Doléances, Recommandations et suggestions</u> : Réservation des postes de cadres ou pas pour les jeunes du village.</p>	<p>BOLI Caryle et ATTA Larissa</p>	<p>ARISE</p>	<p>ARISE assure la construction et la gestion de la zone.</p>

4.	DOUESSEKON C. R.	Agriculture	<p><u>Question:</u></p> <p>Terrains nus depuis un moment, donc occupés par les agriculteurs.</p> <p>Identification des parcelles et des occupants.</p>	<p>BOLI Caryle et ATTA Larissa</p> <p>LATTO Apie Carrine</p>	ARISE	Point demandé au Cabinet ENVAL et prise de décision d'indemnisation ou d'achats directs des matières auprès des producteurs.
5.	OBE Alexis	Président de Jeunesse Adonkoi 1	<p>Bon projet de développement de la zone</p> <p><u>Question:</u> existe-t-il des projets de développement (écoles, centres de santé, terrains, etc) pour les villages environnants ?</p>	<p>BOLI Caryle et ATTA Larissa</p>	ARISE	<p>Aménagement et construction des écoles,</p> <p>Accompagnement des femmes dans les domaines ou secteurs observés au niveau de la zone industrielle.</p> <p>CAS ECOLE DU GABON, donc reproduction possible au niveau d'Abidjan après les consultations des parties prenantes.</p>
6.	GOHI G. Pierre	Président des jeunes de Allokoi	<p><u>Question:</u> Superficie de ARISE et localisation exacte ? La zone est-elle déjà exploitée ?</p>	<p>BOLI Caryle et ATTA Larissa</p>	ARISE	<p>Il s'agit de deux zones à développer au cours de deux phases.</p> <p>Zone industrielle située juste derrière Brassivoire délimitée par SEA INVEST</p>

						Non la zone n'est pas encore exploitée
7.	SARR Seynabou	Directrice RADIO Anyama	<u>Question</u> : Impacts sur les industries alimentaires pour leurs installations ? Propositions en termes de mesures sonores et impacts environnementaux.	LATTO Apie Carrine	ENVAL	Mesures d'atténuations à préconiser dans l'EIES et à présenter lors de l'enquête publique.
8.	GUE Gaston	Représentant MAIRE	Doléances à l'endroit des chefs. Détenir un registre pour avoir des exigences au cours des discussions avec les promoteurs une fois au village afin d'éviter toute situations de non-respect des engagements de la part du promoteur.	-----	CHEFS	Doléances qui seront prises en compte

Après ces différents échanges, le président de la séance a remercié à nouveau l'assistance pour sa contribution et son écoute attentive pendant la réunion. Il a rappelé que cette étude étant différente des autres, il importe que le cabinet dispose de toute la documentation relative à cette zone. Et que l'équipe de réalisation de l'EIES se rapproche des 3 chefferies Allokoi, Akoupé-Zeudji et Attinguié. Donc il est important de contacter les différents chefs des villages afin de pouvoir prendre toutes les informations avant la validation du projet.

Aussi a-t-il insisté sur le fait que pour un Projet de développement, le train de vie augmente de même que la circulation des biens et matériels. Donc les impacts négatifs doivent être prises en compte afin d'amoindrir tout ce qui est risqué. Il est important de collaborer avec les chefs du village ; les autorités et les populations.

Cet état de fait nécessite une franche collaboration et une prise en compte des promesses faites aux populations.

Il a laissé la parole à du Cabinet ENVAL pour son mot de fin. Le représentant du Cabinet a remercié l'assistance pour sa participation et a promis prendre en compte les différentes observations faites. Pour finir Elle a précisé qu'une équipe du Cabinet ENVAL reviendra présenter les résultats d'EIES lors de la réalisation de l'enquête publique.

La parole a été donné au représentant d'ARISE pour son mot de fin. Dans son intervention finale, ce dernier a remercié, les autorités Administratives et coutumières, les directeurs des structures des différents ministères, guides religieux. associations.

La séance a été alors levée à 12h 10minutes.

Préparé par		
Entreprise	Nom	Signature
Enval	LATTO Apie Carrine	

Président de la séance		
Structure	Nom	Fonction, Signature et cachet
Sous-Préfecture d'Anyama	Mr Sedjou G.Pacôme	Secrétaire du Sous-Préfet

Documents Annexés

1. Liste de Présence
2. Quelques photos de la séance de présentation du projet de ARISE à la Mairie d'Anyama.

Quelques images de la réunion d'information et de consultation publique



	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser)
 autre (préciser): *Réunion d'informations et de consultation*
- DATE : *22/11/2022* DEPARTEMENT : *ABISSINIA* LIEU : *rairie d'Anyama* HEURE DEBUT : *11h* HEURE FIN : *15h*

2. THEME(S) ABORDE(S)

- 2.1 *présentation du projet*
 2.2 *Echanges*
 2.3 *Rassemblement d'avis, préoccupations suggestions et recommandations*

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <i>SEJOU G. Pacôme</i>	<i>Secrétaire P.</i>	<i>SIP Anyama</i>	<i>04685974-</i>	<i>juayacomesedjox@gmail.com</i>	<i>[Signature]</i>
2. <i>GUE GANTON</i>	<i>conseiller</i>	<i>rairie d'Anyama</i>	<i>0799796604</i>		<i>[Signature]</i>
3. <i>Bdi Cayle</i>	<i>Management - RAISE</i>	<i>ARISE</i>	<i>0596 00 00 09</i>	<i>cayle.bdi@wisenet.com</i>	<i>[Signature]</i>
4. <i>VANIE née OULAI Guéi Chantale</i>	<i>secrétaire Adm.</i>	<i>SIP Anyama</i>	<i>0787298789</i>	<i>ogchantale@gmail.com</i>	<i>[Signature]</i>
5. <i>AKOSSI NIANDJ JOSIAS</i>	<i>Adi chef du village</i>	<i>Adonkoi</i>	<i>0707807856</i>	<i>niandj.niandj@gmail.com</i>	<i>[Signature]</i>
6. <i>YAPI BOESSE ISAAC</i>	<i>chef du village</i>	<i>ADONKOI</i>	<i>0747488888</i>	<i>yapisaac65@gmail.com</i>	<i>[Signature]</i>
7. <i>OBE ALEXIS</i>	<i>PRESIDENT</i>	<i>JECNESSE ADONKOI</i>	<i>0709990966</i>		<i>[Signature]</i>
8. <i>ADAMA-DIALLO</i>	<i>Imam</i>	<i>COSIM</i>	<i>072580901</i>		<i>[Signature]</i>
9. <i>OUMAR-KONE</i>	<i>Imam</i>	<i>COSIM</i>	<i>079338093</i>		<i>[Signature]</i>
10. <i>SARB ZEYNABOU</i>	<i>Directrice</i>	<i>RAISO ANYAMA</i>	<i>0708263450</i>	<i>zeynabou.eda@gmail.com</i>	<i>[Signature]</i>

(Veuillez joindre cette fiche au compte rendu s'il en existe)

	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage
 Visite..... préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser)
 autre (préciser): Réunion d'information et de consult

DATE : 22/11/2019 DEPARTEMENT : ABIDJAN LIEU : mairie d'Anyama HEURE DEBUT : 11h00 HEURE FIN : 12h30

2. THEME(S) ABORDE(S)

- 2.1. Présentation du projet
- 2.2. Echanges
- 2.3. Recueil d'avis, préoccupations, suggestions et doléances

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. DOUESSEKON. CR	AGENT DE L'AGRICULTURE	secteur Deuz AGRICULTEUR	07074516	doussekon@gmail.com	[Signature]
2. ADAMA-DIALLO	Imam	COSIM	0707580909		[Signature]
3. OUMAR-KONE	IMAM	COSIM	0707238048		[Signature]
4. Kouadio Faustin	Agent Construct	secteur Construction	0757113439	secteurconstructionanyama@gmail.com	[Signature]
5. YAPI GBESSO ISAAC	CHEF de village Adonkoi	ADONKOI	0747488088	yapiisad63@gmail.com	[Signature]
6. AKOSSI NIANDO JOSIAS	Adj. Chf/ Adonkoi	Adonkoi 1	0707807856	niandojab@gmail.com	[Signature]
7. KOUASSI AMAN	ASSISTANTE	Adonkoi 1	0749157492	atinguic	[Signature]
8. GBESSO K. ROGER	responsable des chf	Adonkoi	0515040571		[Signature]
9. AJEHOUA A. Rebecca	Présidente Femmes	Adonkoi	0707911199		[Signature]
10. GOTTI G. Pierri	Président	Adonkoi	0757271907		[Signature]

(Veuillez joindre cette fiche au compte rendu s'il en existe)

	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

comité de pilotage Visite.....préciser le nom de l'entreprise)

Audit..... (interne ou externe à préciser) autre (préciser): Réunion d'information et de consultation
 DATE : 22/09/2022 DEPARTEMENT : BOUJAN LIEU : Mairie d'Anyama HEURE DEBUT : 11h00 HEURE FIN : 12h00

2. THEME(S) ABORDE(S)

- 2.1 présentation du projet
- 2.2 Echanges
- 2.3 Récueil d'avis, préoccupations, suggestions et recommandations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>LATIO APE CARBINE</u>	<u>consultante sociologue</u>	<u>Carinet ENVAL</u>	<u>07-08-395392</u>	<u>latiocarbine@yahoo.fr</u>	<u>[Signature]</u>
2. <u>Dr AHOUSSI DAMADA</u>	<u>Consultant QSE</u>	<u>ENVAL</u>	<u>07 69 46 25 07</u>	<u>myrese-carimelle@gmail.com</u>	<u>[Signature]</u>
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

Titre de la réunion	REUNION DE PRESENTATION DU PROJET
----------------------------	--

Détails de la réunion	
Date de la réunion	25 Novembre 2022
Lieu de la réunion	Salle de réunion de la Mairie de Anyama
Type de réunion	Réunion de présentation du Projet ARISE : Projet de Construction d'une Zone Economique Industrielle 429 ha qui fait partie de la ZEI PK 24 d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan.

Ordre du jour / objectifs de la réunion
<ol style="list-style-type: none"> 1. Mot de bienvenue 2. Présentation du projet ARISE 3. Echanges (recueil des préoccupations et avis des parties prenantes)

Participants Équipe de la mission			
<i>Structure</i>	<i>Nom</i>	<i>Prénoms</i>	<i>Position</i>
	LATTO	Apie Carrine	Consultant socio-économiste
	COULIBALY	Abdoul-Karim Khona	Consultant socio-économiste

Participants Parties Prenantes ¹			
<i>Institution</i>	<i>Nom</i>	<i>Prénoms</i>	<i>Position</i>
Voir la liste de présence, en annexe			

**PROCES VERBAL DE LA REUNION D'INFORMATIONS ET DE
CONSULTATION PUBLIQUE A LA PREFECTURE D'ABIDJAN**

L'An deux mille vingt-deux et le Vendredi 25 Novembre à 11 h 12 minutes, a eu lieu à la préfecture d'Abidjan une réunion d'information publique initiée par le Cabinet ENVAL dans le cadre de l'Etude d'Impact Environnemental et Social (EIES) pour le projet de construction d'une Zone Economique et Industrielle 429 ha de la ZEI PK 24 d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan.

Au début de la séance, le Secrétaire Général de la préfecture représentant Mr le Préfet en la personne de Mr André Martin Kakou a souhaité la bienvenue et a remercié les représentants de Arise, du cabinet ainsi que les directeurs techniques des ministères qui ont fait l'amabilité de s'associer à nous dans le cadre de la réalisation de cette étude. Toutefois il n'a pas manqué de présenter ses excuses pour le retard accusé. Car la réunion était prévue pour 10 H mais elle a débuté avec 1 h 12 mn de retard. Par la même occasion il a déclaré la séance ouverte

Sans transition aucune, la parole a été donné aux représentantes de Arise dont Caryle Boli et Larissa Atta de présenter respectivement le promoteur et projet.

Quant à Latto Carrine, représentante du cabinet, elle s'est chargée de la présentation de la procédure de l'EIES et des impacts potentiels à l'aide d'un Powerpoint.

Suite à cette présentation, s'en est suivi la section des échanges. Les interventions qu'il y a eu au cours de cette section d'échanges sont résumées dans le **tableau 1** :

Tableau 1 : Résumé des échanges au cours de la présentation du projet ARISE à la Préfecture d'Abidjan

N°	Nom et Prénom(s)	Communauté ou Structure	Question (s) / Recommandation (s) et/ou Doléance (s)	Nom et Prénom (s) de l'intervenant pour la (les) réponse (s)	Structure	Réponse (s)
1.	Mr Aka Charles Albéric	Attaché recherche CRO	<p>Question :</p> <p>1-Pourquoi Arise a initié une gestion autonome des déchets alors qu'il y'a une défaillance au niveau du système de gestion en Côte d'Ivoire</p> <p>Etant donné que des entreprises viendront s'installer il y'aura donc le rejet des effluents, de poussière la pollution de l'eau et de l'air et également la position de la forêt d'Anguededou, un des champs captant de la SODECLI.</p> <p>.</p> <p>Suggestions :</p> <p>Gestion collective pour chaque zone puisque ces trois zones sont dissimulées.</p>	Caryle Boli ATTA Larissa	ARISE	<p>1. La gestion des déchets se fera avec la collaboration de l'Etat.</p> <p>2. Nous aurons une collecte interne dans notre zone avec la construction de station d'épuration en notre sein qui permettra de traiter l'eau avant de la rejetée dans le milieu naturel lorsqu'elle sera jugée acceptable.</p> <p>En ce qui concerne les rejets atmosphériques et les poussières nous étudions ces paramètres avec le cabinet qui nous accompagne. Nous ferons tout notre possible afin de réduire le niveau de</p>

				Latto Carirne	Enval	<p>pollution et ce sont les normes auxquelles nos opérateurs seront obligés de se conformer.</p> <p>Vos propositions spécifiques sont également les bienvenues.</p> <p>3. Le but de la réunion c'est de recueillir vos avis et recommandations qui pourront nous permettre d'améliorer le rapport. Par conséquent vos propositions sont les bienvenues.</p>
2.	Mme Beugré née Djedje Edwige	Chargés d'études à l'ANAGED	<p><u>Contribution :</u></p> <p>Je me réjouis parce que déjà la question des déchets est ressortie et les conséquences également (les nuisances). J'espère que dans votre étude vous mettez l'accent sur cette composante.</p> <p>1. Prendre attache avec l'ANAGED afin de mettre à la disposition du cabinet la</p>	Latto Carrine	Enval	<p>1. Nous prenons bonne note de ces recommandations et nous prendrons attache avec l'ANAGED</p>

			<p><u>Doléances, Recommandations et suggestions :</u></p> <p>Réservation des postes de cadres ou pas pour les jeunes du village.</p>			<p>Certainement d'ici les enquêtes publiques, nous pourrons le partager.</p> <p>Le partenariat sera fonction du taux de participation après négociation ils pourront nous dire sur combien de temps exploiter selon la réglementation ivoirienne. Ce sont les choses à mettre en évidences.</p> <p>Pour les autres pays dans lesquels nous exerçons, la participation de l'Etat est à 30% et à termes le projet est restitué à l'Etat. Pour le cas d'Abidjan rien n'est encore défini</p> <p>3-Avec la SOGEDI, c'est la redevance industrielle et pour ce projet nous prévoyons un guichet unique pour les promoteurs soient à l'aise. Peu importe la nationalité. Cela facilite</p>
--	--	--	--	--	--	--

					<p>en termes de gestion administrative.</p> <p>Le coût sera également discuté. L'idée c'est d'offrir des services connexes autres que ce que nous avons l'habitude de voir dans les autres zones.</p> <p>4 et 5-Le projet est d'abord exonéré de taxe. Nous encore en discussion et l'un des critères c'est le taux de participation de L'Etat. Et nous travaillons aussi avec le CEPICI, la SOGEDI et bien d'autres.</p> <p>Au Gabon par exemple il y'a des textes juridiques qui sont pris encadrer le développement bois la filière bois parce que c'est le moteur de développement évidemment il y'a des avantages spécifiques qui en sont liés. En Côte d'Ivoire c'est beaucoup plus large à cause de la diversité et nous</p>
--	--	--	--	--	---

						sommes focus sur le coton, l'hévéa ; la noix de cajou ;le manioc. Les avantages seront spécifiques aux différentes filières en fonctions des textes juridiques.
4.	Manoua Ettienne	DGRE (Direction Générale des Ressources en Eau)	<p><u>Question :</u></p> <p>1- En quoi la responsabilité d'Arise va consister en termes de gestion des ressources en eau puisque les forages et les prélèvements sont soumis à autorisation conformément au code l'eau selon la loi portant code de l'eau. Si toutefois, le projet exonéré de taxe, cela sous-entend que vous disposez de document attestant une taxe en ce sens.</p> <p>2- Nous sommes un peu gênés du fait que les eaux seront déversées d'autant plus que vous n'êtes pas loin du champ captant de la SODECI donc de la nappe phréatique. Car vous êtes au Nord et cela peut donc entrainer des pollutions. Quand bien mêmes qu'elles soient traitées.</p> <p><u>Recommandations</u></p>	ATTA Larissa	ARISE	<p>Merci Mr Manoua pour vos contributions pertinentes à l'avancée de notre projet.</p> <p>Z I dans l'ensemble est gérée par la SOGEDI qui est une structure sous-tutelle du commerce et de l'Industrie. En son sein, Il y'aun réseau d'alimentation et de distribution d'eau qui sera fonctionnel en 2023.Naturellement notre projet sera connecté à cette approvisionnement en eau.</p> <p>En ce qui concerne l'électricité le poste se trouvant à Akoupé-Zeudji selon nos sources d'information n'a pas la capacité d'alimenter notre projet en fonction de nos besoins exprimés. La conjoncture</p>

			<p>-Prendre attache avec le Ministère des Eaux et Forêt qui est le gestionnaire de cette ressource afin de suivre la procédure.</p> <p>L'ONEP est un préleveur institutionnel</p> <p>-Il serait intéressant que cette Zone Economique et Industrielle soit compartimenté en fonction des activités des opérateurs en tenant compte de la proximité avec la forêt d'Anguededou et du rejet des effluents dans la zone.</p>			<p>vers laquelle nous partons maintenant c'est d'installer un poste source au sein de notre zone en collaboration avec CI -energies et la CIE qui sont parties prenantes du comité de négociation. Toutes les mesures qui accompagnent seront prises en compte.</p> <p>Concernant le coût des forages vu qu'effectivement le réseau n'est pas encore disponible, nous envisageons faire des forages sur notre zone nous avons contactez l'ONEP qui nous a donné toutes les procédures et réglementations à suivre. Mais nous prenons bonne note.</p> <p>Il y'a une cartographié spécifique de la classification des activités sur la zone donc cela est déjà pris en compte en fonction de la direction des vents dominants que nous avons.</p> <p>L'activité dominant ece sont les produits agricoles. Mais n'empêche que les activités les</p>
--	--	--	---	--	--	--

						plus polluantes seront orientées vers le Nord-Est afin de respecter la direction des vents dominants.
--	--	--	--	--	--	---

Après ces différents échanges, le président de la séance a remercié à nouveau l'assistance pour sa contribution et son écoute attentive pendant la réunion. Il a incité tout un chacun à participer à cette étude par des contributions ou recommandations.

Après quoi, le Secrétaire Général a donné la parole au cabinet et au promoteur pour leur mot de fin.

Aussi a-t-il insisté sur le fait que ce Projet soit innovateur et permettra d'améliorer les conditions de vie de la population ivoirienne.

La séance a été alors levée à 12 h 01 minutes.

Préparé par		
Entreprise	Nom	Signature
Enval	LATTO Apie Carrine	Socioéconomiste

Président de la séance		
Structure	Nom	Fonction, Signature et cachet
Préfecture d'Abidjan	Mr André Martin Kakou	Secrétaire Général 1 de la Préfecture

Documents Annexés

1. Liste de Présence
2. Quelques photos de la séance de présentation du projet de ARISE à la Préfecture d'Abidjan

Quelques images de la réunion d'information et de consultation publique



	ENREGISTREMENT	ENR 01 RH	
	LISTE DE PRESENCE	Version : 00	
		23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage Visite.....préciser le nom de l'entreprise)
- Audit (interne ou externe à préciser) autre (préciser): réunion d'information et de consultation
- DATE : 25/11/2022 DEPARTEMENT : ARISTIAN LIEU : préfecture d'ARISTIAN HEURE DEBUT : 14h12 HEURE FIN : 12h01

2. THEME(S) ABORDE(S)

- 2.1 présentation du projet
- 2.2 Echanges
- 2.3 recueil d'avis, préoccupations, suggestions et recommandations.

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
<u>André Martin KAKOU</u>	<u>SES</u>	<u>Préf. Arj</u>	<u>01 01 51 51 58</u>	<u>andremartin.k@opaf.be</u>	<u>[Signature]</u>
<u>Boli Caryle</u>	<u>Management Trainee</u>	<u>ARISE</u>	<u>05 95 00 00 09</u>	<u>caryle-boli@arisenet.com</u>	<u>[Signature]</u>
<u>ATTA LARISSA</u>	<u>Interface Manager</u>	<u>ARISE</u>	<u>05 95 00 00 08</u>	<u>barissa.atla@arisenet.com</u>	<u>[Signature]</u>

(Veuillez joindre cette fiche au compte rendu s'il en existe)

Titre de la réunion	REUNION DE PRESENTATION DU PROJET
----------------------------	--

Détails de la réunion	
Date de la réunion	19 Décembre 2022
Lieu de la réunion	Sous-Préfecture de Songon
Type de réunion	Réunion de présentation du Projet ARISE : Projet de Construction d'une Zone Economique Industrielle 429 ha qui fait partie de la ZEI PK 24 d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan.

Ordre du jour / objectifs de la réunion
<ol style="list-style-type: none"> 1. Mot de bienvenue 2. Présentation du projet ARISE 3. Echanges (recueil des préoccupations et avis des parties prenantes)

Participants Équipe de la mission			
<i>Structure</i>	<i>Nom</i>	<i>Prénoms</i>	<i>Position</i>
	LATTO	Apie Carrine	Consultant socio-économiste

Participants Parties Prenantes ¹			
<i>Institution</i>	<i>Nom</i>	<i>Prénoms</i>	<i>Position</i>
Voir la liste de présence, en annexe			

PROCES VERBAL DE LA REUNION D'INFORMATIONS ET DE CONSULTATION PUBLIQUE A LA SOUS-PREFECTURE

L'An deux mille vingt-deux et le Lundi 19 Décembre à 15h 10 minutes, a eu lieu à la Sous-Préfecture de Songon plus précisément dans la salle de réunion de la Sous-Préfecture une réunion d'information publique initiée par le Cabinet ENVAL dans le

cadre de l'Etude d'Impact Environnemental et Social (EIES) pour le projet de construction d'une Zone Economique et Industrielle 429 ha de la ZEI PK 24 d'Akoupé-Zeudji de 940 ha, dans le District Autonome d'Abidjan.

Au début de la séance, Monsieur le Sous-Préfet en la personne de Monsieur STEPHANE GUIRIGA a souhaité la bienvenue aux autorités coutumières des différentes localités concernées par le projet et aux membres des structures étatiques.

Sans transition aucune, Monsieur le Sous-Préfet a situé le contexte de l'étude en quelques mots (la création d'une Zone économique et Industrielle pour permettre à des Entreprises de s'installer). Il a également décliné les objectifs de cette réunion qui se résume comme suit :

-Présentation du projet

-Echanges

-Recueil d'avis, de préoccupations, de suggestions et de recommandations

Il a par la même occasion invité le cabinet à présenter le projet après quoi la parole a été donnée à la représentante d'Arise pour la présentation du projet de façon suscite vu que la présentation faite par le cabinet à l'aide du PowerPoint comportait une généralité. La particularité de cette zone

De sa présentation il est à retenir que l'objectif du projet est de procéder à la création des zones industrielles, vecteur de développement dans les localités concernées et par ricochet à l'échelle Nationale avec Arise un groupe panafricain qui intervient en Afrique de l'Ouest (Togo, Benin, Côte d'Ivoire) et centrale (RDC, Gabon).

En Côte d'ivoire, Arise a signé un accord de développement dans trois zones (San-Pedro, Ferkessedougou, et Abidjan). La particularité à Abidjan c'est un partenariat public-privé afin d'aménager et mettre à disposition des services Administratifs pour attirer les investisseurs en gérant la chaîne d'approvisionnement et créer des emplois.

Le président de séance a alors déclaré ouverte la section des échanges. Les interventions qu'il y a eut au cours de cette section d'échanges sont résumées dans le **tableau 1** :

Tableau 1 : Résumé des échanges au cours de la présentation du projet ARISE à la Sous-Préfecture de Songon

N°	Nom et Prénom(s)	Communauté ou Structure	Question (s) / Recommandation (s) et/ou Doléance (s)	Nom et Prénom (s) de l'intervenant pour la (les) réponse (s)	Structure	Réponse (s)
1.	Mr. Nimba Mobio Francis	Responsable foncier, Abadjin-Kouté	<p>Mon intervention porte sur le mode d'acquisition de terre par Arise étant donné que les parcelles que vous présentez est le prolongement des plantations de l'ex SAPH dans le temps. Ce sont ces parcelles que nous revendiquons</p> <p>Question :</p> <ol style="list-style-type: none"> 1. Que prévoyez-vous pour ces villageois dont les sites sont utilisés pour l'aménagement de cette zone ? 2. Lorsque le cabinet Enval est arrivé au village il était question de définir le rayon d'impact donc nous avons souligné le problème d'acquisition de la terre et l'indemnisation prévue. 3-Que prévoyez-vous pour les populations affectées. 	BOLI Caryle	ARISE	<ol style="list-style-type: none"> 1. L'objectif de cette étude justement c'est d'aller au contact des communautés voisines au projet, pour prendre en compte leurs doléances selon le plan de Développement RSE (Responsabilité Sociétale des Entreprises Renforcer et accompagner des agriculteurs de la zone ainsi que des femmes et autres producteurs. <p>Développement d'un centre de formation dans différents secteurs afin d'obtenir de</p>

				Mr Stéphane GUIRIGA	SOUS- PRÉFECTURE DE SONGON	différents profils (cadres, etc en vue du recrutement a la longue. Arise n'a pas sont mot à dire puisque que les 429ha sont inclus dans la Zone Industrielle de 940ha. La purge a été déjà était faite avant la construction de la ZI. Vous ne pouvez pas vous en prendre à Arise ; C'est avec l'état de Côte d'ivoire que vous pourrez discuter de ces choses.
				BOLI Caryle	ARISE	Nos champs d'action dépendent des doléances des populations. Mais nous déjà nous prevoyons les formations principalement pour les jeunes des communautés qui seront sodées par des certificats. Le niveau requis est au moins le BEPC

2.	SEDJOU Pacôme	G. Représentant du Sous-Préfet	<p><u>Question :</u></p> <p>1. C'est à là que je voulais en venir puisqu'Arise prétend avoir acheté les 429ha</p>	BOLI Caryle	ARISE	<p>1. . La Convention a été signé avec l'Etat afin d'exploiter une partie de la zone qui est comprise dans les 940ha</p> <p>.</p> <p>2. C'est un partenariat public privé entre l'état par le biais de la structure (SOGEDI) impliquée dans tout le processus. Ce n'est Pas un achat. Mais une mise à disposition des parcelles par l'ETAT. Partenariats Multipartites.</p> <p>Je pense qu'il devrait prendre attache avec la SOGEDII pour comprendre le processus d'acquisition des terres.</p>
				Latto Carrine	ENVAL	

				Mr Stéphane GUIRIGA	SOUS- PRÉFECTURE DE SONGON	<p>Où était -le village d'Abadjin-Kouté lorsque l'Etat indemnisait les propriétaires terriens ?</p> <p>Nous n'allons pas revenir sur ces choses. Il faut être stratège et savoir poser les problèmes. Où il faut sinon vous serez en train de perdre l'essentiel.</p> <p>Il y'a eut décapage, les Entreprises sont en train de s'installer il n'ya donc pas lieu de venir renégocier l'espace.</p> <p>Surtout que le projet est inscrit dans un cadre infrastructurel de 940ha.</p>
--	--	--	--	------------------------	----------------------------------	---

Après ces différents échanges, le président de la séance a remercié à nouveau l'assistance pour sa contribution et son écoute attentive pendant la réunion. Il a salué la vision d'Arise. Car ce sont des opportunités qui s'ouvrent à la jeunesse. Il faut qu'elle soit formée pour être employée. Il faut également que les jeunes soient proactifs et courageux.

En termes de recommandation pour terminer, Monsieur le Sous-Préfet de Songon, suggère qu'Arise prenne attache avec les Leaders communautaires dans le cadre des différents recrutements pour donner l'information aux jeunes.

La séance a été alors levée à 15h 50minutes.

Préparé par		
Entreprise	Nom	Signature
Enval	LATTO Carrine Apie	Socioéconomiste


Président de la séance		
Structure	Nom	Fonction, Signature et cachet
Sous-Préfecture de Songon	Mr STEPHANE GUIRIGA	Sous-Préfet de Songon

Documents Annexés

1. Liste de Présence
2. Quelques photos de la séance de présentation du projet de ARISE à la Sous-Préfecture de Songon

Quelques images de la réunion d'information et de consultation publique



	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1




1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser)
 autre (préciser): Réunion d'information et de consultation publique
- DATE : 19/12/2022 DEPARTEMENT: ABIDJAN LIEU: sous-préfecture de Songon HEURE DEBUT: 15h30 HEURE FIN: 18h30


2. THEME(S) ABORDE(S)

- 2.1. présentation du projet
 2.2. Echanges
 2.3. Recueil d'avis, préoccupations, suggestions et recommandations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. Stéphane GUIRYGA	sous-prefet	sous-préfecture	07081340	ststephy@gmail.com	
2. Boli Caryle	ESGTT	ARISE	0595000008	Caryle.boli@ariserst.com	
3. LATO ARIE CARRINE	Sociologue	Ennval	07 57 3253	Ltoacarune@ennval.org	
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser)
 autre (préciser): Réunion d'information et de consultation publique.
- DATE : 13/09/2022 DEPARTEMENT : ABIDJAN LIEU : Sous préfecture de Songon HEURE DEBUT : 15h30 HEURE FIN : 15h50


2. THEME(S) ABORDE(S)

- 2.1. présentation du projet
 2.2. Echanges
 2.3. Recueil d'avis, préoccupations, suggestions et recommandations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. KA Kouidi	chef service Receveur (abon)	PORT EDP Songon	0707 00507	Kakouidj.kouidi@gmail.com	
2. NIMBA Mobio Francis	Pdt Foncier	Abadjin-Kouli	0140436762	mobiofrancu@yahoo.fr	
3. MOBIO PHILIPPE	Doyen Icheraba	Abadjin-Kouli	0575 599596		
4. Gbédjé Toussaint	Pdt Litige	" "	0709 52 60 20		
5. SA GOV - Martial	Resp. sécurité	" "	01 02 637776		
6. Konan Brou Athurin	chef Adjoint	Anguededou village	0101489068		
7. Konan Konan J. serge	Pe Adjoint	Anguededou village	0757 27 43 05		
8. AKABLA Jacques BROWN	NOTABLE Président	ANGUEDEDOU	0707463334	jacquesakabla65@gmail.com	
9. AKRE GEOFFROY	Jeunes	Abadjin-Kouli	0707007075		
10. Konan AMENAN	MENA-GERE	ANGUEDEDOU	05-05-91-41-12		

(Veuillez joindre cette fiche au compte rendu s'il en existe)

	ENREGISTREMENT	ENR 01 RH	
		Version : 00	
	LISTE DE PRESENCE	23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite.....préciser le nom de l'entreprise)
 Audit (interne ou externe à préciser)
 autre (préciser): *Réunion d'information et de consultation*
- DATE : *19/12/2022* DEPARTEMENT : *Abidjan* LIEU : *Sau profecture de Sere* HEURE DEBUT : *15h30* HEURE FIN : *18h50*

2. THEME(S) ABORDE(S)

- 2.1 *présentation du projet*
 2.2 *Echec*
 2.3 *Résumé d'avis, prescriptions, suggestions et de recommandations*

3. PARTICIPANTS


Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <i>MOPKO Hugues</i>	<i>Responsable F.</i>	<i>Mairie</i>	<i>0759322593</i>	<i>venezlasamhis@gmail.com</i>	<i>[Signature]</i>
2. <i>KOUAKOU KOVABIO NAROU</i>	<i>AGENT</i>	<i>TICLU</i>	<i>0709834460</i>	<i>narcobebete@gmail.com</i>	<i>[Signature]</i>
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)

**FICHE THEMATIQUE DE COLLECTE DE DONNEES SUR LES ASPECTS SOCIOECONOMIQUES PAR WAYPOINT –
PROJET DE CONSTRUCTION D'UNE ZONE ÉCONOMIQUE INDUSTRIELLE (ZEI) DE 429 HA QUI FAIT PARTIE DE LA
ZEI PK24 D'AKOUCPE-ZEUDJI DE 940 HA, DANS LE DISTRICT AUTONOME D'ABIDJAN, CÔTE D'IVOIRE**

Village	Type de structure de Santé (Hôpital, Centre de Santé, pharmacie, etc.)	Nom	Coordonnées	Photo
Akoupé- Zeudji	Centre de santé urbain (CSU)	Centre de Santé Urbain d'Akoupé/Anyama	Latitude :5 ;28 ;45 ;45.4 078 Longitude :4 ;9 ;18.4078	
Allokoi	Centre de santé urbain (CSU)	Centre de Santé Urbain d'Allokoi	Latitude :5 ;23 ;47.8569 Longitude :4 ;8 ;45.0606	
Adonkoi I	Centre de santé Urbain	Centre de santé Urbain d'Attinguié	En attente de la consultation à Attinguié	En attente de la consultation à Attinguié

<p>Angueded ou village</p>	<p>Centre de santé urbain (CSU)</p>	<p>Centre de Santé Urbain de Songon</p>	<p>Latitude : 5°19'6.63" Longitude : 4°12'8.81"</p>	
<p>V2 Palmafrique</p>	<p>Infirmierie</p>	<p>Infirmierie du village V2 Palmafrique</p>	<p>Latitude : 5 ; 26 ; 20.4724 Longitude : 4 ; 7 ; 40.5915</p>	

<p>Abadjin-Kouté</p>	<p>Centre de santé urbain (CSU)</p>	<p>Centre de Santé Urbain de Songon</p>	<p>Latitude : 5°19'6.63" Longitude : 4°12'8.81"</p>	
----------------------	-------------------------------------	---	---	---

Projet de construction d'une Zone Économique Industrielle 429

Qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan.

Compte rendu de la visite de site avec le village d'Abadjin-Kouté

CONTEXTE

L'An deux mil Vingt-deux, le Jeudi 1er Décembre de 10H30 à 10H49 minutes, a eu lieu une visite de site avec la chefferie d'Abadjin-Kouté, la représentante du cabinet Enval et les représentantes d promoteur Arise dans le cadre de l'Etude d'Impact Environnemental et Social du Projet de construction d'une zone Economique Industrielle 429 qui fait partir de la ZEI PK 24 d'Akoupé-Zeudji de 940ha, dans le District Autonome d'Abidjan (voir la liste de présence en annexe).

En effet, lors de la consultation communautaire avec le village, la chefferie réclamait des parcelles au niveau de la zone Industrielle et la détention d'un champ d'hévéa géré par une coopérative. Suite à ces informations, une visite de site a été initié par les cabinets Enval et ERM afin d'éclairer la lanterne du promoteur et du cabinet.

L'objectif était de :

- confirmer l'existence de champs d'hévéas appartenant au village d'Abadjin-Kouté
- Délimiter la parcelle du village
- procéder à une identification des Paps.

Déroulement de la visite de site

A notre arrivée sur le site, nous nous sommes rendus dans les locaux d'ARISE afin de situer l'emplacement des ou de la parcelle du village sur la carte. Il en est ressorti que la parcelle qu'ils avaient en leur possession a été cédé à SAPH en son temps. Du coup, il n'a pas été nécessaire de faire la visite de site. Car cette parcelle n'existe plus et SAPH a racheté leur parcelle qui ne se trouve pas dans le domaine concédé à ARISE par l'Etat de Côte d'Ivoire.

Le village avait signé un partenariat avec TRCI afin de lui céder leur parcelle

Leur parcelle selon le plan de la Zone Industrielle transmis par la SOGEDI se trouve du côté bas avant la société Mipa.

Les représentantes d'Arise ont souhaité que la chefferie de leur transmettre leur carte pour des questions historiques.





	ENREGISTREMENT	ENR 01 RH	
	LISTE DE PRESENCE	Version : 00	
		23/09/2019	
		Créé le 19/09/19	1/1

1. OBJET : (cochez la case correspondante)

- comité de pilotage
 Visite visite de site.....préciser le nom de l'entreprise)
- Audit (interne ou externe à préciser)
 autre (préciser):.....

DATE : 01/12/2019 DEPARTEMENT : ABIDJAN LIEU : ZIPK24 HEURE DEBUT : 14h30 HEURE FIN : 16h45

2. THEME(S) ABORDE(S)

- 2.1. présentation du contexte
- 2.2. ERIS
- 2.3. Recueil d'informations

3. PARTICIPANTS

Nom & prénoms	Fonction	Structure	Contact	Email	Visa
1. <u>DANTO BADJE G.</u>	<u>co P. Foncier</u>	<u>ABADIA-KOITE</u>	<u>0707098787</u>	<u>danto48ga@gmail.com</u>	<u>GD</u>
2. <u>KUZA MOBIL Francis</u>	<u>Tot Foncier</u>	<u>Abidjan-Koite</u>	<u>010636782</u>	<u>mobilo.francis@yahoo.fr</u>	<u>GD</u>
3. <u>BOLI CARYLE</u>	<u>Planq. Traine</u>	<u>ARISE</u>	<u>0595000008</u>	<u>caryle.boli@arise.net</u>	<u>GD</u>
4. <u>ATTA LARISSA</u>	<u>Intefab Manager</u>	<u>ARISE</u>	<u>0595005235</u>	<u>larissa-atta@arise.net</u>	<u>GD</u>
5. <u>LATTOPIE CARRINE</u>	<u>Consultante Sociologue</u>	<u>enval</u>	<u>0128325372</u>	<u>latterapie@yopoo.fr</u>	<u>GD</u>
6.					
7.					
8.					
9.					
10.					

(Veuillez joindre cette fiche au compte rendu s'il en existe)



APPENDIX H BACKGROUND INFORMATION DOCUMENT (BID)

Présentation du Projet de Conception, Construction et Gestion d'une Zone Economique et Industrielle de 429 Ha au sein de la ZI Akoupé-Zeudji (PK24).



Ce document

Ce document est un support de présentation du Projet de Conception, Construction et Gestion d'une Zone Economique et Industrielle de 429 Ha. (le « Projet" ou la "ZEI") qui fait partie de la zone industrielle PK24 de 940 ha d'Akoupé-Zeudji dans le District Autonome d'Abidjan en Côte d'Ivoire (dénommé "PK24").

Ce support de présentation doit permettre de renseigner les discussions avec les autorités et les parties prenantes parties prenantes clé du Projet lors de l'Etude d'Impact Environnementale et Sociale (EIES) du Projet.

Ce document a été préparé par ARISE, en charge du développement de la conception/ingénierie et gestion du Projet, avec l'appui d'ERM et ENVAL.

Contexte du Projet

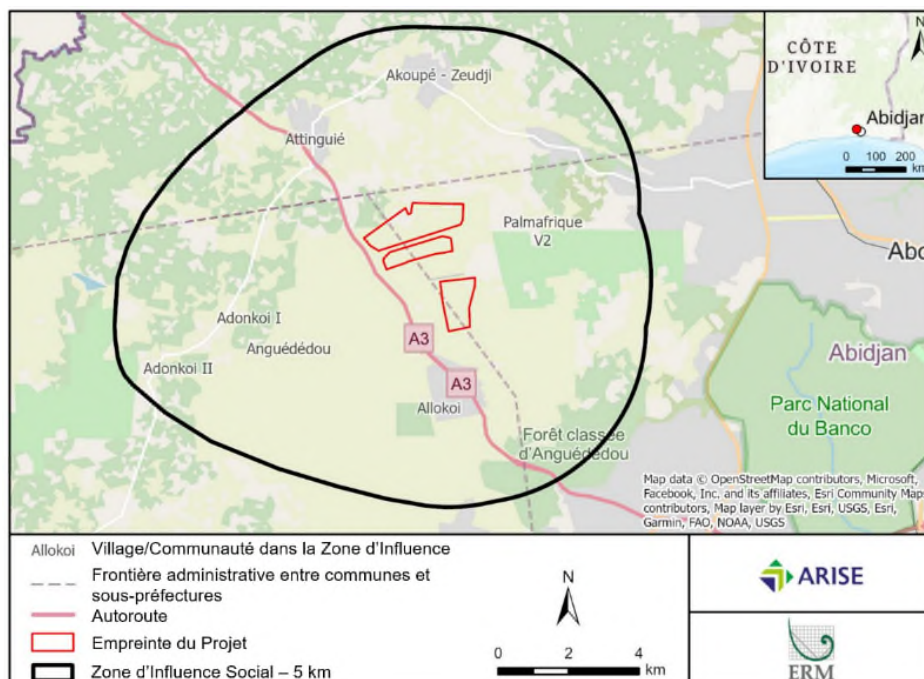
Arise Ivoire est un groupe ayant développé une expertise dans la conception, le financement, la construction et la gestion des environnements industriels en Afrique, en apportant des solutions pour la croissance et la transformation économique des pays partenaires.

Le Ministre du Commerce et de l'Industrie de Côte d'Ivoire a conclu un partenariat Public-Privé avec l'Agence pour la Gestion et le Développement des Infrastructures Industrielles (AGEDI) et l'ARISE en 2020.

L'objectif de ce partenariat est le présent Projet, c'est-à-dire l'aménagement de plusieurs parcelles au sein du PK24 d'une superficie totale de 429 ha.



La zone industrielle sera constituée d'industries de Transformation et de Substitution visant à augmenter la valeur ajoutée agricole et industrielle produite sur le territoire national et diminuer la dépendance vis-à-vis des importations.



Le Projet

Arise Ivoire, entité locale d'ARISE a été mandaté pour réaliser la conception/ingénierie et gestion d'une Zone Économique Industrielle (ZEI) de 429 ha qui fait partie de la zone industrielle PK24 de 940 ha d'Akoupé-Zeudji dans le District Autonome d'Abidjan en Côte d'Ivoire.

Le projet vise à renforcer les productions locales, transformant ainsi les produits de base et les services logistiques locaux en biens et produits exportables. Le projet devrait avoir la capacité d'accueillir jusqu'à 100 entreprises locataires.

La ZEI est principalement destinée à assurer la création massive d'emplois et à développer les activités industrielles à forte valeur ajoutée pour l'économie nationale, et favorisera également les résultats suivants :

- le développement d'infrastructures industrielles compétitives dans le pays pour la transformation des principaux produits agricoles ivoiriens ; et
- la substitution des biens importés par des produits issus des industries locales installées dans la ZEI.

Arise Ivoire s'est vu attribuer 429 ha de terrain pour le développement des infrastructures de base (telles que les usines standard, les entrepôts, les bâtiments administratifs, les centres logistiques et de stationnement, les bâtiments commerciaux, les réseaux routiers internes, le drainage et les égouts, etc.) et préparera tous les services publics, afin d'accueillir les unités industrielles et entreprises.

En ce sens, ARISE gèrera le parc industriel au sein duquel chacune des unités industrielles aura la charge de la construction de l'infrastructure spéciale requise en fonction de la conception spécifique de son projet et d'obtenir les permis environnementaux et les approbations nécessaires, ainsi que de l'exploitation de sa propre installation.

Étapes et Activités de clés

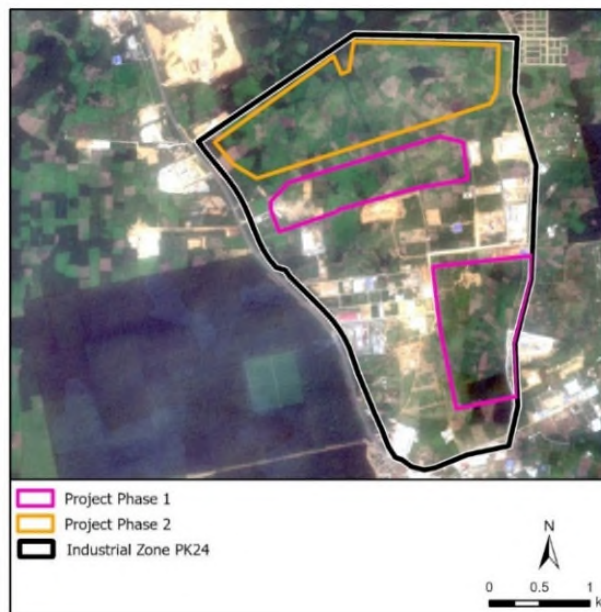
1. Étape de Planification

2. Étape de Construction (2 Phases) :

Le rôle d'ARISE est de conceptualiser la ZEI, construire les infrastructures de base, assurer la gestion, réaliser la maintenance et promouvoir la zone auprès des investisseurs. Les travaux de construction pour établir les infrastructures essentielles comprendront :

- Dévégétalisations et enlèvement de la terre végétale ;
- Le nivellement de la surface du terrain, le déblaiement et le remblayage ;
- Construction de routes sur le site et les systèmes de drainage ;
- Construction de systèmes d'égouts et d'approvisionnement en eau ;
- Construction de la distribution électrique ;
- Construction d'une installation de traitement des eaux usées, d'une station d'épuration des eaux usées et d'une station de pompage ; et
- Construction des bâtiments

Il est prévu que la Phase 1 de construction démarre en 2023, et la Phase 2 démarre en 2025 ; chaque phase a une durée de 24 mois.



3. Étape d'Exploitation et Maintenance.

ARISE sera responsable de l'exploitation et de l'entretien de l'infrastructure de base (l'approvisionnement en eau, les égouts/la station d'épuration, l'approvisionnement en gaz, l'énergie électrique, le stockage du carburant, entretien des routes, etc.)

Risques et impacts potentiels

L'EIES permettra d'identifier et de caractériser les impacts environnementaux et sociaux du Projet, ainsi que d'établir un ensemble de mesures qui permettront d'éviter, réduire ou compenser les impacts identifiés :

- Développement économique régional pour le remplacement direct des industries importatrices et le renforcement de la production locale, et la transformation des produits de base et services locaux en biens exportables ;
- Impact positif sur l'emploi, l'économie et le développement local. Attraction de la main d'œuvre et l'amélioration des conditions de vie à travers l'achat de biens et de services ;
- Impact négatif sur la santé communautaire à cause du bruit et vibrations, poussière, déchets, l'augmentation du trafic, la perturbation des infrastructures et des services publics et des situations accidentelles et d'urgence potentielles ;
- Perte de la terre, des moyens de subsistance et de revenus pour les ménages affectés ;
- Impact négatif sur la biodiversité, par les perturbations directes (ex : bruit, poussière) et par la dégradation globale de leur milieu de vie ;
- La qualité et disponibilité des eaux de surface et souterraines peuvent être affectées par d'éventuels déchets inattendus ;
- La dégradation, imperméabilisation, compactage et érosion du sol liés aux activités de construction, altérant le drainage naturel de la zone ;
- Impact négatif sur les éventuels patrimoines culturels matériels et immatériels qui seraient identifiés lors de l'enquête

Pour plus d'informations, réclamations ou griefs sur le Projet de construction d'une Zone Économique Industrielle (ZEI) de 429 ha qui fait partie de la ZEI PK24 d'Akoupé-Zeudji de 940 ha, veuillez contacter :

- **Larissa Atta** (zic.abidjan@arisenet.com) - Responsable de l'Interface chez ARISE
- **Gédéon Savané** (b.savane@enval-group.com) – Responsable des opérations chez ENVAL

APPENDIX I LABORATORY WATER ANALYSIS RESULTS

RAPPORT D'ESSAI N° 3958.22

Client demandeur	CABINET ENVAL
Lieu de prélèvement	ARISE / ZONE INDUSTRIELLE (ATTINGUE)
Coordonnées du client	09859028/beh@enval-group.com
Référence(s) commande	2358/22, 6766/22, 6767/22, 6768/22, 6769/22
Interlocuteur	Beh Diarrassaouba

Nature échantillon(s): EAU SOUTERRAINE , EAU DE SURFACE
Usage: ETATS DES LIEUX DES EAUX DE LA ZI
Prélèvement effectué par: ENVAL LABORATOIRE
Méthode de prélèvement: AUX SOINS DE NOS PRELEVEURS
Ecart par rapport à la méthode: -
Transport effectué par: ENVAL LABORATOIRE
Lieu analyse: ENVAL LABORATOIRE
Date et heure de reception: 16/12/2022 16:37:52
Quantité: 10
Observations: RAS

Code client	Nature	Date de prélèvement	Condition de stockage	Température (°C)
FORAGE 1	EAU SOUTERRAINE	09/12/2022 10:12	Refrigéré	5
POINT A6 RENCONTRE GOBOUET- SEUMAN	EAU DE SURFACE	13/12/2022 16:57	Refrigéré	5
FORAGE 2	EAU SOUTERRAINE	09/12/2022 14:15	Refrigéré	5
FORAGE 3	EAU SOUTERRAINE	09/12/2022 17:10	Refrigéré	5
FORAGE 4	EAU SOUTERRAINE	09/12/2022 17:42	Refrigéré	5
POINT A1	EAU DE SURFACE	12/12/2022 11:05	Refrigéré	5
POINT A2	EAU DE SURFACE	12/12/2022 14:25	Refrigéré	5
POINT A3	EAU DE SURFACE	12/12/2022 16:05	Refrigéré	5
POINT A4	EAU DE SURFACE	12/12/2022 17:18	Refrigéré	5
POINT DE REJET- EAU STAGNANTE	EAU DE SURFACE	13/12/2022 10:50	Refrigéré	5

I- ANALYSES PHYSICO CHIMIQUES

1- Résultats d'analyses

Date début d'analyse: 09/12/2022

Date fin d'analyse: 23/12/2022

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Norme OMS 2017 (eau)
				FORAGE 1	FORAGE 2	
Dureté totale (THT)	21/12/2022	NF T 90-003:1984	°F	1,1	1,2	
Alcalinité (TAC)	21/12/2022	NF EN ISO 9963-1:1996	°F	< 2	< 2	
Ammonium	22/12/2022	NF T 90-15-2:2000	mgNH ₄ /L	<0,1	0,1	0,5
Bicarbonates*	21/12/2022	NF EN ISO 9963-2:1996	mgHCO ₃ /L	5	5	
Chlorures	21/12/2022	NF ISO 9297:2000	mgCl/L	< 5	< 5	250
Conductivité électrique 25°C*+	09/12/2022	NF EN 27888:1994	uS/cm	53,4 à 24,2°C	86,8 à 24,2°C	
Cyanures totaux*	22/12/2022	NF T 90-107:2002	mg/L	<0,020	<0,020	
DCO	21/12/2022	NF T90-101: Février 2001	mgO ₂ /L	<30	<30	
MES	-	NF EN 872:2005	mg/L	<2	<2	
Nitrates*	23/12/2022	ISO 7890-3:1988	mgNO ₃ /L	3,276	3,365	50
Nitrites*	23/12/2022	NF EN 26777:1993	mgN/L	0,0127	0,0098	3
Ortho phosphate	21/12/2022	NF EN ISO 6878:2005	mgPO ₄ /L	< 0,123	< 0,123	
Oxygène dissous (mg/L)*	09/12/2022	NF EN ISO 5814 Octobre 2012	mg/L	5,0	4,8	
pH/Température*+	09/12/2022	ISO 10523:2008		4,6 à 24,4°C	4,7 à 23,9°C	6,5-8,5
Phosphore total	23/12/2022	NF EN ISO 6878:2005	mgP/L	<0,04	1,00	
Sulfures*	22/12/2022	Méthode Hach	mg/L	<0,020	<0,020	
TSS-Solides en Suspension totale	-	NF EN 872:2005	mg/L	3	4	

*: paramètre non accrédité, +: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Norme OMS 2017 (eau)
				FORAGE 3	FORAGE 4	
Dureté totale (THT)	21/12/2022	NF T 90-003:1984	°F	1 3	0,8	
Alcalinité (TAC)	21/12/2022	NF EN ISO 9963-1:1996	°F	< 2	< 2	
Ammonium	22/12/2022	NF T 90-15-2:2000	mgNH ₄ /L	<0,1	<0,1	0,5
Bicarbonates*	21/12/2022	NF EN ISO 9963-2:1996	mgHCO ₃ /L	4	5	

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Norme OMS 2017 (eau)
				FORAGE 3	FORAGE 4	
Chlorures	21/12/2022	NF ISO 9297:2000	mgCl/L	< 5	< 5	250
Conductivité électrique 25°C*+	09/12/2022	NF EN 27888:1994	uS/cm	109,8 à 23,8°C	59,7 à 23,9°C	
Cyanures totaux*	22/12/2022	NF T 90-107:2002	mg/L	<0,020	<0,020	
DCO	21/12/2022	NF T90-101: Février 2001	mgO2/L	<30	<30	
MES	-	NF EN 872:2005	mg/L	<2	<2	
Nitrates*	23/12/2022	ISO 7890-3:1988	mgNO3/L	3,187	3,099	50
Nitrites*	23/12/2022	NF EN 26777:1993	mgN/L	0,0100	0,0106	3
Ortho phosphate	21/12/2022	NF EN ISO 6878:2005	mgPO4/L	< 0,123	< 0,123	
Oxygène dissous (mg/L)*	09/12/2022	NF EN ISO 5814 Octobre 2012	mg/L	4,9	5,1	
pH/Température*+	09/12/2022	ISO 10523:2008		4,7 à 23,9°C	4,6 à 24,1°C	6,5-8,5
Phosphore total	23/12/2022	NF EN ISO 6878:2005	mgP/L	0,88	0,41	
Sulfures*	22/12/2022	Méthode Hach	mg/L	<0,020	<0,020	
TSS-Solides en Suspension totale	-	NF EN 872:2005	mg/L	6	5	

*: paramètre non accrédité, ++ Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Arrêté N°0168/MSHP/MINEF du 03/08/2020 Eau de surf
				POINT A6 RENCONTRE GOBOUET-SEUMAN	POINT A1	
Dureté totale (THT)	21/12/2022	NF T 90-003:1984	°F	1,4	50	
Alcalinité (TAC)	21/12/2022	NF EN ISO 9963-1:1996	°F	1,5	16,5	
Ammonium	22/12/2022	NF T 90-15-2:2000	mgNH4/L	0,19	3,2	4
Bicarbonates*	21/12/2022	NF EN ISO 9963-2:1996	mgHCO3/L	18	201	
Chlorures	21/12/2022	NF ISO 9297:2000	mgCl/L	7,43	122,9	200
Conductivité électrique 25°C*+	09/12/2022	NF EN 27888:1994	uS/cm	58,7 à 23,9°C	1014 à 23,8°C	
Cyanures totaux*	22/12/2022	NF T 90-107:2002	mg/L	0,029	0,659	0,05

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Arrêté N°0168/MSHP/ MINEF du 03/08/2020 Eau de surf
				POINT A6 RENCONTRE GOBOUET-SEUMAN	POINT A1	
DCO	21/12/2022	NF T90-101: Février 2001	mgO2/L	<30	950,5	
MES	-	NF EN 872:2005	mg/L	<2	52,22	
Nitrates*	23/12/2022	ISO 7890-3:1988	mgNO3/L	1,062	2,125	50-100
Nitrites*	23/12/2022	NF EN 26777:1993	mgN/L	0,1200	0,0326	
Ortho phosphate	21/12/2022	NF EN ISO 6878:2005	mgPO4/L	< 0,123	2,37	
Oxygène dissous (mg/L)*	09/12/2022	NF EN ISO 5814 Octobre 2012	mg/L	4,1	0,1	
pH/Température*+	09/12/2022	ISO 10523:2008		6,4 à 23,9°C	5,3 à 24,1°C	
Phosphore total	23/12/2022	NF EN ISO 6878:2005	mgP/L	4,00	2,75	
Sulfures*	22/12/2022	Méthode Hach	mg/L	<0,020	0,927	
TSS-Solides en Suspension totale	-	NF EN 872:2005	mg/L	8	122	

*: paramètre non accrédité, ++: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Arrêté N°0168/MSHP/
				POINT A2	POINT A3	
Dureté totale (THT)	21/12/2022	NF T 90-003:1984	°F	12,4	11,2	
Alcalinité (TAC)	21/12/2022	NF EN ISO 9963-1:1996	°F	10	8,5	
Ammonium	22/12/2022	NF T 90-15-2:2000	mgNH4/L	2,05	3,6	4
Bicarbonates*	21/12/2022	NF EN ISO 9963-2:1996	mgHCO3/L	122	104	
Chlorures	21/12/2022	NF ISO 9297:2000	mgCl/L	5,40	25,66	200
Conductivité électrique 25°C*+	09/12/2022	NF EN 27888:1994	uS/cm	328 à 24,1°C	314 à 23,7°C	
Cyanures totaux*	22/12/2022	NF T 90-107:2002	mg/L	0,034	0,159	0,05
DCO	21/12/2022	NF T90-101: Février 2001	mgO2/L	61,78	213,86	
MES	-	NF EN 872:2005	mg/L	236,50	711,43	
Nitrates*	23/12/2022	ISO 7890-3:1988	mgNO3/L	0,576	20,364	50-100

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Arrêté N°0168/MSHP/
				POINT A2	POINT A3	
Nitrites*	23/12/2022	NF EN 26777:1993	mgN/L	0,2131	0,1680	
Ortho phosphate	21/12/2022	NF EN ISO 6878:2005	mgPO4/L	0,19	2,37	
Oxygène dissous (mg/L)*	09/12/2022	NF EN ISO 5814 Octobre 2012	mg/L	0,6	0,1	
pH/Température*+	09/12/2022	ISO 10523:2008		6,2 à 24,2°C	7,1 à 24,0°C	
Phosphore total	23/12/2022	NF EN ISO 6878:2005	mgP/L	1,75	7,25	
Sulfures*	22/12/2022	Méthode Hach	mg/L	0,355	21,041	
TSS-Solides en Suspension totale	-	NF EN 872:2005	mg/L	418	1892	

*: paramètre non accrédité, +: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Arrêté N°0168/MSHP/ MINEF du 03/08/2020 Eau
				POINT A4	POINT DE REJET-EAU STAGNANTE	
Dureté totale (THT)	21/12/2022	NF T 90-003:1984	°F	8,8	9,2	
Alcalinité (TAC)	21/12/2022	NF EN ISO 9963-1:1996	°F	14	9	
Ammonium	22/12/2022	NF T 90-15-2:2000	mgNH4/L	3,35	<0,1	4
Bicarbonates*	21/12/2022	NF EN ISO 9963-2:1996	mgHCO3/L	171	110	
Chlorures	21/12/2022	NF ISO 9297:2000	mgCl/L	35,79	6,08	200
Conductivité électrique 25°C*+	09/12/2022	NF EN 27888:1994	uS/cm	382 à 23,9°C	1070 à 24,4°C	
Cyanures totaux*	22/12/2022	NF T 90-107:2002	mg/L	0,251	0,062	0,05
DCO	21/12/2022	NF T90-101: Février 2001	mgO2/L	237,62	42,77	
MES	-	NF EN 872:2005	mg/L	467,00	57,25	
Nitrates*	23/12/2022	ISO 7890-3:1988	mgNO3/L	13,281	1,151	50-100
Nitrites*	23/12/2022	NF EN 26777:1993	mgN/L	0,0996	0,0868	
Ortho phosphate	21/12/2022	NF EN ISO 6878:2005	mgPO4/L	1,23	1,84	
Oxygène dissous (mg/L)*	09/12/2022	NF EN ISO 5814 Octobre 2012	mg/L	0,0	0,4	

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Arrêté N°0168/MSHP/MINEF du 03/08/2020 Eau
				POINT A4	POINT DE REJET-EAU STAGNANTE	
pH/Température*+	09/12/2022	ISO 10523:2008		6,9 à 24,2°C	6,2 à 24,6°C	
Phosphore total	23/12/2022	NF EN ISO 6878:2005	mgP/L	2,25	3,25	
Sulfures*	22/12/2022	Méthode Hach	mg/L	1,610	0,094	
TSS-Solides en Suspension totale	-	NF EN 872:2005	mg/L	960	150	

*: paramètre non accrédité, +: Paramètre analysé sur le terrain

2- Commentaires*

Les échantillons d'eau de forage analysés sont tous acides comparativement aux spécifications de la norme OMS 2017.

Les échantillons d'eau de surface des points A1, A3, A4 et du point de rejet eau stagnante analysés présentent des teneurs en cyanure supérieures à la valeur limite comparativement aux spécifications de l'arrêté N°0168/MSHP/MINEF du 03/08/2020.

II- ANALYSES MÉTAUX LOURDS

1- Résultats d'analyses

Date début d'analyse: 29/12/2022

Date fin d'analyse: 29/12/2022

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Norme OMS version 2017
				FORAGE 1	FORAGE 2	
Aluminium	29/12/2022	ISO 11885:2007	µg/L	93,0	74,4	200
Arsenic	29/12/2022	ISO 11885:2007	µg/L	<5	<5	10
Baryum	29/12/2022	ISO 11885:2007	µg/L	<50	<50	1300
Bore	29/12/2022	ISO 11885:2007	µg/L	<40	<40	2400
Cadmium	29/12/2022	ISO 11885:2007	µg/L	<0,5	<0,5	3
Calcium	29/12/2022	ISO 11885:2007	mg/L	2,41	3,01	200
Chrome	29/12/2022	ISO 11885:2007	µg/L	<5	<5	50
Fer	29/12/2022	ISO 11885:2007	µg/L	<50	<50	300
Magnésium	29/12/2022	ISO 11885:2007	mg/L	0,621	0,558	

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Norme OMS version 2017
				FORAGE 1	FORAGE 2	
Mercuré*	29/12/2022	NF EN ISO 17852 : 2008	µg/L	<0,1	<0,1	6
Plomb	29/12/2022	ISO 11885: 2007	µg/L	<5	<5	10
Potassium	29/12/2022	ISO 11885:2007	mg/L	6,02	1,25	
Sélénium	29/12/2022	ISO 11885:2007	µg/L	<5	<5	40
Sodium	29/12/2022	ISO 11885: 2007	mg/L	4,64	3,66	200
Soufre*	29/12/2022	ISO 11885: 2007	µg/L	<5	<5	
Zinc	29/12/2022	ISO 11885: 2007	µg/L	<50	<50	

*: paramètre non accrédité, +: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Norme OMS version 2017
				FORAGE 3	FORAGE 4	
Aluminium	29/12/2022	ISO 11885: 2007	µg/L	38,2	27,4	200
Arsenic	29/12/2022	ISO 11885: 2007	µg/L	<5	<5	10
Baryum	29/12/2022	ISO 11885: 2007	µg/L	<50	<50	1300
Bore	29/12/2022	ISO 11885: 2007	µg/L	42,8	<40	2400
Cadmium	29/12/2022	ISO 11885: 2007	µg/L	<0,5	<0,5	3
Calcium	29/12/2022	ISO 11885:2007	mg/L	4,20	4,48	200
Chrome	29/12/2022	ISO 11885:2007	µg/L	<5	<5	50
Fer	29/12/2022	ISO 11885:2007	µg/L	<50	<50	300
Magnésium	29/12/2022	ISO 11885:2007	mg/L	0,608	0,508	
Mercuré*	29/12/2022	NF EN ISO 17852 : 2008	µg/L	<0,1	<0,1	6
Plomb	29/12/2022	ISO 11885: 2007	µg/L	<5	<5	10
Potassium	29/12/2022	ISO 11885:2007	mg/L	2,12	1,02	
Sélénium	29/12/2022	ISO 11885:2007	µg/L	<5	<5	40
Sodium	29/12/2022	ISO 11885: 2007	mg/L	5,06	8,83	200

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Norme OMS version 2017
				FORAGE 3	FORAGE 4	
Soufre*	29/12/2022	ISO 11885:2007	µg/L	<5	<5	
Zinc	29/12/2022	ISO 11885:2007	µg/L	<50	<50	

*: paramètre non accrédité, +: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Norme OMS version 2017
				POINT A6 RENCONTRE GOBOUET-SEUMAN	POINT A1	
Aluminium	29/12/2022	ISO 11885:2007	µg/L	238	125	200
Arsenic	29/12/2022	ISO 11885:2007	µg/L	<5	5,08	10
Baryum	29/12/2022	ISO 11885:2007	µg/L	<50	<50	1300
Bore	29/12/2022	ISO 11885:2007	µg/L	<40	<40	2400
Cadmium	29/12/2022	ISO 11885:2007	µg/L	<0,5	<0,5	3
Calcium	29/12/2022	ISO 11885:2007	mg/L	8,04	32,6	200
Chrome	29/12/2022	ISO 11885:2007	µg/L	<5	<5	50
Fer	29/12/2022	ISO 11885:2007	µg/L	823	2020	300
Magnésium	29/12/2022	ISO 11885:2007	mg/L	0,603	2,71	
Mercure*	29/12/2022	NF EN ISO 17852 : 2008	µg/L	<0,1	<0,1	6
Plomb	29/12/2022	ISO 11885:2007	µg/L	8,06	<5	10
Potassium	29/12/2022	ISO 11885:2007	mg/L	15,2	9,10	
Sélénium	29/12/2022	ISO 11885:2007	µg/L	<5	<5	40
Sodium	29/12/2022	ISO 11885:2007	mg/L	10,6	192	200
Soufre*	29/12/2022	ISO 11885:2007	µg/L	<5	<5	
Zinc	29/12/2022	ISO 11885:2007	µg/L	<50	<50	

*: paramètre non accrédité, +: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Norme OMS version 2017
				POINT A2	POINT A3	
Aluminium	29/12/2022	ISO 11885:2007	µg/L	604	1040	200
Arsenic	29/12/2022	ISO 11885:2007	µg/L	<5	7,03	10
Baryum	29/12/2022	ISO 11885:2007	µg/L	58,6	<50	1300
Bore	29/12/2022	ISO 11885:2007	µg/L	<40	71,4	2400
Cadmium	29/12/2022	ISO 11885:2007	µg/L	<0,5	<0,5	3
Calcium	29/12/2022	ISO 11885:2007	mg/L	103	34,9	200
Chrome	29/12/2022	ISO 11885:2007	µg/L	<5	<5	50
Fer	29/12/2022	ISO 11885:2007	µg/L	1439	2306	300
Magnésium	29/12/2022	ISO 11885:2007	mg/L	1,43	1,35	
Mercure*	29/12/2022	NF EN ISO 17852 : 2008	µg/L	<0,1	<0,1	6
Plomb	29/12/2022	ISO 11885:2007	µg/L	11,2	12,7	10
Potassium	29/12/2022	ISO 11885:2007	mg/L	10,3	9,50	
Sélénium	29/12/2022	ISO 11885:2007	µg/L	<5	<5	40
Sodium	29/12/2022	ISO 11885:2007	mg/L	12,5	27,5	200
Soufre*	29/12/2022	ISO 11885:2007	µg/L	<5	<5	
Zinc	29/12/2022	ISO 11885:2007	µg/L	<50	<50	

*: paramètre non accrédité, ++: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Norme OMS version 2017
				POINT A4	POINT DE REJET-EAU STAGNANTE	
Aluminium	29/12/2022	ISO 11885:2007	µg/L	46,4	1084	200
Arsenic	29/12/2022	ISO 11885:2007	µg/L	<5	6,63	10
Baryum	29/12/2022	ISO 11885:2007	µg/L	<50	<50	1300
Bore	29/12/2022	ISO 11885:2007	µg/L	94,8	<40	2400
Cadmium	29/12/2022	ISO 11885:2007	µg/L	<0,5	<0,5	3

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Norme OMS version 2017
				POINT A4	POINT DE REJET-EAU STAGNANTE	
Calcium	29/12/2022	ISO 11885:2007	mg/L	29,0	23,2	200
Chrome	29/12/2022	ISO 11885:2007	µg/L	<5	<5	50
Fer	29/12/2022	ISO 11885:2007	µg/L	1130	2489	300
Magnésium	29/12/2022	ISO 11885:2007	mg/L	1,17	0,785	
Mercure*	29/12/2022	NF EN ISO 17852 : 2008	µg/L	<0,1	<0,1	6
Plomb	29/12/2022	ISO 11885:2007	µg/L	<5	9,25	10
Potassium	29/12/2022	ISO 11885:2007	mg/L	12,8	15,2	
Sélénium	29/12/2022	ISO 11885:2007	µg/L	<5	<5	40
Sodium	29/12/2022	ISO 11885:2007	mg/L	36,6	12,7	200
Soufre*	29/12/2022	ISO 11885:2007	µg/L	<5	<5	
Zinc	29/12/2022	ISO 11885:2007	µg/L	<50	<50	

*: paramètre non accrédité, ++: Paramètre analysé sur le terrain

2- Commentaires*

Les résultats montrent que les eaux de surface sont chargées en fer et en aluminium avec des teneurs dépassant la limite fixée par la norme OMS 2017 relative à la qualité de l'eau potable destinée à la consommation humaine.

Par contre, tous les échantillons d'eau de forage sont conformes à ladite norme.

III- ANALYSES CHIMIE ORGANIQUE

1- Résultats d'analyses

Date début d'analyse: 21/12/2022

Date fin d'analyse: 23/12/2022

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS	
				FORAGE 1	FORAGE 2
Hydrocarbures totaux*	21/12/2022	NF T90-202:1979	mg/L	0,01	0,01
Phénols totaux*	21/12/2022	ISO 8165-2:1999	µg/L	0,01	0,01

*: paramètre non accrédité, ++: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS	
				FORAGE 3	FORAGE 4
Hydrocarbures totaux*	21/12/2022	NF T90-202:1979	mg/L	0,01	0,01
Phénols totaux*	21/12/2022	ISO 8165-2:1999	µg/L	0,01	0,01

*: paramètre non accrédité, +: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS	
				POINT A6 RENCONTRE GOBOUET-SEUMAN	POINT A1
Hydrocarbures totaux*	21/12/2022	NF T90-202:1979	mg/L	0,01	0,01
Phénols totaux*	21/12/2022	ISO 8165-2:1999	µg/L	0,01	0,01

*: paramètre non accrédité, +: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS	
				POINT A2	POINT A3
Hydrocarbures totaux*	21/12/2022	NF T90-202:1979	mg/L	0,01	0,01
Phénols totaux*	21/12/2022	ISO 8165-2:1999	µg/L	0,01	0,01

*: paramètre non accrédité, +: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS	
				POINT A4	POINT DE REJET-EAU STAGNANTE
Hydrocarbures totaux*	21/12/2022	NF T90-202:1979	mg/L	0,01	0,01
Phénols totaux*	21/12/2022	ISO 8165-2:1999	µg/L	0,01	0,01

*: paramètre non accrédité, +: Paramètre analysé sur le terrain

IV- ANALYSES MICROBIOLOGIQUES

1- Résultats d'analyses

Date début d'analyse: 10/12/2022

Date fin d'analyse: 12/12/2022

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Directives UE/OMS
				FORAGE 1	FORAGE 2	
Bactéries coliformes	10/12/2022	ISO 9308-1:2014	UFC/10 0mL	N'=90	<1	0
Coliformes thermotolérants*	10/12/2022	Adaptation ISO 9308-1:2014	UFC/10 0mL	N'=80	<1	0

N: cas général

*: paramètre non accrédité, ++: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Directives UE/OMS
				FORAGE 3	FORAGE 4	
Bactéries coliformes	10/12/2022	ISO 9308-1: 2014	UFC/10 0mL	N=13	<1	0
Coliformes thermotolérants*	10/12/2022	Adaptation ISO 9308-1:2014	UFC/10 0mL	N=12	<1	0

N: cas général

*: paramètre non accrédité, ++: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Directives UE/OMS
				POINT A6 RENCONTRE GOBOUET-SEUMAN	POINT A1	
Bactéries coliformes	10/12/2022	ISO 9308-1: 2014	UFC/10 0mL	N=53	>80000	0
Coliformes thermotolérants*	10/12/2022	Adaptation ISO 9308-1:2014	UFC/10 0mL	N=46	>80000	0

N: cas général

*: paramètre non accrédité, ++: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Directives UE/OMS
				POINT A2	POINT A3	
Bactéries coliformes	10/12/2022	ISO 9308-1: 2014	UFC/10 0mL	>80000	>80000	0
Coliformes thermotolérants*	10/12/2022	Adaptation ISO 9308-1:2014	UFC/10 0mL	>80000	>80000	0

N: cas général

*: paramètre non accrédité, ++: Paramètre analysé sur le terrain

PARAMETRES	DATE EXECUTION	METHODE	UNITE	REFERENCES ECHANTILLONS/RESULTATS		DIRECTIVES Directives UE/OMS
				POINT A4	POINT DE REJET-EAU STAGNANTE	
Bactéries coliformes	10/12/2022	ISO 9308-1: 2014	UFC/10 0mL	>80000	N'=17000	0
Coliformes thermotolérants*	10/12/2022	Adaptation ISO 9308-1:2014	UFC/g	>80000	N'=290	0

N: cas général

*: paramètre non accrédité, ++: Paramètre analysé sur le terrain

2- Commentaires*

Les résultats d'analyse indiquent que les échantillons d'eau soumis à essai sont de qualité microbiologique satisfaisante au regard des critères OMS/UE. Seul l'échantillon FORAGE 2 est de qualité microbiologique satisfaisante.

Nous soussignés, déclarons que le travail décrit dans ce rapport a été exécuté sous notre supervision, et que le rapport est le reflet précis et fidèle des résultats obtenus sur les échantillons.

Abidjan, le 03/01/2023

RESPONSABLE PHYSICO CHIMIE	RESPONSABLE MÉTAUX LOURDS	RESPONSABLE CHIMIE ORGANIQUE	RESPONSABLE MICROBIOLOGIE
			
AKPANGNI TIOMAN HIPPOLYTE	KOUAME ARSÈNE	KOUAME ARSÈNE	SORO ABDOULAYE

APPENDIX J CLIMATE CHANGE RISK ASSESSMENT

1. INTRODUCTION

1.1 Overview

This Appendix is the Physical Climate Change Risk Assessment (CCRA) for the Environmental and Social Impact Assessment (ESIA) of a 429 ha Industrial Economic Zone, Akoupé-Zeudji Industrial Zone PK24 in Abidjan Autonomous District, Côte d'Ivoire (hereafter referred as the “Project”).

The CCRA constitutes a supplemental study as part of the Environmental and Social Impact Assessment (ESIA) package, required by international standards. Financing for the Project is projected to be provided from international lenders and therefore the Project must comply with IFC Performance Standards and Equator Principles 4 (EP4).

2. METHODOLOGY

2.1 Four-Step Assessment Process

This Physical CCRA is undertaken through four key steps, as seen in Figure 2-1 below:

- Steps 1-3 (red) involve the screening of construction and operations associated with the Project – through the collection and analysis of climate data and climate trends. This has already been done within the scoping report and ESIA report.
- Step 4 involves the identification and review of any hazards which are identified as posing potentially material risks to the construction and operations associated with the Project.

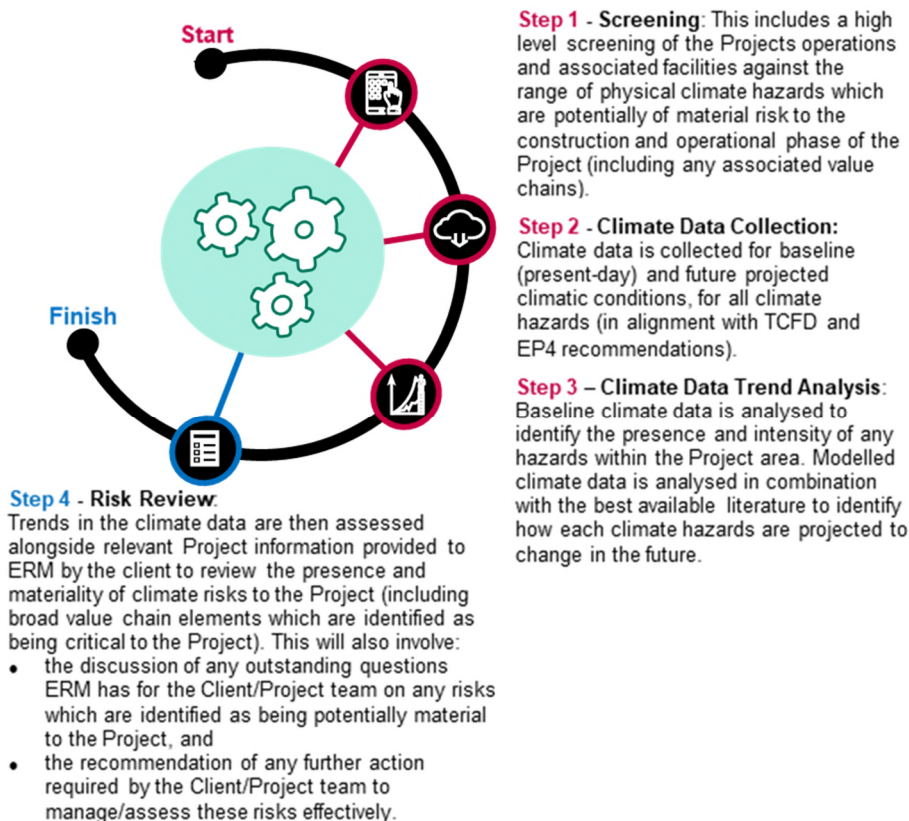


Figure 2-1 Key Steps of the Physical Climate Change Risk Analysis (CCRA)

Source: ERM 2022

2.2 Steps 1-3: Approach for the Preliminary CCRA – Physical Risk Screening

The preliminary CCRA for physical risk screening identifies potential key physical risks of the Project during the construction and operation phases. It consists of an initial screening exercise to identify any potentially material issues to carry further in the assessment. This is based on the knowledge the consultant has of the Project, as well as additional research using publicly available sources. The first step of this physical risk screening involves an identification of the physical climate risks the Project is exposed to. Then in the second step, data on these baseline risks and their future projections is collected, before thirdly, this baseline and projections data is analysed, namely how the identified physical risks may change in the Project area in different future scenarios. As previously mentioned, this was done, along with a high-level risk review, in the scoping report² conducted prior to this assessment. In the subsequent sub-chapter, the last and fourth step, the risk review, is explained in more detail. The baseline and projections data used to inform these steps is described in the following sections.

2.2.1 Climate Data and Projections

As previously mentioned, Step 4 undertakes a review of the climate data which has been collected for each hazard included within this assessment. This includes the analysis of baseline and future projected trends for each climate hazard included within this assessment, a review of the potential materiality of any risk present under baseline conditions, and how this risk could potentially change in the future – according to the key trends in the climate data. Baseline and future projected trends in climate hazards will be assessed using a mixture of the climate data collected (see section 3), and qualitative research which has been collated from industry-leading, academic, and governmental sources.

2.2.2 Material Climate Hazards

The Abidjan Autonomous District (AAD) is exposed to various natural hazards³. The risk thresholds are ranked according to their return period, meaning how likely the chance is that this risk will occur in a certain time period. For example, a high risk is attributed if the hazard may occur at least once or more in the next decade, a medium risk at least once in 50 years and low risk once in 100 years.

Table 2-1 Relevant Climate Hazards in the AAD

Hazard Level Valuation	Risk Return Period
High	1 in 10 years chance
Medium	1 in 50 years chance
Low	1 in 100 years or Low occurrence
Very low	>1 in 1000 years

Source: *thinkhazard.org*

2.2.3 Climate Projections

Material climate hazards collected by ERM are reviewed against future projections or ERM's thresholds (Table 2-2), which provide an indication how each hazard's occurrence and intensity could potentially change under future projected conditions.

² ERM (2022) Scoping report of a 429 ha Industrial Economic Zone, Akoupé-Zeudji Industrial Zone PK24 in Abidjan Autonomous District, Côte d'Ivoire

³ Think Hazard (2022) Available at: [Think Hazard - District autonome de Abidjan](#)

Table 2-2 ERM Climate Change Threshold Definitions

Threshold	Description
Projections Thresholds	
Significant Increase	The projected increase in this variable has the potential to result in a <i>significant increase</i> in the intensity and/or presence of a hazard at the location of the asset being assessed.
Moderate Increase	The projected increase in this variable has the potential to result in a <i>moderate increase</i> in the intensity and/or presence of a hazard at the location of the asset being assessed.
Minimal Change	The projected change in this climate variable is expected to have a <i>minimal impact</i> on the intensity and/or presence of a hazard at the location of the asset being assessed.
Moderate Decrease	The projected decrease in this variable has the potential to result in a <i>moderate decrease</i> in the intensity and/or presence of a hazard at the location of the asset being assessed.
Significant Decrease	The projected decrease in this variable has the potential to result in a <i>significant decrease</i> in the intensity and/or presence of a hazard at the location of the asset being assessed.

2.2.4 Projections Data

ERM uses climate projections data when assessing the impact of climate change on climate hazards for any given location. The Intergovernmental Panel on Climate Change (IPCC)'s Sixth Assessment Report⁴ open-source data from the Coupled Model Inter-comparison Project (CMIP6)⁵ is the source of data used in the Inter-Sectoral Impact Model Intercomparison Project (ISIMIP) and basis for many climate change prediction models to assess these future changes.

The IPCC model provides a series of 'Shared Socioeconomic Pathways' (SSPs) which are a series of scenarios that vary depending on the basis of the projected greenhouse gas (GHG) emissions over the next century. With increasing projected GHG emissions, there is the potential for a change in the climate conditions at a given area (e.g., increased, or decreased precipitation and/or temperatures).

The TCFD recommends that two scenarios are used for this type of assessment, one for a future projected 'business as usual' (BAU) climate change scenario (SSP 5-8.5) and an additional scenario reflecting a lower emissions outcome. For such assessments, ERM utilises the SSP 2-4.5, as this aligns most closely with the goals of the Paris Agreement. Table 2-3 lists the two SSPs used for this assessment.

Table 2-3 Representative Concentration Pathways

SSPs	Scenario
SSP 2-4.5 (medium-low emission)	Intermediate pathway requiring that CO ₂ emissions start slowly declining by approximately 2030 to reach roughly half of the levels of 2050 by 2100. ⁶
SSP 5-8.5 (BAU - high emission)	Pathway where emissions continue to rise throughout the 21st century (business-as-usual – BAU - scenario), suggesting society does not make efforts to reduce GHG emissions and therefore reflects a worst-case scenario for the physical impacts of climate change.

⁴ IPCC, 2022

⁵ World Bank Knowledge Portal 2022

⁶ Many plant and animal species will be unable to adapt to the effects of SSP 4.5 and higher SSPs.

2.2.5 Time Periods included within this CCRA

The construction period is assumed to take a total of 48 months, including preparatory works, and to be completed by 2027. The operation lifetime of the IEZ is expected to be of minimum 30 years, thus the periods of 2030 and 2060 are chosen.

The initial time period of 2030 is used to assess the potential change in climate risk during the initial operational period of the IEZ. On the other hand, the time period 2060 is chosen as by this time the minimum lifespan will have elapsed and the IEZ may need major re-building, or re-construction of some installations. The selected time horizon also reflects the technical view of the ERM assessment team in terms of identifying future time periods, which provide the best insight to climate-related trends.

2.2.6 Limitations of Climate Data

This CCRA provides a relatively high-level review of the possible risks posed to the Project. As a result, this CCRA has been generated with the aims of identifying hazards and areas of the Project design that ERM believes should be assessed further, as planning and design associated with the Project progresses. However, there are also a number of limitations that accompany this type of approach, which should be recognised when interpreting the results of this assessment. These include:

- This is a fully desk-based assessment, meaning that ERM's climate change team has not directly conducted any on-site visits, and thus assessments of the exposure of each asset are based upon information provided by field studies from ERM and ENVAL experts (water, biodiversity, social, etc.), ARISE, online sources, and GIS maps.
- This assessment uses future projected outputs from Global Climate Models (GCMs) and not from statistically downscaled data, meaning that modelled results are not regionally downscaled and validated for the specific Project location in Côte d'Ivoire.
- This CCRA is based on numerous assumptions, projections, and models; although the methodology is aligned with the current best-practice, the whole process is subject to a substantial range of uncertainty.
- This high-level, screening exercise should not be considered as a credit risk assessment associated with the proposed financing facility.

Step 1-3 have been originally conducted during the scoping phase and according to ERM there are no changes in the outcome based on further information provided in the ESIA (refer to ESIA Report, section 5.3.1). The results from these steps can be found at each respective climate hazard chapter under the first sub-section "Climate Data and Trends".

2.3 Step 4: Approach for the Climate Hazard and Risk Review

Step 4 undertakes a review of how the assessed physical climate risks and their future changes might impact the Project in its construction and operation phases. The risk review specifically assesses how the different physical climate risks will affect key components, or risk areas, of the Project (including broad value chain elements critical to the Project). During this fourth step ERM asked the Project design team specific questions and to provide some recommendations on further actions to be implemented by the Project team to mitigate the main physical climate risks. The approach for this is described in more detail in the following paragraphs. Subsequently, an identification of any items of potential risk to different risk areas of the Project is provided. Such a risk valuation is based upon the collected climate data and the exposure of the assets and operations included as a part of the Project. The risk materiality categories (Table 2-5) are assigned separately for the construction and operational phases of the Project. As the construction phase of the Project is expected to be completed before 2027, risk materiality categories are assigned to the construction phase based upon the baseline level of risks. The operational lifetime of the IEZ is expected to end around 2060, for the

purpose of this CCRA – whilst recognising that the true lifetime of the IEZ will extend beyond this period.

Table 2-4 Definitions of the Potential Risk Areas to each Phase of the Project

Project phase	Risk area	Definition and extent of the risk area
Construction & Operations phase	Site personnel	Any site personnel working on-site during the construction and/or operational phase of the Project.
	Access roads	Access roads which are expected to be used during the constructions and/or operational phase of the Project.
	Equipment and machinery	Equipment/machinery which is expected to be used during the construction of the Project.
	Public utilities	Public utilities (electricity supply, wastewater supply)
Operations	Infrastructure	Physical installations part of the IEZ.

Table 2-5 Risk Materiality Categories and Associated Definitions

Risk Materiality Category	Definition
Unlikely material	<p>A risk item is considered as being unlikely to cause material impacts to the Project, under baseline or future projected climate conditions.</p> <p>Impacts with this category (such as those related to operational, financial, or other types of impacts) are unlikely to be material. This means that, for example, (a) operational impacts could be expected to be short term, impacting a limited proportion of the overall asset and its operations, or (b) financial impacts would be expected to be minimal relative to the Project's overall revenue and/or costs.</p>
Likely material	<p>Low to moderate</p> <p>This risk item is considered as being likely to have the potential to cause low-moderately material impacts to the Project, under baseline or future projected climate conditions.</p> <p>Impacts with this category (such as those related to operational, financial, or other types of impacts) are likely to be of low-moderate materiality. This means that, for example, (a) operational impacts could be expected to be short to medium term, impacting a low to moderate proportion of the overall asset and its operations, or (b) financial impacts would be expected to be small to moderate relative to the project's overall revenue and/or costs.</p>
	<p>High</p> <p>This risk item is considered as being likely to have the potential to cause highly material impacts to the Project, under baseline or future projected climate conditions.</p> <p>Impacts associated with this category (such as those related to operational, financial, or other types of impacts) are likely to be of high materiality. This means that, for example, (a) operational impacts could be expected to be medium to long term, impacting a low to moderate proportion of the overall asset and its operations, or (b) financial impacts would be expected to be moderate to high relative to the project's overall revenue and/or costs.</p>

For risk areas that are categorised as 'Likely Material', a series of targeted questions are presented to the Project team. These questions reflect any outstanding queries in relation to the risk area and specific hazard being reviewed. Responses are used to determine the need for further actions for each identified risk, which could identify either:

- The potential value in undertaking the further assessment of specific climate hazards/risks (which would likely exceed the scope of this assessment); or
- Suggest that no further assessment is required (if risks are already being managed effectively).

These recommended next steps are outlined and explained further in Table 2-6 below.

Table 2-6 Next Step Categories and their Associated Definitions

Next Steps Category	Definition
No further action required	ERM does not identify any further action being required by ARISE.
Potential value in assessing the risk further	ERM identifies that a specific climate hazard/risk item could provide additional value to the Project team if assessed in further detail. This would typically be recommended for risk items which are classified as being 'Likely Material – Low to Moderate'.
High value in assessing the risk further	ERM identifies that a specific climate hazard/risk item could provide a large amount of additional value to the Project team if assessed in further detail. This would typically be recommended for risk items which are classified as being 'Likely Material – High'.

3. CLIMATE HAZARD AND RISK REVIEW

The Climate Hazard and Risk Review is based on the results of the ESIA Report section 5.2.1.1 Climate Change Risks. Relevant climate change hazards in the Abidjan Autonomous District are outlined in Table 3-1 and discussed in further details in sections below.

Table 3-1 Relevant Climate Hazards in Abidjan District

Hazard	Hazard Level Valuation ⁷
Flooding (River flood)	High
Wildfire	High
Extreme heat	Medium
Flooding (Urban flood)	Low
Landslides	Low
Water scarcity	Very low

Source: ThinkHazard, 2022

3.1 Flooding

ThinkHazard⁷ classifies floods into three categories: river floods, urban floods and coastal floods. The IEZ is located some 10 km from the Ebrié Lagoon and about 15 km from the ocean. Hence the baseline physical risk of coastal flooding according to Think Hazard⁷ can be assessed as negligible and this risk is therefore not featured in Table 3-1. In the following section 3.1.1, the risks of river floods and urban floods are examined.

3.1.1 Climate Data and Trends

3.1.1.1 River (Fluvial) Flooding⁸

Rainfall in Abidjan occurs during the two rainy seasons from April to July and September to November⁹. Particularly during these periods, river flooding is classified as a high risk in the Abidjan Autonomous District. From April to June the heaviest rain of the year occurs, while slightly less rain falls during September to November.

River flooding is currently ranked as a high risk and is likely to increase moderately in the future, as shown in the below Table 3-2.

⁷ Think Hazard (2022) Available at: [Think Hazard - District autonome de Abidjan](#)

⁸ Fluvial flooding is defined by the overtopping of a river networks natural, or artificial, riverbanks. This typically occurs when a river networks flow exceeds the capacity of its stream channels.

⁹ Climate-data.org (2022). Abidjan Climate Data. Available at: [Abidjan climate: Average Temperature, weather by month, Abidjan water temperature - Climate-Data.org](#)

Table 3-2 Baseline and Projected Fluvial Flooding Data

Asset and Distance to Hazard	Baseline		Projections Change in maximum daily river discharge and 5-day rainfall				Preliminary Risk Rating	
	Hazard Level	Risk Return Period	Year	2030		2060		
			Parameter	SSP 2-4.5	SSP 5-8.5	SSP 2-4.5		SSP 5-8.5
IEZ	High	1 in 10 years chance	Change in maximum of daily river discharge in % ¹⁰	+2.0	+5.2	+4.6	+7.9	Moderate increase
			Change in maximum 5-day Rainfall in mm ¹¹	-0.4	+0.1	+4.7	+7.3	Moderate increase

By 2060, the change in maximum daily river discharge is projected to increase by 4.6 % and 7.9 % in the SSP 2-4.5 and 5-8.5 scenarios respectively (see Table 3-2). For 2030 the change in maximum 5-day rainfall decreases minimally by 0.4 mm for SSP 2-4.5 and increases minimally by 0.1 mm for SSP 5-8.5. The change in maximum 5-day rainfall increases moderately in both scenario projections for 2060 compared to the baseline.

3.1.1.2 Urban Flooding¹²

Urban flooding poses a relatively low risk under present baseline conditions¹³. Baseline and projected urban flooding data is presented in Table 3-3.

Table 3-3 Baseline and Projected Urban Flooding Data

Asset	Baseline		Projections Change in maximum daily rainfall				Preliminary Risk Rating	
	Hazard Level	Risk Return Period	Year	2030		2060		
			Parameter	SSP 2-4.5	SSP 5-8.5	SSP 2-4.5		SSP 5-8.5
IEZ	Low	1 in 100 years chance	Change in maximum daily Rainfall (Ivory Coast) in mm ¹⁴	+0.5	+1.6	+2.1	+4.2	Moderate increase

Although daily precipitation is only projected to increase moderately by 2060, as seen in Table 3-3, it may pose a risk in urban and industrial areas due to the sealing of surfaces. The population of Abidjan is projected to double by 2050¹⁵. Thus, an increase in urbanisation may increase the risk of urban flooding in the future due to a greater built-up area decreasing water percolation into the subsurface and increasing runoff.

¹⁰ Climate Analytics (2021) available at: [Climate Analytics — Climate impact explorer](#)

¹¹ World Bank Knowledge Portal (2022). Available at: [Cote d'Ivoire - Mean Projections Expert | Climate Change Knowledge Portal \(worldbank.org\)](#)

¹² Urban (Pluvial) flooding is defined as a rapid onset flooding event that occurs with little to no advanced warning, usually as a result of intense rainfall over a small area. This differs from river (fluvial) flooding as this type of flooding is not associated with the overtopping of riverbanks.

¹³ Think Hazard (2022) Available at: [Think Hazard - District autonome de Abidjan](#)

¹⁴ World Bank Knowledge Portal (2022). Available at: [Cote d'Ivoire - Mean Projections Expert | Climate Change Knowledge Portal \(worldbank.org\)](#)

¹⁵ OpenCities project (2021) available at:

<https://opencitiesproject.org/abidjan/#:~:text=According%20to%20the%20last%20census,the%20country%27s%20future%20economic%20growth.>

3.1.2 Risk Review

Potential climate hazards associated with flooding and extreme rainfall events have been identified under baseline and future projected climatic conditions. The risk valuation has also taken into account the IEZ exposure to the risk of flooding in regard to the distance to water bodies.

The IEZ is exposed to the risk of river flooding and urban flooding. The Project is located next to a small stream. With increasing site development including PK24 and local towns there will be less infiltration through rainfall thus, the peak flow volume may increase in the future. PK24 stormwater drainage which the Project will be connected to will be following standard good practice international guidelines. The risk of urban flooding is classified as low nonetheless, the projected population growth of Abidjan could increase the risk of urban flooding.

Table 3-4 lists and describes the potential risk areas and their materiality to the Project, associated with flooding and extreme rainfall.

Table 3-4 Potential Risk Areas and Materiality – Associated with Flooding and Extreme Rainfall

Risk area	Description of potential risks and materiality to the IEZ	Project phase and risk materiality category	
		Construction (Baseline)	Operations (2060)
Site personnel CONSTRUCTION OPERATION	Flood waters may cause working conditions to become unsafe for on-site personnel during the construction and operational phase of the Project – and may remain unsafe for short to medium periods of time if areas which are inundated by flood waters are not managed effectively. Similarly, during the operational phase of the Project, staff are likely to be returning to repair any damage incurred during flooding events, potentially increasing their exposure to this hazard. These impacts likely have the potential to cause disruption to the construction of the IEZ. However, the small stream located next to the Project is unlikely to cause disruptions during construction due to its volume.	Unlikely Material	Unlikely Material
Access roads, Infrastructure CONSTRUCTION OPERATION	Flooding has the potential to cause both long and short-term damage to the IEZ structure and access road surfaces, and therefore poses a potential material risk to the construction and operational phase of the Project. Risks include: delays to the construction of the Project, damaged infrastructure from floods, inundated access roads preventing personnel accessing the construction site/workplace and other damage caused to various aspects of the Project. Damage could occur as freshwater (associated with fluvial) flooding can detrimentally influence the durability of the IEZ, particularly if water is left standing for prolonged periods of time. This has	Likely Material – Low - Moderate	Likely Material – Low - Moderate

Risk area	Description of potential risks and materiality to the IEZ	Project phase and risk materiality category	
		Construction (Baseline)	Operations (2060)
	the potential to cause cracks and potholes ¹⁶ . Flood waters may also strip the concrete of its binder, leaving it more vulnerable to natural corrosion, and potentially forming depressions within the concrete structure of the buildings or access roads as cars travel over them ¹⁶ . Damaged or deformed infrastructure and road surfaces (during both phases of the Project) may require ongoing maintenance and repairs and as a result increased capital and operational expenditure. Similarly, personnel could be exposed to unsafe driving conditions during flood events and may experience delays during periods of time when the building and road damage are being repaired. The impacts specified above may cause low-moderate material impacts during the construction and operational phase of the Project.		
Public utilities CONSTRUCTION OPERATION	Infrastructure supporting the Project (e.g., electricity and quarries) could become flooded and damaged, disrupting the supply of energy and quarried materials to the Project. For example, during flood events quarries or substations could become inundated with flood water or electricity pylons could become damaged resulting in the loss of sufficient tension within overhead lines (and in extreme causing pylon collapse). These impacts have the potential to disrupt the supply of materials for use in construction during the construction phase of the Project and disrupt the supply of electricity to construction and operational phases of the Project.	Likely Material – Low - Moderate	Likely Material – Low - Moderate
Equipment and machinery CONSTRUCTION OPERATION	Although many items of construction equipment and machinery are built to be water resistant (e.g., resistant to precipitation), there are many items of machinery which could be vulnerable to damage if left outdoors and submerged by flood waters during the construction and operational phase of the Project. Damage could include the corrosion of electrical components and connections, leading to intermittent but persistent electrical issues on-site. This could result in a required increase in capital expenditure – related to the replacement of damaged equipment – and increased operational expenditure – linked to	Unlikely Material	Unlikely Material

¹⁶ Lu, D., Tighe, S.L. and Xie, W.C., 2020. Impact of flood hazards on pavement performance. *International Journal of Pavement Engineering*, 21(6), pp.746-752.

Risk area	Description of potential risks and materiality to the IEZ	Project phase and risk materiality category	
		Construction (Baseline)	Operations (2060)
	<p>disruptions caused to the construction of the IEZ included as a part of the Project.</p> <p>During operations, equipment used outside is designed for outdoor usage.</p> <p>Impacts associated with this risk area can be mitigated by certain measures, e.g., ensuring proper storage, ensuring equipment is not left outdoors during heavy rainfall events, replacing faulty/damaged equipment. Accordingly, the potential for material impacts associated with this risk area are categorised as being unlikely.</p>		

3.1.3 Next Steps

This section provides an overview of ERM’s recommended next steps for all risk areas which have been identified within the ‘Risk review’ section as being ‘Likely Material’ in the Table 3-4 above. The recommended next steps are based upon the responses provided to ERM by the ARISE/Project team, the risk review undertaken for each risk area and ERM’s technical review and input to the assessment.

Table 3-5 Next Steps for Each Risk Area Associated with Flooding

Risk areas	Next Steps	Justification
<p>Access roads, Infrastructure, Public utilities</p> <p>CONSTRUCTION OPERATIONS</p>	<p>No further action required</p>	<p>Flooding poses a number of potentially material risks to both phases of the Project. The Project Developer (i.e., ARISE) has corporate guidelines to develop a Contingency and Emergency Response Management Plan (ERP), that will be adapted to the Project to include appropriate prevention measures and to assist in the management of risks in case of a flooding event. The onboarding process with the operating industries will include providing an example for an ERP.</p> <p>It is ERM’s assumption that this ERP will provide targeted guidance for construction and operation site personnel to follow in the event of flooding – and therefore no further action is required.</p>

Risk areas	Next Steps	Justification
		<p>During operations floods may affect access roads to the IEZ, as well as electricity lines from the grid supplying these. Even short-term losses of power might hamper operations.</p> <p>No specific emergency measures in case of access road blockage or power losses are included in the ARISE's EPRP, however, such risks are more significant in the operation stage of the Project. Thus, it is recommended that ARISE puts in place emergency risk mitigations measures during the operation phase. These may include having back-up diesel generators in place at the IEZ in case of power failures.</p>

3.2 Wildfires

3.2.1 Climate Data and Trends

Climate data for wildfires is provided in the Table 3-6 below. This climate data is provided in baseline and future projected climatic conditions.

Table 3-6 Baseline and Projected Wildfires Climate Data

Baseline		Projections					Preliminary Risk Rating
Hazard Level	Risk Return Period	Change in land exposed to fire					
		Year	2030		2060		
		Parameter	SSP 2-4.5	SSP 5-8.5	SSP 2-4.5	SSP 5-8.5	
High	1 in 2 years chance of wildfire prone weather	Land fraction exposed to Wildfires in % ¹⁷	-0.01	-0.01	-0.01	0.01	Minimal change

The risk of wildfires is high and material in the Project area, due to dry and hot weather conditions, variance in rainfall, soil moisture and available fuel (vegetation). The land fraction exposed to wildfires in Abidjan, which is the annual aggregate of land area burnt at least once a year by wildfires, is projected to change minimally in the future. Therefore, the risk of wildfires is considered as the most significant risk to this IEZ Project.

Direct heat, flames, dust, and smoke (including smoke produced by wildfires which do not directly intersect the Project area) associated with wildfires have the potential to put the H&S of personnel working on-site during the construction and operational phase of the Project at risk (e.g., direct heat, flames, and reduced air quality at and around the Projects area impacting the H&S of site personnel through smoke inhalation). These impacts have the potential to: cause a delay in the completed construction of the Project, cause a delay in the repair/maintenance during wildfire events and cause reputational and financial damages if on-site personnel are injured as a result of wildfire activity whilst working.

Furthermore, direct heat and flames associated with wildfires have the potential to cause physical damage to road surfaces and infrastructure of the park (including melting and deformation as described

¹⁷ Climate Analytics (2022) Climate Impact Explorer. Available at: <http://climate-impact-explorer.climateanalytics.org/impacts/?region=CIV&indicator=lew&scenario=rcp85&subregion=CI.AB&warmingLevel=1.5&temporalAveraging=annual&spatialWeighting=area&compareYear=2030>

for extreme heat). Similarly, wildfires have the potential to damage surrounding vegetation and result indirect in the obstruction and blockage of facilities and their access roads for personnel.

3.2.2 Risk Review

A series of potential risks to the Project associated with wildfires have been identified under baseline and future projected climatic conditions. These are described in the Table 3-7.

Table 3-7 Potential Risk Areas and Materiality – Associated with Wildfires

Risk area	Description of potential risks and materiality to the Project	Project phase and risk materiality category	
		Construction (Baseline)	Operation (2040)
<p>Site personnel</p> <p>CONSTRUCTION OPERATIONS</p>	<p>Direct heat, flames, dust, and smoke (including smoke produced by wildfires which do not directly intersect the Project area) associated with wildfires have the potential to put the H&S of personnel working on-site during the construction and operational phase of the Project at risk (e.g., direct heat, flames, and reduced air quality at and around the Projects area impacting the H&S of site personnel through smoke inhalation). These impacts have the potential to: cause a delay in the completed construction of the Project, cause a delay in the repair/maintenance during wildfire events and cause reputational and financial damages if on-site personnel are injured as a result of wildfire activity whilst working.</p> <p>During the operational phase of the Project fewer personnel will be required on-site compared to the construction phase, and during wildfire activity, any activities on-site can be postponed preserving staff H&S. ERM does not expect significant changes in wildfire activity in this area. Accordingly, the risk of material impacts from wildfire activity to the operational phase of the project is considered unlikely.</p>	<p>Likely Material – Low - Moderate</p>	<p>Unlikely Material</p>
<p>Access roads, Equipment and machinery, Infrastructure</p> <p>CONSTRUCTION OPERATIONS</p>	<p>Direct heat and flames associated with wildfires have the potential to cause physical damage to road surfaces and infrastructure (including melting and deformation as described for extreme heat). Similarly, wildfires have the potential to damage surrounding vegetation and result indirect in the obstruction and blockage of facilities and their access roads for personnel. Both of these impacts have the potential to cause a delay in the initial construction of the Project and reduce on-site personnel's ability to access during the construction and operational phase of the Project. These impacts are therefore categorised as</p>	<p>Likely Material – Low - Moderate</p>	<p>Likely Material – Low - Moderate</p>

Risk area	Description of potential risks and materiality to the Project	Project phase and risk materiality category	
		Construction (Baseline)	Operation (2040)
	having the potential to be 'Likely Material – Low to Moderate' to both phases of the Project.		

3.2.3 Next Steps

This section provides an overview of ERM's recommended next steps for all risk areas which have been identified within the 'Risk review' section as being 'Likely Material'. The recommended next steps within this section are based upon the responses provided to ERM by the ARISE/Project team, the risk review undertaken for each risk area and ERM's technical review and input to the assessment.

Table 3-8 Recommended Next Steps for each Risk Area

Risk areas	Next Steps	Justification
Site personnel CONSTRUCTION	Integrate wildfires into the EPRP	The Project is located in a country that historically experiences wildfires ¹⁸ . Based on the preliminary CCRA physical risk screening, the ARISE designers need to integrate wildfire risk into the Emergency Preparedness and Response Plan (EPRP).
Access roads, Infrastructure CONSTRUCTION OPERATIONS	Potential value in assessing the risk further	ERM identifies potential value in further assessing the range of impacts and risks to the Project associated with wildfire activity. For example, this could include the completion of a specific fire risk assessment (including the review of nearby land cover, the presence of relevant and susceptible ground materials/wildfire fuel and the potential for wildfire activity in close proximity to the Project). Emergency communications response liaisons may also be set up with the local fire department.

3.3 Extreme Heat

3.3.1 Climate Data and Trends

Climate data for extreme heat in the AAD region is provided in the Table 3-9. This climate data is provided in baseline and future projected climatic conditions.

¹⁸ Soro et al., (2021) Available at : [Identified main fire hotspots and seasons in Cote d'Ivoire \(West Africa\) using MODIS fire data \(scielo.org.za\)](https://doi.org/10.1007/978-94-007-7000-0_10)

Table 3-9 Baseline and Projected Extreme Heat Climate Data

Asset	Baseline		Projections				Preliminary Risk Rating	
	Hazard Level	Risk Return Period	Change in temperature and labour productivity due to heat stress					
			Year	2030		2060		
Parameter	SSP 2-4.5	SSP 5-8.5	SSP 2-4.5	SSP 5-8.5				
IEZ	Medium	1 in 20 years chance	Change in Air temperature in °C ¹⁹	+0.9	+1.0	+1.6	+2.3	Moderate change
			Change in labour productivity due to heat stress in % ¹⁹	-5.4	-6.2	-10.3	-14.8	Moderate change
			Days with >35°C ²⁰	0	0	0	0.1	Minimal change

Côte d’Ivoire is located within tropical West Africa along the Gulf of Guinea coast. In the Abidjan Autonomous District, maximum air temperatures frequently exceed 30 °C²¹, especially during the months from November to May. Average temperatures, however, remain between 25 °C and 29 °C throughout the year²¹.

The modelled climate data collected by ERM shows that maximum air temperatures are projected to change moderately under all future projected timeframes and SSP’s – which will keep the risk of extreme heat as a medium hazard for the Project.

Extreme heat is ranked as a medium hazard by ThinkHazard²², and air temperature is projected to increase by 1.6 °C and 2.3 °C in 2060 for both SSP 2-4.5 and 5-8.5 scenarios respectively. Labour productivity due to heat stress is projected to decrease by 4-8 %. The modelled climate data collected by ERM shows that maximum air temperatures are projected to only change minimally under all future projected timeframes and SSP’s – which will keep the risk of extreme heat as a medium hazard for the Project. Currently, there are no hot days (>35°C) in the AAD and there is only a minimal projected to increase to 0.1 days per year in 2060 (SSP 5-8.5). Nevertheless, as mentioned above maximum air temperatures in the AAD regularly go above 30 °C.

Increased temperatures during the construction phase may result in overheating of vehicles and equipment. High temperatures will lead to heat stress if employees work for long periods during extreme heat. Personnel could experience dehydration, heat stress, heat exhaustion and in extreme cases, heat stroke. Extreme heat events could also mean that personnel require additional breaks, water, and access to shaded areas – potentially reducing their operational efficiency during the course of the Project. For the construction phase of the Project, extreme heat has the potential to cause delays for construction activities

Extreme high temperatures can cause access road surface material to soften and expand, which can result in rutting and potholes. Depending on the material and colour that the facility is built from, as well as the surrounding air temperature, the road surfaces can reach high enough temperatures where they begin to soften and, in some cases, begin to deform, melt, and become damaged.

Extreme heat in both the construction and the operating phases can also cause stresses to IEZ infrastructures, such as steel structures through thermal expansion.

¹⁹ Climate Analytics (2021) available at: [Climate Analytics — Climate impact explorer](#)

²⁰ World Bank (2022) [Cote d'Ivoire - Mean Projections | Climate Change Knowledge Portal \(worldbank.org\)](#)

²¹ World Bank (2021), Climate Knowledge Portal. Available at: [Cote d'Ivoire - Summary | Climate Change Knowledge Portal \(worldbank.org\)](#)

²² Think Hazard (2022). Available at: [Think Hazard - Abidjan](#)

3.3.2 Risk Review

A series of potential risks associated with extreme heat to the Project have been identified under baseline and future projected climatic conditions. These are described in Table 3-10 below.

Table 3-10 Potential Risk Areas and Materiality – Associated with Extreme Heat

Risk area	Description of potential risks and materiality to the Project	Project phase and risk materiality category	
		Construction (Baseline)	Operation (2060)
<p>Site personnel</p> <p>CONSTRUCTION OPERATIONS</p>	<p>Extreme heat events have the potential to pose risks to the H&S of the staff and personnel working on-site during the construction. Personnel could experience dehydration, heat stress, heat exhaustion and in extreme cases, heat stroke. Extreme heat events could also mean that personnel require additional breaks, water, and access to shaded areas – potentially reducing their operational efficiency during the course of the Project. For the construction phase of the Project, extreme heat has the potential to cause delays for construction activities. As a result, the ARISE management may want to account for impacts associated with adverse weather conditions associated with extreme heat through the development of an EPRP for the Project. Provided that an EPRP is followed by site personnel, detrimental impacts associated with extreme heat events and site personnel are understood to be ‘Unlikely Material’ to the construction phase of the Project.</p> <p>Although future climate projections indicate an increase in average air temperatures in the Project area, the noted projected increases in temperature are not expected to be large enough to increase the materiality of this climate hazard to the Project. Similarly, it is also understood that less site personnel are required on-site during the operational phase of the Project. Therefore, the risk materiality category assigned to the operational phase of the Project is also ‘Unlikely Material’.</p>	Unlikely Material	Unlikely Material
<p>Access roads, Infrastructure</p> <p>CONSTRUCTION</p>	<p>During extreme heat events, concrete surfaces absorb heat from sunlight. Depending on the material and colour that the facility is built from, as well as the surrounding air temperature, the surfaces can reach high enough temperatures where they begin to soften and, in some cases, begin to deform, melt, and become damaged. It is</p>	Unlikely Material	Unlikely Material

Risk area	Description of potential risks and materiality to the Project	Project phase and risk materiality category	
		Construction (Baseline)	Operation (2060)
	<p>noted that, darker coloured surfaces (e.g., asphalt) experience higher surface temperatures in comparison to lighter-coloured counterparts. This therefore has the potential to increase a surfaces risk from melting and becoming damaged/deformed²³.</p> <p>This poses risks to the construction and to a lesser extent, the operational phase of the Project. If access road surfaces become damaged/deformed, this could hamper construction vehicles and personnel accessing the Project area causing delays in construction. During operation, access to the IEZ by personnel might also be hampered due to the deterioration of access roads caused by extreme heat. During the operation phase of the Project periods of extreme heat might cause damage to infrastructure by overheating and potential thermal expanding of steel infrastructure.</p>		
<p>Equipment, machinery, Public Utilities</p> <p>CONSTRUCTION</p>	<p>During extreme heat events, any construction equipment or supporting infrastructure that is sensitive to high temperatures could be impacted by extreme temperatures (this could be associated with high air or road-surface temperatures) – potentially causing disruptions to the completed construction and maintenance of the Project (e.g. if equipment malfunctions inhibiting the operational efficiency of personnel) and could require increased operational expenditure (e.g. to accommodate increased energy demand for cooling any heat-sensitive equipment). Impacts associated with this risk area are expected to be short-term in nature, and financial impacts are anticipated to be limited in comparison to the Projects overall revenue/costs. Therefore, this risk area categorised as ‘Unlikely Material’.</p>	Unlikely Material	Unlikely Material

3.3.3 Next Steps

This section provides an overview of ERM’s recommended next steps for all risk areas which have been identified within the ‘Risk review’ section as being ‘Likely Material’. The recommended next steps within this section are based upon the responses provided to ERM by the ARISE/Project team, the risk review undertaken for each risk area and ERM’s technical review and input to the assessment.

²³ Kim et al (2019). A case study of environmental characteristics on urban road-surface and air temperatures during heat-wave days in Seoul. Available at: <https://www.tandfonline.com/doi/full/10.1080/16742834.2019.1608791>

As maximum air temperatures within this region of Côte d'Ivoire are projected to only change minimally in the future (up until 2060) the risk of extreme heat to site personnel is considered unlikely, ERM does not identify potential value in assessing this risk further.

3.4 Landslides

3.4.1 Climate Data and Trends

Based upon Think Hazard's valuation²⁴, landslides are characterised as a low risk in the Abidjan Autonomous District. Maximum 5-day precipitation is projected to decrease minimally until 2025 and increase moderately in 2060 in both SSP 2-4.5 and 5-8.5 scenarios respectively (Table 3-11). Thus, the risk of landslides is likely to remain as low over the course of the next decades.

Table 3-11 Baseline and Projected Landslides Climate Data

Asset	Baseline		Projections				Preliminary Risk Rating	
	Hazard Level	Risk Return Period	Change in maximum 5-day Rainfall					
			Year	2030		2060		
			Parameter	SSP 2-4.5	SSP 5-8.5	SSP 2-4.5		SSP 5-8.5
IEZ	Low	1 in 100 years chance	Change in maximum 5-day Rainfall in mm	-0.4	+0.1	+4.7	+7.3	Moderate increase

3.4.2 Risk Review

A series of potential risks to the Project associated with Landslides have been identified under baseline and future projected climatic conditions as outlined within the table below.

Table 3-12 Potential Risk Areas and Materiality – Associated with Landslides

Risk areas	Description of potential risks and materiality to the Project	Project phase and risk materiality category	
		Construction (Baseline)	Operation (2060)
Site personnel CONSTRUCTION OPERATIONS	Although the Project is planned to be built in largely flat areas with the absence of any significant slopes or hills, it is ERM's assumption that the natural topography of the Project areas will be altered during the construction phase of the Project increasing the risk from landslide activity. As a result of the mass movement of sediment during landslide events, working conditions during the construction and operational phase of the Project could become unsafe (e.g., due to landslide activity whilst staff are on-site, due to unstable ground surfaces and damaged equipment).	Unlikely Material	Unlikely Material

²⁴ Think Hazard (2022) Available at: [Think Hazard - District autonome de Abidjan](#)

Risk areas	Description of potential risks and materiality to the Project	Project phase and risk materiality category	
		Construction (Baseline)	Operation (2060)
	Impacts such as those outlined above are identified to have the potential to cause low-moderate material impacts to site personnel during the construction phase of the Project. However, due to low likelihood of the physical risk recurring under baseline and future conditions within the Project area, ERM categorises this risk area as being 'Unlikely Material' in both the construction and operation phases.		
Access roads, Infrastructure CONSTRUCTION OPERATIONS	Landslides have the potential to cause damage to the structural integrity of the Project installations (e.g., mass movement of sediment causing physical damage to structures). Similarly, if access roads become blocked, it may take longer for maintenance staff to actually attend the IEZ or roads for repairs or to remove debris – further increasing this disruption. However, due to low likelihood of the physical risk recurring under baseline and future conditions within the Project area, ERM categorises this risk area as being 'Unlikely Material' in both the construction and operation phases.	Unlikely Material	Unlikely Material
Public utilities CONSTRUCTION OPERATIONS	As a result of the mass movement of sediment during a landslide event, supporting infrastructure could become damaged (e.g., causing physical damage to overhead electricity pylons and over/underground water pipes or to equipment, machinery, and materials). This in turn could disrupt the supply of electricity, water and quarried materials being used during the construction phase of the Project - delaying the completed construction of the Project. Similarly, electricity supply installations may be damaged during operation. However, due to low likelihood of the physical risk recurring under baseline and future conditions within the Project area, ERM categorises this risk area as being 'Unlikely Material' in both the construction and operation phases.	Unlikely Material	Unlikely Material

Given the unlikely material risks to the Project from landslides, no further recommendations are warranted for this topic.

3.5 Water Scarcity

3.5.1 Climate Data and Trends

The Project is located in in a Low-Medium (10-20 %) water stress region – according to the WRI Aqueduct Water Stress tool²⁵. Similarly, Think Hazard²⁶ values this risk as *very low*.

Table 3-13 Baseline and Projected Water Stress Climate Data

Asset	Baseline		Projections Water Stress ²⁷				Preliminary Risk Rating	
	Hazard Level	Risk Return Period	Year	2030		2060		
			Parameter	SSP 2-4.5	SSP 5-8.5	SSP 2-4.5		SSP 5-8.5
IEZ	Very low	1 every 1000 years	Projected change in water stress	Near normal	Near normal	2.8x or greater increase	2.8x or greater increase	<i>Moderate increase</i>

At the Project area, a near normal conditions in water stress are predicted for 2030 while in 2040 a 2.8x or greater increase in water stress in 2060 (see Table 3-13).

3.5.2 Risk Review

A series of potential risks to the Project associated with water scarcity have been identified under baseline and future projected climatic conditions. These are described in the Table 3-14 below.

Table 3-14 Potential Risk Areas and Materiality – Associated with Water Scarcity

Risk area	Description of potential risks and materiality to the Project	Project phase and risk materiality category	
		Construction (Baseline)	Operation (2040)
Site personnel CONSTRUCTION OPERATIONS	Even though the projections for water stress in the region show moderate increase compared to the baseline, materiality is unlikely due to very low baseline hazard level. Especially a lot of drinking water will be needed for workers in the hotter, drier periods of the year, all of which could suffer detrimental impacts during more pronounced spells of water scarcity.	Unlikely Material	Unlikely Material
Equipment and machinery, public utilities	During construction, water scarcity could hamper the effectiveness of machinery and equipment requiring an important amount of cooling and cleaning water. A	Unlikely Material	Unlikely Material

²⁵ WRI (2022). Available at: [Aqueduct Water Risk Atlas \(wri.org\)](https://www.wri.org/aqueduct)

²⁶ Source: Think Hazard (2022). Available at: [Think Hazard - District autonome de Abidjan](https://www.thinkhazard.com/)

²⁷ Percent chance of entering a period of water stress. Water stress occurs when the demand for water exceeds the available amount during a certain period or when poor quality restricts its use.

Risk area	Description of potential risks and materiality to the Project	Project phase and risk materiality category	
		Construction (Baseline)	Operation (2040)
CONSTRUCTION OPERATIONS	<p>great deal of water might also be needed to limit the spread of dust in dry periods during construction.</p> <p>Increasing drought and severe water shortages can potentially render sanitation systems, such as sewerage systems with long pipelines, inoperable.</p>		

Given the unlikely material risks to the Project from water scarcity, no further recommendations are warranted for this topic.

4. SUMMARY AND CONCLUSIONS

There are a range of climate hazards present within proximity of the Project area, posing several types of potential risks with various degrees of materiality (ranging between Very Low and High). This assessment identifies river flooding and wildfires as posing the largest number of potentially material risks to the Project.

A number of other hazards also pose a variety of potentially material risks to the Project, such as extreme heat. However, these are expected to be of a lower materiality to the Project' construction and operational phases when compared with flooding and wildfires.

ARISE will make sure that these key risks of flooding, wildfires and extreme heat are addressed by the Emergency Management Plans in accordance with the ARISE health and safety policy and environmental sustainability policy.

APPENDIX K GREENHOUSE GAS INVENTORY

1. INTRODUCTION

This Appendix is the Greenhouse Gas (GHG) inventory for the Environmental and Social Impact Assessment (ESIA) of a 429 ha Industrial Economic Zone, Akoupé-Zeudji Industrial Zone PK24 in Abidjan Autonomous District, Côte d'Ivoire (hereafter "the Project").

This Greenhouse Gas (GHG) inventory constitutes a supplemental study as part of the Environmental and Social Impact Assessment (ESIA) package, required by International Standards. Financing for the Project is provided from international lenders and therefore the Project must comply with IFC Performance Standards and Equator Principles 4 (EP4) requirements. In light of this, the Project GHG emissions are estimated in this report for the Project construction and operation phases.

The objectives for this assessment are:

- To undertake a GHG inventory of the construction and operational carbon footprint of Scope 1 and 2 emissions of the Project;
- To contextualise annual emissions against international thresholds; and
- To determine whether expected GHG emissions are deemed to be 'significant'.

This GHG inventory report covers specifically the Project-related emissions, meaning ARISE's construction and operation of the basic infrastructure for the Project. At this stage the specific industries (i.e., tenants) that will occupy the IEZ in future are not defined, so there was no assessment conducted of the potential emissions of the GHGs from these industries. Each future tenant will need to obtain their own E&S permits and conduct their own respective GHG inventory assessment, following Ivorian requirements and international standards.

2. RELEVANT APPLICABLE STANDARDS

The following Applicable Standards are relevant for this assessment:

- OECD Common Approaches, 2016;
- IFC Performance Standards, 2012;
- Equator Principles 4, 2020;

In summary, the Applicable Standards require consideration of the GHG emissions (combined Scope 1 and Scope 2 emissions) associated with the Project during its initial design/construction and later operational stages to determine:

- If the GHG emissions of the Project exceed 25,000 tonnes of CO₂ equivalent annually, the client will quantify direct emissions from the facilities owned or controlled within the physical project boundary, as well as indirect emissions associated with the off-site production of energy used by the project¹.
- If the GHG emissions of the Project exceed 100,000 tonnes of CO₂ equivalent annually, then consideration must be given to relevant Climate Transition Risks (as defined by the Task Force on Climate-related Financial Disclosures² (TCFD)) and an alternatives analysis which evaluates lower GHG intensive alternatives³.

¹ International Finance Corporation, Performance Standard 3, 2012

² TCFD, 2017. Recommendations of the Task Force on Climate-related Financial Disclosures

³ Equator Principles, Principle 4: Environmental and Social Management System, 2020

3. APPROACH

This section describes the methodology of GHG emissions assessment. The following Figure 3-1 shows the four main steps of the assessment, as further elaborated in the text below.



Figure 3-1 Methodology Overview

3.1 Step 1 - Calculation Methodology

The GHG emissions are calculated using the following guidance references:

- World Resources Institute/World Business Council for Sustainable Development, The Greenhouse Gas Protocol: Corporate Accounting & Reporting Standard (2004)⁴;
- World Resources Institute/World Business Council for Sustainable Development, The Greenhouse Gas Protocol: The GHG Protocol for Project Accounting (2005)⁵;
- International Organization for Standardization (ISO), ISO 14064 (2018);
- Recommendations of the Task Force on Climate-related Financial Disclosures (2017)⁶;
- Intergovernmental Panel on Climate Change (IPCC) 2019 Refinement to the 2006 Guidelines for National Greenhouse Gas Inventories (2019)⁷; and
- EBRD Protocol for Assessment of Greenhouse Gas Emissions (2017)⁸.

GHG emissions are calculated via the application of documented emission conversion factors. These factors are calculated ratios relating GHG emissions to a proxy measure of activity at an emissions source. For this assessment, mainly the guidance UNFCCC GHG Emissions Calculator⁹ is used.

3.2 Step 2 - Organisational Boundaries

The organisational boundaries of the GHG assessment were set for this assessment using the so-called “control principle” per the methodology of ISO 14064. This means all emissions by entities and activities controlled by the organisation (i.e., ARISE) must be included; for this Project this refers mainly to all of the construction and operational activities within the scope of the ESIA and over which ARISE has direct control. Not included within this boundary would be e.g., the operations of third-party quarries.

3.3 Step 3 - Operational Boundaries

In accordance with the GHG protocol, direct and indirect emissions are categorised into three broad scopes (see Figure 3-2):

- Scope 1: Direct GHG emissions;

⁴ Available at : <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>

⁵ Available at: <https://ghgprotocol.org/standards/project-protocol>

⁶ Available at: <FINAL-2017-TCFD-Report.pdf> (bbhub.io)

⁷ Available at: <https://www.ipcc-nggip.iges.or.jp/public/2019rf/index.html>

⁸ Available at: <https://www.ebrd.com/documents/admin/ebird-protocol-for-assessment-of-greenhouse-gas-emissions.pdf>

⁹ UNFCCC, 2021. GHG Emissions Calculator. Available at: GHG_emissions_calculator_ver01.1_web.xlsx (live.com)

- Scope 2: Indirect GHG emissions from the use of purchased electricity, heat or steam; and
- Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities not covered in Scope 2, outsourced activities, waste disposal, etc.

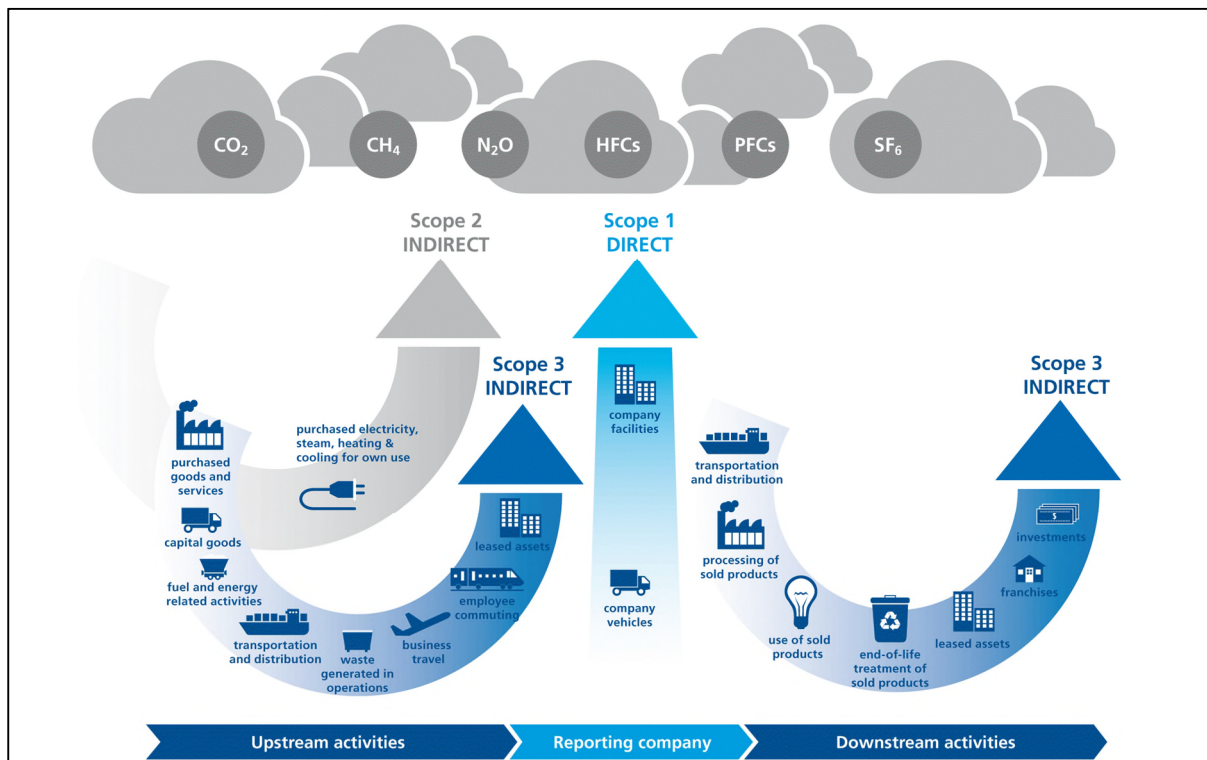


Figure 3-2 Overview of GHG Emission Scopes¹⁰

The construction phase and the operation of the Project will result in direct Scope 1 GHG emissions primarily associated with:

- Combustion of fossil fuels due to the transportation of materials to site, the use of construction equipment on site and diesel generators,
- Combustion of fossil fuels for the use of vehicles during operation.

Indirect GHG emissions in Scope 2 include emissions from the use of electricity from the grid that is generated elsewhere (i.e., not generated at the Project area). Grid electricity will be used to:

- Supply the workers' camp/rest areas during construction, and
- Electricity supply for the operation of the basic infrastructure on the IEZ.

In line with Applicable Standards, the operational boundaries of this study include all emissions released during **Scope 1 and 2**. The Scope 3 emissions from are not required to be included within the operational boundaries and are hence not further evaluated here in this report.

The GHG emissions of a project can usually only be accurately determined on the basis of actual data on relevant activities, such as X litres of diesel or Y kWh of electricity consumed in a given month during construction. Calculations for this assessment have been undertaken on the basis of data estimations provided by ARISE.

¹⁰ World Resource Institute and World Business Council for Sustainable Development (2011) Overview of GHG Protocol scopes and emissions across the value chain. Retrieved from: www.ghgprotocol.org

3.4 Step 4 - Impact Assessment Methodology

Impact assessments are normally conducted by determining how the proposed activity will affect the baseline environment. In the case of GHG emissions, however, the potential impact of GHG emissions occurs on a global basis and the specific source of GHG emissions cannot be linked directly to the future potential impact at a specific location. In the absence of such causal links, this section presents an alternative risk-based methodology per international good practice.

In general, the methodology for assessing GHG impacts is based on the evaluation of impact *Magnitude* and the *Likelihood*, which yields a resulting impact *Significance*. The *Likelihood* factor, as explained further below, replaces the usual factor of '*Vulnerability*'.

3.4.1 Magnitude

Impact magnitude is a function of the potential intensity of the impact, moderated by the extent and duration of that impact. When considering GHGs, the extent and duration of the potential impact will always be the same. The extent is international as it is the total stock of world GHG emissions trapped in the atmosphere (leading to global warming).

The duration of the impact is regarded as permanent as the persistence of CO₂ emissions in the atmosphere ranges between 100 and 300 years¹¹ and thus continues well beyond the life of the Project.

Table 3-1 shows a *Magnitude* scale for project wide GHG emissions that is in line with reporting thresholds adopted by a number of international lender organisations and the Applicable Standards.

Table 3-1 Magnitude Scale for Project GHG Emissions

Project-Wide GHG Emissions/annum	Magnitude Rating
>1,000,000 t CO ₂ e	Very Large
100,000 – 1,000,000 t CO ₂ e	Large
25,000 – 100,000 t CO ₂ e	Medium
5,000 - 25,000 t CO ₂ e	Small
<5,000 t CO ₂ e	Negligible

3.4.2 Likelihood

Likelihood is described as 'Unlikely', 'Seldom/Occasional' or 'Likely' according to the definitions outlined in Table 3-2.

Table 3-2 Likelihood Definitions

Likelihood	Definition
Unlikely	Reasonable to expect that the consequence will not occur at this facility during its lifetime.
Occasional	Exceptional circumstances/conditions may allow the consequence to occur within the facility lifetime.
Likely	Consequence can reasonably be expected to occur within the life of the facility.

In the case of this Project, the *Likelihood* of carbon emissions occurring during construction and operational phases is 100%, and therefore classified as 'Likely' per the above table.

¹¹ Carbon Dioxide Information Analysis Centre (CDIAC)

3.4.3 Determination of Significance

The combination of the *Magnitude* of a potential impact and the *Likelihood* yields the degree of the *Significance* of a potential GHG impact. This is illustrated in Table 3-3.

As stated above, by definition the *Likelihood* of GHG emissions from the Project activities is given as Likely, and therefore only the **Likely** column in Table 3-3 is relevant for this assessment.

Table 3-3 Impact Significance Rating Matrix

		LIKELIHOOD		
		Unlikely	Occasional	Likely
MAGNITUDE	Very Large	MAJOR	MAJOR	MAJOR
	Large	MODERATE	MAJOR	MAJOR
	Medium	MINOR	MODERATE	MAJOR
	Small	NEGLIGIBLE	MINOR	MINOR
	Negligible	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

4. GHG INVENTORY

This section will cover the estimated GHG emissions during the construction and operation phase of the Project.

4.1 Construction Phase

There is currently no intention to import heat and steam during construction phase. During construction of the Project, GHG emissions will be generated by the following activities:

- Scope 1: Use of diesel-fuelled construction equipment; and
- Scope 2: Electricity from the grid

Scope 1 Emissions

Scope 1 emissions for the construction phase stem only from diesel according to ARISE. The expected annual emissions from diesel use for construction activities are shown in Table 4-1.

Table 4-1 Expected Annual Emissions from Diesel during Construction

Diesel Consumption [litres]	Conversion Factor ¹² [kg CO ₂ e/litre]	Annual Emissions [t CO ₂ e]	Total Emissions [t CO ₂ e]
10,950,000 ¹³	2.69	~29,500	~120,000

The expected annual emissions from fuel use during construction is considered to be 29,500 t CO₂e per year resulting in 120,000 t CO₂e over the construction period of about four years.

Scope 2 Emissions

Electricity consumption during operations will be caused by site offices of ARISE and road infrastructure such as lighting of roads (see Table 4-2).

Table 4-2 Electricity Consumption during Construction

Item	Annual Electricity Consumption [kWh] ¹⁴	Grid Electricity Factor ¹⁵ [kg CO ₂ e/kWh]	Annual Electricity Emissions [t CO ₂ e]	Total Emissions [t CO ₂ e]
Site Offices	600 kWh	0.634	0.38	1.52
Road Infrastructure	400 kWh	0.634	0.25	1
Total			~1	~3

The annual electricity consumption during construction is estimated to be 1000 kWh. Côte d'Ivoire's grid electricity factor is 0.634 kg CO₂e/kWh¹⁵. This results in annual emissions of approximately 1 t CO₂e during construction and 3 t CO₂e over the whole construction period. Therefore, the Scope 2 emissions during construction are negligible compared to the Scope 1 emissions.

¹² UNFCCC, 2021. Greenhouse Gas Emissions Calculator

¹³ This number was given by ARISE

¹⁴ The data on the annual electricity consumption was provided by ARISE

¹⁵ IGES, 2022. [IGES List of Grid Emission Factors](#)

4.2 Operation Phase

During operation of the Project, GHG emissions will be generated by the following activities:

Scope 1 Emissions

Scope 1 emissions for the operation phase stem from emissions from fuel use for following activities:

- Diesel Generators; and
- Equipment engaged for operation (Forklift, road clearing machine, trailers, etc.)

Diesel is used for all machineries and average yearly consumption is anticipated to be 26,500 litres. The expected annual emissions during operation are shown in Table 4-3.

Table 4-3 Expected Annual Emissions from Diesel for Operation Activities

Item	Annual Diesel Consumption [litres]	Conversion Factor ¹⁶ [kg CO ₂ e/litre]	Annual Emissions [t CO ₂ e]
Diesel Generators	12,000	2.69	32
Operation Equipment	14,500	2.69	39
Total (rounded)			~70

Annual emissions from fuel use are expected to be around 71 t CO₂e.

Scope 2 Emissions

Scope 2 emissions for the operation phase stem from electricity consumption during operations (see Figure 4-1).

S. No	Land Use	Area (Ha.)				Load Norm kW/Ha.	Connected Load in kW			Demand Factor	Max Demand in kW			Power Factor	Max Demand in MVA						
		Phase 1 Zone 1	Phase 1 Zone 2	Phase 2	Total		Phase 1 Zone 1	Phase 1 Zone 2	Phase 2		Phase 1 Zone 1	Phase 1 Zone 2	Phase 2		Phase 1 Zone 1	Phase 1 Zone 2	Phase 2	Total			
1	Industrial	67.27	39.88	148.59	255.73	435.00	29262	17346	64636	0.7	20484	12142	45245	0.85	24.10	14.28	53.23	91.61			
2	Warehouse		24.53		24.53	100	0	2453	0	0.7	0	1717	0	0.85	0.00	2.02	0.00	2.02			
3	CD		6.29		6.29	100	0	629	0	0.7	0	440	0	0.85	0.00	0.52	0.00	0.52			
4	Commercial	1.57		8.89	10.46	697	1094	0	6195	0.7	766	0	4337	0.85	0.90	0.00	5.10	6.00			
5	Residential	2.41		10.94	13.35	495	1195	0	5414	0.5	598	0	2707	0.85	0.70	0.00	3.18	3.89			
6	Facilities	3.29	2.73	11.36	17.39	697	2296	1904	7919	0.6	1377	1143	4751	0.85	1.62	1.34	5.59	8.55			
7	Utilities	1.66	0.73	4.60	6.98	74.1	123	54	341	0.8	98	43	273	0.85	0.12	0.05	0.32	0.49			
8	Green	6.61	4.83	32.64	44.08	2.47	16	12	81	1.0	16	12	81	0.85	0.02	0.01	0.09	0.13			
9	Benching		3.67		3.67		0	0	0		0	0	0	0.85	0.00	0.00	0.00	0.00			
10	Road	10.54	7.09	30.18	47.81	4.94	52	35	149	1.0	52	35	149	0.85	0.06	0.04	0.18	0.28			
Sub Total of Development Area		93.36	89.75	247.19	430.30										27.52	18.27	67.70	113.49			
11	CI-ENERGIES (MRSS)		2.95		2.95													0.00			
12	Truck Parking		5.21		5.21	25		130		0.7	0	91		0.85		0.11		0.11			
13	Phase-1 Inspection Road		0.76		0.76													0.00			
14	CETP			4.18	4.18													0.00			
15	Phase-2 Inspection Road			1.26	1.26													0.00			
Sub Total External Area		-	8.92	5.44	14.36										0.00	0.11	0.00	0.11			
Grand Total		93.36	98.66	252.63	444.66										27.52	18.38	67.70	113.60			
														Future Expansion Load @ 10%				2.75	1.84	6.77	11.36
														Final Power Demand with Future Expansion				30.27	20.22	74.47	124.96
														SAY				30 MVA	20 MVA	74.5 MVA	125 MVA

Source: ARISE, 2022

Figure 4-1 Anticipated Electricity Demand during Operations

¹⁶ UNFCCC, 2021. Greenhouse Gas Emissions Calculator

In total 113,60 Mega Volt Ampere (MVA) which results to 113,600 Kilowatt (kW) of electricity will be used during operations. Côte d'Ivoire's grid electricity factor is 0.634 kg CO₂e/kWh¹⁷. This results in annual emissions of approximately 70 t CO₂e during operations.

Summary of GHG Emissions

Table 4-4 summarises the projected GHG emissions during construction and operation phases of the Project.

Table 4-4 Total Expected Construction GHG Emissions

Item	Estimated annual emissions [t CO ₂ e]	Estimated total construction phase emissions [t CO ₂ e]
Construction		
Scope 1 Emissions		
On-site Diesel Consumption	29,500	120,000
Scope 2 Emissions		
Electricity from Construction	~1	~3
Total Construction (rounded)	29,500	120,000
Operation		
Scope 1 Emissions		
On-site Diesel Consumption	~70	-
Scope 2 Emissions		
Electricity from Operations	~70	-
Total Operation (rounded)	140	-

¹⁷ IGES, 2022. [IGES List of Grid Emission Factors](#)

5. IMPACT ASSESSMENT

5.1 Stage Specific GHG Impact Evaluation

In the following Table 5-1 the results of the GHG inventory are assessed according to their *Magnitude*, *Likelihood* and *Significance*. The impact assessment shows that the

- Project-related direct emissions during construction (Scope 1), are considered **Major**
- Project-related indirect emissions during construction (Scope 2), are considered **Negligible**.
- Project-related direct emissions during operation (Scope 1), are considered **Negligible**.
- The annual electricity use (Scope 2) during operation of the Project is deemed as **Negligible**.

Table 5-1 Impact Assessment Using GHG Inventory Data

		GHG emissions annually	Magnitude	Likelihood	Resulting Significance
Construction	Fuel consumption (Scope 1)	29,500 t CO ₂ e	Medium	Likely	Major
	Electricity use (Scope 2)	1 t CO ₂ e	Negligible	Likely	Negligible
Operation	Fuel consumption (Scope 1)	70 t CO ₂ e	Negligible	Likely	Negligible
	Electricity use (Scope 2)	70 t CO ₂ e	Negligible	Likely	Negligible

5.2 Mitigation Measures

Mitigation measures need to be implemented to reduce CO₂ emissions during construction phase. ARISE may incorporate below management practices during both phases of the Project.

During the 4 years of construction the IEZ causes Medium GHG emissions resulting in a Major significance. The main source of emissions is due to fuel combustion of vehicles and other construction equipment. ARISE may implement fuel efficient practices as much as possible. This can be achieved, for example, by optimising the transport routes on the construction site, limiting generator use and work at night. Furthermore, it should be ensured that no machines are running when they are not needed.

During operation, the IEZ causes negligible GHG emissions due to electricity use. Mitigation measures are only necessary to reduce the negative effects, for example by implementing best practices to achieve energy and resource efficiency (see Table 5-2). These and other mitigation measures of GHG emissions during the Project construction and operation phase can be achieved through a series of international best practices and the Environmental and Social Management Plan (ESMP) that are listed in the ESIA report.

Future low carbon transition will require to reduce the use of fossil fuels, meaning that in the long term, energy supplied from the grid to supply the operation of the IEZ might be sourced from renewable energies.

Table 5-2 GHG Mitigation Measures during Construction

No.	Impact Description	Impact Assessment	Mitigation Measures	Residual Impacts
1	Fuel Consumption (Construction)	Major	<ul style="list-style-type: none"> ■ Refuelling will be done from authorised fuel stations; ■ Transport logistics (locations/routes) will be optimised to ensure efficient carriage of raw materials and promote fuel efficiency; ■ Vehicle idling times will be reduced through focus on scheduling of construction operations; ■ The use of fuel-efficient transportation vehicles will be prioritised, and regular maintenance of vehicles ensured; ■ Energy efficiency specifications for new and retrofitted site accommodation will be created; ■ Sourcing renewable energy will be considered if feasible; and ■ Energy efficiency usage among workers will be promoted. 	Major

ERM has over 160 offices across the following countries and territories worldwide

Argentina	The Netherlands
Australia	New Zealand
Belgium	Peru
Brazil	Poland
Canada	Portugal
China	Puerto Rico
Colombia	Romania
France	Senegal
Germany	Singapore
Ghana	South Africa
Guyana	South Korea
Hong Kong	Spain
India	Switzerland
Indonesia	Taiwan
Ireland	Tanzania
Italy	Thailand
Japan	UAE
Kazakhstan	UK
Kenya	US
Malaysia	Vietnam
Mexico	
Mozambique	

ERM GmbH

Siemensstrasse 9
63263 Neu-Isenburg
Germany

T: +49 (0) 6102 206 0
F: +49 (0) 6102 771 904 0

www.erm.com