

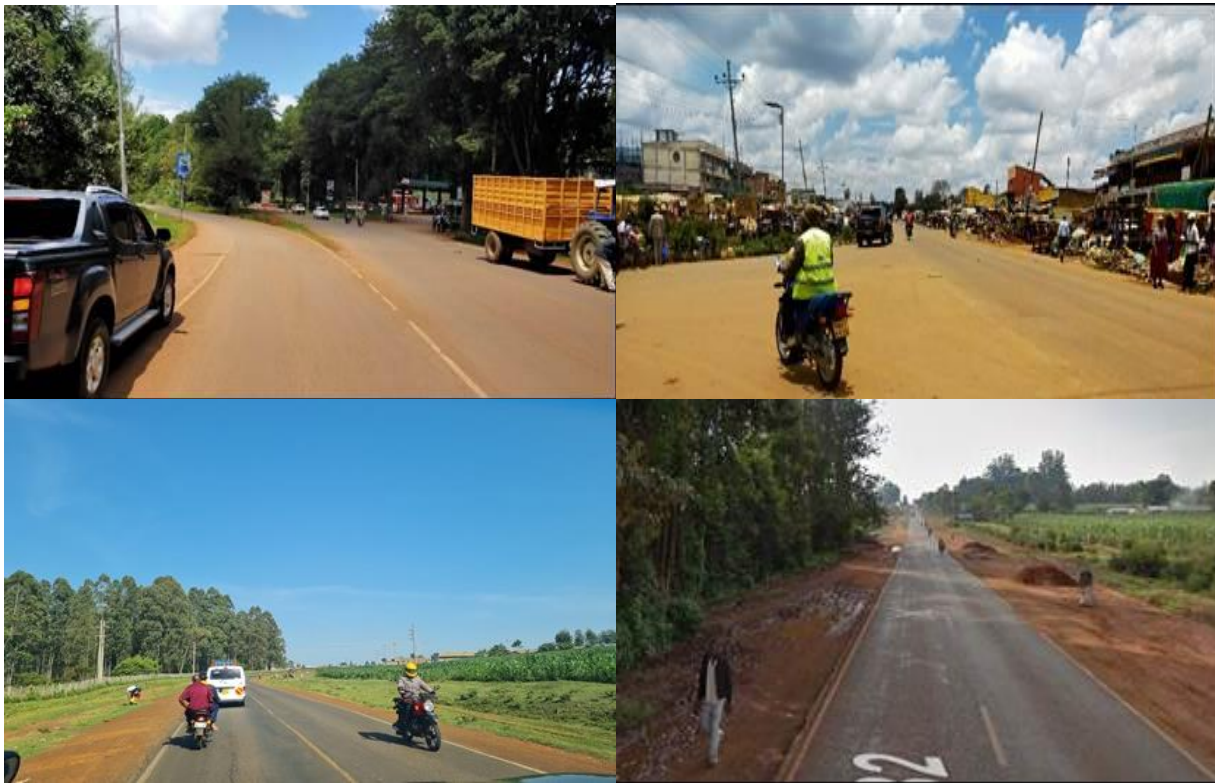


Kenya National Highways Authority

Quality Highways, Better Connections

REVIEW AND UPDATE OF THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) FOR THE

KENYA – SOUTH SUDAN LINK ROAD: ELDORET - KITALE – LODWAR - NADAPAL – KAPOETA - JUBA CORRIDOR



LESERU-KITALE (B2) ROAD SECTION (55KM) UPGRADING PROJECT

JUNE 2022

LIST OF ACRONYMS AND ABBREVIATIONS

AfDB	African Development Bank
CBO	Community Based Organization
CPP	Consultation and Public Participation
CSR	Corporate Social Responsibility
dB (A)	Decibels of noise measured with A-weighted filter
DCC	Deputy County Commissioner
DOSHS	Department of Occupational Safety and Health Services
DOSHS	Directorate of Occupational Safety and Health Services
EA	Environmental Audit
EIA	Environmental Impact Assessment
EMC	Environmental Management and Coordination
EMCA	Environmental Management and Co-ordination Act
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMP	Environmental and Social Management Plan
ESO	Environment and Social Officer
GBV	Gender Based Violence
GoK	Government of Kenya
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanisms
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immuno Deficiency Syndrome
IDA	International Development Association
IP	Indigenous Peoples
ISS	Integrated Safeguards System
KeNHA	Kenya National Highways Authority
KeRRA	Kenya Rural Roads Authority
KM	Kilometre
KNBS	Kenya National Bureau of Statistics
KURA	Kenya Urban Roads Authority
LAPSSET	Lamu Port-South Sudan-Ethiopia-Transport
MoTIHUD	Ministry of Transport, Infrastructure, Housing, and Urban Development
MTP	Medium Term Plan
NEMA	National Environment Management Authority
NGO	Non- Governmental Organization
NMT	Non-Motorized Transport
NPEP	National Poverty Eradication Plan
OD	Operational Directives
OP	Operational Policy
OS	Operational Safeguard
OSHA	Occupation Safety and Health Act
PAPs	Project Affected Persons
PEC	Poverty Eradication Commission
PPE	Personal Protective Equipment
PPE	Personal Protective Equipment
PRSP	Poverty Reduction Strategy Paper
PSVs	Public Service Vehicles
RAP	Resettlement Action Plan
RE	Resident Engineer
SDGs	Sustainable Development Goals

SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
STD	Sexually Transmitted Diseases
UNFCCC	United Nations Framework Convention on Climate Change
VMG	Vulnerable and Marginalized Groups
WB	World Bank
WHO	World Health Organization
WRA	Water Resources Authority
WSSD	World Summit for Social Development

Table of Contents

EXECUTIVE SUMMARY	1
1 PROJECT INTRODUCTION	56
1.1 Project Background	56
1.2 Scope of works	56
1.3 Overall Project Objectives and Expected Results	56
1.4 Project Rationale	57
1.5 Need for the ESIA Review and Update	57
1.6 Objectives of the Updated ESIA Study	58
1.7 ESIA Methodology	59
1.7.1 Inception Stage	59
1.7.2 ESIA Study Phase	60
1.7.3 Preparation of an ESMP and ESMoP	64
1.7.4 Review Findings	64
1.7.5 Structure of this ESIA Report	65
2 PROJECT LOCATION AND DESCRIPTION	67
2.1 Project Description	67
2.1.1 Existing road condition	67
2.1.2 Design Speed and Standards	68
2.1.3 Pavement Design	69
2.1.4 Other design features	69
2.1.5 Proposed General Works	71
2.1.6 Material Investigations	73
2.1.7 Project Costs	74
3 RELEVANT POLICY, LEGAL AND REGULATORY FRAMEWORK	75
3.1 Policy Framework	75
3.1.1 Environment Policy, 2014	75
3.1.2 Vision 2030	75
3.1.3 National Land Policy, 2009	75
3.1.4 Integrated National Transport Policy (INTP), 2009	76
3.1.5 The National Biodiversity Strategy, 2007	76
3.1.6 Gender Policy, July 2011	77
3.2 Legal Framework	77
3.2.1 The Constitution of Kenya, 2010	77
3.2.2 Environmental Management and Coordination Act (EMCA)	77
3.2.3 Water Act, 2016	81
3.2.4 Kenya Roads Act, 2007	81
3.2.5 Traffic Act, 2014	82
3.2.6 Occupational Health and Safety Act (OSHA), 2007	82

3.2.7	Subsidiary Legislations under OSHA Chapter 514	83
3.2.8	Employment Act, 2007	85
3.2.9	The Labour Institutions Act	85
3.2.10	The Labour Relations Act	85
3.2.11	Work Injury Benefits Act (WIBA) Chapter 236	85
3.2.12	Wildlife Conservation and Management Act, 2013	85
3.2.13	Public Health Act, Chapter 242	86
3.2.14	HIV/AIDS Prevention and Control Act, 2006	86
3.2.15	National Construction Authority Act, 2011	87
3.2.16	Land Act (No.6 of 2012)	87
3.2.17	The National Lands Commission Act, 2012	87
3.2.18	The Prevention, Protection and Assistance to Internally Displaced Persons and Affected Communities Act, 2012	87
3.2.19	The Land Registration Act, 2012	88
3.2.20	Land and Environment Court Act, 2012	88
3.2.21	Land Laws (Amendment) Act, 2016	88
3.2.22	Physical Planning Act, 2019	89
3.2.23	Climate Change Act, 2016	89
3.2.24	Urban Areas and Cities Act, No. 13 of 2011	89
3.2.25	The National Museums and Heritage Act (2006)	89
3.2.26	Energy Act, 2019	90
3.2.27	Mining Act, 2016	90
3.2.28	The National Sand Harvesting Guidelines, 2007	90
3.2.29	Technical Guidelines on The Management of Used Oil and Oil Sludge In Kenya (2016)	91
3.2.30	Intergovernmental Relations Act	91
3.3	Institutional framework	92
3.3.1	The Ministry of Transport, Infrastructure, Housing and Urban Development	92
3.3.2	Kenya National Highways Authority	92
3.3.3	The National Environment Management Authority	93
3.3.4	Water Resource Authority (WRA), formerly WRMA	93
3.3.5	National Transport and Safety Authority	94
3.3.6	Kenya Roads Board	94
3.3.7	Uasin Gishu, Kakamega and Trans Nzoia County Governments	94
3.3.8	Directorate of Occupational Safety and Health Services (DOSHS)	95
3.4	AfDB Operational Safeguards	95
3.4.2	World Bank Group Environment, Health and Safety (EHS) General Guidelines	98
3.4.3	Alignment of AfDB and Government of Kenya (GoK) Policies relevant to this ESIA	99
3.5	International Treaties and Conventions	99
3.5.1	The 1985 Vienna Convention for the protection of the Ozone Layer	100
3.5.2	The 1987 Montreal Protocol on Substances that Deplete the Ozone Layer	100
3.5.3	The United Nations Convention on Climate Change ("1992 UNFCCC")	100
3.5.4	The Paris Agreement, 2015	100
3.5.5	CITES Convention (1975)	101
3.5.6	Convention on Biological Diversity	101
4	BASELINE ENVIRONMENTAL AND SOCIAL SETTING	102
4.1	Physical Environment	102
4.1.1	Climatic Conditions	102
4.1.2	Topography	103
4.1.3	Drainage and Hydrology	103
4.1.4	Water Resources	104
4.1.5	Waste Management	105

4.1.6	Geology and Soils	105
4.1.7	Air Quality	105
4.1.8	Noise and Vibrations	106
4.2	Biological Environment	106
4.2.1	Flora and Fauna	106
4.3	Social and Economic Baseline Conditions	107
4.3.1	Administration	107
4.3.2	Demography Trends	107
4.3.3	Livelihoods of the Project counties	108
4.3.4	Land Tenure and Ownership	109
4.3.5	Education	110
4.3.6	Health	111
4.3.7	Trade and Industry	112
4.3.8	Labor Availability	112
4.3.9	Public Utilities and Infrastructure	112
4.3.10	Transport, Information and Communication	113
4.3.11	Energy	113
4.3.12	Mode of transport	113
4.3.13	Social Welfare	114
4.3.14	Other Economic Activities	115
4.4	Cross-Cutting Issues	116
4.4.1	Livelihoods and Poverty Analysis	116
4.4.2	Gender Issues	116
4.4.3	Vulnerable Groups	116
4.4.4	Resettlement Issues	116
4.5	HOUSEHOLD SURVEY	117
4.5.1	Household Size	118
4.5.2	Livelihood	118
4.5.3	Preferred mode of transport	118
4.5.4	Education and Literacy levels	119
4.5.5	Water Sources	119
4.5.6	Cooking Energy	119
4.5.7	Lighting Energy	119
4.5.8	Health Status	120
5	STAKEHOLDER CONSULTATION AND PUBLIC PARTICIPATION	121
5.1	Introduction	121
5.2	Objectives of Stakeholder Participation	121
5.3	General information	122
5.4	Methodology	122
5.4.1	Stakeholder Identification	122
5.5	Key Informant Meetings	123
5.5.1	Approach	123
5.5.2	Consultations with County Governments	125
5.6	Disclosure and Consultation During Project Duration	138

6	POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES	139
6.1	Construction Phase Impacts	140
6.1.1	Positive Impacts	140
6.1.2	Negative Impacts	142
6.2	Impacts on Vulnerable Groups	166
6.3	Operation Phase Impacts	167
6.3.1	Positive Impacts	167
6.3.2	Negative Impacts	168
6.4	Cumulative Impacts of the Project Road	171
6.4.1	Identification of Potential Cumulative Impacts	172
6.5	Potential Impacts during Decommissioning	174
6.5.1	Positive Impacts	174
6.5.2	Negative Impacts	174
6.6	Resettlement Action Plan	176
6.7	Environmental, Social and Climate Change Risks to the Project	177
6.7.1	Climate change impacts	177
6.7.2	Transport of Dangerous Goods	177
6.7.3	Fire	177
6.8	Environmental and Social risk management	178
7	CLIMATE CHANGE SCREENING AND ADAPTATION	179
7.1	Introduction	179
7.2	Climate Change and Disaster Risk Screening of the Project	179
7.2.1	Methodology used in Screening	179
7.2.2	Climate Change and disaster risk Screening results	179
7.2.3	Potential Impacts on Project's Physical Components	181
7.3	Potential Contribution of The Proposed Road to Climate Change	183
7.3.1	Effects of social and economic factors in the project area	183
7.3.2	Firewood use and charcoal burning	183
7.3.3	Greenhouse gases (GHG) contribution	184
7.3.4	Spurred Economic development	184
7.4	Climate Change adaptation component of the road project	184
7.5	Adaptation/Mitigation Measures	185
7.6	Linkages to Climate Change Adaptation measures	186
8	ALTERNATIVES TO THE PROJECT	188
8.1	Alternative alignments	188
8.2	Alternative Modes of Transport	188

8.3	Alternative 1: “No action” scenario	188
8.4	Alternative 2: With Project Option	189
8.4.1	Analysis of Alternative Construction Materials and Technology	189
9	ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)	191
9.1	Environmental and Social Management Plan	191
9.2	Purpose and Objectives of ESMP	191
9.3	Auditing of the ESMP	191
9.4	Responsibilities for the Implementation of the ESMP	192
9.4.1	Kenya National Highways Authority (KeNHA)	192
9.4.2	Ministry of Transport, Infrastructure, Housing and Urban Development	192
9.4.3	Ministry of Environment and Forestry	192
9.4.4	National Environment Management Authority	193
9.4.5	Kenya Forest Service (KFS)	193
9.4.6	Kenya Wildlife Service (KWS)	193
9.4.7	Water Resources Authority (WRA)	193
9.4.8	National Lands Commission (NLC).	193
9.4.9	Construction Contractor	193
9.4.10	Supervising Consultant	194
9.4.11	Directorate of Safety and Health Services (DOSHS)	194
9.4.12	Community Based Organizations and Civil Society Groups	194
9.4.13	County Governments	194
9.5	Environmental and Social Management Plan (ESMP) during Construction and Operation Phases	194
9.6	SUMMARY BUDGET OF ESMP	217
10	GRIEVANCE REDRESS MECHANISM	218
10.1	Grievance Redress Mechanism (GRM)	218
10.2	Objectives of Grievance Redress Mechanism (GRM)	218
10.3	GRM Guiding Principles	218
10.4	Grievance Handling Mechanism Structure	219
10.4.1	Members of the Grievance Redress Committee (GRC) at project Level	219
10.5	Key staff coordinating Grievance Redress	220
10.6	Receiving Complaints	220
10.7	Registry and Monitoring	221
10.8	Grievance Redress Mechanism Process	221
10.9	GRM Jurisdiction	224
11	ENVIRONMENTAL AND SOCIAL MONITORING PLAN (ESMoP)	226

11.1	Environmental and Social Monitoring	226
11.1.1	Internal Monitoring	226
11.1.2	External Monitoring and Evaluation	227
11.2	Other Enhancement Measures	227
11.2.1	Community engagement and communication	227
11.3	Contractor Clauses	228
12	CAPACITY TO IMPLEMENT ESMP	234
12.1	Client capacity	234
12.2	Training objectives	234
12.3	Capacity Building Enhancement	235
12.4	Training	235
12.5	Capacity Building and Training Responsibilities	235
13	CONCLUSION AND RECOMMENDATIONS	236
13.1	Conclusion	236
13.2	Recommendations	237
REFERENCES	238	
Annex 1: Sample Grievance Redress Form		239
Annex 2: Sample Chance Find Procedures		240
Annex 3: Minutes of public consultation meetings		241
Annex 4: Sample Filled Questionnaires		284
Annex 5: Stakeholder Engagement Plan		288

LIST OF FIGURES

Figure 2-1 Aerial map of road section between Lesseru – Kitale (B2)	68
Figure 2-2: Typical cross section of the road section	70
Figure 4-1: Typical historical rainfall and temperature at Matunda centre	102
Figure 4-2: Topographical features along the road with Cherangani hills at the horizon	103
Figure 4-3: Drainage along the road	104
Figure 4-4: Sample River Crossings	104
Figure 4-5: Pine trees at Kitale	107
Figure 4-6: Agricultural Features	109
Figure 4-7:Public Transport (Matatus, Bodaboda)	114
Figure 5-1 Sample Photo Impressions of Community Consultation Meetings	133
Figure 6-1 Example of Oil spills and poor management of used oil	147
Figure 7-1 Air temperature projections for Kenya for different GHG emissions scenarios	182
Figure 7-2 Projections of major roads exposed to river floods at least once a year for Kenya for different GHG emissions scenarios	183
Figure 10-1 Grievance Redress Flow Process	225

LIST OF TABLES

Table 0-1 ESMP during operation phase	41
Table 0-2 ESMP during Decommissioning Phase	43
Table 1-1: Criteria for assessing significance	63
Table 1-2: Significance rating matrix	63
Table 1-3: Negative and Positive Mitigation Ratings	64
Table 2-1 Lesseru - Kitale Road Design Standards	68
Table 2-2 Pavement Structure for the Main Carriageway	69
Table 0-1 Material Sites	73
Table 3-1 WHO 2021 air pollution guidelines	78
Table 3-2 Comparison between WHO and NEMA Noise Guidelines	79
Table 3-3: NEMA Waste Water Discharge Guidelines	80
Table 4-1: Administrative units along Section 1 - Lesseru - Kitale (B2) section	107
Table 4-2: Demographic Features Of The Project Counties	107
Table 4-3: Development Indicators of the Counties served by road	108
Table 4-4: Education institutions in the project counties	110
Table 4-5: Education institutions along the project road	110
Table 4-6: Major Health Institutions along the road	111
Table 4-7: Health data in the project counties	111
Table 4-8: Markets along the road	112
Table 4-9: Access to Public Utilities	112
Table 4-10: Infrastructure in The Project Counties	113
Table 4-11: Education Institutions along the Project Road	114
Table 4-12: Key health statistics in the Project Counties	115
Table 4-13: Household Samples	117
Table 4-14: Gender of respondents	117
Table 4-15: Age of the Respondents	117
Table 5-1: Identified Stakeholders and Modes of Consultation Used	123
Table 5-2: Summary of General Comments and Concerns from sample stakeholders	127
Table 5-3: Summary of General Comments and Concerns from public consultations meetings	129
Table 5-4: Summary of comments and issues raised from Public Consultations on the Road Project	136

Table 6-1: Key Environmental and Social Receptors for the Project Road	139
Table 6-2: Project affected Persons (PAPs)	150
Table 6-3: Summary of the Likely Potential Cumulative Impacts	172
Table 6-4 : Number of PAPs Enumerated According to Settlement	176
Table 6-5 : RAP Implementation Costs	176
Table 7-1: Summary of Exposure to Climate and Geophysical Hazards at Project Location	180
Table 9-1 ESMP during Construction Phase	196
Table 9-2 ESMP during operation phase	213
Table 9-3 ESMP during Decommissioning Phase	215
Table 9-4 ESMP Summary Budget (Including Monitoring)	217
Table 10-1: Grievance Redress Process	222
Table 11-1: ESMoP during Construction and Operation phase	229

PROJECT SUMMARY DATA SHEET

Name of Contact of Project Proponent	Director General Kenya National Highways Authority (KeNHA) P O Box 49712-00100 Nairobi
Title of Project	Environmental and Social Impact of Lesseru – Kitale (B2) Road (55km)
Objectives of Project	This project will contribute to the principal Project Development Objective (PDO), which is to improve access to the North Western part of Kenya and between Kenya and South Sudan, through improving road infrastructure and ICT links, reducing transport and ICT costs, and facilitating the reduction of non-fiscal trade barriers, which help reduce the cost of doing business and development. The project also improves South Sudan's access to sea ports by improving the Lesseru – Lokichar road section, part of the Eldoret – Nadapal – Juba (Kenya - South Sudan regional link) corridor that connects to the Northern Corridor (A8 at Lesseru) serving the landlocked countries in the sub region to Mombasa Sea port. This section of the road project provides part of the most cost-efficient transit corridor for South Sudan that crosses only one border post.
Scope of the ESIA project report	• To carry out site investigations to collect primary data and review available relevant secondary data to establish a comprehensive environmental and social baseline, indicators • To ensure that the stakeholder analysis and consultation are conducted as part of the ESIA review, and identify who among the affected population is particularly vulnerable to potential adverse impacts. • To review and identify all the potential significant positive and adverse environmental and social impacts, including direct, indirect and cumulative impacts associated with the project • To review proposed measures to avoid, reduce, mitigate, manage and/or compensate for such impacts, including the institutional arrangements and required capacity building to implement all such measures and monitor their effectiveness • To review and develop an Environmental and Social Management Plan (ESMP), detailing strategies for the implementation of environmental and social safeguards in the project • Preparation of an environmental and social impact study report, including a monitoring plan for the road project and seeking the necessary approval for the issuance of a license by NEMA
Location and Description of the Project	The project traverses through Uasin Gishu, Kakamega and Trans Nzoia Counties and is located within the North Rift Region of KeNHA's road network. The Lesseru - Kitale highway, forms part of the Suam-Endebes-Kitale-Matunda-A8 Soy (B2) road and measures approximately 55kms. The project road starts at Lesseru interchange - (KM 00) at the junction of Eldoret – Kitale (B2) and Eldoret – Malaba (A8), about 10km from Eldoret town. The road proceeds in a North westerly direction passing through centres in Uasin Gishu of Soy (Km 9), centres in Kakamega of Nangili (Km 18), Furfal (Km 24), Matunda (km 27), Moi's Bridge in Uasin Gishu (km 34), centres in Trans Nzoia of Maili Saba km 46), before ending at Kitale town (km 55) The Right of Way along this section of the road varies between 30 to 40m meters.
Total Estimated Project budget (est)	Kshs 6.6 Billion

EXECUTIVE SUMMARY

Introduction

The Government of the Republic of Kenya (GoK) has earmarked funds through the Development Vote for use in engaging the services of a Consultancy Firm to undertake Design Review, Updating of Resettlement Action Plan, Review of ESIA and Economic Feasibility Study Reports and Updating of Tender Documents in readiness for procurement of works for Lesseru-Kitale (B2) and Morpus – Lokichar (A1) Roads. The road sections forms part of the of the Eldoret - Kitale – Lodwar -Nadapal – Kapoeta - Juba Corridor (945km) corridor interconnecting Kenya and South Sudan. The improvement of the roads will significantly enhance connectivity within the Eastern Africa Region, connecting the southern regions to the northern parts of Kenya linking landlocked South Sudan to Kenya.

The Government of Kenya, through its implementing agency, the Kenya National Highways Authority (KeNHA) has engaged **CGP Consulting Engineers** to render all technical support services relevant to this exercise towards the achievement of the project objectives. The design review included review and updating of the ESIA and RAP reports of the project to conform to African Development Bank (AfDB) Integrated Safeguards System (ISS).

Project Location and Description

The project traverses through Uasin Gishu, Kakamega and Trans Nzoia Counties and is located within the North Rift Region of KeNHA's road network. The Lesseru - Kitale highway, forms part of the Suam-Endebes-Kitale-Matunda-A8 Soy (B2) road and measures approximately 55kms. The project road starts at Lesseru interchange - (KM 00) at the junction of Eldoret – Kitale (B2) and Eldoret – Malaba (A8), about 10km from Eldoret town. The road proceeds in a North westerly direction passing through centres in Uasin Gishu of Soy (Km 9), centres in Kakamega of Nangili (Km 18), Furfara (Km 24), Matunda (km 27), Moi's Bridge in Uasin Gishu (km 34), centres in Trans Nzoia of Maili Saba km 46), before ending at Kitale town (km 55). The Right of Way along this section of the road varies between 30 to 40m meters.

The road is currently in fair condition but the shoulders have been completely eroded in most areas. The road carriageway has a narrow width thereby compromising the safety of road users. The project road traverses through a flat and rolling terrain.

Scope of works

The scope of services for this section will involve, inter-alia, improvement of road geometrics, design of road pavement layers to extend economic life of the road, widening of carriageway and shoulders to address highway safety concerns. The services will also involve, but not limited to the following enhancements to the road network, in line with the stated development objectives.

- Design of the highway to 7.0 m carriageway (2 lanes) with 2.0 m wide shoulders
- Design of three (3) Road over rail bridges near Lesseru, at Matunda and Moi's Bridge Townships and in Kitale Town.
- Design of additional Highway Bridges to accommodate dual carriageway at Moi's Bridge
- Design of Dual carriageway for highway sections through the urban area and critical sections(2km) and critical section of the highway including the 7 km approach section into Kitale town and connecting into the ongoing works on Kitale – Endebess – Suam Road
- Design for the intersections of roads A1 and B15 (formerly C48) near Kitale town.
- Design of NMT facilities through Townships enroute, and in Kitale Municipality at the section joining the ongoing Kitale – Endebess – Suam road project to the Start of Kitale – Morpus (Kfw) Project.
- Design of Local Produce Markets at Matunda, Soy, Nangili, Moi's Bridge and Maili Saba Townships will be finalized at a later stage..

- Design the Interchange approaches at Lesseru and at the Junction of A1 and B14 near Kitale Town.

Main Works of the proposed Project

The proposed project (totaling to about 55 km) will include construction to bitumen standards of 2 lanes of 7.0m wide, with shoulders of 2m width for the entire road section. The works will also involve construction of drainage bridges, and road over rail bridges near Lesseru, at Matunda and Moi's Bridge Townships and in Kitale Town. In addition, dualling will be done along some sections of the road including but not limited to highway sections through the urban area and critical sections of the highway including the section into Kitale town and connecting to the ongoing works on Kitale – Endebess – Suam Road. Other works will include construction of NMT facilities at major centres comprising of 1.5 m footpaths, and 1.5m Cycle paths on each side of road. The construction of the proposed road project is estimated to cost KES 6.6 billion, including the cost of ESMP implementation.

The major items of Works to be executed under the construction contract will include but not limited to the following:

- Setting out, referencing and taking cross sections;
- Site clearance and removal of top soil;
- Earthworks;
- Constructing drainage structures (box and pipe culverts including protection works);
- Construction of pavement comprising bitumen surfacing, cement stabilized base and improved material subbase;
- Construction of other road facilities such as lay-bays, bus bays and widening at market centres along the road
- Works necessary to effect the safe and convenient passage of traffic through the Works;
- Construction of pedestrian crossings
- Provision of road furniture and ancillary services, e.g. signs, guardrails, marker posts, fencing, etc.;
- Operations ancillary to the main Works such as the construction of offices, diversion of services, the operations in quarries and borrow areas, the provision of water supply, the diversion of existing services, spoil areas for disposal of unsuitable or surplus materials, etc.
- Setting up and operation of construction camps, including accommodation of construction workers and Supervising Consultant staff
- Setting up and operation of equipment for materials production such as concrete products (eg pre-cast concrete, paving blocks, etc) and asphalt concrete batching plant. The camp will also be used for stockpiling necessary materials such as bitumen, gravel, sand, etc

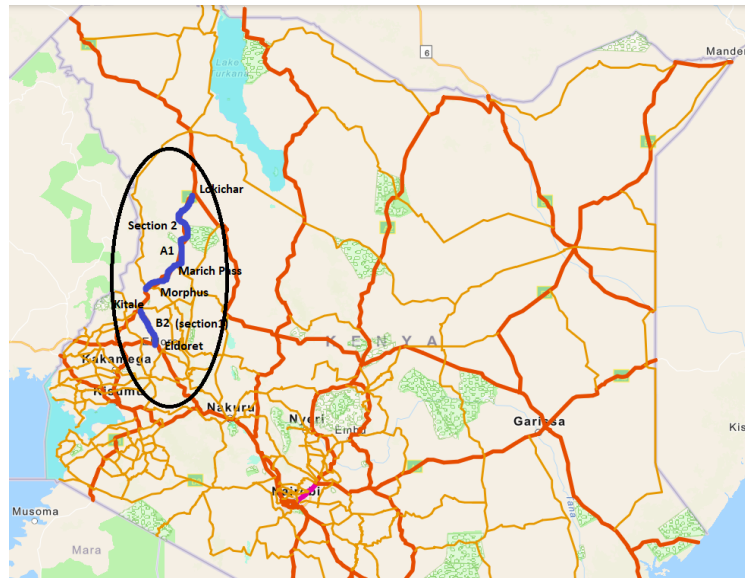


Figure 0-1 Map showing location the project roads

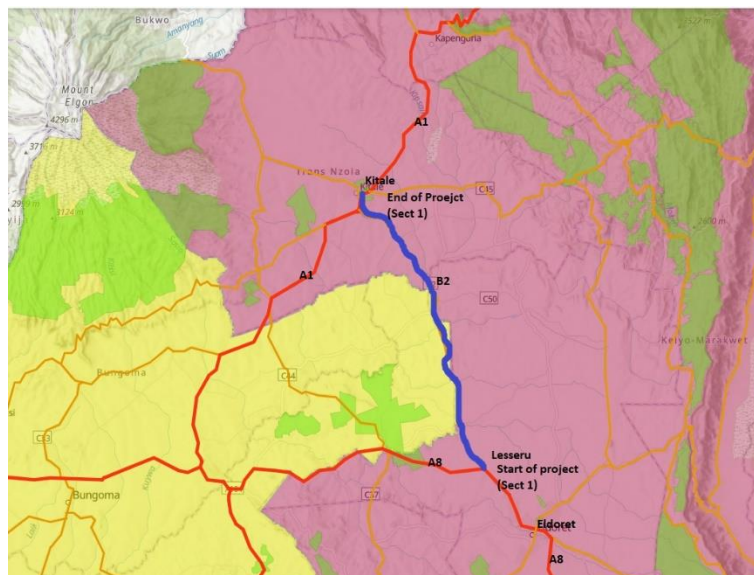


Figure 0-1 Section 1 – Lesseru – Kitale (B2) – 55 Km

Project Rationale

Lesseru – Kitale (B2) section

The Lesseru – Juba is a main corridor that provides the only road link to Turkana and West Pokot counties in Kenya, all the way to South Sudan, serving people living in extreme poverty. The improvement of the corridor will help reduce regional development imbalance in Kenya as well as improve the environment for stimulating economic development in the area, including attracting private investment. Further, the corridor traverses a region that is home to refugees. Its improvement will help in the reduction in time and transportation costs of humanitarian aid to the people of South Sudan, presently suffering from conflict.

The Lesseru – Kitale (B2) road is an important link that enhances regional integration, trade and development. It connects to the Northern Corridor at Kitale, the Kitale – Lodwar – Nadapal (A1) road and the Kitale - Endebess – Suam

- Kapchorwa corridor. It also connects to the Sirari Corridor at Kitale. The project road supports the regional integration objective of 3 out of 5 (Kenya, Uganda and South Sudan) member countries of the East African Community (EAC) and the Great Lakes Region.

This is a transformative project that contributes to socio-economic development and regional integration in eastern Uganda and Western Kenya. In addition, the improvement of the road will promote Government efforts in poverty reduction through improved road infrastructure by providing all-weather access for the supply of farm inputs and evacuation of produce to major market centers, thus improving the level of service and efficiency of the road network and reducing transport costs.

The two counties are fondly referred to as the food basket of Kenya for their role in food production in the country, including production of seed varieties. Predominantly, small scale farming is practiced while large scale farming with very high levels of external inputs is also common. Crops grown include maize, tea, coffee, horticulture. The proposed project will help boost export oriented agricultural development in the north western part of Kenya, which is endowed with agricultural land, animal resources, fishery and minerals. It will also facilitate the extraction of the recent discovery of oil in Lokichar, and the development of tourism potential in the project area.

Project Objectives

This project will contribute to the principal Project Development Objective (PDO), which is to improve access to the North Western part of Kenya and between Kenya and South Sudan, through improving road infrastructure and ICT links, reducing transport and ICT costs, and facilitating the reduction of non-fiscal trade barriers, which help reduce the cost of doing business and development. The project also improves South Sudan's access to sea ports by improving the Lesseru – Lokichar road section, part of the Eldoret – Nadapal – Juba (Kenya - South Sudan regional link) corridor that connects to the Northern Corridor (A8 at Lesseru) serving the landlocked countries in the sub region to Mombasa Sea port. This section of the road project provides part of the most cost-efficient transit corridor for South Sudan that crosses only one border post.

The overall Project objectives for construction of Lesseru – Kitale (B2) road project are to;

- Improve the efficiency of road transport along the project Corridor
- Spur economic activity along the project road and enhance social welfare
- Enhance security and promote peace along the project corridor
- Enhance regional integration
- Enhance road safety along the project road

Project Beneficiaries

The beneficiaries of the project will include: pastoralist communities, farmers and businesses along the road corridor, tradable sectors of the economy, agriculture, and the extractive industry, as well as road users (passengers and transporters), consumers and producers both inside and outside the sub-region. Currently this region has not received adequate attention and exhibits very high levels of poverty. With the improvement of the whole road corridor to South Sudan, the occasional cut off from the rest of Kenya and South Sudan, particularly during the rainy season, will be reduced.

Need for the ESIA Review and Update

An Environmental and Social Impact Assessment Study had been undertaken (February 2014 for Lesseru – Marich Pass road updated in December 2014, and Marich Pass – Lodwar in February 2014, which was updated in January 2015) along the preliminary and detailed design process. The studies was undertaken within the provisions of the established regulations under EMCA, 1999, as well as the World Bank's Environmental and Social and safeguards

Policies - the financier of the Feasibility, ESIA, RAP and Engineering Design Studies for Lesseru – Kitale (B8) and Kitale - Lokichar – Lodwar – Nadapal (A8) roads . This ESIA review is part of the design review process of the proposed Lesseru – Kitale (B8) and Morpus – Lokichar (A8) road project by CGP Consulting Engineers.

The Government of Kenya, through its implementing agency, the Kenya National Highways Authority, commissioned KOCKS CONSULT GMBH in association with MAX & PARTNERS and SURTECH Ltd. in 2011 to undertake Consultancy Services for Feasibility Study, Environmental and Social Impact Assessment, Resettlement Action Plan, Detailed Design and Tender Document preparation of the Lesseru - Kitale - Marich Pass Road Rehabilitation Project. The design for Lesseru – Kitale – Marich Pass was completed in January 2015. Further, the design for the section between Marich Pass and Lokichar (A1) was completed in July 2014. The ESIA was further updated in December 2014.

The previous ESIAs were prepared under the World Bank guidelines at the design stage. However, a review and updating of the ESIAs is necessary due to delay in implementation of the 2 sections, and new information that may have risen since the ESIAs were conducted, including change in environmental and social setting of the area the roads transverses. The review and updating of the ESIA is also necessary to validate any design changes that may be necessary during the design review process. Further, the ESIA review and updating was to be revised to meet the requirements of the African Development Bank (AfDB) Integrated Safeguards System (ISS), and also to ensure that an EIA license is issued for the proposed projects.

Objective of ESIA

The main objective of the ESIA review and updating study was to identify environmental and social impacts associated with the proposed construction of the proposed roads and to recommend an appropriate environmental and social management strategy for the project, which complies with EMCA requirements, AfDB Integrated Safeguards System, and Good International Industry Practices (GIIP) in Environmental, Health, and Safety General Guidelines related road construction. The core outcome of the Study is an Environmental and Social Management Plan, to be carried out to enhance positive impacts and mitigate negative environmental and social impacts of the project. Specific tasks included;

- To review and update the draft ESIA report to conform to AfDB Environmental and Social Safeguards Policies and Procedures for Environment and Social Assessment (OS 1).
- To review and identify gaps in the draft ESIA report prepared for this subproject and address them by evaluating the established social and environmental context, reviewing the identified potential risks and impacts, benefits and opportunities.
- To carry out site investigations to collect primary data and review available relevant secondary data to establish a comprehensive environmental and social baseline, indicators
- To ensure that the stakeholder analysis and consultation are conducted as part of the ESIA review, and identify who among the affected population is particularly vulnerable to potential adverse impacts.
- To conduct public consultations and meaningful stakeholder engagement with project-affected persons, interested parties, and Non-Governmental Organizations (NGOs) on the project's environmental and social impacts, as well as offer opportunity to receive their opinions and feedback so as to take their views into account and reflect the issues raised into the final design for the project.
- To review and identify all the potential significant positive and adverse environmental and social impacts, including direct, indirect and cumulative impacts associated with the project
- To review proposed measures to avoid, reduce, mitigate, manage and/or compensate for such impacts, including the institutional arrangements and required capacity building to implement all such measures and monitor their effectiveness
- To review and update an Environmental and Social Management Plan (ESMP), detailing strategies for the implementation of environmental and social safeguards in the project
- To come with appropriate budget for environmental, social and, health and safety mitigation measures for the proposed project.

- To document all the above mitigation and development interventions in acceptable format to be further discussed and agreed with KeNHA and in compliance with the AfDB Safeguards Requirements

ESIA Approach and Methodology

The systematic investigative and reporting methodologies specified in the conduct of ESIA Studies (Legal Notice 101 of EMCA, 1999, amended 2015) and AfDB Operational Safeguards (OS) were applied in the ESIA Study. Baseline data on the project was first carried out through discussion with the client and review of project documents. Opinions formed were validated through fieldwork entailing site investigations and interviews with key primary stakeholders (e.g. traders, shoppers, county government officials, and residents living along the road project, e.t.c). The study also entailed holding public consultation meetings with residents living along the road project and other stakeholders. Providing basis for identifying, predicting, analyzing, and evaluating potential impacts that may emanate from the project. Diverse study methods and tools including scoping the project area, use of questionnaires, direct stakeholder consultations, holding public consultation meetings, and observations were employed. An Environmental and Social Management Plan comprising of an impact mitigation plan and modalities for monitoring and evaluation was then developed to guide environmental and social management during all phases of project development.

The process involved two stages of reconnaissance and detailed ESIA Study. The reconnaissance field visit was to appreciate the project and familiarize with the general site conditions. The detailed ESIA Study stage comprised of the following activities:

- Desktop studies of the available information for the project area;
- Documentation review for the baseline bio-physical environment;
- Baseline socio-economic survey through field observations (sampling households, focused group discussions, and key informant interviews);
- Public meetings with community members and institutional stakeholders;
- Impact analysis and assessment; and
- Preparation of ESMP;
- Developing a social and environmental monitoring plan including parameters, methodologies, sampling locations, frequency of measurements and timeframes

Project Alternatives

Alternative Alignments: The proposed project road run along the existing alignment with exceptions of a few sections at township where realignments will be effected as design speed could not be achieved and also due to road safety measures considerations. The major realignment will only be near Soy town centre, with few other minor realignments within existing road corridor. Other alignment alternatives would be expensive because of the likelihood of physical and economic displacement of communities, which would make the project economically unfeasible.

Strategic competing alternative routes: There are no strategic competing alternative routes to the project road in the area which would contribute to significant diversion of traffic.

Alternative 1: No Project” Scenario

Since the roads exists and are not meeting the minimum standards in terms of pavement conditions and safety, then there is no standard “no project” scenario if the strategic objectives of the GoK of connecting the North Western areas still exist. The “no project construction would mean that this area with great tourism and oil extraction potential will continue to be isolated. It would also mean that especially the government will continue to incur heavy maintenance costs due to tear, wear and breakdown of their vehicles. and continue to experience hampered delivery of essential services, especially security. The following benefits will also be forgone with the “No Action” alternative; (i) The development of economic and social exchanges between the neighboring regions, (ii) Provision of access to the whole population, regional and national economic integration, (iii) Employment opportunities for local residents along the project road, and (iv) Reduction in travel time and cost.

Alternative 2: With Project Option

Upgrading the existing road without any changes in route alignment: This option is highly favored to minimize any impacts on project affected persons (PAPs) through loss of property or loss of business due to demolition of buildings along the road corridor or shift of business activities due to the new road corridor. The final road design maintains the existing road corridor and reduces the Right of Way (RoW) to reduce physical and/or economic impacts hence fewer businesses will be relocated.

Alternative construction materials and technology: The proposed road projects will be constructed using modern, locally and internationally accepted materials to achieve public health, safety, security and environmental aesthetic requirements. The consultant evaluated recycling of existing pavement materials for subbase and base to reduce exploration of new materials for the road. Due to high cost of milling and recycling the pavement, and lengthy procedures required to meet the required design standards, the Consultant has proposed use of new materials to manage cost of the project. However, the contractor will be given the option to mill and recycle the pavement provided the required subbase material standards are met, without incurring extra costs to the project. Equipment that saves energy and water will be given priority without compromising on cost or availability factors. On the alternative construction materials and technology, rainwater is proposed to be harvested and for supply at labour camps for flushing toilets and other non-domestic activities. Asphalt mixers, crushers and other construction equipment and machinery will be incorporated with pollution control devices like dust arrestors/precipitators, emission control, noise abatement devices and desulfurization devices.

Policy, Legal, and Regulatory Framework

This ESIA Report has been developed to ensure that the proposed construction of the road conforms to national policy aspirations towards securing sustainable development. Specifically, this report has been developed to ensure compliance with requirements of the Environmental Management and Coordination Act (EMCA) 1999 CAP 387, amended 2015, which is Kenya's supreme environmental law, the Constitution and AfDB safeguard policies. Section 58 of EMCA requires that all proposed development in Kenya to be subjected to environmental impact assessment that should be carried out in line with the Second Schedule (of EMCA) and the Legal Notice 31 and 32 (Regulations for Environmental Assessment and Audit (Amendment) of 2019

Policy Framework

The policy frameworks considered were but not limited to the following;

- Environment Policy, 2014
- Vision 2030
- National Land Policy, 2009
- Integrated National Transport Policy (INTP), 2009
- Draft Policy on Aligning the Roads Sub-Sector With the Constitution, 2012
- Guidelines for Prevention and Control of Soil Erosion in Road Works, 2010
- The National Biodiversity Strategy, 2007
- Gender Policy, July 2011
- The National Social Protection Policy (NSPP)
- African Development Bank Integrated Safeguard System
 - Environmental and Social Assessment (OS 1)
 - Involuntary Resettlement: Land Acquisition, Population Displacement and Compensation (OS 2)
 - Biodiversity and Ecosystem Services (OS 3)
 - Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource Efficiency (OS4)
 - Labour Conditions, Health and Safety (OS 5)

- Other Best practices considered were
 - World Bank Group Environmental, Health, and Safety (EHS) General Guidelines.

Legal and Regulatory Framework

The primary law governing environmental management in Kenya is the Environmental Management and Coordination Act (EMCA), 1999 as amended in 2015 and associated regulations. According to EMCA, the proposed project falls under high-risk category for which full ESIA study should be prepared. Other key legal provisions of relevance considered include:

- Constitution of Kenya, 2010;
- Water Act, 2016;
- Kenya Roads Act, 2007;
- Traffic Act, 2014;
- Occupational Health and Safety Act (OSHA), 2007;
 - Subsidiary Legislations under OSHA Chapter 514;
 - Employment Act, 2007;
 - Work Injury Benefits Act (WIBA) Chapter 236;
 - The Factories and Other Places of Work (Hazardous substances) Rules 2007
 - The Factories and Other Places of Work (Noise Prevention and Control) Rules L.N 25 Of 2005
 - The Factories and Other Places of Work (Medical Examinations Rules) Rules L.N.24 of 2005
 - The Factories and Other Places of Work (Fire Risk Reduction) Rules L.N.59/2007
 - Incidence reporting and records maintenance
- Wildlife Conservation and Management Act, 2013;
- Public Health Act, Chapter 242;
 - The Public Health (Drainage and Latrine) Rules
- HIV/AIDS Prevention and Control Act, 2006;
- National Construction Authority Act, 2011;
- Land Act (No.6 of 2012);
- The National Lands Commission Act, 2012;
- Community Land Act, 2016
- The Prevention, Protection and Assistance to Internally Displaced Persons and Affected Communities Act, 2012;
- Land Registration Act, 2012;
- Land and Environment Court Act, 2012;
- Land Laws (Amendment) Act, 2016;
- National Sand Harvesting guidelines, 2007
- Technical Guidance on Management of used oil and oil sludge in Kenya, 2016
- Physical Planning Act, 2019;
- Climate Change Act, 2016;
- Urban Areas and Cities Act, No. 13 of 2011;
- The National Museums and Heritage Act (2006);
- Energy Act, 2019;
- Mining Act, 2016 and
- Intergovernmental Relations Act.
- Access to Information Act, 2016

International Treaties and Conventions

Kenya has ratified the following Project-relevant international conventions:

- The 1985 Vienna Convention for the Protection of the Ozone Layer
- The 1987 Montreal Protocol on Substances that Deplete the Ozone Layer
- The United Nations Convention on Climate Change ("1992 UNFCCC")
- The Kyoto Protocol
- Paris Agreement, 2015
- Convention on Biological Diversity
- The international convention on the protection of the rights of all migrant workers and members of their families, December, 1990
- Convention on the Rights of Persons with Disabilities (ICRPD), 2006
- ILO Convention No. 182 Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour, 1999.
- ILO Convention 138 on Employment Age, 1973
- CITES - the Convention on International Trade in Endangered Species of Wild Fauna and Flora

Institutional Framework

The main administrative structures include:

- Ministry of Transport, Infrastructure, Housing and Urban Development
- Kenya National Highways Authority
- The National Environmental Management Authority
- Water Resources Authority (WRA)
- National Transport and Safety Authority
- Kenya Roads Board (KRB)
- Uasin Gishu, Trans Nzoia, and Kakamega County Governments
- Directorate of Occupational Safety and Health Services (DOSHS)
- Energy and Petroleum Regulatory Authority (EPRA)
- Kenya Railways Corporation (KRC)

Baseline Environmental and Social Setting

Physical Environment

Uasin Gishu and Kakamega Counties

The approximate altitude at Km0+000 is 2,100m a.s.l. with a temperate climate throughout the year. The average night temperatures are ~9 °C and day temperatures of ~24 °C. The minimum and maximum temperatures generally range between 16 °C and 29.7 °C respectively. The conditions are influenced by mixed factors including the Cherangani hills to the north and east, Nandi hills to the south and Mt. Elgon to the west.

The total annual rainfall ranges between 755mm and 1,478mm with a mean value of 1,124mm. Precipitation occurs mainly during April and May with a dry spell in June, followed by increasing rainfall in July and August. Rainfall tails off in September and October. A dry period with scattered showers of four to five months follows, until the following March. Rainfalls hours are mainly during the afternoon and at night. Most days are generally sunny with a mean sunshine of 7.7hrs. per day.

Trans Nzoia County

Trans Nzoia County is generally at an average altitude of ~1,900m a.s.l. in the highlands and ~1,000m a.s.l. in the low lands which significantly affects the temperatures in the area. During the cold months the temperatures are as low as 10°C and rising as high as 37°C during the hottest months. July is the coldest month while August and January are the

hottest months. The average rainfall received in Trans Nzoia County ranges between 1,200mm and 1,500mm per annum.

Topography: The terrain along the road corridor is dynamic from flat to undulating. The Lesseru point (KM 0+000) of the road corridor in Uasin Gishu County is at an elevation of 2,100 a.s.l dropping to 1,790m a.s.l. towards Moi's Bridge (~KM35+000) with an undulating landform comprising of shallow river valleys and occasional outcrops. The landforms do not have significant influence on the road slope of the road surface. There is then a gradual rise in elevation in Trans Nzoia County towards Kitale town (located standing at 1,890m a.s.l near the A1/B2 interchange at ~KM54+600).

Soils and geology: The surface geological conditions between Lesseru and Kitale seem intact and stable. The soils in this section are predominantly ferrasols rich in organic matter, well drained, reddish brown and appropriate for farming.

Drainage and Hydrology: The road corridor is found in the Lake Victoria Drainage Basin, mainly influenced by Nzoia River system. The whole road corridor is well drained, with only a few places noted to be experiencing water ponding, which has not had an impact on the road itself. Within this project section, four existing major rivers cross the road; km 8+180 (Sergoit River), 16+750 (Kipsangui River), 26+720 (Little Nzoia River), and 34 + 500 (Nzoia River).

Air Quality: Vast sections of the project road are in rural areas which are very sparsely settled and have no major anthropogenic activities that contribute to air pollution levels beyond the natural background levels. Air quality along project corridor is influenced by transport activities in addition to agricultural and urban related emissions (farm machinery and domestic emissions). Random samples taken along the road indicates the particulate matter levels are below the occupational health standards. The key emissions associated with the project road include carbon dioxide (CO₂), carbon monoxide (CO), Nitrogen Oxides (NO_x), Sulphur Oxides (SO_x) and Particulate Matter (PM_{2.5}, PM₅ and PM₁₀) which comprises of hydrocarbons, fuel aerosols and soot. However, due to the high dispersal rates and high tree cover along the corridor, the overall concentration of pollutants in the air is fairly low.

Noise and Vibrations: Noise levels along the corridor are mainly ambient and influenced by the nature of human settlement. Slightly elevated levels are within markets and near urban centres where economic activities including workshops, commercial undertakings and entertainment points are located. The main noise pollution is from the vehicles along the road, motorcycles, prayers from the churches, and human noise from traders and consumers during normal business hours. However, the levels, are confined within the vicinity of the carriageway.

Water Quality: The main sources of water are rivers, and natural springs for both domestic and livestock use. During road construction, some of the identified sources may be affected due to their proximity to the road alignment or if utilised during construction.

Biological Environment

Vegetation: Along the project road, there is significant tree cover thanks to intensive agro- forestry initiatives that partially compensates the loss of forest cover associated with human settlements and economic activities. However, the agro-forestry mainly involves exotic trees as opposed to the indigenous trees species. The main tree species observed include but not limited to; *Grevillea robusta*, *Pinus* sp.(pine species) and *Eucalyptus* spp. trees.

Wildlife and birds: Due to the intensive human settlements and economic activities between Lesseru – Kitale sections, there is no notable presence of wildlife other than small rodents, snakes and a number of birds species.

Social and Economic Baseline Conditions

Administration The project road traverses through three (3) counties- Uasin Gishu, Kakamega and Trans-Nzoia, and through the following constituencies; Soy and Moiben (in UGC), Likuyani (in Kakamega county), Kiminini and Sabaoti (in Trans-Nzoia county).

Population: The Kenya Population and Housing Survey report (KPHC) 2019 showed that Trans-Nzoia County had a population of 990,341 persons with an annual growth of 3.8%, Kakamega county had a total population of 1,867,579 persons, with an annual growth of 4.1%, and Uasin Gishu with a population of 1,163,186 persons, with an annual growth of 3.3%. On average, 22.4% of the project counties' population live in urban areas while 87.6% live in rural areas. Uasin Gishu county has the highest number of urbanized population at 38.6% followed by Trans Nzoia which has 20.4% and Kakamega with 15.2%.

Livelihoods of the Project counties: The three counties where the road transverses are considered the breadbasket of Kenya because they have high and reliable rainfall, relatively large farm sizes, and highly mechanized farming. Ninety percent of the total land in the counties is arable. Agriculture is the mainstay of the economy contributing 80% of total rural household income and food security. Maize, wheat, beans, tea, coffee, dairy, Irish potatoes, horticulture and local chicken are the key value chain commodities in the counties. Predominantly small scale farming is practiced in Kakamega while large scale farming with very high levels of external inputs is also common in Uasin Gishu and Trans Nzoia counties.

Settlement patterns: Settlement patterns are influenced by ecological and climatic factors including land fertility, rainfall amount, type of farming practiced and crops grown, number and intensity of economic activities, and access to services (administrative, health and education). Another reason for clustered settlement is the growth of towns such as Mois bridge, Matunda, Kitale and Kapenguria where there are many migrant workers and business people. These factors have led to emergence of two types of settlements in the counties including clustered and scattered settlements. Clustered settlement patterns are commonly found around towns and farm estates

Land Ownership: The main form of land ownership in the Counties where the project is located is private ownership, where most of the owners have title deeds, with a leasehold of 99 years.

Water Resources: Water resources along the corridor include surface water sources and few ground water sources. The road section is endowed with water resources, from Cherangani Hills and Mount Elgon watersheds, mainly used for household use, farming and livestock.

Transport: The counties covered by this section of the road project have well defined infrastructure networks including four airports/airstrips, 237kms of railway (under rehabilitation by Kenya Railways Corporation) and 6,922km and 920.5km of gravel and bitumen roads respectively. Despite having extensive road network coverage, most feeder roads are to gravel standards, making it hard to travel and move produce from the rural areas to the markets during rainy seasons. The road cross the railway three times at Lesseru, Matunda and Moi's Bridge. The design has proposed a road bridge at Lesseru, and Rail-over bridges at Matunda and Mois Bridge.

Education: School enrolment within the Counties has seen an improvement in the years between 2013 and 2017¹ due to improvement of infrastructure. The counties also have good number of institutions- from primary to tertiary level which has seen literacy levels of 14-24 years averaging over 90% in these counties.

Health: The five most common diseases in the Counties in order of prevalence are: Upper Respiratory Tract Infections (URTI), skin diseases, other diseases of the respiratory system, diarrhea and pneumonia.

¹ UG CIDP 2018-2022, and TNZ counties CIDPs – 2018-2022

Trade and Industry: Trade, commerce and industry along the project road includes industrial processing, wholesaling, retailing, hotel and lodging/bars, petrol stations as well as transport and communications. The Major Town centres along the project road include Matunda, Soy, Moi's Bridge, Maili Saba, and Kitale, where major trading and industries are located, including food and vegetable markets. In addition, there are a number of companies in Uasin Gishu and Trans-Nzoia counties including Kenya Seed Company and Western Seed Company.

Cross Cutting Issues

Poverty: Poverty is widespread in the project counties. The major causes of poverty are unemployment, lack of markets for the farm produce, high cost of inputs, and poor food storage facilities. High population growth rate has contributed to increasing poverty as social facilities such as health, education, transport etc have been over burdened. Poverty is highest in Uasin Gishu at 38.2%, with Trans Nzoia at 34% and Kakamega at 33.3%.

Gender Issues: The main gender issues are contained under the customary practices where the male vests ownership and control of productive assets. Women in the counties are faced with a number of challenges including inadequate access to credit, lack of technical skills, multiplicity of roles for women and inadequate access to education and training. The traditional delineation of labour persists with women assuming the entire responsibility for childcare, provision of food, water and firewood collection and the general maintenance of the homestead among others. Other forms of gender issues that are rampant in these counties include but not limited to; discrimination against women and girls, harmful practices such as child abuse, early and forced marriages.

Although not well documented, Gender Based Violence (GBV) is rampant in the project corridor and in some cases normalized. Normalization of GBV and stigma influenced by cultural norms prevents GBV survivors from speaking openly about their experiences and often keeps them from reporting their cases to the local administration or the police. The Kenya's Sexual Offences Act provides for the prevention and protection of all persons from harm from sexual acts including sexual assault, rape, defilement, sexual harassment and child prostitution. It also provides for access to justice and psychosocial support.

Stakeholder Engagement and consultations

The public consultation and participation were conducted through the use of Household socio-economic survey; key stakeholder interviews; Key informant interviews; Public Meetings and Focused Group Discussions.

The key stakeholders consulted included but not limited to; National government officials at the county levels, County government officials including the Governors or their representatives project affected persons (PAPs), traders/business people, boda boda riders, matatu drivers, women, youths, and persons with disability. Consultations were held by the Design Review Consultant during the review and updating of the ESIA at the following locations.

MEETING DATE	COUNTY	VENUE	MALE	FEMALE	TOTAL
7/12/2021	Uasin Gishu / Kakamega	Soy	26	37	63
8/12/2021	Uasin Gishu	Furfarol	18	15	33
8/12/2021	Kakamega	Matunda	42	15	57
9/12/2021	Uasin Gishu	Mois Bridge	50	40	90
7/12/2021	Uasin Gishu	Nangili	30	17	47
22/3/2022	Kakamega / Uasin Gishu	Soy Club	74	39	113
22/03/2022	Uasin Gishu	Matunda SDA Church	38	28	66
23/03/2022	Uasin Gishu	AIC Moi's Bridge	47	41	88
Total			304	241	545

Consultations with stakeholders is a continuous process throughout the project cycle, and the Design review consultant will continue to hold further consultations during design review process to collect more stakeholder comments/views, and validate comments received, and include them to enhance the design and mitigate any impacts that may arise as a result to the project. The stakeholder consultations highlighted the following positive and negative environmental and social impacts of the proposed project:

Positive Impacts	Negative Impacts
• Creation of employment opportunities • Increased business opportunities: • Improved social infrastructure • Faster means of transport: • Cheap / affordable fares • Easy and fast movement of goods and people • Easy and fast movement of goods • Interaction of people from different communities • Growth of towns • Potential for increased economic activities • Transfer of skills • Improved security • Reduction in vehicle maintenance costs	• Dust generation • Noise pollution • Increased Accidents – human and livestock, especially at materials borrow sites • Impact on water resources • Waste disposal and spoils • Loss of vegetation cover • Road accidents • Displacement of local communities and loss of property and assets (including graves) • Disruption and loss of businesses • Cultural erosion • Increase in the spread of STD, HIV and AIDS

The following proposals came out of the various institutional stakeholders and public meetings during the recent consultations.

- Compensation of PAPs due to land-take to pave the way for the road construction should be done before commencement of the civil works;
- Adequate notice (time and resources) for PAPs should be given in preparation for the resettlement;
- Prioritize locals for the employment opportunities arising from the project;
- Livelihood restoration during resettlement should be considered for those relocated from the road reserve;
- The project should consider investing in projects that will benefit the local population in the areas of markets, especially local Produce Markets at Matunda, Soy, Nangili, Moi's Bridge and Maili Saba Townships.;
- Project should train youths and women on road construction for technology transfer
- Importance of timing and duration of construction of the project road, to ensure the project proponent select a good contractor to finish the works on time and within the budget;
- A competent contractor should be selected to undertake the road construction;
- Participatory/Engage the local community and other relevant institutional agencies throughout project implementation

Environmental and Social Impact Assessment

Preliminary Identification of VECs

The Table below provides an overview of the key Valued Ecosystem Components (VECs) that are potential receptors expected to be affected during the implementation of proposed project.

Potential environmental and social receptors during the Implementation of proposed project

Project activities	Impact	VECs
Project construction activities typically including: • Access road construction or upgrade • Site preparation and development • Removal of select vegetation • Grading and excavation of soils • Land clearing for projects rights-of way • Dismantling of damaged equipment • Equipment staging areas • Trenching and excavation works • Storage of materials and Chemical / oil • Vehicle and equipment operation and maintenance. • Land Use & Land Acquisition • Demolition, lifting and transporting of debris and rubbles • Repair, reconstruction and rehabilitation of damaged infrastructure/buildings; • Drilling activities, eg for Water	Air Quality degradation and pollution	Public institutions, community members
	Noise pollution	Public institutions, community members
	Soil contamination and erosion	Soils, water resources, local communities, livestock
	Loss of land	PAPs
	Generation of Solid and hazardous waste as well liquid waste	Local communities, water sources, soil
	Water pollution	Water resources eg Rivers Nzoia, Sebuwani, Kipsania, local communities
	Vegetation clearance Disturbance and/or displacement of wildlife	Flora, Fauna
	Increase in Traffic Congestion and Detours	Local communities, institutions
	Impact on socio-economic activities of the area, such as impact on business, change in pricing of commodities etc	Local communities, institutions
	Health and safety	Workers, local communities, livestock

A summary of the positive and negative impacts envisaged during the implementation of different phases of the projects are presented below.

Construction Phase

Positive Impacts

Employment Opportunities: Construction activities will create employment opportunities for workers at international, national and local community level. This will be significant when gender mainstreaming will be implemented more so for the women who are marginalized and rarely have job opportunities in road construction.

Business Opportunities for Local Suppliers and Service Providers: The road construction activities involve a capital expenditure that requires a range of inputs comprising of machinery/plant and spares for plant and machinery, tyres for plant and machinery, gabions, concrete additives, reinforcement bars, posts and other consumables (wood formwork, bricks, cement, sand, aggregate, oils and lubricants) among others. The locals are optimistic that there will

be business opportunities such as food vending and supply of firewood in the in the construction sites. They also requested that the vehicles for transport services be hired from the locals.

Knowledge and skills transfer: Through staff interaction, the locals employed in the project will have an opportunity to learn from some of the specialised skilled and semi-skilled personnel that will be involved during the project construction. This may enhance their knowledge in construction of bitumen standard roads and associated facilities and their ability to access similar opportunities in future even beyond the county. The works will also invoke interest in youngsters to participate in such project in future and their career goals.

Negative Impacts During the Pre-Construction /Construction Phase

Vegetation Loss: The project road will be confined to the existing road reserve. However, it is anticipated there will be some form of vegetation clearance to pave way for diversions, near drainage sites, and clearing vegetation that might be on the way leave. Some vegetation might also be lost in areas while establishing camp sites, borrow sites, quarry sites, construction sites and associated plants.

Habitat Loss and Disturbance: Construction activities such as vegetation clearing, access to/operation of material sites and excavations along the road corridor will lead to wildlife displacement from their natural habitat. Some of the wildlife such as birds with territory and home ranges will have to abandon the disturbed habitats and re-establish elsewhere leading to increased inter and intra-species competition for preferred sites.

Workmen's and Storage Camp: Camps for this type of road would generally require approximately 5 to 10 acres of land, with offices for contractor and resident engineer, housing for migrant workers, area for materials storage, garage and service bays, parking for staff and construction vehicles, materials laboratory, among others.

Construction camps may put pressure on fuel sources such as kerosene or gas to be used for heating and cooking purposes. Strain on major utilities like water can also cause social unrest along the road project. Sewage, solid and oil/petroleum wastes also produced at the camps could also pollute sources of water, land and soil. Sanitation and hygiene in the workmen's camp are also issues of concern, and if not properly addressed may lead to outbreaks of illnesses such as cholera, hepatitis, typhoid etc

Excessive Noise and vibration: Construction activities generate noise from vehicles used for transportation of material and workers to site, earthworks using heavy equipment and machinery for site preparation and facility erection and diesel generators used for on-site power generation. Workers at construction site are likely to be exposed to increased noise levels as they operate the noisy equipment or work close to the noise sources.

Construction dust and air quality: The construction dust may cause reduced visibility, respiratory problems to exposed workers and community members and discolouration of adjacent vegetation and buildings. In addition, construction machinery will emit exhaust fumes contributing to air pollution.

Because of the settlement patterns, the most likely receptors of dust pollution are located in the urban and town centres along the road, with the other receptors being roadside vegetation and wildlife.

Generation of Solid Wastes: A range of solid waste, both hazardous and non-hazardous, are likely to be generated during road project implementation. Wastes emanating from construction phase will mainly come from site clearance (vegetation) and excavation works (cut-to-spoil); Construction support activities and machinery maintenance and repair works such as used lubricant cans, packaging wrapper, worn-out tyres, and replaced equipment parts; Consumables (such as wood formwork, metal cuttings); Material testing and trial laboratories such as lab material rejects, test specimens for disposal, excess lab sample materials and grounded equipment or spares; Discarded material from handling losses; Residential camp sites wastes such as leftovers/food scraps, bottles, cans, clothing, food packaging, newspapers and magazines. Improper waste disposal is likely to affect the aesthetic value of the surrounding as well as the local community. The waste may attract scavengers and breeding pests, informal recycling or pollution of sensitive resources (such as water sources) triggering community health and safety issues.

Increased Soil Erosion incidences: Project implementation activities such as material borrowing and earthworks (surface scarring) will loosen soil material, which will expose to agents of soil erosion, especially in sloppy and bare areas. Active construction sites may have piled batches from borrow areas as fill material.

Contamination by liquid waste and hydrocarbon spills: Routine cleaning will generate washdown water containing sediment (soil, clay, gravel and sand), detergents and automotive fluids, all of which are pollutants. This may contaminate the receiving soils and surface water environment if not managed properly. Other sources of liquid contamination include release of untreated camps' sewer or grey water, leaks and spills from hydrocarbon containments including stored bitumen. Given scarcity of water resources in the area, any minor pollution of existing surface water can be seriously detrimental to both wildlife, livestock and local communities.

Impacts of Materials Borrow Sites: During the construction phase, the contractor will have to source construction materials from various material sources. While potential material sites have been identified in the project design report, the actual sites to be exploited will be decided by the appointed contractor. Cases of over extracting these materials from few sites beyond their regenerative capacity may arise if not done in a sustainable manner. The contractor will thus be expected to undertake detailed environmental and social impact assessment before commissioning the selected individual material sites.

Increased water demand: Due to high water demand for construction works, sometimes it is difficult to meet the water demand for construction works, local community domestic uses and for livestock from the existing resources. Without participatory exploitation of alternative sources of construction water, conflicts may emerge between the contractor and the local communities.

Impacts on increased construction traffic and associated accidents: Activities related to construction works will undoubtedly induce uncharacteristic high levels of additional vehicular traffic along the proposed road. Related issues of vehicle congestion and reckless driving by truck drivers delivering construction materials to the site will be some sources of potential accidents to humans and livestock, disturbance of normal living conditions to the local population, dust pollution, etc during the construction phase.

Disruption of Public Utilities: There will be requirements for relocation of public utilities such as water, electricity, and sewer lines in some sections of the road away from the road reserve, thereby affecting supply for the local residents, especially at major towns. In addition, construction activities might interfere with the underground fibre optic cables running along the road which could disrupt communication networks. Trucks with heavy loads of construction materials may also damage roads and footpaths, and other public utilities during the construction process.

Spread of Communicable Diseases: The road construction activities are likely to cause particulate emissions (PM2.5, PM10) such as dust leading to Upper Respiratory Tract Infections (URTI) complications among local community and workers if not well managed. Particles less than 10microns (PM10) and finer ones PM2.5 in diameter bypass body's usual defenses against dust, penetrating and lodging deep in the respiratory system (WHO, 2011). These infections occur within the upper respiratory tract (nose, throat, ears and sinuses) leading to common colds, influenza and respiratory distress syndromes. The infections are mainly caused by airborne agents or contaminated surfaces

Spread of HIV/AIDS and other STDs: During project road construction, it is likely that a significant increase in population along the project area as they are attracted to the project activities. The influx is likely to include people from outside the areas of counties served by the road. Construction workers could increase or create the demand for casual sex with local residents leading to the emergence or increase in sex work near the construction sites.

Workers welfare: Project workers such as construction workers face the risk of exploitation, discrimination and other forms of unfair treatment by employers/contractors, eg. exposure to poor health and living conditions, poor sanitation,

being overworked with no compensation, low wages, improper provision of proper PPEs and equipment for the works assigned, among others.

Community Health and Safety: During road construction, the general public may be exposed to injuries from various construction activities like accidents involving construction trucks or other mobile equipment, falls or slips into unprotected trenches/ditches etc. Children have low conscience of the inherent risks present at construction projects such as abuse, accidents and exploitation. Children are easily attracted around active construction sites to watch ongoing activities obliviously.

Conflicts between construction workers and local communities: While employment opportunities from construction is a positive impact, consultation feedback pointed out that there is a very high expectation on employment opportunities and supply of materials for local people during project implementation. Coupled with existing inter-clan conflicts, labour imbalance can create conflicts between the contractor and local communities if not well managed

Labour influx and Social Change: Influx of workers triggers the mushrooming of slums as workers opt for low-cost accommodation. Construction camps are set up by the contractor to provide living and eating areas for workers and also have separate areas for storing equipment and stockpiling material. Interaction with the project staff can lead to positive influences in the form of promotion of diversity in ways of thinking, experience of new cultures and exposure to new expectations in goals and achievements. On a higher level, these influences can result in adoption of new trends in social interaction, modes of dressing, leisure time activities and spending habits.

Child Protection, Sexual exploitation and abuse (SEA) of under-age girls: There is potential of the contractor employing children who have not reached the employment age, therefore violating the child labour laws of the borrower. The laws of Kenya prohibit contractors from “employing children in a manner that is economically exploitative, hazardous, detrimental to the child’s education, harmful to the child’s health or physical, mental, spiritual, moral, or social development.

In addition, there is a potential risk of project workers engaging in illegal sexual relations with minor girls, leading to HIV infection, teenage pregnancy, early child marriage, illegal and risky abortions, school dropout, etc.

Gender Equity and Mainstreaming in employment: There is potential that gender inequality might occur during project construction through unequal distribution of work, discrimination against women, and unequal pay for women, lack of provision of separate facilities for women, among others. Sexual harassment against women or men might also happen for those seeking employment through for example sexual favours for exchange of employment.

Gender Based Violence (GBV), Rape and Sexual harassment: Due to labour influx for some project activities such as construction works, the project could exacerbate GBV, sexual harassment and other sexual offenses such as rape. Construction workers may engage in sexual fraternization with locals. In addition to this being a driver of HIV infection, it will lead to domestic conflicts, GBV and domestic violence at household level. Women who seek employment may also face demands for sexual favors before being employed which amounts to sexual harassment. Even when employed, women may face continuous and unwanted demands for sex and risk losing their jobs if they do not give in.

Alcohol and drug abuse: The presence of migrant construction and other project workers in the community may lead to the emergence of small business hubs with kiosks for selling foodstuffs, cigarettes, alcohol, e.t.c to serve the workers and other members of the community. These business hubs may also engage in selling illegal drugs to project workers and other members of the community. The overall effect may be an increase in consumption of alcohol and illegal drugs in the community

Complaints and Grievances / Social Conflicts: There is also potential for social unrest among the local population if they are not considered for employment. This can bring negative publicity during construction including stoppage of work and can delay the projects progress. Against the background of this knowledge and expectation, there is a risk

of dissatisfaction if procedures of allocation of workforce are not adequately applied, or if they are seen to be applied in an inequitable manner, especially due to local clan political dynamics.

Occupational Safety and Health Hazards: Construction activities will expose staff to risks of accidents and incidents while undertaking excavations and trenching, installation of contractor facilities, operating mobile machinery, electrically powered equipment and materials delivery vehicles

Social Change: During construction phase it is expected that there will be an influx of workers from various cultures and social practices. The project area on the other hand can be categorized into rural, peri-urban and urban settlements hence resulting in a range of cultures from homogenous conservative communities to metropolitan/cosmopolitan communities in the major towns. There shall be an influx of people in the project area in search of employment, most of whom shall be unskilled and semi-skilled. The contractor(s) are also expected to come with a team of skilled personnel to carry out various specialized tasks during the entire construction phase.

Construction works induced traffic and inconveniences: During the road construction works, it will be necessary to have some deviations in order to allow uninterrupted traffic flow. The road corridor is wide enough, and deviations shall remain within the road reserve. However, deviations if not well maintained have negative environmental and social impacts such as generating dust, blockage of accesses, increase in soil erosion, and potential to damage vehicles, thereby increasing maintenance costs to the users of the road.

Much of the road design has been aligned along the existing road reserve. Accesses to facilities abutting the road will be temporarily interrupted within the settlement areas, especially in centres along the road leading to traffic inconveniences and interference with normal operations. In many of these centres, access to the market place and other businesses may be interrupted during construction affecting business operators and their patrons.

Spread of Covid 19 among workers and community members: Project Construction will attract various categories of workers drawn from local, national and international markets. If occurring within the COVID-19 pandemic period, this may pose risk of spread of COVID-19 which is a highly infectious disease.

Crime management: The influx of labour a specific project area or site especially during construction, and the settlement changes due to economic development of the area after project completion has the potential to lead to a number of negative socio-economic impacts, including increased insecurity and community conflicts, increased incidences of diseases (as mentioned above); increased risk of accidents and occupational hazards. Crimes might occur in the project area during the construction and operation such as stealing of construction materials or individual property, fighting, petty crimes such as pick pocketing, drug abuse and alcoholism among others.

Absenteeism in schools: School children who live near construction sites are likely to be absent from school many times or will perpetually report late to school because of engaging in petty business activities of vending eats and other items to construction workers, or being lured by workers into sexual relationships that would encourage dropping out or being absent from school.

Increase in the prices of goods and services in the community: Increased demand by migrant labor may affect the local economy positively for producers and providers of some goods and services. This may lead to prices of rent, food and other commodities to rise. This may negatively affect other households who have a fixed income or those who are already barely managing to survive.

Operation Phase Impacts

Positive impacts

Spurred Economic Development: The project road will improve connectivity between other parts of Kenya, and as far as South Sudan. Improved road connectivity will spur economic development as creation of opportunities to invest and spend increase with the volume of goods and services accessible to local population and on transit. In addition, the upgraded road will provide faster movement of people, goods and services in the area, which will likely stimulate more public and private investments such as facilities which include but not limited to schools, health centres, water, energy, and sanitation mainly in the urban centres. This growth means the social and economic conditions of these people will grow, improving and uplifting the standards of living along the proposed road project.

Reduced travel time and cost: The development of the project road will reduce travel time and cost associated with the current poor road conditions. Paving the project road will improve travel experience by reducing the travel time for users. The cost of travel is deemed to decline with reduced wear and tear due to the paved conditions. This will trickle down to reduced cost of living (access to social and economic services) within the project area.

Improved health benefits: The health benefits associated with the proposed road at operation phase include: improved access to health facilities and health services especially for pregnant women during labour; improved traveling experience especially for the aged who previously suffered joint, back and head injuries when traveling on the rough roads; and Improved access by health specialists who are willing to give service but are currently hindered by the poor road network. The challenges they currently face include time wastage on the road, the stress of traveling, loss of productive time and inconsistent transport.

Cultural integration due to influx of people: The improvement of the project road will improve connectivity of counties to the rest of the country. The number of people from other parts of the country willing to exploit opportunities due to the connectivity will increase. As people of different cultural background, lifestyles and ethnicities stream-in along the project road it will enhance the cultural integration and coexistence within the local communities. However, this may be a gradual process

Reduced Vehicle Operational costs: The reduced vehicle operating and maintenance costs due to improvement of the riding quality and surface of the road compared to the current road situation greatly enhances accessibility to basic facilities, for the local communities and others served the road corridor. Therefore, the development of the road will also be an opportunity for the area to be opened up for other opportunities and development in other commercial sectors by outside investors, since more investors will deploy their vehicles along the road due to reduced costs of maintenance and operations.

Improved Travel Comfort and Response: The road project will generally increase travel safety and comfort. With the improvement of the road, public transport business will be more competitive, and it is likely that transporters may opt for better and bigger public transport buses. In addition, an improved road will allow quicker response by medical and security personnel to the areas served by the road, thereby improving service delivery of the area.

Increased Vehicle Accidents: Improved road conditions will attract more traffic volume and increase incidences of vehicle over speeding considering the road has a maximum design speed of 120km/hr. Under these circumstances, a combination of reckless driving and ignorance of local communities of road safety requirements and basic rules may result in accidents.

Negative Impacts during Operation

Human Encroachment along the Project Roads: After construction of the project road is complete and operational, there is the possibility of encroachment of various informal businesses along the project roads due to the increase in traffic and improved business opportunities. The encroachment increases the possibility of road side accidents and makes road maintenance difficult and an expensive activity due to the compensation demands from destruction of properties and disruption of livelihoods for the encroachers.

Road Maintenance Impacts: During road maintenance, solid waste generation may include road resurfacing waste (removal of the old road surface material), road litter, illegally dumped waste, or general solid waste from rest areas, vegetation waste from right-of-way maintenance; and sediment and sludge from storm water drainage system maintenance. Paint waste may also be generated from road and bridge maintenance (due to removal of old paint from road stripping and bridges prior to re-painting).

Increase in Communicable Diseases: Once operational, the project road will experience increase in vehicle traffic, including long-distance drivers who will be making stop-overs in different towns along the road. Areas where truck drivers usually stop have been known to have high number of sex workers, who are likely to include those from outside the project areas. Truck drivers could increase or create the demand for casual sex leading to the emergence or increase in sex work at the centres along the road. With increased vehicle traffic, there will be a proportionate rise in emission levels. Human exposure to these emissions has health impacts. Health problems associated with the vehicle related pollutants include cardiovascular and respiratory diseases and cancer.

Drainage and Storm water Management: During the operation of the road, storm water will be generated as a result of an increase in paved sections of the roads, meaning that there will be more runoff than normal, which will affect the drainage systems, hydrological regimes and storm drains of the project area.

Solid Waste: During operation period, road users spilling materials (oils, foodstuffs, plastic materials, and other wastes), tends to leave pollutants on the road reserve, bus stops and the adjacent lands compromising the natural resources and people's health.

Cumulative impacts

Cumulative impacts are impacts which result from the incremental impact of a proposed activity on a common resource when added to the impacts of other past, present or reasonably foreseeable future activities. As a result, cumulative impacts such as impacts on resources such as water, energy and road construction materials within the region might arise due to the needs for the simultaneous construction of the roads. Lesseru – Kitale (B2) and Morpus– Lokichar (A1) project roads will be developed concurrently with other roads in the Western and North Western region including Marich Pass – Loruk (B4), Lokichar – Nginyang (C113), Kitale – Endebess- Suam (B2), Kitale – Kapenguria – Morpus (A1), among others. If well implemented, the proposed measures are expected to minimize the overall cumulative impacts from these projects in the region. Other road projects include those along or near the road corridor undertaken by other road agencies such as KURA, KeRRA, the county Governments and the Constituencies through Constituency Development Fund (CDF).

Cumulative impacts such as impacts on resources such as strain in water, energy and road construction materials within the region might arise due to the needs for the simultaneous construction of the roads, other initiatives in the project road corridor (e.g. water and sanitation projects), degradation of environment due vegetation clearance, an increase in soil erosion, impacts of wildlife such as potential poaching in the region due to better access, solid waste generation, among others. Furthermore, the project can also contribute negatively from a social perspective such as changes in cultural practices for the local communities due to influx of people looking for business opportunities, increase in tourism in the area, security challenges, changes in traffic patterns, housing availability, and employment, considering that there are a number of proposed projects along or near the road corridor.

Summary of the Likely Potential Cumulative Impacts

Environmental and Social Item	Potential Cumulative Impacts	
	Construction Phase	Operation Phase
Soil Degradation, site related oil spills	Although not so significant, risks of oil spills increase as more projects are being undertaken in the region.	Increase in vehicles and potential accidents, and improper servicing of vehicles increase chances of soil and water sources degradation from poor management of oil wastes
Loss of flora, proliferation of invasive species	This may happen during the construction phase if the construction of other nearby projects coincides with that of the proposed project.	Vehicles and passengers plying along the roads may carry invasive species that may spread in the region Proposed measures include monitoring composition of species regenerating along road reserves and taking prompt actions in case of emergence of invasive species.
Solid waste	There will be a large amount of solid waste generated by all projects from various sources during construction such as at camp sites, soil spoil, cement bags, among others	Regional growth and increase in population as a result of easy access to the North Western region will increase solid waste generated in towns and centres. Passengers and travelers using the roads also tend to throw waste on the roads which increase the amount of waste generated in the region.
Air Quality	There is potential for degradation of during construction if not mitigated only if the construction of other nearby projects coincides with that of the proposed project	The impacts of the proposed road on regional air quality and greenhouse gases are currently negligible since the road is in poor condition and thus minimal traffic is experienced in the area. However, this is expected to change in future with improvement of various corridors in the area. It is recommended that monitoring of air quality in the region during operational stages should be conducted to devise methods of controlling greenhouse gases
Noise and Vibration	There is the potential for cumulative noise impacts of the proposed development in conjunction with other concurrent projects in the vicinity arising from simultaneous demolition and construction works.	Increase in traffic in the region, and higher speeds as a result of a good road will translate to increase in noise levels as more traffic use the roads.
Increased Traffic	There will be increased traffic in the region from construction activities of all the projects. The potential risks include cumulative increase in traffic accidents. Mitigation measures have been proposed to be implemented during construction	Traffic volumes will increase in the project area due to improved road conditions. More vigilance needed with installation of speed measure in high risk areas along the projects However, the proposed mitigations need to be strictly adhered to.
Strain in water resources	There is potential strain of water resources in the area during the construction phase if the construction of	Social unrest due to usage of water resources may occur as a result of easier access by other communities.

Environmental and Social Item	Potential Cumulative Impacts	
	Construction Phase	Operation Phase
	other nearby projects coincides with that of the proposed project.	
Social Impacts including: Labour influx, Crime, disruption of services, increased conflicts, impacts on children, GBV sexual exploitation and abuse	Influx of immigrant workers will impact the region through increase of local population. The Cumulative impacts will only occur during the construction phase if the construction of other nearby projects coincides with that of the proposed project. The proposed mitigations need to be strictly adhered to.	Given that traffic volumes will increase in the project area due to improved road conditions, changes in social setting of the communities in the region is bound to change in one way or another which could bring negative impacts such as social conflicts, intermarriages, prostitution, child abuse and sexual exploitation of underage girls. Continuous community awareness and sensitization of such negative issues will need to be done continuously using Community-Based Organizations (CBOs) and NGOs operating in the region with the support of the local county governments
Increased demand for firewood.	The major source of energy in the region for domestic use is firewood. The contractors of the road may also use firewood to heat up bitumen for the construction. This increased demand strains the forest resources and increases the level of carbon dioxide in the atmosphere	With an improved transport system in the region, access of firewood to larger markets is increased which will lead to unsustainable use of forest resources
Strain on Natural resources due to construction materials requirements - sand, stone and gravel.	With the concurrent implementation of development projects in the region, sand and gravel demand is on the rise. The sources of such resources face habitat disturbances, deformation and unsustainability	The road project will induce economic growth in the region leading to physical developments that will demand the use of sand, stone and gravel for construction

To mitigate against cumulative impacts, the project implementers have or will carry out ESIA studies that propose mitigation measures to be implemented during construction and operation phases of the projects. It is also proposed that the project implementers in the region should have a collaborative engagement with each other to develop a common cumulative impact management strategy to minimize cumulative impacts of their projects. If well implemented, the proposed measures are expected to minimize the overall cumulative impacts from these projects in the region.

Potential Impact during Decommissioning

Positive Impacts

Reuse of Contractor's Facilities: Some of the contractor's camps and other facilities erected during project construction can be handed over to the local government for convenient utilization as local administration offices or social halls instead of demolition. Boreholes can also be handed over to the community to improve their access.

Negative Impacts

Community Safety: Abandoned and improperly rehabilitated material borrow sites and quarries can present a great safety and health hazard to adjoining communities due to water ponding, deep cliffs and being inhabited by or providing hideout for problem wildlife.

Loss of Income: Staff working at the contractor's camp will lose income sources as their services will be terminated. Without prior awareness of contract conditions, abrupt loss of income source may psychologically impact the affected workers and even their families.

Noise pollution: Decommissioning of construction structures involve noisy activities originating from movement of heavy ground vehicles, disassembling all the prefabricated structures, disconnection of services, breaking down concrete foundations and handling of debris from sites.

Dust and Fumes: Decommissioning activities likely to cause dust and fumes include: Excavation and loading of spoil debris for disposal; Decommissioning of septic facilities; and Removal of fuel holding tanks and dispensers. These will be a nuisance mainly to demolition workers but may also affect nearby communities.

Waste Accumulation: Decommissioning of construction camps will generate waste some of which may not be reused or recycled. Spillages during handling substances may also occur contaminating surfaces. Removal and reinstatement of sites may accumulate debris that require proper handling and disposal.

Resettlement Impacts

The proposed project road will have a width of 40-60 m as is the standard requirement for a Class B road.

The project road mainly follows an existing alignment and to avoid or minimize impacts related to involuntary resettlement, effort has been made to ensure the road will be within the road reserve. The proposed alignment mainly lies within the existing alignment with the exception of some sections where there had to be deviation from the existing alignment at Soy township in order to meet the design standards including the allowed curve radius for the given design speed. However, there are some sections where realignments to achieve the road design standards and safety requirements is required; and therefore will require some land acquisition. In addition, field work established that the road will affect a number of traders and structures on the road reserve. This will affect some roadside properties and settlements mainly at key centres along the road between Lesseru and Kitale (see table below). This and other realignments have necessitated the undertaking of a Resettlement Action Plan (RAP).

The census was carried out to document the Project Affected People (PAPs) within the road RoW in all the settlements along the road. The data is important as it will form the basis for future RAP decision making regarding eligibility for compensation and resettlement assistance.

The road project development will disrupt livelihoods and cause loss of properties following displacement of people along some sections of the alignment. From RAP studies, the valuation roll yielded **616 PAPs**, mainly vendors roadside vendors trading at urban centres along the road reserve. Moi's bridge registered the highest number of PAPs, due to the number of roadside traders located in this centre.

Project affected Persons (PAPs)

Affected Towns/Centers	Business Structures	Structure owners operating business	Tenants	Mobile Road Vendors	TOTAL

Soy	0		0	115	115
Furfarol	0		0	19	19
Nangili	0		0	17	17
Matunda	0		0	72	72
Mois Bridge	0		0	393	393
TOTAL				616	616

A RAP implementation budget of Kshs 435,538,277 has been set aside for land acquisition, resettlement of traders, and trees compensation. This budget includes Kshs 30 million for RAP Implementation and monitoring costs.

Proposed Environmental and Social Plan (ESMP)

The negative environmental, health and safety, and social impacts together with the proposed mitigation measures are presented in the table below.

Table 0-1: Summary of Impacts and Proposed Mitigation measures

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
ENVIRONMENTAL IMPACTS					
Vegetation Loss	Low	- Minimize unnecessary vegetation clearance - Revegetation and landscaping of vegetation and trees along the road - Siting of camp sites should be done away from densely vegetated areas. - Compensate for the valuable trees to be felled within the settlements as per the project RAP recommendations.	- Vegetation cover along the road reserve that is also safe to the road users. - Landscaping and grassing on road reserves and especially on steep slopes - Recovery of tree cover lost in Kitale	Contractor, RE, KeNHA	No additional cost to the BoQ (see habitat loss and disturbance)
Workmen's camps management	High	- Locate camp sites away from residential areas and settlements - Contractor to prepare a Waste Management Plan for all worksites, especially the campsites - Provision of adequate water and sanitation (fixed toilets with running water and changing rooms) at the campsites, separate for men and women; - Provide for septic tanks and soak pits - Pay special attention on waste generation and disposal, sanitary conditions at the sites, which includes exploring an option of having a third party to manage the various waste generated at the campsites, including regular treatment of pests and rodents; - No waste at the campsite shall be buried or burnt; contractor to segregate waste, reuse, compost or use licensed third-party service providers for disposal of waste; - Treatment of the campsite for rodents and other pests shall be done regularly; - Completely decommissioning of the camp including permanent foundations and floors to discourage future informal settlement at the campsite	Campsite meeting environmental and social conditions of the project	Contractor, RE	Costs build in the planning and administration costs of the contractor
Excessive Noise and Vibration	Medium	Contractor to prepare Health and safety plan;	Noise levels meeting conditions of the applicable standards	Contractor, RE, County governments	To be provided under Bill No 1 –

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		• Monitor environmental and occupational noise levels as per the EMCA provisions of regulations and World Bank Group EHS guidelines; • The noise emission characteristics should be considered during selection and mobilization of construction equipment; • Where feasible, fit equipment with rock mufflers, sound insulations, silencers to lower the levels of noise emission; • Sensitize construction workers to switch off machinery and vehicles when not in use; • Provision of appropriate and adequate Personal Protective Equipment (PPEs) to workers; • Proper selection of project auxiliary sites, e.g. locate noisy operations like batching plant away from the densely settled areas; • Where noisy activities must be undertaken near sensitive receptors, the neighbouring occupants must be informed in advance and works limited to day time only. • Noise quality samples to be used as baseline data will be collected before commencement of the civil works for regular monitoring during the construction period at various sensitive areas to be agreed upon with the RE.			KSHS 2,000,000 for PPEs (ear plugs, maintenance of vehicles in administrative costs of the contractor)
Construction Dust and Air Quality	High	• Sprinkling water (at least twice a day) on the accesses and excavated surfaces during the construction period to suppress dust generation; • Limit the speed of construction vehicles (maximum speed limit 40 kph/25 mph) on earth road; • Where feasible, fit equipment with rock mufflers, sound insulations, silencers to lower the levels of noise emission; • Provision of appropriate protective personal equipment including respirators and dustcoats to exposed workers; • Ensuring the location of material stockpiles are away from human settlements and business premises;	Low particulate matter in the air meeting the applicable standards	Contractor , RE	To be provided under Bill No 1 - Kshs 5 million (Dust masks and other accessories) (NB water sprinkling part of the main BoQ – Bill No 9)

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		- Covering loaded trucks during the transportation of material; - Sensitize workers on best practice on management of air pollution from vehicles and machinery; - Demolition of existing structures shall be done in a manner that the dust from demolitions can be controlled; - Undertake regular air quality (dust level) monitoring and conduct corrective adjustments where necessary. - Air quality samples to be used as baseline data will be collected before commencement of the civil works for regular monitoring during the construction period at various sensitive areas to be agreed upon with the RE.			
Generation of Solid Wastes	Medium	- Contractor will prepare Solid Waste Management Plan - Waste be managed as per Environmental Management and Coordination (Waste Management) Regulations 2006; - Utilize the 3C strategy – Reduce, Reuse and Recycling; - Reuse excavated top soil for landscaping of the site as far as practical; - Segregation of solid wastes and provision of suitable and well labelled waste receptacles within the camp and at active construction sites; - Disposed solid waste at designated sites through licensed waste handlers; - Sensitize resident workers and service providers (e.g. food vendors) at project sites on proper waste management practices especially hazardous materials and risks of contaminations.	Proper waste management and disposal Minimal accumulation of waste	Contractor, RE, Contracted Licensed waste handlers	TO be provided under Bill 1 - KShs. 2,500,000 annually for waste management (total 7,500,00 for duration of the contract)
Increased Soil Erosion	Low	- Material excavation should be minimized and restricted to designated locations; - Excavated material should be properly piled and managed - sprinkled with water and covered (where possible) to prevent possible wash-out into seasonal watercourses.	Controlled soil erosion Proper compaction of surfaces Proper Landscaping and grassing of embankments	Contractor, RE	Part of Bill no 8

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		- The contractor should ensure that construction related impacts like erosion and cut slope destabilization should be addressed through rock pitching; - Re-vegetation should be done in tandem with construction activities to avoid exposure of bare ground to agents of erosion; - Enforce landscaping and restoration of the construction site prior to decommissioning of the construction site; - As part of enhancing environmental protection in the region, the contractor should start a tree planting campaign for reforestation by incubating a tree nursery programs along the road. The types of trees to plant shall be through the guidance of the local KFS or through involvement of the Ministry of Environment and Forestry			
Contamination by Liquid Waste and Hydrocarbon Spills	High	- Contractor will prepare waste management plan - Machinery maintenance should be done only on purpose-built garages that meet hydrocarbon containment measures and controlled drainage; - Fueling and servicing of vehicles will be undertaken from only designated and lined area - Contractor will be required to have an emergency spill containment and response plan; - Minor service and washing areas placed/ constructed with containment basins to ensure that the surrounding areas (including groundwater) are not polluted; - All sanitation waste, grey water runoff or uncontrolled discharges from the site/working areas (including wash down areas) to any water courses shall be contained, treated and properly channeled; - Flash toilets at camp sites should be connected to septic tanks or other treatment facilities approved by the county government and NEMA; - Water containing such pollutants as cements, concrete, lime, chemicals and fuels shall be discharged into a conservancy tank for removal from site.	Zero tolerance on liquid waste and hydrocarbon spills	Contractor, RE	To be provided under Bill No 1 - Kshs 3 million Rest of the budget under administrative costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
Habitat Loss and Disturbance	Low	- Locate project auxiliary features like camps and batching plants in areas already disturbed or outside of wildlife habitats. - Construction activities should be confined on the demarcated corridor and discourage movement or intrusion into wildlife habitats; - Throughout the construction cycle, project staff should be sensitized regularly on wildlife conservation. - The Contractor should sensitize workers on nature conservation, and enforce unauthorized intrusion or use of the wildlife habitats through signed code of conduct; - After decommissioning contractor facilities, native vegetation should be replanted as restoration measures. Accredited sources of seedlings should be used (such as local KFS tree nurseries). - To avoid random off-road driving that leads to trampling of vegetation in sensitive habitats, vehicles should be provided with designated routes - Existing diversions and diversions should be considered before opening up new ones during construction.	Minimal vegetation clearance Minimal disruptions of habitat life	Contractor, RE	Under Bill No 1 Extra KShs. 5,000,000 for reforestation program through establishment of a tree nurseries along the road project
Impacts on Materials Borrow Sites	High	- All material sites shall be selected in consultation with the county governments and the local communities, and rehabilitation/decommissioning plans agreed to ensure the sites will not cause any social conflict within the communities. If borrow sites will be converted to water pans, proper communities and stakeholder engagement shall be conducted and agreed upon (through signing of agreements to exclude any future liability by the contractor) if such usage will be proposed by the community members. - The contractor shall carry out environmental and social assessment for all auxiliary sites and seek relevant statutory licenses including NEMA for proposed material sites to be used for construction works;	Properly rehabilitated material borrow sites No incidents/accidents at materials borrow sites	Contractor, RE	No additional cost to the BoQ Costs built in the planning and administration costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		- Construction materials including sand, stones and borrow materials must be sourced from duly approved sources only; - Materials haulage routes must be pre-determined to avoid unnecessary off road driving; - Contractor to develop a system of tracking materials received viz a vis utilization to ensure proper materials management to avoid wastage; - The contractor shall locate material sites away from settlements if possible; - Where material sites are located near settlements, the contractor shall carry out baseline studies of structural integrity assessments of nearby structures; - The contractor shall develop safety management plans for any blasting which shall require the blasting to be done by a qualified experts, sensitization and notification to locals on blasting times; All material sites shall always be fenced with controlled entry at all times.			
SOCIAL					
Land take and disruption of livelihoods	Medium	- RAP Study Report for the project should be implemented to guide the compensation and resettlement process; - Compensation for all affected properties should be compensated before construction commences; - Grievance management system should be operationalized and maintained throughout the project implementation phase. All pertinent stakeholders should be involved in the compensation and grievance redress mechanism during implementation of RAP.	Do no harm for the PAPs Minimize livelihoods of the PAPs	KeNHA, Contractor, RE	Cost as per RAP Study Report Kshs <u>435,538,277</u>
Construction works induced traffic and inconveniences	High	- The contractor shall be required to formulate and implement a traffic management plan - Provision of alternative routes in areas where accesses have been disrupted;	Minimal disruptions of traffic due to construction activities Minimal accidents reported for contractors vehicles	Contractor, RE	No additional cost to the BoQ Under Bill No 4 and 9

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		• Provision and maintenance of clear traffic signages of ongoing construction works, regulate speed limits and diversion signage to notify approaching traffic; • In urban areas, schedule delivery of materials to the sites during periods of light traffic between 9.00am - 12.00 pm and 2.00 pm - 4.00 pm during week days; • Contractor to carry out road safety awareness for community members and institutions along the project corridor • Obtain permission from inhabitants and county governments if diversion routes go beyond the Right of Way; • Reinstatement of diversion routes (and old tracks) to original condition; • Institute a traffic management plan incorporating adequate temporary signages and flagmen as necessary; •	Observance of Code of Conduct		
Disruption of Public Utilities	Medium	• Liaise with utilities providers (power, water, telecommunication) to identify affected sections of alignment of the utilities and provide cost to cover the relocation of the existing infrastructure; • Relocation plans shall include adequate notification of affected customers.	Minimal disruption of public utilities	Contractor, RE	Under Bill No 1 – Relocation of services
Communicable Diseases	Medium	Upper Respiratory Tract Infections (URTI) • Apply dust suppression measures - sprinkling water on the accesses and excavated surfaces – this shall be determined by the RE depending on the prevailing weather conditions; • Maintain a grievance register to log any complaints from local community; • Hold inductions for staff and people visiting the construction sites on the health and safety aspects; • Provide dust masks for all staff and visitors to active construction areas;	No reported cases of communicable diseases	Contractor, RE	To be provided under Bill 1 - Kshs 6,000,000 For sensitization and awareness programs

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		- The Contractor should plan work program's activities and timing to avoid emission impact on sensitive receptors, especially urbanized areas; - Install screens and scrubbers on crusher sites to minimize dust emissions; - Locate ancillary facilities away from residential/institutional to minimize dust or other emissions to the residents; - Regular maintenance contractors' equipment			
	Medium	- Spread of HIV/AIDS, COVID, and Other STDs - KeNHA/Contractor should, in liaison with approved local service providers, provide HIV/AIDS awareness training to staff and the locals and monitor the efficacy of the awareness created during the project implementation period; - Sensitize workers on the need to refrain from risky behaviours; - Provision of condoms both male and female in the sanitary facilities and various locations for the members of public; - The unskilled workers should, as far as feasible, be recruited from among the residents of the project area and its immediate neighborhood to minimize labour influx; - Workers should be given regular leave, preferably monthly to cool off period and join their families - Regular sensitization and awareness, and provision of measures to reduce spread of COVID-19, and other communicable diseases.	Adherence to Code of Conduct by employees	Contractor, RE Appointed NGO	Kshs 15,000,000 for HIV/AIDS Awareness programs and campaigns (by a NGO) To be included under Bill No 25
Conflicts with local communities on labour issues	Medium	- Contractor to formulate and implement a labour management plan for his workforce; - Contractor will be required to have a transparent external communication plan covering among others, how available opportunities will be advertised; - The Contractor should prioritize employing locals as casuals to reduce the need for labour influx;	Local benefits from project construction in employment	Contractor, RE	No additional cost to the BoQ Costs build in the planning and administration costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		- Consultations with the local council of elders to ensure that available opportunities are fairly distributed across different clan members; - Maintain a grievance register to log any complaints from workers and local community.			
Workers Welfare	Low	- The contractor shall comply with the required Law of Kenya under Department of Occupational Safety Health and Services (DOSHS), and Labour requirements; - Have fulltime nurse on the campsite, with all first aid facilities are available at all times; - In collaboration with local health facilities, ensure that the workers have access to health facilities in the area; - Contractor to ensure that first aid facilities are available at all times at the work sites, and arrangement to access to ambulance service; - The contractor shall provide portable water and mobile toilets (separate for women and men) for the workers at all worksites along the road; - The contractor has to ensure that for any personnel accommodation, suitable arrangements are made to meet the welfare and hygiene requirements and prevention of epidemics, taking into consideration issues like harsh weather conditions in the region, sanitation, etc. - Contractor should hire qualified Human Resources staff to manage labour related risks in the project	Adherence to labour laws Proper living and working conditions for the workers	Contractor, RE	No additional cost to the BoQ Costs build in the planning and administration costs of the contractor
Community Safety and Health	Medium	- Ensure that all active work areas have controlled access limited to authorized persons only; - Establish and maintain continuous liaison with the host communities including sensitization on safety and health issues on construction sites; - Prepare and implement construction traffic management plan, incorporating safety of other traffic; - Install and maintain appropriate safety and warning signages along road sections and all other construction sites and facilities;	Minimize health and safety risks to the local communities	Contractor, RE	No additional cost to the BoQ Under Bill 9, and administrative costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		- Ensure proper and adequate provision of sanitation and waste management facilities at all construction sites; - Maintain a system of receiving and responding to any safety concerns by the communities; - Undertake general and third-party insurance liability covers as appropriate.			
Labour influx and Social Change	High	- The contractor shall develop a labour management plan for project; - The Contractor should prioritize employing locals as casuals to reduce the need for labour influx; - Ensure there is adequate security and reasonable controlled access to project offices and residential quarters of immigrant staff to discourage deviant behaviours at workers campsites; - Employment policy of the contractor should prohibit deviant behaviours at the workplace among staff such as cultural profiling, sexual exploitation, child labour and gender-based violence; - Workers will be sensitized on the different cultural practices in the region and for immigrant workers, respecting different cultural, religions and beliefs, including behaviours and norms of the local people; - Contractor to establish a grievance management system to handle internal and external complaints. - Workers will be sensitized and sign code of conduct regarding interactions, behaviours and relations with the local communities.	Adherence to Code of Conduct by employees Good relationship of workers and local communities	Contractor , RE	No additional cost to the BoQ - administrative costs of the contractor
Child Protection, Sexual exploitation and abuse (SEA) of underage girls	High	- Workers will be educated by relevant agencies such as police and probation officers on the relevant laws and polices protecting children - Reach out to children in and out of school in the vicinity of the construction sites with a life skills program focusing on HIV/AIDS and sexual abuse prevention among others areas - Mobilize and strengthen child protection institutions and structures near construction sites	Adherence to Code of Conduct by all employees	Contractor , RE	Kshs 10,000,000 For sensitization and awareness

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		- Reach out to school authorities and parents near construction sites on paying special attention to child protection in light of labour influx - Partnerships will be established with relevant government agencies and NGOs to ensure children access survivor centred services such as medical care, psychosocial support, legal redress, safety, etc as and when necessary - Ensure no children are employed on site in accordance with national labor laws - Ensure that any sexual exploitation and abuse (SEA) of children by the contractors' workers are promptly reported to the police - Popularize /put in place confidential mechanisms and hotlines for reporting child abuse cases - Enforce the child protection related clauses in the Code of conduct signed by all workers - Ensure visibility of signage and information, education and communication materials on such issues in the construction sites - Liaise with the administration units (County and sub County governments, Police, DO, chiefs, etc.) to provide regular surveillance and patrols to protect workers and unacceptable behavioral interaction of children and workers			
Gender Equity and Mainstreaming	Medium	- Contractor and implementing agency to prepare and implement a Gender Action plan to include at minimum, in conformance with local laws and customs, equal opportunity for employment (min 30% of labour should be women); - Ensure that women are given adequate employment opportunities during recruitment and job postings, including equal payment - Regular sensitization and awareness campaigns to the workers should be done to promote gender equity in employment during the construction works and during operation	Women are given opportunities to participate in the projects 30% of labour to be women	Contractor, RE	Kshs 3,000,000 for sensitization and awareness (under Bill No 1)

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		Provision of gender disaggregated accommodation, bathing, changing, sanitation facilities			
Gender based violence (GBV), Rape and Sexual Harassment	Medium	- Contractor will prepare a GBV Prevention and Response Plan and implementation arrangements - Contractor to prepare and enforce a No Sexual Harassment and discrimination Policy in accordance with national laws; - KeNHA to engage services of local CSO to educate all workers and nearby communities and stakeholders on preventing and responding to sexual harassment and GBV ahead of any project related works; - Popularize /put in place confidential mechanisms and hotlines for reporting GBV and sexual offences cases; - Strategies such as male involvement will be employed in preventing and responding to GBV and sexual harassment; - Establish partnerships with relevant government agencies and NGOs to ensure survivors of GBV and sexual offences access survivor centered services such as medical care, psychosocial support, legal redress, safety, etc as and when necessary; - Provision of gender disaggregated facilities - separate bathing, changing, sanitation facilities for men and women; - Grievance redress mechanisms including non-retaliation should be set up for the workers; - Liaise with the administration units (County and sub County governments, Police, DO, chiefs, etc.) to provide regular surveillance and patrols to protect workers and unacceptable behavioral interaction of local communities and workers	Adherence to Code of Conduct by all employees Zero cases of GBV related to the project reported	Contractor, RE	Part of sensitization and awareness budget (under Bill No 1)
Alcohol and drug abuse by workers	Low	- All workers (including subcontractors) to sign and comply with Code of Conduct on zero-tolerance on alcohol and drug abuse. - Removing any employee who persists in any misconduct or lack of care, carries out duties incompetently or negligently, fails to conform to any	Adherence to Code of Conduct by all employees	Contractor, RE	No additional cost to the BoQ, Administrative costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		provisions of the contract, or persists in any conduct which is prejudicial to safety, health, or the protection of the environment. • Taking all reasonable precautions to prevent unlawful, riotous or disorderly conduct by or amongst the Contractor's personnel, and to preserve peace and protection of persons and property on and near the site. • Prohibiting alcohol, drugs, arms, and ammunition on the worksite among personnel. • Liaise with the administration units (County and sub County governments, Police, DO, chiefs, etc.) to provide regular surveillance and patrols to protect workers and unacceptable behavioral interaction of local communities and workers			
Loss of life, injury or damage to people and private property	High	• Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, at all times • The contractor shall have insurance for his workers as required by law; • Insuring against liability for any loss, damage, death or bodily injury which may occur to any physical property or to any person which may arise out of the Contractor's performance of the contract • All fatalities or severe accidents/incidences shall be reported to the client (KeNHA) immediately (KeNHA) shall report to the AfDB within 24 hours after occurrence. The same should be done to DOSHS (within 24 hrs) with a written notice within 7 days as per the statutory requirements.	Zero cases of severe incidents/accidents	Contractor, RE	No additional cost to the BoQ Part of contract requirements
Complaints and grievances/social conflicts	Medium	• Provide grievance redress mechanism for the local communities and workers; • Advise the public and workers on where to report grievances; • Consider prioritizing the local manpower for both skilled and unskilled labour. • Implement proposed grievance resolution mechanism	Proper and operational GRM setup for employees and members of the public	Contractor, RE	Kshs 10,000,000 For GRC operations

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		Grievance redress mechanisms especially for workers should incorporate non-retaliation policies			
Impacts on Vulnerable groups	Low	- The project had conducted a standalone Social Assessment (SA) report in 2015 to determine how the communities will benefit from the project activities, and the recommendations will be incorporated into the project design; - Develop an action plan that sets out the measures through which the project will ensure that potentially adverse effects on the peoples' communities are avoided, minimized, and mitigated, and/or compensate for such effects; - The project to conduct continuous Consultations in order to achieve broad community support; - The project will make the development process more inclusive of vulnerable groups and local communities by meaningful consultations and incorporating their perspectives in the design of development programs and poverty reduction strategies; - Provide the local communities and vulnerable groups with opportunities to benefit more fully from development programs associated with the project, such as social infrastructure projects along the road project.	Incorporation of project benefits for the vulnerable groups	KeNHA, Contractor, RE	No additional cost to the BoQ – defined in the SA report
OCCUPATIONAL HEALTH AND SAFETY					
Occupational Safety and Health Hazards	High	- Contractor will prepare Health and Safety Plan and Emergency Response Plans and operationalize them - Contractors' selection criteria should include ability to demonstrate having some defined minimum requirements for Safety and Health Management System. - Contractor's should comply OSHA 2007 requirements as bare minimum; - Contractor must obtain a registration of workplace certificate from DOSH and comply with the subsequent requirements of the Health and Safety Committee Rules 2004 of the OSHA;	Eliminate incidents and accidents (Zero cases) Proper provision and use of PPEs	Contractor, RE	To be included in Bill 1 - Kshs 8 million for operations of clinical facilities at campsites and other OHS arrangements Other costs under Bill 1, 9, and administrative costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		• Enforce use of defined standard operating procedures for handling various activities, depending on risks levels; • Establish an emergency response procedure and display on all work areas; • Provision of a standard first aid kit at active construction sites at all times; • Designate qualified first-aider as per the OSHA requirements; • Contractor to have a full time Health and Safety advisor on site • Engage a qualified Health and Safety auditor to conduct routine and annual Health and Safety (H&S) audits; • Establish a Health and Safety Committee for the project construction team as per the Health and Safety Committee Rules 2004 of the OSHA • Provide medical care for all staff as necessary as allowed in the Kenyan Law including securing a worker insurance cover as required under WIBA; • Conduct risk assessment before commencing new assignments/tasks; • Provide appropriate and adequate Personal Protective Equipment (PPE) to all workers that is commensurate with construction site activities; • Abide by standard best practice health and safety provisions in the construction contract; • Conduct daily toolbox and monthly safety meetings for the construction workforce; • Undertake routine worksites safety inspections; • Carry out induction and training on Health and Safety for workers and visitors to site • Display of appropriate safety signs around the construction site • All operators shall be trained and skilled in their area of operations;			

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		- Regular trainings to workers on OHS and first aid administration; - Contractor (s) to maintain an accident register; carry out accident and incidents investigations and implement corrective actions.			
Road Safety	High	- Copies of insurance policies for the contractor's drivers and vehicles should be provided to the Supervision Consultant. - The contractor's vehicles and equipment must be in proper working condition and have registration plates, and numbering. - The contractor to sensitize all drivers and equipment operators to adopt safe driving and operation behaviors, to ensure proper discipline by these personnel, and sanctions those in breach. - Ensure that safety is included in the driver's contracts as part of "Code of Conduct" and any non-compliances are sanctioned; - Excavated sites, embankments, and dangerous locations are protected with proper safety barriers, tape and warning signs. - Install temporary speed calming measures such as bumps and speed signs at high risk areas such as shopping centres, hospitals, and schools; - As part of normal Occupational Health and Safety monitoring, the contractor and Supervision Consultant both maintain a log detailing every violation and accident on site or associated with the project work activities, including the nature and circumstances, location, date, time, precise vehicles and persons involved, and follow-up actions with the police, insurance, families, community leaders, etc. - The implementing agency, in cooperation with the relevant government agency, should undertake road safety campaigns targeting settlements, schools, and other facilities along the project road or other affected areas. The cost of such campaigns should be covered in the project budget.	Minimal road accidents	Contractor, RE , Local administration	No additional cost to the BoQ Under administrative costs of the contractor and Bill No 9

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets of mitigation	Responsibility	ESMP Costs
		•			
Impacts Related to High Temperature and Humidity Levels	Low	- Contractor must ensure Project staff have access to adequate potable water; - Provisions should be made for adequate ventilation and air conditioning for in-house work spaces; - Sensitize staff on health concerns and avoiding heatstroke, dehydration and fatigue; - Work schedules should be such that workers are allowed adequate break durations in between working sessions; - Ensure adherence to OSHA, 2007.	Workers welfare complied with	Contractor, RE	No additional cost to the BoQ Under administrative costs of the contractor
Stakeholder Engagement	High	The implementing agency (KeNHA) should prepare and implement a communication and community/stakeholder engagement plan that addresses all project issues	Continuous Stakeholder engagement	KeNHA, Contractor, RE	Kshs 10,000,000
Grievance Redress Mechanisms	Medium	Proper, effective and strong Grievance Redress Mechanisms (GRM)	Established GRM	Contractor, RE, KeNHA	Part of Complaints mechanisms budget

Table 0-1ESMP during operation phase

Environmental / Social impact	Level of Impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals of mitigation	Responsibility for Implementation	Cost (KSHS)
ENVIRONMENTAL IMPACTS					
Road Maintenance Impacts	Low	- Incorporate recycling of road resurfacing waste where possible; - All vegetation cuttings for road clearance maintenance suspected to be from invasive alien species should be burnt on site translocated to minimize dispersal; - Manage sediment and sludge removed from storm water; - All removed paint materials suspected or confirmed as containing lead should be treated as a hazardous waste.	Conserve environment during road maintenance	KeNHA	No additional cost to the BoQ – under KeNHA maintenance budget
SOCIAL IMPACTS					

Environmental / Social impact	Level of Impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals of mitigation	Responsibility for Implementation	Cost (KSHS)
Increased Vehicle Accidents	High	- The public should be sensitized on safety measures to observe while using the road; - KeNHA to liaise with National Traffic Safety Authority (NTSA) for close monitoring of the road usage and impose penalties on those going against the set roads usage rules; - KeNHA should ensure maintenance of installed road furniture and safety signages along the road; - Undertake periodic roadside bush clearance that may reduce visibility clearance or obstruct critical signages.	Road use safety	KeNHA	No additional cost to the BoQ Under KeNHA and other various agencies operational budget
Communicable Diseases	Low	- Regular sensitization and awareness of the truck drivers, sex workers,, and local communities on communicable diseases such as HIV, COVID-19, and other communicable diseases. - Enforcement of Vehicles to adhere to emission criteria set under the Environmental Management and Co-ordination (Fossil Fuel Emission Control) regulations, 2006. - Proper Vehicle maintenance and servicing of vehicle engine, especially for maintenance equipment.	Prevent communicable diseases	KeNHA	No additional cost to the BoQ
Human Encroachment along the Project Roads	Medium	- KeNHA in consultation with the county governments should enforce development control by not allowing for any development approvals on the road reserve to ward off potential encroachers and to allow for easy implementation of future road maintenance or expansion plans; - Install and maintain road reserve boundary posts at appropriate intervals; - Conduct awareness talks and presentations about the road reserve.	Curb human encroachment onto road reserve	KeNHA	No additional cost to the BoQ – county government budgets and KeNHA management of road reserves

Table 0-2ESMP during Decommissioning Phase

Environmental / Social impact	Level of Impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals	Responsibility for Implementation	Cost (KSHS)
Community Health and Safety	Low	- Contractor must prepare detailed decommission plan for approval by local government, NEMA and department of mines as applicable; - KeNHA should consider satisfactory rehabilitation of decommissioned sites as part of contractual requirement with enforceable penalties including financial disincentives.	Enhance public safety	KeNHA	No additional cost to the BoQ
Loss of Income	Low	- Notify the employees in advance on the project closure date and adequately compensate them; - Dismissal procedures to be compliant with Employment Act, 2007; - Provide counselling & alternative skills for alternative activities; - Employer should possibly identify alternative means of livelihood for the staff who were employed at the construction camp.	Improve local financial safety nets	KeNHA	No additional cost to the BoQ
Noise pollution	Low	- Prepare a decommissioning plan to guide activities; - Monitor noise levels as per the NEMA Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009 & OSHA, 2007; - The noise emission characteristics should be considered during selection and mobilization of decommissioning equipment; and - Sensitize staff to switch off machinery and vehicles when not in use.	Mitigate noise pollution	KeNHA	No additional cost to the BoQ
Dust and Fumes	Low	- Prepare a decommissioning plan to guide staff on proper handling of sensitive facilities; - Enforce stand operating procedures while undertaking demolition works; - Provide and enforce the appropriate use of PPE against dust; and - Employ dust suppression measures such as sprinkling water on loose soil surfaces and providing cover for spoil batches.	Suppress pollution from dust and fumes	KeNHA	No additional cost to the BoQ
Waste Accumulation	Medium	- Decommissioning plan should cover waste management; - Waste be managed as per Environmental Management and Coordination (Waste Management) Regulations 2006;	Proper Waste management	KeNHA	No additional cost to the BoQ

Environmental / Social impact	Level of Impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals	Responsibility for Implementation	Cost (KSHS)
		- Establish a segregation and grading waste management system to manage garbage and other forms of waste generated; - Prioritize options of waste reduction, reuse and recycling, particularly papers, polythene bags and plastic wrappers and containers and other materials that can possibly be recycled; and - Disposed waste at designated sites through licensed waste handlers.			
		TOTAL COST OF ESMP			Ksh84,500,000

NB: The cost of ESMP excludes RAP costs

Grievance Handling Mechanism Structure

Grievance redress mechanisms (GRM) provide a formal avenue for affected groups or stakeholders to engage with the project implementers or owners on issues of concern or unaddressed impacts. Grievances are any complaints or suggestions about the way a project is being implemented. They may take the form of specific complaints for damages/injury, concerns about routine project activities, or perceived incidents or impacts. Identifying and responding to grievances supports the development of positive relationships between projects and affected groups/communities, and other stakeholders.

Objectives of Grievance Redress Mechanism (GRM)

The GRM has the following objectives:

- Establish a prompt, easy to understand and access, consistent and respectful mechanism to support the receiving, investigating and responding to complaints or grievances from communities and other stakeholders;
- Ensure proper documentation of complaints or grievances and any corrective actions taken; and
- Contribute to continuous improvement in performance of the project by reducing risks and negative environmental and social impacts through analysis of trends and lessons learned

Grievance Handling Mechanism Structure

A grievance redress committee (GRC) will be constituted to manage any concerns or complaints emanating from the local communities, projected affected persons and stakeholders at the project level

The local Assistant County Commissioner of the subcounty will be the chairman of the Grievance Redress Committee (GRC), with the Resident Engineer (RE) being the secretary of the committee or a person the RE might appoint as his representative. Other members of the GRC will include but not limited to area administration (chief), community representatives who will include representation from men, women, youth, People Living with Disabilities (PLWDs), representatives from NEMA, NGOs, County, and other stakeholders such as the business leaders, bodaboda sector, among others).

The main role of the committee will be arbitration through mediation and negotiation when complaints arise to ensure that cases are resolved quickly and fairly. The committee shall normally meet once per month and may form special sub-committees or ad-hoc committee that shall meet on a weekly basis or more frequently as the nature of some grievances may demand. Such sub-committees or special ad-hoc committee will report their findings and recommendations to the main committee for ratification or approval. The Resident Engineer will be designated as the person in charge of Grievance Redress by ensuring the GRM is formed and operational, and reporting of grievances received to the client on monthly basis or as needed. The RE and his team will be responsible for creating awareness of the Grievance Redress Mechanism (GRM) amongst all the stakeholders through public awareness campaigns, and providing information on GRC with local communities, including awareness materials that will be distributed at all centres along the road project, through local Administration office, posters, local radio stations, flyers, public gatherings, churches, mosques, and other applicable locations along the project area of influence.

The GRC shall be issued with ToRs by the implementing agency (KeNHA) on their roles and responsibilities, with a clear period of tenure. In addition, facilitation of the GRC shall be done accordingly based on applicable government rates. The budget for this facilitation has been provided for in the ESMP.

The various points of receiving complaints would be as follows: County Governments administration; Local chief's office; KeNHA office (at headquarters and Regional Office), Contractor or RE office, Ministry of Transport, Infrastructure, Housing and Urban Development (MoTIHUD) and Representative at the community level. The complaints can be made in writing, verbally, over the phone, by fax, emails or any other media such as WhatsApp and KeNHA website.

ESMP Implementation and Monitoring Arrangements

In order to ensure the sound development and effective implementation of the ESMP, it will be necessary to identify and define the responsibilities and authority of the various persons and organizations that will be involved in the project. In addition, the following entities will be involved in the implementation of the Environmental and Social Monitoring Plan (ESMoP)

- Kenya National Highways Authority (KeNHA);
- Ministry of Transport, Infrastructure, Housing and Urban Development;
- National Environment Management Authority;
- Supervising Consultant;
- Construction Contractor;
- Directorate of Safety and Health Services (DOSHS)
- Uasin Gishu, Trans Nzoia, and Kakamega county Governments.

Organization	Role and responsibility
KeNHA	• Overseeing or appointing qualified and competent team to oversee environmental, social, health and safety (EHS) during the Project cycle; • Review and approve Contractor's Environmental and Social Management Plan (CESMP); • Carry out targeted Environmental, Social, Health and Safety (ESHS) training to the Supervision Consultant and contractor's teams; • Regular monitoring (monthly) and supervision of Implementation of the ESMP; • Carry out regular compliance ESHS audits including developing corrective action plans; • Ensuring that during construction and operations, the NEMA license conditions are adhered to since it's the principle holder of NEMA license; • Ensure the project is complying with ALL the AfDB Safeguards Policies that are applicable to the project.
Ministry of Transport, Infrastructure, Housing and Urban Development	• Facilitate development and sustenance of transport infrastructure, maritime economy, public works and housing for sustainable socio-economic development. • The State Department for Infrastructure is one of the Departments whose functions include policy management for road development. KeNHA falls under the State Department for Infrastructure.
National Environment Management Authority (NEMA)	• Issue license for the project • Exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment and to ensure that all mitigation measures proposed are implemented.
Construction Contractors	• Preparing a Contractor's Environmental and Social Management Plan (CESMP) that will comply with the requirements of the EIA/ESMP and the Standard Specifications for road works in Kenya, which include specifications for environmental and social protection and waste disposal, borrow pit and quarry acquisition and exploitation, landscaping and grassing among others. • Carry out environmental and social assessment for the project auxiliary sites • Operationalize, monitor and report on the implementation of the CESMP on monthly and quarterly basis (or as required by the Supervision consultant and KeNHA).

Organization	Role and responsibility
	• Employ competent and qualified separate environmental and social experts on fulltime basis to manage and monitor implementation of CESMP. • Employ fulltime personnel to manage Occupational Health and Safety issues for the entire duration of the project. • Report any environmental, social, health and safety incidents to the Supervision Consultant
Supervising Consultant	• Oversee the construction programme and construction activities performed by the Contractor, in compliance with the ESMP. • Employ qualified full time Environmental and Social Specialists in its team to co-ordinate all aspects of the environment and social during project implementation. • Review and approve the CESMP and other associated plans (eg rehabilitation/decommissioning plans). • Daily and regular monitoring, reviewing and verifying the implementation of the project's ESMP by the contractor, • Proposing additional appropriate mitigation measures that may be required during the project's implementation. • Keep track of project compliance regarding permits and approvals necessary from the relevant authorities. • Conducting and coordinating training to the contractor's team on issues relating to environmental and social issues. • Report on his monthly and quarterly reports (or as required) on the ESMP aspects throughout the project implementation duration
Directorate of Safety and Health Services (DOSHS)	• Registering and Permitting of work place for all the work sites and camp sites for the project; • Inspection and auditing of workplaces to ensure they are adhering to OSHA 2007. • Receiving and investigating any severe incidents reported on worksites
Community Based Organizations and Civil Society Groups	• Participate in training and enhancing the capacity of the local communities in poverty reduction strategies proposed by the Social Assessment; • Ensure communities are meaningfully consulted on the project; • To encourage ownership of roads by the local communities by involving them directly in the process of monitoring of road construction; • Represent the underrepresented groups such as women and youth, People Living With Disability (PLWD), other interest groups, etc • Oversight role in ensuring that the proposed environmental and social mitigation measures are implemented as proposed (especially if there are any local organizations that deals with local environmental and social issues, wildlife etc).
County governments	• The relevant departmental officers in the County Governments of where project is located should be called upon where necessary during project implementation to provide the necessary permits and advisory services to the project implementers

Client's Capacity to Implement Safeguards

Review of the existing environmental and social management system of KeNHA indicated that the organization has adequate capacity that is capable of implementing safeguards for the proposed projects, based on similar projects financed by the AfDB and other donor funded projects the organization has executed. The Directorate of Environment and Social safeguards has experienced specialists who have capacity to monitor and implement the ESMP and the safeguards for the proposed project.

However, the ESIA recommends a capacity building and training program for all other stakeholders namely; supervising consultants, contractors, local county governments, participating institutions (NEMA, DOSHS, KWS, KFS, and others), local communities, and other stakeholders that will be involved directly in the implementation of this project. The capacity building requirements will mostly be in the form of stakeholder training and workshops. In addition, regular stakeholder workshops shall be held quarterly to review safeguards performance and improve on lessons learned through interactions and engagement throughout the project period.

The proposed capacity building and training requirements would cover among others; NEMA Environmental Management and Coordination Act and Regulations, AfDB OS, Good International Industry Practices (GIIP)EHS Guidelines, OSHA requirements, preparation of CESMP; and Environmental and Social safeguards risk management during construction; Code of Conduct, and execution of safeguards requirements Clauses in the Contractors' contract documents.

The Grievance Committee members will also need to be trained on the grievance redress mechanisms and management system to be set up for the project. Besides safeguards, the capacities of the Grievance Committee members will be built around issues of conflict identification, conflict information analysis and conflict resolution.

ENVIRONMENTAL AND SOCIAL MONITORING PLAN

The overall objective of environmental and social monitoring is to ensure that mitigation measures are implemented and that they are effective. Environmental and social monitoring will also enable response to new and developing issues of concern during project implementation.

Table 0-2: Environmental and Social Monitoring Plan

Monitoring Item	Monitoring Phase	Parameters	Monitoring Indicators	Location	Frequency	Responsibility
ENVIRONMENTAL IMPACTS						
Vegetation Loss	Construction and Operation	% cover	No. of Trees felled and compensated Areas of land cleared	Entire Site	Weekly	Contractor, KeNHA
Workmen's camps management	Construction	Solid waste, wastewater, sanitation	General camp management and cleanliness	Workers Camp sites	Weekly	Contractor, KeNHA
Excessive Noise and Vibration	Construction	dB and m/s, respectively	Noise levels ² , complaints log	Active areas	monthly	Contractor, KeNHA
Construction dust and Air Quality	Construction	TSP, NO _x , SO ₂ , CO, Dust particles, particulate matter etc.	Records on issuance and use of PPEs Equipment and Number of times road is sprinkled Safety induction records Compliance with NEMA regulations and WHO guidelines Complaints from community	Active areas	Continuous, with Quarterly air quality measurements	Contractor, KeNHA
Solid Waste management	Construction, Decommissioning and Operation	Domestic refuse, metallic scraps, sludge	Waste management plan Waste collection and disposal records Level of housekeeping Agreements with waste handlers Licenses of waste handlers/transporters engaged	Entire Site	Monthly	Contractor, KeNHA
Soil Erosion	Construction and Operation	Eroded surfaces	Gully formation; Sedimentation Protection measures in place	Entire Site	Monthly	Contractor, KeNHA
Water Quality and Contamination by Liquid Waste and Spills	Construction	Contaminated surfaces pH, Total Suspended Solids (TSS) and Total Dissolved Solids (TDS), heavy metals, oils and grease	Records on water quality; Compliance with NEMA regulations and WHO guidelines; Soil conditions at the sites; Bunded hydrocarbon storage areas	Rivers, streams, other water sources including boreholes and water pans; Entire Site	monthly	Contractor, KeNHA

² Noise, Air, and Water quality baseline parameters will be undertaken before commencement of the project by the Contractor at agreed monitoring locations with the RE

Monitoring Item	Monitoring Phase	Parameters	Monitoring Indicators	Location	Frequency	Responsibility
Habitat Loss and Disturbance	Construction and Operation	Vegetation cover and wildlife habitat	Number of seedlings replanted; Percent of ground vegetation cover	Entire Site	Weekly	Contractor, KeNHA
Spread of Invasive and Alien Species	Construction and Operation	% cover	Identified invasive species	Entire Site	Monthly	Contractor, KeNHA
Impact on materials borrow sites	Construction and Operation	Rehabilitation, Landscape restoration	EIA reports and licenses Other relevant permits and authorizations Decommissioning plan Number of material sites restored as recommended	Material sites	Monthly	Contractor, KeNHA
Increased in poaching and Human-Wildlife Conflicts	Construction and Operation	Poaching and Wildlife encounter incidences	Workers Code of conduct Records of encounter incidences Sensitization records Poaching cases	Entire Site	Monthly	Contractor, KeNHA, KWS
Inhibited wildlife and livestock movements	Construction and Operation	Animal crossing	Number of animal crossings provided Installed signages	Entire site	Project life	Contractor, KWS, KeNHA
Increased deadwood collection and charcoal	Construction and Operation	% cover	% cover declining or increasing	Entire site	Project life	KFS, KWS, County government
Environmental and Social Risks	Construction and Operation	Fire outbreaks, floods, terrorism, etc	Areas for potential hazards	Entire site	Continuous during project life	KeNHA
SOCIAL IMPACTS						
Disruption of Livelihood due to land take	Construction	PAPs	RAP implementation progress report	Right of way	Monthly	Contractor, KeNHA
Increased water demand	Construction	Projected water requirements against available water volumes	Water assessment report; abstraction permits	Entire site	Monthly	Contractor, KeNHA, WRA
Construction induced traffic and disruptions	Construction	Traffic management plan	Number of accidents reported Number of grievances registered;	Entire site	Monthly	Contractor, KeNHA
Disruption of Public Utilities and Accesses	Construction	Utility relocation plans Construction management plans	Number of grievances registered; Communications and agreements with utility companies; Notices to the affected public	Right of way	Monthly	Contractor, KeNHA
Spread of communicable diseases	Construction and Operation	Sensitization and testing campaigns	Number of reported infections; Number of Medical camps held;	Entire site and immediate neighbouring communities	Monthly	Contractor, KeNHA

Monitoring Item	Monitoring Phase	Parameters	Monitoring Indicators	Location	Frequency	Responsibility
Spread of HIV/AIDS and Other Sexually Transmitted Diseases (STDs)	Construction	Sensitization and awareness campaigns	Agreements with HIV/AIDS awareness service provider Sensitization and monitoring records; Number of Medical camps for testing and counselling; Campaign materials; Signed code of conduct	Entire site and immediate neighbouring communities	Monthly	Contractor, KeNHA
Conflict with local communities on labour issues	Construction	Social unrest by local communities	Number of social unrest registered Number of Grievances on labour issues	Entire site	Monthly	Contractor, KeNHA
Workers welfare	Construction	Non-compliance with workers safety	Accident reports Number of grievances by workers	Entire site	Monthly	Contractor
Community Health and Safety	Construction	Incidences of injuries to local communities and road users Occupational safety and health advisor engaged; Safety training for workers	Number of accident cases reported Severity of cases reported Community feedback	Entire site	Daily	Contractor
Labour Influx and Social Change	Construction	Cultural integration and social harmony	Number of awareness trainings and sensitization campaigns Cases of deviant behaviours by immigrant workers reported	Entire site	Monthly	Contractor; Gender Dept, police
Crime Management	Construction and Operation	Incidences	Number of crimes reported	Entire site	Monthly	Contractor, Police Dept
Child Protection, Sexual exploitation and abuse (SEA) of underage girls	Construction	Sexual misconduct of employees	Incidents of sexual exploitation Police records Number of Grievances	Entire site	Monthly	Contractor, Gender dept, police dept
Absenteeism in Schools	Construction	School attendance	Number of absent students in schools Sexual incidences reported	Entire site	Monthly	Contractor / Schools
Gender equity and Mainstreaming	Construction	Participation by women	Number of women benefiting from the project Number of Grievances related to gender equity	Entire site	Monthly	Contractor, Gender Dept
GBV, Rape and Sexual harassment	Construction	Incidences	No of cases reported Number of grievances Number of sensitization and awareness campaigns	Entire site	Monthly	Contractor, Gender Dept

Monitoring Item	Monitoring Phase	Parameters	Monitoring Indicators	Location	Frequency	Responsibility
Alcohol and drug abuse by workers	Construction	Workers conduct Drug and alcohol abuse	Number of workers reported on drug and alcohol abuse Police reports	Entire site	Monthly	Contractor
Increase in the prices of goods and services in the community	Construction and Operation	Prices of commodities	Increase in cost of living in the area Increase of key commodities in the region	Entire site	Monthly	Contractor/ County Ministry of Trade
OCCUPATIONAL HEALTH AND SAFETY						
Occupational Safety and Health Hazards	Construction and Operation	Visual inspection; Accident and Incident records Safety and Health Management Plan with relevant procedures incorporating: Emergency response plan	Traffic management Plan No. of OHS trainings and Audit records Health and safety management plan; Compliance with DOSHS regulations and AfDB policies Accident and Incident Register.	Entire site	Daily	Contractor, KeNHA
Impacts related to High temperature and Humidity Levels	Construction	Temperature & humidity	Human health change	Entire site	Daily	Contractor, KeNHA
Road safety	Construction and Operation	Road accidents	Traffic management Plan Number of awareness trainings and sensitization campaigns Installed signages and traffic calming devices Accident records	Entire site	Monthly	Contractor; KeNHA, NTSA
Security challenges	Construction and Operation	Incidences	Number of intelligence briefings and reports Incident records	Entire site	Daily	Contractor, KeNHA
Loss of life, injury or damage to people and private property	Construction	Accidents, Fatalities, and property damage	Number of accidents Number of fatalities Number of claims/grievances	Entire site	Daily	Contractor /KeNHA

Environmental and Social Monitoring Plan (ESMoP) Operation Phase

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
ENVIRONMENTAL IMPACTS						
Vegetation Loss	Operation	% cover	No. of Trees felled and compensated Areas of land cleared	Entire Site	Monthly	KeNHA
Soil Erosion	Operation	Eroded surfaces	Blocked drains Gulley formation; Sedimentation Protection measures in place	Entire road section	Monthly	KeNHA
Habitat Loss and Disturbance	Operation	Vegetation cover and wildlife habitat	Number of seedlings replanted; Change in land use Percent of ground vegetation cover	Entire road section	Monthly	KeNHA
Spread of Invasive and Alien Species	Operation	% cover	Identified invasive species	Entire road section	Monthly	KeNHA
Impact on borrow and quarry sites	Operation	Rehabilitation, Landscape restoration	Ponding Accidents and incidents	Material sites	Biannually	KeNHA
Increased in poaching and Human-Wildlife Conflicts	Operation	Poaching and Wildlife encounter incidences	Poaching incidents cases KWS surveys	Entire road section	Biannually	KeNHA, KWS
Inhibited wildlife and livestock movements and crossings	Operation	Animal crossing	Number of animal crossings provided Installed signages	Entire road section	Monthly	KWS, KeNHA
SOCIAL IMPACTS						
Spread of communicable diseases	Operation	Sensitization and testing campaigns	Number of reported infections; Number of Medical camps held;	Entire road section	Annually	KeNHA
Community Conflicts	Operation	Incidences	Number of conflicts reported	Entire road section	Monthly	Police Dept KeNHA
OCCUPATIONAL HEALTH AND SAFETY						
Road safety	Operation	Road accidents	Traffic accident records Police operation book records Installed signages and traffic calming devices	Entire road section	Monthly	; KeNHA, NTSA
TOTAL COST OF MONITORING ESMP ACTIVITIES						Kshs 10 million

Contractor Clauses

This will include various plans and safeguards the Contractor will be expected to prepare and implement based on the ESMP, during the construction phase of the project. The plans will be prepared by the contractor and will be reviewed by the RE and forwarded for further review and approval by KeNHA before the commencement of the works. These safeguards will be required as a part of the requirements in the bidding documents and contractual obligations. The safeguard documents required will include a Contractors Environmental and social management plan (CESMP) with the following subplans;

- i. Occupational health and safety plan
- ii. Waste management plan
- iii. Traffic management plan
- iv. Borrow pit and quarry site rehabilitation plan
- v. Child Protection Strategy
- vi. HIV/AIDS management plan
- vii. Code of Conduct
- viii. Grievance redress mechanism
- ix. Prevention and protection against gender-based violence and sexual exploitation
- x. Labour influx plan
- xi. Stakeholder engagement plan
- xii. Whistleblower policy

During the bidding process, the Contractor will be expected to include a brief methodology of the implementation of these Environmental and Social Safeguards and attach a cost of implementation of these plans in his proposal bid.

In addition, the Contractor will have to provide relevant staff for the implementation of the safeguards including a Community Liaison Officer and EHS advisor throughout during the construction period of the project.

Conclusion

The rehabilitation and improvement of the project roads is foreseen to attract significant benefits to the remote areas of Northern western Kenya through transport connectivity and ease of access. Nonetheless, negative impacts (on the socio-economic, cultural and ecological environments) are anticipated during the different road development phases. Therefore, its recommended that the KeNHA and contractor implements the proposed mitigation measures and environmental and social management plan. RAP has been prepared separately to specifically address project impacts related to relocation and loss of livelihoods and shall be implemented ahead of construction works.

The total direct amount of implementation of ESMP is estimated to be about Kshs 84,500,000, including other implementation costs spread out in the budget for the road construction, with Kshs 15 million dedicated to the HIV/AIDS programmes. The rest of the ESMP Costs amounting to a lumpsum of Kshs 69.5 Million is dedicated to other Environmental and Social Management plans under Bill Number 1 and other costs spread out in the main works of the Bill of Quantities as shown in the ESMP under Chapter 8. In addition, a provisional cost of Kshs 10 million has also been included to be provided in Bill number 1 for ESMP monitoring activities. With the total environmental and social impacts mitigation costs estimated to be less than 5% of the total project costs, the Project is considered feasible environmentally and social. It is thus recommended that the project be allowed to go ahead with construction from an environmental and social impacts perspective.

Recommendations

Recommendations for the prevention and mitigation of potential adverse impacts are as follows:

- KeNHA will involve stakeholders and public during the project implementation, and particularly during the construction and early stages of the road use to ensure minimized environmental and social impacts.

- The Contractor(s) shall develop contractor's environment and social management plan (CESMP) in line with this ESIA report for purposes of supervision and continuous monitoring. This document shall be part of the contract for the works between the KeNHA and the contractor;
- All material sites will have comprehensive ESIA's undertaken and management plans developed such as to include extraction practices, haulage and materials management and rehabilitation plans.
- KeNHA will ensure that the contractor comply with the requirements of the ESMP, which includes compliance with all the environmental and social mitigation measures, and other requirements such as gender principles; labour laws by ensuring the contractor to employ 30% women, utilizing PWDs and the youth in road construction and maintenance; providing safe working conditions for both women and men workers; and ensuring that all civil work contractors engaged under the project, participate in HIV prevention and road safety programmes and; that information reaches the local communities (women, men, the youth and vulnerable groups) living and working along the road corridor.
- Regular environmental and social monitoring will be carried out to ensure that measures proposed in this ESIA have been implemented to mitigate or avert any potential negative impacts for the project.
- KeNHA will oversee the set-up of a proper and applicable Grievance Redress Mechanism (GRM) for the project to deal with grievances and issues on the project, as part of the stakeholder management program.
- KeNHA shall ensure that a provisional budget of Kshs 84.5 million for implementation of the ESMP is included in the BoQs for adequate budgeting by the contractor. A further Kshs 10 million shall be provided in Bill No. 1 as provisional sum for monitoring activities of the ESMP.

SUMMARY BUDGET OF ESMP IMPLEMENTATION

S/N	Item	Description	Cost (KSHS Million)
1	Sensitization and Awareness	Sensitization of the project activities, including printing of materials of SEAH/GBV, meetings with local communities by an NGO consultant	10
2	Loss of vegetation, Habitat loss & Disturbance	Reafforestation, landscaping and planting of trees	5
3	Gender Equity & Mainstreaming	Sensitization and awareness materials, Special projects targeting women and vulnerable groups	3
4	Workers Welfare and OHS	Operation of clinic at campsite and other OHS arrangements	8
5	Stakeholder Engagement	Meetings, venues, allowances, & refreshments	10
6	Communicable diseases	Sensitization and awareness materials, COVID 19 protocols	6
7	Air Quality	Control and Monitoring of air pollution, including PPEs	5
8	Noise Pollution	Control and Monitoring of Noise pollution, including PPEs	2
9	HIV/AIDS	Sensitization and awareness materials, Testing, Involvement of NGOs for counselling, provisions of condoms, etc	15
10	Solid Waste management	Management of waste, disposal and other costs associated with SWM	7.5
11	Control of Liquid waste and hydrocarbon spills	Waste management arrangements	3
12	Grievance Redress Mechanisms	GRC Operations	10
		TOTAL ESMP Cost (excluding monitoring)	84.5
	Monitoring Costs	Costs of Monitoring (to be included in the BoQ as Lumpsum)	10
	TOTAL COSTS OF ESMP & ESMoP		94.5

1 PROJECT INTRODUCTION

1.1 Project Background

The Government of the Republic of Kenya (GoK) has earmarked funds through the Development Vote for use in engaging the services of a Consultancy Firm to undertake Design Review, Updating of Resettlement Action Plan, Review of ESIA and Economic Feasibility Study Reports and Updating of Tender Documents in readiness for procurement of works for Lesseru-Kitale (B2) and Morpus – Lokichar (A1) Roads. The road sections form a critical link between the busy Eldoret - Malaba (A8) highway and the Kenya-Sudan Link Road; both of which promote and facilitate a regional economic integration with Kenya and her neighbors Uganda and South Sudan.

1.2 Scope of works

The scope of services for this section will involve, inter-alia, improvement of road geometrics, design of road pavement layers to extend economic life of the road, widening of carriageway and shoulders to address highway safety concerns. The services will also involve, but not limited to the following enhancements to the road network, in line with the stated development objectives.

- Design of the highway to 7.0 m carriageway (2 lanes) with 2.0 m wide shoulders
- Design of three (3) Road over rail bridges near Lesseru, at Matunda and Moi's Bridge Townships and in Kitale Town.
- Design of additional Highway Bridges to accommodate dual carriageway at Moi's Bridge
- Design of Dual carriageway for highway sections through the urban area and critical sections(2km) and critical section of the highway including the 7 km approach section into Kitale town and connecting into the ongoing works on Kitale – Endebess – Suam Road
- Design for the intersections of roads A1 and B15 (formerly C48) near Kitale town.
- Design of NMT facilities through Townships enroute, and in Kitale Municipality at the section joining the ongoing Kitale – Endebess – Suam road project to the Start of Kitale – Morpus (Kfw) Project.
- Design of Local Produce Markets at Matunda, Soy, Nangili, Moi's Bridge and Maili Saba Townships.
- Design the Interchange approaches at Lesseru and at the Junction of A1 and B14 near Kitale Town.

1.3 Overall Project Objectives and Expected Results

This project will contribute to the principal Project Development Objective (PDO), which is to improve access to the North Western part of Kenya and between Kenya and South Sudan, through improving road infrastructure and ICT links, reducing transport and ICT costs, and facilitating the reduction of non-fiscal trade barriers, which help reduce the cost of doing business and development. The improvement of the Lesseru – Kitale section of the road improves South Sudan's access to sea ports, because it is part of the Eldoret – Nadapal – Juba (Kenya - South Sudan regional link) corridor that connects to the Northern Corridor (A8) at Lesseru). This will act as a corridor serving the landlocked countries in the sub region to Mombasa Sea port. This section of the road project provides part of the most cost-efficient transit corridor for South Sudan that crosses only one border post.

The overall Project objectives for undertaking both Lesseru – Kitale (B2) road project are to;

- Improve the efficiency of road transport along the project Corridor
- Spur economic activity along the project road and enhance social welfare
- Enhance security and promote peace along the project corridor
- Enhance regional integration
- Enhance road safety along the project road

The expected results indicators include:

- a. Average Travel time between Lesseru – Kitale, disaggregated by passengers and freight;

- b. Number of public transport service providers along Lesseru – Kitale road;
- c. Number of road crash fatalities between Lesseru - Kitale road section (per 1,000 vehicles)
- d. Number of women and children utilizing the improved social services (Social/Gender disaggregated) and
- e. Number of non-Kenyans trained in new skills in Kenyan institutions.

1.4 Project Rationale

The expansion of major highways remains Kenya's top priority to improve both national and regional connectivity, transportation logistics and support the achievement of Vision 2030 and the Big 4 Agenda. The GoK has identified the Lesseru – Kitale (B2) Road as a priority national trunk road, connecting the A8 Road with the A1 Road. The A8 Road and A1 Road are international trunk roads that form part of the EAC Regional Road Network (Transnational corridor Nos 1 and 3 respectively) and they play a key role in national connectivity and enhancement of Kenya's trade competitiveness.

The Lesseru – Kitale road is an important link that enhances regional integration, trade and development. It connects to the Northern Corridor at Lesseru and the Kitale - Endebess – Suam - Kapchorwa corridor. It also connects to the Sirari Corridor at Kitale. The project road supports the regional integration objective of 3 out of 5 (Kenya, Uganda and South Sudan) member countries of East African Community (EAC) and the Great Lakes Region.

This is a transformative project that contributes to socio-economic development and regional integration in eastern Uganda and Western Kenya. In addition, the improvement of the road will promote Government efforts in poverty reduction through improved road infrastructure by providing all-weather access for the supply of farm inputs and evacuation of produce to major market centers, thus improving the level of service and efficiency of the road network and reducing transport costs.

The road is critical to economic growth of Kenya since it carries a significant amount of commercial traffic as it directly traverses three counties viz. Uasin Gishu, Kakamega and Trans Nzoia. The major economic activities in the project area include large-scale agricultural farming, horticultural, livestock keeping and tourism, among other businesses. The road is the main link to Kenya's traditional breadbasket and directly supports the Big-Four Agenda towards Food Security, facilitating faster access for agro-based inputs and supporting spatial development for businesses, housing and promoting economic rejuvenation in the rural areas in Uasin Gishu, Kakamega, Trans-Nzoia, West Pokot, Turkana counties, and parts of Bungoma County, with a total population of approximately 4.01 million people. The project will provide job opportunities during and after construction which will improve the livelihood of the people.

Upgrading of the project road will enhance movement of traffic and therefore facilitate trade, efficient connection to markets and passenger movements between Eldoret and Kitale as well as major centers adjacent to the project. As a result, development of the road will promote social welfare, economic activities as well as security in the project zone of influence.

Road Safety which has been a major concern will improve significantly due to enhanced capacity and improvement of the alignment, and will result in reduction of road crashes.

1.5 Need for the ESIA Review and Update

The Government of Kenya, through its implementing agency, the Kenya National Highways Authority, commissioned KOCKS CONSULT GMBH in association with MAX & PARTNERS and SURTECH Ltd. in 2011 to undertake Consultancy Services for Feasibility Study, Environmental and Social Impact Assessment, Resettlement Action Plan, Detailed Design and Tender Document preparation of the Lesseru - Kitale - Marich Pass Road Rehabilitation Project. The design for Lesseru – Kitale – Marich Pass was completed in January 2015. The design for the section between Marich Pass and Lokichar (A1) was completed in July 2014.

An Environmental and Social Impact Assessment Study was undertaken in February 2014 for Lesseru – Marich Pass road, and updated in December 2014 during the design process. The 2014 studies had been undertaken within the provisions of the established regulations under EMCA, 1999, and had to be updated to conform with the World Bank's Environmental and Social and safeguards Policies - the financier of the Feasibility, ESIA, RAP and Engineering Design Studies for Lesseru – Kitale (B8) and Kitale - Lokichar – Lodwar – Nadapal (A8) roads. This ESIA review is part of the design review process of the proposed Lesseru – Kitale (B8) and Morphus – Lokichar (A8) road project conducted by CGP Consulting Engineers.

The previous ESIAs were prepared under the World Bank guidelines at the design stage. However, a review and updating of the ESIAs is necessary due to delay in implementation of the road, and new information that may have risen since the ESIAs were conducted, including change in environmental and social setting of the area the roads transverses. The review and updating of the ESIA is also necessary to validate any design changes that may be necessary during the design review process. Further, the ESIA review and updating was to be revised to meet the African Development Bank (AfDB) Integrated Safeguards System (ISS), and also to ensure that an EIA license is issued for the proposed project.

1.6 Objectives of the Updated ESIA Study

The main objective of the ESIA study was to identify environmental and social impacts associated with the proposed construction of the proposed road and to recommend an appropriate environmental management strategy for the project. The core outcome of the Study is an Environmental and Social Management and Monitoring Plan, which will be used to enhance and mitigate any positive and negative impacts, respectively, for the project.

The objectives of the ESIA study are: (i) review and update the existing ESIA report, identify any gaps vis-à-vis AfDB Operational Safeguards (OS) requirements for the road project, which according to AfDB is classified as **Category 1** project, and the national requirements for ESIA; (ii) identify and fill in those gaps by updating the ESIA, including collection of additional baseline should it be required, and in depth analysis of environmental and social impacts that are not currently covered in the existing draft; and (iii) updating the ESMP to include both generic construction measures and site-specific measures.

The specific objectives of the assignment are:

- To review and update the ESIA report to conform with AfDB Safeguards Policies and Procedures for project assigned **Category 1** and laws and regulations of the Government of Kenya,
- To review and identify gaps in the ESIA report prepared for this subproject and address them by evaluating the established social and environmental context, reviewing the identified potential risks and impacts, benefits and opportunities.
- To review and identify all the potential significant positive and adverse environmental and social impacts, including direct, indirect and cumulative impacts associated with the project
- To review proposed measures to avoid, reduce, mitigate, manage and/or compensate for such impacts, including the institutional arrangements and required capacity building to implement all such measures and monitor their effectiveness
- To review and develop an Environmental and Social Management Plan (ESMP)
- This being a marginalized region, ensure that the stakeholder analysis and consultation are conducted as part of the ESIA review, and identify who among the affected population is particularly vulnerable to potential adverse impacts. The project should adopt differentiated measures so that potential adverse impacts do not fall disproportionately on the disadvantaged or vulnerable
- To carry out site investigations to collect primary data and review available relevant secondary data to establish a comprehensive environmental and social baseline, indicators, and data collection methodology
- To conduct public consultations and meaningful stakeholder engagement with project-affected persons and Non-Governmental Organizations (NGOs) about the project's environmental and social impacts, as well as

offer opportunity to receive their opinions and feedback so as to take their views into account and reflect the issues raised into the final design for the project.

- To come with appropriate budget for environmental, social and, health and safety mitigation measures for the subproject.
- To document all the above mitigation and development interventions in acceptable format to be further discussed and agreed with KeNHA and in compliance with the AfDB Policies, and best Practices on EHS guidelines.

1.7 ESIA Methodology

1.7.1 Inception Stage

The ESIA study process commenced with the retrieval and review of existing project documentation as well as a site reconnaissance along the project road. Thereafter an ESIA Study Inception Report was compiled and submitted to the client.

1.7.1.1 Desktop Review

Desktop review of design consultant ESIA, Updated ESIA by Independent Consultant, and other relevant documents was done in preparation of updating the ESIA Study Report. The consultant was able to prepare tools to facilitate the reconnaissance field visit and other follow up visits of the study. Desk study by the consultant began with review of the following project documentary resources:

- ESIA Study Report for Lesseru – Marich Pass road done during Engineering Design February 2014 by the design Consultant (JV of KOCKS CONSULT GMBH), and updated ESIA of December 2014 by Independent Consultant (Harrison Ngirigacha)
- ESIA Study Report (Draft Final Reports, February 2014) for the Preliminary and Detailed Design of Lesseru – Kitale (B2) Kitale -- Marich Pass (A1) road.
- Updated ESIA Study Report, February 2015) for Lesseru – Kitale (B2) Kitale -- Marich Pass (A1) road.
- ESIA Study Report (Draft Final Reports, February 2014) for the Preliminary and Detailed Design of Marich Pass - Lodwar (A1) road.
- Updated ESIA Study Report, February 2015) of Marich Pass - Lodwar (A1) road
- ESIA Study for Marich Pass – Lodwar done in February 2014, and updated ESIA of January 2015 by Independent Consultant (Zabloon Oonge)
- Draft Final Engineering reports - (April 2014) for the Preliminary and Detailed Design of Marich Pass - Lodwar (A1) road.
- Draft Final Engineering reports - (April 2014) for the Preliminary and Detailed Design of Lesseru – Kitale (B2) Kitale -- Marich Pass (A1) road.
- African Development Bank Integrated Safeguards System- Policy Statement and Operational Safeguards, December 2013,
- AfDB Environmental and Social Assessment Procedures (ESAP), November 2015

Other reports (with focus on the project area) reviewed by the ESIA Team include:

- County Integrated Development Plan 2018-2022 – Uasin Gishu County;
- County Integrated Development Plan 2018-2022 – Trans Nzoia County;
- The 2019 Kenya Population and Housing Census – Population Distribution by Administrative Units. Volume 1, prepared by KNBS;

- Project Information Document / Integrated Safeguards Data Sheet (PID/ISDS). Prepared in May 2015 for the World Bank Eastern Africa Regional Transport, Trade and Development Facilitation Project (EARTTRDFP) (Second Phase).
- Social Assessment Lesseru-Marich Pass Lodwar- Nakodok A1 Road, South Sudan-EA Regional Transport, Trade And Development Facilitation Project (EARTTDFP), May 2015

Current legal, policy and regulatory frameworks were also reviewed. Scientific reports, sectoral reports and authoritative online sources were reviewed to fill in knowledge gaps on the various thematic areas of the ESIA study. The full list of information sources reviewed during the preparation of ESIA study is provided in the Reference Chapter of this Report.

1.7.1.2 Site Reconnaissance

The reconnaissance visit was also undertaken where during the visits, a rapid assessment of the project area was conducted to review and identify the following:

- Vegetation mix and fauna activities;
- Terrain formation and physical features within the project area and its zone of influence e.g. land gradient, surface drainage, edaphic characteristics etc;
- Existing land uses and related developments;
- Preliminary identification of receptors of potential project biophysical and socio-economic project impacts.

1.7.1.3 Stakeholder Consultations

In addition to stakeholder consultations that had been carried out by the previous consultants, the consultant reviewing and updating the ESIA also conducted other Stakeholder consultations along the road. The consultations were mainly conducted with the help of the local administration (County Commissioners and chiefs) who would play an active role in community coordination and mobilization during the project implementation.

1.7.2 ESIA Study Phase

1.7.2.1 Baseline Socio-Economic Survey

Review of Secondary Data

- The study team undertook desktop reviews of project related documentation to gain understanding of the background of the study area. Information from secondary data provided benchmarks against which the study team analysed relevant parameters.

Field Observations

- Site walks were conducted to ensure that the entire study team was well versed with the project area. Participatory transect walks were carried out together with community leaders who acted as guides so as to enable collection of qualitative data on the project area. The initial field work (involving household surveys and stakeholder consultations) was undertaken in between November 2021 and January 2022.

Household Survey

- Structured household surveys were conducted among the project beneficiaries in order to capture quantitative information and some qualitative information at household level. The qualitative information was to be verified through information collected during interviews with key informants as well as public meetings. The ESIA

review team reviewed household surveys conducted previously to identify if there was any gap on the data collected.

- The baseline socio economic data was collected through questionnaires that were distributed to randomly selected households in the area by trained enumerators who went from door to door.
- Sample data was collected from all different locations spread along the project area from Lesseru to Kitale. The Consultant team collected more than 150 household questionnaires along the road to compare the results from the previous study.
- Sample household surveys were also collected to collect sample socio-economic data for people located along the road project with the help of the local chiefs, village elders and enumerators from the locality.

Stakeholders' consultations and public meetings

Stakeholders' consultations and public meetings were conducted between November 2021 and January 2022 through key informant interviews (KII), meetings with institutional representatives and community meetings as elaborated in Chapter Six.

1.7.2.2 Baseline Ecological Environment

Desktop review of existing data and documentation was undertaken for the description of the ecological environment of the project environment. Project area documentation reviewed includes:

- Draft ESIA Study Report (2014) and Updated ESIA Study (2015)

Parameter under review included:

- Habitat classifications;
- Dominant floral species;
- Invasive alien floral species;
- Wildlife (macrofauna – mammals, avifauna) and wildlife issues.

1.7.2.3 Assessment of Project Impacts

An environmental impact is any change to the existing condition of the environment caused by human activity or an external influence. Impacts may be:

- Direct or indirect
Direct impacts result from a proposed action and manifest at the present time and place; while indirect impacts are caused by action that manifest at later time or occur remotely from source and are foreseeable.
- Cumulative;
Impacts are termed cumulative when they add incrementally to existing impacts. In the case of the project, potential environmental impacts would arise during the construction and the operations phases of the project and at both stages positive and negative impacts would occur.

Moreover, impacts also vary with:

- Duration, that is long-term or short-term;
- Extent of their effect that is in wide-spread or local; and
- Are positive (beneficial) or negative (adverse).

(i) Impact significance

The purpose of this ESIA Study Report is to identify the significant impacts related to the project or activity under consideration and then to determine the appropriate means to avoid or mitigate those which are negative.

Significant impacts are defined, not necessarily in order of importance, as being those which:

- Are subject to legislative control;
- Relate to protected areas or to historically and culturally important areas;
- Are of public concern and importance;
- Are determined as such by technically competent specialists;
- Trigger subsequent secondary impacts;
- Elevate the risk to life threatening circumstances; and
- Affect sensitive environmental factors and parameters.

(ii) Impact identification, Analysis and Mitigation Measures

In this study, impacts were predicted and evaluated using acceptable standard methods of impact prediction and evaluation. Constant reference to project activities was made and scores were assigned in an assessment table in order to make an objective assessment of how each of the project activities would impact on a particular environmental and social medium. The significance of impacts is subjective, but the value judgments required were best arrived at by use of several approaches such as brainstorming and use of checklists and matrices, to establish the potential impacts from the proposed project activities.

(iii) Impact assessment scoring

The impacts were evaluated using the parameters of magnitude, significance, probability and duration of occurrence. Evaluation of the identified impacts was guided by careful assessment and judgment of anticipated consequences with regard to set standards or pre-development environmental situation of the site. The score of each of the impacts is an average value of scores. Table 1-1 and Table 1-2 show criteria for assessing significance. The assessment and assignment of values to each identified impact was based on the values developed in Table 1-2 which is adapted from the International good practices. Impacts were evaluated by assigning positive or negative scores.

Table 1-1: Criteria for assessing significance

SEVERITY OF IMPACT	RATING	CONSEQUENCE
Insignificant / non-harmful / less beneficial	-1/ +1	
Small/ Potentially harmful / Potentially beneficial	-2/ +2	
Significant / slightly harmful / Significantly beneficial	-3/ +3	
Great/ harmful / beneficial	-4/ +4	
Disastrous/ extremely harmful / extremely beneficial	-5/+5	
SPATIAL SCOPE OF IMPACT	RATING	
Activity specific	-1/ +1	
Right – of – way specific (within right – way)	-2/ +2	
Local area (within 5km of the project)	-3/ +3	
Regional	-4/ +4	
National	-5/+5	
DURATION OF IMPACT	RATING	
One day to one month	-1/ +1	
One month to one year	-2/ +2	
One year to ten years	-3/ +3	
Life of operation	-4/ +4	
Post closure	-5/+5	
FREQUENCY OF ACTIVITY / DURATION OF ACTIVITY	RATING	LIKELIHOOD
Annually or less / low	-1/ +1	
6monthly / temporary	-2/ +2	
Monthly / infrequent	-3/ +3	
Weekly/ life operation/ regularly / likely	-4/ +4	
Daily / permanent / high	-5/+5	
FREQUENCY OF IMPACT	RATING	
Almost never/ almost impossible	-1/ +1	
Very seldom / highly unlikely	-2/ +2	
Infrequent / unlikely/seldom	-3/ +3	
Often / regularly/ likely/ possible	-4/ +4	
Daily / highly likely/ definitely	-5/+5	

Table 1-2: Significance rating matrix

CONSEQUENCE (Severity+ Spatial Scope + Duration)															
LIKELIHOOD (Frequency of activity + Frequency of impact)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45
	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	7	14	21	28	35	42	49	56	63	70	77	84	91	98	105
	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	9	18	27	36	45	54	63	72	81	90	99	108	117	126	135
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150

Table 1-3: Negative and Positive Mitigation Ratings

Significance Ratings	Value	Negative Impact Management Ratings	Positive Impact Management Ratings
Very High	126-150	Avoid/Offset/Compensate	Maintain proposed management
High	101-125	Avoid/ Mitigate, Offset./Compensate	Maintain proposed management
Medium-High	76-100	Mitigate and minimize	Maintain proposed management
Low -Medium	51-75	Mitigate and minimize	Maintain proposed management
Low	26-50	Minimize, Avoid	Maintain proposed management
Very low	1-25	Minimize/adapt	Maintain proposed management

1.7.3 Preparation of an ESMP and ESMoP

The Environmental and Social Management Plan (ESMP) is developed to demonstrate how site-specific concerns and mitigation measures are addressed during construction and operation of the proposed project development activities. The ESMP has been developed with project knowledge and information available to date. The impacts originating from the project road development (construction, operation and decommissioning phases) have been identified. To ensure that the negative environmental impacts can be controlled and mitigated effectively, a thorough scientific management and monitoring plan has been prepared. This will ensure that all the targets are achieved and that the environmental responsibilities and obligations of ESIA are met during project implementation. As a progressive approach, components of the ESMP may require updating throughout the initiation and scheduling of plans for the project.

The Environmental and Social Monitoring Plan (ESMoP) is prepared with an objective of monitoring to ensure that mitigation measures in the ESMP are implemented and that they are effective. Environmental and social monitoring also enables response to new and developing issues of concern.

1.7.4 Review Findings

The initial ESIA Report was reviewed alongside the design report and drawings followed by a review verification mission of the road corridor comprising the Environmentalist (Team Leader), Sociologist, the Highway Design Engineer and a Field Support Team. The following are the key findings made;

- (i) The initial Environmental and Social Impact Assessment report covered the section between Lesseru and Marich Pass. There is therefore a need to remove the impacts between Kitale and Marich Pass, which is not part of this project.
- (ii) The design for the road sections are well thought out and have fairly addressed the main challenges facing the road stretch including among others;
 - ✓ Geometry (slopes and curves),
 - ✓ Reduced social conflicts
 - ✓ Provisions for drainage
 - ✓ Improved junctions
- (iii) However, the design did not consider some safety issues at major key towns such as Soy where the design require some improvement for safety purposes, and in major towns like Soy, Matunda, and Moi's Bridge, where people are trading on the road. While appreciating the design, no options were given such as service lanes and livelihood restoration options for the traders.
- (iv) The ESIAs captured well the environmental and social economic baseline of the area. While

appreciating the impacts analysis in the initial ESIA report, it was felt that arising from the above findings, significant specific linkages along the corridor required to be updated. Equally, specific management factors in the Environmental and Social Management Plan also required updating on the basis of the established corridor specific linkages.

1.7.5 Structure of this ESIA Report

This report has been prepared under the following chapters:

- Executive summary:** This section presents a summary of the significant findings and recommended actions, with an emphasis on expected impacts.
- Chapter 1: **Introduction:** This chapter gives description of the project background, location, purpose, objectives, NEMA reporting requirements, study methodology and the structure of the report.
- Chapter 3: **Project Location and Description:** This chapter presents the project location, design and implementation strategies.
- Chapter 2: **Policy, Legal and regulatory framework:** This chapter outlines the overview of legislative regulatory and framework, international guidelines and conventions relevant to this project.
- Chapter 4: **Environmental and Social setting:** This chapter gives description of the environmental and social setting of proposed project and surrounding areas, e.g. climate, soils, geology, vegetation, fauna, land use, socio-economic profile and cultural heritage.
- Chapter 5: **Stakeholder Consultation and Public Participation:** This chapter gives description of the objectives, methods used and summary of results of the public consultation activities undertaken during the project report stage.
- Chapter 6: **Climate Change and Adaptation:** Presents the connection of the proposed project to climate change and the preferred adaptation measures.
- Chapter 7: **Alternatives to the Project:** This chapter gives an analysis of project alternatives including the no-project option.
- Chapter 8: **Potential Impacts and Mitigation Measures:** This chapter presents the analysis of beneficial and adverse impacts of the project on the biophysical and human (social, cultural and economic) environments. The analysis covers anticipated impacts during the construction, operation phases and decommissioning phases and also describes the measures proposed to enhance benefits or prevent, minimize, mitigate or compensate for adverse impacts.
- Chapter 9: **Environmental and Social Management Plan (ESMP):** This chapter presents the proposed ESMP prepared for the project. It also presents strategies for management of specific biophysical and socio-economic management components that should be further developed prior to commencement of the Construction Phase of the Project
- Chapter 10: **Grievance Redress Mechanism (GRM):** This chapter outlines the process, procedure and mechanisms for handling possible disputes in the project implementation process.
- Chapter 11: **Environmental and Social Monitoring Plans (ESMoP):** This chapter presents the

proposed ESMoP prepared for the project.

Chapter 12: **Conclusions:** The conclusion briefly presents the proposed way forward on the project and key deliverables.

Chapter 13: **References:** Presents the sources of information and materials used in the study and review.

2 PROJECT LOCATION AND DESCRIPTION

The Lesseru - Kitale highway, forms part of the Suam-Endebes-Kitale-Matunda-A8 Soy (B2) road and measures approximately 55kms. The road traverses through Uasin Gishu, Kakamega and Trans Nzoia Counties and is located within the North Rift Region of KeNHA's road network.

The project road starts at Lesseru interchange - (KM 00) at the junction of Eldoret – Kitale (B2) and Eldoret – Malaba (A8), about 10km from Eldoret town. The road proceeds in a North westerly direction passing through centres in Uasin Gishu of Soy (Km 9), centres in Kakamega of Nangili (Km 18), Furfara (Km 24), Matunda (km 27), Moi's Bridge in Uasin Gishu (km 34), centres in Trans Nzoia of Maili Saba km 46), before ending at Kitale town (km 55). The Right of Way along this section of the road varies between 30 to 40m meters.

At Lesseru, the project road links with the Eldoret Bypass Road (31.2Km), which is currently under construction, in Kitale, it connects to the Kitale – Suam Road also under construction (50Km). Apart from being a short link connecting Highway A8 at Eldoret and Highway A1 at Kitale town, it connects to Suam Town at the border with Uganda and therefore it is of regional importance.

The road is currently in fair condition but the shoulders has been completely eroded in most areas. The road carriageway has a narrow width thereby compromising the safety of road users. The project road traverses through a flat and rolling terrain.

2.1 Project Description

2.1.1 Existing road condition

2.1.1.1 Alignment and Geometry

The Lesseru – Kitale (B2) road is characterized by the following conditions;

- The road is on flat and rolling terrain;
- The condition of the road alternates between poor to fair conditions. The road has a poor cross section with no shoulders, and pavement failure is widespread between Lesseru and Kitale
- The carriageway width is not uniform and ranges from 6.5m to 7m.

2.1.1.2 Existing Drainage Structures

Within Section 1 of the project, there are four existing major drainage structures, bridges at km 8+180 (Sergoit River Bridge), 16+750 (Kipsangui River Bridge), 26+720 (Little Nzoia River Bridge), and 34 + 500 (Nzoia River Bridge). The structural elements of the bridges are in a quite good condition but the width might not be sufficient especially considering that the road-way has to be used by motorized and non-motorized traffic on the same lanes.

The minor drainage structures consisting of pipe culverts, are generally in good condition, and do not have structural problems, however almost all of them are affected by siltation problem, which is caused by lack of regular maintenance.

2.1.1.3 Existing Road Reserve

The Lesseru – Kitale (B2) road project is classified as B2, requiring a minimum width of 40m. The topographical survey conducted during the design review identified that the existing road reserve varies along the road, with some sections having at least 60m provision, while in other towns the road reserve is small to about 30 m (eg at Kitale) due to encroachment.

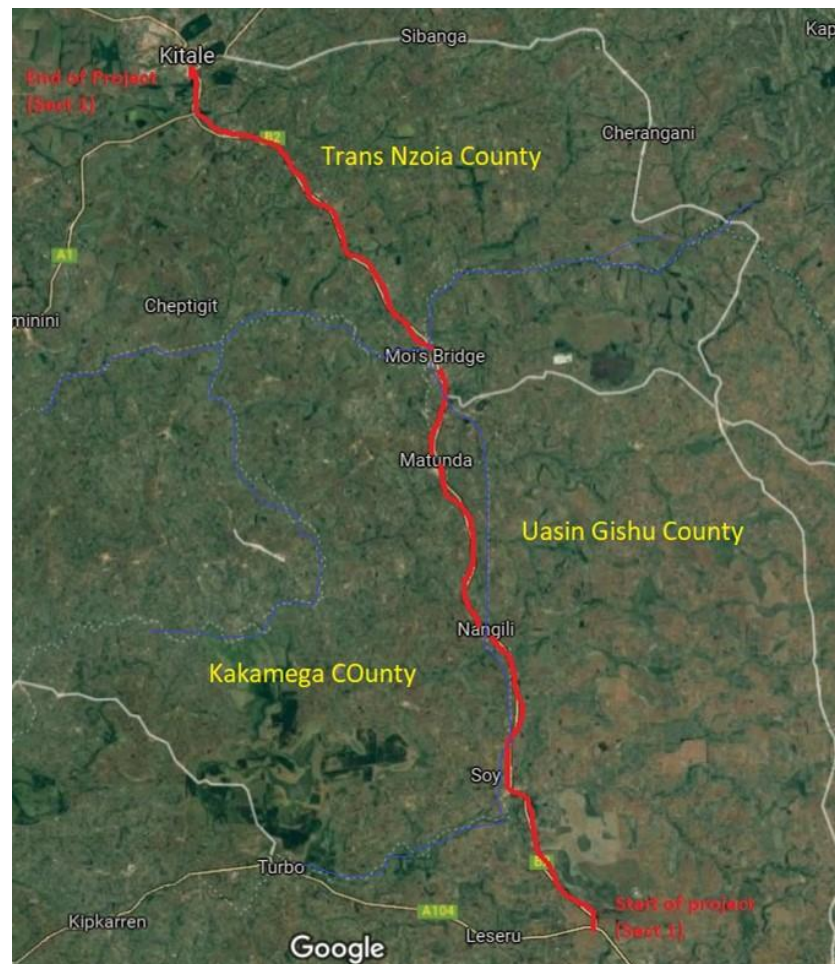


Figure 2-1 Aerial map of road section between Lesseru – Kitale (B2)

2.1.2 Design Speed and Standards

The terrain allows suitable design speed of 100km/hr along Lesseru Kitale (B2) road. The requisite geometric design standards for the project road are summarized in the Table 3-1.

Table 2-1 Lesseru - Kitale Road Design Standards

Description	
Terrain	Flat
Design speed (Km/hr)	100
Carriageway width (m)	7.0
Shoulder width (m)	1.5 each side
Minimum horizontal radius (m)	1000
Maximum super-elevation	6%
Maximum grade	3%
Minimum lengths of sag and crest curves	240

2.1.3 Pavement Design

Following material investigations and making use of the RDM III and AASHTO, the following are the pavement features that were designed for the project road.

Table 2-2 Pavement Structure for the Main Carriageway

	75mm Surfacing – AC type 1
	150mm Cement Stabilised Gravel Base
	175mm Cement improved material subbase (Base Quality)
	300mm compacted natural material improved subgrade to S5

2.1.4 Other design features

2.1.4.1 Shoulders

Pavement layers, both subbase and base extend to the outer edges of the shoulder. The shoulders will be sand sealed. Shoulders will be widened by 1.5m to accommodate guardrails in high fills i.e. where the fill is greater than 3m.

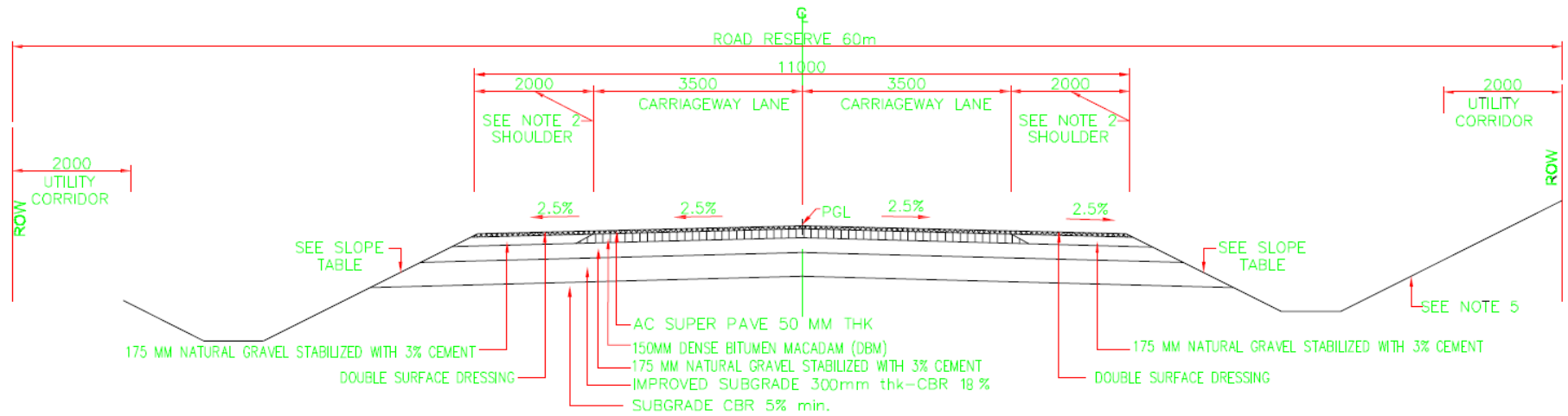
2.1.4.2 Crossfalls and slopes

The carriageway crossfall of 2.5% has been maintained. Shoulder cross fall is 4%. Embankment slopes (ratio of vertical to horizontal distances) of 1:4 is recommended for fills less than 1m and 1:2 for fills greater than 1 m and up to 3 m. For fills greater than 3m, the side slope is 1:1.5.

2.1.4.3 Side drains and cut slopes

Scraper drains 2.5 m wide (Type B3) have been adopted as side ditch generally in flat terrain. The width of the drain shall be reduced to 1.0 m where hard material is encountered. Minimum depth of side drains from the edge of the shoulder has been maintained at 1.0 m.

The ditch back slope shall depend on the height of cut, erosion conditions and the need of borrow material from the area. Side slopes of 1:3 have been adopted for cuts up to 1 m, 1:2 for cut heights between 1 and 3m and 1:1.5 for heights greater than 3m. A slope of 5:1 shall be used for cuts in rock material, depending on the material type.



TYPICAL CROSS SECTION - TYPE1

Figure 2-2: Typical cross section of the road section

2.1.4.4 Service, Loop and Market Roads

The road will also provide service roads at several market centres and institutions located along the road project. The main purpose for the service roads is to provide access to the market centre shops, public institutions such as hospitals, schools, and others for ease of access to these institutions.

2.1.4.5 Bus Bays

Passenger transport will form a key element of road use for the project road. Travel and human patterns usually determines where bus bays needs to be provided at convenient locations for road users. At junction locations at least one bus bay location will be made available for each traffic movement direction. At village centres, at least one bus bay will be provided for each direction depending on the length of the village centre along the road. Other provision for additional bus bays will be decided during the road construction through further public and stakeholder engagements and analysis of traffic patterns.

2.1.5 Proposed General Works

2.1.5.1 Construction works

The proposed project (totaling to about 55 km) will include construction to bitumen standards of 2 lanes of 7.0m wide, with shoulders of 2m width for the entire road section. The works will also involve construction of drainage bridges, and road over rail bridges near Lesseru, at Matunda and Moi's Bridge Townships and in Kitale Town. In addition, dualling will be done along some sections of the road including but not limited at highway sections through the urban area and critical sections of the highway including the section into Kitale town and connecting to the ongoing works on Kitale – Endebess – Suam Road. Other works will include construction of NMT facilities at major centres. to 1.5 m footpaths, and 1.5m Cycle paths on each side of road.

The major items of Works to be executed under the Contract include the following:

- Setting out, referencing and taking cross sections;
- Site clearance and removal of top soil;
- Earthworks;
- Constructing drainage structures (box and pipe culverts including protection works);
- Construction of pavement comprising bitumen surfacing, cement stabilised base and improved material subbase;
- Construction of other road facilities such as lay-bays, bus bays and widening at market centres along the road
- Works necessary to effect the safe and convenient passage of traffic through the Works;
- Construction of pedestrians crossings
- Provision of road furniture and ancillary services, e.g. signs, guardrails, marker posts, fencing, etc.;
- Operations ancillary to the main Works such as the construction of offices, diversion of services, the operations in quarries and borrow areas, the provision of water supply, the diversion of existing services, spoil areas for disposal of unsuitable or surplus materials, etc.
- Setting up and operation of construction camps, including accommodation of construction workers and Supervising Consultant staff
- Setting up and operation of equipment for materials production such as concrete products (eg pre-cast concrete, paving blocks, etc) and asphalt concrete batching plant. The camp will also be used for stockpiling necessary materials such as bitumen, gravel, sand, etc

2.1.5.2 Road Furniture and Ancillary Services

The design Consultant has made the following recommendations on road safety and furniture, which also forms as part of environmental and social mitigation measures:

- **Road Reserve Boundary Posts** - these are proposed at intervals of 250m on each side of the road reserve edge and details are shown in the book of drawings annexed to this report;

- **Edge Marker posts** - these are proposed at bridge approaches, pipe culverts, and sharp curves and at locations where sight distance requirements are not complied with. Exact location for the Edge Marker Posts will be determined during the construction phase of the project.
- **Kilometre Marker Posts** - these are proposed at intervals of 2km staggered on either side of the road.
- **Road Signage** - these are provided and installed in accordance with the recommendations of Ministry of Works, Roads Department (Kenya); Manual for Traffic Signs in Kenya, Part I (Road Markings)- 1975;
- **Road Marking** - Locations for different types of road marking will be determined on site during construction. These are to be determined in accordance with the requirements of Ministry of Works, Roads Department (Kenya); Manual for Traffic Signs in Kenya, Part I (Road Markings)- 1975;
- **Guardrails** - These road furniture elements, whose exact locations will be determined on site during construction, shall be determined at bridge approaches, box culverts and high fill in accordance with Guardrail Need Index (G.N.I) in Figure 8.5 .1 of the RDM I;
- **Kerbs** - these are proposed at junctions, bus bays and parking bays. Exact location shall be determined on site during construction;
- **Warning Signs and Features:** Locations of Reflective Road Stands, Rumble Strips and Speed Bumps shall be determined on site during Construction.
- **Pedestrian Crossings:** The residents who have settled along the road in town centres will require protection from vehicles with level crossings and foot bridges in various sections of the road, especially in densely populated towns. The design consultant has considered such features in all towns and near institutions (such as mosques, schools, and hospitals) including installation of speed reduction measures such as bumps/humps, road markings and signage, and foot bridges for safety of the local residents.

It is recommended that all road signs shall use pictorial or animated signage as much as possible to compliment written signage along the road project.

2.1.5.3 Temporary works

In addition to the permanent works described above, some temporary works will be undertaken to facilitate construction. These include:

- Diversion roads to allow passage of traffic to be maintained along the full length of the construction works;
- A work camp for accommodation, offices, services, stores, workshops and parking of vehicles;
- Production facilities such as concrete precast yard, timber and reinforced steel bending yards;
- Temporary stockpile areas to be set aside for delivered or double-handled materials such as aggregates and sand;
- Spoil areas for disposal of unsuitable or surplus materials.

2.1.6 Material Investigations

2.1.6.1 Borrow Material

A total of 34 borrow areas and gravel sources were investigated along the proposed Road. Summary details of the proposed sites that met the materials quality are presented in the table below.

Table 2-3 Material Sites

Hard Stone Quarry No.	Name of Hard stone Quarry / Area	Location	Chainage	Offset (Km)	Side	Remarks
HS 1	Milimani	Along Lesseru – Moi's Bridge Road	036 + 400	1.90	RHS	Surface samples Tested, boreholes drilled to confirm quantity and quality.
HS 2	Mowlem	Along the Kitale – Suam Road	064+200	29.0	LHS	Surface samples Tested, boreholes drilled to confirm quantity and quality
HS 3	Chepsertoi Area	Just Past Marich Pass Junction	158+200	1.50	LHS	Surface samples Tested, boreholes drilled to confirm quantity and quality

Gravel sources for improved Base-Course and Sub-Base material

Road Section	Material Site No.	Chainage	Offset (Km)	Side	Type of gravel
Lesseru – Kitale	MS1	004 + 500	0.01	LHS	Brown Lateritic Gravel
	MS 2	013 + 300	10	LHS	Brown Lateritic Gravel
	MS 3	019 + 500	2.50	RHS	Brown Lateritic Gravel
	MS 4	046 + 200	0.06	LHS	Brown Lateritic Gravel

2.1.6.2 Sand Sources

In the Design review studies, two rivers with sand were sampled and analysed that is River Nzoia. Samples indicate the sand from these sources is suitable for concrete works. In addition, the alignment soils consist of silty sands/clays with a high percentage of fines. It is possible to obtain well graded sand by wet sieving some soils along, or near the alignment.

Sand Source No.	Name of River	Chainage	Offset	Side	Remarks
RS 1	River Nzoia at Moi's Bridge	034+500	Within Road Corridor	LHS	River Sand

2.1.6.3 Water for Construction

Several water sources were identified along the project road corridor for use during the construction phase. The permanent water sources available for construction include;

- River Sergoit/Chepkoiel (Km8+180),
- River Kipsangui (Km16+750),
- Mtoni Polisi (Km26+720),
- River Nzoia (Km34+500)

2.1.6.4 Use of Borrow and Quarry Sites

The contractor will be entirely responsible for locating suitable sources of materials complying with the Standard and Special Specifications and for the procurement, mining, haulage to site of these materials and all costs involved therein. The Contractor will make available any land for quarries, borrow pits, stockpiles and spoil areas, except for those areas in road reserves specifically approved by the resident engineer. Any areas used for spoil dumps or stockpiles within the road reserve forming the site of the works by the Contractor shall be subject to the approval of the RE. The contractor will also establish and maintain transport routes for transporting any materials to final destinations.

In addition, the contractor will be required to conduct ESIA (which will include rehabilitation plan) for all materials borrow and quarry sites and obtain requisite permits/licenses as per NEMA requirements.

2.1.7 Project Costs

The construction of the proposed road project is estimated to cost **KES 6.6 billion, including the** cost of ESMP implementation. This ESMP cost is provided in chapter 9 of this report.

3 RELEVANT POLICY, LEGAL AND REGULATORY FRAMEWORK

3.1 Policy Framework

3.1.1 Environment Policy, 2014

The aim of the Environment Policy (Sessional Paper No.10 of 2014) is to ensure that environmental concerns are part of the national planning and management processes; and that guidelines are provided for environmentally sound development. The policy has seven broad goals under which guiding principles are mainstreamed to achieve conservation and management of the natural resources (forest ecosystems, arid and semi-arid lands ecosystems etc. that have wildlife resources, water resources, grazing lands, minerals, soils therein). Some of the principles outlined in the policy include right to a clean and healthy environment, ecosystem approach, total economic value, sustainable resource use, equity, public participation, precautionary principle, polluter pays principle, international cooperation, community empowerment, benefit sharing and good governance.

Relevance

The policy promotes use of EIA as an innovative environmental management tool. It also calls for the Government of Kenya (GoK) to ensure that all significant development projects are subjected to EIA and regular environmental audits. This EIA Study Report (and its ESMP that will be subjected to regular audits) was prepared to promote sustainable development as envisaged in the policy.

3.1.2 Vision 2030

Kenya Vision 2030 is the country's new development blue print covering the period 2008 to 2030. The blueprint aims at transforming Kenya into "a newly industrializing, middle-income country providing a high quality of life to all its citizens in a clean and secure environment." The Vision is anchored on three key pillars: Economic; Social; and Political Governance.

The political governance pillar envisages public participation during project development; while social pillar envisages development through equitable social development. Poor road access to the north-western parts of Kenya constraints the social and economic development prospects of the area. The Lesseru – Kitale road is an important link that enhances regional integration, trade and development. It connects to the Northern Corridor at Lesseru and the Kitale - Endebess – Suam - Kapchorwa corridor. It also connects to the Sirari Corridor at Kitale. The project road supports the regional integration objective of 3 out of 5 (Kenya, Uganda and South Sudan) member countries of the East African Community (EAC) and the Great Lakes Region.

The Vision 2030 policy anticipates possible environmental impacts during roll out of flagship projects requiring mitigation measures be put in place in line with the requirements of the Environmental Management and Coordination Act (EMCA), 1999 and the Environmental Management and Coordination (Amendment) Act, 2015. Hence, KeNHA should ensure environmental care through mitigation of impacts as part of project achievement.

Relevance

The improvement of the existing ESIA for the proposed Road aims at observance of the principle policy directives of Vision 2030.

3.1.3 National Land Policy, 2009

The policy is presented to provide goals and direction for the current and future management of land in Kenya. It outlines the measures and guidelines which the government shall implement to achieve optimal utilization and

management of land, and from which laws governing land administration and management shall be drawn. The Policy and its implementation is guided by the philosophy that land is not just a commodity that can be traded in the market but has multiple values which should be protected by both policy and law.

Clause 51(d) of the policy states that government to establish development control standards, processes and procedures that are efficient, transparent and accountable taking into account International Conventions and national policies relating to the sustainable use of land and the preservation of environmental values. The policy in Section 3.4.3.4 promotes Environmental Management and Audit as land management tools and encourages public participation in the process.

Relevance

This ESIA has espoused the policy recommendations key among them compliance with EMCA as the harmonized framework for sustainable use of land.

3.1.4 Integrated National Transport Policy (INTP), 2009

The policy scopes the main challenges associated with transport infrastructure planning, development and management, sectoral institutional and regulatory frameworks, safety and security, gender mainstreaming, and environmental considerations, among others.

The policy perceives that currently there are inadequate measures to check on the damage on the environment (gaseous pollution, vibration and noise among others) and that efficient road transport management will minimize pollution by traffic. The policy advocates for use of more energy efficient and less polluting modes of transport. It recognizes the need to enforce EMCA at all stages of road infrastructure development and management that will lead to reduced environmental impacts from road infrastructure provision and operation as well as better utilization of road building materials.

Relevance

The ESIA through the ESMP has scoped foreseeable impacts and corresponding mitigations at construction and operation stages.

3.1.5 The National Biodiversity Strategy, 2007

The overall objective of the National Biodiversity Strategy and Action Plan (NBSAP) is to address the national and international undertakings elaborated in Article 6 of the Convention on Biological Diversity (CBD). It is a national framework of action to ensure that the present rate of biodiversity loss is reversed and the present levels of biological resources are maintained at sustainable levels for posterity. The general objectives of the strategy are to conserve Kenya's biodiversity to sustainably use its components; to fairly and equitably share the benefits arising from the utilization of biological resources among the stakeholders; and to enhance technical and scientific cooperation nationally and internationally, including the exchange of information in support of biological conservation.

Relevance

The project falls in an area with no protected habitats. However, there are some wildlife outside the protected areas and should the project encounter endangered flora and fauna then their conservation is of primary importance.

3.1.6 Gender Policy, July 2011

The objective of this policy is to mainstream gender perspectives in the national development process in order to improve equality and related social, legal/civic, economic and cultural conditions in Kenya. The policy encourages integration of measures that ensure gender-specific vulnerabilities and capacities of men and women are systematically identified and addressed.

The implementation of project will create job opportunities; through gender mainstreaming the problem of marginalizing women during employment may be addressed. Economic empowerment of women in the counties is a concern as most of them are usually housewives as identified in the counties' CIDPs.

3.2 Legal Framework

3.2.1 The Constitution of Kenya, 2010

The Constitution of Kenya, 2010; in Part 2 - Environment and Natural Resources stipulates the obligation of the State in respect of the environment. According to Article 69, the State shall:

- Ensure sustainable exploitation, utilization, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits;
- Work to achieve and maintain a tree cover of at least ten per cent of the land area of Kenya;
- Protect and enhance intellectual property in, and indigenous knowledge of, biodiversity and the genetic resources of the communities;
- Encourage public participation in the management, protection and conservation of the environment;
- Protect genetic resources and biological diversity;
- Establish systems of environmental impact assessment, environmental audit and monitoring of the environment;
- Eliminate processes and activities that are likely to endanger the environment; and
- Utilize the environment and natural resources for the benefit of the people of Kenya.

"Every person has the right to a clean and healthy environment", which includes:

- The right to have the environment protected for the benefit of present and future generations through legislative and other measures, particularly those contemplated in Article 69; and
- The right to have obligations relating to the environment fulfilled under Article 70".

Thus, every activity or project undertaken within the republic must be in accordance with the Constitution as well as adherence to the entitlement of every individual to a clean and healthy environment, as envisaged in the Constitution.

This Report seeks to ensure prior identification and adoption of mitigation strategies against impacts to ensure protection of citizen's right to a clean and healthy environment under the Bill of Rights.

3.2.2 Environmental Management and Coordination Act (EMCA)

EMCA, 1999 (The principal Act) and the Environmental Management and Coordination (Amended) Act, 2015 provide the main legal and institutional framework under which the environment in general is to be managed. EMCA is implemented by the guiding principle that every person has a right to a clean and healthy environment and can seek redress through the High court if this right has been, is likely to be or is being contravened.

Section 58 of the Act makes it a mandatory requirement for an EIA study carried out by KeNHA to implement projects specified in the Second Schedule of the Act. Such projects have a potential of causing significant impacts on the environment. Similarly, section 68 of the same Act requires operators of existing projects or undertakings to carry out Environmental Audits (EA) in order to determine the level of conformance with statements made during the EIA study. KeNHA will submit the EIA and EA reports to NEMA for review and necessary action.

The Environmental Management and Co-ordination (Amendment) Act, 2015 has repealed some of the sections in the principal Act. EMCA provides for the establishment of appropriate legal and institutional framework for the management of the environment and for matters connected therewith and incidental thereto. EMCA outlines the requirements for EIA, environmental audits, monitoring procedures and environmental-quality standards.

This ESIA Report has been prepared in accordance with the provisions of EMCA. The following regulations under EMCA operationalize various provisions under the Act.

3.2.2.1 Environmental (Impact Assessment and Audit) Regulations, 2003 and Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2016

Regulation 3 of the Environmental (Impact Assessment and Audit) Regulations state that "the Regulations should apply to all policies, plans, programmes, projects and activities specified in Part III and V of the Regulations". The road construction project falls under the High-Risk Project (4) Transportation and related infrastructure projects including— (a) all new major roads including trunk roads. It is under this premise that this ESIA Report was prepared for submission to NEMA.

3.2.2.2 Environmental Management and Coordination (Air Quality) Regulations, 2014

These Regulations cover air quality standards that are requisite to protect human health and allow an adequate margin of safety. These Regulations specify priority air pollutants, mobile and stationary sources as well as stipulates emission standards.

The emissions/pollution likely to result from road construction activities (such dust and exhaust emissions from running vehicle and equipment engines) have the potential of polluting the immediate atmospheric environment. Bush clearing, earthworks and bulk delivery of construction material, if unmanaged may result in generation of dust. Thus, need for strict adherence to these Regulations and standards therein in preventing/monitoring possible pollutants and managing sources. The table below shows the WHO 2021 air pollution guidelines.

Table 3-1 WHO 2021 air pollution guidelines

POLLUTANT	AVERAGING TIME	WHO 2021 AIR QUALITY GUIDELINE
PM _{2.5} (µg/m ³)	Annual	5
	24-hour	15
PM ₁₀ (µg/m ³)	Annual	15
	24-hour	45
O ₃ (µg/m ³)	Peak season	60
	8-hour	100
NO ₂ (µg/m ³)	Annual	10
	24-hour	25
	1-hour	200
SO ₂ (µg/m ³)	24-hour	40
	10-minute	500

POLLUTANT	AVERAGING TIME	WHO 2021 AIR QUALITY GUIDELINE
CO (mg/m ³)	24-hour	4
	8-hour	10
	1-hour	35
	15-minute	100

3.2.2.3 Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009

These Regulations provide thresholds within specified environments for noise and excessive vibrations. It includes provisions on noise from related sources such as vibration of machinery, motor vehicles, blasting activities, and construction at night.

Sensitive areas such as mosques, schools occur along the project road and may be affected by noisy activities during road construction phase. Construction activities such as compaction of the road surface, blasting activities at quarries, movements of various mobile construction equipment (such as mixing plant) as well as powering generator (at night) have a potential of exceeding permitted levels for residential and mixed residential areas as per the Regulation.

Measures shall be put in place to ensure the permissible noise levels by the NEMA regulation are not exceeded by the project road implementation activities. Where NEMA guidelines has not specified acceptable limitations, the WHO guidelines will be used. These regulations are summarised in the table below.

Table 3-2 Comparison between WHO and NEMA Noise Guidelines

Specific Environment	Critical Health Effects	LAeq dB(A) WHO	Time base (hours)	LAeq dB(A) NEMA	Time base (hours)
Outdoor living area	Serious annoyance Moderate annoyance	55 50	16 16	45 35	14 14
Indoor dwelling	Speech interference	35	16	-	-
Inside bedroom	Sleep disturbance	30	8	-	-
Outdoor bedroom	Sleep disturbance	45	8	35	-
School classroom	Speech and communication	35	During class time	Day 60	14
Indoor				Night 35	14
School playground outdoor	Annoyance External	55	During play	45	Day
Hospital, treatment room indoor	night time	30	8	-	-
	daytime	30	16	-	-
Industrial, Commercial and traffic areas	Hearing impairment	70	24	60	12
Ceremonies, festivals entertainment events	Hearing impairment	100	4	-	-

3.2.2.4 Environmental Management and Coordination (Waste Management) Regulations 2006

These Regulations basically cover all categories of wastes that include solid waste, Industrial waste, hazardous waste, toxic substances and waste, biomedical waste and radio-active substances. These Regulations also vest responsibilities to the generator of the wastes especially with regards to any consequent environmental impacts.

Construction of project road will generate waste at different forms and quantities such as form woodwork, empty bitumen drums, excavated spoil material, wrappers, plastic containers, cuttings (plastic/metal), used vehicle tyres,

among others. Wash-down from equipment and vehicle maintenance, waste from septic facilities and used oil and chemical substances are some of the liquid waste expected to be generated at project construction stage. The wastes generated from the activities have the potential of contaminating the immediate ground surfaces and atmosphere; thus, need for strict adherence to these Regulations in dealing with all the wastes and handling of waste streams.

3.2.2.5 Environmental Management and Coordination (Water Quality) Regulations 2006

The regulation provides for sustainable management of water resources including prevention of water pollution and protection of water sources (lakes, rivers, streams, springs, wells and other water sources). It is an offence under Regulation No. 4 (2), for any person to throw or cause to flow into or near a water resource any liquid, solid or gaseous substance or deposit any such substance in or near it, as to cause pollution. Regulation No. 11 further makes it an offence for any person to discharge or apply any poison, toxic, noxious or obstructing matter, radioactive waste or other pollutants or permit the dumping or discharge of such matter into the aquatic environment unless such discharge, poison, toxic, noxious or obstructing matter, radioactive waste or pollutant complies with the standards for effluent discharge into the environment. These regulations are summarized in the table on the next page.

The proposed road project will require water and also generate some waste water from vehicles oil, asphalt plant, asphalt products and at the batching site. In addition, the camp sites may also produce waste water inform of effluents and kitchen waste water. There are numerous seasonal water crossings along the project road that are in need of protection from pollution through compliance with the waste water discharge standards specified in this regulation.

Table 3-3: NEMA Waste Water Discharge Guidelines

Parameter	Units	Discharge into public sewers	Discharge into open water bodies
PH	-	6.0 – 9.0	6.0 – 9.0
BOD (5 days at 20o C) not to exceed	Mg/l	500	20
COD not to exceed	Mg/l	1000	50
Total suspended solids not to exceed	Mg/l	500	30
n-hexane extract not to exceed	Mg/l	Nil	30
Oils(mineral, animal & vegetable)	Mg/l	10	5
Total phenol not to exceed	Mg/l	10	2
Copper (Cu) not to exceed	Mg/l	1.0	0.05
Zinc (Zn) not to exceed	Mg/l	5.0	0.5
Lead (Pb) not to exceed	Mg/l	1.0	0.1
Arsenic (As) not to exceed	Mg/l	0.2	0.002
Total Mercury (Hg) not to exceed	Mg/l	0.05	0.005
Alkyl mercury not to exceed	Mg/l	0.01	0.001
PCB (Polychlorinated biphenyl) not to exceed	Mg/l	Nil	0.003
Pesticides residues not to exceed	Mg/l	Nil	0.05
Sulphates not to exceed	Mg/l	1000	500
Dissolved manganese (Mn)	Mg/l	-	1.0
Chromium (total)	Mg/l	1.0	0.1
Chloride not to exceed	Mg/l	1000	1000
Fluoride not to exceed	Mg/l	-	2.0
Coliform bacteria	-	-	1000/100ml
Free ammonia not to exceed	Mg/l	2.0	0.2
Sulphides (S) not to exceed	Mg/l	2.0	0.1
Cadmium (Cd) not to exceed	Mg/l	0.5	0.05
Cyanide (CN) total not to exceed	Mg/l	0.5	0.1
Organic phosphorous not to exceed	Mg/l	30	1.0
Chromium six (Cr 6) not to exceed	Mg/l	0.5	0.005
Total dissolved solids not to exceed	Mg/l	3000	1200

Parameter	Units	Discharge into public sewers	Discharge into open water bodies
Selenium (Se) not to exceed	Mg/l	1.0	0.05
Nickel (Ni) not to exceed	Mg/l	3.0	1.0
Barium (Ba) not to exceed	Mg/l	10	2.0
Temperature not to exceed	-	+/- 2o of the ambient temperature of the sewer	+/- 2o C of ambient temperature of the water body
Oil/ grease	Mg/l	No trace	Nil/ no trace
Toxic substances	Mg/l	Nil	Nil
Odor	-	-	Not objectionable to the nose
Color	-	-	Not objectionable to the eye or not to exceed 5 mg Pt/l

3.2.3 Water Act, 2016

The Water Act 2016 provides for the management, conservation, use and control of water resources and for acquisition and regulation of rights to use water; to provide for the regulation and management of water supply and sewerage services. Under this Act, ownership of water resources is vested and held in trust with the national government. Nonetheless, every person has a right to access water resources that is administered by the national government.

Road construction activities will need bulk supply of water for mixing and curing concrete, suppressing dust, cleaning and maintenance of equipment, among others. The Act promotes water resources management through soil and water conservation, protection, development and utilization of water resources. The construction of the project road will have to apply water resource management measures since the project area is predominantly arid.

Various permits from Water Resources Authority (WRA) will be required for proposed water abstraction methods, whether surface or ground water. In consideration that the project will be located in counties that have scarcity of water, the contractors will be required to employ water efficient technologies during construction.

3.2.4 Kenya Roads Act, 2007

Provides for the establishment of the Kenya National Highways Authority, the Kenya Urban Roads Authority and the Kenya Rural Roads Authority, to provide for the powers and functions of the authorities and for connected purposes.

The functions of KeNHA include the management, development, rehabilitation and maintenance of international trunk roads linking centres of international importance and crossing international boundaries or terminating at international ports (Class A road), national trunk roads linking internationally important centres (Class B roads), and primarily roads linking provincially important centres to each other or two higher-class roads (Class C roads).

Part IV, Sections 22 to 28 provides for the powers of the authority as a statutory body to; -

- Maintain, operate, improve and manage the roads under its jurisdiction;
- Construct new roads;
- Measure and assess the weights, dimensions and capacities of vehicles using any road and provide measures to ensure compliance with rules relating to axle load control, other provisions of the Traffic Act (Cap. 403) and any regulations under this Act; and

- d) Provide such amenities or facilities for persons making use of the services or facilities provided by the Authority as may appear to the Authority necessary or desirable.

Part IV (29) on compensation further emphasizes that in exercising the powers conferred by sections 23, 24, 25, and 26, an Authority shall do as little damage as possible, and, where any person suffers damage, no action or suit shall lie against the Authority, but he shall be entitled to such compensation there for as may be agreed between him and the concerned Authority, or, in default of agreement, as may be determined by an arbitrator appointed by the Chief Justice.

Relevance

In respect to the above Act, the proposed road is under the jurisdiction of KeNHA. It has identified the proposed road project as a priority project. This will focus on reducing linking up the neighbouring counties and nations which will eventually contribute towards the growth of the national economy. Further to this, KeNHA has adhered to the provisions of Part IV (29) of the Act by requesting for the design consultants to limit the road design, as far as feasible, within the existing road alignment in order to minimize damage on personal or public property along the project roads.

3.2.5 Traffic Act, 2014

The Traffic Act relates to traffic rules and management of traffic on all public roads. Towards ensuring safety on the roads, the following permits/licenses will be relevant especially for the contractor's compliance during the construction phase.

- Drivers licenses;
- Automobile insurance covers; and
- Permit to transport abnormal loads.

3.2.6 Occupational Health and Safety Act (OSHA), 2007

This Act covers the health, safety and welfare of persons lawfully present at workplaces. Provisions in the Act are designed to allow measures against potential hazards and the absence of risks to health at the workplace. The OSHA was enacted to assure the health, safety and welfare of persons employed in workplaces, and for matters incidental thereto and connected therewith.

- Part II of the Act provides the General Duties that the Occupier must comply with respect to health and safety in the workplace. Such duties include undertaking S&H risk assessments, S&H audits, notification of accidents, injuries and dangerous occurrences, etc, including ensuring that any incidents is entered in the General Register. In case of a fatal accident, the area Safety and Health Office should be informed within 24 hrs and a written notice to the same within 7 days. Part II also requires that every occupier shall establish a safety and health committee at the workplace in accordance with regulations prescribed by the Minister if— (a) there are twenty or more persons employed at the workplace; or (b) the Director directs the establishment of such a committee at any other workplace. A number of sections under this part shall be applicable to the proposed project.
- Part III of the Act provides the Administrative framework for supervision of the Act.
- Part IV deals with the enforcement provisions that the DOSHS has been provided with under the Act. It discusses the instances when Improvement and Prohibition Notices can be issued as well as the powers of OSH officers. This part of the Act will be mandatory for the Occupier to comply with for the proposed project.
- Part V of the Act requires all workplaces to be registered with the DOSHS. This part will be applicable for the proposed project as the Occupier will have to apply for registration of their project with the DOSHS on completion of the construction phase and before the operational phase of the project. During the

construction phase, the Contractor shall be required to register the project site as a construction site and be registered in the DOSHS database.

- Part VI of the Act lists the requirements for occupational health provisions which include cleanliness, ventilation, overcrowding, etc. This part of the Act will apply to the Occupier during all phases of the project.
- Part VII of the Act contains provisions for the safe operation of machinery and includes all prime movers and transmission equipment. Additionally this part includes the safe operation of cranes, chains, ropes, lifting tackles, pressure vessels and their statutory examination by DOSHS Approved Persons. This part of the Act will apply to the proposed project during the construction and operational phases respectively.
- Part VIII of the Act contains provisions for general safety of a workplace especially operation and safety of plant, machinery and equipment, including fire safety. This part of the Act will apply to the proposed project during the design, construction and operational phases respectively of the project.
- Part IX of the Act deals with Chemical Safety. This will be applicable to the proposed project as it will receive, store, handle and distribute materials such as bitumen, petroleum fuels, lubricants, chemicals, etc. The Occupier will be required to have MSDS sheets for all hazardous materials handled in the workplace including labeling of all receptacles containing such hazardous materials.
- Part X of the Act deals with the General Welfare conditions that must be present during the construction and operational phase of the project. Such conditions include first aid facilities and equipment, supply of drinking water, accommodation for clothing, ergonomics, etc. This section of the Act will be applicable to the proposed project.
- Part XI of the Act contains Special Provisions on the management of health, safety and welfare. These include work permit systems, PPE requirements and medical surveillance. All sections of this part of the Act will be applicable to the proposed project during the construction and operational phase.
- Part XII of the Act deals with Special Applications such as platforms erected over water and workplaces where steam boilers or hoists and lifts are used. This part of the Act will be applicable to the proposed project.
- Part XIII of the Act stipulates various fines and penalties associated with non-compliance with the Act. It includes those fines and penalties that are not included in other sections of the Act and will be important for the Occupier to read and understand the penalties for non-compliance with S&H provisions.

During the implementation of the project road, the project contractor will occupy construction camps, mobilize equipment and hire construction workforce. Specific health, safety and welfare measures to be implemented include:

- Ensure all relevant permits and licenses are obtained prior to commencement of the works,
- Train all workers on OHS measures;
- Provision of First Aid kits, and training of First Aiders
- Establishing the Safety and Health Committees
- Carry out medical examinations (Pre- employment and Annual Audiometric, Lung function and Clinical) for specific workers exposed to specific work-related hazards
- Appointment of qualified Safety and Health adviser
- Avail required personal protective equipment (PPE) at workplaces such as hand gloves, safety boots, reflective jackets, nose mask and helmet.
- Inspection of construction equipment to ensure that they are in good working condition before beginning a job. In addition, the contractor will ensure that regular inspections and maintenance of the equipment are conducted accordingly
- Carry out Annual OSH Audit & Fire Audits
- Obtain relevant Permits and licenses

3.2.7 Subsidiary Legislations under OSHA Chapter 514

3.2.7.1 The Factories and Other Places of Work (Hazardous substances) Rules 2007

These Rules are prepared to:

- Mitigate against workplace exposure of persons to potentially hazardous substances;
- Put in place safety standards against hazardous exposure; and
- Lower performance of work in hazardous conditions or circumstances.

There is need to properly handle all the hazardous Substances that result from the construction activities of the project road. The provisions will help to curb against health hazards arising from any of the harmful substances that may be in use.

3.2.7.2 The Factories and Other Places of Work (Noise Prevention and Control) Rules L.N 25 Of 2005

These Rules make a provision for the noise levels that a worker should be subjected to at the workplace. Further, the Rules provide for noise prevention program where noise levels exceed 85 dB (A) at the workplace. In situations where the noise levels exceed permissible levels, the occupier is required to develop, rollout and implement a written hearing conservation program.

Deployment of earth moving machines and vehicles at the onset of implementation of project road (during clearing works and bulk delivery of material) has the potential of emitting noise. This legislation provides mitigation to excessive noise levels especially those beyond 85 dB(A) at the workplace.

3.2.7.3 The Factories and Other Places of Work (Medical Examinations Rules) Rules L.N.24 of 2005

These Rules provide for the conducting of medical exams on various occupations including work involving exposure to noise. There should be Pre-employment and annual repeat examinations within two weeks where abnormal examination results are noted. This is to ensure consistency. Examinations are to involve clinical examinations, biological monitoring and other necessary tests depending on the type of exposure.

The regulations and OSHA prescribe the activities under which workers shall undergo medical examination. These include noisy workplaces exceeding threshold limits, and work involving exposure to tar pitch, bitumen and creosote.

3.2.7.4 The Factories and Other Places of Work (Fire Risk Reduction) Rules L.N.59/2007

These Rules seek to promote fire safety measures at every workplace, process and operations by:

- Vesting some responsibilities to the occupier;
- Recommendations on flammable substances on storage, marking and labelling, handling, monitoring (flammable substances), ventilation;
- Housekeeping as well as removal of products and waste;
- Machinery/equipment layout as well as Fire escape exits;
- Control of spread of smoke;
- Means of evacuation;
- Formation of fighting teams;
- Training in fire safety;
- Functions of firefighting team;
- Fire detection system; and
- Maintenance inspection & testing of cylinders.

During implementation of the project road, the employer/contractor will be required to comply with these regulations by conducting annual fire audits (site offices, camps and establishments), acquiring fire safety certificates, provision of trained fire marshals and conduct of annual fire drills of the resident workforce will have more than 100 staff including the employer's representative; the contractor is expected to form representative SHE committees to perform their roles in accordance with the Rules.

3.2.8 Employment Act, 2007

The Act declares and defines the fundamental rights of employees, to provide basic conditions of employment of employees, to regulate employment of children, and to provide for matters connected with the foregoing. The provides the basic minimum conditions for employment to include hours of work, water (for use at the place of work), food (employee properly fed) and medical attention.

At construction stage, the project contractor will hire both full-time and casual staff and the prevailing basic minimum conditions of employment will have to observed.

3.2.9 The Labour Institutions Act

The Act provides for establishment of labor institutions in Kenya such as the National Labor Board, Labor Committees (e.g. the Work Permits Committee, Trade Disputes Committee etc.), The Industrial Court and the Wages Council.

The applicable minimum wage requirements in Kenya classified by urban, per-urban and rural areas are usually gazetted every year or every other year as regulations under this Act. It will be important for the selected project contractor to abide by this law for fair wages of those engaged.

3.2.10 The Labour Relations Act

This is an Act of Parliament to consolidate the law relating to trade unions and trade disputes, to provide for the registration, regulation, management and democratisation of trade unions and employers organisations or federations, to promote sound labour relations through the protection and promotion of freedom of association, the encouragement of effective collective bargaining and promotion of orderly and expeditious dispute settlement, conducive to social justice and economic development and for connected purposes.

Workers freedom of association, procedures for establishment and registration of trade unions and employers' organisations and related mechanisms are provided in this Act.

KeNHA, its contractors and sub-contractors will be expected to comply with the provisions of this act when their employees exercise these rights.

3.2.11 Work Injury Benefits Act (WIBA) Chapter 236

This Act provides for compensation to employees for work related injuries and diseases contracted in the course of their employment and for connected purposes.

In the event of injury, during the implementation of the project road, the employer/contractor will be required to compensate workers in accordance with the Act. The contractor must therefore obtain and maintain relevant insurance policies in respect of this liability.

3.2.12 Wildlife Conservation and Management Act, 2013

This Act through rules and regulations seeks to promote the protection, sustainable conservation and management of wildlife resources within the Country and related matters. The Act recognizes and vests a range of responsibilities to different agencies associated with management of biodiversity and their refugia. The Act takes cognisance that the conservation, protection and management of the wildlife environment shall be in conformity with the provisions of the Environmental Management and Coordination Act. In addition, the Act in its schedules have listed legally protected areas and various species of wildlife under differing categories of conservation significance (i.e. vulnerable, endangered etc.) and whose handling requires authority from the Kenya Wildlife Service (KWS).

Although there is no legally protected wildlife area in the immediate project alignment, sections of the road traverse some areas with wild vegetation and inhabited by some wildlife species like wetlands, although not close to the road. These areas are of interest with regard to wildlife conservation and protection.

3.2.13 Public Health Act, Chapter 242

The Act seeks to protect and promote human health as well as prevent, restrain or suppress infectious, communicable or preventable diseases throughout the Country. This Act provides the impetus for a healthy environment and gives regulations to waste management, pollution and human health.

The Act makes it an offence for any landowner or occupier to allow nuisance or any other condition liable to be injurious or dangerous to health to prevail on his land. This would include effluent and solid waste as sources of nuisance.

3.2.13.1 The Public Health (Drainage and Latrine) Rules

Rule 85 provides that every owner or occupier of every workshop, workplace or other premises where persons are employed shall provide proper and sufficient latrines for use by employees.

Rule 87 requires every contractor, builder or other person employing workmen for the demolition, construction, reconstruction or alteration of any building or other work in any way connected with building to provide in approved position sufficient and convenient temporary latrines for use by such workmen. Rule 91 provides that no person shall construct a latrine in connection with a building other than a water closet or a urinal, where any part of the site of such building is within 200 feet of a sewer belonging to the local authority which is at a suitable level, and where there is sufficient water supply.

The project appointed contractor is expected to observe these provisions including ensuring adequate temporary sanitation facilities for workers.

3.2.14 HIV/AIDS Prevention and Control Act, 2006

This law requires HIV/AIDS education to be conducted in the work place. Road construction works by their nature increase risks of HIV/AIDS spread between workers and host communities and even among workers themselves in camps.

The project appointed contractor is expected to institute HIV/AIDS awareness and prevention plan among his staff and the host communities through service providers approved by the local public health departments. This requirement shall be incorporated in the tender documents to ensure compliance is achieved by bidders.

3.2.15 National Construction Authority Act, 2011

This Act establishes the National Construction Authority (NCA), meant to oversee the construction industry and coordinate its development. The authority is meant to promote quality assurance of the construction industry; accredit and register contractors as well as accredit and certify skilled construction workers and construction site supervisors.

During project implementation, the appointed contractor and conduct of construction works will be required to meet registration and approval requirements with NCA.

3.2.16 Land Act (No.6 of 2012)

This Act is intended to create harmony among the land laws to allow for a sustainable administration and management of land and related resources such as environmentally sensitive areas, heritage sites within public land. As part of environmental management of land resources in areas earmarked for development, the Act requires an Environmental Impact Assessment as per EMCA Act.

The pastoralist lifestyle of the locals in the project area and the reliance on land resources (pasture and water sources) in an arid environment makes it primary to sustainably utilize the resources during project activities especially identified material sites and water sources.

3.2.17 The National Lands Commission Act, 2012

This is an Act of Parliament to make further provisions as to the functions and powers of the National Land Commission (NLC), qualifications, and procedures for appointments to the commission; to give effect to the objects and principles of devolved government in land management and administration, and for connected purposes.

Compulsory land Acquisition in Kenya is handled by the NLC. Other mandates of the Commission include management of public land on behalf of the national and county governments.

The Act also mandates the Commission to:

- ensure that public land and land under the management of designated state agencies are sustainably managed for their intended purpose and for future generations;
- administer all unregistered trust land and unregistered community land on behalf of the county government;
- initiate investigations, on its own initiative or on a complaint, into present or historical land injustices, and recommend appropriate redress. To this end, it is empowered to encourage the application of traditional dispute resolution mechanisms in land conflicts.

These roles are all relevant to the planning, implementation, monitoring and evaluation of the envisaged project resettlement process and are elaborated in the separate project RAP document.

3.2.18 The Prevention, Protection and Assistance to Internally Displaced Persons and Affected Communities Act, 2012

This is an Act of parliament that applies to all internally displaced and affected communities by the development projects or programmes. The prevention, protection and assistance to internally displaced persons and affected communities are outlined in the following sections of the Act;

Part II: Principle of prevention, protection and assistance; The Government and any other organization, body or individual when responding to a situation of internal displacement and the needs of internally displaced persons under this Act, shall take into account their rights and freedoms as set out in the Bill of Rights of the Constitution.

Part IV: Public awareness, sensitization, training and education; The national Government, in order to prevent future instances of internal displacement in Kenya, shall promote public awareness about the causes, impact, and consequences of internal displacement as well as on means of prevention, protection and assistance to internally displaced persons through a comprehensive nation-wide education and information campaign.

Part V: Provisions relating to development and displacement; 21. (1) Subject to the Constitution, the Government shall abstain from displacement and relocation due to development projects or projects to preserve the environment and protect persons from displacement by private actors. Finally, (4) The Government shall ensure that the displacement is carried out in manner that is respectful of the human rights of those affected; taking in particular into account the protection of community land and the special needs of women, children and persons with special needs. This requires in particular-(a) Full information of those affected and their effective participation, including by women, in the planning, management of the displacement, and in defining suitable durable solutions; and (b) Provision of safe, adequate and habitable sites.

The proposed project will result in some unavoidable land take and economic displacement of individuals trading along the road reserves. The RAP study and implementation shall consider provisions of this Act in addition to the relevant AfDB policy OS 2 - Involuntary resettlement land acquisition, population displacement and compensation.

3.2.19 The Land Registration Act, 2012

This is an Act of Parliament intended to revise, consolidate and rationalize the registration of titles to land, to give effect to the principles and objects of devolved government in land registration, and for connected purposes.

The project is envisaged to affect some private properties and communal land. Provisions under this Act are essential to the project RAP as it is expected that the documentation for the affected land parcels will have to be updated in line with the laws of Kenya to show the changes due to the sections acquired for the road implementation. Such provisions are elaborated separately in the project RAP report.

3.2.20 Land and Environment Court Act, 2012

A Land and Environment Court is established under section 4 of the Environment and Land Court Act No. 19 of 2011. The court has the jurisdiction to hear any other dispute relating to environment and land. The Court has original and appellate jurisdiction to hear and determine all disputes in accordance with Article 162(2)(b) of the Constitution and with the provisions of the Act or any other written law relating to environment and land. The court is also empowered to hear cases relating to public, private and community land and contracts, choses in action or other instruments granting any enforceable interests in land.

Relevance

In matters relating to land disputes that may arise between KeNHA and the local community or county government during requisite private or community land acquisition for the road development or local material sites, the court has powers to deal with such disputes relating to land administration and management.

3.2.21 Land Laws (Amendment) Act, 2016

This Act amends the laws relating to land to align them with the Constitution, to give effect to Articles 68(c)(i) and 67(2)(e) of the Constitution, to provide for procedures on evictions from land, and for connected purposes. The Act has repealed sections of the following Acts:

- Land Registration Act, 2012
- Land Act, 2012

- National Land Commission Act, 2012

At implementation stage, the project will adhere to land requirements under the Act especially where land take is necessary from private owners.

3.2.22 Physical Planning Act, 2019

This is the main Act that governs land planning and it is required that all proposed developments must be approved by the respective local authority and certificate of compliance issued accordingly. Section 30(1) requires a developer in any local authority to be granted development permission by the respective local authority, failure to which heavy fines will ensue; and the land registrar shall decline to register such a document. No sub-division of private land shall take place within a local authority unless the sub-division is in accordance with the requirements of an approved local physical development plan.

The project appointed contractor will seek approval for the construction of the temporary camp (s) KeNHA will be required to discuss its development plans (road designs) with the respective County Physical Planning Officers, Liaise with the local governments in development control along the corridor.

3.2.23 Climate Change Act, 2016

This is an Act of Parliament to provide for a regulatory framework for enhanced response to climate change, to provide for mechanism and measures to achieve low carbon climate development, and for connected purposes. Part IV section 15 provides on how Climate change should be integrated in every public-sector entity. A public entity is expected to observe the Act together with provisions of the National Climate Change Action Plan. The National Climate Change Action Plan Section 4.3.1 (d) has specified how the road infrastructure sector can contribute towards the achievement of low carbon climate resilient sustainable development.

Relevance

KeNHA will be required to work closely with the counties to ensure that the project is in line with the set-out strategies by the county in mitigating climate change as per the Act.

3.2.24 Urban Areas and Cities Act, No. 13 of 2011

In Sections 27 and 28, the Act empowers County Government to appoint a Manager to manage or prohibit all places of work that by reason of smoke, fumes, or chemical gases, dust smell, noise or vibration or other cause may be a source of danger, discomfort, or annoyance to the neighborhood, and to prescribe the conditions subject to which businesses, factories and workshops shall be carried on.

The county governments will thus be instrumental, with mandates derived from this Act, in monitoring works to ensure that environmental nuisances are controlled.

3.2.25 The National Museums and Heritage Act (2006)

Provides for the establishment, control, management and development of national museums and the identification, protection, conservation and transmission of the cultural and natural heritage of Kenya.

The Act also establishes a notification of discovery requirement and sets restrictions on moving objects of archaeological or paleontological interest. It is administered by the National Museums of Kenya (NMK). Authority to move any encountered objects of archaeological importance or the implementation of a chance find procedure must be done in liaison with NMK.

3.2.26 Energy Act, 2019

Energy Act makes provisions that shall apply to every person or body of persons importing, exporting, generating, transmitting, distributing, supplying, using electrical energy, importing, exporting, transporting refining, storing and selling petroleum or petroleum products, producing, transporting, distributing and supplying of other forms of energy, and to all works or apparatus for any or all of these purposes”.

This Act also created the Energy Petroleum Regulatory Authority (EPRA) whose functions and powers include issuance of licenses, permits and exemptions for electric power and petroleum undertakings, review and approval of the electric power tariffs, imposition and collection of penalties and fines for non- compliance in the energy sector, investigation and resolution of conflicts, formulation of regulations and enforcement of standards in the Energy Sector, formulation and co- ordination of a disaster preparedness plan for the energy sector, ensuring fair play and competition within the Energy sector.

Given the heavy use of fuel for construction works and remote location of project road relative to major points of fuel supply, the contractor will require bulk storage of fuel on site. Permit for Bulk fuel storage on site from ERC shall be required in line with this Act.

3.2.27 Mining Act, 2016

This Act regulates the development of the mining and mineral (including construction minerals) industry including health, safety and environment issues related to mining.

The proposed road is expected to place a lot of demand on natural resources to be mined at quarries and borrow sites. In some instances, rock blasting may be required. The mining of these natural resources is regulated by this act among other legislations. Some of the permits/license triggered by this project under the mining act include:

- Rock mining permit; and
- Permits for blasting and storage of mining explosives from Department of Mines

3.2.28 The National Sand Harvesting Guidelines, 2007

The National Sand Harvesting Guidelines (2007) are secondary legislation that apply to all sand harvesting activities in Kenya and is aimed at ensuring sustainable utilization of sand resources and proper management of the environment.

The key provisions are:

- a. The Guidelines establish the Technical Sand Harvesting Committee (TSHC) whose main mandate is to be responsible for the proper and sustainable management of sand harvesting within the County, designate sand harvesting sites, ensure that sand dams and gabions are constructed in designated areas, designate sand transportation roads, ensure EIA/EA are undertaken, undertake dispute resolution, fix minimum sand prices, monitor restoration of sites and allocate areas to the Riparian Resource Management Association (RRMA).
- b. The Guidelines establish a Riparian Resource Management Association (RRMA) which comprises community leaders with the mandate to require EIA before sand harvesting operations start, annual environmental audits, sustainable management, provide access to sites, collection of revenues to be employed in rehabilitation of sites and revenue sharing with the community.
- c. It places responsibilities on sand dealers and transporters to comply with the Guidelines and the law.
- d. It identifies the social impacts of sand harvesting and bans child labour, requires fair wages, the organization of loaders for self- regulation and establishes a revenue sharing mechanism.
- e. It requires sand harvesting to occur in designated areas only and under an environmental management plan.

- f. The said guidelines provide for Farm, Lakeshore/Seashore and Riverbed sand harvesting as follows: it shall not exceed six (6) feet in depth, on-farm sand harvesting must be carried out at designated sites with a buffer zone of at least 50 metres from the riverbanks or dykes for, restoration will be undertaken concurrently with harvesting and under guidance from the Technical Sand Harvesting Committee, open-cast harvesting is recommended and underground tunneling must employ appropriate extraction technology to safeguard human safety.
- g. Riverbed sand harvesting is banned on riverbanks, and must be carried out in designated sites, must retain adequate reserves of sand to ensure water retention and maintain a buffer zone of 100 metres from any infrastructure.
- h. The Guidelines require any person who wishes to remove and/or transport sand to obtain a written approval from the County Environment Officer, NEMA.
- i. The Guidelines bar harvesting or transporting sand during the night.

Relevance

This project might be required to harvest sand for its use in structural works in rivers and other sources, and will therefore be required to adhere to the requirements of these guidelines.

3.2.29 Technical Guidelines on The Management of Used Oil and Oil Sludge In Kenya (2016)

NEMA developed technical guidelines on the management of used oil and oil sludge in Kenya so as to assist all used oil and oil sludge handlers meet their requirements under the Environmental Management and Coordination (Water Quality) Regulations of 2006, Environmental Management and Coordination (Waste Management) regulations of 2006 and Occupational Safety and Health Requirements among others.

The guidelines provides direction on safe management of used oil and oil sludge in Kenya and shall be the main regulatory reference material for management of used oil in Kenya.

Relevance

This project will use be using and generating used oil which some are categorized as hazardous and will be required to adhere to these guidelines for proper disposal.

3.2.30 Intergovernmental Relations Act

The Intergovernmental Relations Act of Parliament to establish a framework for consultation and cooperation between the national and county governments and amongst county governments; to establish mechanisms for the resolution of intergovernmental disputes pursuant to Articles 6 and 189 of the Constitution, and for connected purposes.

The objects and purposes of this act are to:

- Provide a framework for consultation and cooperation between the national and county governments;
- Provide a framework for consultation and cooperation amongst county governments;
- Establish institutional structures and mechanisms for intergovernmental relations;
- Provide a framework for the inclusive consideration of any matter that affects relations between the two levels of government and amongst county governments;
- Give effect to Articles 187 and 200 of the Constitution, in respect of the transfer of functions and powers by one level of government to another, including the transfer of legislative powers from the national government to the county governments; and
- Provide mechanisms for the resolution of intergovernmental disputes where they arise.

Relevance

This project section starts in Lesseru in Uasin Gishu county and terminates at Kitale in Trans Nzoia county, while also passing through Kakamega county on some sections. It will be necessary for KeNHA to work with both county governments consistently throughout the project period as the act may require.

3.3 Institutional framework

The main administrative structures are described in the following sections.

3.3.1 The Ministry of Transport, Infrastructure, Housing and Urban Development

The Ministry has three Departments relevant for road transport development namely; State Department of Transport, State Department of Infrastructure and State department for public works. Ministry is mandated to perform the following functions:

- National Roads Development Policy Management
- Transport Policy Management
- Rail Transport and Infrastructure Management
- Development, Standardization and Maintenance of Roads
- Mechanical and Transport Services
- Enforcement of Axle Load Control
- Materials Testing and Advice on Usage
- Standardization of Vehicles, Plant and Equipment
- Registration of Roads Contractors
- Protection of Road Reserves
- Maintenance of Security in Roads
- National Road Safety Management
- National Transport and Safety Policy

Relevance

All the functions listed above are relevant to the project's construction and operation phases.

3.3.2 Kenya National Highways Authority

KeNHA was established by the Kenya Roads Act 2007. It is an autonomous road agency. The functions of KeNHA include the management, development, rehabilitation and maintenance of international trunk roads linking centres of international importance and crossing international boundaries or terminating at international ports (Class A road), national trunk roads linking internationally important centres (Class B roads), and primarily roads linking provincially important centres to each other or two higher-class roads (Class C roads).

The main functions of KeNHA are:

- Constructing, upgrading, rehabilitating and maintaining roads Class A, B, C roads
- Implementing road policies in relation to national roads
- Ensuring adherence to the rules and guidelines on axle load control prescribed under the traffic act and any regulations under this act
- Ensuring that the quality of roads works is in accordance with such standards as may be defined by the minister

- Collecting and collating all such data related to the use of national roads as may be necessary for efficient forward planning under the Act

KeNHA has established Planning and Environment Department headed by a director and has, among others, the following functions:

- Implementation of policies for the efficient planning, survey services, road reserve protection, monitoring, evaluation and socio-environmental management for the roads under the Authority;
- Preparation of the annual work programmes and budgets for road planning, surveying, road reserves protection and socio-environmental management;
- Preparation and monitoring of the road investment programme for the road network under the Authority;
- Undertaking studies, designs and preparation of tender documentation for operations relating to planning, surveying, road reserve protection and socio-environmental management;
- Effectively supervising works and consultancies relating to road planning, surveying, road reserve protection and socio-environmental management and ensuring the works and services are executed in accordance with the standards and specifications;
- Administering and protecting road reserves;
- Liaison with Ministry for the time being responsible for road safety;
- Undertaking of road safety audits for road designs and implementation of road safety measures;
- Coordination of the Performance Contracts of the Authority;
- Monitoring and evaluation of road projects;
- Preparation and collection of economic, environmental and social data and information;
- Liaison with internal and external financing agencies;
- Preparation of monthly, quarterly, twice yearly, annual and ad-hoc reports for the Department

In regard to this project, this department will play a key role in setting standards for compliance with the Environment and Social Management Plan (ESMP) produced in this Report. This will include but not limited to ensuring the contractor prepares the CESMP and approving the same, induction and training of the contractors and supervision consultants, participating in monthly site meetings, monitoring and supervision of the ESIA/ESMP, carrying out compliance EHS audits, and reporting of the implementation of project safeguards.

3.3.3 The National Environment Management Authority

The responsibility of the National Environmental Management Authority (NEMA) is to exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment.

In addition to NEMA, the Act provides for the establishment and enforcement of environmental quality standards to be set by the Cabinet Secretary in consultation with the Authority, which will govern the discharge limits to the environment by the proposed project.

Relevance

NEMA must approve the project through issuance an ESIA license before implementation. It will also participate in subsequent stages of construction environmental management and annual environmental audits review.

3.3.4 Water Resource Authority (WRA), formerly WRMA

WRA is responsible for regulation of water resources through water allocation, source protection and conservation, water quality management and pollution control and international waters. Its roles and responsibilities are as follows:

- Planning, management, protection and conservation of water resources;
- Planning, allocation, apportionment, assessment and monitoring of water resources;
- Issuance of water permits;
- Water rights and enforcement of permit conditions;
- Regulation of conservation and abstraction structures;
- Catchment's and water quality management;
- Regulation and control of water use; and
- Coordination of the Integrated Water Resource Management (IWRM) Plan.

Relevance

Project construction will require substantive water inputs. The contractor will need to get authorization from WRA to abstract any underground or surface water resources.

3.3.5 National Transport and Safety Authority

The National Transport and safety Authority (NTSA) was established through an Act of Parliament; Act Number 33 on 26 October 2012. The objective of forming the Authority was to harmonize the operations of the key road transport departments and help in effectively managing the road transport sub-sector and minimizing loss of lives through road accidents. Some of its key mandates are the development of road safety strategies and facilitating education of the general public on road safety.

Relevance

NTSA has set various road safety standards, rules and motor vehicle licensing requirements which the contractors vehicles and drivers are expected to adhere to. In addition, all vehicles which will be using the road will be required to adhere to the set rules.

Similarly, KeNHA should liaise with NTSA in conducting road safety education along the project corridor, to sensitize the local population on road safety.

3.3.6 Kenya Roads Board

The main objective of KRB is to oversee the road network in Kenya and thereby coordinate its development, rehabilitation and maintenance and is the principal adviser to the Government on all matters related development, rehabilitation and maintenance. It ensures prudent Sourcing and Optimal Utilization of Resources for Socio-economic Development.

Relevance

It is necessary that KeNHA and the Contractor incorporate the principles integrated National transport policy in the construction and maintenance of the road.

3.3.7 Uasin Gishu, Kakamega and Trans Nzoia County Governments

The County Governments are a creation of the Constitution of Kenya 2010 and successor of the defunct Municipal authorities. They operate under the auspices of the Cities and Urban Areas Act, The Devolved Governments Act and a host of other Acts.

The County Governments are charged, among others, with the responsibility of providing a variety of services to residents within its area of jurisdiction. These include the services that were hitherto provided by the defunct County Council and the ones that have been transferred from the national government. The former includes Physical Planning, Public Health, Social Services and Housing, Primary Education Infrastructure, Inspectorate Services, Public Works, Environment Management while the latter include Agriculture, Livestock Development and Fisheries, Trade, Industrialization, Corporate Development, Tourism and Wildlife, Public Service Management.

The Fourth Schedule of the Constitution of Kenya 2010 Part 2 (3) provides for devolved environmental functions to be undertaken by the County Governments and includes; control of air pollution, noise pollution, and other public nuisances.

Relevance

The county governments will thus be crucial in issuing trade licenses to the contractor (s), issuing temporary facilities construction plan approvals, monitoring environment protection within the project, and general development control along the road.

3.3.8 Directorate of Occupational Safety and Health Services (DOSHS)

DOSHS is responsible for the enforcement of Occupational Safety and Health Act (OSHA),2007 and associated regulations. Construction sites must be registered with the Directorate and safety management plans, training and emergency preparedness done in accordance with the relevant guidelines issued by DOSHS.

Relevance

The contractor should be required to register construction sites with this authority as work places before the commencement of the construction works. DOSHS will also undertake workers safety and health inspections at its own initiative or upon receiving reports on any associated issues.

3.4 AfDB Operational Safeguards

The following Operational safeguards are triggered for the proposed project:

- Operational Safeguard (OS) 1- Environmental and Social Assessment;
- Operational Safeguard (OS) 2 Involuntary resettlement land acquisition, population displacement and compensation
- Operational Safeguard (OS) 3: Biodiversity and ecosystem services
- Operational Safeguard (OS)4: Pollution prevention and control, hazardous materials and resource efficiency
- Operational Safeguard (OS) 5: Labour conditions, health and safety

The safeguard policies are intended to reduce and manage risk and impacts for the Borrowers' and the AfDB projects, ensuring protection of people and environment from adverse impacts, reduce and manage project risks; enhance sound and sustainable operations in regard to the project.

3.4.1.1 OS 1 Environmental and Social Assessment

This overarching safeguard governs the process of determining a project's environmental and social category and the resulting environmental and social assessment requirements. The policy aims to ensure investment projects are environmentally and socially sound and sustainable achieved through appropriate analysis of project activities and

subsequent potential environmental and social impacts. It further advances integration of environmental and social aspects of project into the decision-making process.

Relevance

In accordance with the Bank's ESAP guidelines, this project has been assigned as Category 1 project, because it is anticipated that the potential impacts will be significant and adverse, and that the direct and indirect environmental and social impacts are likely to be diverse, sensitive or unprecedented. The main environmental issues will result from construction and operational phases of the project activities, particularly dust and air emissions, noise pollution and vibration, clearing of vegetation, soil erosion due to excavation and earthworks, human-wildlife conflict, increase in loss of wildlife due to accidents, pollution of soil and water sources from spillage/leakage of oils and sediment loading. Other environmental impacts include those due to the disposal of solid and liquid wastes, and sources and use of water. The occupational health and safety issues identified include workers accidents and hazards during construction, possible exposure of workers to diseases, risks posed to communities living in the area including injuries and accidents during construction and operation stages.

Full Environmental and social impact assessment (ESIA) and environmental and social management plan (ESMP) has been carried out to fulfill the requirements of this policy. In addition, at least two consultation cycles have been carried out with project affected people and other stakeholders (during the design engineer ESIA preparation and Independent Consultant, and this updated ESIA), and the disclosure requirements met.

3.4.1.2 OS 2- Involuntary resettlement land acquisition, population displacement and compensation

This safeguard consolidates the policy commitments and requirements set out in the Bank's policy on involuntary resettlement, and incorporates a number of refinements designed to improve the operational effectiveness of those requirements.

The specific objectives of this OS mirror the objectives of the involuntary resettlement policy to;

- Avoid involuntary resettlement where feasible, or minimize resettlement impacts where involuntary resettlement is deemed unavoidable after all alternative project designs have been explored;
- Ensure that displaced people are meaningfully consulted and given opportunities to participate in the planning and implementation of resettlement programmes;
- Ensure that displaced people receive significant resettlement assistance under the project, so that their standards of living, income-earning capacity, production levels and overall means of livelihood are improved beyond pre-project levels;
- Provide explicit guidance to borrowers on the conditions that need to be met regarding involuntary resettlement issues in Bank operations to mitigate the negative impacts of displacement and resettlement, actively facilitate social development and establish a sustainable economy and society; and
- Guard against poorly prepared and implemented resettlement plans by setting up a mechanism for monitoring the performance of involuntary resettlement programmes in Bank operations and remedying problems as they arise

The project road mainly follows an existing alignment and efforts have been made to follow the existing road reserve. However, field work established that the road was going to affect a number of traders, and structures on the road reserve. To avoid or minimize impacts related to involuntary resettlement, effort has been made to ensure the road will be within the road reserve. However, there are some sections where realignments to achieve the road design standards and safety requirements is impossible and therefore will require some resettlement. Therefore, the road development will affect some roadside properties and settlements such as at Soy town, Furfal, Matunda, Moi's Bridge, and Kitale town. This and other realignments have necessitated the undertaking of a Resettlement Action Plan (RAP).

3.4.1.3 OS 3: Biodiversity and ecosystem services

This Operational Safeguard (OS) outlines the requirements for borrowers or clients to (i) identify and implement opportunities to conserve and sustainably use biodiversity³ and natural habitats, and (ii) observe, implement, and respond to requirements for the conservation and sustainable management of priority ecosystem services⁴

Relevance

This policy is triggered by the project because the project road traverses an area with different natural habitats because of varying weather characteristics, with section 1 in tropical climate. The dominant natural habitat trees in the project area are Pine trees, Eucalyptus, *Grevilla*, among others. Significant degradation of such habitats may lead to population decline or local extinction of such species and we avoided as much as possible during construction.

3.4.1.4 OS 4 Pollution prevention and control, hazardous materials and resource efficiency

This OS outlines the main pollution prevention and control requirements for borrowers or clients to achieve high-quality environmental performance, and efficient and sustainable use of natural resources, over the life of a project.

This safeguard covers the range of key impacts of pollution, waste, and hazardous materials for which there are agreed international conventions, as well as comprehensive industry-specific and regional standards, including greenhouse gas accounting, that other multilateral development banks follow. The specific objectives of this OS are;

- Manage and reduce pollutants resulting from the project— including hazardous and non-hazardous waste—so that they do not pose harmful risks to human health and the environment; and
- Set a framework for efficiently using all of a project's raw materials and natural resources, especially energy and water.
- This OS draws on and aligns Bank operations with existing international conventions and standards related to pollution, hazardous materials and waste, and related issues. It also requires compliance with internationally accepted environmental standards, particularly the World Bank Group Environmental Health and Safety (EHS) Guidelines.

Relevance

This OS is triggered as the project is likely to cause significant adverse environmental or social impacts owing to the emission of pollutants, waste or hazardous materials covered by national legislation, international conventions or internationally recognized standards or by unsustainable resource use. It is also triggered by potentially significant levels of GHG emissions.

3.4.1.5 OS 5- Labour conditions, health and safety

This safeguard establishes the bank's requirements for its borrowers or clients concerning workers' conditions, rights and protection from abuse or exploitation. It also ensures greater harmonization with most other multilateral development banks.

The specific objectives are to:

³ Biodiversity is "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems" (The Convention on Biological Diversity).

⁴ Ecosystem services are the benefits that people derive from ecosystems. There are four types of ecosystem services: (i) provisioning services, which are the products people obtain from ecosystems (food, freshwater, wood and fiber, fuel), (ii) regulating services, which are the benefits people obtain from the regulation of ecosystem processes (climate regulation, flood regulation, disease regulation, water purification), (iii) cultural services, which are the nonmaterial benefits people obtain from ecosystems (aesthetic, spiritual, educational, recreational), and (iv) supporting services, which are the natural processes that maintain the other services (nutrient cycling, soil formation, primary production).

- Protect workers' rights;
- Establish, maintain, and improve the employee– employer relationship;
- Promote compliance with national legal requirements and provide supplemental due diligence requirements where national laws are silent or inconsistent with the OS;
- Align Bank requirements with the ILO Core Labor Standards, and the UNICEF Convention on the Rights of the Child, where national laws do not provide equivalent protection;
- Protect the workforce from inequality, social exclusion, child labour, and forced labour; and
- Establish requirements to provide safe and healthy working conditions.

Relevance

This OS is triggered as the project involves the establishment of a temporary or permanent workforce. In addition, the Bank adopted Presidential Directive (PD.02.2021) on Sexual exploitation, sexual abuse and sexual harassment (SEAH)

3.4.2 World Bank Group Environment, Health and Safety (EHS) General Guidelines

The General Guidelines provides guidance to users on common EHS issues potentially applicable to all industry sectors. These are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). When one or more members of the World Bank Group are involved in a project, these EHS Guidelines are applied as required by their respective policies and standards. These General EHS Guidelines are used in addition to the local guidelines in order to provide mitigation measures for the various environmental and social impacts that will be identified in this report.

The project will comply with World Bank Group EHS General Guidelines namely:

EHS Guideline	Applicability
Environmental	The environmental guidelines provide guidance to users on common environmental issues expected to be impacted during the project implementation which included air, energy, wastewater and water quality, water conservation, waste and hazardous waste management, and contamination. The ESIA has considered all the potential environmental issues and provided mitigation measures related to the proposed project as for environmental management.
Occupational Health and Safety (OHS)	Employers and supervisors are obliged to implement all reasonable precautions to protect the health and safety of workers. This guideline provides guidance and examples of reasonable precautions to implement in managing principal risks to occupational health and safety. The project is expected to have OHS risks during the implementation period, such as injuries of the workers, and other physical hazards at the worksites. This ESIA has evaluated potential OHS risks and provided mitigation measures associated with OHS during project implementation as provided for in this guideline.
Construction materials extraction	This guideline includes information relevant to construction materials extraction activities such as aggregates, limestone, slates, sand, gravel, clay, gypsum, feldspar, silica sands, and quartzite, as well as to the extraction of dimension stone. It addresses stand-alone projects and extraction activities supporting construction, civil works, and cement projects. The project will use these guidelines since it be using materials that will be extracted from various sources along the road. The ESIA has considered the impacts associated with the extraction of materials for construction and proposed mitigation measures as provided for in this guideline.
Toll roads	The EHS Guidelines for Toll Roads include information relevant to construction, operation and maintenance of large, sealed road projects including associated bridges and overpasses.

EHS Guideline	Applicability
	The project will apply these guidelines during construction of the carriageway and bridges which have been considered in the ESIA
Construction and Decommissioning	This guideline provides additional, specific guidance on prevention and control of community health and safety impacts that may occur during new project development, at the end of the project life-cycle, or due to expansion or modification of existing project facilities. Cross referencing is made to various other sections of the General EHS Guidelines. The project will decommission several temporary facilities and structures, among others the camp sites, storage facilities, and batching plants. for the workers. Decommissioning of these structures and facilities have been considered in the ESIA as per this guideline.

3.4.3 Alignment of AfDB and Government of Kenya (GoK) Policies relevant to this ESIA

Both the AfDB safeguards and GoK laws are generally aligned in principle and objectives of environmental and social sustainability. The following table summarize the similarities/differences or gaps of the two policies.

Item	GoK Policies	AfDB Policies	Gaps
Environmental and Social Assessment	Under EMCA, all road projects falls under Schedule II and are required to go through full ESIA study during project design and development of an ESMP	Under OS 1, all projects under Category 1 should under EA project implementation leading to development of comprehensive Environmental and social Management plans to guide resolution of social and environmental impacts as anticipated	None
Public consultations and disclosure	EMCA requires full ESIA studies to undergo public consultations and disclosure during the ESIA process. The Kenya constitution, 2010, also provides for public consultation and participation	OS 1 requires all ESIA studies to undergo public	none
ESIA Disclosure	NEMA publish the NEMA report to encourage any concerned citizen to forward their concerns on the project	The AfDB will publish the report on the website as part of the public disclosure. The borrower will also advertise on its website the ESIA	None

3.5 International Treaties and Conventions

A treaty is a binding agreement under International Law concluded by subjects of International Law, namely states and international organizations. Treaties can be called by many names including; International Agreements, Protocols, Covenants, Conventions, Exchanges of Letters, Exchanges of Notes, etc. However, all of these are equally treaties and the rules are the same regardless of what the treaty is called.

Treaties can be loosely compared to contracts; both are means of willing parties assuming obligations among themselves, and a party to either that fails to live up to their obligations can be held legally liable for that breach. The central principle of treaty law is expressed in the maxim *pacta sunt servanda*, translated as "pacts must be respected."

Kenya has ratified the following Project-relevant international conventions:

3.5.1 The 1985 Vienna Convention for the protection of the Ozone Layer

The Vienna Convention for the Protection of the Ozone Layer, 1985 was adopted after consensus was reached on 22 March 1985. Kenya ratified the convention on November 9 1988. The overall objective of the Vienna Convention is to protect human health and the environment against the effects of ozone depletion. As a framework convention, it does not establish any specific controls on ozone depleting substances. Instead, it establishes a general obligation upon the parties to protect the ozone layer (article 2) and emphasizes the need for international cooperation. For instance, Green House Gases might be released from the asphalt fumes at the asphalt plants.

Relevance

KeNHA and the contractor will be required to observe the above convention in all its operations throughout the project cycle in reducing emission of Greenhouse Gases.

3.5.2 The 1987 Montreal Protocol on Substances that Deplete the Ozone Layer

The Montreal Protocol on Substances that Deplete the Ozone Layer was adopted on 15 September 1987 and is a significant milestone in international environmental law, and Kenya ratified the agreement on 9 November 1988. It establishes firm targets for reducing and eventually eliminating consumption and production of a range of ozone depleting substances. These substances are enumerated in Annexes A-E to the Protocol and are to be phased out within the schedule given in article 2A-2I.

Relevance

The appointed project contractor will be required to observe the above convention in all its operations throughout the project cycle in reducing emission of Ozone Depleting Substances (ODS). The contractor will ensure he does not use equipment such as A/C units running on hydrochlorofluorocarbon (R22 gas) or other refrigerants with a high ozone-depleting potential.

3.5.3 The United Nations Convention on Climate Change (“1992 UNFCCC”)

The objective of the 1992 UNFCCC is to tackle the negative effects of climate change. The Conventions' stated aim is to stabilize greenhouse gas concentrations at a level that allows ecosystems to adapt naturally to climate change so that food production is not threatened, while enabling economic development to proceed in a sustainable manner (article 2).

Kenya signed the UNFCCC on 12 July 1992, ratified it on 30 August 1994 and started enforcing it on 2 November 1994. In 2016, Kenyan parliament passed a law on Climate change, the Climate Change Act further reiterating the country's commitment to this convention.

Relevance

KeNHA and the contractor will be required to observe the above convention in all its operations throughout the project cycle in reducing emission of Green House Gasses leading to climate change.

3.5.4 The Paris Agreement, 2015

The Paris Agreement was an agreement within the United Nations Framework Convention on Climate Change (UNFCCC), dealing with greenhouse-gas-emissions mitigation was adopted on 12 December 2015 and entered into force on 4 November 2016 requiring required both developing and developed nations to reduce their

greenhouse emissions (Carbon dioxide, Methane, Nitrous oxide, Hydro chlorocarbons, Perfluorocarbons and Sulphur hexafluoride). to fight against rising global temperatures.

Kenya is a signatory to the agreement (April 2016) and submitted its Updated Nationally Determined Contribution (NDC) in December 2020 committing to abate Green House Gases (GHGs) by 32% by 2030.

Relevance

The contractor will be required to carry out regular inspection and maintenance of construction equipment in order to reduce the levels of GHGs emissions into the atmosphere.

3.5.5 CITES Convention (1975)

CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments (where Kenya signed as party in March 1979), which aim to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species. Although CITES is legally binding on the Parties – in other words they have to implement the Convention – it does not take the place of national laws. Rather it provides a framework to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level

Relevance

The project will pass through areas with wildlife such as elephants and other species, and therefore the contractor and KeNHA should ensure that there will be no trade of specimens from wild animals and/or plants as a result of the project, including poaching.

3.5.6 Convention on Biological Diversity

The Convention entered into force on 29 December 1993, which was 90 days after the 30th ratification. The first session of the Conference of the Parties was scheduled for 28 November – 9 December 1994 in the Bahamas. Kenya is a signatory of the convention which has three main goals; namely;

- Conservation of biological diversity (or biodiversity)
- Sustainable use of its components; and
- Fair and equitable sharing of benefits arising from genetic resources

Relevance

The contractor and KeNHA should look out for species of conservation importance as established in the baseline environmental study in liaison with Kenya wildlife Service.

4 BASELINE ENVIRONMENTAL AND SOCIAL SETTING

4.1 Physical Environment

Lesseru – Kitale (B2) road traverses through three Counties of Uasin Gishu, Kakamega, and Trans Nzoia with very similar environmental, social and climatic conditions.

4.1.1 Climatic Conditions

Uasin Gishu and Kakamega Counties

The approximate altitude at Km0+000 is 2,100m a.s.l. with a temperate climate throughout the year. The average night temperatures are ~9 °C and day temperatures of ~24 °C. The minimum and maximum temperatures generally range between 16 °C and 29.7 °C respectively. The conditions are influenced by mixed factors including the Cherangani hills to the north and east, Nandi hills to the south and Mt. Elgon to the west.

The total annual rainfall ranges between 755mm and 1,478mm with a mean value of 1,124mm. Precipitation occurs mainly during April and May with a dry spell in June, followed by increasing rainfall in July and August. Rainfall tails off in September and October. A dry period with scattered showers of four to five months follows, until the following March. Rainfalls hours are mainly during the afternoon and at night. Most days are generally sunny with a mean sunshine of 7.7hrs. per day.

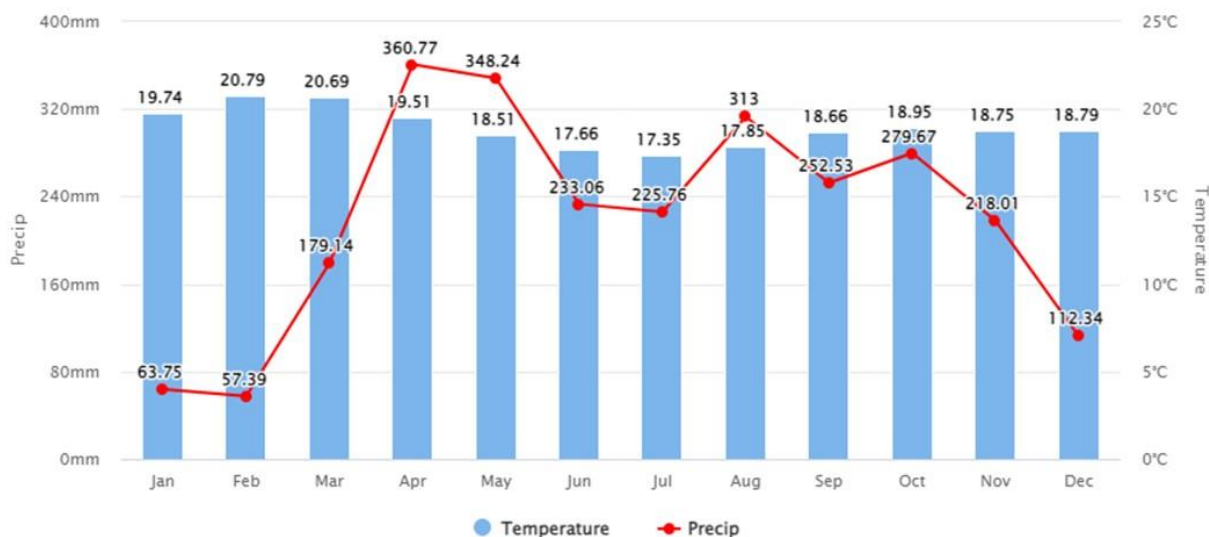


Figure 4-1: Typical historical rainfall and temperature at Matunda center

Trans Nzoia County

Trans Nzoia County is generally at an average altitude of ~1,900m a.s.l. in the highlands and ~1,000m a.s.l. in the low lands which significantly affects the temperatures in the area. During the cold months the temperatures are as low as 10 °C and rising as high as 37 °C during the hottest months. July is the coldest month while August and January are the hottest months. The average rainfall received in Trans Nzoia County ranges between 1,200mm and 1,500mm per annum.

4.1.2 Topography

The terrain along the road corridor is dynamic from flat to undulating. The Lesseru point (KM 0+000) of the road corridor in Uasin Gishu County is at an elevation of 2,100 a.s.l dropping to 1,790m a.s.l. towards Moi's Bridge (~KM35+000) with an undulating landform comprising of shallow river valleys and occasional outcrops. The landforms do not have significant influence on the road slope of the road surface. There is then a gradual rise in elevation in Trans Nzoia County towards Kitale town (located standing at 1,890m a.s.l near the A1/B2 interchange at ~KM54+600).

The entire section of the road has ragged land form features with steep slopes occurring on approach and exit from river crossings. The river valleys, however are fairly shallow and short distances. Influence of the topography is mainly from Cherangany hills on the western and northern side of the road corridor and rivers rising the same ranges flowing into Lake Victoria basin.



Figure 4-2: Topographical features along the road with Cherangani hills at the horizon

4.1.3 Drainage and Hydrology

The road corridor falls into the drainage Lake Victoria Drainage Basin, namely, influenced by Nzoia River system. The whole road corridor well drained, with only a few places noted to be experiencing water ponding, which has not had an impact on the road itself. The topography is well sloped and characterized with rivers and streams with varying flow capacities with appropriately sub-catchments linkages. However, it was noted that natural drainage systems in the along the road has been seriously compromised by human and socio-economic activities. The tendency has been to confine surface runoff into the roadside drainage, especially within the urbanized and settlement areas leading to poor functionality of drainages due to blockage by waste and silt. The effect has been conversion of road reserve as the drainage channel compromising the integrity of the road formation and safety.

Within this project section, four existing major rivers cross the road; km 8+180 (Sergoit River), km 16+750 (Kipsangui River), km 26+720 (Little Nzoia River), and km 34 + 500 (Nzoia River).



Figure 4-3: Drainage along the road
Compromised Roadside Drainage (Typical of KM0+000 – Km55)



Kipsangui River near Soi Market



Nzoia River crossing at Mois Bridge



Nzoia River



Kipsangui river

Figure 4-4: Sample River Crossings

4.1.4 Water Resources

Water resources along the corridor include surface water sources and limited ground water sources. There are numerous rivers and streams flowing from the Cherangani hills to the east and north of the corridor. The rivers are faced with serious threat of pollution from intensive agricultural activities in the catchments, settlements and urban development. Endowment of water resources for the corridor varies on the basis of climatic and relative elevation. Mto Polisi River (Little Nzoia), Nzoia River and Kipsangui River are among the rivers providing water for the supplies to the nearby towns and markets as well as their surrounding communities (Nzoia is the source of water for Moi's Bridge, Matunda town and the nearby areas, Segoit river provides water for Soy and Nangili market and their immediate surroundings). Intensive social and economic activities in the catchments is also a threat to the water quality in the corridor,

4.1.5 Waste Management

Areas with potential waste management challenges are urban centres and settlement areas – mainly organic matter, papers, plastics and polythene materials and fabrics. Other wastes include hazardous materials from health facilities, service stations and motor vehicle and garages. Notable is poor management of used oil at various centres along the road where boda bodas are repaired. It noted that none of the towns and markets are provided with effective solid waste management system or sewage disposal (apart from Kitale town). Dry vegetation materials generated from agricultural farms are used for soil conditioning.

Road construction activities generates waste materials almost similar to urban and settlement wastes and under the current capacity in the corridor towns, camp sites and other work areas would need to establish own management mechanisms. Spoil earth materials, however, is a unique waste associated with road construction.

4.1.6 Geology and Soils

The surface geological conditions between Lesseru and Kitale is intact and stable. The soils in this section are predominantly ferralsols rich in organic matter, well drained, reddish brown and appropriate for farming. The Brownish and reddish-brown soils (lateritic soil) are the common sub-grade materials along the project road, which are also used as embankment material for the construction of the existing road.

4.1.7 Air Quality

Vast section of the project road are in rural areas which are very sparsely settled and have no major anthropogenic activities that contribute to air pollution levels beyond the natural background levels. The current source of air pollution is thus limited to occasional dust generated by traffic on the gravel or earth roads. Occasional whirlwinds sweeping across bare land also contribute to intermittently elevated dust levels. In the town centres, the air pollution is limited to local vehicular movements, market activities, and winds sweeping across the bare land. The towns have no major industrial activities that constitute major point sources of air pollution.

Random samples taken along the road indicate the particulate matter levels are below the occupational health standards (10mg/m³). There are lower levels in isolated sections of the corridor with low population and human activities with an average of 1 – 3.mg/m³. Sections of the corridor with high human habitation and economic activities, and particularly the town centres display high concentration of particulate matter ranging between 3.5 – 7.5mg/m³, e.g. at Soy, Moi's Bridge and Kitale town centres. A significant quantity of the particulate matter is associated with traffic on the road surfaces, especially during the dry seasons when dust levels are high on the dilapidated road surface, when high concentrations were noted⁵.

The pollution of dust material would increase during construction as a result of excavations and movement of construction vehicles and use by other motorists along the roads. The pollution can have an impact on public health, as well as soils, livestock, and water supplies in the areas along the road. Air quality samples to be used as baseline data will be collected before commencement of the civil works for regular monitoring during the construction period. Monitoring of air quality will be done at all construction sites, including areas around the plants, and at quarry and borrow sites. Sampling and monitoring points will be determined and agreed upon with between the client representative and the contractor.

Air quality along project corridor is influenced by transport activities in addition to agricultural and urban related emissions (farm machinery and domestic emissions). With the high traffic volumes plying the route comprising partly of heavy trucks, vehicular emissions are expected to be relatively high. The key emissions associated with the project road include carbon dioxide (CO₂), carbon monoxide (CO), Nitrogen Oxides (NO_x), Sulphur Oxides (SO_x) and Particulate Matter (PM_{2.5}, PM₅ and PM₁₀) which comprises of hydrocarbons, fuel aerosols and soot. However, due

⁵ The random samples taken for air quality and noise cannot be used as baseline data because there is very high chance that the data will be obsolete because of dynamics in weather changes, maintenance regime of the road, and the time lag between when this ESIA was conducted and when the actual construction will commence.

to the high dispersal rates and high tree cover in the entire corridor, the overall concentration in the air is expected to be fairly low.

4.1.8 Noise and Vibrations

Noise levels along the corridor is mainly ambient influenced by human settlement nature. Slight elevated levels are within markets and near urban centres where economic activities including workshops, commercial undertaking and entertainment points are located. Along the corridor, the main sources is vehicular traffic plying the corridor, and especially heavy trucks. The levels, however, are confined within the vicinity of the carriageway.

The main noise pollution is from the vehicles along the road, motorcycles, prayers from the churches, and human noise from traders and consumers during normal business hours.

The noise levels are extremely low throughout most of the road corridors save for areas close to the market centres, where the level increases, due to concentration of people, vehicles, motorcycles and businesses activities. There are a few key sensitive points such as schools located near the proposed project road, and this is expected to be critical during the construction and operation phases.

Spot checks of the area noise levels were done along the road and ranged between 25dBa to 67dBa, with the high noise levels observed at the town centre areas, eg at Soy, Mois bridge, Matunda, and Kitale. The current levels of noise during the day and at night are noted to be below acceptable standard levels of 65dBa and 45 dBa respectively (see footnote 5). Therefore, the current acoustic environment is considered good around the project area. The situation will be exacerbated temporarily during construction, but will also occur during operation, specifically to vehicular noise, as a result of anticipated increased traffic along the road. Noise quality samples to be used as baseline data will be collected before commencement of the civil works for regular monitoring during the construction period.

4.2 Biological Environment

4.2.1 Flora and Fauna

Vegetation

Along the project road, there is significant tree cover (although not in the road reserve) thanks to intensive agro- forestry initiatives that partially compensates the loss of forest cover associated with human settlements and economic activities. The agro-forestry mainly involves exotic trees as opposed to the indigenous trees species. The main tree species observed include but not limited to; *Grevillea robusta*, *Pinus* sp.(pine species) and *Eucalyptus* spp. trees.

As you enter Kitale town, there are numerous pine trees (*pinus spp*) lined along the road that will be impacted by the project during construction. Since these trees have acted as iconic image to entry to Kitale, it is recommended that these trees will be reserved with the road to be aligned with minimal or no impact on the trees. Where it will be inevitable to preserve the trees, they will be with similar or other trees to maintain the image of the entry to the town.

Wildlife

Due to the intensive human settlements and economic activities between Lesseru – Kitale – Kapenguria sections, there is no notable presence of wildlife other than small rodents, snakes and birds species. However, there are limited wildlife species harbored by the wetland systems (e.g. Sitatunga in Saiwa and Kipsaina Wetland Systems, snakes and birds species).



Figure 4-5: Pine trees at Kitale

4.3 Social and Economic Baseline Conditions

4.3.1 Administration

The project road traverses through three (3) counties- Uasin Gishu, Kakamega and Trans-Nzoia, and through the following constituencies; Soy (in Uasin Gishu), Lugari (in Kakamega county), Kiminini (in Trans-Nzoia county).

Table 4-1: Administrative units along Section 1 - Lesseru - Kitale (B2) section

County	Sub-County	Wards (along the road)	Population
Uasin Gishu	Soy	Mois bridge	30,142
		Kipsomba	19,193
		Soy	25,068
Kakamega	Lugari	Matunda	10,807
Trans Nzoia	Kiminini	Sirende	231,191

4.3.2 Demography Trends

4.3.2.1 Population

The Kenya Population and Housing Survey report (KPHC) 2019 showed that Trans-Nzoia County had a population of 990,341 persons with an annual growth of 1.9%, Kakamega county had a total population of 1,867,579 persons, with an annual growth of 1.2%, and Uasin Gishu with a population of 1,163,186 persons, with an annual growth of 2.7%. The Table below summarizes the counties' population by gender and annual growth rates according to the Kenya Population and Housing Census 2019 report:

Table 4-2: Demographic Features Of The Project Counties

County	Population (2019)				
	Male	Female	Total	Avg No. of Households	population growth rate (%)
Uasin Gishu	580,269	582,889	1,163,186	3.3	2.7
Kakamega	897,133	970,406	1,867,579	4.3	1.2
Trans Nzoia	489,107	501,206	990,341	4.4	1.9

Source: KNBS, 2019

4.3.2.2 Urban And Rural Populations and Settlement Patterns

On average, 22.4% of the project counties' population live in urban areas while 87.6% live in rural areas. Uasin Gishu county has the highest number of urbanized population at 38.6% followed by Trans Nzoia which has 20.4% and Kakamega with 15.2%.

Settlement patterns are influenced by ecological and climatic factors including land fertility, rainfall amount, type of farming practiced and crops grown, number and intensity of economic activities, and access to services (administrative, health and education). Another reason for clustered settlement is the growth of towns such as Mois bridge, Matunda, Kitale and Kapenguria where there are many migrant workers and business people. These factors have led to emergence of two types of settlements in the counties including clustered and scattered settlements. Clustered settlement patterns are commonly found around towns and farm estates. The Counties' average population density is 452.7 persons per Km², with Kakamega having the highest at 618.4 persons per Km²:

Table 4-3: Development Indicators of the Counties served by road

Development indicators				
	Uasin Gishu County	Kakamega County	Trans Nzoia	National
Estimated County Population (KNBS, 2019)	1,163,186	1,867,579	990,341	
Males Females Intersex	580,269	897,133	489,107	
Females	582,889	970,406	501,206	
Estimated Population Density (km2)	342	619	397	82
Persons with disability	1.50%	2.90%	2.00%	2.20%
Population living in rural areas (%)	90.10%	90.00%	81.90%	68.80%
School going age (4-22 years) (%)	45.00%	50.60%	50.20%	68.70%
Youth (%)	39.00%	33.20%	35.00%	36.10%
Elderly population (over 65-year-old)	3.00%	3.30%	3.50%	3.90%
Food Poverty (2015/2016) (%)	41.00%	33.60%	34.00%	31.90%
Multidimensional Poverty (2015/2016) (%)	54.20%	56.10%	61.40%	56.10%
Stunted children (KDHS 2014)	10.80%	28.40%	29.20%	26%
Gross County Product (Ksh Million) 2017	162,273	182,563	116,683	
Average growth of Nominal GCP/GDP (2013-2017) (%)	11.20%	15.10%	11.30%	15.30%

4.3.3 Livelihoods of the Project counties

The three counties where the road transverses are considered the breadbasket of Kenya because they have high and reliable rainfall, relatively large farm sizes, and highly mechanized farming. Ninety percent of the total land in the counties is arable. Agriculture is the mainstay of the economy contributing 80% of total rural household income and food security. Maize, wheat, beans, tea, coffee, dairy, Irish potatoes, horticulture and local chicken are the key value

chain commodities in the counties. Predominantly small-scale farming is practiced in Kakamega while large scale farming with very high levels of external inputs is also common in Uasin Gishu and Trans Nzoia counties.

Livestock is an important natural resource in the counties and supports some of the livelihood system at the household level. Most of the animals are kept for production of milk which is sold to various dairy companies, providing some subsistence income to the households.

According to Ministry of Agriculture and Livestock development⁶, the agricultural sector in the three counties directly employs over 80% of the rural population. Men, women, and youths aged 15-35 years are active in the agricultural sector. Women and youths are mainly engaged in on-farm activities such as the production and harvesting of agricultural produce. Men are involved in the commercialization and marketing of agricultural produce, and youths mainly participate in transporting the produce to markets and selling it. Women provide more family and hired labor in crop production than men and youths.



Maize growing in Kitale Area

Farm Produce at Mois Bridge

Figure 4-6: Agricultural Features

4.3.4 Land Tenure and Ownership

Land Tenure is a system through which land rights are determined and documented while Land Disposition is the act through which ownership and use may change from one party to another. Different tenure systems exist in Kenya. In general, land in Kenya is classified as government land, private land or community lands. Trust land refers to land held in trust by the county government on behalf of the residents.

Uasin Gishu, Kakamega and Trans Nzoia Counties has a land tenure system such that there is trust land and leasehold (99 years) in urban centres. There is also leasehold tenure in the rural part of the county where Africans bought the large farms owned by the White Settlers while other parts of the County are under freehold land tenure system. The combination of the tenure systems offers both opportunities and constraints. Areas under freehold tenure pose difficulties in enforcing regulations on land. However, the trust land areas provide the County Governments with sufficient land for future location public facilities and infrastructure. In Soy sub-county where the road pass, the average size of land per household is 1.98 ha.

⁶ Agriculture Sector Development Support Programme (ASDSP), <https://asdsp.kilimo.go.ke/>

4.3.5 Education

School enrolment within the Counties has seen an improvement in the years between 2013 and 2017⁷ due to improvement of infrastructure. The counties also have good number of institutions- from primary to tertiary level which has seen literacy levels of 14-24 years averaging over 90% in these counties.

In 2010, number of primary school going children was estimated to be 137,125. This comprised 68,647 males and 68,478 females, a sex ratio of 1:1. The age group is projected to increase to 75,221 males and 75,036 females in year 2002. The number will further increase to 91,968 males and 91,741 females by year 2014. The current enrolment in primary school is 130,427 pupils with boys accounting for 64,264 and girls 65,983. A total of 467 primary schools accommodate this number out of which 353 schools are based in rural areas while 114 are in urban areas. Teachers/pupil ratio is 1:30, which is better than the national average of 1:40.

The secondary age group was 59,838 in 2010 with males accounting for 29,541 and females 30,297 and a sex ratio of 96:100. In the year 2010, it was estimated that there were 32,370 males and 33,199 females in this age group. This number will increase to 39,577 males and 40,589 females by year 2014. The enrolment (2010) was reported to be 8,780 for boys and 8,777 for girls. This number was accommodated in a total of 86 secondary schools of which 74 are public and 12 private. At secondary school, gross enrolment (GER) is estimated at 21.4% for the poor while the Net Enrolment for the non-poor is estimated at 13.2%.

Currently, there are over 470 primary schools and 120 secondary schools in Trans Nzoia. Some of the prominent secondary schools include St. Brigids Girls, St. Monica, St. Joseph's Boys, St. Joseph's Girls, Kitale School and Boma Secondary schools. Trans Nzoia has over 20 tertiary institutions, including a university campus, a nursing training college, a teachers' training college, farmers training institute, youth polytechnic and a number of commercial colleges. The table below summarizes the number of schools in the project counties:

Table 4-4: Education institutions in the project counties

Health and Education Outcomes	Uasin Gishu	Trans Nzoia	Kakamega	West Pokot
Literacy rate (%)	91.0	58.3	72.7	37.0
Population with primary education (%)	61.6	70.9	70.9	72.0
Population with Secondary education (%)	13.1	10.9	11.0	6.2

There are numerous education institutions (ECDs, Primary Schools, Secondary schools and tertiary institutions) along the project road. The list of education institutions touching the project road are presented in the following Table.

Table 4-5: Education institutions along the project road

Chainage (KM)	Educational Institutions
3+200	Georgen Academy
5+600	Sunrise Academy,
8+500	Soy Academy, Moi Baracks Academy,
14+900	St. Lucy Educational Centre; St. Lucy Soy Teachers College
17+800	Moi Girls Secondary; Nagili Primary
19+700	Star Rays Educational Centre

⁷ Uasin Gishu CIDP 2018-2022, and Trans Nzoia CIDPs – 2018-2022

Chainage (KM)	Educational Institutions
36+400	St. Francis Secondary, Kapkoi, Kapkoi Sisal Primary
37+000	Aic Kapkoi Secondary
41+000	Mainek Toro Secondary
43+700	St. Patrick Academy, Epson Academy
46+000	St. John Girls Secondary,
48+000	St. Teresia Secondary; Line Member School; Makusudi Academy
49+800	Aida Star Academy, Robinsons Technical Teachers College; Little Eagles Academy
51+600	Winners Academy

4.3.6 Health

The five most common diseases in the Counties in order of prevalence are: Upper Respiratory Tract Infections (URTI), skin diseases, other diseases of the respiratory system, diarrhea and pneumonia.

Table 4-6: Major Health Institutions along the road

Chainage (KM)	Health Institutions	Location
3+00	Moi Barracks	Lesseru
5+600	Uasin Gishu Inoculation Centre	Soy
8+520	Soy Dispensary	Soy
14+900	Kongoni Health Centre Sheywe Community Hospital Chemororoch Dispensary	Nangili
17+800	Matunda Maternity Center Mary's Clinis Matunda Sub-District Hospital Biberion Hospital	Matunda
19+700	Moi's Bridge Health Centre Moi's Bridge Mission Hospital Moi's Bridge Maternity and Nursing Home St Andrews Clinic Jabali Dispensary	Moi's Bridge
55+00	Kitale Referral Hospital Aga Khan Hospital Kitale Hospital Cheragany Nursing Home Mt Elgon County hospital The Galilee Hospital Sinai Medical Kipomet Medical Clinic And other small clinics	Kitale town

Table 4-7: Health data in the project counties

Health and Education Outcomes	Uasin Gishu	Trans Nzoia	Kakamega	West Pokot
Fully-immunized pop <1yr (% , 2010/11)	76.2	35.7	76.8	54.0
Malaria (as % of all 1st outpatient visits)	18.3	33.6	45.4	49.9
TB in every 10,000 people (2009/10)	124	5	26	57
HIV+ ante-natal care clients (% , 2010)	3.4	5.4	6.2	0.2

4.3.7 Trade and Industry

Trade, commerce and industry along the project road includes wholesaling, retailing, hotel and lodging/bars, petrol stations as well as transport and communications. The Major Town centres along the project road include Matunda, Soy, Moi's Bridge, Maili Saba, and Kitale, where major trading and industries are located, including food and vegetable markets. In addition, there are a number of companies in Uasin Gishu and Trans-Nzoia counties including Kenya seed company, Western Seed Company at Kitale and Kitale Industries Ltd, and The National Cereals Board has silos located at Moi's Bridge.

Table 4-8: Markets along the road

km	Markets
0+000	Leseru Chicken Eateries Market
5+600	Logisa Market
8+500	Soy Market
17+800	Nagili Market
24+00	Furfural Market
27+00	Matunda Market
34+000	Moi's Bridge Market
45+500	Maili Saba Market
55+000	Kitale Town

Among the banks found in the counties include Barclays Bank, Diamond Trust Bank, Cooperative Bank, Standard Chartered Bank, Kenya Commercial Bank (K.C.B), National Bank of Kenya and Equity Bank. There are several microfinance institutions in the county including Faulu and SMEP (Small and Micro-Enterprise Programme).

There are also many supermarkets, mini supermarkets and shops in towns along the project road. Some of the most established stores include Khetia supermarkets, Suam Supermarket, Trans Mattresses supermarket, R.B Shah Supermarket and Soy Trading supermarkets, among others.

4.3.8 Labor Availability

Soy, Matunda, Moi's Bridge, and Kitale towns guarantee availability of well skilled labour as well as an abundant pool of local semi-skilled and unskilled labour capable of carrying out construction works and supportive activities. Unemployment rates in the counties the road pass is very high, with an average of 54% unemployed, indicating labour availability is high in the region.

4.3.9 Public Utilities and Infrastructure

Public utilities include roads, water, telecommunication and other facilities. The distribution and access to public utilities along the project corridor are as presented in the table below:

Table 4-9: Access to Public Utilities

Access to Infrastructure	Uasin Gishu	Kakamega	Trans Nzoia
Improved water (% households)	88.9	76.1	76.7
Improved sanitation (% households)	98.0	122.1	96.0
Electricity (% households)	27.9	5.6	8.9
Paved roads (as % of total roads)	7.6	4.9	9.3
Good/fair roads (as % of total roads)	50.6	54.1	50.0

Source: Kenya County Fact Sheet 2011

4.3.10 Transport, Information and Communication

The counties covered by this section of the road project have well defined infrastructure networks including four airports/airstrips, 237kms of railway (under rehabilitation by Kenya Railways Corporation) and 6,922km and 920.5km of gravel and bitumen roads respectively. Despite having extensive road network coverage, most feeder roads are to gravel standards, making it hard to travel and move produce from the rural areas to the markets during rainy seasons. The road cross the railway three times at Lesseru, Matunda and Moi's Bridge. The design has proposed road bridge at Lesseru, and Rail-over bridges at Matunda and Mois Bridge.

. A summary of road distribution in the project counties is presented in the Table below;

Table 4-10: Infrastructure in The Project Counties⁸

County	Airports and airstrips	Railway Lines (km)	Roads		
			Bitumen	Gravel	Earth
Uasin Gishu	3	179	450	1964	2450
Trans Nzoia	2	23	163	2165	2093
Kakamega	2	35	307.5	2793	1309

Despite having extensive road network coverage, most feeder roads are rugged and impassable, making it hard to communicate and move produce from the rural areas to the markets. The rugged nature of the roads also leads to high vehicle maintenance costs which ultimately translating into high transport costs. With rehabilitation of the road, there may be need to improve interior service roads to the benefit of the area even as the road serves international interest.

The mobile phone coverage stands at 95 percent in Uasin Gishu, Kakamega, and Trans Nzoia. The counties are also well served with fixed telephone lines though their use has rapidly declined. Other communication facilities in the area include post offices, cyber-cafes and private courier services. With rehabilitation of the road, communication networks and investments is expected to speed up due to easiness of accessibility.

4.3.11 Energy

All towns and urban centres along the project road are connected with electricity whose source is hydro generation, mainly from 105MW Kengen's Turkwel Hydro Power Plant is also situated in West Pokot County. Alten Solar Company and Frontier Energy are developing 40MW solar power plants each in Eldoret town, which will be connected to the main grid of Kenya Power & Lighting Company (KPLC), increasing power supply in the region.

4.3.12 Mode of transport

From the social economic surveys, the most common mode of transport in the region is matatus and motorcycles. Other modes includes bicycles while other people prefer to walk, especially for those who live and work or have businesses near major towns.

⁸ County CIDPs, 2018-2022



Figure 4-7: Public Transport (Matatus, Bodaboda)

4.3.13 Social Welfare

4.3.13.1 Education

School enrolment within the Counties has seen an improvement in the years between 2013 and 2017⁹ due to improvement of infrastructure. The counties also have good number of institutions- from primary to tertiary level which has seen literacy levels of 14-24 years averaging over 90% in these counties. The male to female sex ratio is 1:1, while the average teachers/pupil ratio is 1:30, which is better than the national average of 1:40.

There are numerous education institutions (ECDs, Primary Schools, Secondary schools and tertiary institutions) along the project road. The list of education institutions touching the project road are presented in the following

Table 4-11: Education Institutions along the Project Road

Chainage (KM)	Educational Institutions
3+200	Georgen Academy
5+600	Sunrise Academy,
8+500	Soy Academy, Moi Baracks Academy,
14+900	St. Lucy Educational Centre; St. Lucy Soy Teachers College
17+800	Moi Girls Secondary; Nagili Primary
19+700	Star Rays Educational Centre
36+400	St. Francis Secondary, Kapkoi, Kapkoi Sisal Primary
37+000	Aic Kapkoi Secondary
41+000	Mainek Toro Secondary
43+700	St. Patrick Academy, Epson Academy
46+000	St. John Girls Secondary,
48+000	St. Teresia Secondary; Line Member School; Makusudi Academy
49+800	Aida Star Academy, Robinsons Technical Teachers College; Little Eagles Academy
51+600	Winners Academy
55+000	Kitale School, Faith Community Academy

Impact on Education

The road construction is expected to have a positive impact on education in that it will allow access to schools in the area, and also give an opportunity for students to access other schools outside the counties served by the road. This

⁹ UG CIDP 2018-2022, and TNZ counties CIDPs – 2011-2022

in turn will help in increasing enrollment rates for primary and secondary school students, especially the girls. The road will also ease in supply of much needed infrastructure in schools such as books and desks, and other materials such as laboratory equipment.

The areas served by the road have various health institution's (both public and private), including Sub-County hospitals at Soy, Matunda, and Moi's Bridge, and government clinics in all other small centres located along the road. There is also Kitale Referral Hospital in Kitale town, which act as a referral hospital serving Trans Nzoia, and parts of Uasin Gishu and Kakamega counties.

4.3.13.2 Health

According to CIDPs of the counties the road serves, the five most common diseases in the Counties in order of prevalence are: Upper Respiratory Tract Infections (URTI), skin diseases, other diseases of the respiratory system, diarrhea and pneumonia.

Table 4-12: Key health statistics in the Project Counties

Health and Education Outcomes	Uasin Gishu	Trans Nzoia	Kakamega
Fully-immunized pop <1yr (%)	76.2	35.7	76.8
Malaria (as % of all 1st outpatient visits)	18.3	33.6	45.4
TB in every 10,000 people	124	5	26
HIV+ ante-natal care clients (%)	3.4	5.4	6.2

Though with limited data, the road corridor is characterized with road safety hotspots while others were evidently observed. The areas noted to be of concern and reported to have high number of accidents are mainly within town centres located along the road, especially where markets are located very near to the road at Soy, Matunda, and Moi's Bridge. Analysis of these hot spots by the design engineer will determine the type of safety features that will be installed in these sections of the road to minimize accidents and injuries to pedestrians.

4.3.13.3 Waste Management

According to the CIDPs of the counties, on average, most of the waste generated in the counties consists of 70% organic waste which in nature can be composted to manure, and the remaining 30% is inorganic which includes plastic material, metals and old tyres that can either be reused or recycled. The Counties have limited number of solid waste equipment for collection of waste, making management of waste a challenge, especially in urban centres.

The Counties lacks adequate solid waste storage and transportation facilities. Further, the waste collected is usually taken to open dump sites since there are no engineered landfills with proper where waste is dumped with no treatment which contributes to environmental degradation, reduced aesthetic value and is also a human and livestock health hazard. Solid waste management activities are affected by inadequate human personnel for managing the waste.

4.3.14 Other Economic Activities

The Lesseru – Kitale road corridor have high economic potentials arising from the numerous resources available in Uasin Gishu and Trans Nzoia counties. These resources include land, Water, Wildlife, Livestock, Pasture, Forests, Tourist Attractions: Scenic Sites, Eco-tourism, Escarpments, among others. Thus, there are many economic activities that can contribute to household income and employment in the counties served by the road. These activities include crop growing, livestock keeping, and trade.

4.3.14.1 Tourism

Most outstanding places of interest for tourism in the area include Mount Elgon National Park, where some of the wild animals found here include elephants, buffalos, black and white Columbus, giant forest hog and over 420 bird species, Saiwa Swamp National Park (game viewing and camping), Kitale Nature Conservancy and Kitale Museum (hosting varieties of traditional artifacts, home to different snakes' species and one of the largest crocodile pits in Kenya).

4.4 Cross-Cutting Issues

4.4.1 Livelihoods and Poverty Analysis

The three main livelihoods in the County are mixed farming – commercial and subsistence (food crops and livestock), and formal/casual employment. Agriculture sector comprises of livestock production, veterinary, agriculture and fisheries departments. The major causes of poverty are unemployment, lack of markets for the farm produce, high cost of inputs, and poor food storage facilities. High population growth rate has contributed to increasing poverty as social facilities such as health, education, transport etc. have been overburdened. Poverty is highest in Uasin Gishu (38.2%) and Trans Nzoia (34%) and Kakamega at 33.3%.

4.4.2 Gender Issues

The main gender issues are contained under the customary practices where the male vests ownership and control of productive assets. Women in the counties are faced with a number of challenges including inadequate access to credit, lack of technical skills, multiplicity of roles for women and inadequate access to education and training. The tradition delineation of labor persists with women assuming the entire responsibility for childcare, provision of food, water and firewood collection and the general maintenance of the homestead among others.

Although not well documented, Gender Based Violence (GBV) is rampant in the project corridor and in some cases normalized. Normalization of GBV and stigma influenced by cultural norms prevents GBV survivors from speaking openly about their experiences and often keeps them from reporting their cases to the local administration or the police. The Kenya's Sexual Offences Act provides for the prevention and protection of all persons from harm from sexual acts including sexual assault, rape, defilement, sexual harassment and child prostitution. It also provides for access to justice and psychosocial support.

4.4.3 Vulnerable Groups

The challenges faced by the physically disabled in the project area of influence include unfriendly infrastructure such as lack of considerations in road infrastructure (e.g. crossing points), lack of ramps in buildings and lack of knowledge on sign languages by those providing services to the deaf amongst others. It was also indicated during consultations that PLWD would face challenges if the road design does not provide specific facilities (especially NMT facilities, lighting, ramps, access/crossing points, and road signs) for this category of persons. Therefore, facilities to serve them should be provided adequately including ramps on footbridges, special crossing points, as well as signboards.

4.4.4 Resettlement Issues

A separate full resettlement action plan review has been undertaken separately for the Lesseru – Kitale, Morpus – Lokichar road and a separate report will be produced.

Land acquisition and resettlement of traders will mainly occur in areas under the following categories:

- (i) Market centres of Soy, Matunda, Mois Bridge, and Kitale among others mainly due to encroachment by informal enterprises who are trading on the road reserve and will be required to thereby affecting livelihoods of the PAPs through economic displacement.
- (ii) A minor realignment will be required at Soy to improve the road for safety purposes.

4.5 HOUSEHOLD SURVEY

Quantitative survey data was collected using Handheld Assisted Personal Interviewing Technique. As part of quality control measures, all handheld devices were GPS-enabled so that the Monitoring and Evaluation Expert can view the locations where data will be collected.

The Population of the sub-counties where the road transverses is estimated to be about 235,000 and using the Raosoft sample size calculator (www.raosoft.com/samplesize.html), a sample size of 384 respondents (N) was targeted for this study at 95% level of confidence and 50% response distribution along the road. A total of 392 households were interviewed along the road as shown in the table below. The households also included some people who are directly affected by the project, such as those trading along the wayleave in major centres.

Table 4-13: Household Samples

Data Collection Site (Settlement)	County	No of Samples (N)	Percentage
Lesseru	Uasin Gishu	25	6%
Soy	Uasin Gishu/Kakamega	30	8%
Farfural	Uasin Gishu/Kakamega	25	6%
Nangili	Uasin Gishu/Kakamega	30	8%
Matunda	Kakamega	80	21%
Moi's Bridge	Uasin Gishu	140	36%
Kitale	Trans Nzoia	60	15%
Total		390	100%

Table 4-14: Gender of respondents

Respondent Gender	Samples	Percentage of N
Male	218	56%
Female	172	44%

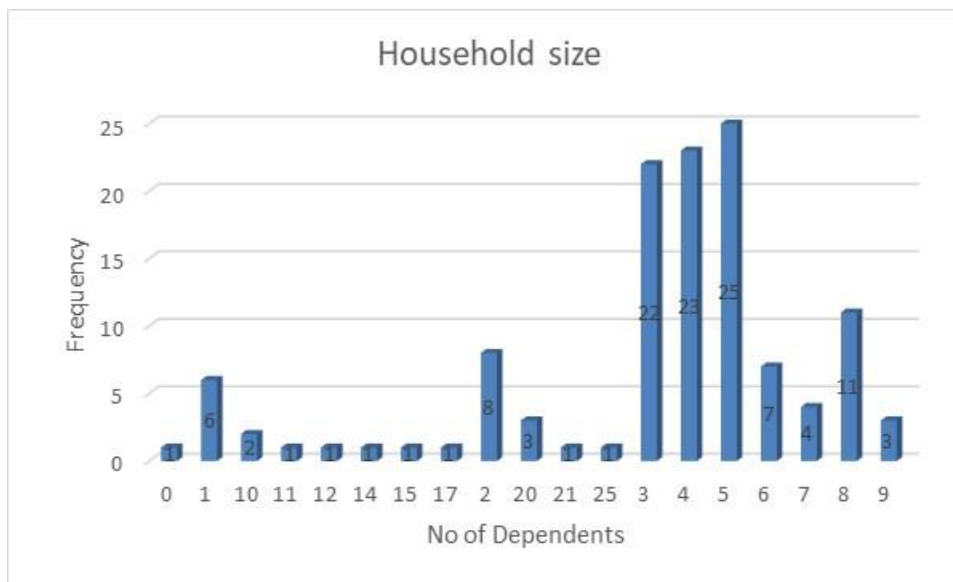
The majority of household heads (91. percent) are under 50 years of age with the remainder (9 percent) over 50 years of age. The mean age of the household head is slightly less than 40 years. Therefore, the preponderance of households is headed by a person under 50 years, an age group that falls within the active workforce and below the government's retirement age.

Table 4-15: Age of the Respondents

Age of respondents	% of total	N
Between 18 and 35 years	49.6%	195
Above 50 years of age	8.7%	35
Below 18 years	1.6%	2
Between 35 and 50 years	40.2%	160
Total	100%	392

4.5.1 Household Size

Among interviewees, household size varies widely: some households had only one member whereas some had as many as thirty-four members, a number that reflects polygamous households and the resulting multi-household family. The average household size in the project area of influence is 4.2 number of household size.

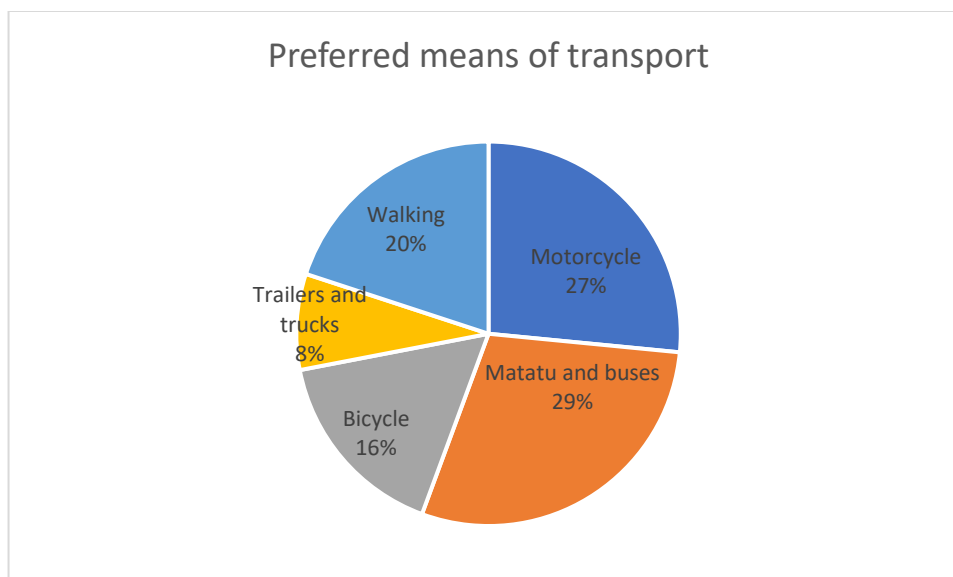


4.5.2 Livelihood

The main occupation and source of livelihood of the head of households was agriculture, with 42% of the respondents indicating that this is the main source of income. Other sources of livelihood include trading (27%), casual labour (13.5%) and livestock farming and products (11.3%). The major trading along the project area of influence include; sale of farm products (maize, beans, vegetables, etc) and trading of household goods such as clothes, hardware business, and household and personal items (commonly known mali mali). Charcoal is also traded which has contributed to depletion of vegetation cover (especially on Cherangani hills) and exposure of the local communities to climate change impacts, and overall livelihoods of the local communities.

4.5.3 Preferred mode of transport

The most preferred form of transport along the road is matatus and motorcycles with 29% and 27% of respondents respectively indicating they use these means of transport along the road. Other means of transport in the area include bicycles and walking, especially for those travelling to shorter distances to their workplaces close to their homes.



4.5.4 Education and Literacy levels

Literacy levels along the project counties is very high, with only 2% of the respondents indicating they have no formal education.

School enrolment for age group 3 years to 18 years

For respondents that were married and having (or should have) children in school, 95% said their children are enrolled in school. Although illegal not to enroll children in school, for those not enrolled in school, the main reason given was family responsibilities. 88% of the respondents indicated that the nearby primary schools are less than 1km from their homes, with only 11% indicating the schools are more than 1km away from their homes.

4.5.5 Water Sources

Majority of the household's water is supplied from one or more of three systems—groundwater (boreholes and wells), public and surface water (rivers and streams). The degree to which households uses one or more of these water sources is dependent upon whether or not they reside within a centre or town, or near a community project or rivers. All centres along the road have piped water, although rationed in most cases due to shortage of supply. The average distance to the nearest water point in the rural and urban areas of the project Counties is approximately 500m – 1Km and 0-500m respectively; meaning anyone does not have to spend a disproportionate part of the day fetching water for the family's needs. This distance can be reduced further if appropriate water supply and management strategies are initiated.

4.5.6 Cooking Energy

The survey also established the energy sources used for household cooking and found that main source of cooking fuel, majority of households (64 per cent) rely on firewood; 21 per cent on charcoal; 7 per cent on kerosene; and 5 per cent on Liquefied Petroleum Gas (LPG). The use of firewood and charcoal in most households as the main source of cooking fuel may lead to degradation of forests in the project area of influence.

4.5.7 Lighting Energy

Household energy sources for lighting is largely shared between electricity and paraffin in the project area of influence. 66% of the respondents indicated they use electricity as a source of lighting attributed to the government scale up in the rural electrification program. 30% of the respondents use paraffin as a source of lighting, while the rest use other sources such as batteries, solar and candles.

4.5.8 Health Status

4.5.8.1 Diseases

According to the household surveys, Malaria remains the leading cause of morbidity in the adult population (27%); followed by upper respiratory tract infections (13%), diseases of the skin (6%), urinary tract infections (3%) and diarrhea (3%).

4.5.8.2 Access to Healthcare Facility

95% percent of the respondents indicated that the nearest health facilities is located less than 3km from their houses, and take less than 1 hour to reach these health facilities (average 20 min). The remaining 5% indicated that health centres are more than 3 km away, but due to good access and feeder roads in the project counties, it takes less than 1 hour to reach these health facilities, even for those that stay in the far interiors.

5 STAKEHOLDER CONSULTATION AND PUBLIC PARTICIPATION

5.1 Introduction

This chapter describes the process of public consultation and participation that were followed to identify the key issues and impacts of the proposed project. Stakeholder consultation is an important process through which stakeholders including beneficiaries and members of public living in project areas (both public and private), are given an opportunity to contribute to the overall project design by making recommendations and raising concerns projects before they are implemented. In addition, the process creates a sense of responsibility, commitment and local ownership for smooth implementation.

Stakeholder Engagement and Public Participation Process is an integral aspect of successful decision making in the ESIA processes for major developments. Public participation is a key requirement as stipulated in Article 69 Section 1 of the Kenyan Constitution, 2010, Legal Notice 101 of the Environmental Management and Coordination Act (EMCA), 1999, Section 3 of the EIA/EA regulations, 2003 and Section 87 & 113 of the County Governments Act, 2012.

Stakeholder Engagement and Public Participation is also necessary for Category '1' projects provided under AfDB Safeguards Policies. OS 1 Environment and Social Assessment requires stakeholder engagement with project affected persons (PAPs) and other stakeholders in the preparation/designing and implementation of AfDB financed projects. To fulfil this condition, consultations were done by the design engineer during initial ESIA preparation, and further consultations done by the Independent Consultant. Further consultations have been done by the Design Review consultant as part of this ESIA updating.

Disclosure requirements will also be met by disclosing the ESIA on the KeNHA's website and AfDB external website.

5.2 Objectives of Stakeholder Participation

Stakeholder consultation is generally useful for gathering environmental data, understanding likely impacts, determining community and individual preferences, selecting Project alternatives and designing viable and sustainable mitigation and compensation plans.

Stakeholder consultation during ESIA process is undertaken during the design, implementation and initial operation stages of the Project. The aim is to disseminate information to interested and affected parties (stakeholders), solicit their views and consult on sensitive issues.

The specific aims of the Public Consultation and Participation process during the Preparation of the ESIA at the design stage include:

- To inform the local people, leaders and other stakeholders about the proposed Project and its objectives
- Obtain the main concerns and perception of the community and their representatives of the Project
- To promote Project ownership by the operator and beneficiaries in order to minimize conflicts
- Obtain opinions and suggestions from the directly affected persons on the Project impacts and best suited measures to mitigate them
- Obtain opinions and suggestions on the Project Concepts, Designs, etc. and therefore minimize conflicts and delays in implementation
- To facilitate the development of appropriate and acceptable mitigation options
- To increase long term Project sustainability and ownership

5.3 General information

The public participation program undertaken during the ESIA and RAP Studies was guided by the following considerations:

- Structured community engagement to, as far as was possible, facilitate discussions on and record consent on:
 - ✓ General project acceptance;
 - ✓ The proposed project design with practical considerations on the alignment design and related footprint of the right of way for the project;
 - ✓ In the case of persons to be relocated, options on the relocation process and acceptance of relocation in itself;
- Participation in the identification of both positive and negative impacts of the project with focus on the bio-physical and socio-cultural environment vis a vis the project as guided by the proposed design;
- Provision of a platform to identify the need for alternative alignments and design approach in particular areas as well and an opportunity to influence the proposed project design;
- Provision of a platform to inform the study team of potential risks that the project may face from an environmental and social perspective;
- Opportunities to discuss and record expected project benefits from the perspective of communities and larger stakeholder groups;
- Discussions on possible and practical mitigation measures as informed by the experience of the community, government agency officials and civil society representatives who are based on location;
- Discussions on aspects specific to land take and resettlement including:
 - ✓ Disclosure of information on land take for the proposed road alignment;
 - ✓ Disclosure of information related to the RAP studies;
 - ✓ Possible grievances that will arise from the land take of the proposed road alignment and practical modalities for resolution;
 - ✓ Existing and emerging issues related to land tenure, land use and land management within the project area, with focus on the proposed road alignment; and
 - ✓ Status of land adjudication and registration in the area.

5.4 Methodology

5.4.1 Stakeholder Identification

In general, the following steps were followed in carrying out the entire consultation process: -

- ✓ Courtesy visits at the County Government and Assistant County Commissioners offices;
- ✓ Courtesy visits to County Executive Committees (CEC) of the counties;
- ✓ Identification of institutions and individuals interested in the process and compiling a database of the interested and affected parties;
- ✓ Setting dates for public barazas and technical meetings at various levels and with different target groups;
- ✓ Administration of questionnaires to different target groups and local community members within the proposed project site.

Consultations and meetings were also held with other government departments represented in the area and the local Civic Society Organizations (CSOs) that have a role to play in the realization of a smooth implementation of

environmental and social issues and other issues related to the project such as the resettlement plan. These forums were held jointly with the team dealing with RAP consultations.

The table below summarizes stakeholders identified and how they were consulted.

Table 5-1: Identified Stakeholders and Modes of Consultation Used

Stakeholder	Identified Stakeholders	Consultation Method
National Government	- Assistant County Commissioners - Sub County Administrator - KPLC - NEMA - Kenya Wildlife Service (KWS) - Kenya Forest Service (KFS) - National Drought Management Authority (NDMA)	Introduction letter and one-on-one Interviews
County Government	- Governors - CEC Members for Lands, Housing, Physical Planning and Urban Development - Chief Officer in charge of Land - District Administration Police Commandant - Chief Officer - Transport - Sub-county Lands Officer - Sub-county Adjudication Officer - Sub-county Surveyor - District Medical Officer for Health. - Sub-county Social and Gender Officers - County Public Health Officers - Sub-county Livestock Development Officer - Sub-county Water Officer	Introduction letter and one-on-one Interviews
Project areas residents and PAPs	Locations of public meetings (all settlements along the road).	Public Meetings (<i>Baraza</i>) Small Group Meetings Focus Group Discussions
Sample groups representing vulnerable and marginalized groups among residents and PAPs	Location of FGDs	FGDs

5.5 Key Informant Meetings

5.5.1 Approach

Stakeholders' consultations for the proposed road were carried out in November and December 2021, and further consultations were held by the consultant updating the ESIA in January 2022, to update data and information collected in earlier consultations. Information collected in the updating of the ESIA were found to correspond to

the information collected in the initial consultations by the previous consultants. The meetings in January 2022 focused on consultations in regard to gender analysis and NGOs/CSOs in the area.

The consultations were done through courtesy calls, questionnaires and one-on-one meetings. However, there were other stakeholders who were not available at the time of consultation, mainly the NGOs and CSOs in the area, and were contacted by phone for their views. Below is a list of the stakeholders who were consulted regardless of whether they signed the attendance list or not.

During design and initial ESIA

The design consultant held public meetings at pre-selected sites along the project route, which included:

- a. Lesseru / Maili Tisa;
- b. Soy;
- c. Nangili;
- d. Matunda;
- e. Moi's Bridge;
- f. Kitale;
- g. Maili Saba;

By Independent Consultant in 2015 during Updating of the ESIA

A total of five secondary public/stakeholder participation meetings were held along the project road between 12th and 15th January 2015. The venues of these meetings including dates is presented in the following table below.

Location	Date	Venue	Number of participants		
			Male	Female	Total
Lesseru	15th January 2015	Lesseru village chairman 's office – Lesseru market	6	8	14
Matunda	13th January 2015	Matunda market committee office, Matunda market	7	6	13
Likuyani	12th January 2015	Soy market	6	0	6
Kipsaina	13th January 2015	Kipsaina market	15	2	17

By the Design Review Consultant in 2021 and 2022 during review and updating of the ESIA

5.5.2 Consultations with County Governments

Uasin Gishu County

S/n	Name	Designation	Organization
1.	H.E Governor Jackson Mandago	Governor, Uasin Gishu County	Uasin Gishu County Government
2.	Eng Gedion Birir	CECM Roads, Transport, Public Works and Energy	Uasin Gishu County Government
3.	Eng Nelson Maritim	CECM Lands, Housing, Physical Planning and Urban Development	Uasin Gishu County Government
4.	Mr Kenneth Mbeka,	Chief Office Physical Planning and Urban Development	Uasin Gishu County Government
5.	Planner Daniel Koech	Director, Physical Planning and Urban Development	Uasin Gishu County Government
6.	Ms Ruth Chelashaw	Chief Officer, Lands and Housing	Uasin Gishu County Government
7.	Eng Benjamin Kirongo	Director, Roads	Uasin Gishu County Government
8.	Cyprian Chesire	Senior Planner	Uasin Gishu County Government
9.	Jael Maritim	Communication	Uasin Gishu County Government
10.	Stephen K Kihara	County commissioner office Uasin Gishu County	National Government

Trans Nzoia County

1.	Pierra Ntongai	Assistant County Commissioner (ACC) Moi's Bridge (Uasin Gishu)	National Government
2.	Charles Moyaya	DCC Lukuyani(Kakamega County)	National Government
3.	Catherine sicela	Head teacher	St Teresa Matunda- Kakamega County
4.	Jane Makokha	Head teacher	Matunda primary -Kakamega County
5.	Tima Omar	Administrative 1 officer 1	Trans-Nzoia County
6.	Charles Munialo	Deputy CEC road and transport-	Trans-Nzoia county

The consultant held meetings at all towns along the road which included;

- i. Soy;
- ii. Nangili;
- iii. Matunda;
- iv. Fulfarol
- v. Moi's Bridge;

vi. Kitale

MEETING DATE	COUNTY	VENUE	MALE	FEMALE	TOTAL
7/12/2021	Uasin Gushu / Kakamega	Soy	26	37	63
8/12/2021	Uasin Gishu	Furfarol	18	15	33
8/12/2021	Kakamega	Matunda	42	15	57
9/12/2021	Uasin Gishu	Mois Bridge	50	40	90
7/12/2021	Uasin Gishu	Nangili	30	17	47
22/3/2022	Kakamega / Uasin Gishu	Soy Club	74	39	113
22/03/2022	Uasin Gishu	Matunda SDA Church	38	28	66
23/03/2022	Uasin Gishu	AIC Moi's Bridge	47	41	88
Total			304	241	545

The records of consultation and minutes of meetings attached in the Annex.

Table 5-2: Summary of General Comments and Concerns from sample stakeholders

Stakeholder Name	Institution/Organization	Comment	Response
Pierra Ntongai	Assistant County Commissioner (ACC) Moi's Bridge (Uasin Gishu)	She appreciated the road project and assured the support of the project implementation. She requested involvement of the village elders and local chief in supporting stakeholder engagement.	The consultant informed the informant that a GRC will be formed comprising top administration at the subcounty and incorporating village leaders and key stakeholders and will be selected by the PAPs
Charles Moyaya	DCC Likuyani(Kakamega County)	The project will reduce the road accidents that are rampant in Matunda and farfarol areas. He assured of the Kakamega County commissioner support for the project.	The consultant requested support of the DCC office, especially during stakeholder engagement during resettlement
Catherine sicela	Head teacher St Teresa Matunda (Kakamega County)	The project will be of benefit to the community. Requested KeNHA to consider tarmacking access road to the public facilities and schools which are close to the proposed road.	KeNHA will look into budget available and if it allows, tarmacking of these access roads will be done
Jane Makokha	Head teacher Matunda primary (Kakamega County)	Appreciated the road project. Requested for a CSR project to support Matunda primary with pupils toilets or a classroom.	Social amenities along the road will be evaluated during the design review. The contractor will also be requested if he can undertake some CSR projects during the construction period
Tima Omar	Administrative 1 officer 1(Trans-Nzoia)	She assured of the support of the county commissioners office on reaching out to the community all through the project and public participation.	

Stakeholder Name	Institution/Organization	Comment	Response
Stephen K Kihara	County commissioner office Uasin Gishu County	He assured the support of implementation of the projected. Requested for proper consultation and management of the community expectation.	The CC was assured that consultations is a continuous process that is undertaken throughout the project cycle
Charles Munialo	Deputy CEC road and transport-Trans-Nzoia county	The project will open up Kitale and create vehicular movement through the bypass. The major concern was how the proposed roads were linked to each other. He requested the design team to liaise with the Trans-Nzoia county planning department for better outcome of the designed that will be owned by the county.	The Planning department input on the road design will be important to ensure any concerns the county might have are addressed. The design review consultant will consult and work closely with the county to ensure the design fits into the County plans.

The Table below provides a summary of the comments from the Stakeholder consultations. Detailed minutes are presented in Annex 4 of this report.

Table 5-3: Summary of General Comments and Concerns from public consultations meetings

Location of Consultations	Comments and Concerns	Response to comments
Matunda	- The attendees appreciated the proposed project. They requested to have safe crossing areas on the town centre and near schools. - The community requested for improvement of roads heading to the health facility and the secondary and primary schools in Matunda. - They lamented on the many accidents that had recently occurred on the town, they requested the road to be expanded and have service lanes. - The community was concerned about the vendors who depended on the road reserve, they requested for a market as part of CSR program- they already have designated land for the market - The community requested for fair distribution of the available employment opportunities during the implementation of the project.	- Safety measures along the road will be considered during design, especially at areas near town centres, schools, and other institutions - KeNHA will look into the request, and with the availability of budget, the request will be considered - The section at Matunda centre is being considered for additional service lanes, and expansion to improve on the safety of the area. Foot bridges will also be considered - As part of the design, roadside amenities such as a market is being considered to ensure traders do not trade on the road reserve - The participants were advised to ensure that they apply for employment when the road project commences. They were encouraged to ensure they participate in the project, including training of the youths and women. The contractor will be informed to ensure local labour is utilized as much as possible
Soi	- The resident appreciated the plans to have the road improved. - They enquired on how the project would support the community and they requested for a market in the centre to cater for the women who usually depend on the road reserve to run their businesses. - The community stated the challenges faced by children while trying to cross the road, the requested the project to implement safety measures to ensure the safety of the community and children. - They requested for support to ensure that the vendors have a continuous live hood	- Some of the project components include evaluating roadside amenities and a market at Soy will be considered as part of the project - Road safety measures is part of the road design, including installation of speed calming measures, foot bridges, and signage to minimize road accidents - The project policy is "Do No harm", therefore, no livelihood will be disrupted. However, the public was informed on not building structures along the road reserve because that does not qualify for compensation

Location of Consultations	Comments and Concerns	Response to comments
Moi's bridge	- Concerned were raised on the impacts of the vendors during construction. - They stated the centre lacks a designated place for a marketing leaving the vendors only dependent on the road reserve for their business operation - The requested that during project implementation the client to have proper ways of moving the vendors to ensure their lively hoods are not negatively affected. - The enquired what plans the proponent had in place for the informal sectors - The community requested that employment opportunities should be prioritised to the local people. - They were concerned if the project could affect the water treatment works at the Moi's bridge. - They requested for consideration of women, children and other vulnerable groups for livelihood restoration. - They requested for relocation with a human face without proper notices to vacate.	- The meeting was advised that no vendors should build structures along the road reserve. - A market as part of the road project to relocate the traders trading on the road reserve is being evaluated. A RAP is also being undertaken to determine those who are affected. However, only genuine traders will be relocated to a new market. Traders will not be allowed to setup businesses after construction - No one will be evicted from their businesses. Enough notice will be given to the traders to allow them to salvage their structures and move to allocate area within the town - Employment opportunities will be provided to those who apply, and will have requisite skills to work with the contractor. However, opportunities will be given to non-skilled local people - The engineering design will look if there will be any impact on the treatment facility and will avoid any impact as much as possible to avoid disruption of water services
Nangili	- They lamented on the current status of the road, they requested to have a properly designed road ensuring the community safety - They requested the design to incorporate proper hydrology to ensure the town does not flood during the rainy season. - They requested to have the community elders resolve some of the grievances during project implementation. - The community enquired on the mitigation that will be taken for those who operate business along the road reserve. - Ensure the safety of children from the truck drivers and have sensitisation meetings on HIV and aids awareness.	- The state of the road is why the design review is being undertaken to improve the road into better standards, including installation of NMT facilities, safety measures, and widening of the road to include shoulders - Drainage is part of the design to ensure the road is well drained - Grievance redress mechanisms will be setup for the road project, where communities will select the members of the committee. - Those who are trading on the road reserve will be required to move to allow for construction. They will be given adequate notice to salvage their materials. A RAP is being undertaken to determine those affected,

Location of Consultations	Comments and Concerns	Response to comments
		although no compensation will be given, unless private property outside the road reserve is affected • There will be sensitization and awareness campaigns on HIV/AIDs during road construction. Workers will also be sensitized on the same, and will be discouraged to have relationships with minors
Furfarol	• The community lamented on the current state of the road while stating the road lacking proper shoulders and walk paths. • The community requested for a GRM committee to be formed by local community • The community requested for employment opportunities during project implementation • The community requested access roads to schools and government institutions such as health centre	• The design will incorporate shoulders and NMT facilities to improve on safety of the road within centres • A GRM, with local GRC will be constituted for the road project. It will consist of officials selected by the communities themselves, led by the county administration • KeNHA will look into the request and with budget allowing, this will be taken into consideration





Figure 5-1 Sample Photo Impressions of Community Consultation Meetings

Picture 1 Public meeting at Moi's Bridge



Picture 2 Public meeting at Matunda



Picture 3 public meeting in Nangili





Picture 4 Public meeting at soy



Picture 5 Public meeting in Farfarol

Table 5-4: Summary of comments and issues raised from Public Consultations on the Road Project

	ISSUES	COMMENTS	RESPONSE TO COMMENTS
1.	Road Safety	The design should incorporate road safety especially at main centres along the road	The participants were informed that during the design, the consultant will identify areas with high accidents and risks and incorporate road safety measures in the road design, including installation of speed calming measures, foot bridges, and signage. In addition, footpaths and service roads will be constructed in major centres to ease traffic flow at these areas
2.	Environmental and Social mitigation measures	The meetings highlighted the need for proper environmental and social mitigation measures, for issues like dust, safety of community members, drainage, among others to be incorporated and enforced during construction	The Consultant is conducting the ESIA (and RAP) to identify impacts of the project, and will come up with mitigation measures to eliminate or minimize negative impacts of the project. The Contractor will be required to adhere to the mitigation measures proposed throughout the project duration.
3.	Awarding of Road Construction Tender	- The Community requested that the contract for construction of this road be given to a reputable company for purposes of getting a quality road done, and on time to avoid inconveniences	The contractor to be mobilized for the construction assignment will be awarded through a competitive tendering process. The contractor will be required to comply with national engineering and construction regulations as well as industry best practices. The procuring of the contractor will also be transparent.
4.	Employment of local staff during road construction	- The locals requested that their youth get formal and casual employment in the project so as the community can benefit further economically. - The community asked that the government give their youth priority.	At the construction phase, the Contractor will be required to have a policy that prioritizes qualified locals and that they get: - Casual Labor opportunities as supplementary income sources; - Equal opportunities to both men and women as the women are very interested in these jobs; For women who would like to provide support services to the construction workers, they will be assisted to understand the procedures required to legalize their small businesses.
5.	Compensation of traders and construction of a market	Participants wanted to know whether those doing business along the road will be compensated. Similarly, they wanted a clarification whether markets and market structures will be valued for compensation. The community asked that the project uplift their livelihood means and not	The traders were informed that those trading along the road reserve will not be compensated but will be assisted in moving out of the road reserve.

	ISSUES	COMMENTS	RESPONSE TO COMMENTS
		leave them with worse off conditions and it was agreed that the community would be consulted as to the mode of livelihood restoration engagements that they would like to ensure that this project leaves them in a better place. The traders at Moi's bridge, where there are a lot of traders along the road reserve requested for a market to be constructed for them, and a bus-park to be constructed adjacent to the proposed market so that they don't lose customers when the road is constructed	• The traders were assured that the National Government, together with the county government will consult to find land suitable for their relocation, which can fit a bus stop also, to minimize losses of businesses for the traders. • The re settlement of these traders will require participation from the County Physical Planning, and Markets and Trades and other relevant Departments; • This RAP has included the County Government as a key member of the RAP Implementation Unit (RAPIC). They should be actively involved in the monitoring and evaluation of livelihood restoration of traders who were relocated from the project RoW.
6.	Timing of relocation	The community requested that other than the compensation being done properly and prior to relocation, that the public be consulted prior to it for there to be adequate time and resources to assist those moving to make a move that's not coerced or forced.	The community was assured of constant engagement with regards to such important information as this was their right. They have as Kenyan citizens a right to free and all access to information relevant to them with regards to this project. In addition, the outcomes of RAP survey and documentation will undergo disclosure to inform the community before the implementation the report.
7.	Decision making	Involvement of the local leadership when coordinating issues affecting the locals is very critical. Chiefs should be involved in coordinating any involvement with the community since they are impartial.	On discussions with PAPs on grievance resolution, GRC will comprise of administration, and members to be selected by the affected persons, with representatives of women, men, youth and PLWD. This system has been adopted into the project's grievance resolution mechanism as presented in both the RAP and ESIA Reports.
8.	Population influx	The communities acknowledged that with road construction there was bound to be population influx of people from other areas coming in search of jobs during project construction.	Contractor shall be encouraged to local labour as feasible. An open and transparent employment policy especially for semiskilled and unskilled workers shall be required of the contractor.

5.6 Disclosure and Consultation During Project Duration

Disclosure involves making the ESIA available to the public, and any interested persons. Disclosure of the ESIA report will be done in country at the KeNHA's website and in the AfDB external website which can be accessed by interested parties. The ESIA will also be available at NEMA county offices for viewing by any interested parties. Since the project area is in a rural area, where majority of the residents have limited access to the Internet, printed reports will be given to the local administration for use by the local community.

Continuous consultation shall be carried out throughout the construction phase of the project using focus group discussions and public meetings when necessary to ensure stakeholders are aware of construction procedures and provide a forum for feedback and recommendations for implementation in the construction. The consultation will occur during the environmental supervision, monitoring, and evaluation which will be carried out every three months, or when necessary. A Stakeholder Engagement Plan (SEP) has been developed as a separate document for the project and is attached to this report as an annex. In addition, a proposed grievance redress procedure is also provided in chapter 9 of this report.

Project information will be translated into local dialects and indigenous languages and special efforts made to reach vulnerable groups lacking access to public media and information exchange.

6 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

This chapter highlights significant impacts which may arise due to proposed road improvement activities of the proposed Road project.

To this end, the focus of this Chapter will be:

- To identify and analyze the extent of the environmental and social impacts from the project;
- To assess the environmental impacts of the operation and maintenance activities,
- Propose mitigation measures; and
- To discuss the decommissioning of the project.

Preliminary Identification of VECs

During the ESIA study, the Consultant identified the key Valued Ecosystem Components (VECs) that are potential receptors expected to be affected during the implementation of proposed project.

Potential environmental and social receptors during the Implementation of proposed project

Table 6-1: Key Environmental and Social Receptors for the Project Road

Project activities	Impact	VECs	Phase Construction (C) Operation (O)
Typical Project activities including: • Access road construction or upgrade • Site preparation and development • Removal of select vegetation • Grading and excavation of soils • Land clearing for projects rights-of way • Dismantling of damaged equipment • Equipment staging areas • Trenching and excavation works • Storage of materials and Chemical / oil • Vehicle and equipment operation and maintenance. • Land Use & Land Acquisition • Demolition, lifting and transporting of debris and rubbles • Repair, reconstruction and rehabilitation of damaged infrastructure/buildings; • Drilling activities, eg for Water • Running of AC and	Air Quality degradation and pollution	Public institutions, community members	Construction Operation
	Noise pollution	Public institutions, community members	Construction Operation
	Soil contamination and erosion	Soils, water resources, local communities, livestock	Construction Operation
	Loss of land	PAPs	Construction
	Generation of Solid and hazardous waste as well liquid waste	Local communities, water sources, soil	Construction Operation
	Water pollution	Water resources eg Rivers Segiot, Kipsangui, Little Nzoia, Nzoia, local communities	Construction Operation
	Vegetation clearance Disturbance and/or displacement of wildlife	Flora, Fauna, and Sensitive (critical, natural etc.) habitats	Construction Operation
	Increase in Traffic Congestion and Detours	Local communities, institutions	Construction Operation
	Impact on socio-economic activities of the area, such as impact on business, change in pricing of commodities etc	Local communities, institutions	Construction Operation

Project activities	Impact	VECs	Phase Construction (C) Operation (O)
concrete batching plants • Sourcing of materials • Disposal of wastes/spoils • Creation and maintenance of deviations • Maintenance works such as repair / overlay of pavement	Health and safety	Workers, local communities, livestock	Construction Operation

6.1 Construction Phase Impacts

6.1.1 Positive Impacts

6.1.1.1 Employment Opportunities

Construction activities for this project road will have employment opportunities for workers at the international, national and the local community levels. The contractor will require skilled, semi-skilled and unskilled labour force to undertake various activities. Skilled labour will be required especially in the final design interpretation and supervision of construction works. Manual work will be required during enabling works (clearing the right-of-way, material loading and delivery, moulding works among others). Some of the equipment likely to be deployed on site include excavators, wheel loaders, reclaimer, graders, rollers, tippers, and water bowsers. Truck drivers, machine operators, site agent, foreman, security personnel among others form part of the skilled manpower that may be hired.

During the public meetings, the community members requested that all the community members who are qualified, willing and able be considered for the available job opportunities and that they should not be discriminated against on the basis of their age or gender. These include jobs as night guards, casual labourers, cleaners, sweepers, etc. The women requested to be considered for cleaning, sweeping, cooking, collecting firewood, etc. from the FGDs.

The contractor shall be highly encouraged to hire locally staff during construction period. Site clearance, traffic management and diversions, earthworks, concrete works as well as road furniture installation and marking will require both skilled and semi-skilled labour.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	+3
Spatial scope of impact	+4
Duration of impact	+4
Frequency of activity / duration of activity	+3
Frequency of impact	+4
Result	+77 Medium – High

Enhancement Measures

- Require the contractor have an employment policy that covers local communities as an affirmative action that ensures marginalized communities, disability groups and gender sensitive groups are not side-lined. The policy should also have security screening measures to confirm originality and conduct of potential employees during recruitment;

- Mixed communication strategies and instruments should be used to effectively relay information on employment opportunities to the community such as local public administration officers' desks, public notice boards as well as public address platforms and gatherings in churches and mosques;
- Furnish relevant authorities (police and other security organs) with details and number individuals working and living at the camp especially immigrant workers; and
- As part of induction, immigrant workers should be encouraged to adhere to the code of conduct, as well as respecting traditions and managing relations with host communities.

6.1.1.2 Business Opportunities for Local Suppliers and Service Providers

The road construction activities involve a capital expenditure that requires a range of inputs comprising of machinery/plant and spares for plant and machinery, tyres for plant and machinery, gabions, concrete additives, reinforcement bars, posts and other consumables (wood formwork, bricks, cement, sand, aggregate, oils and lubricants) among others. The contractor will have to procure locally or regionally from credible suppliers creating business opportunities for dealers. Most of the potential borrow and quarry materials have been identified in close proximity of the project road. Some transport services may also be leased from local service providers.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	+4
Spatial scope of impact	+3
Duration of impact	+4
Frequency of activity / duration of activity	+3
Frequency of impact	+3
Result	+66 Low – Medium

Enhancement Measures

- Local sources of supplies and services should be prioritized, as far as feasible, as a way of boosting local economy and building capacity of local businesses.

6.1.1.3 Knowledge and skills transfer

Majority of rural residents in the project area will be witnessing construction of bitumen road for the first time in the region. Through staff interaction, the locals employed in the project will have an opportunity to learn from some of the specialised skilled and semi-skilled personnel that will be involved during the project construction. This may enhance their knowledge in construction of bitumen standard roads and associated facilities and their ability to access similar opportunities in future even beyond the counties. The works will also invoke interest in youngsters to participate in such project in future and their career goals.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	+3
Spatial scope of impact	+2
Duration of impact	+3
Frequency of activity / duration of activity	+3
Frequency of impact	+2
Result	+40 Low

Enhancement Measures

- KeNHA should make deliberate requirements on both appointed contractors and construction supervising consultants to employ and accommodate local people during construction works
- Training of local people (including women and persons with disability) should be designed as part of the project for technology and knowledge/skills transfer. Local institutions such as TVETs and Polytechnics located in the counties the project is located should be used for training local workers to be integrated into the project activities.

6.1.2 Negative Impacts**ENVIRONMENTAL IMPACTS****6.1.2.1 Vegetation Loss**

The project road has been designed to highway standards, which will require expanding of the carriageway and maintaining road reserve. Such provisions in the road design will lead to clearing of natural vegetation in some sections. The project area harbours natural vegetation that has different tree species such as pine (*Pinus*), *Grevilia* sp, *Eucalyptus* sp, among others. A number of trees, especially within towns and centres will also be cut to allow for construction of the road project, especially a number of pine trees in Kitale town.

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	-3
Spatial scope of impact	-2
Duration of impact	-4
Frequency of activity / duration of activity	-1
Frequency of impact	-3
Result	-36 Low

Mitigation Measures

- Restrict vegetation clearing to project sites by clear demarcation of areas to be used;
- Thickets and bush shrubs should be preserved wherever possible through selective clearing, especially along the seasonal riverine areas;
- Siting of camp sites should be done away from densely vegetated areas;
- Compensate for the valuable trees to be felled within the settlements as per the project RAP recommendations;
- Consultations with the local people should be done to ensure that trees with historical, cultural or ornamental values are preserved.
- Beautification using trees that will not damage the infrastructure to maintain the beauty of the trees to be done as part of the project

6.1.2.2 Workmen's Camp

Camps for this type of road would generally require approximately 5 to 10 acres of land, and an area will have to be allocated for the heavy equipment and for crushing hardstone.

Construction camps may put pressure on fuel sources such as kerosene or gas to be used for heating and cooking purposes. Strain on major utilities like water can also cause social unrest along the road project. Sewage, solid and oil/petroleum wastes also produced at the camps could also pollute sources of water, land and soil.

Sanitation and hygiene in the workmen's camp are also issues of concern, and if not properly addressed may lead to outbreaks of illnesses such as cholera, hepatitis, typhoid etc.

In setting up the workmen's camps, consideration will be given to water availability and other resources such as energy and security. Water supplies are a problem for the area, and permission will be needed before the water can be accessed. Water in the camps is important in terms of maintaining hygiene and sanitary conditions. With the area having security challenges, the campsites shall be located in an area where security will be of importance to the workers.

Impact significance Matrix

Impact without Mitigation	
Severity of impact	+4
Spatial scope of impact	+4
Duration of impact	+4
Frequency of activity / duration of activity	+4
Frequency of impact	+4
Result	+96 Medium - High

Mitigation measures

- Locate camp sites away from residential areas and settlements;
- Consult local authorities on a plan for usage of utilities to avoid strain on local residents;
- Ensure that the campsites are guarded 24 hours by armed personnel;
- Contractor shall also provide clean drinking water at the campsite for his workers
- Contractor to prepare a Solid Waste Management Plan for all worksites, especially the campsites
- Provision of adequate sanitation (fixed toilets with running water and changing rooms) at the campsites, separate for men and women;
- Pay special attention on waste generation and disposal, sanitary conditions at the sites, which includes exploring an option of having a third party to manage the various waste generated at the campsites;
- No waste at the campsite shall be buried or burnt; all waste to be segregated and reused, composted, or collected by licensed waste handler for disposal;
- Proper and adequate waste management facilities shall be provided at all contractors' camp
- Treatment of the campsite for rodents and other pests shall be done regularly;
- Completely remove the camp including permanent foundations and floors to discourage future informal settlement at the campsite

6.1.2.3 Noise pollution - Excessive Noise and Vibration

The current road use by buses, lorries and private cars is the main source of existing noise along the project road. The main receptors identified along the road will be settlements, mosques, schools, hospitals, other institutions and administrative offices that will most likely be affected by the noise generated from the construction works. Construction activities generate noise from vehicles used for transportation of material and workers to site, earthworks using heavy equipment and machinery for site preparation and facility erection and diesel generators used for on-site power generation.

Workers at construction site are likely to be exposed to increased noise levels as they operate the noisy equipment or work close to the noise sources. Workplace noise situation have already been envisaged and regulated as follows:

- Motor vehicles should not exceed 84 dB(A) noise levels as required in the EMCA (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009.
- The Factories and Other Places of Work (Noise Prevention and Control) Rules L.N 25 Of 2005, requires:
 - The continuous equivalent of 90dB(A) in 8 hours within any 24 hours duration;
 - 140dB (A) peak sound level at any given time;
 - Noise transmitted from workplace shall not exceed 55dB(A) during the day and 45dB(A) during the night;
 - Anybody working in an area involving exposure to noise, needs Audiometric examination and internal examination (pre-employment and annual) to determine deafness, cases with deterioration of hearing loss of 20dB(A) or more in two successive examinations within two weeks.

The noise and vibration may cause temporary reduction of use of nearby habitats by resident wildlife. The project has giraffes and gazelles fond of browsing and dispersing may consider the unfamiliar noise as a threat and therefore keep off as a defensive mechanism until the noise is withdrawn.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-3
Frequency of impact	-2
Result	-54 Medium

Mitigation Measures

- Monitor environmental and occupational noise levels as per the NEMA Environmental Management and Coordination Act (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009 & OSHA, 2007 requirements respectively;
- The noise emission characteristics should be considered during selection and mobilization of construction equipment;
- Where feasible, fit equipment with mufflers, sound insulations, silencers to lower the levels of noise emission;
- Sensitize construction workers to switch off machinery and vehicles when not in use;
- Staff on active project sites with continuous exposure should be provided and encouraged to fit in their Personal Protective Equipment (PPEs);
- Locate noisy operations like batching plant away from the densely settled areas;
- Where noisy activities must be undertaken near sensitive receptors, the neighboring occupants must be informed in advance and works limited to day time only.
- Noise quality samples to be used as baseline data will be collected before commencement of the civil works for regular monitoring during the construction period at various sensitive areas to be agreed upon with the RE.

6.1.2.4 Construction dust and Air quality

Air quality will be affected during construction during;

- Earthworks, grading, ground levelling and soil compaction;
- Frequent truck movements on the earth roads;
- Wind blows on uncovered or partially covered trucks delivering borrow material and ferrying out cut-to-spoil material;

- Wind blows on stockpiled mounts of soil for reuse or disposal from the site.

The construction dust may cause reduced visibility, respiratory problems to exposed workers and community members and discoloration of adjacent vegetation and buildings. In addition, construction machinery will emit exhaust fumes contributing to air pollution. Because of the settlement patterns, the most likely receptors of dust pollution are located in the urban and town centres along the road, with the other receptors being roadside vegetation and wildlife.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-4
Spatial scope of impact	-4
Duration of impact	-4
Frequency of activity / duration of activity	-4
Frequency of impact	-4
Result	-96 High

Mitigation Measures

- Unnecessary vegetation clearance to be avoided through clear demarcation of construction areas;
- Where practicable, re-vegetate disturbed areas to minimize ground exposure;
- Sprinkling water (at least twice a day) on the accesses and excavated surfaces during the construction period to suppress dust generation within settled areas;
- Limit the speed of construction vehicles (maximum speed limit 40 kph/25 mph) on earth road;
- Provision of appropriate protective personal equipment (PPEs) including respirators and dustcoats to exposed workers;
- Ensuring the location of material stockpiles are away from human settlements and business premises;
- Covering loaded trucks during the transportation of material;
- Maintenance of vehicles and machinery in accordance with the equipment specifications and manufacturer's standards;
- Sensitize workers on best practice on management of air pollution from vehicles and machinery;
- All records on dust-related complaints should be submitted to Resident Engineer for appropriate action;
- Demolition of existing structures shall be done in a manner that the dust from demolitions can be controlled;
- Undertake regular air quality (dust level) monitoring and conduct corrective adjustments where necessary based on the baseline data collected before project commencement
- Air quality samples to be used as baseline data will be collected before commencement of the civil works for regular monitoring during the construction period at various sensitive areas to be agreed upon with the RE.

6.1.2.5 Generation of Solid Wastes

A range of solid waste, both hazardous and non-hazardous, are likely to be generated during road project implementation. Wastes emanating from construction phase will mainly come from:

- Site clearance (vegetation) and excavation works (cut-to-spoil);
- Construction support activities and machinery maintenance and repair works such as used lubricant cans, packaging wrapper, worn-out tyres, and replaced equipment parts;
- Consumables (such as wood formwork, metal cuttings);

- Material testing and trial laboratories such as lab material rejects, test specimens for disposal, excess lab sample materials and grounded equipment or spares;
- Discarded material from handling losses;
- Residential camp sites wastes such as leftovers/food scraps, bottles, cans, clothing, food packaging, newspapers and magazines.

Improper waste disposal is likely to affect the aesthetic value of the surrounding as well as the local community. The waste may attract scavengers and breeding pests, informal recycling or pollution of sensitive resources (such as water sources) triggering community health and safety issues.

Improperly managed waste (unattended landfills or pile of waste on site) may pose risk to resident wildlife. Scavenging wildlife (in dire search of food) may be attracted to or stray on heaps or landfill with used plastics and tin cans, wrappers and/or containers causing spillages of contained fluid substances or chemicals. Animals poisoning may occur as they sniff or leak substances in the containers or bags. Contamination of surfaces/habitats may incidentally occur as fluids flow away from the source.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-4
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-60 Low – Medium

Mitigation Measures

- Waste shall be managed as per Environmental Management and Coordination (Waste Management) Regulations 2006, e.g. No waste shall be buried underground or burned on open air
- Contractor to develop a waste management plan;
- Manage and control waste generation at the various project sites and stations through standard operating procedures (SOPs) and Solid Waste Management Plan;
- Reduce generation of solid waste at the source through proper planning and procurement of construction materials;
- Segregation of solid wastes and provision of suitable and well labelled waste receptacles within the camp and at other active construction sites;
- Reuse excavated top soil for landscaping of the site as far as practical;
- Disposal of solid waste at designated sites through licensed waste handlers;
- Prioritize options of waste reduction, reuse and recycling, particularly papers, polyethene plastic wrappers and containers as well as other materials that can possibly be recycled; and
- Sensitize resident workers and visitors (especially those operating food catering services) at project sites on proper waste management practices especially hazardous materials and risks of contaminations.

6.1.2.6 Increased Soil Erosion Incidences

Sections along the project road have already been affected by erosion an indication of high erosion potential of soils. Soils comprise mainly of high proportions of sandy, silty and gravel that are loosely detached and carried away during run off, especially in bare and sloppy terrains. Animal movements in large herds loosens soil particle has also increased the chances of erosion along the road. Sporadic intense rainfall is also a major agent of soil erosion in the arid areas.

Project implementation activities such as material borrowing and earthworks (surface scarring) will loosen soil material, which will expose to agents of soil erosion, especially in sloppy and bare areas. Active construction sites may have piled batches from borrow areas as fill material.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-2
Frequency of activity / duration of activity	-3
Frequency of impact	-2
Result	-40 Low

Mitigation Measures

- Excavated material should be properly piled, sprinkled with water and covered (where possible) to prevent possible wash-out into seasonal watercourses. Stock piling areas should have levelled ground and away from sensitive areas like slopes, water courses;
- Material excavation should be minimized and restricted to designated locations;
- The contractor should ensure that construction related impacts like erosion and cut slope destabilization should be addressed through rock pitching;
- Re-vegetation should be done in tandem with construction activities to avoid exposure of bare ground to agents of erosion;
- Enforce landscaping and restoration of the construction site prior to decommissioning of the construction site.
- As part of enhancing environmental protection in the region, the contractor should start a tree planting campaign for reforestation by incubating a tree nursery programs along the road. The types of trees to plant shall be through the guidance of the local KFS or through involvement of the Ministry of Agriculture

6.1.2.7 Contamination by Liquid Waste and Hydrocarbon Spills

Previous experience has shown poor management of liquid waste at camp sites, oil spills at garages, and poor maintenance of construction equipment by road contractors in Kenya (See figure below). Construction activities will require assembling several machinery and equipment (including excavators, graders, excavators and tippers). This will require a maintenance and repair area as well as some on site storage of fuel. Routine cleaning and maintenance will generate washdown water containing sediment (soil, clay, gravel, sand, concrete, etc), detergents and automotive fluids, all of which are pollutants. This may contaminate the receiving soils and surface water environment if not managed properly. Other sources of liquid contamination include release of untreated camps' sewer or grey water, leaks and spills from hydrocarbon containments including stored bitumen.



Figure 6-1 Example of Oil spills and poor management of used oil

Observance of the existing energy act and associated regulations for handling petroleum products will ensure adequate measures are integrated by the contractor.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-4
Spatial scope of impact	-4
Duration of impact	-3
Frequency of activity / duration of activity	-3
Frequency of impact	-2
Result	-84 Medium High

Mitigation Measures

- Machinery maintenance should be done only on purpose-built garages that meet hydrocarbon containment measures and controlled drainage, including banding all areas prone to spills;
- Contractor will be required to have an emergency spill containment and response plan;
- Minor service and washing areas placed/ constructed with containment basins to ensure that the surrounding areas (including groundwater) are not polluted;
- All grey water runoff or uncontrolled discharges from the site/working areas (including wash down areas) to any water courses shall be contained, treated and properly channelled;
- Flash toilets at camp sites should be connected to septic tanks or other treatment facilities approved by the county government and NEMA;
- Water containing such pollutants as cements, concrete, lime, chemicals and fuels shall be discharged into a conservancy tank for removal from site.

6.1.2.8 Habitat Loss and Disturbance

Construction activities such as vegetation clearing, access to/operation of material sites and excavations along the road corridor will lead to wildlife displacement from their natural habitat. Some of the wildlife such as birds with territory and home ranges will have to abandon the disturbed habitats and re-establish elsewhere leading to increased inter and intra-species competition for preferred sites.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-3
Frequency of impact	-2
Result	-45 Low

Mitigation Measures

- Where practical, locate project temporary features like camps and batching plants in areas already disturbed or outside of wildlife habitat. Construction activities should be confined on the demarcated corridor and discourage movement or intrusion into wildlife habitats;
- Throughout the construction cycle, project staff should be sensitized regularly on nature conservation. Local conservation agencies can occasionally be engaged to conduct the sensitization;

- The Contractor policy should discourage unauthorised intrusion or destroying of the wildlife habitats through signed code of conduct;
- To avoid random off-road driving that leads to trampling of vegetation in sensitive habitats, especially for vehicles collecting borrow materials, vehicles should be provided with designated routes. Existing diversions and diversions should be considered before opening up new ones during construction.

6.1.2.9 Impacts on Materials Borrow Sites

During the construction phase, the contractor will have to source construction materials from various material sources. While potential material sites have been identified in the project design report, the actual sites to be exploited will be decided by the appointed contractor. Cases of over extracting these materials from few sites beyond their regenerative capacity may arise if not done in a sustainable manner. The contractor will thus be expected to undertake detailed environmental and social impact assessment before commissioning the selected individual material sites.

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	+4
Spatial scope of impact	+4
Duration of impact	+4
Frequency of activity / duration of activity	+4
Frequency of impact	+4
Result	+96 Medium - High

Mitigation measures

- Selection of material sites will ensure that the handover will not cause any social conflict within the communities;
- All material sites shall be selected in consultation with the county governments and the local communities, and rehabilitation plan agreed. If borrow sites will be converted to water pans, proper communities and stakeholder engagement shall be conducted and agreed upon (through signing of agreements to exclude any future liability by the contractor) if such usage will be proposed by the community members.
- The contractor shall prepare and seek approval from NEMA all proposed material sites to be used for construction works; all borrow sites must have approved environmental and social impact assessment (ESIA) reports, incorporating rehabilitation procedures upon decommissioning;
- Construction materials including sand, stones and borrow materials must be sourced from duly approved sources only;
- Materials haulage routes must be pre-determined to avoid unnecessary off road driving;
- Contractor to develop a system of tracking materials received viz a vis utilization to ensure proper materials management to avoid wastage;
- The contractor shall endeavor to locate material sites away from settlements if possible;
- Where material sites are located near settlements, the contractor shall carry out baseline studies of structural integrity assessments of nearby structures;
- The contractor shall develop safety management plans for any blasting which shall require the blasting to be done by qualified experts, sensitization and notification to locals on blasting times;
- All material sites shall be fenced with controlled entry.

SOCIAL IMPACTS

6.1.2.10 Land take and disruption of livelihoods

The road project development will disrupt livelihoods and cause loss of properties following displacement of people along some sections of the alignment. From RAP studies, the valuation roll yielded at **least 616 PAPs**, mainly vendors roadside vendors trading at urban centres along the road reserve. Moi's bridge registered the highest number of PAPs, due to the number of roadside traders located in this centre.

Table 6-2: Project affected Persons (PAPs)

Affected Towns/ Centres	Business Structures	Structure owners operating business	Tenants	Mobile Road Vendors	TOTAL
Soy	0		0	115	115
Furfarol	0		0	19	19
Nangili	0		0	17	17
Matunda	0		0	72	72
Mois Bridge	0		0	393	393
TOTAL				616	616

To minimize the resettlement impacts, the road construction will be limited to the existing road corridor. However, a realignment at Soy centre is proposed to maintain engineering design standards and for safety reasons. A RAP study report has been compiled as a separate Report describing the type of impacts and entitlement of each affected PAP.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-54 Medium -

Mitigation Measures

- Project RAP Study Report should be implemented to guide the compensation and resettlement process;
- Compensation for all affected properties should be compensated before construction commences;
- Continuous complaints and grievance management system should be maintained throughout the project implementation phase. All pertinent stakeholders should be involved in the compensation and grievance redress mechanism during implementation of RAP.

Reference should be made to the RAP report for more mitigation measures proposed.

6.1.2.11 Increased Water Demand

Due to high water demand for construction works, sometimes it is difficult to meet the water demand for construction works, local community domestic uses and for livestock from the existing resources. Without participatory exploitation of alternative sources of construction water, conflicts may emerge between the contractor and the local communities.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-2
Spatial scope of impact	-2
Duration of impact	-2
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-36 Low

Mitigation Measures

- The contractor will need to develop independent construction water sources, with potential to abstract water from groundwater resources. The area is endowed with various rivers and streams, but drilling of boreholes is ideal as it will also support the locals after the road construction works are complete;
- The Contractor must adhere to the Water Act, 2016 and associated rules and regulations as administered by WRA and NEMA. Relevant water abstraction permits must be obtained from these authorities to minimize competition or conflict with existing water rights/ resource uses;
- Contractor shall employ water efficient and conserving technologies to minimize on water usage;

6.1.2.12 Construction works induced traffic and inconveniences

During the road construction works, it will be necessary to have some deviations in order to allow uninterrupted traffic flow. The road corridor is wide enough, and deviations shall remain within the road reserve. However, deviations if not well maintained have negative environmental and social impacts such as generating dust, blockage of accesses, increase in soil erosion, and potential to damage vehicles, thereby increasing maintenance costs to the users of the road.

Much of the road design has been aligned along the existing road reserve. Accesses to facilities abutting the road will be temporarily interrupted within the settlement areas, especially in centres along the road leading to traffic inconveniences and interference with normal operations. In many of these centres, access to the market place and other businesses may be interrupted during construction affecting business operators and their patrons.

Impacts on traffic in areas outside the centres is not expected to be significant. However, during the rainy seasons, diversions away from existing routes may still pose serious challenges when such diversions are not properly done and maintained. Similarly, most of the identified material sources are far away from the project site and impacts on haulage routes may extend well beyond the immediate project area.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-4
Spatial scope of impact	-4
Duration of impact	-3
Frequency of activity / duration of activity	-4
Frequency of impact	-4
Result	-88 – High

Mitigation Measures

The contractor shall be required to formulate and implement a traffic management plan incorporating:

- Provision of alternative routes in areas where accesses have been disrupted;

- Provision and maintenance of clear traffic signages of ongoing construction works, regulate speed limits and diversion signage to notify approaching traffic;
- In urban areas, schedule delivery of materials to the sites during periods of light traffic between 9.00am - 12.00 pm and 2.00 pm - 4.00 pm during week days;
- Create awareness and sensitize workers and area residents on the importance of exercising safe driving behaviours, taking caution and care in the project sensitive areas in as far as traffic movement and other safety issues are concerned;
- Obtain permission from inhabitants and county governments if diversion routes go beyond the Right of Way;
- Reinstatement of diversion routes (and old tracks) to original condition;
- Institute a traffic management plan incorporating adequate temporary signages and flagmen as necessary.
- Local language shall be used in signage to ensure the people in the area understand their meanings due to low literacy rates in the region

6.1.2.13 Disruption of Public Utilities

There will requirements for relocation of public utilities in some sections of the road away from the road reserve, thereby affecting supply for the local residents. There were water pipes noted along the road, that might be affected during construction. In addition, fibre optic cables running along the road could affect communication networks if construction activities interfere with the underground cables. Trucks with heavy loads of construction materials may also damage roads and footpaths, and other public utilities during the construction process.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-4
Spatial scope of impact	-4
Duration of impact	-3
Frequency of activity / duration of activity	-2
Frequency of impact	-3
Result	-55 Low - Medium

Mitigation Measures

- Liaise with KPLC, fibre optic providers, and regional water companies to identify affected sections of alignment that affect utilities and provide cost to cover the relocation of the existing infrastructure;
- Relocation plans shall include adequate notification of affected customers and residents whose access foot paths might get disrupted.

6.1.2.14 Spread of Communicable Diseases

The arrival of new population from other parts of the country as a result of good economic conditions in the area due to the development of the road may lead to spread of new communicable diseases to local population and immigrant workers, eg Tuberculosis, Cholera, Malaria, Meningitis. In addition, sanitation and hygiene along the project area during the construction (and even operation) of the road is also an issue of concern. If these are not properly addressed, they may lead to outbreaks of new illnesses in the area, which might spread to the local community and road workers.

The road construction activities are likely to cause particulate emissions (PM_{2.5}, PM₁₀) such as dust leading to Upper Respiratory Tract Infections (URTI) complications among local community and workers if not well managed. Particles less than 10microns (PM₁₀) and finer ones PM_{2.5} in diameter bypass body's usual defences against dust, penetrating and lodging deep in the respiratory system (WHO, 2011). These infections occur within the upper respiratory tract (nose, throat, ears and sinuses) leading to common colds, influenza and respiratory distress

syndromes. The infections are mainly caused by airborne agents or contaminated surfaces. Sources of dust include:

- Material sites (borrow pits and quarries);
- Excavations and enabling works along the Right of Way (RoW);
- Road diversions;
- Batching plant (dust and hydrocarbon aerosols).

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-4
Duration of impact	-4
Frequency of activity / duration of activity	-3
Frequency of impact	-2
Result	-55 Low - Medium

Mitigation Measures

- Apply dust suppression measures - sprinkling water on the accesses and excavated surfaces – this shall be determined by the RE depending on the prevailing weather conditions;
- Regular maintenance contractors' equipment
- Maintain a grievance register to log any complaints from local community;
- Active construction sites should have controlled access and repulse by standers likely to be exposed to emissions;
- Hold inductions for staff and people visiting the construction sites on the health and safety aspects;
- Provide proper PPEs (dust masks, clothes, etc) for all staff and visitors to active construction areas;
- The Contractor should plan work program's activities and timing to avoid emission impact on sensitive receptors, especially urbanized areas
- Install screens and scrubbers on crusher sites to minimize dust emissions;
- Locate ancillary facilities away from residential/institutional to minimize dust or other emissions to the residents;
- Conduct regular checkups for workers, and offer local community free monthly medical camps for testing and treatment through cooperation of local medical health facilities and county government;

6.1.2.15 Spread of HIV/AIDS and Other STDs

During project road construction, it is likely that a significant increase in population along the project area as they are attracted to the project activities. The influx is likely to include people from outside the areas of counties served by the road. Construction workers could increase or create the demand for casual sex with local residents leading to the emergence or increase in sex work near the construction sites. Sex workers are a key bridging population for HIV transmission because their customers in many cases have spouses. The HIV prevalence rates among sex workers is usually about 2-3 times that of the general population, and have been researched and found to increase in areas which migrant and mobile populations live, work, pass through, or originate. This group of individuals are mostly truck drivers and other employees who work for the contractor and are brought in as skilled labourers. The project implementation thus poses such risk to the local communities.

The average HIV prevalence among adults in the Uasin Gishu, Trans Nzoia, and Kakamega counties is 4.7%, 5.2%, and 4% respectively, which is lower than the national average of 5.9 percent. Women (5.2%) are more affected by prevalence than men (4.5%) (National Aids Control Centre, 2018).

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-4
Duration of impact	-4
Frequency of activity / duration of activity	-3
Frequency of impact	-2
Result	-55 Low - Medium

Mitigation Measures

- KeNHA/Contractor should, in liaison with approved local non-governmental organizations (NGOs) or approved HIV/AIDS service providers, conduct awareness training to staff and the locals and monitor the efficacy of the awareness created during the project implementation period;
- Sensitize workers on the need to refrain from risky behaviors;
- Provision of condoms both male and female in the sanitary facilities;
- Encourage workers and local communities to go for regular HIV voluntary screening/testing, counseling and referral services; Contractor should arrange for quarterly medical camps to benefit workers and local communities through cooperation with county government health departments and local medical facilities;
- Monitoring of outcomes, in collaboration with National HIV/AIDS Authorities.
- The unskilled workers should, as far as feasible, be recruited from among the local residents of the project area and its immediate neighborhood;
- Workers should be given regular leave, preferably monthly to cool off and join their families.

6.1.2.16 Spread of Covid 19 among workers and community members

Project Construction will attract various categories of workers drawn from local, national and international markets. If occurring within the COVID-19 pandemic period, this may pose risk of spread of COVID-19 which is a highly infectious disease.

Some construction activities including implementation of some environmental and social safeguards actions may be done during the COVID-19 pandemic era. Since consultations are required during RAP implementation and sensitization on E&S issues, these may pose a potentially high risk of infection to and among communities.

Impact Analysis matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-54 Low-Medium

Mitigation measures

- Install hand washing troughs and soap at strategic points in the camps and common areas.
- Make sanitisers available to workers
- Limit movement in and out of the camps; contact between workers and community members should be discouraged.
- Measure temperatures of workers and visitors to sites at entry points.
- Insist that workers and locals working on the project have face masks at all time.

6.1.2.17 Workers Welfare

Project workers such as construction workers face the risk of exploitation, discrimination and other forms of unfair treatment by employers/contractors, eg. exposure to poor health and living conditions, poor sanitation, being overworked with no compensation, low wages, improper provision of proper PPEs and equipment for the works assigned, among others.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-2
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-48 Low

Mitigation Measures

- The contractor shall comply with the required Law of Kenya under DOSH and Labour requirements
- Have stocked clinic with a fulltime nurse on the campsite;
- In collaboration with local health facilities, ensure that the workers have access to health facilities in the area;
- Contractor to ensure that first aid facilities are available at all times at the work sites, and arrangement to access to ambulance service;
- The contractor shall provide mobile toilets for the workers at all worksites along the road (for women and men separately);
- The contractor has to also ensure that for any accommodation for personnel, suitable arrangements are made for welfare and hygiene requirements and prevention of epidemics, taking into consideration issues like harsh weather conditions in the region, sanitation, etc.

6.1.2.18 Community Health and Safety

During road construction, the general public may be exposed to injuries from various construction activities like accidents involving construction trucks or other mobile equipment, falls or slips into unprotected trenches/ditches etc.

Accidents involving community members may strain relations between project implementers and host community members and even disrupt programs. Similarly, the contractor may be subject to litigation enjoining even the implementing agency. The contractor thus needs robust safety and health management plan that covers not only workers but the general public as well. Some areas where serious precaution is needed include towns and centres, market areas, areas with institutions such as schools and hospitals, and mosques where community members tend to cross the roads regularly.

Children have low conscience of the inherent risks present at construction projects such as abuse, accidents and exploitation. Children are easily attracted around active construction sites to watch ongoing activities obliviously.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	+3
Spatial scope of impact	+3
Duration of impact	+4
Frequency of activity / duration of activity	+5
Frequency of impact	+4
Result	+90 Medium - High

Mitigation measures

In addition to measures for workers safety, the contractor shall:

- Establish and maintain continuous liaison with the host communities including sensitisation on safety and health issues on construction sites;
- Prepare and implement construction traffic management plan, incorporating safety of other traffic;
- Install and maintain appropriate safety and warning signages along road sections and other construction sites like quarries, batching plants and camps where works are undergoing.
- Use of local language and images for signage shall be encouraged;
- Ensure that all potentially dangerous work areas have controlled access limited to authorised persons only;
- Ensure proper and adequate provision of proper sanitation and waste management facilities at all construction sites;
- Maintain a system of receiving and responding to any safety concerns by the communities;
- Undertake general and third-party insurance liability covers as appropriate.

6.1.2.19 Conflicts between construction workers and local communities

While employment opportunities from construction is a positive impact, consultation feedback pointed out that there is a very high expectation on employment opportunities and supply of materials for local people during project implementation. Coupled with existing inter-club conflicts, labour imbalance can create conflicts between the contractor and local communities if not well managed.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-54 Low-Medium

Mitigation measures

- Contractor to formulate a labour management plan for his workforce;
- Contractor will be required to have a transparent external communication plan covering among others, how available opportunities will be advertised;

- The Contractor should prioritize employing locals as casuals to reduce the need for labour influx;
- Consultations with the local council of elders to ensure that available opportunities are fairly distributed across different clan members;
- Maintain a grievance register to log any complaints from local community.

6.1.2.20 Labour Influx and Social Change

During construction phase it is expected that there will be an influx of workers from varied cultures and social practices. The project area on the other hand can be categorized into rural, peri-urban and urban settlements hence resulting in a range of cultures from homogenous conservative communities to metropolitan/cosmopolitan communities in the major towns. Influx of workers triggers the mushrooming of slums as workers opt for low-cost accommodation. Construction camps are set up by the contractor to provide living and eating areas for workers and also have separate areas for storing equipment and stockpiling material.

Interaction with the project staff can lead to positive influences in the form of promotion of diversity in ways of thinking, experience of new cultures and exposure to new expectations in goals and achievements. On a higher level, these influences can result in adoption of new trends in social interaction, modes of dressing, leisure time activities and spending habits.

Similarly, interaction between workers and young girls from the local communities is a point of potential conflict as the communities abhors such relations. It will therefore be important to sensitize non-local workers on local cultural expectations. These interactions can lead to negative perception for the project if it is perceived that the new trends have resulted in vices and deviant behavior such as improper sexual relationships between immigrant workers and local girls/women (including married women), which can also lead to gender-based violence.

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	-4
Spatial scope of impact	-4
Duration of impact	-4
Frequency of activity / duration of activity	-4
Frequency of impact	-4
Result	-96 High

Mitigation measures

- The contractor shall develop a labor management plan for all his project activities;
- The Contractor should prioritize employing locals as casuals to reduce the need for labor influx;
- Ensure there is adequate security and reasonable controlled access to project offices and residential quarters of immigrant staff to discourage deviant behaviors at workers campsites;
- Employment policy of the contractor should prohibit deviant behaviors at the workplace among staff such as cultural profiling, sexual exploitation, child labor and gender-based violence;
- Workers will be sensitized on the different cultural practices in the region and for immigrant workers, respecting different cultural, religions and beliefs, including behaviors and norms of the local people;
- Contractor to establish a grievance management system to handle internal and external complaints. This system will include establishment of a community liaison desk that is easily accessible by the community representatives and their leaders;
- Workers will be sensitized and sign code of conduct in regard to interactions, behaviors and relations with the local communities.

6.1.2.21 Crime Management

The influx of labor a specific project area or site especially during construction, and the settlement changes due to economic development of the area after project completion has the potential to lead to a number of negative socio-economic impacts, including increased insecurity and community conflicts, increased incidences of diseases (as mentioned above); increased risk of accidents and occupational hazards. Crimes might occur in the project area during the construction and operation such as stealing of construction materials or individual property, fighting, petty crimes such as pick pocketing, drug abuse and alcoholism among others. Migration and settlement by new people could lead to increase of negative vices in the project area during operational stages of the road.

Impact Analysis matrix

<i>Impact without Mitigation</i>	
Severity of impact	-2
Spatial scope of impact	-2
Duration of impact	-2
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-36 Low

Mitigation measures

- The Contractor and Supervision Consultant should report all activities of a criminal nature on the worksite or by the Contractor's employees (whether on or off the worksite) to the police and undertake the necessary follow-up.
- Crime reports should include nature of the offense, location, date, time, and all other pertinent details
- Sensitize the construction workers, locals, and security to be on the lookout on suspicious activities near the site
- Enforce the crime related clauses in the Code of conduct signed by all workers

6.1.2.22 Child Protection, Sexual exploitation and abuse (SEA) of under-age girls

There is potential of the contractor employing children who have not reached the employment age, therefore violating the child labor laws of the borrower. The laws of Kenya prohibit contractors from "employing children in a manner that is economically exploitative, hazardous, detrimental to the child's education, harmful to the child's health or physical, mental, spiritual, moral, or social development. In addition, there is a potential risk of project workers engaging in illegal sexual relations with minor girls, leading to HIV infection, teenage pregnancy, early child marriage, illegal and risky abortions, school dropout, etc.

Impact Analysis matrix

<i>Impact without Mitigation</i>	
Severity of impact	-4
Spatial scope of impact	-4
Duration of impact	-4
Frequency of activity / duration of activity	-4
Frequency of impact	-4
Result	-96 High

Mitigation measures

- Workers will be educated by relevant agencies such as police and probation officers on the relevant laws and policies protecting children

- Reach out to children in and out of school in the vicinity of the construction sites with a life skills program focusing on HIV/AIDS and sexual abuse prevention among others areas
- Mobilize and strengthen child protection institutions and structures near construction sites
- Reach out to school authorities and parents near construction sites on paying special attention to child protection in light of labor influx
- Partnerships will be established with relevant government agencies and NGOs to ensure children access survivor centered services such as medical care, psychosocial support, legal redress, safety, etc as and when necessary
- Ensure no children are employed on site in accordance with national labor laws
- Ensure that any sexual exploitation and abuse (SEA) of children by the contractors' workers are promptly reported to the police
- Popularize /put in place confidential mechanisms for reporting child abuse cases
- Enforce the child protection related clauses in the Code of conduct signed by all workers
- Ensure visibility of signage and information, education and communication materials on such issues in the construction sites
- Liaise with the administration units (National and County Government leadership including the office of the County Commissioner, County Administration, the Police service etc.) to provide regular surveillance and patrols to protect workers and unacceptable behavioral interaction of children and workers

6.1.2.23 Absenteeism in Schools

School children who live near construction sites are likely to be absent from school many times or will perpetually report late to school because of engaging in petty business activities of vending eats and other items to construction workers, or being lured by workers into sexual relationships that would encourage dropping out or being absent from school.

Impact Analysis matrix

<i>Impact without Mitigation</i>	
Severity of impact	-2
Spatial scope of impact	-2
Duration of impact	-2
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-36 Low

Mitigation Measures

- Contractor and local NGOs to conduct a program to strengthen school based and school led life skills programs targeting any schools near construction sites to discourage dropping out of schools for school children;
- Ensure no children are employed on site in accordance with national labor laws;
- The contractor shall sensitize the workers not to engage with children conducting business activities near the worksites of campsites;
- Impose zero tolerance for employees on sexual relationship with students that would encourage dropping or being absent from school

6.1.2.24 Gender Equity and Mainstreaming in employment

There is potential that gender inequality might occur during project construction through unequal distribution of work, discrimination against women, and unequal pay for women, lack of provision of separate facilities for women, among others. Sexual harassment against women or men might also happen for those seeking employment through for example sexual favors for exchange of employment.

Impact Analysis matrix

<i>Impact without Mitigation</i>	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-54 Low-Medium

Mitigation Measures

- Contractor and implementing agency to prepare and implement a Gender Action plan to include at minimum, in conformance with local laws and customs, equal opportunity for employment (min 30% of labour should be women);
- Ensure that women are given adequate employment opportunities during recruitment and job postings, including equal payment;
- Regular sensitization and awareness campaigns to the workers should be done to promote gender equity in employment during the construction works and during operation;
- Provision of gender disaggregated accommodation, bathing, changing, sanitation facilities;
- Zero tolerance on sexual harassment during employment.

6.1.2.25 Gender Based Violence (GBV), Rape and Sexual harassment

Due to labor influx for some project activities such as construction works, the project could exacerbate GBV, sexual harassment and other sexual offenses such as rape. Construction workers may engage in sexual fraternization with locals. In addition to this being a driver of HIV infection, it will lead to domestic conflicts, GBV and domestic violence at household level. Women who seek employment may also face demands for sexual favors before being employed which amounts to sexual harassment. Even when employed, women may face continuous and unwanted demands for sex and risk losing their jobs if they do not give in.

Women in the community and places of work may also face the risk being subjected to verbal harassment in the form of insults and demeaning comments in addition to unwanted gestures and touches by construction workers. Sexual harassment of women and girls might also happen as a result of mixing of women and men at worksites and campsites. Outright rape is also a risk some female employees may face when employed at construction sites. As a result, domestic violence and gender-based violence in homes, where it might have an impact to children who are likely suffer physically and emotionally.

Local women from the communities seeking employment at the construction sites may lead to abandonment of their cultural practices and responsibilities of fetching water, gathering firewood, herding, etc. Neglect of their normal social responsibilities commonly-accepted by the local communities may lead to social unrest among families, and also lead to increase in gender-based violence by their spouses.

Impact Analysis matrix

<i>Impact without Mitigation</i>	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-54 Low-Medium

Mitigation Measures

The proposed measures shall include but not limited to:

- KeNHA will engage services of a local community service provider to carry out sensitization on GBV during the construction period;
- All workers and nearby communities and stakeholders will be educated on preventing and responding to sexual harassment and GBV ahead of any project related works;
- Contractor to prepare and enforce a No Sexual Harassment Policy in accordance with national laws;
- The community within the vicinity of the road where construction will take place will also be educated on gender-based violence and sexual offenses such as sexual harassment, rape and defilement in the context of labor influx and the prevention and response measures;
- Involvement of women in the periodic dialogues/consultations with contractors and host communities during construction;
- Strategies such as male involvement will be employed in preventing and responding to GBV and sexual harassment. The strategy involves promotion of the role of men and boys in confronting and transforming their own male privilege, power and status that perpetuates GBV. This includes mobilizing men in their different positions as rights holders and duty bearers to prevent and respond to cases of GBV;
- Establish partnerships with relevant government agencies and NGOs to ensure survivors of GBV and sexual offenses access survivor centered services such as medical care, psychosocial support, legal redress, safety, etc as and when necessary;
- Provision of gender disaggregated facilities, separate bathing, changing, sanitation facilities for men and women;
- Impose zero tolerance on sexual harassment, all forms of gender-based violence and discrimination at all phases of the project;
- Grievance redress mechanisms including non-retaliation should be set up for the workers;
- Liaise with the administration units (National and County Government leadership including the office of the County Commissioner, County Administration, the Police service etc.) to provide regular surveillance and patrols to protect workers and unacceptable behavioral interaction of local communities and workers

6.1.2.26 Alcohol and drug abuse

The presence of migrant construction and other project workers in the community may lead to the emergence of small business hubs with kiosks for selling foodstuffs, cigarettes, alcohol, e.t.c to serve the workers and other members of the community. These business hubs may also engage in selling illegal drugs to project workers and other members of the community. The overall effect may be an increase in consumption of alcohol and illegal drugs in the community.

Impact Analysis matrix

Impact without Mitigation	
Severity of impact	-2
Spatial scope of impact	-2
Duration of impact	-2
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-36 Low

Mitigation Measures

- The Contractor shall require his employees, sub-Contractors, sub-Consultants, and any personnel thereof engaged in construction works to individually sign and comply with this Code of Conduct.

- Removing any employee who persists in any misconduct or lack of care, carries out duties incompetently or negligently, fails to conform to any provisions of the contract, or persists in any conduct which is prejudicial to safety, health, or the protection of the environment.
- Taking all reasonable precautions to prevent unlawful, riotous or disorderly conduct by or amongst the Contractor's personnel, and to preserve peace and protection of persons and property on and near the site.
- Prohibiting alcohol, drugs, arms, and ammunition on the worksite among personnel.
- Liaise with the administration units (National and County Government leadership including the office of the County Commissioner, County Administration, the Police service etc.) to provide regular surveillance and patrols to protect workers and unacceptable behavioral interaction of local communities and workers

6.1.2.27 Increase in the prices of goods and services in the community

Increased demand by migrant labor may affect the local economy positively for producers and providers of some goods and services. This may lead to prices of rent, food and other commodities to rise. This may negatively affect other households who have a fixed income or those who are already barely managing to survive.

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	+3
Spatial scope of impact	+2
Duration of impact	+3
Frequency of activity / duration of activity	+3
Frequency of impact	+2
Result	+40 Low

Mitigation Measures

- The contractor should ensure his workers appropriately mix the use of locally and non-locally procured goods to allow local project benefits to balance the local economy while reducing risk of crowding out of and price hikes for local consumers

6.1.2.28 Complaints and Grievances/Social Conflicts

During construction, the local communities and workers may have complaints and grievances regarding the ongoing activities. There is also potential for social unrest among the local population if they are not considered for employment. This can bring negative publicity during construction including stoppage of work and can delay the projects progress. Against the background of this knowledge and expectation, there is a risk of dissatisfaction if procedures of allocation of workforce are not adequately applied, or if they are seen to be applied in an inequitable manner, especially due to local clan political dynamics. See GRM section on this document.

Impact Analysis matrix

<i>Impact without Mitigation</i>	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-54 Low-Medium

Mitigation Measures

- Provide grievance redress mechanism for the local communities and workers;
- Advise the public and workers on where to report grievances;
- Consider prioritizing the local manpower for both skilled and unskilled labour.
- Implement proposed grievance resolution mechanism
- Grievance redress mechanisms especially for workers should incorporate non-retaliation policies

6.1.2.29 Impacts on Cultural Resources and Archaeological Sites

While the realignment has been proposed to avoid any cultural resources and Archaeological sites, there is potential that new sites may be discovered during the construction works.

Impact Analysis matrix

Impact without Mitigation	
Severity of impact	-2
Spatial scope of impact	-2
Duration of impact	-2
Frequency of activity / duration of activity	-2
Frequency of impact	-2
Result	-24 Low

Mitigation measures

- Future care demands chance find procedures (as prescribed by NMK) to kick in for use during the construction phase. A sample "Chance Finds" is attached in the Annex 2.

OCCUPATIONAL HEALTH AND SAFETY**6.1.2.30 Occupational Safety and Health Hazards**

Construction activities will expose staff to risks of accidents and incidents while undertaking excavations and trenching, installation of contractor facilities, operating mobile machinery, electrically powered equipment and materials delivery vehicles. Occupational health and safety measures should be undertaken to avoid falling from heights, heavy lifting activities and electrical shock, exposure to excessive body vibrations and noise, fire hazards, hot bitumen, wildlife attack and snake bite etc. which can result in injuries or even fatalities. Adherence to WBG EHS Guidelines, and OSHA and its regulations will significantly reduce occupational safety and health risks associated with the project implementation.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-4
Spatial scope of impact	-3
Duration of impact	-4
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-99 High

Mitigation Measures

- Contractors' selection criteria should include ability to demonstrate having some defined minimum requirements for Safety and Health Management System.

- Comply with the OSHA 2007 requirements can be used as minimum requirements and WBG EHS Guidelines;
- Contractor will prepare a site-specific Health and Safety Plan and implement it throughout the construction period;
- Contractor must obtain a registration of workplace certificate from DOSHS and comply with the subsequent requirements of the Health and Safety Committee Rules 2004 of the OSHA Act;
- Enforce use of defined standard operating procedures for handling various activities, depending on risks levels;
- Ensure adherence to Health and Safety Policy during construction activities;
- Establish an Emergency Response Procedure and display on all work areas;
- Provision of a standard first aid kit at active construction sites at all times;
- Designate qualified first-aider as per the OSHA requirements;
- Regular trainings to workers on OHS and first aid administration;
- Contractor to provide for ambulance vehicle for emergency evacuations
- Contractor (s) to maintain an accident register; carry out accident and incidents investigations and implement corrective actions;
- Undertake staff and visitor safety induction;
- Establish a Health and Safety Committee for the project construction team as per the Health and Safety Committee Rules 2004 of the OSHA Act
- Contractor to have a full time Health and Safety advisor on site;
- Have a stocked clinic with fulltime nurse on the main campsite;
- Engage a qualified Health and Safety auditor to conduct routine and annual Health and Safety (H&S) audits; Fire Safety Audit, and a Risk Assessment
- Provide appropriate and adequate Personal Protective Equipment (PPE) to workers;
- Abide by standard best practice health and safety provisions in the construction contract;
- Establish and enforce a strict code of conduct for all project drivers including outside suppliers delivering materials. The code shall focus on safety, especially speed, and loading, especially banning all carriage of staff, workers and passengers except in seats;
- Provide medical care for all staff as necessary as allowed in the Kenyan Law including securing a worker insurance cover as required under WIBA;
- Implement road safety campaigns addressing construction zone dangers and encourage motorists to exercise caution when driving through work zones.
- Conduct daily toolbox and monthly safety meetings;
- Conduct risk assessment before commencing new assignments/tasks;
- Undertake routine worksites safety inspections.

6.1.2.31 Impacts Related to High Temperature and Humidity Levels

Working in high temperatures and humidity may have health impacts on construction workers such as dehydration, heat stroke, and other heat related illnesses.

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	-2
Spatial scope of impact	-2
Duration of impact	-2
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-36 Low

Mitigation Measures

- Contractor must ensure Project staff have access to adequate potable water;

- Provisions should be made for adequate ventilation and air conditioning for in-house work spaces and campsites;
- Sensitize staff on health concerns and avoiding heatstroke, dehydration and fatigue;
- Work schedules should be such that workers are allowed adequate break durations in between working sessions; and
- Ensure adherence to OSHA, 2007.

6.1.2.32 Road safety

Activities related to construction works will undoubtedly induce uncharacteristic high levels of additional vehicular traffic along the proposed road. Related issues of vehicle congestion and reckless driving by truck drivers delivering construction materials to the site will be some sources of potential accidents to humans and livestock, disturbance of normal living conditions to the local population, dust pollution, etc during the construction phase.

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	-4
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-5
Frequency of impact	-5
Result	-100 Medium-High

Mitigation Measures

The following mitigation measures shall be adopted:

- Copies of insurance policies for the contractor's drivers and vehicles should be provided to the Supervision Consultant.
- The contractor's vehicles and equipment must be in proper working condition and have registration plates, and numbering.
- The contractor to sensitize all drivers and equipment operators to adopt safe driving and operation behaviors, to ensure proper discipline by these personnel, and sanctions those in breach.
- Ensure that safety is included in the driver's contracts as part of "Code of Conduct" and any non-compliances are sanctioned;
- Excavated sites, embankments, and dangerous locations are protected with proper safety barriers, tape and warning signs.
- Install temporary speed calming measures such as bumps and speed signs at high risk areas such as shopping centres, hospitals, and schools;
- As part of normal Occupational Health and Safety monitoring, the contractor and Supervision Consultant both maintain a log detailing every violation and accident on site or associated with the project work activities, including the nature and circumstances, location, date, time, precise vehicles and persons involved, and follow-up actions with the police, insurance, families, community leaders, etc.
- The implementing agency, in cooperation with the relevant government agency, should undertake road safety campaigns targeting settlements, schools, and other facilities along the project road or other affected areas. The cost of such campaigns should be covered in the project budget.

6.1.2.33 Loss of life, injury, or damage to people and private property

There is potential loss of life, injury and damage to people's property during construction period due to accidents, misuse of contractors' equipment etc. This can occur to the members of the public or workers during construction activities.

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	-4
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-5
Frequency of impact	-5
Result	-100 Medium-High

Mitigation Measures

- The construction site shall be fenced off to prevent access to members of the public;
- Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, at all times or as the RE may reasonably require;
- The contractor shall have insurance for his workers as required by law;
- Insure against liability for any claims for loss, damage, death or bodily injury which may occur to any physical property or to any person which may arise out of the Contractor's performance of the contract;
- All fatalities or severe accidents/incidences shall be reported to the DOSHS as required, to KeNHA immediately, and KeNHA shall report to the AfDB within 24 hrs of the occurrence. The same should be done to DOSHS within 24 hrs and a written notice to the same within 7 days.

6.2 Impacts on Vulnerable Groups

The project will have some impacts on project affected persons, especially men and women who heads households individually. This will mainly be roadside traders and other businesses which might be affected as a result of the project implementation. This will require KeNHA to fulfill the requirements of ensuring these groups are catered for, from a short term (eg employment benefits during construction period) and long term (eg strategies and projects that target poverty reduction) perspective of the project. A gender assessment report has been as a standalone report for the project to determine the impacts to the Vulnerable groups, and how the they can benefit from the project activities.

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	-3
Spatial scope of impact	-1
Duration of impact	-5
Frequency of activity / duration of activity	-2
Frequency of impact	-3
Result	-55 Low -Medium

Mitigation measures for impacts on vulnerable groups

- The recommendations from the Gender Assessment will be incorporated to the project design to determine how the communities will benefit from the project activities;
- The project will make the development process more inclusive of vulnerable groups by meaningful consultations and incorporating their perspectives in the design of development programs and poverty reduction strategies;

- Conduct of Free, Prior and Informed Consultation in order to achieve broad community support, during implementation;
- Provide the VGs with opportunities to benefit more fully from development programs associated with the project, such as employment, community driven projects along the road project.

6.3 Operation Phase Impacts

6.3.1 Positive Impacts

6.3.1.1 Spurred Economic Development

The project road will also improve connectivity between other parts of Kenya, and as far as South Sudan. Improved road connectivity will spur economic development as creation of opportunities to invest and spend increase with the volume of goods and services accessible to local population and on transit. The project road development is within the national Vision 2030 and is also serves as a connection for the Turkana and West Pokot counties, and connecting to the LAPSSSET Corridor project hence will be important trade route with the neighbouring South Sudan.

In addition, the upgraded road will provide faster movement of people, goods and services in the area, which will likely stimulate more public and private investments such as facilities which include but not limited to schools, health centres, water, energy, and sanitation mainly in the urban centres. This growth means the social and economic conditions of these people will grow, improving and uplifting the standards of living along the proposed road project.

6.3.1.2 Reduced Vehicle Operational costs

The reduced vehicle operating and maintenance costs due to improvement of the riding quality and surface of the road compared to the current road situation greatly enhances accessibility to basic facilities, for the local communities and others served the road corridor. Therefore, the development of the road will also be an opportunity for the area to be opened up for other opportunities and development in other commercial sectors by outside investors, since more investors will deploy their vehicles along the road due to reduced costs of maintenance and operations.

6.3.1.3 Improved Travel Comfort and Response

The road project will generally increase travel safety and comfort. With the improvement of the road, public transport business will be more competitive and it is likely that transporters may opt for better and bigger public transport buses. In addition, an improved road will allow quicker response by medical and security personnel to the areas served by the road, thereby improving service delivery of the area.

6.3.1.4 Reduced Travel Time and Cost

The development of the project road will reduce travel time and cost associated with the current poor road conditions. Paving the project road will improve travel experience by reducing the travel time for users. The cost of travel is deemed to decline with reduced wear and tear due to the paved conditions. This will trickle down to reduced cost of living (access to social and economic services) within the project area.

Enhancement measures

- Routine inspection and proper maintenance of the project road

6.3.1.5 Cultural Integration due to Influx of People

The improvement of the project road will improve connectivity of counties to the rest of the country. The number of people from other parts of the country willing to exploit opportunities due to the connectivity will increase. As people of different cultural background, lifestyles and ethnicities stream-in along the project road it will enhance the cultural integration and coexistence within the local communities. However, this may be a gradual process.

Enhancement measures

- Awareness campaign to encourage cultural coexistence and appreciate diversity.

6.3.1.6 Reduced Dust Pollution

Vehicle traffic plying along the existing road cause fugitive dust because of the failed sections of the road and prolonged dry weather conditions, which may cause respiratory complications and discolouration of surrounding vegetation. In an improved paved state, the problem of fugitive dust associated with the road will be mitigated.

6.3.1.7 Improved Drainage

Overall, the hydrology and drainage of the road will be improved due to the upgrading of the road structures, such as bridges, culverts and other cross-drainage facilities like roadside drainage. Sedimentation of culverts and road side drainages will be eliminated due to provision of control devices and cover vegetation and water stagnation within and the on the road side will be eliminated.

Currently, the infrastructural facilities (roads, sewer, water, etc) of the area is not well developed, and the development of the road means such facilities will need to be improved as increased settlement and need for such facilities along the road becomes necessary, thereby bringing development of the area under the project's influence.

6.3.2 Negative Impacts

6.3.2.1 Increase in Communicable Diseases

Once operational, the project road will experience increase in vehicle traffic, including long-distance drivers who will be making stop-overs in different towns along the road. Areas where truck drivers usually stop has been known to have high number of sex workers, who are likely to include those from outside the areas of counties served by the road. Truck drivers could increase or create the demand for casual sex leading to the emergence or increase in sex work at the centres along the road. Sex workers are a key bridging population for HIV transmission because their customers in many cases have spouses.

With increased vehicle traffic, there will be a proportionate rise in emission levels. Human exposure to these emissions has health impacts. Some of the pollutants contained in vehicular emissions include particulate matter (PM_{2.5}), ozone, volatile organic compounds (VOCs), carbon monoxide, oxides of nitrogen and benzene (WHO, 2011). Health problems associated with the vehicle related pollutants include cardiovascular and respiratory diseases and cancer.

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	-3
Spatial scope of impact	-1
Duration of impact	-5
Frequency of activity / duration of activity	-2
Frequency of impact	-2
Result	-36 Low

Mitigation measures:

- KeNHA/Contractor should, in liaison with approved local non-governmental organizations (NGOs) or approved HIV/AIDS service providers, conduct awareness training to truck drivers and the locals and monitor the efficacy of the awareness created during project operation period, through the performance-based contractors selected to do maintenance of the road;
- Sensitize truck drivers on the need to refrain from risky behaviours;
- Provision of condoms both male and female in the sanitary facilities located at truck stops;

- Encourage truck drivers, conductors, workers and local communities to go for HIV voluntary counseling, testing and referral services;
- Monitoring of outcomes, in collaboration with National HIV/AIDS Authorities;
- Vehicles to adhere to emission criteria set under the Environmental Management and Co-ordination (Fossil Fuel Emission Control) regulations, 2006.
- Vehicle maintenance and servicing of vehicle engine.

6.3.2.2 Increased Vehicle Accidents

Improved road conditions will attract more traffic volume and increase incidences of vehicle over speeding considering the road has a maximum design speed of 100km/hr. Under these circumstances, a combination of reckless driving and ignorance of local communities of road safety requirements and basic rules may result in accidents. Vehicle accidents may also contribute to oil spills that may contaminate soil and local water resources. In Kenya, road accidents are a safety concern causing disability and death of victims. The design has incorporated the following for safety purposes:

- Speed reduction measures and structure like bumps and zebra crossings near settlements and institutions;
- Road furniture like crash barriers in dangerous curves and elevation and signages to alert the drivers and other road users of what to expect ahead

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	-4
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-5
Frequency of impact	-5
Result	-100 Medium-High

Mitigation measures

- The public should be sensitised on safety measures to observe while using the road;
- KeNHA to liaise with NTSA for close monitoring of the road usage and impose penalties on those going against the set roads usage rules;
- KeNHA should ensure maintenance of installed road furniture and safety signages along the road;
- Undertake periodic roadside bush clearance that may reduce visibility clearance or obstruct critical signages.
- Accident scenes should be cleared and any oil spills cleaned to minimize contaminating soil and local water resources.

6.3.2.3 Human Encroachment along the Project Roads

After construction of the project road is complete and operational, there is the possibility of encroachment of various informal businesses along the project roads due to the increase in traffic and improved business opportunities. The encroachment increases the possibility of road side accidents and makes road maintenance difficult and expensive activity due to the compensation demands from destruction of properties and disruption of livelihoods for the encroachers.

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	+4
Spatial scope of impact	+3
Duration of impact	+4
Frequency of activity / duration of activity	+3
Frequency of impact	+3
Result	+66 Low - Medium

Mitigation measures

- KeNHA in consultation with the county governments should enforce development control by not allowing for any development approvals on the road reserve to ward off potential encroachers and to allow for easy implementation of future road maintenance or expansion plans;
- Install and maintain road reserve boundary posts at appropriate intervals;
- Conduct awareness talks and presentations about the road reserve.

6.3.2.4 Road Maintenance Impacts

During road maintenance, solid waste generation may include road resurfacing waste (removal of the old road surface material), road litter, illegally dumped waste, or general solid waste from rest areas, vegetation waste from right-of-way maintenance; and sediment and sludge from storm water drainage system maintenance. Paint waste may also be generated from road and bridge maintenance (due to removal of old paint from road stripping and bridges prior to re-painting).

Impact Analysis Matrix

<i>Impact without Mitigation</i>	
Severity of impact	+4
Spatial scope of impact	+3
Duration of impact	+4
Frequency of activity / duration of activity	+3
Frequency of impact	+3
Result	+66 Low - Medium

Mitigation measures

- Incorporate recycling of road resurfacing waste where possible;
- All vegetation cuttings for road clearance maintenance suspected to be from invasive alien species should be burnt on site translocated to minimize dispersal;
- Manage sediment and sludge removed from storm water;
- All removed paint materials suspected or confirmed as containing lead should be treated as a hazardous waste.

6.3.2.5 Drainage and Storm water Management

During the operation of the road, storm water will be generated as a result of an increase in paved sections of the roads, meaning that there will be more runoff than normal, which will affect the drainage systems, hydrological regimes and storm drains of the project area.

There will be also be an increase in drainage speed which in turn will create heavy outfalls and worsen soil erosion cases along the drainage systems and area of project influence.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-54 Low -Medium

Mitigation measures

- Design should ensure efficient drainage structures (culverts, mitre drains, scour checks etc) to take care of the increased drainage;
- Proper construction of erosion protection measures such as cascading gabions and distribution channels to protect soil erosion along the road;
- Regular maintenance of structures is required to ensure the drainage structures are functioning properly

6.3.2.6 Solid Waste

During operation period, road users spilling materials (oils, foodstuffs, plastic materials, and other wastes), tends to leave pollutants on the road reserve, bus stops and the adjacent lands compromising the natural resources and people's health.

Impact Analysis Matrix

Impact without Mitigation	
Severity of impact	-3
Spatial scope of impact	-3
Duration of impact	-3
Frequency of activity / duration of activity	-3
Frequency of impact	-3
Result	-54 Low -Medium

Mitigation measures

Enforcement of laws and by-laws for buses and other motorists on improper disposal of solid waste from vehicles; No vehicles should be serviced along the roads or at bus stops – all should be in a licensed garages or service stations;

Road signage prohibiting disposal of waste;

Regular cleaning, collection and disposal of solid waste by the local authorities (at bus stops), and performance-based contractor that will be assigned on the road for maintenance (along the roads)

6.4 Cumulative Impacts of the Project Road

Cumulative impacts are impacts which result from the incremental impact of a proposed activity on a common resource when added to the impacts of other past, present or reasonably foreseeable future activities. Lesseru – Kitale (B2) and Morpus– Lokichar (A1) project roads will be developed concurrently with other roads in the Western and North Western region including Marich Pass – Loruk (B4), Lokichar – Nginyang (C113), Kitale – Endebess-Suam (B2), Kitale – Kapenguria – Morpus (A1).

Cumulative impacts such as impacts on resources such as strain in water, energy and road construction materials within the region might arise due to the needs for the simultaneous construction of the roads, degradation of environment due vegetation clearance, an increase in soil erosion, impacts of wildlife such as potential poaching in the region due to better access, solid waste generation, among others. Furthermore, the project can also contribute

negatively from a social perspective such as changes in cultural practices for the local communities due to influx of people looking for business opportunities, increase in tourism in the area, security challenges, changes in traffic patterns, housing availability, and employment, considering that there are a number of proposed projects along or near the road corridor.

The assessment of cumulative impacts along the project road corridor has taken these projects into account. Some of the projects include; Marich Pass – Loruk (B4), Lokichar – Nginyang (C113), Kitale – Endebess- Suam (B2), Eldoret Western/Southern Bypass, Kitale – Kapenguria – Morpus (A1) road project which joins the project road at its end and beginning at Kitale (for Lesseru – Kitale-B2) and Morpus – Lokichar - A1). Other road projects include those along or near the road corridor undertaken by other road agencies such as KURA, KeRRA, the county Governments and the Constituencies through CDF. Impacts on sourcing of construction materials along the corridor due to growth in the region and /or any other initiatives in the project road corridor (e.g. water and sanitation projects) that may result in positive or negative cumulative impacts in the region.

6.4.1 Identification of Potential Cumulative Impacts

The table below provides a summary of the likely potential cumulative impacts that may result from the construction and operation of the proposed road project, in combination with other proposed development such as the ones mentioned above. To mitigate cumulative impacts, the project implementers have or will carry out ESIA studies that propose mitigation measures to be implemented during construction and operation phases of the projects. It is also proposed that the project implementers in the region should have a collaborative engagement with each other to develop a common cumulative impact management strategy to minimize cumulative impacts of their projects. If well implemented, the proposed measures are expected to minimize the overall cumulative impacts from these projects in the region.

Table 6-3: Summary of the Likely Potential Cumulative Impacts

Environmental and Social Item	Potential Cumulative Impacts	
	Construction Phase	Operation Phase
Soil Degradation, site related oil spills	Although not so significant, risks of oil spills increase as more projects are being undertaken in the region.	Increase in vehicles and potential accidents, and improper servicing of vehicles increase chances of soil and water sources degradation from poor management of oil wastes
Loss of flora, proliferation of invasive species	This may happen during the construction phase if the construction of other nearby projects coincides with that of the proposed project.	Vehicles and passengers plying along the roads may carry invasive species that may spread in the region Proposed measures include monitoring composition of species regenerating along road reserves and taking prompt actions in case of emergence of invasive species.
Solid waste	There will be a large amount of solid waste generated by all projects from various sources during construction such as at camp sites, soil spoil, cement bags, among others	Regional growth and increase in population as a result of easy access to the North Western region will increase solid waste generated in towns and centres. Passengers and travelers using the roads also tend to throw waste on the roads which increase the amount of waste generated in the region.
Air Quality	Air quality may occur during construction if not mitigated only if the construction of other nearby projects	The impacts of the proposed road on regional air quality and greenhouse gases are predicted increase as a result of more vehicles along the

Environmental and Social Item	Potential Cumulative Impacts	
	Construction Phase	Operation Phase
	coincides with that of the proposed project	road, and with other improvement of proposed road networks. Monitoring of air quality in the region during operational stages should be conducted to devise methods of controlling greenhouse gases
Noise and Vibration	There is the potential for cumulative noise impacts of the proposed development in conjunction with other concurrent projects in the vicinity arising from simultaneous demolition and construction works.	Increase in traffic in the region will translate to increase in noise levels as more traffic use the roads.
Increased Traffic	There will be increased traffic in the region from construction activities of all the projects. The potential risks include cumulative increase in traffic accidents. Mitigation measures have been proposed to be implemented during construction	Traffic volumes will increase in the project area due to improved road conditions. More vigilance needed with installation of speed measure in high risk areas along the projects. However, the proposed mitigations need to be strictly adhered to.
Strain in water resources	There is potential strain of water resources in the area during the construction phase if the construction of other nearby projects coincides with that of the proposed project.	Social unrest due to usage of water resources may occur as a result of easier access by other communities.
Social Impacts including: Labour influx, Crime, disruption of services, increased conflicts, impacts on children, GBV sexual exploitation and abuse	Influx of immigrant workers will impact the region through increase of local population. The Cumulative impacts will only occur during the construction phase if the construction of other nearby projects coincides with that of the proposed project. The proposed mitigations need to be strictly adhered to.	Given that traffic volumes will increase in the project area due to improved road conditions, changes in social setting of the communities in the region is bound to change in one way or another which could bring negative impacts such as social conflicts, intermarriages, prostitution, child abuse and sexual exploitation of underage girls. Continuous community awareness and sensitization of such negative issues will need to be done continuously using Community-Based Organizations (CBOs) and NGOs operating in the region with the support of the local county governments
Increased demand for firewood.	The major source of energy in the region for domestic use is firewood. The contractors of the road may also use firewood to heat up bitumen for the construction. This increased demand strains the forest resources and increases the level of carbon dioxide in the atmosphere	With an improved transport system in the region, access of firewood to larger markets is increased which will lead to unsustainable use of forest resources

Environmental and Social Item	Potential Cumulative Impacts	
	Construction Phase	Operation Phase
Strain on Natural resources due to construction materials requirements - sand, stone and gravel.	With the concurrent implementation of development projects in the region, sand and gravel demand is on the rise. The sources of such resources face habitat disturbances, deformation and unsustainability	The road project will induce economic growth in the region leading to physical developments that will demand the use of sand, stone and gravel for construction

6.5 Potential Impacts during Decommissioning

While the project road is not anticipated to be decommissioned in the near future but periodically maintained for extended service, temporary contractor's facilities will be decommissioned by the end of road construction works' defects liability period.

The contractor is expected to prepare a detailed decommissioning plan for all his temporary facilities including camps, borrow sites and quarries, which shall be approved by the Supervising consultant and KeNHA. The plans detailing environmental restoration measures and associated safety and health protection should be submitted to NEMA for approval at least three months before the actual decommission works begin.

The following presents anticipated decommission impacts of the contractor's facilities.

6.5.1 Positive Impacts

6.5.1.1 Reuse of Contractor's Facilities

Some of the contractor's camps and other facilities erected during project construction can be handed over to the local government for convenient utilization as local administration offices or social halls instead of demolition.

Enhancement measures

- KeNHA to liaise with the local county administration to facilitate official handover of reusable facilities;
- Contractor shall complete a decommissioning plan incorporating appropriate disposal of non-recyclable materials and rehabilitation of the biophysical environment at the temporary camp and materials sites prior to handover

6.5.2 Negative Impacts

6.5.2.1 Community Safety

Abandoned and improperly rehabilitated material borrow sites and quarries can present a great safety and health hazard to adjoining communities due to water ponding, deep cliffs and being inhabited by or providing hideout for problem wildlife.

Mitigation Measures

- Contractor must prepare detailed decommission plan for approval by local government, NEMA and department of mines as applicable;
- KeNHA should consider satisfactory rehabilitation of decommissioned sites as part of contractual requirement with enforceable penalties including financial disincentives.

6.5.2.2 Loss of Income

Staff working at the contractor's camp will lose income sources as their services will be terminated. Without prior awareness of contract conditions, abrupt loss of income source may psychologically impact the affected workers and even their families.

Mitigation Measures

- Notify the employees in advance on the project closure date and adequately compensate them;
- Dismissal procedures to be compliant with Employment Act, 2007;
- Provide counselling & alternative skills for alternative activities;
- Formerly employed staff at the project, should get recommendation letters to assist in getting job search and reuse acquired skills and earn income.

6.5.2.3 Noise pollution

Decommissioning of construction structures involve noisy activities originating from movement of heavy ground vehicles, disassembling all the prefabricated structures, disconnection of services, breaking down concrete foundations and handling of debris from sites. Though short lived, the generated noise will affect exposed workers and, in some cases, the nearby communities.

Mitigation Measures

- Prepare a decommissioning plan to guide activities;
- Monitor noise levels as per the NEMA Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009 & OSHA, 2007;
- The noise emission characteristics should be considered during selection and mobilization of decommissioning equipment; and
- Sensitize staff to switch off machinery and vehicles when not in use.

6.5.2.4 Dust and Fumes

Decommissioning activities likely to cause dust and fumes include:

- Excavation and loading of spoil debris for disposal;
- Decommissioning of septic facilities; and
- Removal of fuel holding tanks and dispensers.

These will be a nuisance mainly to demolition workers but may also affect nearby communities.

Mitigation measures

- Prepare a decommissioning plan to guide staff on proper handling of sensitive facilities;
- Enforce stand operating procedures while undertaking demolition works;
- Provide and enforce the appropriate use of PPE against dust; and
- Employ dust suppression measures such as sprinkling water on loose soil surfaces and providing cover for spoil batches.

6.5.2.5 Waste Accumulation

Decommissioning of construction camps will generate waste some of which may not be reused or recycled. Spillages during handling substances may also occur contaminating soil and surface water bodies. Removal and reinstatement of sites may accumulate debris that require proper handling and disposal.

Mitigation Measures

- Contractor will be required to prepare a decommissioning plan that covers waste management;

- Waste be managed as per Environmental Management and Coordination (Waste Management) Regulations 2006;
- Establish a segregation and grading waste management system to manage garbage and other forms of waste generated;
- Prioritize options of waste reduction, reuse and recycling, particularly papers, polythene bags and plastic wrappers and containers and other materials that can possibly be recycled; and
- Disposed waste at designated sites through licensed waste handlers.

6.6 Resettlement Action Plan

A Resettlement Action Plan (RAP) has been developed in conjunction with this ESIA to mitigate the economic displacement impacts arising from the Project. The RAP conducted a baseline socio-economic survey, a census survey, and an asset inventory of project affected persons. The RAP presents entitlements and compensation options that form the basis for further engagement between the project-affected persons and KeNHA.

The census was carried out to document the current occupants of the Project Affected People (PAPs) within the road RoW in all the settlements along the road. The data is important as it will form the basis for future RAP decision making regarding eligibility for compensation and resettlement assistance.

Table 6-4 : Number of PAPs Enumerated According to Settlement

Affected Towns/Centres	Business Structures	Structure owners operating business	Tenants	Mobile Road Vendors	TOTAL
Soy	0		0	115	115
Furfarol	0		0	19	19
Nangili	0		0	17	17
Matunda	0		0	72	72
Mois Bridge	0		0	393	393
TOTAL				616	616

Table 6-5 : RAP Implementation Costs

Item	Estimated Total Value (Kshs)	15% Statutory allowance	Total Value (Kshs)
Structures Values			
Land Values (<i>Provisional</i>)**	350,000,000	52,500,000	402,500,000
Tree Values	2,641,980	396,297	3,038,277
Sub-Total 1			405,538,277
Estimated expenses of KeNHA and Other Relevant Government Agencies			10,000,000
Estimated expenses of Lesseru-Kitale (B14) RAP implementation and Monitoring cost			15,000,000
Financial Management Training & Counseling for PAPs			5,000,000
Sub-Total 2			30,000,000
GRAND TOTAL (Estimated)			435,538,277

Source, RAP Report, January 2022

** The Land value provided is a provisional sum for land that maybe acquired for associated facilities – markets, truck parking, and minor acquisition of road realignment near Soy Market

6.7 Environmental, Social and Climate Change Risks to the Project

In any project, there are risks associated with it during the project cycle. For the proposed Lesseru - Kitale road project, the following environmental, social, and climate change risks were identified and some recommendations have been proposed to reduce their occurrence are discussed below.

6.7.1 Climate change impacts

Higher temperatures can cause pavement to soften and expand. This can create rutting and potholes, particularly in high-traffic areas and can place stress on bridge joints. Heat waves can also limit construction activities, particularly in areas with high humidity. With these changes, it could become more costly to build and maintain roads and highways.

Climate change is projected to concentrate rainfall into more intense storms. Heavy rains may result in flooding, which could disrupt traffic, delay construction activities, and weaken or wash out the soil that support roads, bridges and culverts. The floods could be a risk to the project especially during construction and operation phases as they could lead to loss of properties, roads and even lives.

Risk management

The Consultant has considered and factored in the design of the various river crossings the highest recorded flood levels of these rivers. During construction, it will also be prudent for the contractor to ensure measures have been put in place to provide adequate warning before flooding. This will ensure adequate evacuation is done prior to the floods. A Storm Water Management Plan will also be requisite to state the measures to be taken during the flooding periods.

6.7.2 Transport of Dangerous Goods

Dangerous goods are frequently transported in bulk presenting a potential risk of release to the environment in the event of accidents. Additionally, there is a potential for the release of diesel during fuelling operations. The recommended measures to prevent minimize, and control releases of hazardous materials during road transportation and use include the following:

- Use of tank cars and other rolling stock that meet national and international standards (e.g. thermal protection and puncture resistance) appropriate for the cargo being carried, and implementing a preventive maintenance program;
- Preparation of spill prevention and control, and emergency preparedness and response plans, based on an analysis of hazards, including the nature, consequence, and probability of accidents.

Based on result of the hazard analysis, implementation of prevention and control measures may include: -

- Requirements for authorization and obtaining of permits before transporting dangerous goods along the road;
- Routing and timing of hazardous materials transport to minimize risk to the community (e.g. restricting transport of hazardous materials in certain hours)
- Limiting the general speed of vehicles in developed areas
- Construction of protective barriers and other technical measures (e.g. guardrails) at sensitive locations (e.g. water resources and settlements)
- Dissemination of emergency preparedness and response information to the potentially affected communities (e.g. emergency notification systems and evacuation procedures);
- Implementation of a hazardous material security plan and security awareness training, including provisions for personnel security, prevention of unauthorized access, and measures to reduce risks during storage and transport of hazardous materials;
- Use of standardized fuel spill prevention systems.

6.7.3 Fire

If vegetation growth is left unchecked or slash/waste from routine maintenance is left to accumulate within the right-of-way, sufficient fuel can accumulate that may promote forest fires. In addition, vehicle accident might trigger fire

where this kind of vegetation may catch fire and it spreads uncontrollably near the scene. The recommended measures to prevent and control risk of forest fire include:

- Monitoring of right-of-way vegetation according to fire risk;
- Trimming, slashing, and other maintenance activities to avoid seasons when the risk of forest fires is high;
- Removal of maintenance slash or management by controlled burning. Controlled burning should adhere to applicable burning regulations, fire suppression equipment requirements, and typically should be monitored;
- Planting and management of fire-resistant species (e.g. hardwoods) within, and adjacent to rights-of-way.

6.8 Environmental and Social risk management

The failure of environmental and social mitigation can result in serious impacts such as erosion, increased road accidents and disruption of the community lifestyles. Construction of a road also involves occupational health and safety risks to road workers and members of the communities, primarily in the areas of excavations, storage and handling of dangerous materials, and operation of heavy machinery close to traffic, slopes and watercourses. The anticipated risks in this project include:

- Exposure to excessive dust particles or toxic fumes from bitumen and other chemicals used in road works;
- Potential for collapse of trenches;
- Risk of accidents involving passing traffic;
- Risk of rock falls during blasting;
- Risk of fuel spills and therefore contaminating soil and groundwater;
- Contractor and communities conflicts due to labour distribution;
- Requirement by the local communities to benefit from the project through construction of amenities at various centres along the road.

The above risks can be mitigated to some extent through:

- Strengthening staff skills and training in environmental management;
- Monitoring environmental and social actions and responsibilities and making provision for remedial actions;
- Planning for remedial measures in case initial planned actions are not successful;
- Limiting time of exposure to dust particles, chemicals and noise;
- Provision of Personal Protective Equipment (PPE);
- Establishing safety and inspection procedures in materials handling, operating heavy equipment and constructing trenches;
- Safe handling of toxic materials, explosives and other hazardous substances;
- Establish well-coordinated community relationship and regular consultations and engagements between KeNHA, local communities and the contractor;
- Establishment of proper, active, and accessible GRM mechanisms;
- Continuous Stakeholder engagement throughout the project cycle

7 CLIMATE CHANGE SCREENING AND ADAPTATION

7.1 Introduction

There is need to develop a comprehensive approach for addressing the vulnerabilities and risks that are associated with climate variability and change. Kenya, just like other nations around the globe is susceptible to the effects of global climate change and as such, has been in the forefront advocating for sound approach in tackling the predicted impacts of climate change. Adaptation and resilience remain Kenya's, and indeed Africa's priority response to climate change.

In the year 2010, Kenya launched the National Climate Change Response Strategy (NCCRS), followed by a national climate change action plan (NCCAP) in the year 2013. Since then, the previous NCCAPs have been reviewed after every five years with a view to streamlining development planning, budgeting and implementation activities with the appropriate climate change adaptation measures for sustainable development. The National Adaptation Plan (NAP) 2015-2030 lays out the sectoral climate change adaptation measures comprehensively.

Kenya published its Second National Communication in 2015 and submitted its Updated Nationally-Determined Contribution to the UNFCCC in 2020, in support of adaptation and mitigation efforts, to improve the country's ability to prepare for and respond to natural disasters and increase its resilience to climate change. Additionally, Kenya aims to become a newly industrialized country by 2030, which will require expanding climate change resilience efforts while also increasing its domestic energy production; including through the use of renewable sources. Adaptation efforts are focused on the country's energy, infrastructure, land use and environment, health, water and irrigation, agriculture and tourism sectors.

Due to a combination of political, geographic, and social factors, Kenya is recognized as highly vulnerable to climate change impacts, ranked 152 out of 181 countries in the 2019 ND-GAIN Index.¹⁰

7.2 Climate Change and Disaster Risk Screening of the Project

7.2.1 Methodology used in Screening

This project was screened by using the World Bank Group's Climate and Disaster Risk Screening Project Level Tool;¹¹ The project level Climate and Disaster Risks Screening provides early stage screening for climate and disaster risks at the concept stage of project development. The tool uses an exposure - impact - adaptive capacity framework to consider and characterize risks from climate and geophysical hazards, based on key components of a project and its broader development context.

The potential risks flagged were identified by connecting information on climate and geophysical hazards exposure with the Consultant's subject matter expertise and understanding of the project components and sensitivity to rate the impacts. The in-depth screening does not provide detailed risk assessments, rather it flags risks to inform consultations, enhance dialogue with local and other experts, and define further analytical work that may be required at the project location.

The following section summarizes the results of the screening process for Lesseru Kitale Road Project in Kenya, which was applied using Road Sector analysis.

7.2.2 Climate Change and disaster risk Screening results

The project's exposure to the risk of climate change and potential impact of future climate scenarios is low. The screening flagged **slight** climate impacts associated with extreme temperatures and the level of

¹⁰ WB Climate Risk Profile, Kenya, 2021

¹¹ <https://climatescreeningtools.worldbank.org/>

precipitation and flooding. The historic average temperature of the project area ranges from 28 (high) Celsius to 20 (low) Celsius. The project area receives a maximum rainfall ranging from 1100 to 1800 mm and experiences an average of 25 days with heavy and extreme rain. To date, there has been no recorded incidents of heavy flooding in the project area. Since the project is in the hinterland, it is not exposed to natural hazards such as sea level rise or strong storm surge.

Table 7-1: Summary of Exposure to Climate and Geophysical Hazards at Project Location

Hazard	Time frame	Description of hazards for the project location
Extreme Temperature	Current	From the early 1960s, Kenya has experienced generally increasing temperature trends over vast areas. Over the inland areas, the trends in both minimum (night/early morning) and maximum (daytime) temperatures depict a general warming (increasing) trend with time. Temperatures in Kenya, since 1960, have exhibited an incremental trend. The annual mean increase has been estimated at 1°C with an average rate of 0.21°C per decade. The rate of increase has been most rapid in March-May (0.29°C per decade) and slowest in June-September (0.19°C per decade).
	Future	The region where the project is located is not known to have extreme temperatures; However, climate change impacts in the future can have impacts on the road. Since 1960, Kenya's mean annual temperature has increased by 1.0°C, at an average rate of 0.21°C per decade. The rate of increase has been most rapid in March-May (0.29°C per decade) and slowest in June - September (0.19°C per decade). In response to increasing greenhouse gas (GHG) concentrations, air temperature over Kenya is projected to rise by 1.2 to 3.2 °C (very likely range) by 2080 relative to the year 1876, depending on the future GHG emissions scenario (Figure 2). Compared to pre-industrial levels, median climate model temperature increases over Kenya amount to approximately 1.4 °C in 2030 and 1.7 °C in both 2050 and 2080 under the low emissions scenario RCP2.6. Under the medium / high emissions scenario RCP6.0, median climate model temperature increases amount to 1.3 °C in 2030, 1.6 °C in 2050 and 2.2 °C in 2080. Extreme temperatures due to climate change can expose the road to damage through cracking if not well designed.
Extreme Precipitation and Flooding	Current	Observations of rainfall over Kenya since 1960 do not show statistically significant trends, as trends in the extreme indices based on daily rainfall data are mixed.
	Future	Precipitation projections indicate that exposure minimal of the project location to heavy downpours and sustained periods of rainfall is unlikely to increase. However, heavy downpours can cause damage to the infrastructure even if not sustained for a long time in low lying areas, as experienced in April 2020 heavy flash floods. Future projections of precipitation are less certain than projections of temperature change due to high natural year-to-year variability. Out of the three climate models underlying this analysis, one model projects no change to a slight decrease in mean annual precipitation over Kenya under RCP6.0, while the other two models project an increase under the same scenario.

		Under RCP2.6, median model projections indicate a slight increase towards the year 2030 but an overall decrease towards the end of the century. Under RCP6.0, the projected precipitation increase is likely to intensify after 2050, reaching 53 mm per year at the end of the century compared to year 2000. Higher concentration pathways suggest an overall wetter future for Kenya. There is therefore some exposure to heavy downpours and sustained periods of rainfall likely to increase at the project region.
Sea Level Rise	Current	The project is located far away from the effects of sea level rise
	Future	The project is located far away from the effects of sea level rise
Storm Surge	Current	The project area has never experienced storm surge, and is also located far away from the effects of storm surge
	Future	No future storm surges are expected in the project location
Strong Winds	Current	The project location has never been exposed to strong winds due to tropical cyclones, and there is no known risks of strong winds in the area
	Future	Although projections of future winds are uncertain, it is not expected that there will be any change in the wind events in the project area.

KEY

Insufficient Understanding	Not Exposure	Slightly Exposed	Moderately Exposed	Highly Exposed

7.2.3 Potential Impacts on Project's Physical Components

This section presents the detailed results of screening for relevant subsectors to the transportation project, including the project's investments in physical structures. The impact ratings are based on the exposure ratings and the understanding of the project's sensitivity.

The potential impact of climate and geophysical hazards on the project's roads investments is rated based on exposure ratings for the location, and an understanding of the project's historical and future sensitivity to these risks. This helps in judging the effect that these impacts may have on the investment, and the ability of the project to sustain and enhance resilience of roads infrastructure and connectivity under a changing climate. Extreme temperatures and heavy precipitation, for example, can impact the performance and durability of the physical components of road infrastructure (e.g., asphalt, pavement, gravel), and take road infrastructure out of service temporarily or permanently.

Current Scenario

Temperature: There has not been any records of prolonged periods of high temperatures in the project location which have caused minor pavement cracking in the past. The evaluation of the existing pavement does not show any signs of cracking due to extreme temperatures. Recent trends do not point to a sharp increase in the frequency or maximum temperature of heat waves. At this point, no design decisions have been made that would increase the temperature ratings of pavement materials.

Flooding: In terms of flooding, some areas through which the road passes is occasionally subject to minor flooding from extreme precipitation, eg near rivers and streams such as at River Nzoia, although there is no record of the road bed incurring any damage. Recent trends do not indicate a notable increase in heavy downpours, but flash floods cannot be ruled out once in a while in the project area. Pavement materials have been selected to accommodate historical events. To reduce the physical impacts of flash flood and potential damage to the

infrastructure, the drainage infrastructure will be upgraded under this project. The drainage structures will be designed for 10 yr, 25yr and 50 yr flood level for pipe culverts, box culverts and bridges respectively.

Wind: At this point, there are no historical information on strong winds, and therefore, no design measures are in place to reduce risk from strong winds.

Potential impacts therefore includes;

- Pavement cracking may occur, or maintenance costs may slightly increase due to extreme temperature.
- Traffic may be slowed during heavy downpours.
- Maintenance costs may increase slightly due to greater erosion from extreme and continuous precipitation

Conclusion:

Overall, damage to road assets from extreme precipitation and flooding is likely to be **low** as design measures have accounted for current trends and events. Damage from strong winds is also likely to be low given past experience. There may be damage from extreme temperatures but design considerations to increase resistance to temperature, especially for pavement, will be incorporated. **The Current rating is Low Potential Impact.**

Future Scenario

In line with rising mean annual temperatures, the annual number of very hot days (days with daily maximum temperature above 35 °C) is projected to rise substantially and with high certainty, in particular over central and eastern Kenya (see figure 8-1). Under the medium / high emissions scenario RCP6.0, the multi-model median, averaged over the whole country, projects 25 more very hot days per year in 2030 than in 2000, 36 more in 2050 and 59 more in 2080. In some parts, especially in northern and eastern Kenya, this amounts to about 300 days per year by 2080.

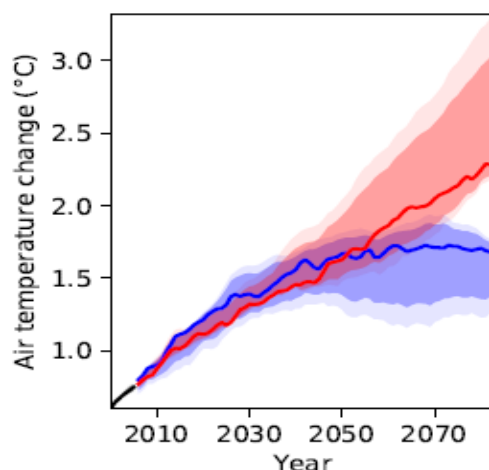


Figure 7-1 Air temperature projections for Kenya for different GHG emissions scenarios

Based on above, extreme temperature conditions may increase the risk of damage to road assets slightly, especially on pavement. However, pavement binder can be modified easily in the future, so the decisions made today are not locked in for future decades.

Any increase in extreme precipitation, namely heavy downpours, may expand damage from flooding in low areas or damaging the road shoulders and edges through soil erosion. However, according to different climate change scenarios (called Representative Concentration Path ways, RCPs, projections for Kenya show a slight decrease in the exposure of major roads to river floods under RCP2.6 and an increase under RCP6.0. In the year 2000, 1.9 %

of major roads were exposed to river floods at least once a year, while by 2040, this value is projected to change to about 2.0 % under RCP6.0. In a similar way, exposure of urban land area to river floods is projected to barely change under RCP2.6, whilst increasing from 0.11 % in 2000 to 0.13 % in 2080 under RCP6.0¹². Design decisions concerning the road bed and the elevation of the road at key areas are long-lasting and costly to modify, and will be considered for this road project.

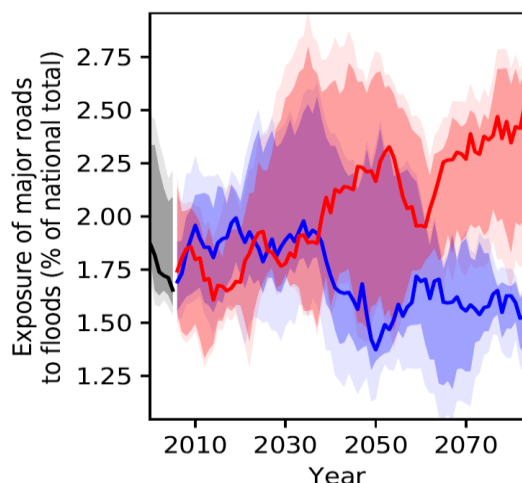


Figure 7-2 Projections of major roads exposed to river floods at least once a year for Kenya for different GHG emissions scenarios.

Projected increases in extreme precipitation, namely heavy downpours, may expand damage from flooding in low areas or damaging the road shoulders and edges through soil erosion. Design decisions concerning the road bed and the elevation of the road at key areas are long-lasting and costly to modify, and will be considered for this road project. Overall, the potential physical damage from extreme temperature and flooding is not expected to change the current rating of Low-risk Potential. **Therefore, the Future rating remains Low Potential Impact.**

7.3 Potential Contribution of The Proposed Road to Climate Change

7.3.1 Effects of social and economic factors in the project area

The road construction will have significant improvement in provision of access to public services and facilities, thereby improving the lives of people in the region. This will lead to development of the area and some towns along the road becoming more urbanized. This will lead to an increase in population that can lead to environmental degradation, pollution in towns along the road, and areas served by the road, increasing the potential climatic hazards of the project. This slightly increase impacts of the hazards identified for the project.

The road construction will increase the level of economic activities in the country in sectors such as transport, industrialization, agriculture and energy all which have their footprints on climate change Consumerism is responsible for manmade climatic change. High rate of growth in production and consumption of non-essential goods has led to deterioration of environment leading to climatic change. According to studies, between 60-80 percent of the impacts on the planet come from household consumption.

7.3.2 Firewood use and charcoal burning

Access to clean modern energy sources is low in the areas served by the project, where more than 90% of the population use firewood and/or charcoal as source of energy. Since firewood burning produce carbon dioxide, a major greenhouse gas, biomass burning emissions significantly influence the Earth's atmosphere and

¹² https://www.adaptationcommunity.net/wp-content/uploads/2021/01/GIZ_Climate-risk-profile-Kenya_EN.pdf

climate. Biomass burning has both short and long-term impacts on the environment. Vegetation acts as a sink; a natural storage area for carbon dioxide by storing it over time through the process of photosynthesis. As burning occurs, it can release hundreds of years' worth of stored carbon dioxide into the atmosphere in a matter of hours. Burning also will permanently destroy an important sink for carbon dioxide if the vegetation is not replaced.

The road development will lead to increased demand for food by the contractor's camp which would mean increased use of firewood in local restaurants and by the locals. Also, when the road is complete there will be an increase in firewood and charcoal sales as there will be ease of transporting them from one area to another.

7.3.3 Greenhouse gases (GHG) contribution

Construction activities of the road project, and operation phases of the project will contribute to GHG emissions in various ways including but not limited to transport of materials; Earthworks; Pavement construction; construction of Structures such as bridges; and provision/construction of Equipment/road furniture. A better road will lead to more vehicles using the road, especially on this section of the road where it is less frequented because of poor road condition. Traffic increase and congestion on roads not only increases the fuel consumption but consequently leads to increase in carbon dioxide emissions, outdoor air pollution as well as increase in the exposure time of the passengers.

In order to reduce the impacts of GHG emissions related to the road, the following is proposed;

- Use of more efficient construction equipment and plants with low emissions,
- Use of labor-intensive methods where applicable, (eg bush clearing)
- Reduced use of lime/cement for base and subbase treatment to avoid emissions from and transport of the same
- Optimal use of bituminous materials for the pavement structure
- Use of solar lighting where possible for lighting along the centres

7.3.4 Spurred Economic development

The project road will also improve connectivity between other parts of Kenya, and as far as South Sudan. Improved road connectivity will spur economic development as creation of opportunities to invest and spend increase with the volume of goods and services accessible to local population and on transit. This will require conversion of land from natural habitat to commercial, residential, industrial, and other uses as more and more people settle in the area.

In addition, the upgraded road will provide faster movement of people, goods and services in the area, which will likely stimulate more public and private investments such as facilities which include but not limited to schools, health centres, water, energy, and sanitation mainly in the urban centres. This growth means the social and economic conditions of these people will grow, improving and uplifting the standards of living along the proposed road project.

However, this will contribute to climate change in various ways through production of goods which use fuel and other products that emits GHG gases. Transportation of these goods and services as the region develops also means more vehicles will use the road, which will also contribute to GHG emissions.

Although unavoidable, GHG emissions from spurred economic development can be reduced through;

- Implementation and commitment of Government policies to reduce GHG emissions, eg Kenya's Nationally Determined Contribution (NDC) to abate GHG emissions by 32% by 2030
- Sensitization of people on climate change
- Use of alternative means of energy eg solar power, among others

7.4 Climate Change adaptation component of the road project

The climate change adaptation component of this project serves the purpose of:

- Protecting the road infrastructure from the impacts of climate change; and

- Ensuring that the road infrastructure does not increase the vulnerability of the surrounding area to climate change

Various options can be employed to climate for adaptation in development of road either through engineering options, planning and ecosystem approaches or by do nothing option.

a) Engineering options

- Hardening the design of key road infrastructure to be more resistant to climate change impacts
- Designing infrastructure to be cheaply and easily replaced if damaged

b) Planning and ecosystem approaches

- Strengthening the capacity of national and county institutions responsible for climate change coordination; climate-related data and information collection.
- Promotion of tree planting activities
- Public awareness on the importance of tree planting and conservation

The proposed road design incorporates various considerations aimed at adapting to climate change especially to extreme events such as extreme temperature and floods in the project area: This includes;

- selection of appropriate type of pavement;
- proper design of drainage facilities;
- proper level of road embankment;
- use of water pans and boreholes where appropriate.

7.5 Adaptation/Mitigation Measures

Although there is no baseline data on CO₂ emission in the project area, it is expected that in the long run CO₂ emission into the atmosphere increases due to an increase in traffic on the road. Measures aiming at mitigating climate change include:

Item	Responsible party
Planting of trees made of various indigenous species;	KFS/ KeNHA
Proper reinstatement of borrow pits;	KeNHA/
Minimizing of bush clearing during the construction works,	KeNHA
Sensitization of communities and youth on climate change related topics such as bush clearing, bush fires, conservation agriculture, etc.	Counties
Sensitize the contractor on issues relating to climate change.	KeNHA
Accordingly, implement the existing climate change (CC) response strategy/policy focusing on infrastructure.	GoK / County governments
Initiate early warning and adaptation systems as well as investing in integrated assessment models.	GoK / County governments
Proper engineering interventions for construction of vulnerable and critical areas. This will enable developing of site-level adaptation strategies and enhance climate resilience of infrastructure operations.	KeNHA / Consultant
Green infrastructure should be secured in road expansion and rail construction.	GoK / KeNHA
Improve on met data disclosure and transparency.	GoK
Conduct vulnerability assessments at local/regional level to manage interdependencies.	GoK / County governments
Improve waste management systems more so on solid waste through cleaning and campaigns in all phases	KeNHA / County governments

More afforestation initiatives should be undertaken concurrently with the project implementation to counter loss of vegetation and impacts of soil erosion.	KFS / KeNHA / County governments
National climate change adaptation and mitigation measures should be devolved to counter climate change effects at County level.	GoK / County Governments
Sector specific adaptation and mitigation measures should be formulated and adopted for a holistic management of Climate change impacts.	GoK / County governments

In order to minimize impacts on the vulnerable groups due to climate change impacts, the project components include building amenities such as markets in major centres along road to cater for traders and vulnerable groups (such as women and PWD) who are trading in open centres along the road reserve on semi-permanent structures which are not suitable for the traders during heavy rainy seasons as an adaptation measure.

7.6 Linkages to Climate Change Adaptation measures

Kenya takes climate change seriously, as demonstrated by the enactment of the Climate Change Act (Number 11 of 2016) requires the Government to develop five-year National Climate Change Action Plans (NCCAP) to guide the mainstreaming of adaptation and mitigation actions into sector functions of the National and County Governments. NCCAP 2018-2022 aims to further Kenya's development goals by providing mechanisms and measures to achieve low carbon climate resilient development in a manner that prioritises adaptation. This plan builds on the first Action Plan (2013-2017) and provides a framework for Kenya to deliver on its Nationally Determined Contribution (NDC) under the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC). NCCAP 2018-2022 guides the climate actions of the National and County Governments, the private sector, civil society and other actors as Kenya transitions to a low carbon climate resilient development pathway.

The government of Kenya has committed through Nationally Determined Contribution (NDC) in December 2016 to undertake a mitigation contribution towards the Paris agreement, by abating her GHG emissions by 32% by 2030, relative to the Business as Usual (BAU) scenario of 143 MtCO₂eq, inline her sustainable development agenda. The priority mitigation and adaptation actions in the NDC will be implemented through the NCAAPs as set out in the Climate Change Act, 2016, therefore availing opportunity to enhance the ambition every 5 years with the revision of the NCAAPs.

Responsibility for implementing national climate change policy largely rests with county governments. Sectors like agriculture and environmental management are devolved functions of county governments, and as such, most climate actions (prioritised in the National Climate Change Action Plan,) will be implemented at the county level, and counties have to mobilise resources to undertake climate change actions as they don't get sufficient allocations from the national government. Accordingly, the Climate Change Act requires county governments to mainstream climate change into their five-year County Integrated Development Plans. Moreover, each county is required to designate a member of the County Executive Committee to coordinate climate change affairs and annually report on implementation to the County Assembly and the National Climate Change Directorate.

Kenya has pioneered a climate change governance mechanism to increase finance for local climate action. The County Climate Change Fund (CCCCF) consists of climate legislation enacted by county governments and a county-controlled fund that finances climate projects identified and prioritised by local communities. Originally designed by a multi-stakeholder coalition with the aim to increase capacity for local development planning and climate change adaptation in some of Kenya's most vulnerable regions, the CCCC evolved to encompass mitigation measures and effectively influenced national climate policy. The CCCC is a key component in a comprehensive national planning and financing framework that strengthens capacity and channels money from international and national sources to community-driven climate action priorities. Successful and sustainable CCCC ensure local ownership and guarantee an annual budget drawn from counties' own-funds.

Therefore, the National and county governments, together with project developers in the country have to work hand in hand to ensure the proposed adaptation measures and commitments in the NDC are met to ensure issues of climate change are addressed at all stages of project development.

8 ALTERNATIVES TO THE PROJECT

It is expected that the road corridor will follow the existing alignment as much as possible. There are however several sections that may be considered for realignment for geometry and safety suitability but without compromising the environmental and social requirements. Limitations in project alternatives are based on a number of factors including land acquisition (the cost of land procurement and displacement of people), road design speeds, alternative mode of transport, alternative project routes, topography and linkages to the social and economic centers along the corridor. Since the road is existing, there are two major alternatives with the reconstruction options having sub-alternatives based on the proposed pavement structure options and the realignment. The two main options are “with the project” and “without the project”.

8.1 Alternative alignments

The road is part of the most important link between Eldoret and Kitale, and beyond serving the North western counties of Trans Nzoia, Kakamega North, Uasin Gishu North, and West Pokot. Alternative alignments would be considered if current baseline environmental and social conditions encountered are too sensitive to the extent that the impacts of implementing the proposed alignment would be devastating, irreversible and environmentally and economically unjustifiable. For the major section of the current alignment, no such sensitive conditions were established.

The proposed project road alignment is on an existing road reserve and its reconstruction will not involve any major horizontal or vertical realignment except at few locations in Soy where some resettlement will be necessary due to either encroachment of the existing reserve or optimisation of the engineering design for safety reasons.

8.2 Alternative Modes of Transport

The project road is the only relatively fast, cheap land transportation means in the project area. Currently, it is not feasible to complement or to substitute the project road with rail, and water transport, especially for land transport, because of its reliable, cheap, and faster between Eldoret and Kitale. The Eldoret Airport at Eldoret, and Kitale airstrip is at the end of the project have flights but they are not affordable to all, thus the road offers the best mode of transport for the common citizens.

8.3 Alternative 1: “No action” scenario

Eldoret and Kitale towns are already connected by the existing road on bitumen standards, therefore there is no standard “no action” scenario if the strategic objectives of the Government of Kenya in connecting the two areas and in fact the entire region still exist. There is no other macro-transport alternative like water, air and overland rail which can be applicable to connect these places.

This scenario will mean just maintaining the road in passable condition with intermittent repairs undertaken from time to time. This scenario is therefore to assume that similar interventions will continue in the future and that the maintenance strategy will be to ensure that the road remains passable. The maintenance strategy may involve any of the following options:

- Heavy routine maintenance. This would involve clearing blocked drains and culverts and treatment of the road surface;
- Periodic maintenance. This would spot repairs to failed sections of the road surface and measures to restore drainage to good condition; and
- Timely routine maintenance. This would involve keeping drains in good shape and cutting back vegetation and weeds.

The option is preferable to implementation of the project since it will avoid causing any adverse environmental impacts associated with the road upgrading activities. Leaving the project road in this condition is not a viable option, especially as the desired objective of construction of the project road has not been achieved. This implies the following benefits will be foregone:

- i. The development of economic and social exchanges between the neighbouring regions,
- ii. Provision of access to the whole population, regional and national economic integration,
- iii. Employment opportunities for local residents along the project road; and
- iv. Reduction in travel time and cost

In addition, the status quo will mean that the area will still face problems of poor access to social services, poor economic interconnectivity and road safety will be compromised. From the foregoing, the no action alternative is not environmentally, socially and economically the preferred option.

8.4 Alternative 2: With Project Option

The option of improving the existing pavement alignment as is through reconstruction, provision of drainage and safety components could be considered. This option consists of implementing the construction of the Lesseru – Kitale –road. Construction of the project road, in addition to the section between Kitale and Lokichar is critical and will promote and facilitate a regional economic integration between Sudan and Kenya, direct road access to the port of Mombasa for South Sudan's export and import, as well as facilitating relief and re-construction efforts in all sectors in South Sudan.

The expected benefits are defined as follows:

- (i) Savings in vehicle operating cost;
- (ii) Savings in maintenance expenditures;
- (iii) Time savings to passengers and freight;
- (iv) Reductions in the number and severity of accidents;
- (v) Induced exogenous benefits, such as industrial, agricultural or tourist activities that were previously constrained by poor access;
- (vi) Social benefits arising from the increased mobility of the population and improved accessibility to health, education and other services.

From the economic analysis carried for the project, it is recommended that the project road be considered for reconstruction at the earliest possible opportunity. The HDM-4 analysis gives very impressive results with an IRR of over 24%. This alone shows that the benefits accruing to the project are adequate. The project is thus viable on the basis of HDM-4 analysis alone while the sensitivity test and risk analysis also confirm viability of the project.

In addition, the benefits to the Kenyan economy as a whole and the local economy will be substantially higher, although no exact figure can be provided of these additional benefits. These include the non-quantifiable exogenous benefits accruing to the project. On the basis of regional integration and cooperation, it is also noted that the project will yield numerous benefits to South Sudan as it forms a major arterial that will link the oil rich country to the port of Mombasa.

The "with project" alternative can further be explored based on the Construction materials and Technology options.

8.4.1 Analysis of Alternative Construction Materials and Technology

The implementation of the project will entail the use of materials that will be sourced locally provided they meet the required standards and are environmentally friendly. The adoption of use of locally available and internationally accepted materials is aimed at promoting the local industry and minimizing the cost of transport. The consultant evaluated recycling of existing pavement materials for subbase and base to reduce exploration of new materials for the road. Due to high cost of milling and recycling the pavement, and lengthy procedures required to meet the required design standards, the Consultant has proposed use of new materials to manage cost of the project. However, the contractor will be given the option to mill and recycle the pavement provided the required subbase material standards are met, without incurring extra costs to the project. Equipment that saves energy and water will be given priority without compromising on cost or availability factors. On the alternative construction materials and technology, rainwater should be harvested and for supply to labour camps for flushing toilets and other non-

domestic activities. Asphalt mixers, crushers and other construction equipment and machinery will be incorporated with pollution control devices like dust arrestors/precipitators, emission control, noise abatement devices and desulfurization devices.

The project will also evaluate the use of modern technologies that comply with the environmental and safety issues and are cost effective. This includes evaluation of green technologies for pavement options that reduce usage of materials that sometimes results to pollution of the environment.

9 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

9.1 Environmental and Social Management Plan

The Environmental and Social Management Plan (ESMP) is developed to demonstrate how site-specific concerns and mitigation measures are addressed during construction and operation of the proposed project development activities. The ESMP has been developed with project knowledge and information available to date. The impacts originating from the project road development (construction and operation phases) have been identified. To ensure that the negative environmental and social impacts can be controlled and mitigated effectively, a thorough scientific management and monitoring plan has been prepared. This will ensure that all the targets are achieved and that the environmental responsibilities and obligations of EIA are met during project implementation. As a progressive approach, components of the ESMP may require updating throughout the initiation and scheduling of plans for the project. Thus, this is a working document subject to amendments whenever new information is received or project road conditions change.

9.2 Purpose and Objectives of ESMP

The ESMP describes the range of environmental and social issues associated with the project and outlines corresponding management strategies that will be employed to mitigate potential adverse environmental impacts. The ESMP conveys the Project's environmental and social constraints. The project will comply with all local laws and regulations, which seek to ensure that the road construction and operation does not adversely affect the environment and social community resources.

The project supervision may periodically revise the ESMP in consultation with the Contractor, and subject to the approval from National Environment Management Authority (NEMA). The revisions may be made to accommodate changes in work, weather, and road conditions. The ESMP should be made available to all the project staffs.

The objectives of the ESMP are:

- To serve as a commitment and reference for the project planners and implementers including conditions of approval from NEMA;
- To serve as a guiding document for the environmental and social monitoring activities for future studies, on requisite progress reports;
- To provide detailed specifications for the management and mitigation of activities that have the potential to impact negatively on the environment;
- To provide instructions to relevant project personnel regarding procedures for protecting the environment and minimizing environmental and social effects, thereby supporting the project goal of minimal or zero incidents;
- To document environmental and social concerns and appropriate protection measures; while ensuring that corrective actions are completed in a timely manner;
- To address capacity building requirements within the project team, if necessary.

9.3 Auditing of the ESMP

KeNHA and the contractor shall conduct regular audits – quarterly and annual, to the ESMP to ensure that the system for implementation of the ESMP is operating effectively. The audit shall check that a procedure is in place to ensure that:

- Environmental, Social, Health and Safety Systems are in place and operational during the project implementation, and identify any gaps for improvement;
- The ESMP being used is the up to date version;
- Variations to the ESMP and non-compliance and corrective action are documented;
- Appropriate Environmental, Social, Occupational Health and Safety trainings of personnel is undertaken;
- Emergency and safety procedures are in place and effectively communicated to personnel;

- A register of major incidents (spills, injuries, complaints) is in place and other documentation related to the ESMP; and
- Ensure that appropriate corrective and preventive action is taken by the Contractor once instructions have been issued.

9.4 Responsibilities for the Implementation of the ESMP

In order to ensure the sound development and effective implementation of the ESMP, it will be necessary to identify and define the responsibilities and authority of the various persons and organisations that will be involved in the project. The following entities will be involved in the implementation of the ESMoP:

- Kenya National Highways Authority (KeNHA);
- Ministry of Transport, Infrastructure, Housing and Urban Development;
- National Environment Management Authority;
- Supervising Consultant;
- Construction Contractor;
- Directorate of Safety and Health Services (DOSHS)
- Uasin Gishu, Kakamega, and Trans Nzoia County Governments.

9.4.1 Kenya National Highways Authority (KeNHA)

KeNHA will be responsible for:

- Overseeing or appointing qualified and competent team to oversee environmental, social, health and safety (EHS) during the Project cycle;
- Review and approve Contractor's Environmental and Social Management Plan (CESMP);
- Carry out targeted Environmental, Social, Health and Safety (ESHS) training to the Supervision Consultant and contractor's teams;
- Regular monitoring (monthly) and supervision of Implementation of the ESMP;
- Carry out regular compliance ESHS audits including developing corrective action plans;
- Ensuring that during construction and operations, the NEMA license conditions are adhered to since it's the principle holder of NEMA license;
- Ensure the project is complying with ALL the Bank Safeguards Policies that are applicable to the project.

9.4.2 Ministry of Transport, Infrastructure, Housing and Urban Development

This ministry is formulated to facilitate development and sustenance of transport infrastructure, maritime economy, public works and housing for sustainable socio-economic development. The Ministry has five state departments. The State Department for Infrastructure is one of the Departments whose functions include policy management for road development. KeNHA falls under the State Department for Infrastructure.

9.4.3 Ministry of Environment and Forestry

The Ministry of Environment and Forestry's mandate is to undertake National Environment Policy and Management, Forestry development policy and management, Development of re-afforestation and agro-forestry, Restoration of strategic water towers, Protection and conservation of Natural environment, Pollution control, Conservation and protection of wetlands and Climate change affairs.

The facilitates the enabling policies, legal and regulatory reforms for promoting sustainability of the environment and forest resources, while at the same time, mitigating the effects of climate change.

9.4.4 National Environment Management Authority

The responsibility of the National Environment Management Authority (NEMA) is to exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment and to ensure that all mitigation measures proposed are implemented.

9.4.5 Kenya Forest Service (KFS)

The KFS mandate is to provide for the development and sustainable management, including conservation and rational utilization of all forest resources for the socioeconomic development of the country and for connected purposes. In this regard, the road project construction will involve clearing of vegetation along the Right Of Way and in the siting of the workers camp. KFS should therefore liaise with KeNHA to ensure that an afforestation programme is carried out concurrently with the construction activities to mitigate the effects of vegetation loss in the area.

9.4.6 Kenya Wildlife Service (KWS)

The mandate of KWS is to conserve and manage wildlife in Kenya, and to enforce related laws and regulations thereof. The project area is characterized by wildlife populations that should be protected during project implementation and operation. The project proponent should therefore involve KWS in the road design to identify wildlife sensitive areas and implement measures that adhere to wildlife protection.

9.4.7 Water Resources Authority (WRA)

The authority is mandated to safeguard the right to clean water by ensuring that there is proper regulation of the management and use of water resources, in order to ensure sufficient water for everyone- now and in the future.

Although water is not scarce in the area, there will be an increased demand for water during the construction of the proposed road for the civil works and domestic purposes. This will require the contractor to provide for his own water need without straining the local sources. It is the responsibility of the WRA to authorize the abstraction and use of water for the project purposes sustainably.

9.4.8 National Lands Commission (NLC).

It is the responsibility of the NLC to monitor and have oversight responsibilities over Land Use Planning throughout the country. It will therefore oversee the land take and compensation procedures involved in the proposed road project.

9.4.9 Construction Contractor

The Contractor will be responsible for;

- Preparing a Contractor's Environmental and Social Management Plan (CESMP) that will comply with the requirements of the EIA/ESMP and the Standard Specifications for road works in Kenya, which include specifications for environmental and social protection and waste disposal, borrow pit and quarry acquisition and exploitation, landscaping and grassing among others.
- Carry out environmental and social assessment for the project auxiliary sites
- Operationalize, monitor and report on the implementation of the CESMP on monthly and quarterly basis (or as required by the Supervision consultant and KeNHA).
- Employ competent and qualified separate environmental and social experts on fulltime basis to manage and monitor implementation of CESMP.
- Employ fulltime personnel to manage Occupational Health and Safety issues for the entire duration of the project.
- Report any environmental, social, health and safety incidents to the Supervision Consultant

9.4.10 Supervising Consultant

The Supervising Consultant will be responsible for;

- Oversee the construction programme and construction activities performed by the Contractor, in compliance with the ESMP.
- Employ qualified full time Environmental and Social Specialists in its team to co-ordinate all aspects of the environment and social during project implementation.
- Review and approve the CESMP and other associated plans (eg rehabilitation/decommissioning plans).
- Daily and regular monitoring, reviewing and verifying the implementation of the project's ESMP by the contractor,
- Proposing additional appropriate mitigation measures that may be required during the project's implementation.
- Keep track of project compliance regarding permits and approvals necessary from the relevant authorities.
- Conducting and coordinating training to the contractor's team on issues relating to environmental and social issues.
- Report on his monthly and quarterly reports (or as required) on the ESMP aspects throughout the project implementation duration.

9.4.11 Directorate of Safety and Health Services (DOSHS)

DOSHS will be responsible for;

- Registering and Permitting of work place for all the work sites and camp sites for the project;
- Inspection and auditing of workplaces to ensure they are adhering to OSHA 2007.
- Receiving and investigating any severe incidents reported on worksites

9.4.12 Community Based Organizations and Civil Society Groups

CBOs and local civil society groups can play a major role in ensuring that the local people are participating actively in the implementation of the project through representation in areas such as grievance committees, ensuring the local communities benefit from the project activities, and that the local communities are consulted widely on the project, among others.

The CBOs role in the project will include but not limited to;

- Participate in training and enhancing the capacity of the local communities in poverty reduction strategies proposed by the Social Assessment;
- Ensure communities are meaningfully consulted on the project;
- To encourage ownership of roads by the local communities by involving them directly in the process of monitoring of road construction;
- Represent the underrepresented groups such as women and youth, PWDs, etc
- Oversight role in ensuring that the proposed environmental and social mitigation measures are implemented as proposed (especially if there are any local organizations that deals with local environmental and social issues, wildlife etc).

9.4.13 County Governments

The relevant departmental officers in the County Governments should be called upon where necessary during project implementation to provide the necessary permits and advisory services to the project implementers.

9.5 Environmental and Social Management Plan (ESMP) during Construction and Operation Phases

An Environmental and Social Management Plan (ESMP) is prepared as a logical framework within which the identified negative environmental and social impacts will be mitigated and monitored during the construction process of the development project.

The construction phase ESMP is presented in **Table 9-1**, below.

NB: Bill 1 provides a lumpsum amount to be used for environmental and social mitigation measures for the project. Where the table refers to Bill No. 1, a fixed amount has been assigned to the mitigation measures and has to be used specifically for environmental and social impacts as identified in the ESMP.

Table 9-1 ESMP during Construction Phase

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
ENVIRONMENTAL IMPACTS					
Vegetation Loss	Low	- Minimize unnecessary vegetation clearance - Revegetation and landscaping of vegetation and trees along the road - Siting of camp sites should be done away from densely vegetated areas. - Compensate for the valuable trees to be felled within the settlements as per the project RAP recommendations.	- Vegetation cover along the road reserve that is also safe to the road users. - Landscaping and grassing on road reserves and especially on steep slopes - Recovery of tree cover lost in Kitale	Contractor , RE, KeNHA	No additional cost to the BoQ (see habitat loss and disturbance)
Workmen's camps management	High	- Locate camp sites away from residential areas and settlements - Contractor to prepare a Waste Management Plan for all worksites, especially the campsites - Provision of adequate water and sanitation (fixed toilets with running water and changing rooms) at the campsites, separate for men and women; - Provide for septic tanks and soak pits - Pay special attention on waste generation and disposal, sanitary conditions at the sites, which includes exploring an option of having a third party to manage the various waste generated at the campsites, including regular treatment of pests and rodents; - No waste at the campsite shall be buried or burnt; contractor to segregate waste, reuse, compost or use licensed third party service providers for disposal of waste; - Treatment of the campsite for rodents and other pests shall be done regularly; - Completely decommissioning of the camp including permanent foundations and floors to discourage future informal settlement at the campsite	Campsite meeting environmental and social conditions of the project	Contractor, RE	Costs build in the planning and administration costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
Excessive Noise and Vibration	Medium	- Contractor to prepare Health and safety plan; - Monitor environmental and occupational noise levels as per the EMCA provisions of regulations and World Bank Group EHS guidelines; - The noise emission characteristics should be considered during selection and mobilization of construction equipment; - Where feasible, fit equipment with rock mufflers, sound insulations, silencers to lower the levels of noise emission; - Sensitize construction workers to switch off machinery and vehicles when not in use; - Provision of appropriate and adequate Personal Protective Equipment (PPEs) to workers; - Proper selection of project auxiliary sites, e.g. locate noisy operations like batching plant away from the densely settled areas; - Where noisy activities must be undertaken near sensitive receptors, the neighbouring occupants must be informed in advance and works limited to day time only.	Noise levels meeting conditions of the applicable standards	Contractor, RE, County governments	To be provided under Bill No 1 – KSHS 2,000,000 for PPEs (ear plugs, maintenance of vehicles in administrative costs of the contractor)
Construction Dust and Air Quality	High	- Sprinkling water (at least twice a day) on the accesses and excavated surfaces during the construction period to suppress dust generation; - Limit the speed of construction vehicles (maximum speed limit 40 kph/25 mph) on earth road; - Where feasible, fit equipment with rock mufflers, sound insulations, silencers to lower the levels of noise emission; - Provision of appropriate protective personal equipment including respirators and dustcoats to exposed workers; - Ensuring the location of material stockpiles are away from human settlements and business premises; - Covering loaded trucks during the transportation of material; - Sensitize workers on best practice on management of air pollution from vehicles and machinery; - Demolition of existing structures shall be done in a manner that the dust from demolitions can be controlled;	Low particulate matter in the air meeting the applicable standards	Contractor, RE	To be provided under Bill No 1 - Kshs 5 million (Dust masks and other accessories) (NB water sprinkling part of the main BoQ – Bill No 9)

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		Undertake regular air quality (dust level) monitoring and conduct corrective adjustments where necessary.			
Generation of Solid Wastes	Medium	- Contractor will prepare Solid Waste Management Plan - Waste be managed as per Environmental Management and Coordination (Waste Management) Regulations 2006; - Utilize the 3C strategy – Reduce, Reuse and Recycling; - Reuse excavated top soil for landscaping of the site as far as practical; - Segregation of solid wastes and provision of suitable and well labelled waste receptacles within the camp and at active construction sites; - Disposed solid waste at designated sites through licensed waste handlers; - Sensitize resident workers and service providers (e.g. food vendors) at project sites on proper waste management practices especially hazardous materials and risks of contaminations.	Proper waste management and disposal Minimal accumulation of waste	Contractor, RE, Contracted Licensed waste handlers	TO be provided under Bill 1 - KShs. 2,500,000 annually for waste management (total 7,500,00 for duration of the contract)
Increased Soil Erosion	Low	- Material excavation should be minimized and restricted to designated locations; - Excavated material should be properly piled and managed - sprinkled with water and covered (where possible) to prevent possible wash-out into seasonal watercourses. - The contractor should ensure that construction related impacts like erosion and cut slope destabilization should be addressed through rock pitching; - Re-vegetation should be done in tandem with construction activities to avoid exposure of bare ground to agents of erosion; - Enforce landscaping and restoration of the construction site prior to decommissioning of the construction site; - As part of enhancing environmental protection in the region, the contractor should start a tree planting campaign for reforestation by incubating a tree nursery programs along the	Controlled soil erosion Proper compaction of surfaces Proper Landscaping and grassing of embankments	Contractor, RE	Part of Bill no 8

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		road. The types of trees to plant shall be through the guidance of the local KFS or through involvement of the Ministry of Environment and Forestry			
Contamination by Liquid Waste and Hydrocarbon Spills	High	- Contractor will prepare waste management plan - Machinery maintenance should be done only on purpose-built garages that meet hydrocarbon containment measures and controlled drainage; - Fueling and servicing of vehicles will be undertaken from only designated and lined area - Contractor will be required to have an emergency spill containment and response plan; - Minor service and washing areas placed/ constructed with containment basins to ensure that the surrounding areas (including groundwater) are not polluted; - All sanitation waste, grey water runoff or uncontrolled discharges from the site/working areas (including wash down areas) to any water courses shall be contained, treated and properly channeled; - Flash toilets at camp sites should be connected to septic tanks or other treatment facilities approved by the county government and NEMA; - Water containing such pollutants as cements, concrete, lime, chemicals and fuels shall be discharged into a conservancy tank for removal from site.	Zero tolerance on liquid waste and hydrocarbon spills	Contractor, RE	To be provided under Bill No 1 - Kshs Kshs 3 million Rest of the budget under administrative costs of the contractor
Habitat Loss and Disturbance	Low	- Locate project auxiliary features like camps and batching plants in areas already disturbed or outside of wildlife habitats. - Construction activities should be confined on the demarcated corridor and discourage movement or intrusion into wildlife habitats; - Throughout the construction cycle, project staff should be sensitized regularly on wildlife conservation.	Minimal vegetation clearance Minimal disruptions of habitat life	Contractor, RE	Under Bill No 1 Extra KShs. 5,000,000 for reforestation program through establishment of a tree nurseries along the road project

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		- The Contractor should sensitize workers on nature conservation, and enforce unauthorized intrusion or use of the wildlife habitats through signed code of conduct; - After decommissioning contractor facilities, native vegetation should be replanted as restoration measures. Accredited sources of seedlings should be used (such as local KFS tree nurseries). - To avoid random off-road driving that leads to trampling of vegetation in sensitive habitats, vehicles should be provided with designated routes - Existing diversions and diversions should be considered before opening up new ones during construction.			
Impacts on Materials Borrow Sites	High	- All material sites shall be selected in consultation with the county governments and the local communities, and rehabilitation/decommissioning plans agreed to ensure the sites will not cause any social conflict within the communities. If borrow sites will be converted to water pans, proper communities and stakeholder engagement shall be conducted and agreed upon (through signing of agreements to exclude any future liability by the contractor) if such usage will be proposed by the community members. - The contractor shall carry out environmental and social assessment for all auxiliary sites and seek relevant statutory licenses including NEMA for proposed material sites to be used for construction works; - Construction materials including sand, stones and borrow materials must be sourced from duly approved sources only; - Materials haulage routes must be pre-determined to avoid unnecessary off road driving; - Contractor to develop a system of tracking materials received viz a vis utilization to ensure proper materials management to avoid wastage;	Properly rehabilitated material borrow sites No incidents/accidents at materials borrow sites	Contractor, RE	No additional cost to the BoQ Costs built in the planning and administration costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		- The contractor shall locate material sites away from settlements if possible; - Where material sites are located near settlements, the contractor shall carry out baseline studies of structural integrity assessments of nearby structures; - The contractor shall develop safety management plans for any blasting which shall require the blasting to be done by a qualified experts, sensitization and notification to locals on blasting times; - All material sites shall always be fenced with controlled entry at all times.			
SOCIAL					
Land take and disruption of livelihoods	Medium	- RAP Study Report for the project should be implemented to guide the compensation and resettlement process; - Compensation for all affected properties should be compensated before construction commences; - Grievance management system should be operationalized and maintained throughout the project implementation phase. All pertinent stakeholders should be involved in the compensation and grievance redress mechanism during implementation of RAP.	Do no harm for the PAPs Minimize livelihoods of the PAPs	KeNHA, Contractor, RE	Cost as per RAP Study Report Kshs <u>435,538,277</u>
Increased Water Demand	High	- The contractor to develop independent construction water sources to avoid straining existing local resources; - Consider supplementing ground water supplies with harvesting seasonal surface flows through pans and small dams that may also be handed over to the local communities; - The Contractor must adhere to the Water Act, 2016 and associated rules and regulations as administered by WRA and NEMA; and - Relevant water abstraction permits must be obtained from these authorities.	Minimal interference of water resources in the project area	Contractor, RE	No additional cost to the BoQ Under and administrative costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
Construction works induced traffic and inconveniences	Medium	- The contractor shall be required to formulate and implement a traffic management plan - Provision of alternative routes in areas where accesses have been disrupted; - Provision and maintenance of clear traffic signages of ongoing construction works, regulate speed limits and diversion signage to notify approaching traffic; - In urban areas, schedule delivery of materials to the sites during periods of light traffic between 9.00am - 12.00 pm and 2.00 pm - 4.00 pm during week days; - Contractor to carry out road safety awareness for community members and institutions along the project corridor - Obtain permission from inhabitants and county governments if diversion routes go beyond the Right of Way; - Reinstatement of diversion routes (and old tracks) to original condition; - Institute a traffic management plan incorporating adequate temporary signages and flagmen as necessary; and	Minimal disruptions of traffic due to construction activities Minimal accidents reported for contractors vehicles Observance of Code of Conduct	Contractor, RE	No additional cost to the BoQ Under Bill No 4 and 9
Disruption of Public Utilities	Medium	- Liaise with utilities providers (power, water, telecommunication) to identify affected sections of alignment of the utilities and provide cost to cover the relocation of the existing infrastructure; - Relocation plans shall include adequate notification of affected customers.	Minimal disruption of public utilities	Contractor, RE	Under Bill No 1 – Relocation of services
Communicable Diseases	Medium	Upper Respiratory Tract Infections (URTI) - Apply dust suppression measures - sprinkling water on the accesses and excavated surfaces – this shall be determined by the RE depending on the prevailing weather conditions; - Maintain a grievance register to log any complaints from local community; - Hold inductions for staff and people visiting the construction sites on the health and safety aspects;	No reported cases of communicable diseases	Contractor, RE	To be provided under Bill 1 - Kshs 6,000,000 For sensitization and awareness programs

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		- Provide dust masks for all staff and visitors to active construction areas; - The Contractor should plan work program's activities and timing to avoid emission impact on sensitive receptors, especially urbanized areas; - Install screens and scrubbers on crusher sites to minimize dust emissions; - Locate ancillary facilities away from residential/institutional to minimize dust or other emissions to the residents; - Regular maintenance contractors' equipments			
	Medium	Spread of HIV/AIDS, COVID, and Other STDs - KeNHA/Contractor should, in liaison with approved local service providers, provide HIV/AIDS awareness training to staff and the locals and monitor the efficacy of the awareness created during the project implementation period; - Sensitize workers on the need to refrain from risky behaviours; - Provision of condoms both male and female in the sanitary facilities and various locations for the members of public; - The unskilled workers should, as far as feasible, be recruited from among the residents of the project area and its immediate neighborhood to minimize labour influx; - Workers should be given regular leave, preferably monthly to cool off period and join their families - Regular sensitization and awareness, and provision of measures to reduce spread of COVID-19, and other communicable diseases.	Adherence to Code of Conduct by employees	Contractor, RE Appointed NGO	Kshs 15,000,000 for HIV/AIDS Awareness programs and campaigns (by a NGO) To be included under Bill No 25
Conflicts with local communities on labour issues	Low	- Contractor to formulate and implement a labour management plan for his workforce; - Contractor will be required to have a transparent external communication plan covering among others, how available opportunities will be advertised;	Local benefits from project construction in employment	Contractor, RE	No additional cost to the BoQ Costs build in the planning and administration costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		- The Contractor should prioritize employing locals as casuals to reduce the need for labour influx; - Consultations with the local council of elders to ensure that available opportunities are fairly distributed across different clan members; - Maintain a grievance register to log any complaints from workers and local community.			
Workers Welfare	Medium	- The contractor shall comply with the required Law of Kenya under DOSHS, and Labour requirements; - Have fulltime nurse on the campsite, with all first aid facilities available at all times; - In collaboration with local health facilities, ensure that the workers have access to health facilities in the area; - Contractor to ensure that first aid facilities are available at all times at the work sites, and arrangement to access to ambulance service; - The contractor shall provide portable water and mobile toilets (separate for women and men) for the workers at all worksites along the road; - The contractor has to ensure that for any personnel accommodation, suitable arrangements are made to meet the welfare and hygiene requirements and prevention of epidemics, taking into consideration issues like harsh weather conditions in the region, sanitation, etc. - Contractor should hire qualified Human Resources staff to manage labour related risks in the project	Adherence to labour laws Proper living and working conditions for the workers	Contractor, RE	No additional cost to the BoQ Costs build in the planning and administration costs of the contractor
Community Safety and Health	High	- Ensure that all active work areas have controlled access limited to authorized persons only; - Establish and maintain continuous liaison with the host communities including sensitization on safety and health issues on construction sites;	Minimize health and safety risks to the local communities	Contractor, RE	No additional cost to the BoQ Under Bill 9, and administrative costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		• Prepare and implement construction traffic management plan, incorporating safety of other traffic; • Install and maintain appropriate safety and warning signages along road sections and all other construction sites and facilities; • Ensure proper and adequate provision of sanitation and waste management facilities at all construction sites; • Maintain a system of receiving and responding to any safety concerns by the communities; • Undertake general and third-party insurance liability covers as appropriate.			
Labour influx and Social Change	• High	• The contractor shall develop a labour management plan for project; • The Contractor should prioritize employing locals as casuals to reduce the need for labour influx; • Ensure there is adequate security and reasonable controlled access to project offices and residential quarters of immigrant staff to discourage deviant behaviours at workers campsites; • Employment policy of the contractor should prohibit deviant behaviours at the workplace among staff such as cultural profiling, sexual exploitation, child labour and gender-based violence; • Workers will be sensitized on the different cultural practices in the region and for immigrant workers, respecting different cultural, religions and beliefs, including behaviours and norms of the local people; • Contractor to establish a grievance management system to handle internal and external complaints. • Workers will be sensitized and sign code of conduct regarding interactions, behaviours and relations with the local communities.	Adherence to Code of Conduct by employees Good relationship of workers and local communities	Contractor , RE	No additional cost to the BoQ - administrative costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
Crime Management	Medium	- All activities of a criminal nature on the worksite or by the Contractor's employees (whether on or off the worksite) shall be reported to the police and necessary follow-up undertaken to ensure action is taken; - Sensitize the construction workers, locals, and security to be on the lookout on suspicious activities near the site - Enforce the crime related clauses in the Code of conduct signed by all workers	Adherence to Code of Conduct by all employees Proper security to protect employees	Contractor, RE, Local administration	No additional cost to the BoQ - administrative costs of the contractor
Child Protection, Sexual exploitation and abuse (SEA) of underage girls	Medium	- Workers will be educated by relevant agencies such as police and probation officers on the relevant laws and policies protecting children - Reach out to children in and out of school in the vicinity of the construction sites with a life skills program focusing on HIV/AIDS and sexual abuse prevention among others areas - Mobilize and strengthen child protection institutions and structures near construction sites - Reach out to school authorities and parents near construction sites on paying special attention to child protection in light of labour influx - Partnerships will be established with relevant government agencies and NGOs to ensure children access survivor centred services such as medical care, psychosocial support, legal redress, safety, etc as and when necessary - Ensure no children are employed on site in accordance with national labor laws - Ensure that any sexual exploitation and abuse (SEA) of children by the contractors' workers are promptly reported to the police - Popularize /put in place confidential mechanisms and hotlines for reporting child abuse cases - Enforce the child protection related clauses in the Code of conduct signed by all workers	Adherence to Code of Conduct by all employees	Contractor, RE	Kshs 10,000,000 For sensitization and awareness

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		- Ensure visibility of signage and information, education and communication materials on such issues in the construction sites - Liaise with the administration units (County and sub County governments, Police, DO, chiefs, etc.) to provide regular surveillance and patrols to protect workers and unacceptable behavioral interaction of children and workers			
Absenteeism in Schools	Low	- Contractor and local NGOs to conduct a program to strengthen school based and school led life skills programs targeting any schools near construction sites to discourage dropping out of schools for school children; - Ensure no children are employed on site in accordance with national labor laws; - The contractor shall sensitize the workers not to engage with children conducting business activities near the worksites of campsites - Impose zero tolerance for employees on sexual relationship with students that would encourage dropping or being absent from school	Adherence to Code of Conduct by all employees Zero tolerance on child labour	Contractor , RE	Part of sensitization and awareness budget (under Bill No 1), and administrative costs of the contractor
Gender Equity and Mainstreaming	High	- Contractor and implementing agency to prepare and implement a Gender Action plan to include at minimum, in conformance with local laws and customs, equal opportunity for employment (min 30% of labour should be women); - Ensure that women are given adequate employment opportunities during recruitment and job postings, including equal payment - Regular sensitization and awareness campaigns to the workers should be done to promote gender equity in employment during the construction works and during operation - Provision of gender disaggregated accommodation, bathing, changing, sanitation facilities	Women are given opportunities to participate in the projects 30% of labour to be women	Contractor, RE	Kshs 3,000,000 for sensitization and awareness (under Bill No 1)

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
Gender based violence (GBV), Rape and Sexual Harassment	Medium	- Contractor will prepare a GBV Prevention and Response Plan and implementation arrangements - Contractor to prepare and enforce a No Sexual Harassment and discrimination Policy in accordance with national laws; - KeNHA to engage services of local CSO to educate all workers and nearby communities and stakeholders on preventing and responding to sexual harassment and GBV ahead of any project related works; - Popularize /put in place confidential mechanisms and hotlines for reporting GBV and sexual offences cases; - Strategies such as male involvement will be employed in preventing and responding to GBV and sexual harassment; - Establish partnerships with relevant government agencies and NGOs to ensure survivors of GBV and sexual offences access survivor centered services such as medical care, psychosocial support, legal redress, safety, etc as and when necessary; - Provision of gender disaggregated facilities - separate bathing, changing, sanitation facilities for men and women; - Grievance redress mechanisms including non-retaliation should be set up for the workers; - Liaise with the administration units (County and sub County governments, Police, DO, chiefs, etc.) to provide regular surveillance and patrols to protect workers and unacceptable behavioral interaction of local communities and workers	Adherence to Code of Conduct by all employees Zero cases of GBV related to the project reported	Contractor, RE	Part of sensitization and awareness budget (under Bill No 1)
Alcohol and drug abuse by workers	Low	- All workers (including subcontractors) to sign and comply with Code of Conduct on zero-tolerance on alcohol and drug abuse. - Removing any employee who persists in any misconduct or lack of care, carries out duties incompetently or negligently, fails to conform to any provisions of the contract, or persists in any conduct which is prejudicial to safety, health, or the protection of the environment. - Taking all reasonable precautions to prevent unlawful, riotous or disorderly conduct by or amongst the Contractor's personnel,	Adherence to Code of Conduct by all employees	Contractor, RE	No additional cost to the BoQ, Administrative costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		and to preserve peace and protection of persons and property on and near the site. - Prohibiting alcohol, drugs, arms, and ammunition on the worksite among personnel. - Liaise with the administration units (County and sub County governments, Police, DO, chiefs, etc.) to provide regular surveillance and patrols to protect workers and unacceptable behavioral interaction of local communities and workers			
Increase in the prices of goods and services in the community	Medium	The contractor should ensure his workers appropriately mix the use of locally and non-locally procured goods to allow local project benefits to balance the local economy while reducing risk of crowding out of and price hikes for local consumers	Use of locally procured goods	Contractor	No additional cost to the BoQ administrative costs of the contractor
Loss of life, injury or damage to people and private property	High	- The construction site shall be fenced off to prevent access to members of the public - Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, at all times - The contractor shall have insurance for his workers as required by law; - Insuring against liability for any loss, damage, death or bodily injury which may occur to any physical property or to any person which may arise out of the Contractor's performance of the contract - All fatalities or severe accidents/incidences shall be reported to the client (KeNHA) immediately (KeNHA) shall report to the AfDB within 24 hours after occurrence. The same should be done to DOSHS within 24 hours and a written notice to the same within 7 days as per the statutory requirements.	Zero cases of severe incidents/accidents	Contractor, RE	No additional cost to the BoQ Part of contract requirements
Complaints and grievances/social conflicts	Medium	- Provide grievance redress mechanism for the local communities and workers; - Advice the public and workers on where to report grievances;	Proper and operational GRM setup for employees and members of the public	Contractor, RE	Kshs 10,000,000 For GRC operations

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		- Consider prioritizing the local manpower for both skilled and unskilled labour. - Implement proposed grievance resolution mechanism - Grievance redress mechanisms especially for workers should incorporate non-retaliation policies			
Impacts on Cultural Resources and Archaeological Sites	Medium	Use "Chance Finds" procedures in case of any discovery of archeological or important physical or cultural resources	No impact on Physical Cultural Resources (PCR)	Contractor, RE	No additional cost to the BoQ administrative costs of the contractor
Impacts on Vulnerable groups	Medium	- The project had conducted a standalone Social Assessment (SA) report in 2015 to determine how the communities will benefit from the project activities, and the recommendations will be incorporated into the project design; - Develop an action plan that sets out the measures through which the project will ensure that potentially adverse effects on the peoples' communities are avoided, minimized, and mitigated, and/or compensate for such effects; - The project to conducted continuous Consultations in order to achieve broad community support; - The project will make the development process more inclusive of vulnerable groups and local communities by meaningful consultations and incorporating their perspectives in the design of development programs and poverty reduction strategies; - Provide the local communities and vulnerable groups with opportunities to benefit more fully from development programs associated with the project, such as social infrastructure projects along the road project.	Incorporation of project benefits for the vulnerable groups	KeNHA, Contractor, RE	No additional cost to the BoQ – defined in the SA report
OCCUPATIONAL HEALTH AND SAFETY					

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
Occupational Safety and Health Hazards	High	- Contractor will prepare Health and Safety Plan and Emergency Response Plans and operationalize them - Contractors' selection criteria should include ability to demonstrate having some defined minimum requirements for Safety and Health Management System. - Contractor's should comply OSHA 2007 requirements as bare minimum; - Contractor must obtain a registration of workplace certificate from DOSH and comply with the subsequent requirements of the Health and Safety Committee Rules 2004 of the OSHA Act; - Enforce use of defined standard operating procedures for handling various activities, depending on risks levels; - Establish an emergency response procedure and display on all work areas; - Provision of a standard first aid kit at active construction sites at all times; - Designate qualified first-aider as per the OSHA requirements; - Contractor to have a full time Health and Safety advisor on site - Engage a qualified Health and Safety auditor to conduct routine and annual Health and Safety (H&S) audits; - Establish a Health and Safety Committee for the project construction team as per the Health and Safety Committee Rules 2004 of the OSHA Act - Provide medical care for all staff as necessary as allowed in the Kenyan Law including securing a worker insurance cover as required under WIBA; - Conduct risk assessment before commencing new assignments/tasks; - Provide appropriate and adequate Personal Protective Equipment (PPE) to all workers that is commensurate with construction site activities; - Abide by standard best practice health and safety provisions in the construction contract;	Eliminate incidents and accidents (Zero cases) Proper provision and use of PPEs	Contractor, RE	To be included in Bill 1 - Kshs 8 million for operations of clinical facilities at campsites and other OHS arrangements Other costs under Bill 1, 9, and administrative costs of the contractor

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		- Conduct daily toolbox and monthly safety meetings for the construction workforce; - Undertake routine worksites safety inspections; - Carry out induction and training on Health and Safety for workers and visitors to site - Display of appropriate safety signs around the construction site - All operators shall be trained and skilled in their area of operations; - Regular trainings to workers on OHS and first aid administration; - Contractor (s) to maintain an accident register; carry out accident and incidents investigations and implement corrective actions.			
Road Safety	High	- Copies of insurance policies for the contractor's drivers and vehicles should be provided to the Supervision Consultant. - The contractor's vehicles and equipment must be in proper working condition and have registration plates, and numbering. - The contractor to sensitize all drivers and equipment operators to adopt safe driving and operation behaviors, to ensure proper discipline by these personnel, and sanctions those in breach. - Ensure that safety is included in the driver's contracts as part of "Code of Conduct" and any non-compliances are sanctioned; - Excavated sites, embankments, and dangerous locations are protected with proper safety barriers, tape and warning signs. - Install temporary speed calming measures such as bumps and speed signs at high risk areas such as shopping centres, hospitals, and schools; - As part of normal Occupational Health and Safety monitoring, the contractor and Supervision Consultant both maintain a log detailing every violation and accident on site or associated with the project work activities, including the nature and circumstances, location, date, time, precise vehicles and persons involved, and follow-up actions with the police, insurance, families, community leaders, etc.	Minimal road accidents	Contractor, RE , Local administration	No additional cost to the BoQ Under administrative costs of the contractor and Bill No 9

Environmental / Social impact	Level of Impact	Proposed mitigation and management measures	Goals/Targets	Responsibility	ESMP Costs
		The implementing agency, in cooperation with the relevant government agency, should undertake road safety campaigns targeting settlements, schools, and other facilities along the project road or other affected areas. The cost of such campaigns should be covered in the project budget.			
Impacts Related to High Temperature and Humidity Levels	Low	- Contractor must ensure Project staff have access to adequate potable water; - Provisions should be made for adequate ventilation and air conditioning for in-house work spaces; - Sensitize staff on health concerns and avoiding heatstroke, dehydration and fatigue; - Work schedules should be such that workers are allowed adequate break durations in between working sessions; - Ensure adherence to OSHA, 2007.	Workers welfare complied with	Contractor, RE	No additional cost to the BoQ Under administrative costs of the contractor
Stakeholder Engagement	High	The implementing agency (KeNHA) should prepare and implement a communication and community/stakeholder engagement plan that addresses all project issues	Continuous Stakeholder engagement	KeNHA, Contractor, RE	Kshs 10,000,000
Grievance Redress Mechanisms	Medium	Proper, effective and strong Grievance Redress Mechanisms (GRM)	Established GRM	Contractor, RE, KeNHA	Part of Complaints mechanisms budget

Table 9-2 ESMP during operation phase

Environmental / Social impact	Level of Impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals of mitigation	Responsibility for Implementation	Timeframe	Cost (KSHS)
ENVIRONMENTAL IMPACTS						
Road Maintenance Impacts	Low	- Incorporate recycling of road resurfacing waste where possible; - All vegetation cuttings for road clearance maintenance suspected to be from invasive alien	Conserve environment during road maintenance	KeNHA	Operation	No additional cost to the BoQ – under KeNHA maintenance budget

Environmental / Social impact	Level of Impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals of mitigation	Responsibility for Implementation	Timeframe	Cost (KSHS)
		species should be burnt on site translocated to minimize dispersal; • Manage sediment and sludge removed from storm water; • All removed paint materials suspected or confirmed as containing lead should be treated as a hazardous waste.				
SOCIAL IMPACTS						
Increased Vehicle Accidents	High	• The public should be sensitised on safety measures to observe while using the road; • KeNHA to liaise with NTSA for close monitoring of the road usage and impose penalties on those going against the set roads usage rules; • KeNHA should ensure maintenance of installed road furniture and safety signages along the road; • Undertake periodic roadside bush clearance that may reduce visibility clearance or obstruct critical signages.	Road use safety	KeNHA	Construction / Operation	No additional cost to the BoQ Under KeNHA and other various agencies operational budget
Communicable Diseases	Low	• Regular sensitization and awareness of the truck drivers, sex workers, and local communities on communicable diseases such as HIV, COVID-19, and other communicable diseases. • Enforcement of Vehicles to adhere to emission criteria set under the Environmental Management and Co-ordination (Fossil Fuel Emission Control) regulations, 2006. • Proper Vehicle maintenance and servicing of vehicle engine, especially for maintenance equipment.	Prevent communicable diseases	KeNHA	Operation	No additional cost to the BoQ
Human Encroachment along the Project Roads	Medium	• KeNHA in consultation with the county governments should enforce development control by not allowing for any development approvals on the road reserve to ward off potential encroachers and to allow for easy	Curb human encroachment onto road reserve	KeNHA	Operation	No additional cost to the BoQ – county government

Environmental / Social impact	Level of Impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals of mitigation	Responsibility for Implementation	Timeframe	Cost (KSHS)
		implementation of future road maintenance or expansion plans; - Install and maintain road reserve boundary posts at appropriate intervals; - Conduct awareness talks and presentations about the road reserve.				budgets and KeNHA management of road reserves

Table 9-3 ESMP during Decommissioning Phase

Environmental / Social impact	Level of Impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals	Responsibility for Implementation	Timeframe	Cost (KSHS)
Community Health and Safety	Minor	- Contractor must prepare detailed decommission plan for approval by local government, NEMA and department of mines as applicable; - KeNHA should consider satisfactory rehabilitation of decommissioned sites as part of contractual requirement with enforceable penalties including financial disincentives.	Enhance public safety	KeNHA	Decommissioning	No additional cost to the BoQ
Loss of Income	Minor	- Notify the employees in advance on the project closure date and adequately compensate them; - Dismissal procedures to be compliant with Employment Act, 2007; - Provide counselling & alternative skills for alternative activities; - Employer should possibly identify alternative means of livelihood for the staff who were employed at the construction camp.	Improve local financial safety nets	KeNHA	Decommissioning	No additional cost to the BoQ
Noise pollution	Minor	- Prepare a decommissioning plan to guide activities; - Monitor noise levels as per the NEMA Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009 & OSHA, 2007;	Mitigate noise pollution	KeNHA	Decommissioning	No additional cost to the BoQ

Environmental / Social impact	Level of Impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals	Responsibility for Implementation	Timeframe	Cost (KSHS)
		- The noise emission characteristics should be considered during selection and mobilization of decommissioning equipment; and - Sensitize staff to switch off machinery and vehicles when not in use.				
Dust and Fumes	Minor	- Prepare a decommissioning plan to guide staff on proper handling of sensitive facilities; - Enforce stand operating procedures while undertaking demolition works; - Provide and enforce the appropriate use of PPE against dust; and - Employ dust suppression measures such as sprinkling water on loose soil surfaces and providing cover for spoil batches.	Suppress pollution from dust and fumes	KeNHA	Decommissioning	No additional cost to the BoQ
Waste Accumulation	Moderate	- Decommissioning plan should cover waste management; - Waste be managed as per Environmental Management and Coordination (Waste Management) Regulations 2006; - Establish a segregation and grading waste management system to manage garbage and other forms of waste generated; - Prioritize options of waste reduction, reuse and recycling, particularly papers, polythene bags and plastic wrappers and containers and other materials that can possibly be recycled; and - Disposed waste at designated sites through licensed waste handlers.	Proper Waste management	KeNHA	Decommissioning	No additional cost to the BoQ
Total ESMP Costs						Ksh84,500,000

NB: The cost of ESMP excludes RAP costs

9.6 SUMMARY BUDGET OF ESMP

Table 9-4 ESMP Summary Budget (Including Monitoring)

S/N	Item	Description	Cost (KSHS Million)
1	Sensitization and Awareness	Sensitization of the project activities, including printing of materials of SEAH/GBV, meetings with local communities by an NGO consultant	10
2	Loss of vegetation, Habitat loss & Disturbance	Reafforestation, landscaping and planting of trees	5
3	Gender Equity & Mainstreaming	Sensitization and awareness materials, Special projects targeting women and vulnerable groups	3
4	Workers Welfare and OHS	Operation of clinic at campsite and other OHS arrangements	8
5	Stakeholder Engagement	Meetings, venues, allowances, & refreshments	10
6	Communicable diseases	Sensitization and awareness materials, COVID 19 protocols	6
7	Air Quality	Control and Monitoring of air pollution, including PPEs	5
8	Noise Pollution	Control and Monitoring of Noise pollution, including PPEs	2
9	HIV/AIDS	Sensitization and awareness materials, Testing, Involvement of NGOs for counselling, provisions of condoms, etc	15
10	Solid Waste management	Management of waste, disposal and other costs associated with SWM	7.5
11	Control of Liquid waste and hydrocarbon spills	Waste management arrangements	3
12	Grievance Redress Mechanisms	GRC Operations	10
	TOTAL ESMP COST		84.5
	Cost of ESMP Monitoring		10
	TOTAL ESMP Cost (including monitoring)		94.5

10 GRIEVANCE REDRESS MECHANISM

10.1 Grievance Redress Mechanism (GRM)

Grievance redress mechanisms (GRM) provide a formal avenue for affected groups or stakeholders to engage with the project implementers or owners on issues of concern or unaddressed impacts. Grievances are any complaints or suggestions about the way a project is being implemented. They may take the form of specific complaints for damages/injury, concerns about routine project activities, or perceived incidents or impacts. Identifying and responding to grievances supports the development of positive relationships between projects and affected groups/communities, and other stakeholders.

Grievance mechanisms should receive and facilitate resolution of the affected institutional or communities' concerns and grievances. World Bank Safeguard Policies states the concerns should be addressed promptly using an understandable and transparent process that is culturally appropriate and readily acceptable to all segments of affected communities, at no cost and without retribution. Mechanisms should be appropriate to the scale of impacts and risks presented by a project.

Grievances can be an indication of growing stakeholder concerns (real and perceived) and can escalate if not identified and resolved. The management of grievances is therefore a vital component of stakeholder management and an important aspect of risk management for a project. Projects may have a range of potential adverse impacts to people and the environment in general, and identifying grievances and ensuring timely resolution is therefore very necessary.

The following sections describe the proposed procedures that will be followed to address complaints or concerns submitted by people who may benefit from or impacted by the proposed project. It intends to provide clarity and predictability on how complaints will be received, assessed, sorted, resolved and monitored.

10.2 Objectives of Grievance Redress Mechanism (GRM)

The GRM has the following objectives:

1. Establish a prompt, easy to understand and access, consistent and respectful mechanism to support the receiving, investigating and responding to complaints or grievances from communities and other stakeholders;
2. Ensure proper documentation of complaints or grievances and any corrective actions taken; and
3. Contribute to continuous improvement in performance of the project by reducing risks and negative social impacts through analysis of trends and lessons learned

10.3 GRM Guiding Principles

Effective GRMs usually embody six core principles¹³:

- **Fairness.** Grievances are treated confidentially, assessed impartially, and handled transparently.
- **Objectiveness and independence.** The GRM operates independently of all interested parties in order to guarantee fair, objective, and impartial treatment to each case. GRM officials have adequate means and powers to investigate grievances (e.g., interview witnesses, access records).
- **Simplicity and accessibility.** Procedures to file grievances and seek action are simple enough that project beneficiaries can easily understand them. Project beneficiaries have a range of contact options including, at a minimum, a telephone number (preferably toll-free), an e-mail address, and a postal address. The GRM is accessible to all stakeholders, irrespective of the remoteness of the area they live in, the

¹³ World bank Group; HOW-TO-NOTES, The theory of Grievance Redress, <http://siteresources.worldbank.org/EXTSOCIALDEVELOPMENT/Resources/244362-1193949504055/4348035-1298566783395/7755386-1301510956007/GRM-P1-Final.pdf>

language they speak, and their level of education or income. The GRM does not use complex processes that create confusion or anxiety (such as only accepting grievances on official-looking standard forms or through grievance boxes in government offices).

- **Responsiveness and efficiency.** The GRM is designed to be responsive to the needs of all complainants. Accordingly, officials handling grievances shall be trained to take effective action upon, and respond quickly to, grievances and suggestions.
- **Speed and proportionality.** All grievances, simple or complex, shall be addressed and resolved as quickly as possible. The action taken on the grievance or suggestion is swift, decisive, and constructive.
- **Participatory and social inclusion.** A wide range of project-affected people— community members, members of vulnerable groups, project implementers, civil society, and the media - shall be encouraged to bring grievances and comments to the attention of project authorities. Special attention is given to ensure that poor people and marginalized groups, including those with special needs, are able to access the GRM, in a culturally appropriate manner.

10.4 Grievance Handling Mechanism Structure

10.4.1 Members of the Grievance Redress Committee (GRC) at project Level

The local Assistant County Commissioner of the subcounty will be the chairman of the GRC, with the RE being the secretary of the committee or a person the RE might appoint as his representative.

The proposed members of the grievance committee are as follows;

Name / organization	Representing
Local Administration (eg Sub County Commissioner)	Government - Chairman
Area Administration (eg Chief)	Government - member
Community representative	Community - member
Resident Engineer (RE)	Consultant – Secretary
Safeguard specialist (Consultant)	Consultant - Member
NEMA representative	NEMA – Member
Contractor representative	Contractor - Member
NGOs	NGOs – representative of various NGOs
Representative of PLWD	People living with Disabilities (PLWDs)
County Government	Appointed member from the county - Member
Institution stakeholders (eg traders, transporters etc)	Users – Member
Other Stakeholders	As may be determined during the implementation of the project

NB: Other members can be added or removed as required depending on the needs of the communities as advised by the local leadership.

The main role of the committee will be arbitration through mediation and negotiation when complaints arise to ensure that cases are resolved quickly and fairly. The above committee shall normally meet once per month and may form special sub-committees or ad-hoc committee that shall meet on a weekly basis or more frequently as the nature of some grievances may demand. Such sub-committees or special ad-hoc committee will report their findings and recommendations to the main committee for ratification or approval.

The GRC shall be issued with ToRs by the implementing agency (KeNHA) on their roles and responsibilities, with a clear period of tenure. In addition, facilitation of the GRC shall be done accordingly based on applicable government rates. The budget for this facilitation has been provided for in the ESMP.

10.5 Key staff coordinating Grievance Redress

The Resident Engineer will be designated as the person in charge of Grievance Redress. In regard to GRM, the following will be their responsibilities;

- Coordinate formation of Grievance Redress Committees (GRCs) before the commencement of construction to resolve issues.
- Act as the Focal Point for the client (KeNHA) on Grievance Redress issues and facilitate the grievance mechanisms.
- Create awareness of the Grievance Redress Mechanism (GRM) amongst all the stakeholders through public awareness campaigns.
- Assist in Redress of all Grievances by coordinating with the concerned parties.
- Maintain information of grievances and Redress.
- Monitor the activities on Redress of Grievances.
- Prepare the progress for monthly/quarterly reports.
- Provision of resources to cover the operational costs of the GRM (facilitation costs etc).

10.6 Receiving Complaints

Points of receipt of complaints

The various points of receiving complaints would be as follows:

- i. County Governments administration;
- ii. Local chief's office;
- iii. KeNHA office (at headquarters)
- iv. Contractor or RE office
- v. Ministry of Transport, Infrastructure, Housing and Urban Development (MoTIHUD)
- vi. Representative at the community level

Mode of receipt and recording of Complaints

The complaints can be made in writing, verbally, over the phone, by fax, emails or any other media. As soon as the officer receives a complaint he /she would issue an acknowledgement of the complaint, including the details of the person bringing the grievance. The officer receiving the complaints should try to obtain relevant basic information regarding the grievance and the complainant and will immediately inform the safeguard specialist the receipt of the complaint.

The RE will maintain a Complaint / Grievance and Redress register or log book and the responsibility of keeping records collected from relevant bodies will be the responsibility of the supervising consultant safeguard specialist.

After registering the complaint in the Grievance Redress Registration and Monitoring Sheet, the safeguard specialist would study the complaint made in detail and forward the complaint to the concerned officer with specific dates for replying and redressing the same. He/she would hold meetings with the affected persons / complainant and then attempt to find a solution to the complaint received. If necessary, meetings have to be held with the concerned affected persons / complainant and the concerned parties to find a solution to the problem and fix up plans to redress the grievance. The deliberations of the meetings and decisions taken are recorded and minutes of the meetings filed.

A grievance process is presented in Table 9-1 in the next page.

10.7 Registry and Monitoring

All complaints received will be entered into a publicly accessible system that will allow complaints to be tracked and monitored. The system will also present a database showing:

- No of complaints received.
- No and % of complaints that have reached agreement.
- No and % of complaints that have been resolved.
- No and % of complaints that have gone to mediation
- No and % of complaints that have not reached agreement.

The database should also show the issues and geographic areas most complaints circle around. The information provided by the database is expected to help KeNHA to improve the Grievance Redress Mechanism and better understand and address the environmental and social impacts of the project.

10.8 Grievance Redress Mechanism Process

The stakeholders are informed of various points of making complaints (if any) and the RE collect the complaints from these points on a regular basis and record them. This is followed by coordinating with the concerned people to address the grievances. The RE will manage the grievance activities at the respective stakeholder's level to address the Grievances and would act as the focal point in this regard.

The complaints are received at various points as described above.

A 3- tier Redress structure is proposed to address all complaints for the proposed project effectively.

a) *First tier of Redress*

The first tier is divided into two parts where a complainant can register his grievances and resolved quickly:

- i. Village redress led by local leadership such as the Local Chief or Assistant chief, Nyumba Kumi leaders, or any other locally recognized respected member of the society
- ii. Project level redress led by Resident Engineer and/or Contractor's representative

i. Village Level GRM

Some parties show preference for an alternative mechanism which utilizes the use of Village Level GRC. The village level GRC is categorized with the following recommended membership;

- Assistant/sub locational chief,
- Nyumba Kumi Leader
- Nyumba Kumi representatives
- One project affected youth,
- One project affected woman,
- One project affected male
- Persons with Disability
- Ward Administrator
- Contractor representative

Table 10-1: Grievance Redress Process

Process	Description	Time frame	Other information
Identification of grievance	Face to face; phone; letter, e-mail; recorded during public/community interaction; others	1 Day	Email address; hotline number
Grievance assessed and logged	Significance assessed and grievance recorded or logged (i.e. in a log book)	4-7 Days	Significance criteria: Level 1 –one off event; Level 2 – complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law or policy or provisions in other project documents
Grievance is acknowledged	Acknowledgement of grievance through appropriate medium	7-14 Days	
Development of response	Grievance solved at Tier 1 (Resolved at project level) Response development with input from management/ complainant/relevant stakeholders	4-14 Days	RE and complainant to sign off
Response signed off	Grievance closed Redress action approved at appropriate levels	Within above timelines	RE to sign off
Grievance not solved, passed to GRC	Grievance passed to appropriate party for resolution (GRC) – Tier 2 Redress action approved at appropriate levels	7-14 Days	GRC and complainant to sign off
Implementation and communication of response	Redress action implemented and update of progress on resolution communicated to complainant	Within 7 days	
Complaints Response	Redress action recorded in grievance log book Confirm with complainant that grievance can be closed or determine what follow up is necessary	4-7 Days	
Grievance not solved, passed to MRC	Grievance passed to appropriate party for resolution (MRC) – Tier 3 Final decision communicated to complainant	7 -14 days	MRC to sign off Complainant to sign off
Close grievance	Record final sign off of grievance If grievance cannot be closed, return to step 2 or refer to sector minister or recommend third-party arbitration or resort to court of law.	4-7 Days	Final sign off on by KeNHA, MoTIHUD

ii. Resident Engineer

The other resolution at this first tier will be normally be by the RE at the project level. If the affected party / complainant does want to use the Village level GRC, he is free to forward his grievances to the Resident Engineer's office directly.

Resolutions at Village GRC or the RE shall be done within 14 working days and notified to the concerned through a disclosure form. Should the Grievance is not solved within this period, this would be referred to the next level of Grievance Redress. However, if any of the above two mechanisms feels that adequate solutions are worked out but it would require a few more days for actions to be taken, the leaders of these mechanisms can decide on retaining the issue at this level by informing the complainant accordingly. However, if the complainant requests for an immediate transfer of the issue to the next level, it would be accepted and the issue would be taken to the next tier, especially if the issue is not addressed within 21 days.

b) Second tier of Redress

The Grievance Redress Committee (GRC) would be the one which would address the grievance in the next level in case the problem is not solved at the first tier. The RE will coordinate with the respective chairman of the GRC in getting this Committee to meet and get the necessary circulars issued in this regard so that they can be convened whenever required.

The RE will coordinate the convening of the meetings of the GRC. He / She is also responsible for briefing the GRC on the grievances and deliberations of the first level of Redress, outcomes and on the views of both the parties (project and complainant).

The GRC will hold the necessary meetings with the affected party / complainant and attempt to find a solution acceptable at all levels. The GRC would record the minutes of the meeting and filed by the RE. The decisions of the GRC will be communicated to the complainant formally and if he/she accepts the resolutions, the complainant's acceptance is obtained in writing and signing off is done between the complainant and the GRC.

If the complainant does not accept the solution offered by the GRC, then the complaint is passed on to the next level / or the complainant can reach the next level for redress. The Chairman of the GRC would be required to forward the issue to the Third Tier to facilitate in exploring a solution to the grievance. In any case, the grievance should be forwarded to the next level if no solution is reached within 14 days of the case reaching the second level. However, in cases nearing offering an amicable solution, it can be retained to an extent of 21 days.

c) Third tier of Redress

If the affected party / complainant does not agree with the resolution at the 2nd level, or there is a time delay of more than a month in solving the issue, the complainant can opt to consider taking it to the third level.

Where an agreement has not been reached, the complainant will be offered the option of an independent mediation process at an alternative arbitration body such as local arbitration arrangements, local administration, or other avenues as might be prescribed in the country constitution before legal redress. The RE will collect all the details of the Grievance including the deliberations of first tier efforts and of the GRC and present it to the 3rd level tier. The 3rd tier structure will deliberate upon the issue and give suitable recommendations. The minutes of the meetings will be recorded and kept at KeNHA office.

The decisions of the 3rd tier structure would be final from the project side and will be communicated to the complainant formally and if he/she accepts the resolutions, the complainant's acceptance is obtained and signed off by the complainant and the 3rd tier structure, including the project GRC.

The Complainant may decide to take a legal or any other recourse if he /she is not satisfied with the resolutions of the deliberations of the three tiers of GRM.

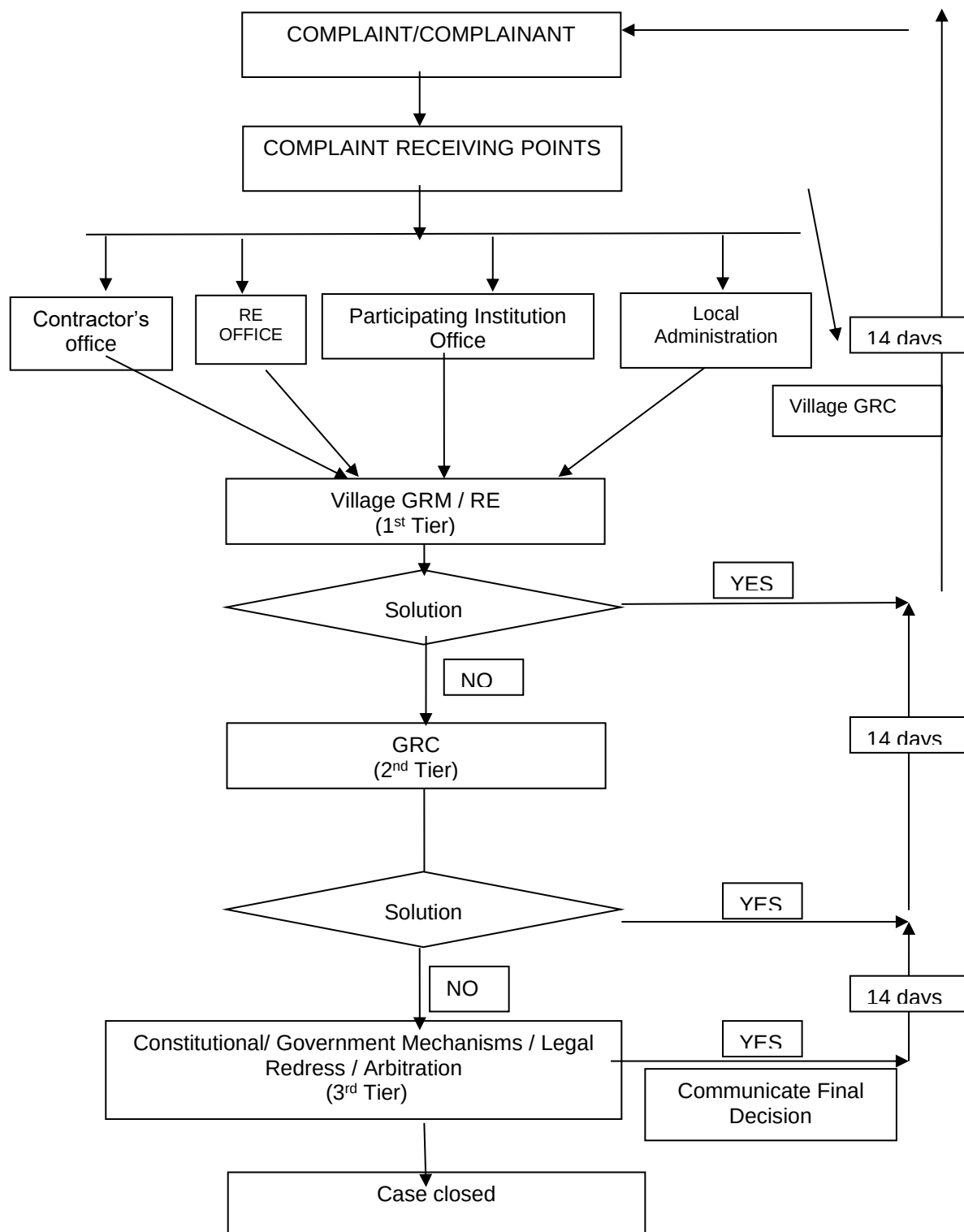
It should be encouraged that the 3 levels of handling the grievances should be exhausted extensively before one goes to courts as last resort.

10.9 GRM Jurisdiction

The proposed GRM is project specific and scaled to the risks and impacts of the Project. It is meant to solve the project's concerns by the stakeholders or any complainant. The proposed GRM is however not intended to bypass any Governments' own existing redress process; rather is intended to address affected people's concerns and complaints promptly, making it readily accessible to all segments of the affected people. Any established Government Redress mechanisms takes priority over the proposed GRM. The GRC's term shall have a Terms of Reference (ToR), tenure and timeless when the GRC will be closed.

The figure on the next page shows a proposed Grievance Redress Mechanism flow process for the proposed project. This will be reviewed and customized to address any missing gaps before establishment as required.

Figure 10-1 Grievance Redress Flow Process



11 ENVIRONMENTAL AND SOCIAL MONITORING PLAN (ESMoP)

11.1 Environmental and Social Monitoring

The overall objective of environmental and social monitoring is to ensure that mitigation measures are implemented and that they are effective. Environmental and social monitoring will also enable response to new and developing issues of concern. The activities and indicators that have been recommended for monitoring are presented in the ESMoP.

Environmental monitoring is also carried out to ensure that all construction activities comply and adhere to environmental provisions and standard specifications, so that all mitigation measures are implemented. The environmental monitoring program will operate during road construction and operation phases. It will consist of a number of activities, each with a specific purpose with key indicators and criteria for significant assessment.

Monitoring includes:

- Visual observations;
- Selection of environmental and social parameters;
- Sampling and regular testing of these parameters.
- Periodic on-going monitoring will be required during the life of the Project and the level can be determined once the Project is operational.

Monitoring will be done in three fronts:

- Physical monitoring
- Biological monitoring and
- Social monitoring

For monitoring purposes, baseline data on air, noise, and water quality shall be collected before commencement of the construction activities for the project. This data shall be collected on all key sensitive receptor areas near the road including but not limited to the following locations; schools, hospitals, mosques and churches, administration buildings, and water quality for rivers/streams, among others as specified in the Table 11-1. Information on exact locations and distance away from the final established road centerline shall also be collected using GPS equipment.

For monitoring during construction activities, the Contractor and RE's staff should be equipped with portable, hand-held meters to monitor noise, air quality and water quality data on regular and ad hoc basis. This would allow the Contractor to immediately respond to complaints from stakeholders, or to infringement of contractual or regulatory obligations.

11.1.1 Internal Monitoring

The objective of internal monitoring and audit will be:

- To find out any significant environmental and social non-compliance and their existing ESMS systems in place;
- Meeting the legal requirements as stipulated in the AfDB Safeguard Policies, Environmental Management & Coordination (Amendment) Act, 2015

KeNHA (under the directorate of Environment and Social Safeguards) will conduct regular monthly and annual internal monitoring of the project to verify the results of the Contractor and to audit direct implementation of environmental and social mitigation measures contained in the ESMoP and construction contract clauses for the Project. KeNHA also have the direct responsibility to implement and monitor social issues related to land acquisition and compensation issues arising from project land-take. The monitoring should be a systematic evaluation of the activities of the operation in relation to the specified criteria of the condition of approval.

The Resident Engineer will work closely with the Environmental and Social Manager of KeNHA to ensure safeguards implementation and compliance to national policies and guidelines, and AfDB policies. The RE shall ensure that the environmental management and monitoring will at minimum include:

- Current environmental and social issues and parameters to be mitigated;
- Mitigation measures;
- Counter measures;
- Line of responsibilities;
- Cost of undertaking the environmental and social mitigation measures; and
- The time frame within which these mitigation measures will be handled.

The contractor will be required under the contract to engage competent safeguards specialists – Environmentalist, Sociologist, community liaison officers, and Health and Safety Advisor/officer to advise them on the ESMP compliance. The contractor's staff will undertake environmental, social and occupational health risk assessments and prepare project specific Construction ESMPs for review and approval by the RE and the client. The contractor will be required to monitor implementation of safeguards on daily basis through his staff, including actual training and coordination of external training for all the workers and staff involved in the project. The monitoring should be a systematic evaluation of the all project activities and providing recommendations and remedies to improve safeguards performance.

11.1.2 External Monitoring and Evaluation

NEMA has the overall responsibility for issuing approval for the Project and ensuring that their environmental guidelines are followed during Project implementation. Its role therefore is to review environmental monitoring and compliance documentation submitted by the implementing authorities. They would not normally be directly involved in monitoring the Project unless some specific major environmental issue arose, and can carry out an audit at any time.

DOSHS is responsible for the enforcement of Occupational Safety and Health Act (OSHA), 2007 and associated regulations. DOSHS will ensure that all construction sites are registered with the Directorate and safety management plans, training and emergency preparedness done in accordance with the relevant guidelines issued by DOSHS. DOSHS will also undertake workers safety and health inspections at its own initiative or upon receiving reports on any associated issues.

The parameters to be monitored are as shown in Table 12-1.

11.2 Other Enhancement Measures

The implementing agency will also need to set up the following enhancement measures to manage the social and environmental safeguard elements effectively. The contractor's contract will also need to contain clauses binding it to cooperate with the implementing agency in each of these areas and sanctions for non-compliance.

11.2.1 Community engagement and communication

The implementing agency (KeNHA) should prepare and implement a communication and community/stakeholder engagement plan that addresses all project issues. Heads of local authorities and community leaders should be invited to monthly progress meetings, which should be attended by the implementing agency's project manager, contractor's manager, and Supervision Consultant's Resident Engineer. The RE should establish a form of communication mechanisms for the project road to provide a continuous flow of information to communities on the progress of works, compensation, and other emerging issues and their resolution. The obligations of the contractor and RE in these aspects should be specified in their respective contracts.

The Specific objectives of the stakeholders' engagement and management plan are:

- To mobilize and engage stakeholders towards a common understanding of the project.

- To define common guiding principles and approaches for engagement of stakeholders for the project.
- To provide a procedure for the process of stakeholder engagement for the project.
- To support capacity building processes for stakeholders for their effective participation in the project.

A Stakeholder Engagement Plan (SEP) has been developed as a standalone document to guide the project on the process of stakeholder engagement throughout the project cycle. The SEP include the following;

- **Identification of Stakeholders** –identifies by name and titles the people, groups, and organizations that have significant influence on project direction and its success or who are significantly impacted by the project. Key stakeholders' categories identified for this project includes; KeNHA, NEMA, Uasin Gishu, Kakamega and Trans Nzoia counties (transport ministry and social services department, labour office etc), contractor, RE, area residents along the road, local administration, traders, business people, local transport providers, schools, hospitals, among others
- **Stakeholder Engagement Management** – outlines the processes and steps that will be undertaken to carry out the planned strategies. The engagement plan include communication materials that will be used for the project, communication vehicles (eg local radio, newspapers etc), frequency of communication, scheduling of consultative meetings on the project progress, and incorporation of grievance redress mechanisms for the project.
- **Stakeholder Engagement Monitoring** – describes the methods that will be used to monitor stakeholder engagement and alert the project team if problems are surfacing. The proposed monitoring parameters include level of awareness, number of grievances received and solved, level of participation by the stakeholders, and general satisfaction of the project activities.

11.3 Contractor Clauses

This will include various plans and safeguards the Contractor will be expected to prepare and implement based on the ESMP, during the construction phase of the project. The plans will be prepared by the contractor and will be reviewed by the RE and forwarded for further review and approval by KeNHA before the commencement of the works. These safeguards will be required as a part of the requirements in the bidding documents.

The safeguard documents required will include a Contractors Environmental and social management plan (CESMP) with the following subplans;

- i. Occupational health and safety plan
- ii. Waste management plan
- iii. Traffic management plan
- iv. Borrow pit and quarry site rehabilitation plan
- v. Child Protection Strategy
- vi. HIV/AIDS management plan
- vii. Code of Conduct
- viii. Grievance redress mechanism
- ix. Prevention and protection against gender-based violence and sexual exploitation
- x. Labour influx plan
- xi. Stakeholder engagement plan
- xii. Whistleblower policy

During the bidding process, the Contractor will be expected to include a brief methodology of the implementation of these Environmental and Social Safeguards and attach a cost of implementation of these plans in his proposal bid.

In addition, the Contractor will have to provide relevant staff for the implementation of the safeguards including a Community Liason Officer and EHS advisor throughout during the construction period of the project.

Table 11-1: ESMoP during Construction and Operation phase

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
ENVIRONMENTAL IMPACTS						
Vegetation Loss	Construction and Operation	% cover	No. of Trees felled and compensated Areas of land cleared	Entire Site	Weekly	Contractor, KeNHA
Workmen's camps management	Construction	Solid waste, wastewater, sanitation	General camp management and cleanliness	Workers Camp sites	Weekly	Contractor, KeNHA
Excessive Noise and Vibration	Construction	dB and m/s, respectively	Noise levels ¹⁴ , complaints log	Active areas	monthly	Contractor, KeNHA
Construction dust and Air Quality	Construction	TSP, NO _x , SO ₂ , CO, Dust particles, particulate matter etc.	Records on issuance and use of PPEs Equipment and Number of times road is sprinkled Safety induction records Compliance with NEMA regulations and WHO guidelines Complaints from community	Active areas	Continuous, with Quarterly air quality measurements	Contractor, KeNHA
Solid Waste management	Construction, Decommissioning and Operation	Domestic refuse, metallic scraps, sludge	Waste management plan Waste collection and disposal records Level of housekeeping Agreements with waste handlers Licenses of waste handlers/transporters engaged	Entire Site	Monthly	Contractor, KeNHA
Soil Erosion	Construction and Operation	Eroded surfaces	Gulley formation; Sedimentation Protection measures in place	Entire Site	Monthly	Contractor, KeNHA

¹⁴ Noise, Air, and Water quality baseline parameters will be undertaken before commencement of the project

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
Water Quality and Contamination by Liquid Waste and Spills	Construction	Contaminated surfaces pH, Total Suspended Solids (TSS) and Total Dissolved Solids (TDS), heavy metals, oils and grease	Records on water quality; Compliance with NEMA regulations and WHO guidelines; Soil conditions at the sites; Bunded hydrocarbon storage areas	Rivers, streams, other water sources including boreholes and water pans; Entire Site	monthly	Contractor, KeNHA
Habitat Loss and Disturbance	Construction and Operation	Vegetation cover and wildlife habitat	Number of seedlings replanted; Percent of ground vegetation cover	Entire Site	Weekly	Contractor, KeNHA
Impact on materials borrow sites	Construction and Operation	Rehabilitation, Landscape restoration	EIA reports and licenses Other relevant permits and authorizations Decommissioning plan Number of material sites restored as recommended	Material sites	Decommissioning	Contractor, KeNHA
Inhibited wildlife and livestock movements	Construction and Operation	Animal crossing	Number of animal crossings provided Installed signages	Entire site	Project life	Contractor, KWS, KeNHA
Increased deadwood collection and charcoal	Construction and Operation	% cover	% cover declining or increasing	Entire site	Project life	KFS, KWS, County government
Environmental and Social Risks	Construction and Operation	Fire outbreaks, floods, terrorism, etc	Areas for potential hazards	Entire site	Continuous during project life	KeNHA
SOCIAL IMPACTS						
Disruption of Livelihood due to land take	Construction	PAPs	RAP implementation progress report	Right of way	Monthly	Contractor, KeNHA
Increased water demand	Construction	Projected water requirements against available water volumes	Water assessment report; abstraction permits	Entire site	Monthly	Contractor, KeNHA, WRA
Construction induced traffic and disruptions	Construction	Traffic management plan	Number of accidents reported Number of grievances registered;	Entire site	Monthly	Contractor, KeNHA

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
Disruption of Public Utilities and Accesses	Construction	Utility relocation plans Construction management plans	Number of grievances registered; Communications and agreements with utility companies; Notices to the affected public	Right of way	Monthly	Contractor, KeNHA
Spread of communicable diseases	Construction and Operation	Sensitization and testing campaigns	Number of reported infections; Number of Medical camps held;	Entire site and immediate neighbouring communities	Monthly	Contractor, KeNHA
Spread of HIV/AIDS and Other Sexually Transmitted Diseases (STDs)	Construction	Sensitization and awareness campaigns	Agreements with HIV/AIDS awareness service provider Sensitization and monitoring records; Number of Medical camps for testing and counselling; Campaign materials; Signed code of conduct	Entire site and immediate neighbouring communities	Monthly	Contractor, KeNHA
Conflict with local communities on labour issues	Construction	Social unrest by local communities	Number of social unrest registered Number of Grievances on labour issues	Entire site	Monthly	Contractor, KeNHA
Workers welfare	Construction	Non-compliance with workers safety	Accident reports Number of grievances by workers	Entire site	Monthly	Contractor
Community Health and Safety	Construction	Incidences of injuries to local communities and road users Occupational safety and health advisor engaged; Safety training for workers	Number of accident cases reported Severity of cases reported Community feedback	Entire site	Daily	Contractor
Labour Influx and Social Change	Construction	Cultural integration and social harmony	Number of awareness trainings and sensitization campaigns Cases of deviant behaviours by immigrant workers reported	Entire site	Monthly	Contractor; Gender Dept, police
Crime Management	Construction and Operation	Incidences	Number of crimes reported	Entire site	Monthly	Contractor, Police Dept

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
Child Protection, Sexual exploitation and abuse (SEA) of underage girls	Construction	Sexual misconduct of employees	Incidents of sexual exploitation Police records Number of Grievances	Entire site	Monthly	Contractor, Gender dept, police dept
Absenteeism in Schools	Construction	School attendance	Number of absent students in schools Sexual incidences reported	Entire site	Monthly	Contractor / Schools
Gender equity and Mainstreaming	Construction	Participation by women	Number of women benefiting from the project Number of Grievances related to gender equity	Entire site	Monthly	Contractor, Gender Dept
GBV, Rape and Sexual harassment	Construction	Incidences	No of cases reported Number of grievances Number of sensitization and awareness campaigns	Entire site	Monthly	Contractor, Gender Dept
Alcohol and drug abuse by workers	Construction	Workers conduct Drug and alcohol abuse	Number of workers reported on drug and alcohol abuse Police reports	Entire site	Monthly	Contractor
Increase in the prices of goods and services in the community	Construction and Operation	Prices of commodities	Increase in cost of living in the area Increase of key commodities in the region	Entire site	Monthly	Contractor/ County Ministry of Trade
Impacts on Vulnerable groups	Construction	Participation by VMGs	Number of projects targeting VGs Number of grievances related to VGs participation	Entire site	Monthly	Contractor/ KeNHA
OCCUPATIONAL HEALTH AND SAFETY						
Occupational Safety and Health Hazards	Construction and Operation	Visual inspection; Accident and Incident records Safety and Health Management Plan with relevant procedures incorporating: Emergency response plan	Traffic management Plan No. of OHS trainings and Audit records Health and safety management plan; Compliance with DOSHS regulations and AfDB policies Accident and Incident Register.	Entire site	Daily	Contractor, KeNHA
Impacts related to High temperature and Humidity Levels	Construction	Temperature & humidity	Human health change	Entire site	Daily	Contractor, KeNHA

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
Road safety	Construction and Operation	Road accidents	Traffic management Plan Number of awareness trainings and sensitization campaigns Installed signages and traffic calming devices Accident records	Entire site	Monthly	Contractor; KeNHA, NTSA
Security challenges	Construction and Operation	Incidences	Number of intelligence briefings and reports Incident records	Entire site	Daily	Contractor, KeNHA
Loss of life, injury or damage to people and private property	Construction	Accidents, Fatalities, and property damage	Number of accidents Number of fatalities Number of claims/grievances	Entire site	Daily	Contractor /KeNHA
TOTAL COST OF MONITORING						Kshs 10 million

12 CAPACITY TO IMPLEMENT ESMP

Effective implementation of the project ESMP requires adequate capacity for the whole project team (KeNHA, supervising consultant, contractor) and stakeholders (local communities, NGOs, government institutions, e.t.c) participating in the implementation of the project.

12.1 Client capacity

KeNHA has the capacity to implement the ESMP and ensure safeguards performance at the project level is maintained, based on similar projects financed by the AfDB and donor funded projects the organization has executed. The directorate of Environment and Social safeguards has experienced environmental and social specialists who are capable of monitoring the ESMP implementation and environmental and social risk management for the proposed project.

The KeNHA safeguards team, will be the key implementers of the project and will perform the overall environmental and social risk management, and develop an environmental and social management systems for the project. The team shall also identify the needs of each participant in the project, and determine the level of capacity building required to ensure successful implementation of safeguards.

12.2 Training objectives

The overall objective of the training will be to mainstream environmental and social implementation and mitigation, as well as monitoring of the mitigation activities in all project activities. The specific objectives of the training are:

- To ensure that key stakeholders understand the ESMP, how to apply it to the project;
- To actively involve key stakeholders in the environmental and social aspects of projects from planning, monitoring and implementation;
- Ensure all stakeholders are aware of their roles in safeguards implementation;
- Manage environmental and social risks during project implementation.
- Identification of Capacity Needs

The ESIA recommends a capacity building and training program for all other stakeholders namely; supervising consultants, contractors, local county governments, participating institutions (KWS, KFS, and others), local communities, and other stakeholders that will be involved directly in the implementation of this project. The capacity building requirements will mostly be in the form of stakeholder training and workshops. In addition, regular stakeholder workshops shall be held quarterly to review safeguards performance and improve on lessons learned through interactions and engagement throughout the project period.

The proposed capacity building and training requirements would cover among others; NEMA Environmental Management and Coordination Act and Regulations, World Bank safeguards policies, WB EHS Guidelines, DOSH requirements, preparation of CESMP; and Environmental and Social safeguards risk management during construction; Code of Conduct, and execution of safeguards requirements Clauses in the Contractors' contract..

Also, the ESIA recommends capacity building the Grievance Committee members on the grievance redress mechanisms and management system to be set up for the project. Besides safeguards, the capacities of the Grievance Committee members will also need to be built around issues of conflict identification, conflict information analysis and conflict resolution.

The ESIA proposes capacity building by way of awareness creation, sensitization, actual training through a formal training as described below for different players that will be involved in the proposed project.

The following capacity building and training programmes are proposed.

12.3 Capacity Building Enhancement

Awareness creation, training and sensitization will be required for personnel of the following agencies, institutions, and other stakeholders.

- Environmental and Social officers from supervising consultants;
- Contractors and their staff prior to commencement of construction works
- Representatives from the county governments;
- County/Sub-county Environment Officers;
- Local administration;
- Local communities;
- Grievance Redress Committees;
- Representatives from local NGOs involved in Environment and Social issues, or interested parties;
- Kenya Wildlife Services;
- Kenya Forest Services;
- Any other relevant agencies that will be supporting the project

12.4 Training

The training will focus on the following but not limited to;

- Background of the project– its objectives, target groups and footprints;
- Role of ESIA/ESMP in implementation of the projects;
- Relevant environmental and social regulations;
- Compliance with AfDB Operational Policies and WBG EHS Guidelines;
- Project activities and their potential environmental and social impacts;
- Stakeholder engagement, consultation and partnerships;
- Development of Contractor's Environmental and Social Management Plans
- Project screening methods, including application of ESMF tools (Screening checklists, EA), their review, implementation and enforcement.
- CESMP reporting, monitoring and follow-up
- Implementation responsibilities of each party
- Grievance Handling and Redress mechanisms and its relevant tools
- Grievance redress mechanism for workers
- Prevention and response to gender-based violence (GBV), and sexual exploitation and abuse (SEA) of women and girls/boys;
- HIV Prevention in the work place
- Prevention and response to sexual harassment
- Labor influx management practices including preparation and enforcement of workers contracts and codes and conduct.
- Enforcement of Clauses in the contractors' contracts

12.5 Capacity Building and Training Responsibilities

Capacity building and training programs will be developed and implemented by the KeNHA Directorate of Environment and Social Safeguards, with input of the relevant agencies (NEMA, DOSHS etc), and if necessary, hired Safeguards Consultants and the AfDB safeguard specialists involved in the project. The resources for implementing the training will be allocated from the respective component of the project, and will be coordinated by the Deputy Director, Environment and Social Safeguards at KeNHA.

13 CONCLUSION AND RECOMMENDATIONS

The rehabilitation and improvement of the road project is foreseen to attract significant benefits to Northern western Kenya through transport connectivity and ease of access. Nonetheless, negative impacts (on the socio-economic, cultural and ecological environments) are anticipated during the different road development phases. Therefore, its recommended that KeNHA and contractor implements the proposed mitigation measures and environmental and social management plan. RAP has been prepared separately to specifically address project impacts related to relocation and loss of livelihoods and shall be implemented ahead of construction works.

13.1 Conclusion

The construction of the road is expected to improve the road transport services by reducing travel time and facilitating movement in the area, especially movement of people and trade. It is anticipated that in the long term, there will be considerable economic benefits accruing to the entire country, and the local communities that directly or indirectly use/served by the road through improved traffic flow and increased business activities along the road. However, this ESIA study has established that the proposed project will also come along with some potential negative environmental and social impacts, including potential cumulative impacts.

The main environmental and social issues will result from construction and operational phases of the project activities, particularly dust and air emissions, noise pollution and vibration, clearing of vegetation, change in hydrology, soil erosion due to excavation and earthworks, pollution of soil and water sources from spillage/leakage of oils and sediment loading. Other environmental impacts include those due to the disposal of solid and liquid wastes and sources and use of water. The occupational health and safety issues identified include workers accidents and hazards during construction, possible exposure of workers to diseases, risks posed to communities living in the area including injuries and accidents during construction and operation stages.

The main social issues identified includes but not limited to; disruption of business and public utilities, spread of communicable diseases such as HIV/AIDs, Gender based violence, Sexual abuse and exploitation of underage children, Social and Cultural change as a result of labour influx and immigrants in the area, increased energy demand, increased loss of human and livestock due to road accidents, and potential community conflicts due to labour distribution, among others. There will also be some displacement of people because some sections of the road reserve are already encroached. There will also be some physical displacement in some sections of the road, although the design will utilize existing wayleave to minimize resettlement.

However, most of these potential negative impacts can be sufficiently mitigated during construction and operational phases of the project. Mitigation measures have been proposed for all identified impacts, and an environmental and social management plan has been prepared. Mitigation measures will be included in the Bill of Quantities, conditions of contract, and technical specifications for drainage, protection of water sources, minimization of dust, safety and road furniture, HIV/AIDS awareness campaign, rehabilitation of materials sites, and making good of areas that construction has been completed.

It can be therefore concluded that in the long term there will be considerable economic benefit accruing through increased business activities to the areas of influence of the road project. It is our considerable opinion that the proposed development is a timely venture, beneficial and important in that it subscribes to the government of achieving the goals of Vision 2030. Therefore, the construction of Lesseru – Kitale (B2) road in Uasin Gishu, Kakamega and Trans Nzoia counties have positive impacts that outweigh the key negative impacts which can be mitigated.

The total direct amount of implementation of ESMPs is estimated to be about Kshs 84,500,000, including other implementation costs spread out in the budget for the road construction, with Kshs 15 million dedicated to the HIV/AIDS programmes. The rest of the ESMP Costs amounting to a lumpsum of Kshs 69.5 Million is dedicated to other

Environmental and Social Management plans under Bill Number 1 and other costs spread out in the main works of the Bill of Quantities as shown in the ESMP under Chapter 8. In addition, a provisional cost of Kshs 10 million has also been included to be provided in Bill number 1 for ESMP monitoring activities. With the total environmental and social impacts mitigation costs estimated to be less than 5% of the total project costs, the Project is considered feasible environmentally and social. It is thus recommended that the project be allowed to go ahead with construction from an environmental and social impacts perspective.

13.2 Recommendations

Recommendations for the prevention and mitigation of adverse impacts are as follows:

- The project will involve the stakeholders and public during the project implementation, and particularly during the construction and early stages of the road use to ensure minimized environmental and social impacts. In this case, a stakeholder engagement plan should be developed by the RE in consultation with the contractor on how issues concerning the road should be communicated to the relevant stakeholders.
- The Contractor(s) shall develop Contractor's environment and social management plan (CESMP) in line with this ESIA report for purposes of supervision and continuous monitoring. This document shall be part of the contract for the works between the KeNHA and the contractor;
- All material sites will have comprehensive ESIA undertaken and management plans developed such as to include extraction practices, haulage and materials management and rehabilitation plans.
- Appropriate safety audit should be undertaken for the road to guide on the implementation of safety measures during construction and operation stages.
- Continuous stakeholder engagement of the road users and community members on safety will be necessary on the long term management of the road section.
- The project will ensure that the contractor comply with the requirements of the ESMP, which includes compliance with all the environmental and social mitigation measures, and other requirements such as gender principles; labour laws by ensuring the contractor to employ 30% women, utilizing PWDs and the youth in road construction and maintenance; providing safe working conditions for both women and men workers; and ensuring that all civil work contractors engaged under the project, participate in HIV prevention and road safety programmes and; that information reaches the local communities (women, men, the youth and vulnerable groups) living and working along the road corridor.
- Periodic environmental and social monitoring is important to ensure that measures proposed in this ESIA have been implemented to mitigate or avert any negative impacts for the project.
- KeNHA and the contractor should set up proper and applicable Grievance Redress Mechanism (GRM) for the project to deal with grievances and issues on the project, as part of the stakeholder management program
- KeNHA shall ensure that a provisional budget of Kshs 84.5 million for implementation of the ESMP is included in the BoQs for adequate budgeting by the contractor. A further Kshs 10 million shall be provided in Bill No. 1 as provisional sum for monitoring activities of the ESMP.

REFERENCES

African Development Bank Integrated Safeguards System- Policy Statement and Operational Safeguards, December 2013,

AfDBISS Environmental and Social Assessment Procedures (ESAP), November 2015

ESIA Study Report (Draft Final Reports, February 2014) for the Preliminary and Detailed Design of Lesseru – Kitale (B2) Kitale -- Marich Pass (A1) road.

Updated ESIA Study Report, February 2015) for Lesseru – Kitale (B2) Kitale -- Marich Pass (A1) road.

ESIA Study Report (Draft Final Reports, February 2014) for the Preliminary and Detailed Design of Marich Pass - Lodwar (A1) road.

Updated ESIA Study Report, February 2015) of Marich Pass - Lodwar (A1) road

Individual County Integrated Development Plan (CIDP), , 2018 -2022 for Uasin Gishu County, Kakamega, Trans Nzoia, West Pokot and Turkana counties

Draft Final Engineering reports - (April 2014) for the Preliminary and Detailed Design of Marich Pass - Lodwar (A1) road.

Draft Final Engineering reports - (April 2014) for the Preliminary and Detailed Design of Lesseru – Kitale (B2) Kitale -- Marich Pass (A1) road.

F. White, 1983. The vegetation of Africa A descriptive memoir to accompany the UNESCO/AETFAT/UNSO vegetation map of Africa. UNESCO.

Ministry of Education Science and Technology and UNICEF, 2014. Basic Education Statistical Booklet

Ministry of Health (2017), Kenya HIV County Profiles.

The 2019 Kenya Population and Housing Census – Population Distribution by Administrative Units. Volume 1, August 2020 prepared by KNBS.

World Bank Project Appraisal Document Prepared on May 21, 2015 for the EA REGIONAL TRANSPORT, TRADE AND DEVELOPMENT FACILITATION PROJECT (EARTTDFP (PAD 1226

Social Assessment Lesseru-Marich Pass – Lodwar- Nakodok A1 Road, South Sudan-EA Regional Transport, Trade And Development Facilitation Project (EARTTDFP), May 2015

World Bank (2007): Environmental Health and Safety Guidelines for Toll Roads, International Finance Corporation.

Annex 1: Sample Grievance Redress Form

Reference No.	
Contact Information	Address:
Please mark how you wish to be contacted (mail, telephone, e-mail)	Telephone: - Email: -
Preferred Language for Communication (Please mark how you wish to be contacted)	English Kiswahili
National Identity Number	
Description of Incident or Grievance: What happened? Where did it happen? Who did it happen to? What is the result of the problem?	
Date of Incident/ Grievance	
	One-time incident/ grievance (date-----) Happened more than once (How many times-----) Ongoing (Currently experiencing problem.....)
What would you like see happen to resolve the problem?	

Signature: Date:

Please return this form to: COMMITTEE

Annex 2: Sample Chance Find Procedures

Chance find procedures are an integral part of the project ESMoP and civil works contracts.

If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:

- Stop the construction activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the Ministry of State for National Heritage and Culture take over;
- Notify the Supervising Consultant, who in turn will notify the KeNHA, responsible local authorities and the Ministry of State for National Heritage and Culture immediately (within 24 hours or less);

Responsible local authorities and the Ministry of State for National Heritage and Culture would then be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archaeologists of the National Museums of Kenya. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage, namely the aesthetic, historic, scientific or research, social and economic values.

Decisions on how to handle the find shall be taken by the responsible authorities and the Ministry of State for National Heritage and Culture. This could include changes in the layout (such as when finding irremovable remains of cultural or archeological importance) conservation, preservation, restoration and salvage.

Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities.

Construction work may resume only after permission is given from the responsible local authorities or the Ministry of State for National Heritage and Culture concerning safeguard of the heritage.

Annex 3: Minutes of public consultation meetings**MINUTES FOR THE JOINT MISSION AFRICAN DEVELOPMENT BANK (AfDB) KENYA NATIONAL HIGHWAYS AUTHORITY (KeNHA) AND CGP CONSULTING ENGINEERS FOR THE DESIGN REVIEW, ENVIRONMENT AND SOCIAL IMPACTS ASSESSMENT AND THE RESETTLEMENT ACTION PLAN FOR THE LESSERU-KITALE B12, MORPUS LOKICHAR A1.****VENUE; SOI CLUB****DATE;22/02/2022****Attendees; See attached attendance register****Agenda of The Meeting**

1. Opening prayer
2. Introduction
3. Remarks
4. Project presentation
5. Plenary session
6. Closing remarks

Minute 01; Opening prayers.

The meeting was called to order 1t 1025hrs by the Uasin Gishu county commissioner (CC) Mr.Kihara.

He requested a volunteer to lead the attendees in prayers.

Minute02; Introduction

Mr. Kihara appreciated the attendees for making time to attend the meeting he invited the Deputy county commissioners (DCC) Assistance County Commissioners(ACC) chiefs and assistance chiefs of Soy sub county and Turbo sub county. The CC welcomed the stakeholders from different sectors for self-introduction, these included the Civil Society organizations (CSOs) from Uasin Gishu County, The National government department and ministries representatives, the county government County Executive(CEC) committee members, chief officers , department heads in the National and county governments the business community trade unions and representatives from the transport and manufacturing sectors.

After the introductions the CC invited the team from KeNHA to introduce the bank representatives and the consultants.

The KeNHA team leader Eng. Cherono invited the KeNHA team from the North rift region and the Nairobi region for self-introduction after which he called upon the AfDb team leader to introduce the team form the AfDB. Eng Winnie invited the Environment and safeguards expert from AfDB Mr Engim, the regional trade and integration expert and the gender specialist for self-introduction, There after Eng Cherono invited the Consultant team leader Eng. Maina Githinji to introduce the consultant team.

See attached register for the list of attendees.

Minute 03 Remarks

Mr Kihara informed the meeting attendees of the national government support on the successful implementation of the proposed project. He informed the stakeholder of the constitutional requirement for public participation and consultation to ensure the stakeholders are well informed of the project before its implementation.

Eng. Cherono. He made his opening remarks by giving a preview of other project under implementation with in the north rift regions. The Eldoret Eastern bypass, the Suam Kitale road which are almost complete. He gave a preview of the proposed road improvement the Lesseru Kitale B14 road and Morpus- Likichar A1 road . he mentioned that the road will open up the trade within East Africa region Uganda Kenya and Souther Sudan. He mentioned that the road section from Nedapal to Lodwar is complete, the section between Lodwar and Lokichar is under construction, He mentioned that the proposed improvement of the road is the missing link between Eldoret and Lokichar . Once implemented the link between Nairobi and Southern Sudan Via Eldoret Kitale and Lodwar shall be open for trade.

He mentioned part of the project implementation is to undertake the design, feasibility study, environment and Social Impacts Assessment as well as the Resettlements action plan (RAP). He mentioned that public participation is key component in ensuring the successful implementation of the project

Remarks from AfDB lead Winnie

Remarks form AfDB E&S specialist

Kingsley Ejim the environment and Social safeguards expert from AfDB informed the participant that the ESIA and RAP are critical documents for the Project and hence the need for the stakeholders to understand the details in the two documents. he encouraged the attendees to make full engagement and air their views on the project.

He informed the participants that AfDB ride on 3 pillars while investing on the projects

1. The project must be environmentally friendly (risks must be identified and mitigations provided through the environment and social management plans (ESMP)
2. The project must be socially friendly; and
3. The project must be economically viable (to improve the life and standards of the people)

The participants were informed that the 3 pillars must be adequately installed to ensure the bank has safeguards complaint ESIA and RAP.

Minute 04. Project presentation

The consultant representative engineer gave an overview of the project. He mentioned the road design will be maintained on the existing Right of Way (ROW). The road will also include expansion of the road to improve safety, consideration for safe crossings near markets and institutions. The design will include 3 railways crossing one near Lesseru soi and Mois bridge. He mentioned that the design will consider dualing Mois bridge and providing service lanes. In Kitale the road shall be dualled from Maili saba to Kitale town. The other section of the road from Murpus to Lokichar shall be expanded for safety of the road users with improvement of all the bridges along the road sections. The participants were informed that the design will provide safe crossing for livestock in the pastoralist areas of West Pokot and Turkana region. The participants were also informed that consideration of wildlife crossing had been identified in the Morpus Lokichar road section where there is a wildlife sanctuary.

The participants were also informed of the safety measures proposed in the design to ensure all road users have been considered, road signage non-motorized transport facilitates,

Environment and social impacts Assessment and Resettlement Action Plan.

The participants were informed that the RAP and ESIA study for the two road sections had been done and the drafts submitted to the client for review they were however informed that the consultant was still undertaking more studies to enable the completion of the ESIA RAP and Gender Analysis Report. The participants were encouraged to give their views on the proposed road.

Minute 06; Plenary session

Stakeholder	Issue
Robert Wahu- youth leader	Design. Design remedial measures for Soy River, Provide climbing lanes at Soy bridge Roberts and Nangili. Safety Requested the design team to provide safe crossing areas near schools The road at msalaba yellow requires to be expanded to ensure the safety of motorcycle riders and other motorists. The sharp bends close to river soy should be redesigned to ensure safety of trailers and other large trucks. Employment The contractors engaged during construction to ensure employment of the local youth
Stephen Mosesei- Civil society	Public participation Commended the opportunity given to stakeholders and civil society groups. Safety/security. The road from Kitale to Maili saba is very narrow and endangers the lives of the road users, the design should ensure the road is wide enough to accommodate smooth flow of traffic while ensuring safety. Construction materials Proper mitigation should be undertaken to reinstate quarries where the contractor shall source for the raw materials. Open quarries become death traps for livestock Design. The design should ensure the drainage of Soy town is well designed to ensure the flooding water doesn't stagnate within the centre Siltation of River soy- The drainage should ensure incorporation of check dams to reduce the speed of water and soil erosion The design should allocate bus stop and safe crossing areas. Utilities- The contractor to ensure all the utilities are replaced in case of disruption Cycling lanes for cyclists and pedestrian paths be included in the design Private property Ensure all private property have been compensated to ensure smooth implementation of the project Waste management KeNHA to conduct public awareness and sensitize the community on waste management.
Mdonge Wilson- Kakamega county	Design Ensure the design for the bridges consider climate in the area- heavy rains overflow on the bridges and makes the roads impassable (Nangili, matunda and Mois bridge river crossings) Provide a CSR program for Kakamega residents
Phillip	Environment Ensure the design considers allocation of toilets that can serve the public and people travelling from Turkana and within. Employment- Ensure inclusion of women youth and PWD during project implementation. HIV/Aids Awareness Include the National Council for HIV/Aids in the management and sensitization of HiV/ Aids during project implementation Provide a safety disaster management centre and a trauma centre the section from Turkana lacks a trauma centre facility.
Emily Kemboi	Traders

	Mois bridge the traders are many and they lack a market the traders operate on the road reserve, the available land cannot accommodate the over 500 traders. Traders trade on second hand clothes groceries and other household items.
Dr. Kogos CEC Trade Uasin Gishu County	Market The Uasin Gishu county government have allocated 3 acres of land to build a market, the design incorporates an ablution block with a bio digester. The county has set as side 200 million to build the market. The assessment of traders have been done and indication is that the market shall accommodate all the traders/
Nickson Chepkoi- National Aids Council	Health During project implementation there maybe rise in health issues due to social behavior. Cases of violence against women may arise. To support in HIV aids management the KeNHA should consider local implementers people who understand the dynamic of the area in management of HIV/Aids. The council has county implementation plan which KeNHA can seek and implement during construction. Human Centred activities. Young people contribute to HIV/Aids some offering skilled labour, gender based violence may rise due to the project bodaboda riders who are mostly youth could be at risk of accidents.
Alice Achieng- Business lady Soy	The traders lack a market at Soy. Soy is at the boundary of 2 counties and it makes the centre disadvantaged none of the 2 counties want to invest at Soy
Mathew –Snt Johns ambulance	Ensure the laborers receive training on first aid Improve the road design to eliminate areas of rampant accidents, provide toilets for proper sanitation on the design. Have a trailer park next to the railway at Soy. Water management- Consider damming water Diversion Provide alternative route for traffic during construction
Joan Kanari- Market trader Matunda	Matunda lacks a market – consider having a market in Matunda to reduce condgestion on the road reserve.
Edward Wekesa- Water Resource Authority	Ensure the contractor obtains a water obstruction license. The road section is water scarce, the contractor to consider a borehole for construction water to ensure there are no conflicts between contractor and communities. Liase with WRA to get water measuring structure at Nzoia bridge- relocation
Birir- CEC Roads and Transport	Market. The design for the Mois bridge market is complete, the market is designed as a storey market to accommodate many traders. The County Intergrated development plan had planned to have a fires station at Mois bridge. Urban centres of Furfarol Nangili and Matunda should be considered to have pedestrian walk street lights and covered drains. The county team will plan on the best location to have trauma centre
Kakamega County CEC roads	Proposed to have equitable share for CSR programmes . The CSR should be looked at their economic viability, Mois bridge market should involve the traders to ensure the design is acceptable by the traders. The proposed road shall spur economic development the road shall also enable growth of markets.
Ameka- Boda boda sector Lady biker	During construction consider boda boda. Mois bridge is congested and lack parking spaces for bodaboda.

	The design should allocate parking spaces for bodaboda this will help reduce conflict with store owners. The road is narrow and many time bodaboda riders are pushed by large vehicle
Carol - Children protection	Defilement- the labourers and most human resource will be from outside and most men will have left their families at home defilement cases may be on the rise as well as neglect of the families left behind by men. Young girls will be at risk Child labour- cases might occur young, aged people seeking employment on the site.
Ministry of education representative	Concerns of construction safety and security of learner's dust and noise, social vices and mob psychology Provide toilets for public use – to be incorporated on the design Beatification of the road after construction.
Johnah Odek Kenya National of Chambers of commerce	During construction consider townships along the road, consider night construction to reduce interruption during the day. Relocation of affected persons- Have the RAP done early and resettle those affected to avoid crisis and discontent of the PAPS.

Closing remarks

DCC Turbo- Commended KeNHA for the project, requested Liaison between the Military at Lesseru for provision of trauma centre facility on the available parcel of land.

Robert- AfDB Climate change expert- Informed the stakeholders that AfDB is at the front line of ensuring that all the project funded are climate resilience by ensuring adoption of measures that would reduce impacts of climate change or measures that do not trigger climate change such as emission of greenhouse gases. Explained some measures to be adopted are installing solar street lighting and revegetation

Kingsley- Informed the stakeholder that the bank has the best interest on the stakeholders by ensuring the project does not cause negative impacts but ensures growth and development,

Informed youth leader to be aggressive and use existing structures for adequate mobilization,

The bank ensures the resident as are the core beneficiaries.

AfDB E&S representative informed the stakeholders that the ESIA document shall develop a management plan to ensure safety during construction is adhered to. AfDB E&S representative informed the stakeholders to ensure they request for project documents and understand the recommendations on the documents as well as give input to ensure the RAP and ESIA reports incorporates the suggestions.

Quarries and borrow pits; The stakeholders were informed to ensure they understand the project documents

The stakeholders were informed to raise quarries at the ESIA stage of the project to ensure their views are incorporated in the design- water bodies, and effects of erosion on down stream

Eng Cherono; Appreciated the stakeholder for attending the meeting. Informed the meeting on the consideration of appropriate facility for the trauma centre which could be preferably a level 4 hospital. Agreement will be done between KeNHA and counties on the emergency centre.

Having no other matters to discuss the meeting was called to an end by the Uasin Gishu County Commissioner at 0230hrs.

MINUTES OF ESIA, RAP AND THE DESIGN REVIEW PUBLIC PARTICIPATION MEETING FOR THE PROPOSED ROAD PROJECT FROM LESSERU TO LOKICHAR HELD AT MATUNDA ON 08TH December, 2021 AT 11:00AM**AGENDA OF THE MEETING**

1. Opening of the meeting/Word of prayer
2. Introduction of participants
3. Key stakeholders present
4. Purpose of conducting the consultation/sensitization meeting with the community and relevant stake holders
5. Introduction of the proposed project and its various components, benefits and possible impacts/mitigation measures
6. Views and questions from the participants of the proposed project with responses and clarifications given by the consulting engineers review team
7. Closing remarks
8. A.O.B
9. Closing/prayer

Minute 01: Opening of the meeting

The meeting commenced with a word of prayer at 11:05am from a volunteer. The acting area chief of Kakamega appreciates the presence of the other officers in authority including the ACC of both Moi's bridge and Matunda, the Chief of Uasin Gishu, the Assistant Chiefs and the community leaders as well as the village elders. He made a point of welcoming one of the principal of the secondary schools in Matunda (Principal Luvand Mary of Matunda SA Secondary School) to greet the people. He then goes on to welcoming all those who availed themselves and told them to use the opportunity to raise their concerns about the proposed road project.

Minute 02: Introduction of the participants

The acting area Chief of Kakamega introduced the CGP consulting engineers' team. All organizers introduced themselves by stating their names and roles in the government and in the design review team. The design review team leader, Beatrice Githinji gave an introduction of the project and explained the positive and negative impacts that the project will have towards the community and the region.

Minute 03: Key stakeholders present

CGP Consulting Engineers team, The ACC of Moi's bridge and Matunda, The Chiefs, The Assistant Chiefs and their fellow peers.

Minute 04: Purpose of conducting the consultation

The Sociologist from the team of experts explained the importance of public participation and consultations before the project is undertaken. She explained that that would help in giving the communities a sense of ownership of the project. She also explained the importance of the project and stakeholders involvement in the project.

Minute 05: Project scope-Beatrice Githinji

The purpose of the meeting is to explain the design review, resettlement action plan (RAP), and the environmental and social impact assessment (ESIA) from Morpus to Lokichar to the community along the road. The road project will pass through Uasin Gishu, Trans nzoia, West Pokot and Turkana counties. According to the proposed road design there will be resettlement of people who have encroached along the road. According to the resettlement action plan, the affected people will receive award letters which will show the value of their property and how much they will get during compensation. After compensation, they will be given a three month ultimatum to relocate.

The contractor must have a certificate from NEMA that allows him to go ahead with the project after careful assessment of the environmental and social impacts that would be result from the project being operational. Beatrice explained that the project may also have negative impacts such as dusty roads, noise, accidents, deforestation, invasion of culture, foreign diseases etc. She then reassured the public that the contractor is expected to follow the protocols put in place to protect the people from those disadvantages according to NEMA and the Government. The proposed road project is not meant to diminish the current state of the livelihood of the public but to improve or maintain it.

In addition, she mentioned that there will be availability of job opportunities and the value of the land in the affected towns will automatically increase. To support the need for public participation, there will be a grievance regress committee that will mediate between the public and the contractor. Compensation has already commenced by the World Bank and the Africa Development Bank. The project is meant to ease accessibility of the areas affected and ensure safety of all road users.

Minute 06: Views and questions from the participants of the proposed road project with responses and clarifications given by CGP consulting engineers' team

Comment: By Principal Luvanda Mary of Matunda SA secondary school

The principal explained that the members of the affected community are happy to know that soon their children will be able to cross and use this road without any worries about their safety. This community has lost one child this year due to a road accident. The children also have bicycles but cannot really rely on them because of the motorbikes and vehicles that over speed. She also mentioned that 70% of the workers should come from members of the community such as the youths who are well skilled and capable of the formal and casual work. She explained how her school is located behind the market center and she just wanted to propose that the presence of an access lane to the school would be highly appreciated as well as any other aid from the contractor to develop the schools or community at large.

Response: Beatrice explained that the Cooperate Social Responsibility (CSR) team will choose a way that they can help develop the community while the contractor focuses on ensuring the safety of all road users.

Comment: By Leonard Simiyu

The community would like for there to be an expansion of the road and installation of bumps to reduce the over speeding of vehicles. Also the presence of reliable drainage systems, parking areas and roads leading to the market center would really be helpful and highly appreciated. In addition, the public would like the contractor to really consider the youths for the job opportunities.

Response: Beatrice reassured the people that the road design will cater for all issues and safety measures required. She also stated that the contractor will employ the youth for both manual labor and skill oriented labor.

Comment: By Christopher Aballa

Being the first time this community has been involved in a public participation meeting concerning the proposed road works, the members of the community appreciate that opportunity to raise their concerns and views. The county government has always side lined the locals that is why the people are happy to have the forum. She mentioned that vehicles have been over speeding and the presence of good bumps will really help mitigate that. Also on the job opportunities in the project the people will not tolerate any type of corruption.

Response: Beatrice mentioned that there will be bumps and speed limits to reduce the cases of vehicles over speeding. The grievance regress committee will be in charge of bringing forward a list of potential workers for the project from the community.

Comment: By Salome Kayanza

The challenges on this road have been many so the people are glad to hear that something will be done about the problems on the road. The job opportunities should also be offered to both genders equally while also not criticizing according to the age groups. Those who are capable of working on the project should be offered the same fair opportunity. The project should not be a political propaganda and the grievance regress committee should include all representatives of the community from the youth to the elderly. It is good that the public has the committee as a human face. The affected people would also appreciate a warning before the project starts.

Response: Beatrice talked about how the project is meant to either maintain the livelihood of the people or improve it. She mentioned that the project is being sponsored by the World Bank. She also reassured the people that the criteria used when employing the community members will be fair to all.

Question: Will the bridge in Matunda be reconstructed because it is currently not in the best shape and all will there be pathways for pedestrians on that bridge? By Agnes Langu

Answer: The design of the proposed road project will involve all road safety measures for pedestrians including foot paths where needed.

Question: Which criteria will be used when employing the youth? Is there anything that can be done about the flooding that is caused by the areas with low terrines? By Wanyama Benson

Answer: Casual labor will be given to the youths and the skilled labor will require trained personnel. The contractor will build reliable drainage systems and also raise the areas with low terrains so as to reduce the flooding.

Minute 07: Closing remarks

The Chief from Kakamega thanked the people for availing themselves and for their views and concerns. He also said that the people with any complains or concerns about the project should report them to their respective Chiefs. He suggested for there to be a meeting to appoint the members of the grievance regress committee. Beatrice was given a chance to thank the people and since there was no other business the meeting was adjourned at 12:00pm with a word of prayer.

MINUTES FOR THE JOINT MISSION AFRICAN DEVELOPMENT BANK (AfDB) KENYA NATIONAL HIGHWAYS AUTHORITY (KeNHA) AND CGP CONSULTING ENGINEERS FOR THE DESIGN REVIEW, ENVIRONMENT AND SOCIAL IMPACTS ASSESSMENT AND THE RESETTLEMENT ACTION PLAN FOR THE LESSERU-KITALE B12, MORPUS LOKICHAR A1.

Location; AIC Moi's Bridge

Date; 23/03/2022

Attendees; See attached register

Agenda of the meeting;

- 1. Opening prayer**
- 2. Introduction**
- 3. Remarks**
- 4. Project presentation**
- 5. Plenary session**
- 6. Closing remarks**

Opening prayers; The area chief called upon one of the attendees to lead with prayers. Soon after he invited the senior chief to welcome the team from KeNHA.

Introduction.

The KeNHA environmental expert invited the team from KeNHA for introduction later on he invited the AfDB mission team and the consultant team for self-introduction.

Remarks.

Kingsley Ejim; He informed the attendees of the stakeholder engagement process and informed the team that engagement shall be a continuous process. The attendees were informed that the project was at the preparation stage looking at the social and environment impacts which anticipates to enhance the benefit of the project and mitigate the negative impacts. The attendees were informed to give their views about the project and openly participate and ask questions.

Project presentation

The consultant representative engineer gave an overview of the project. He mentioned the road design will be maintained on the existing Right of Way (ROW). The road will also include expansion of the road to improve safety, consideration for safe crossings near markets and institutions. The design will include 3 railway crossing one near Lesseru soi and Mois bridge. He mentioned that the design will consider dualing Mois bridge and providing service lanes. In Kitale the road shall be dualled from mail saba to Kitale town. The other section of the road from Murpus to Lokichar shall be expanded for safety of the road users with improvement of all the bridges along the road sections. The participants were informed that the design will provide safe crossing for livestock in the pastoralist areas of West Pokot and Turkana region. The participants were also informed that consideration of wildlife crossing had been identified in the Murpus Lokichar road section where there is a wildlife sanctuary.

The participants were also informed of the safety measures proposed in the design to ensure all road users have been considered, road signage Non-motorized transport facilitates,

Environment and social impacts Assessment and Resettlement Action Plan.

The participants were informed that the RAP and ESIA study for the two road sections had been done and the drafts submitted to the client for review they were however informed that the consultant was still undertaking more studies to enable the completion of the ESIA RAP and Gender Analysis Report. The participants were encouraged to give their views on the proposed road.

Plenary session

Stakeholder	Issue raised
Morries Otieno- boda boda sector chairperson	He mentioned that the bodaboda riders are common users of the road and the most at risk from accidents on the road, he mentioned the road was very narrow at Mois bridge and many accidents have occurred leaving most of the disabled and others dead. Mois bridge had more than 1500 bodaboda riders serving the rural Kakamega county Trans Nzoia and UasinGishu. Women suffer when it rains, they are the majority dependants of the bodaboda transport. The bodaboda rider operate a SACCO that support its members with loans training, and access to licenses. The Mois bridge centre lacks public toilet and its challenging for traders and customer during market days
Mr Keter- Chaiperson Headteacher association Uasin gishu	He raised concerns on the safety of the children. Proposed to have fly over at the urban centres and safe crossing areas for the passengers including where schools are located. Security is a ig issue at ois bridge many incident of children kidnapping and some found murdered, proposed to have more security lights on the streets. Proposed to provision of a tarmack road toward the Mois bridge school to serve the church primary school and secondary school.
Rael Kogai	Requested for support for women in the project, skills transfer to women during project implementation through provision of employment. Provide employment to young people men and women. Mosi bridge is second largest urban centre in Uasin Gishu and second in paying county levy, traders in the centre are many and depend on the road corridor for their livelihood. The available land for a market is 3 acres which will no be sufficient to accommodate all the traders.
Kiprono Joseph Meli- Opinion leader	Proposed to have CSR program to support local secondary school by fitting a modern laboratory Proposed to have streetlights through the town for security. The design should provide parking on the urban centres as well as bodaboda shades, lorry packs and service lanes.
Elius Ogire- Youth leader Mois bridge	Mois bridge lack a waste management system, wste is collected by the county intermittently, there l a need to establish a waste management system during project implementation. There are anticipated impacts during project implementation such as influx in population, insecurity, increase in HIV/Aids. There is a need to undertake health sensitization on communicable diseases to the locals and the contractor employees. The design should consider drainage, walking paths and bodaboda parking Consider having a public toilet to serve the ton and increase the heath and safety of the people in the town.
Samuel Kubai	Traders along the road reserve have been harassed before and forced out of the road reserve.

	The traders should be resettled before the construction of the road.
Emily Kemboi	During construction provide safe footpaths for women and traders, away from the road . The contractor should source construction materials locally. Mois bridge lack playground and at times children like playing on the road especially skating, propose to have a skating field within close public schools.
Silas Jogoo	The contractor should ensure access of the business to the traders. The contractor should also ensure the utilities are cared for during construction- water pipelines electricity and internet fibre.
Doreen	The design should incorporate beatification of the town, plant trees, and flowering and involve local youth groups that have tree nursery projects

Remarks from the client representative environmentalist; the current road is under contract-based contractor for maintenance.

Land scaping-the contractor will be linked with the youth groups to engage in providing the seedlings.

Employment shall be openly advertised for application all people will be considered.

Materials; The design teams are undertaking studies to identify the material sites. The agreement for material sites will be made between the landowners and contractors but rehabilitation of the sites must be done.

Winnie Gichuru; The road design shall provide signage, at times the signages are vandalized by the local people it is important for the community to safeguard the road signage.

The design shall consider bus stops, shade for riders labor considerations shall be equally considered.

Toilets- other towns like Nairobi and Eldoret has toilets run by youth same can be replicated in the centres along the road sections.

Markets- KeNHA shall liaise with the county government on provision of land for the markets.

Awareness on Hiv/Aids will be done during project implementation.

Salma Sheba- Consultant representative gender specialist. She explained the gender aspects and consideration for men and women. She posed a question on the attendees on the hinderance of employment in the project; the respondent indicated that women are not expected to work on construction sites, the perception of engineering work as being male dominated , women are time constrained by house chore and they don't have places to leave their young children these factors lead to women withdrawing for the project.

Lilian Miriti; She proposed that the Project shall support development of career mentorship, and the project will be open for women to seek opportunities.

Kingsley Ejim; Women will participate in the project similar to their participation in the stakeholder engagement. The provision of the RAP/ESIA should be taken keenly and understood, the document should be availed in public office where people can access. There will be disclosure of the project documents to the public for review and comments 2 months appraisal will be done, and the community will be at a better position during the appraisal of ESIA and RAP. The community was informed to engage the ESIA/ RAP report.

In closing, the Clinet assured the attendants that the road design team shall

- Expand the road and accommodate all the road users, have service lanes within the urban centres walk paths for pedestrians.
- Design livestock crossing areas to ensure safe crossing for the wildlife.

- There is need for the design to incorporate bodboda shed within the urban centres to ensure the parking spaces are designated for routes.
- The design should incorporate public toilets in all the urban centres along the road corridor.

Having no other issues to discuss the meeting was called off at 530 hrs.

MINUTES FOR THE ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT RESETTLEMENT ACTION PLAN FOR THE DESIGN REVIEW OF LESSERU-KITALE(B14) AND MORPUS –LOKICHAR (A1) ROAD.**Meeting Venue:** Moi's Bridge**Date:** 9th December 2021**Time:** 10.00hrs**Agenda**

7. Opening prayer
8. Introduction
9. Project presentation
10. Plenary session
11. Closing remarks

Minute 01: Opening prayers

The meeting was called to order by the area ACC Madam Madam Pierra at 1100hrs. she invited a volunteer to say a word of prayers.

The Madam Pierra welcomed all members and told them to use the opportunity to raise their concerns about the proposed road project.

Minute 02: Introduction.

The ACC welcomed the attendees and invited the local leaders (nyumba kumi and elders) recognized the presence of the stakeholder.

She affirmed the Government's support toward the proposed project and reiterated the importance of the public participation process as it is in line with the constitution, he informed the attendees to make their contributions with regard to the proposed project during the plenary session.

She invited the consultant for self-introduction

The consultants team made their opening remarks and appreciated the attendees for making time to attend the meeting

Minute 03: Project presentation**Purpose of public participation meeting**

The consultant appreciated the attendees for making time to attend the meeting and acknowledged the importance of public participation. The sociologist informed the meeting attendees that public participation was a constitutional requirement and a legal legislative requirement. He informed the meeting that the 2010 constitution calls for public participation of all the stakeholders in a project, he mentioned that the EMCA 1999 updated in 2015 states that all project must undergo through the Environment and Social Impacts Assessment process (ESIA), it is a requirement by the EMCA 1999 that public participation must be carried out to ensure that the community and stakeholders have been informed of the project its impacts negatively and positively.

The project.

The meeting attendees were informed that Kenya National Highways Authority(KeNHA) had appointee CGP consulting engineers to undertake the update of the feasibility study, Design of the road project Resettlement Action Plan(RAP) and Environment and Social Impacts Assessment (ESIA) for the road Lesseru-Kitale (B14) and Morpus Lokichar A1 roads.

The attendees were informed that the road between Leseru and Kitale is 60 Km and Morpus Lokichar is 143 Km. The attendees were also informed that the roads traverses the counties of Uasin Gishu, Kakamega, Trans Nzoia, West Pokot and Turkana. They were informed that the road section between Kitale and Morpus was not part of the proposed project scope and it was being funded by KFW.

The meeting attendees were informed that the project will be funded by the African Development Bank(AfDB).

Project works

The attendees were informed that the road design which will involve expansion of the road in the narrow sections of the road, improve the bridges, provide non-motorized transport pavement, consideration for bus bays and trailer parks, dualling the road section at Mois bridge for 2 Km and providing services lanes, dualling of Kitale town from Maili saba to Kitale, and provision of service lanes in the major town centres of Soi, Matunda, Ortum and Lokichar.

Project Impacts

The meeting attendees were informed that the road works shall be retained within the existing road reserve of 40 M in some section and 60 M within other sections the attendees were informed that the project will not require land uptake for road construction works.

Environment and social impacts during construction phase

The attendees were informed that the road construction will lead to environment and social and economic impacts during the construction and operation phase of the project. Impacts, the impacts were presented as listed below

- Construction negative impacts
- Dust
- Noise vibration oil spill
- Movement of heavy machinery vehicles
- Impacts of material sites where raw materials will be sources
- Impact on water sources
- Loss of trees and vegetation
- Influx in population
- Loss of trading spaces for the traders on the Right of Way (ROW)
- Risk of increased spread of HIV/Aids
- Early pregnancies
- Sexual abuse
- Construction Positive impacts
- Employment opportunities
- Skills transfer
- Increased traders
- Revegetation of lost cover

The meeting attendees were informed that the adverse environment and social impacts have been identified and the study will develop an environment and social management plan indicating how the adverse impacts would be reducing or mitigated during the project implementation. The participants were informed that the ESIA report shall be submitted to the National Environment Management Authority (NEMA).

Further to the ESIA the attendees were informed that a Resettlement Action Plan (RAP) study will be undertaken to identify the properties/assets that would be impacted by the improvement of the road project. The meeting attendees were informed that the traders along the ROW of way shall be enumerated and documented in the RAP report.

Further the attendees were informed that there will be an exercise to collect data in their locality to held the report have a socio-economic baseline of the area.

Grievance redress management (GRM)

The participants were informed that a grievance redress management will be develop to guide the handling of grievances during project implementation, they were informed that local administration, local leaders, women and youth will be part of the grievance committee. They were informed that the project resident engineer and appointed KeNHA officials will also be part of the grievance committee, further to that they were informed there shall be continuous consultation before and during the project implementation.

The sociologist requested the chief to lead the plenary session where the participants were given an opportunity to share their views concerns and comments about the proposed project.

Minute 04. Plenary session

Question/comment; Ambrose otukwa;

There are youths with skills and certificates within Moi's Bridge Community. Will they be given the employment opportunity during implementation of the project?

Response

The community will be considered for employment during construction phase, 70% of the unskilled labor opportunities shall be given to the locals. The skilled will be required to apply if any opportunity arises.

Question: Salome

As a person operating on the road reserve what will happen to our livelihood?

Response

The consultant will find out whether there is a land available where KeNHA in collaboration with the County government of Uasin Gishu will construct market for the traders.

Question: James Migui

How is KeNHA planning to support the informal sector and reduce the economic loss.

What is the plan for those who will lose entirely their businesses?

Response

A market will be constructed for the traders doing their businesses along the road to move to and continue doing with their business. There will be a disturbance allowance to make sure no one will be affected negatively.

Question: Alex Baraza

Is there a plan to incorporate path ways for Boda-boda and pedestrians in the design?

Will there be shades for boda boda people?

Response

The design will consider all non-motorized requirement for every user to be safe. There will be stages for Boda boda and walking paths for the pedestrians.

Question: Harun Ng'etich

There are some KeNHA demarcating pillars within private lands past Moi's bridge.

What will be done to those whose land is affected by the new road design?

Response

If the new design will affect any one's land they will be compensated. For the Pillars in people's land there will be consultation with KeNHA to enquire if really the pillars are in people's land.

Question: Morris Otieno

The GRC should be given opportunity to see the design. This will help them understand who will be affected by the road and pass the information to the community.

Response

The design and ESIA report will be made available to everyone either online or even in the local administration offices.

Comment: Bob Rono

The contractor should put the market first before relocating the traders from the road reserve.

The Traders doesn't have a toilet at the market center. It should be a component of the market.

Question/comment: Laeh Wanjiku

Women should be given equal opportunities for employment by the contractor. There are many single women without any livelihood activities

Response

Women will be given opportunity and be considered for less heavy task to encourage more women to come out for the construction works. There will be more sensitization about the opportunities from the construction works and the opportunity it creates for women to participate and earn their living.

Question: Maheli Daniel

How will the contractor handle sexual exploitation to our young girls and boys?

Response

The contractor will have all the workers sign code of conduct for SEA, Child protection and for GBV which will make every body responsible for their action. There will be more training and sensitization on the same issues of SEA, GBV and child protection.

Question: Solomon Wanyoike

During construction will there be encroachment on the road reserve?

How will the contractor manage the issue of dust especially at the market center?

Response

The encroachers will be given notice to move out of the road reserve early enough to enable smooth continuation of the road construction.

The contractor will always be guided by the NEMA guild lines in the issues of environmental impacts, therefore he will be expected to contain the dust and any other environmental issue in accordance to the rules and guidelines.

Answer: The contractor has to ensure that his project operations do not degrade the environment of the local people.

Minute 07: Closing remarks

The Acc gave her remarks to the people and advised them to bring their concerns and complaints to his office. She also mentions that the grievance regress committee members will be appointed as soon as possible. The consultant thanked the public for their participation and since there was no other business, the meeting was adjourned at 01:00 pm with a word of prayer.

MINUTES FOR THE JOINT MISSION AFRICAN DEVELOPMENT BANK (AfDB) KENYA NATIONAL HIGHWAYS AUTHORITY (KeNHA) AND CGP CONSULTING ENGINEERS FOR THE DESIGN REVIEW, ENVIRONMENT AND SOCIAL IMPACTS ASSESSMENT AND THE RESETTLEMENT ACTION PLAN FOR THE LESSERU-KITALE B12, MORPUS LOKICHAR A1.

Venue; Matunda at SDA Church

Date;22/03/2022

Attendees; See attached attendance register

Agenda of The Meeting

1. Opening prayer
2. Introduction
3. Remarks
4. Project presentation
5. Plenary session
6. Closing remarks

Minute01; Opening Prayers;

The meeting was called to order at 330hrs by the area Assistant County commissioner Pierra Ntongai. She invited one of the attendees to say a word of prayers.

Minute02; Introduction

The ACC invited the consultant to give introduction, make remarks and address the meeting. The consultant representative invited the consultant teams, KeNHA team and the AfDB team members for self-introduction and the brief on their role in the project.

Minute 03; Remarks

Eng Winnie from AfDB requested the residents to be open in giving their contribution and propose what can be done to improve their livelihood. She informed the residents that the AfDB was concerned on the social and environmental impacts of the project and hence the RAP and ESIA report required their local input and capture all the identified impacts as well as provide the mitigation measures.

Kingsley Engim

He informed the attendees that the project will have environmental and social impacts. AfDB will finance the project and one of the key issues to be considered before the loan is approved by the bank in financing is to ensure that Environment and social impacts have been identified and provided with proper mitigation. He requested the attendees to give their input and ask any questions they might have about the project and vet the SIA and RAP documents and understand the provisions on the document. He informed the attendees that the ESIA document disclosure shall be made public by KeNHA.

Minute 04 Plenary session.

Stakeholder	Issue
Simon Baraza	He enquired if there will be employment for the local people. He requested that priority on employment to consider local youth (men and women)
Vincent Monera	Matunda is prone to flooding during rainy seasons. The design should consider proper drainage that will accommodate all the storm water. The contractor should give support to the local sub county hospital. He proposed that the project should support the local health facility at Kibuguchi and Chkura Response The consultant representative informed the meeting that the design team has a hydrologist expert who is working with design engineers to ensure that the design incorporates proper drainage system.
Eboi Francis	He mentioned that the town lack a proper designated bus stop and therefor the design should consider having a designated bus stop that will ensure safety for the road users. He proposed that the design to include safe crossing areas, and toilets along the road corridor.
Kihonge James	He mentioned that Matunda is a busy centre serving other rural areas who depend on supply from the centre he mentioned that there is no designated market to accommodate all the traders, during market days the traders trade on the road reserve blocking the road this leaves them vulnerable to accidents. Provide access road to the market to encourage traders to work from the market. The culverts are detached from the road. Create service lines at the centre. The safety of the traders and school going children should be put into consideration There is no proper drainage therefore water flows from Kakamega to Uasin Gishu which is directed to private properties. The project should ensure that local people benefit from the employment opportunities.
Heiza Mtabezi	There is no bus stop at Matunda He proposed the project to support an orphanage which started due to post election violence which would like to be given support. The contractor should provide access roads to the learning institution along the road. Defilement once reported are referred to Eldoret because the sub county hospital doesn't have the capacity to handle such cases. We request to have a doctor and facilities at the sub county hospital which can deal with such cases.
Rapheal Wanyonyi	He informed the meeting that boda boda shades are located next to private properties blocking their business. The road expansion should consider erecting a bodaboda shades in every centre. Majority of the youths are idle the contractor should give them employment opportunity during the road construction. The women also should be equally involved in the road works to empower them. During the market day on Saturday the road is very narrow because the traders encroach the road with their trading items because the market is not sufficient to serve the community.
Pastor Kibet Joshua	He requested that the contractor to tarmac the access roads to any government institution along the road. He requested provision of an emergency centre in Matunda which is the headquarter of Likuyani to provide emergency services. KeNHA should acquire additional land for bus park at Matunda.

	Designing a proper drainage system will save the people on the lower side of Matunda who suffer due to floods every rainy season.
Jackson	The area is still an agricultural land but Matunda is developing to commercial town. There is a need for the design team to integrate the road design with proposed municipal plans to accommodate the town plans in the design. The town lack a dumping site for the solid waste and when it rains the solid waste is taken by water to open fields and people's properties.
Esther Erikana (Maua Environment)	She requested that the project contractor to engage Maua environment in supplying beatification flowers and trees. She mentioned that the group engage in tree planting and flowers
Ronald Nyongesa	He requested the project design to Provide Enough streetlights within the towns and contractor should tarmac access road to Matunda sub county hospital which is about 500m
Nderitu John Karimi	He mentioned that the road is very narrow, lack street lighting whereas it is the third largest in Kakamega county and pays lots in Levy. He requested inclusion of a market bus park and toilets in the design.
Joseph Sirika	He enquired what would be the project benefit to the community during construction and what criteria will be use in engaging employment.
ASS.chief Shikuku	The area has a special school Matunda school for impaired KeNHA should consider supporting the facility and provide proper access to the school. To ensure safety for the visually impaired and others using assistive devices.

Remarks/ response

Consultant representative.

The ESIA proposes measures that will ensure that the adverse negative impacts will be mitigated Employment process will be fair and transparent the contractor will be advised to advertise for the available employment opportunities.

The design team will make consideration on the areas that are prone to flooding, the team has a hydrologist who will support the design team on drainage.

Social impacts; The contractor shall sign a code of conduct to protect the vulnerable groups from labour exploitation and sexual harassment.

Remarks from Kingsley Ejim

The community should educate their children for purpose of social protection and take responsibility of social protection for their children. Alcoholism and drugs should be taken seriously and should be reported. Youth groups should take up the role of social protection. There will be a continuous consultation until the project is complete. Consideration for the special school will be done by the design to provide access to the school

Remarks from Robert Ochieng-

One of the key issues being considered by the bank is the issue of climate change. The project will adopt measures that will not bring impacts on the environment, the project will adopt use of solar lighting for streetlights, reduce loss of vegetation or advocate for revegetation to replace vegetation, the design will consider proper drainage that will reduce erosion.

Remarks from Linet Miriti

Women are usually disadvantaged in getting employment in construction site due to culture and stigma women are encouraged to apply for more positions and Encourage women to participate in the road construction works. Gender issues will be considered in the report.

Eng Winnie Gichuru; She appreciated the attendees for their contribution in the meeting and the contribution of the community will make the project better.

Closing remarks; The Area ACC appreciated the residents for making time to attend the meeting and making their contribution in the meeting. having no other issues to discuss the meeting ended at 1800hrs with a word of prayer from a volunteer.

Meeting Venue: Matunda

Date: 8th December 2021

Time: 10.00hrs

Agenda

7. Opening prayer
8. Introduction
9. Project presentation
10. Plenary session
11. Closing remarks

Minute 01: Opening prayers

The meeting was called to order by the area chief Mr. Shikuku at 10.00hrs. He invited a volunteer to say a word of prayers.

The Mr. Shikuku welcomed all members and told them to use the opportunity to raise their concerns about the proposed road project.

Minute 02: Introduction.

The area chief welcomed the attendees and invited the local leaders (nyumba kumi and elders) recognized the presence of the stakeholder and opinion leaders.

He affirmed the local administration support toward the proposed project and reiterated the importance of the public participation process as it is in line with the constitution, he informed the attendees to make their contributions with regard to the proposed project during the plenary session.

He invited the consultant for self-introduction. The consultants team made their opening remarks and appreciated the attendees for making time to attend the meeting

Minute 03: Project presentation

Purpose of public participation meeting

The consultant appreciated the attendees for making time to attend the meeting and acknowledged the importance of public participation. The sociologist informed the meeting attendees that public participation was a constitutional requirement and a legal legislative requirement. He informed the meeting that the 2010 constitution calls for public participation of all the stakeholders in a project, he mentioned that the EMCA 1999 updated in 2015 states that all project must undergo through the Environment and Social Impacts Assessment process (ESIA), it is a requirement by the EMCA 1999 that public participation must be carried out to ensure that the community and stakeholders have been informed of the project its impacts negatively and positively.

The project.

The meeting attendees were informed that Kenya National Highways Authority (KeNHA) had appointee CGP consulting engineers to undertake the update of the feasibility study, Design of the road project Resettlement Action Plan (RAP)

and Environment and Social Impacts Assessment (ESIA) for the road Lesseru-Kitale (B14) and Morpus Lokichar A1 roads.

The attendees were informed that the road between Leseru and Kitale is 60 Km and Morpus Lokichar is 143 Km. The attendees were also informed that the roads traverses the counties of Uasin Gishu, Kakamega, Trans Nzoia, West Pokot and Turkana. They were informed that the road section between Kitale and Morpus was not part of the proposed project scope and it was being funded by KFW.

The meeting attendees were informed that the project will be funded by the African Development Bank (AfDB).

Project works

The attendees were informed that the road design which will involve expansion of the road in the narrow sections of the road, improve the bridges, provide non-motorized transport pavement, consideration for bus bays and trailer parks, dualling the road section at Mois bridge for 2 Km and providing services lanes, dualling of Kitale town from Maili saba to Kitale, and provision of service lanes in the major town centres of Soi, Matunda, Ortum and Lokichar.

Project Impacts

The meeting attendees were informed that the road works shall be retained within the existing road reserve of 40 M in some section and 60 M within other sections the attendees were informed that the project will not require land uptake for road construction works.

Environment and social impacts during construction phase

The attendees were informed that the road construction will lead to environment and social and economic impacts during the construction and operation phase of the project. Impacts, the impacts were presented as listed below

Construction negative impacts

- Dust
- Noise vibration oil spill
- Movement of heavy machinery vehicles
- Impacts of material sites where raw materials will be sources
- Impact on water sources
- Loss of trees and vegetation
- Influx in population
- Loss of trading spaces for the traders on the Right of Way (ROW)
- Risk of increased spread of HIV/Aids
- Early pregnancies
- Sexual abuse

Construction Positive impacts

- Employment opportunities
- Skills transfer
- Increased traders
- Revegetation of lost cover

The meeting attendees were informed that the adverse environment and social impacts have been identified and the study will develop an environment and social management plan indicating how the adverse impacts would be reducing or mitigated during the project implementation. The participants were informed that the ESIA report shall be submitted to the National Environment Management Authority (NEMA).

Further to the ESIA the attendees were informed that a Resettlement Action Plan (RAP) study will be undertaken to identify the properties/assets that would be impacted by the improvement of the road project. The meeting attendees were informed that the traders along the ROW of way shall be enumerated and documented in the RAP report.

Further the attendees were informed that there will be an exercise to collect data in their locality to help the report have a socio-economic baseline of the area.

Grievance redress management (GRM)

The participants were informed that a grievance redress management will be developed to guide the handling of grievances during project implementation, they were informed that local administration, local leaders, women and youth will be part of the grievance committee. They were informed that the project resident engineer and appointed KeNHA officials will also be part of the grievance committee, further to that they were informed there shall be continuous consultation before and during the project implementation.

The sociologist requested the chief to lead the plenary session where the participants were given an opportunity to share their views concerns and comments

Plenary Session

Comment: Principal Luvanda Mary of Matunda SA secondary school

The principal said Matunda community is happy to know that soon their children will be able to cross and use this road without any worries about their safety. She retaliated that the community has lost a child in the recent days due to a road accident. She informed the participants that there are children who use bicycles to school but they are too much exposed to accidents. She also mentioned that 70% of the unskilled laborers should come from members of the community and there are youths who are well skilled in different area of expertise.

She suggested for an access road to the school to be tarmacked as a CSR by the contractor. She also proposed for any other additional aid from the contractor to develop the school or community at large will be highly appreciated.

Response:

The consultant explained that the Cooperate Social Responsibility (CSR) team and the community leaders will choose a way that they can help and develop the community. She assured safety measures for school going pupils will be taken during construction and after the road construction.

Question/Comment: By Leonard Simiyu

He recommended for the road to be wide and bumps to be erected in the centers to reduce over speeding of vehicles and motorcycle, further, he requested for installation of security lights to curb insecurity and extend the working hours of the traders, big and well-designed drainage system which will accommodate all the rain water around the center.

He also requested for bus terminals, lorry parking areas and tarmacking of the road to the Market. In addition, he requested the project to consider the local people in employment opportunities.

Response:

The consultant reassured the people that the road design will cater to all issues and safety measures required. She also stated that the contractor will employ the youth for both unskilled labor and skill-oriented labor.

Question/Comment: By Christopher Aballa

He appreciated KeNHA for making it possible for the community to participate in public participation forum about road construction. He said the public participation will enable the community in raising their concern about the proposed road works. He said the county government has always sidelined the locals in matters development and that's why the people are happy to have the forum. She mentioned that vehicles have been over speeding and the presence of good bumps and signage will help mitigate and prepend more accidents. He also requested the locals to be considered for employment opportunity in the project and the recruitment process to be fair and free of corruption.

Response:

The consultant assured the participants of safety measures to curb accidents which will include bumps, speed limits signs to reduce the cases of vehicle over speeding. She explained to the participants the importance of grievance redress committee which will be in charge of bringing forward a list of potential workers for the project from the community and solving any emerging conflict between the contractor and the community.

Question/Comment: Salome Kayanza

She recognized the challenges they have gone through with existing current road condition: which included the road being narrow, Potholes and lack of road signs. The job opportunities should also be offered to both genders equally without discriminating. Those who are capable of working on the project should be offered the same fair opportunity.

She mentions the importance of keeping politics away from the project and the Grievance Redress Committee should be well represented across all genders and age.

Response:

The consultant assured the participants that the project will won't make the PAPs more vulnerable but will either maintain their livelihood status or improve it. She mentioned that the project is being sponsored by the African Development Bank and the criteria used when employing the community members will be fair to all.

Question: Agnes Langu

She asked whether the bridge at Matunda will be reconstructed because it's very old and in bad shape and will the design consider pathways for pedestrians on the bridge?

Response:

The design of the proposed road project will involve all road safety measures for pedestrians including footpaths where needed.

Question: Wanyama Benson

Which criteria will be used when employing the youth?

Is there anything that can be done about the flooding that is caused by the areas with low terrains?

Response:

The consultant of the assured participants that Casual labor will be fairly given to the youth, women and any other person capable of working in a road construction works. For the skilled labor they will require trained personnel which

will be employed through interviews and the contractor will build reliable drainage systems to accommodate the flood water around the town.

Closing remarks

The Chief from Kakamega thanked the participants for availing themselves and making their views count. He also said that the people with any complaints or concerns about the project should report to their respective Chiefs office. He suggested for there to be a meeting to appoint the members of the grievance redress committee. The Meeting was adjourned at noon with a word of prayer.

MINUTES FOR THE JOINT MISSION AFRICAN DEVELOPMENT BANK (AfDB) KENYA NATIONAL HIGHWAYS AUTHORITY (KeNHA) AND CGP CONSULTING ENGINEERS FOR THE DESIGN REVIEW, ENVIRONMENT AND SOCIAL IMPACTS ASSESSMENT AND THE RESETTLEMENT ACTION PLAN FOR THE LESSERU-KITALE B12, MORPUS LOKICHAR A1.

Venue: Aturkan Hotel.

Date; 23rd February 2022

Attendees; See attached register

Agenda of the meeting;

7. Opening prayer
8. Introduction
9. Remarks
10. Project presentation
11. Plenary session
12. Closing remarks

Minute 01; Opening prayers.

The meeting was called to order at 1030hrs by the Trans Nzoia Deputy County commissioner.

He requested a volunteer to lead the attendees in prayers. He welcomed the attendees and invited the client team leader for introduction and agenda of the meeting

Minute 02 Introduction

The Consultant representative welcomed the attendees to the meeting and appreciated them for making time for the meeting, He invited the consultants team for self-introduction and thereafter invited the team lead from KeNHA for their remarks and introduction.

Eng. Cheronzo the client representative team lead welcomed the attendees and invited the team from KeNHA for self-introduction and invited AfDB team lead Eng Winnie for the to introduce the team AfDB for self-introduction.

Minute 03 Remarks.

Patrick Khaemba the governor Trans Nzoia County.

He welcomed the attendees and appreciated the mission for creating an opportunity for stakeholder engagement. He mentioned the various projects within the county that have been funded by AfDB, construction of Kapsora health

center and renovation of other 28 health facilities, rehabilitation of schools, the ongoing construction of Suam Endebes road that extends to Uganda and the Mt Elgon Korogot water project.

He mentioned that the county is an agricultural county, and the road will support agriculture through Kitale Lesseru and connectivity of Turkana and Eldoret. He mentioned the current status of the road which is dilapidated and the huge trucks traversing the road from Eldoret to Turkana heading to Southern Sudan. He mentioned that the oil exploration in Turkana have made an increase in tracks on the road section and therefore a need to improve the road.

The governor requested that the design consider the Mois bridge centre which is a major center along the highway, provision of street lighting service lanes to serve the urban centers.

The governor requested the design to consider 2 km dual road from Kwa Muthoni to Kitale town to ease congestion in the town and improve accessibility. He was concerned of the Pondo trees along the road towards Kitale town and requested the design team to ensure the trees are not affected by the project.

He suggested the design team to provide a fly over at the junction near the county commissioners office and ensure the road is fitted with street lighting. The design should also consider speed calming mechanisms

Requested KeNHA to collaborate with institutions and provide possible social infrastructure as part of CSR as well as consider training programs for bodaboda and safety on the road. The project should also consider safety of women and children as well as reduce the negative impacts and maximize on the positive impacts.

Minute 04. Project presentation

The consultant representative engineer gave an overview of the project. He mentioned the road design will be maintained on the existing Right of Way (ROW). The road will also include expansion of the road to improve safety, consideration for safe crossings near markets and institutions. The design will include 3 railway crossing one near lesseru soi and Mois bridge. He mentioned that the design will consider dualing Mois bridge and providing service lanes. In Kitale the road shall be dualled from mail saba to Kitale town. The other section of the road from Murpus to Lokichar shall be expanded for safety of the road users with improvement of all the bridges along the road sections. The participants were informed that the design will provide safe crossing for livestock in the pastoralist areas of West Pokot and Turkana region. The participants were also informed that consideration of wildlife crossing had been identified in the Murpus Lokichar road section where there is a wildlife sanctuary.

The participants were also informed of the safety measures proposed in the design to ensure all road users have been considered, road signage Non-motorized transport facilitates,

Environment and social impacts Assessment and Resettlement Action Plan.

The participants were informed that the RAP and ESIA study for the two road sections had been done and the drafts submitted to the client for review they were however informed that the consultant was still undertaking more studies to enable the completion of the ESIA RAP and Gender Analysis Report. The participants were encouraged to give their views on the proposed road.

Min. 05 Remarks from AfDB Environment experts;

Kingsley Ejim the environment and Social safeguards expert from AfDB informed the participant that the ESIA and RAP are critical documents for the Project and hence the need for the stakeholders to understand the details in the two documents. he encouraged the attendees to make full engagement and air their views on the project.

He informed the participants that AfDB ride on 3 pillars while investing on the projects

- The project must be environmentally friendly (risks must be identified and mitigations provided through the environment and social management plans (ESMP)

- The project must be socially friendly; and
- The project must be economically viable (to improve the life and standards of the people)

The participants were informed that the 3 pillars must be adequately installed to ensure the bank has safeguards complaint ESIA and RAP.

ESIA and RAP

The attendees were informed to be conversant with the ESIA and RAP document and understand the provisions on the documents the CSOs were challenged to understand the proposed management plans and ensure during project implementation the contractor is compliant with the provision of local labor laws, wages and labour conditions. He also reiterated that the local community must understand the RAP document and understand the compensation plan.

Remarks from Lilian Gender expert ; She informed the meeting that AfDB finances project that would benefit the communities- men and women. Employment opportunities are advertised to ensure all people have an opportunity to apply

Remarks from Robert- Climate Change expert; He informed the attendees that AfDB was keen on projects and ensure they don't cause adverse impacts on climate change, the project adopt modern ways that would save the environment such as having solar powered streetlights, proper management of storm water to reduce erosion, ensuring vegetation/ trees are replaces after construction and ensuring the road design considers the negative environment pollutants during construction and in the operation phase

Minute 06 Plenary session

Stakeholder	Issue
Bishop Mwafumbo- Interreligious council	The project proponent should involve the religious leaders from the onset of the project; Consideration of PWD women and children should be prioritized during project implementation and provide conditions that will ensure the safety of the Vulnerable and marginalized groups. The design should provide toilets along the road corridor. Distribution of employment should be balanced along the road corridor
Leonard Barasa	Ensure the value for money is achieved on the road project. He enquired how the local community would be involved in monitoring the road construction. He requested for equity in distribution of employment opportunities. Ensure enforcement of labour laws ensure there will be no sexual harassment, and if there are such cases they should be handled legally. Pollution- Ensure the environment is safe during construction by providing proper mitigation measures. Provide diversions during construction and also rehabilitate the diversion routes after construction. Delay in project completion. Who will be responsible on ensuring timely project implementation? Traders- Ensure alternative trading spaces have been provided for the traders.
Martin Wariaura- Kenya National Chambers of Commerce	She raised concern on business community and the occupation of traders along the road corridor. She mentioned that business people suffer during road construction due to disruption of their working spaces , community suffer while accessing their homes.

	She requested that the NLC and KeNHA to ensure all people whose private properties maybe affected by the road project are considered for compensation.
Agnes Ndiema- Maendeleo ya wanawake	The Project should develop a component for financial management to enable women and youth Drug and substance abuse may be on the rise during project implementation measures to curb drugs and substance abuse should be structured. Ensure women led household are not victimized during project implementation. During recruitment have more women participate in the employment. Provide daycare services where young mothers can leave their children as they head to work. Provide access roads from the farms to the highway to enable farmers transport their horticulture crops. Upgrade Kitale Kisawai road through which most women and youth farming horticulture transport their farm produce to the collection centre in Kitale the road has a stretch of 20KM
Elizabeth- Women leader	During project implementation there could be rise in gender-based violence, the police stations could be improved to enhance the reporting of GBV and managing GBV cases.
Stanley Ambasa - NEMA	There is need for the design team to share the preliminary plans to enable NEMA. Once prospectus learn of the project they learn of new project they start development along the road corridor
Maungu Austine Department of children and social protection	There will be a need to caution the workers on the marriage act and child protection, this will enhance the kind of interaction the workers have with the local community The project should have a localized GRM to enable handling grievances at the local level. Ensure the Pondo trees on the road to Kitale town have been secured and the design won't lead to felling the trees.
Kenneth kalele- Public works Kitale	Diversion- proposed that diversions should not be longer than 1 km to reduce maintenance. Provide access to public facilities close to the road Provide safe crossing at Lesseru near the Kenya defense barracks, the area close to Khetias supermarket Provide animal crossing areas. Put up a materials lab in Kitale during the project implementation, the lab should later be donated to the Kitale public works. Provide training opportunities -come up with programs to support women practicing engineering select from the various institutions within the project corridor and support them through internship and attachment.
Mathew Twigon Snt Johns ambulance	The snt johns doesn't have an office in Kitale. Propose to have an emergency trauma centre in Kitale and other centres along the proposed road project to ensure accident victims get assistance promptly. Mali saba, the junction of Cherangani and Amagoro experience many accidents propose to have a dual carriage to reduce the accident.
Kevin- kenya National Human Rights Commission	The need for prompt and prior compensation before project begins. The traders along the road corridor should be given sufficient notice to vacate. The GRM should be elaborate, The road section has representative members and leaders of the KNHRC. The community lacks faith in the process of compensation there is need for further consultation and sensitization on the RAP issues. Ensure the contractor prioritizes the local community on employment.

	The contractor should take responsibility on the employees who get involved in GBV and ensure the safety of the community.
Moses Ngetich NACC	In charge of HIV/Aids in Kitale. Proposed linking the contractor to National council for HIV/Aids in Kitale and support in management of HIV and other health issues during project implementation The project should also provide youth programs to manage cash flow . Management of negative social impacts from the project such as influx in population, increase sexually transmitted diseases, possible increase in GBV should be considered.

Summary responses.

Kingsly Engim; The project shall have a locally structured GRM, the CSO are requested to familiarize with the ESIA and RAP document to understand what has been proposed. The National aids council should be well prepared for the project during implementation and operation of the project, what measures have been put in place

Robert- Climate change expert; Climate change impacts from road project emanate from flooding and loss of tree cover and vegetation. Proposals to counter the impacts will be proposed on the ESIA report some other recommendation on climate change include utilization of solar energy in lighting the streets, minimized clearance of trees, and replanting more trees.

Winnie.

The contractor will consider having the access roads- inform the design team to incorporate in the design. Monitoring and evaluation- the RE office will be open to the public. all the employees shall be required to sign code of conduct. the national Aids council should have linkage with the project in providing awareness. Sexually gender-based violence and gender awareness should be undertaken.

On the quality-of-service KeNHA has rules to be adhered to. Training opportunities will be provided in the project to allow it is a component of the project where internship programs are structured within the project. The cress and baby cress centres are good proposals to have in the project.

KeNHA representative environment expert; Considerations for the proposals have been enlisted and the design team shall consider the and incorporate in the design. Having toilets within the road corridor at different points of the road is key to ensuring safety and health of the community.

Adams Mureithi appreciated the attendees for availing themselves for the stakeholder engagement.

Having no other issues to discuss the meeting was called off at 230hrs with a word of prayer.

MEETING MINUTES FOR THE ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT RESETTLEMENT ACTION PLAN FOR THE DESIGN REVIEW OF LESSERU-KITALE(B14) AND MORPUS –LOKICHAR (A1) ROAD.**Venue; Soy****Meeting Venue; Matunda**Date:7th December 2021

Time: 10.00hrs

Agenda

1. Opening prayer
2. Introduction
3. Project presentation
4. Plenary session
5. Closing remarks

Minute 01: Opening prayers

The meeting was called to order by the area the area chief Mr Augustine Kiprono at 10.00hrs. He invited a volunteer to say a word of prayers.

The Mr.Shikuku welcomed all members and told them to use the opportunity to raise their concerns about the proposed road project.

Minute 02: Introduction.

The area chief welcomed the attendees and appreciated them for making time to attend the meeting, he invited the ACC from Likuyani to make her remarks.

Remarks**Acc Likuyani**

She welcomed the attendees appreciated the proposed road project, she mentioned that the improvement of the road would improve trade and cohesion in the community, she assured the support of the local government through out the project until it is fully implemented. Informed the attendees to actively participate on the meeting.

The area Member of County Assembly

He appreciated the attendees for making time to attend the meeting, he appreciated KeNHA for recognizing the poor state of the road that has led to very many accidents. He requested that the project considers the traders along the road reserve whose livelihood depend on trading on the road reserve.

The chief invited the consultant to introduce the team and address the meeting.

Minute 03: Project presentation

The consultant representative introduced themselves to the attendees, the sociologist assistant sociologist and the data collection team was introduced.

The sociologist appreciated the attendees and the local administration.

Purpose of public participation meeting

The sociologist informed the meeting attendees that public participation was a constitutional requirement and a legal legislative requirement. He informed the meeting that the 2010 constitution calls for public participation of all the stakeholders in a project, he mentioned that the EMCA 1999 updated in 2015 states that all project must undergo through the Environment and Social Impacts Assessment process (ESIA), it is a requirement by the EMCA 1999 that public participation must be carried out to ensure that the community and stakeholders have been informed of the project its impacts negatively and positively.

The project.

The meeting attendees were informed that Kenya National Highways Authority (KeNHA) had appointed CGP consulting engineers to undertake the update of the feasibility study, Design of the road project Resettlement Action Plan (RAP) and Environment and Social Impacts Assessment (ESIA) for the road Lesseru-Kitale (B14) and Morpus Lokichar A1 roads.

The attendees were informed that the road between Leseru and Kitale is 60 Km and Morpus Lokichar is 143 Km. The attendees were also informed that the roads traverses the counties of Uasin Gishu, Kakamega, Trans Nzoia, West Pokot and Turkana. They were informed that the road section between Kitale and Morpus was not part of the proposed project scope and it was being funded by KFW.

The meeting attendees were informed that the project will be funded by the African Development Bank (AfDB).

Project works

The attendees were informed that the road design which will involve expansion of the road in the narrow sections of the road, improve the bridges, provide non-motorized transport pavement, consideration for bus bays and trailer parks, dualling the road section at Mois bridge for 2 Km and providing services lanes, dualling of Kitale town from Maili saba to Kitale, and provision of service lanes in the major town centres of Soi, Matunda, Ortum and Lokichar.

Project Impacts

The meeting attendees were informed that the road works shall be retained within the existing road reserve of 40 M in some section and 60 M within other sections the attendees were informed that the project will not require land uptake for road construction works.

Environment and social impacts during construction phase

The attendees were informed that the road construction will lead to environment and social and economic impacts during the construction and operation phase of the project. Impacts, the impacts were presented as listed below

Construction negative impacts

The attendees were informed of the anticipated impacts during construction which were mentioned as Dust, Noise vibration oil spill, Movement of heavy machinery vehicles, Impacts of material sites where raw materials will be sources, Impact on water sources, Loss of trees and vegetation, Influx in population, Loss of trading spaces for the traders on the Right of Way (ROW), Risk of increased spread of HIV/Aids, Early pregnancies, Sexual abuse amongst others

The construction Positive impacts were presented as new employment opportunities, Skills transfer, Increased traders, improved road network and improved safety.

The meeting attendees were informed that the adverse environment and social impacts have been identified and the study will develop an environment and social management plan indicating how the adverse impacts would be reducing or mitigated during the project implementation. The participants were informed that the ESIA report shall be submitted to the National Environment Management Authority (NEMA).

Further to the ESIA the attendees were informed that a Resettlement Action Plan (RAP) study will be undertaken to identify the properties/assets that would be impacted by the improvement of the road project. The meeting attendees were informed that the traders along the ROW of way shall be enumerated and documented in the RAP report. Further the attendees were informed that there will be an exercise to collect data in their locality to held the report have a socio-economic baseline of the area.

Grievance redress management (GRM)

The participants were informed that a grievance redress management will be develop to guide the handling of grievances during project implementation, they were informed that local administration, local leaders, women and

youth will be part of the grievance committee. They were informed that the project resident engineer and appointed KeNHA officials will also be part of the grievance committee, further to that they were informed there shall be continuous consultation before and during the project implementation.

The sociologist requested the chief to lead the plenary session where the participants were given an opportunity to share their views concerns and comments.

Minute 04. Plenary session

Name	Question/answer
Varaly ondisa	There are youths with skills and certificates within Soi community. Will you give the employment opportunity during implementation of the project? Response. The meeting attendees were informed that the project will prioritise employing the local people, it was mentioned to the attendees that some of the opportunities might required skills and therefore the locals were informed to seek skills in different sectors of road construction works such as plant operators plumbing etc
Paul Kenei	KeNHA should find a way to reduce vandalism of the road signs. How will the project support the local community? The community has an available land for market, if need be, for a market construction. Notice should be given early enough for those doing business in the reserve to move. Response. The meeting was informed that they should ensure safeguarding the road signage locally through local administration by reporting the people vandalizing the roads infrastructure. The meeting was informed that there will be a disclosure process for the project and notices shall be issued by before relocation/construction works.
Robert Wahu	There are two public schools within soy. There is a need for flyovers to give the children safe crossing. The drainage system of Soy is poor, from msalaba through Posta it usually floods whenever it rains. Response The attendees were informed that the areas highlighted on flooding and accidents had been noted and the design team would be informed to seek appropriate measures to ensure that the impacts on road flooding are reduced or eliminated.
A lady	There ware compensation in other area like Lesseru we expect even us to be compensated. Response The attendees were informed that measures were being considered on the best way for the traders to have a continuous livelihood such as training on business and proposing alternative markets away from the road reserve.

Having no more issues raised the meeting ended at 1200hrs with a word of prayers.

MEETING MINUTES FOR THE ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT RESETTLEMENT ACTION PLAN FOR THE DESIGN REVIEW OF LESSERU-KITALE(B14) AND MORPUS –LOKICHAR (A1) ROAD.**Public participation meeting for the ESIA and RAP for Lesseru Kitale (B2) Road Project**

Venue; FAFAROL

DATE;7TH DEC.2021

Time 1500hrs

Agenda

1. Opening prayer
2. Introduction
3. Project presentation
4. Plenary session
5. Closing remarks

Minute 01: Opening prayers

The meeting was called to order by the area the senior chief Mr Wycliff Masinde. He invited a volunteer to say a word of prayers. The Mr Masinde welcomed all members and told them to use the opportunity to raise their concerns about the proposed road project.

Minute 02: Introduction.

The area chief welcomed the attendees and appreciated them for making time to attend the meeting, he invited the chief invited the consultant to introduce the team and address the meeting.

Minute 03: Project presentation

The consultant representative introduced themselves to the attendees, the sociologist assistant sociologist and the data collection team was introduced. The sociologist appreciated the attendees and the local administration.

Purpose of public participation meeting

The sociologist informed the meeting attendees that public participation was a constitutional requirement and a legal legislative requirement. He informed the meeting that the 2010 constitution calls for public participation of all the stakeholders in a project, he mentioned that the EMCA 1999 updated in 2015 states that all project must undergo through the Environment and Social Impacts Assessment process (ESIA), it is a requirement by the EMCA 1999 that public participation must be carried out to ensure that the community and stakeholders have been informed of the project its impacts negatively and positively.

The project.

The meeting attendees were informed that Kenya National Highways Authority (KeNHA) had appointee CGP consulting engineers to undertake the update of the feasibility study, Design of the road project Resettlement Action Plan (RAP) and Environment and Social Impacts Assessment (ESIA) for the road Lesseru-Kitale (B14) and Morpus Lokichar A1 roads.

The attendees were informed that the road between Leseru and Kitale is 60 Km and Morpus Lokichar is 143 Km. The attendees were also informed that the roads traverses the counties of Uasin Gishu, Kakamega, Trans Nzoia, West Pokot and Turkana. They were informed that the road section between Kitale and Morpus was not part of the proposed project scope and it was being funded by KFW. The meeting attendees were informed that the project will be funded by the African Development Bank (AfDB).

Project works

The attendees were informed that the road design which will involve expansion of the road in the narrow sections of the road, improve the bridges, provide non-motorized transport pavement, consideration for bus bays and trailer parks, dualling the road section at Mois bridge for 2 Km and providing services lanes, dualling of Kitale town from Maili saba to Kitale, and provision of service lanes in the major town centres of Soi, Matunda, Ortum and Lokichar.

Project Impacts

The meeting attendees were informed that the road works shall be retained within the existing road reserve of 40 M in some section and 60 M within other sections the attendees were informed that the project will not require land uptake for road construction works.

Environment and social impacts during construction phase

The attendees were informed that the road construction will lead to environment and social and economic impacts during the construction and operation phase of the project. Impacts, the impacts were presented as listed below

Construction negative impacts

The attendees were informed of the anticipated impacts during construction which were mentioned as Dust, Noise vibration oil spill, Movement of heavy machinery vehicles, Impacts of material sites where raw materials will be sources, Impact on water sources, Loss of trees and vegetation, Influx in population, Loss of trading spaces for the traders on the Right of Way (ROW), Risk of increased spread of HIV/Aids, Early pregnancies, Sexual abuse amongst others.

The construction Positive impacts were presented as new employment opportunities, Skills transfer, Increased traders, improved road network and improved safety. The meeting attendees were informed that the adverse environment and social impacts have been identified and the study will develop an environment and social management plan indicating how the adverse impacts would be reducing or mitigated during the project implementation. The participants were informed that the ESIA report shall be submitted to the National Environment Management Authority (NEMA).

Further to the ESIA the attendees were informed that a Resettlement Action Plan (RAP) study will be undertaken to identify the properties/assets that would be impacted by the improvement

of the road project. The meeting attendees were informed that the traders along the ROW of way shall be enumerated and documented in the RAP report.

Further the attendees were informed that there will be an exercise to collect data in their locality to held the report have a socio-economic baseline of the area.

Grievance redress management (GRM)

The participants were informed that a grievance redress management will be develop to guide the handling of grievances during project implementation, they were informed that local administration, local leaders, women and youth will be part of the grievance committee. They were informed that the project resident engineer and appointed

KeNHA officials will also be part of the grievance committee, further to that they were informed there shall be continuous consultation before and during the project implementation.

The sociologist requested the chief to lead the plenary session where the participants were given an opportunity to share their views concerns and comments.

Minute 04. Plenary session

Name	Question/Answer
Francis Simiyu	The road lacks proper shoulders and clear signages. The compensation should not be only for the property owners even the tenants doing businesses should be compensated for loss of business. Response The improved road design will consider having a wide road with proper shoulders, in the urban centres the road will be improved to have service lanes and walk paths. The meeting attendees were informed that A RAP was being done to identify those that will be affected by the project
Trevor Inyanya(boda boda Rep.)	There is already exist vegetation along the road, we would like the contractor to avoid as much as possible cutting down the mature trees. The road is very narrow and it caused a lot of accidents affecting the Boda boda people. Response. The project is designed in a way that there will be minimal impacts, some of the vegetation will be lost, the ESIA report will give recommendation to the contract to ensure that after completion of the project more trees are planted to recover the lost vegetation and trees.
Mama mboga	We wish that the young people will be given an employment opportunity during construction. The market at Fafarol is very small, we work with the young people amongst ourselves. We would like a bigger one so that we old people can separate with the young ones. Response The meeting attendees were informed that local people will benefit from the employment opportunity, they encouraged to seek skills that are inline with road construction works and during project implementation they were informed to apply for available opportunities.
Catherine Sicela Head teacher Snt Teresa	The GRC should include women and youths. Women should be given opportunity during construction to supply food to the construction workers. Displacement of people and their businesses what support will they be given? Response The attendees were informed that the GRM constitution will be representative of women youth and elders and hence each group will be well presented in the GRM.

Having no further issues to discuss the meeting was called off at 1700hrs. A volunteer said a closing prayer.

MEETING MINUTES FOR THE ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT RESETTLEMENT ACTION PLAN FOR THE DESIGN REVIEW OF LESSERU-KITALE(B14) ROAD.

Venue **Nangili**

Date;7/12/2021

Time 1215hrs

Agenda

1. Opening prayer
2. Introduction
3. Project presentation
4. Plenary session
5. Closing remarks

Minute 01: Opening prayers

The meeting was called to order by the area the senior chief Mr Daniel Busienei. He invited a volunteer to say a word of prayers.

The Mr Busienei welcomed all members and told them to use the opportunity to raise their concerns about the proposed road project.

Minute 02: Introduction.

The area chief welcomed the attendees and appreciated them for making time to attend the meeting, he invited the chief Kongoni to make her remarks.

Remarks

Chief kongoni Mr Peter Lugano

He welcomed the attendees appreciated the proposed road project, he appreciated the public participation process and informed the attendees that the government will require the support of the community community throughout the project. Mentioned that the improvement of the road would improve trade and cohesion in the community, she assured the support of the local government through out the project until it is fully implemented. Informed the attendees to actively participate on the meeting. The chief invited the consultant to introduce the team and address the meeting.

Minute 03: Project presentation

The consultant representative introduced themselves to the attendees, the sociologist assistant sociologist and the data collection team was introduced. The sociologist appreciated the attendees and the local administration.

Purpose of public participation meeting

The sociologist informed the meeting

attendees that public participation was a constitutional requirement and a legal legislative requirement. He informed the meeting that the 2010 constitution calls for public participation of all the stakeholders in a project, he mentioned that the EMCA 1999 updated in 2015 states that all project must undergo through the Environment and Social

Impacts Assessment process (ESIA), it is a requirement by the EMCA 1999 that public participation must be carried out to ensure that the community and stakeholders have been informed of the project its impacts negatively and positively.

The project.

The meeting attendees were informed that Kenya National Highways Authority (KeNHA) had appointed CGP consulting engineers to undertake the update of the feasibility study, Design of the road project Resettlement Action Plan (RAP) and Environment and Social Impacts Assessment (ESIA) for the road Lesseru-Kitale (B14) and Morpus Lokichar A1 roads.

The attendees were informed that the road between Leseru and Kitale is 60 Km and Morpus Lokichar is 143 Km. The attendees were also informed that the roads traverses the counties of Uasin Gishu, Kakamega, Trans Nzoia, West Pokot and Turkana. They were informed that the road section between Kitale and Morpus was not part of the proposed project scope and it was being funded by KFW.

The meeting attendees were informed that the project will be funded by the African Development Bank (AfDB).

Project works

The attendees were informed that the road design which will involve expansion of the road in the narrow sections of the road, improve the bridges, provide non-motorized transport pavement, consideration for bus bays and trailer parks, dualling the road section at Mois bridge for 2 Km and providing services lanes, dualling of Kitale town from Maili saba to Kitale, and provision of service lanes in the major town centres of Soi, Matunda, Ortum and Lokichar.

Project Impacts

The meeting attendees were informed that the road works shall be retained within the existing road reserve of 40 M in some section and 60 M within other sections the attendees were informed that the project will not require land uptake for road construction works.

Environment and social impacts during construction phase

The attendees were informed that the road construction will lead to environment and social and economic impacts during the construction and operation phase of the project. Impacts, the impacts were presented as listed below

Construction negative impacts

The attendees were informed of the anticipated impacts during construction which were mentioned as Dust, Noise vibration oil spill, Movement of heavy machinery vehicles, Impacts of material sites where raw materials will be sources, Impact on water sources, Loss of trees and vegetation, Influx in population, Loss of trading spaces for the traders on the Right of Way (ROW), Risk of increased spread of HIV/Aids, Early pregnancies, Sexual abuse amongst others The construction Positive impacts were presented as new employment opportunities, Skills transfer, Increased traders, improved road network and improved safety.

The meeting attendees were informed that the adverse environment and social impacts have been identified and the study will develop an environment and social management plan indicating how the adverse impacts would be reducing or mitigated during the project implementation. The participants were informed that the ESIA report shall be submitted to the National Environment Management Authority (NEMA).

Further to the ESIA the attendees were informed that a Resettlement Action Plan (RAP) study will be undertaken to identify the properties/assets that would be impacted by the improvement of the road project. The meeting attendees were informed that the traders along the ROW of way shall be enumerated and documented in the RAP report.

Further the attendees were informed that there will be an exercise to collect data in their locality to held the report have a socio-economic baseline of the area.

Grievance redress management (GRM)

The participants were informed that a grievance redress management will be develop to guide the handling of grievances during project implementation, they were informed that local administration, local leaders, women and youth will be part of the grievance committee. They were informed that the project resident engineer and appointed KeNHA officials will also be part of the grievance committee, further to that they were informed there shall be continuous consultation before and during the project implementation.

The sociologist requested the chief to lead the plenary session where the participants were given an opportunity to share their views concerns and comments.

Minute 04. Plenary session

Name	PLENARY
LUMALA LUMALA	The current road status is very poor we are happy to hear there will be expansion very soon. KeNHA should ensure the people affected are compensated for lose of properties and businesses. The road is very narrow therefore there are a lot accident especially around Fafarol area. Response The meeting attendees were informed that the road will be improved to ensure safety for all the road users, the attendees were informed that a resettlement action plan study will be undertaken to ensure all the project affected persons have been considered.
Alfred papa	There should be a good traffic management plan during construction to ensure a smooth flow of vehicle and ensure the traffic is not diverted in people's land. Response The meeting attendees were informed that the Environment and Social Impact Assessment report will develop mitigation measures of the impacts identified to ensure they are minimized. They were also informed that the diversion of the road will not be on private land.
Elizabeth Nafula	In every village the youths should be give an opportunity for manual jobs or non-skilled opportunities. Response. The attendees were informed that the contractor shall be encouraged to engage the local community on available employment opportunities.
Beatrice simiyu	The people working on the road reserve should be give enough notice to move. They should be provided with an alternative area to work from. Response The attendees were informed that the traders will be issued with notices to vacate during construction.
Moses Indech	What support will be given to the people working along the road reserve? Will the project affect the business in the permanent structures? Response The attendees were informed that the road improvement work will be undertaken on the existing road reserve which is adequate to accommodate the improved road. The people whose livelihood depend on the road reserve will have to vacate to pave way for the road project however measures will be undertaken to ensure a continuous livelihood to the traders
Alice Malasi	There will be several impacts of the project to the children. The contractor should consider putting flyovers to minimize accidents involving children. Response The design team will consider safe crossing areas in urban centres and schools to ensure safety mechanisms are considered.

Having No other issues to discuss the meeting ended at 1430hrs by prayers from a volunteer.

MINUTES FOR THE JOINT MISSION AFRICAN DEVELOPMENT BANK (AfDB) KENYA NATIONAL HIGHWAYS AUTHORITY (KeNHA) AND CGP CONSULTING ENGINEERS FOR THE DESIGN REVIEW, ENVIRONMENT AND SOCIAL IMPACTS ASSESMENT AND THE RESETTLEMENT ACTION PLAN FOR THE LESSERU-KITALE B12, MORPUS LOKICHA A1.

Venue: Aturkan Hotel.

Date; 23rd February 2022

Attendees; See attached register

Agenda of the meeting;

1. Opening prayer
2. Introduction
3. Remarks
4. Project presentation
5. Plenary session
6. Closing remarks

Minute 01; Opening prayers.

The meeting was called to order at 1030hrs by the Trans Nzoia Deputy County commissioner.

He requested a volunteer to lead the attendees in prayers. He welcomed the attendees and invited the client team leader for introduction and agenda of the meeting

Minute 02 Introduction

The Consultant representative welcomed the attendees to the meeting and appreciated them for making time for the meeting. He invited the consultants team for self-introduction and thereafter invited the team lead from KeNHA for their remarks and introduction.

Eng. Cherono the client representative team lead welcomed the attendees and invited the team from KeNHA for self-introduction and invited AfDB team lead Eng Winnie for the to introduce the team AfDB for self-introduction.

Minute 03 Remarks.

Patrick Khaemba the governor Trans Nzoia County.

He welcomed the attendees and appreciated the mission for creating an opportunity for stakeholder engagement. He mentioned the various projects within the county that have been funded by AfDB, construction of Kapsora health center and renovation of other 28 health facilities, rehabilitation of schools, the ongoing construction of Suam Enderbes road that extends to Uganda and the Mt Elgon Korogot water project.

He mentioned that the county is an agricultural county, and the road will support agriculture through Kitale Lesseru and connectivity of Turkana and Eldoret. He mentioned the current status of the road which is dilapidated and the huge trucks traversing the road from Eldoret to Turkana heading to Southern Sudan. He mentioned that the oil exploration in Turkana have made an increase in tracks on the road section and therefor a need to improve the road.

The governor requested that the design consider the Mois bridge centre which is a major center along the highway, provision of street lighting service lanes to serve the urban centers.

The governor requested the design to consider 2 km dual road from Kwa Muthoni to Kitale town to ease congestion in the town and improve accessibility. He was concerned of the Pondo trees along the road towards Kitale town and requested the design team to ensure the trees are not affected by the project.

He suggested the design team to provide a fly over at the junction near the county commissioners office and ensure the road is fitted with street lighting. The design should also consider speed calming mechanisms

Requested KeNHA to collaborate with institutions and provide possible social infrastructure as part of CSR as well as consider training programs for bodaboda and safety on the road. The project should also consider safety of women and children as well as reduce the negative impacts and maximize on the positive impacts.

Minute 04. Project presentation

The consultant representative engineer gave an overview of the project. He mentioned the road design will be maintained on the existing Right of Way (ROW). The road will also include expansion of the road to improve safety, consideration for safe crossings near markets and institutions. The design will include 3 railway crossing one near lesseru soi and Mois bridge. He mentioned that the design will consider dualing Mois bridge and providing service lanes. In Kitale the road shall be dualled from mail saba to Kitale town. The other section of the road from Murpus to Lokichar shall be expanded for safety of the road users with improvement of all the bridges along the road sections. The participants were informed that the design will provide safe crossing for livestock in the pastoralist areas of West Pokot and Turkana region. The participants were also informed that consideration of wildlife crossing had been identified in the Murpus Lokichar road section where there is a wildlife sanctuary.

The participants were also informed of the safety measures proposed in the design to ensure all road users have been considered, road signage Non-motorized transport facilitates,

Environment and social impacts Assessment and Resettlement Action Plan.

The participants were informed that the RAP and ESIA study for the two road sections had been done and the drafts submitted to the client for review they were however informed that the consultant was still undertaking more studies to enable the completion of the ESIA RAP and Gender Analysis Report. The participants were encouraged to give their views on the proposed road.

Min. 05 Remarks from AfDB Environment experts;

Kingsley Ejim the environment and Social safeguards expert from AfDB informed the participant that the ESIA and RAP are critical documents for the Project and hence the need for the stakeholders to understand the details in the two documents. he encouraged the attendees to make full engagement and air their views on the project.

He informed the participants that AfDB ride on 3 pillars while investing on the projects

- The project must be environmentally friendly (risks must be identified and mitigations provided through the environment and social management plans (ESMP)
- The project must be socially friendly; and
- The project must be economically viable (to improve the life and standards of the people)

The participants were informed that the 3 pillars must be adequately installed to ensure the bank has safeguards complaint ESIA and RAP.

ESIA and RAP

The attendees were informed to be conversant with the ESIA and RAP document and understand the provisions on the documents the CSOs were challenged to understand the proposed management plans and ensure during project

implementation the contractor is compliant with the provision of local labor laws, wages and labour conditions. He also retaliated that the local community must understand the RAP document and understand the compensation plan.

Remarks from Lilian Gender expert ; She informed the meeting that AfDB finances project that would benefit the communities- men and women. Employment opportunities are advertised to ensure all people have an opportunity to apply

Remarks from Robert- Climate Change expert; He informed the attendees that AfDB was keen on projects and ensure they don't cause adverse impacts on climate change, the project adopt modern ways that would save the environment such as having solar powered streetlights, proper management of storm water to reduce erosion, ensuring vegetation/ trees are replaces after construction and ensuring the road design considers the negative environment pollutants during construction and in the operation phase

Minute 06 Plenary session

Stakeholder	Issue
Bishop Mwafumbo- Interreligious council	The project proponent should involve the religious leaders from the onset of the project; Consideration of PWD women and children should be prioritized during project implementation and provide conditions that will ensure the safety of the Vulnerable and marginalized groups. The design should provide toilets along the road corridor. Distribution of employment should be balanced along the road corridor
Leonard Barasa	Ensure the value for money is achieved on the road project. He enquired how the local community would be involved in monitoring the road construction. He requested for equity in distribution of employment opportunities. Ensure enforcement of labour laws ensure there will be no sexual harassment, and if there are such cases they should be handled legally. Pollution- Ensure the environment is safe during construction by providing proper mitigation measures. Provide diversions during construction and also rehabilitate the diversion routes after construction. Delay in project completion. Who will be responsible on ensuring timely project implementation? Traders- Ensure alternative trading spaces have been provided for the traders.
Martin Wariaura- Kenya National Chambers of Commerce	She raised concern on business community and the occupation of traders along the road corridor. She mentioned that business people suffer during road construction due to disruption of their working spaces , community suffer while accessing their homes. She requested that the NLC and KeNHA to ensure all people whose private properties maybe affected by the road project are considered for compensation.
Agnes Ndiema- Maendeleo ya wanawake	The Project should develop a component for financial management to enable women and youth Drug and substance abuse may be on the rise during project implementation measures to curb drugs and substance abuse should be structured. Ensure women led household are not victimized during project implementation. During recruitment have more women participate in the employment. Provide daycare services where young mothers can leave their children as they head to work. Provide access roads from the farms to the highway to enable farmers transport their horticulture crops. Upgrade Kitale Kisawai road through which most women and youth

	farming horticulture transport their farm produce to the collection centre in Kitale the road has a stretch of 20KM
Elizabeth- Women leader	During project implementation there could be rise in gender-based violence, the police stations could be improved to enhance the reporting of GBV and managing GBV cases.
Stanley Ambasa - NEMA	There is need for the design team to share the preliminary plans to enable NEMA. Once prospectus learn of the project they learn of new project they start development along the road corridor
Maungu Austine Department of children and social protection	There will be a need to caution the workers on the marriage act and child protection, this will enhance the kind of interaction the workers have with the local community The project should have a localized GRM to enable handling grievances at the local level. Ensure the Pondo trees on the road to Kitale town have been secured and the design won't lead to felling the trees.
Kenneth kalele- Public works Kitale	Diversion- proposed that diversions should not be longer than 1 km to reduce maintenance. Provide access to public facilities close to the road Provide safe crossing at Lesseru near the Kenya defense barracks, the area close to Khetias supermarket Provide animal crossing areas. Put up a materials lab in Kitale during the project implementation, the lab should later be donated to the Kitale public works. Provide training opportunities -come up with programs to support women practicing engineering select from the various institutions within the project corridor and support them through internship and attachment.
Mathew Twigon Snt Johns ambulance	The snt johns doesn't have an office in Kitale. Propose to have an emergency trauma centre in Kitale and other centres along the proposed road project to ensure accident victims get assistance promptly. Maili saba, the junction of Cherangani and Amagoro experience many accidents propose to have a dual carriage to reduce the accident.
Kevin- kenya National Human Rights Commission	The need for prompt and prior compensation before project begins. The traders along the road corridor should be given sufficient notice to vacate. The GRM should be elaborate, The road section has representative members and leaders of the KNHRC. The community lacks faith in the process of compensation there is need for further consultation and sensitization on the RAP issues. Ensure the contractor prioritizes the local community on employment. The contractor should take responsibility on the employees who get involved in GBV and ensure the safety of the community.
Moses Ngetich NACC	In charge of HIV/Aids in Kitale. Proposed linking the contractor to National council for HIV/Aids in Kitale and support in management of HIV and other health issues during project implementation The project should also provide youth programs to manage cash flow . Management of negative social impacts from the project such as influx in population, increase sexually transmitted diseases, possible increase in GBV should be considered.

Summary responses.

Kingsley Ejim; The project shall have a locally structured GRM, the CSO are requested to familiarize with the ESIA and RAP document to understand what has been proposed. The National aids council should be well prepared for the project during implementation and operation of the project, what measures have been put in place

Robert- Climate change expert; Climate change impacts from road project emanate from flooding and loss of tree cover and vegetation. Proposals to counter the impacts will be proposed on the ESIA report some other recommendation on climate change include utilization of solar energy in lighting the streets, minimized clearance of trees, and replanting more trees.

Winnie.

The contractor will consider having the access roads- inform the design team to incorporate in the design. Monitoring and evaluation- the RE office will be open to the public. all the employees shall be required to sign code of conduct. the national Aids council should have linkage with the project in providing awareness. Sexually gender-based violence and gender awareness should be undertaken.

On the quality-of-service KeNHA has rules to be adhered to. Training opportunities will be provided in the project to allow it is a component of the project where internship programs are structured within the project. The cress and baby cress centres are good proposals to have in the project.

KeNHA representative environment expert; Considerations for the proposals have been enlisted and the design team shall consider the and incorporate in the design. Having toilets within the road corridor at different points of the road is key to ensuring safety and health of the community.

Adams Mureithi appreciated the attendees for availing themselves for the stakeholder engagement.

Having no other issues to discuss the meeting was called off at 230hrs with a word of prayer.

Annex 4: Sample Filled Questionnaires

KeNHA Kenya National Highways Authority
Quality Highways, Better Connections

Barabara Plaza, corner Kenyatta Rd. Muthurua Avenue, PO Box 42000 Nairobi 00100 Kenya
Tel: 011-4994000 - 011-4214206 Email: info@kenha.co.ke customerservice@kenha.co.ke

Environment and Social Impact Assessment for Lesseru- Kitale(B14) and Morpus- Lokichar(A1) Road

1. What is the importance of this Road to you?
Easy transport
Trade
Expansion of businesses

2. Do you think the road works will be of any benefit to you and/or other road users in the area?
YES ☒ NO ☐

a) Explain your answer in (2) above.
Trade

3. What are the current issues / problems with the existing road condition?
Accidents
Pot holes
Narrow road

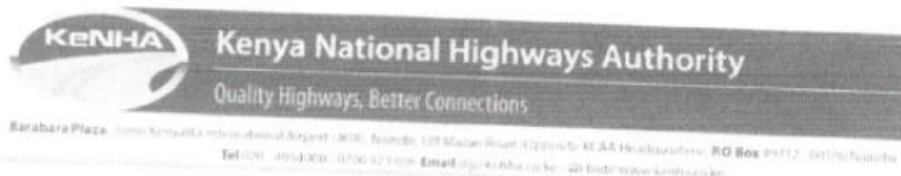
4. Which part of this road experience flooding during rainy seasons?
Stagnant water beside road

5. What would advocate to be done in mitigating the flooding?
Drainage systems
Canals, bridges

6. What are some of the Positive AND/OR Negative environmental and social impacts you foresee during the Construction and operation/completion of this road?

Positive impact during construction	Negative impact during Construction
Job opportunities Market for goods	Dust Noise Accidents Diseases

Positive impact during Operation(completion)	Negative impact during Operation(completion)
Safer roads Business expansion	Accidents due to over speeding Diseases



(ii) in what ways can the negative impacts identified above be mitigated / avoided

Watering dusty roads

VCTs

Observation of environmental policies

7. What would be your general concerns during construction of the project? And how would you like your concerns to be handled/managed to minimize any impacts?

Jobs for locals

8. What safety measures would you propose to be considered during the design of the road to make it more user friendly for the road users below

Road users	Proposed safety measures
Livestock	livestock grazing areas
Pedestrians	Foot paths
Commercial vehicles(matatu/Buses)	Speed limits, Parking areas
Commercial motorcycles (boda boda)	Speed limits,
Bicycles	Speed ~~to~~ Parking areas
Persons with physical disability	crossing areas
others	Bump

9. Do you have any questions/additional comments on the proposed road works?

Jobs for locals

Name of respondent	JUAN AMOLO
Date:	06-12-2021

Kenya National Highways Authority
Quality Highways, Better Connections

Barabara Plaza, Industrial Park, Industrial Area, Nairobi 00100, Kenya
Tel: +254 20 271 2000 Email: info@kenha.org.ke Website: www.kenha.org.ke

Environment and Social Impact Assessment for Lesseru- Kitale(B14) and Morpus- Lokichar(A1) Road

1. What is the importance of this Road to you?
Safer roads
Faster means of transport

2. Do you think the road works will be of any benefit to you and/or other road users in the area?
YES ☒ NO ☐

a) Explain your answer in (2) above.
Our businesses will grow and expand due to development.

3. What are the current issues / problems with the existing road condition?
Poor bumps that cause accidents
Lack of road signs

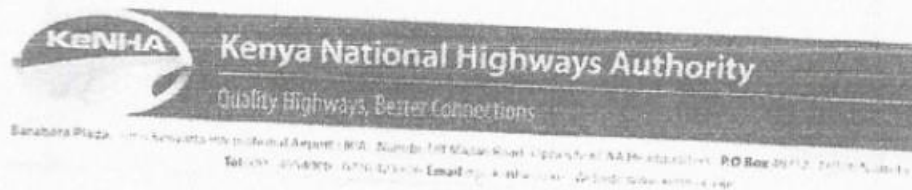
4. Which part of this road experience flooding during rainy seasons?
Places along the roads

5. What would advocate to be done in mitigating the flooding?
Installation of drainage systems

6. What are some of the Positive AND/OR Negative environmental and social impacts you foresee during the Construction and operation/completion of this road?

Job opportunities	Dust
Development of our towns	Noise

Positive impact during Operation(completion) Faster and safer means of transport	Negative impact during Operation(completion) Accidents caused by overspeeding vehicles



(6) In what ways can the negative impacts identified above be mitigated / avoided

Watering of dusty roads
Creation of reliable diversion routes

7. What would be your general concerns during construction of the project? And how would you like your concerns to be handled/managed to minimize any impacts?

No favouritism during resettlement and job allocations

8. What safety measures would you propose to be considered during the design of the road to make it more user friendly for the road users below

Road users	Proposed safety measures
Livestock	Animal crossing signs
Pedestrians	Zebra crossing signs
Commercial vehicles (matatu/Buses)	Speed limits, stages, bumper
Commercial motorcycles (boda boda)	Parking areas and lanes for carriage
Bicycles	Cyclist lanes
Persons with physical disability	Zebra crossing signs
others	

9. Do you have any questions/additional comments on the proposed road works?

We would really appreciate our youths getting jobs

Name of respondent	Moses Ayua
Date:	07/12/2021

Annex 5: Stakeholder Engagement Plan



Kenya National Highways Authority

Quality Highways, Better Connections

**KENYA – SOUTH SUDAN LINK ROAD: ELDORET - KITALE – LODWAR -
NADAPAL – KAPOETA - JUBA CORRIDOR**

**LESERU-KITALE (B2) & MORPUS – LOKICHAR (A1) UPGRADING ROAD
PROJECT**



STAKEHOLDER ENGAGEMENT PLAN (SEP)
JUNE 2022

LIST OF ABBREVIATIONS

AfDB	African Development Bank
C-ESMP	Contractor's Environmental and Social Management Plan
CoC	Code of Conduct
COVID-19	CoronaVirus Disease 2019, or novel coronavirus-2019
EAC	East African community
EARTTDFP	East Africa Regional Transport Trade and Development Facilitation project
GBV	Gender-Based Violence
GIIP	Good International Industry Practice
GRM	Grievance Redress Mechanism
GRM	Grievance Redress Mechanisms
ICT	Information and Communication Technology
ICTA	Information and Communication Technology Authority
ILO	International Labour Organization
ISS	Integrated Safeguards Systems
KeNHA	Kenya National Highways Authority
LAPPSET	Lamu Port-South Sudan-Ethiopia-Transport
LMP	Labor Management Plan
MDAs	Ministries, Departments and Agencies
Moi	Ministry of Interior
MoTIHUD	Ministry of Transport Infrastructure, Housing and Urban Development
NACC	National Aids Control Council
NEMA	National Environment Management Authority
NMT	Non Motorized Transport
OS	Operational Safeguards
OSH	Occupational Safety and Health
PDO	Project Development Objectives
PIA	Project Implementing Agency
PMU	Project Management Unit
PPE	Personal Protective Equipment
PWD	Persons With Disabilities
RAP	Resettlement Action Plan
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
SMP	Security Management Plan
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organization

PROJECT DETAILS

PROJECT: Consultancy Services for Design Review, Updating of Resettlement Action Plan, Review of ESIA And Economic Feasibility Study Reports and Updating of Tender Documents for Leseru-Kitale (B2) Road (55Km) and Morpus – Lokichar (A1) Road (142km)

CONTRACT No KeNHA /2463/2021

CLIENT

Engineer:

Director (Highway Planning & Design)
Kenya National Highways Authority (KeNHA)
P. O. BOX 49712 - 00100
NAIROBI.

Employer

Director General
Kenya National Highways Authority (KeNHA)
P. O. BOX 49712 - 00100
NAIROBI.

CONSULTANT



P. O. BOX 58911- 00200,
NAIROBI.
Tel 020-231 9553

TABLE OF CONTENTS

LIST OF ABBREVIATIONS	2
PROJECT DETAILS	3
TABLE OF CONTENTS	4
1 INTRODUCTION.....	6
1.1 Overview	6
1.2 Project Background	6
1.3 Project Rationale.....	8
1.4 Project Location and Description	9
1.5 Main Works of the proposed Project	10
1.6 Project Objectives	10
1.7 Project Beneficiaries	11
2 Stakeholder Engagement Plan (SEP).....	12
2.1 Regulations and Requirements	12
2.1.1 Relevant National Laws, Policies and Strategies	12
2.2 AfDB Operating Safeguard 1 (OS 1): Stakeholder Engagement and Information Disclosure	13
2.3 Summary of prior stakeholder engagement activities relevant to the project.....	13
3 AN OVERVIEW OF STAKEHOLDER ENGAGEMENT	20
3.1 What is Stakeholder Engagement?	20
3.2 2.2 Principles for Effective Stakeholder Engagement	20
3.3 Stakeholder Engagement Considerations.....	20
4 STAKEHOLDER IDENTIFICATION AND ANALYSIS.....	22
4.1 Project Stakeholders	22
4.2 Identification of Stakeholders	23
5 STAKEHOLDER ENGAGEMENT PROCESS	29
5.1 Engagement methods and tools	29
5.2 Covid -19 Guidelines on Consultations	29
5.3 Engagement with disadvantaged and Vulnerable Groups	30
5.4 Consultations and Inclusion Plan for Indigenous Peoples (IPs) groups.....	30
5.5 Proposed strategies to incorporate the view of IPs.....	31
5.6 Proposed Strategy for Consultation	35
5.7 Review of stakeholder comments	35
5.8 Proposed strategy for Information Disclosure	35
6 GRIEVANCE REDRESS MECHANISM (GRM).....	37
6.1 Grievance Handling Mechanism Structure.....	37
6.2 Key staff coordinating Grievance Redress.....	38
6.3 6.3 Receiving Complaints	38
6.4 Grievance Redress Mechanism Process	40
6.5 GRM Jurisdiction.....	42
6.6 GBV Related Grievance Redress Mechanism	44
6.7 Handling GBV and SEAH.....	44
6.7.1 Gender Based Violence Referral System.....	45
6.8 Building Grievance Redress Mechanism Awareness and Training	45
6.9 Monitoring and Reporting of GRM	46
7 STAKEHOLDER ENGAGEMENT MONITORING AND EVALUATION	47
7.1 Monitoring and Evaluation.....	47
7.2 Reporting.....	47
7.3 Stakeholder Monitoring Plan	48
7.4 Proposed SEP Timelines	49
7.5 Performance of the SEP	49
8 RESOURCES AND RESPONSIBILITIES FOR IMPLEMENTING STAKEHOLDER ENGAGEMENT	50
ANNEXES.....	52
8.1 Annex 1: Grievance Receipt and Resolution	52
8.2 Annex 2: Grievance Acknowledgement Form (GAF)	54
8.3 Annex 3: Grievance Redressal Registration Monitoring Sheet	55
8.4 Annex 4: People met during consultations.....	56

List of Figures

Figure 1 Map showing location the project roads	7

Figure 2: Section 1 – Lesseru – Kitale (B2) – 55 Km	7
3: Morpus – Marich Pass – Lokichar (A1) – 142km.....	8
Figure 6-1 Grievance Redress Flow Process	43

List of Tables

Table 2-1: Identified Stakeholders and Modes of Consultation Used	14
Table 2-2: <i>Stakeholder engagement activities</i>	15
Table 2-3 Summary of comments and issues raised from Public Consultations on the Road Project.....	17
Table 2-4 Summary of comments and issues raised County Governments and Non-Governmental Organizations on the Road Project	19
Table 4-1: <i>Summary of Stakeholders Identification</i>	24
Table 5-1: Stakeholder Engagement Methods and Tools	33
Table 6-1: Proposed structure of the GRC	37
Table 6-2: Grievance Redress Process	39
Table 7-1: Methods and frequency of reporting to stakeholders.....	47
Table 7-2: Stakeholder Monitoring Plan- SEP	48
Table 7-3: Stakeholder engagement plan and timeline	49
Table 8-1: <i>Roles in the implementation of SEP</i>	50
Table 8-2: Estimated SEP Budget	51

1 INTRODUCTION

1.1 Overview

The purpose of a SEP is to ensure that a consistent, comprehensive and coordinated approach is taken to stakeholder engagement and Project disclosure throughout the project. It serves as a demonstration of the commitment by the implementing agency to adherence to international best practice' approach to engagement.

1.2 Project Background

The Government of the Republic of Kenya (GoK) has earmarked funds through the Development Vote for use in engaging the services of a Consultancy Firm to undertake Design Review, Updating of Resettlement Action Plan, Review of ESIA and Economic Feasibility Study Reports and Updating of Tender Documents in readiness for procurement of works for Lesseru-Kitale (B2) and Morpus – Lokichar (A1) Roads. The road sections forms part of the of the Eldoret - Kitale – Lodwar -Nadapal – Kapoeta - Juba Corridor (945km) corridor interconnecting Kenya and South Sudan. The improvement of the roads will significantly enhance connectivity within the Eastern Africa Region, connecting the southern regions to the northern parts of Kenya linking landlocked South Sudan to Kenya.

The project road is part of the international trunk road connecting Southern Sudan, Kenya and Tanzania. The Biharamulo - Sirari - Lodwar - Lokichogio corridor (Corridor 3) is one of the five main corridors that the East African Community has identified, which constitute a strategic priority and require rehabilitation and upgrading. The section of this corridor that is within Kenyan is about 900 Km long starting at Isebania at the border with Tanzania and ending at Nakodok at the border with Southern Sudan. The road intersects with other critical international corridors including the Northern Corridor (Corridor 1) A8 Highway and the LAPSSET Corridor A10 Highway at Webuye and Lokichar respectively.

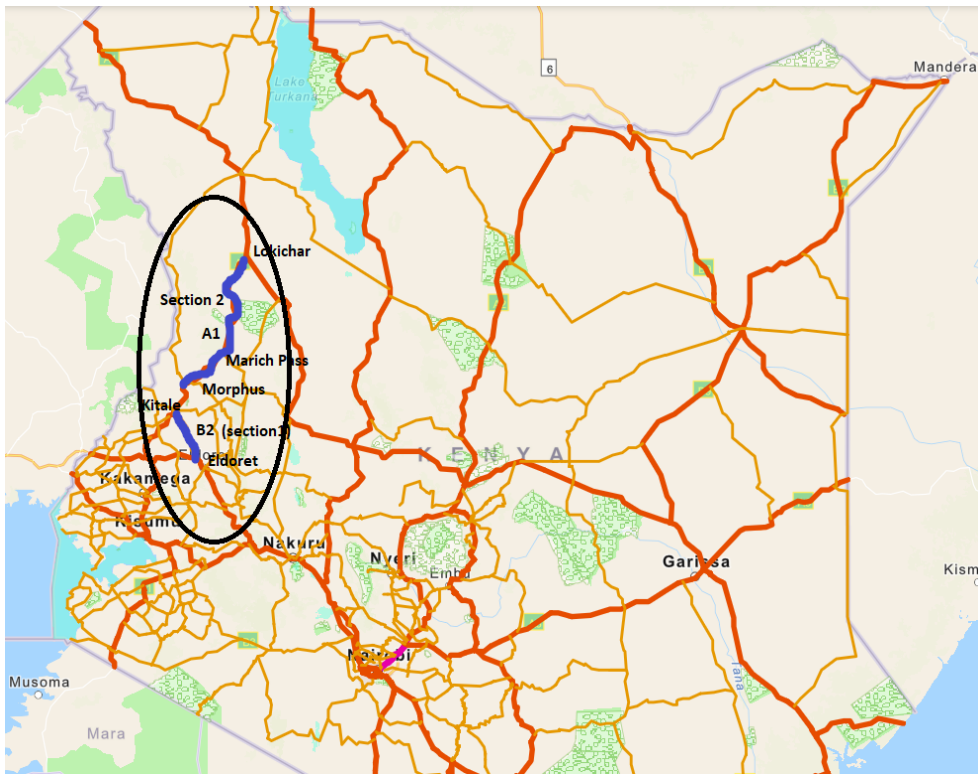


Figure 1 Map showing location the project roads

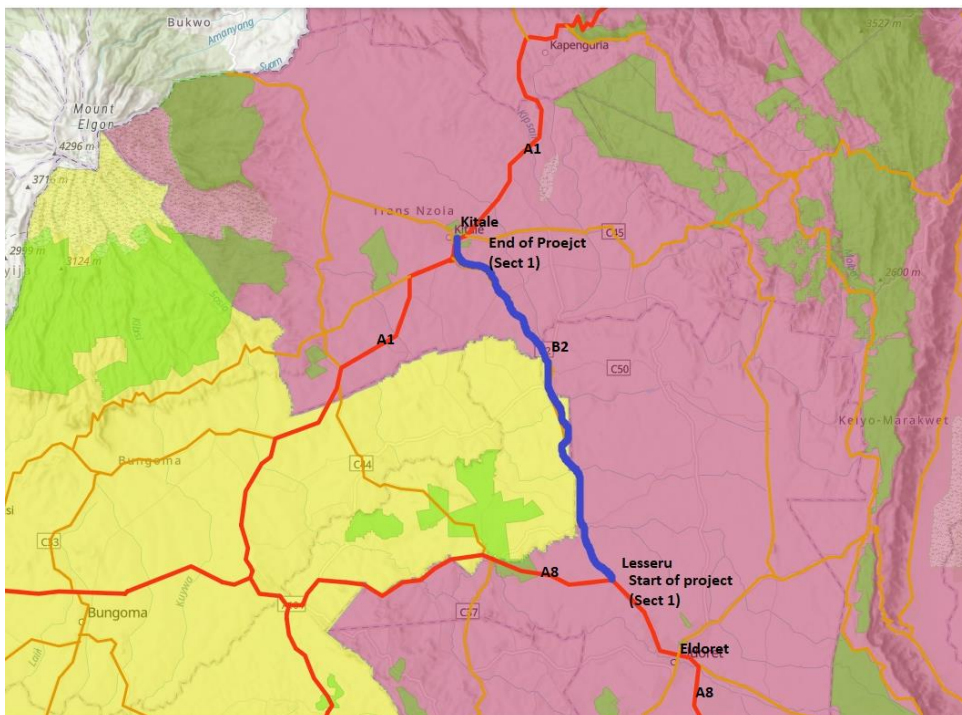
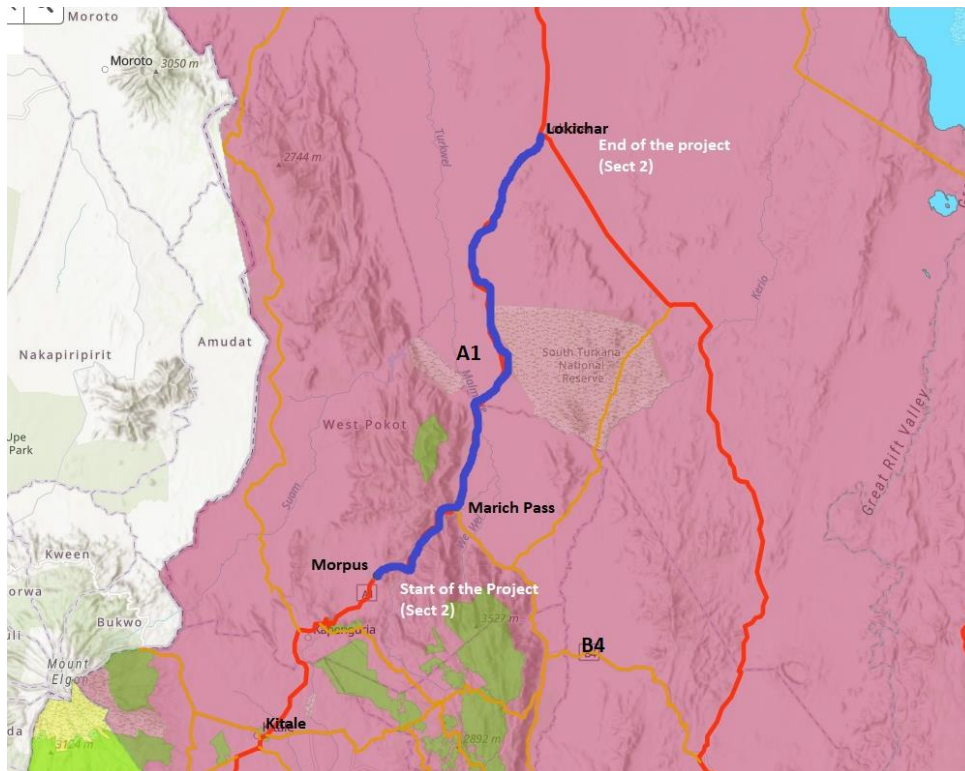


Figure 2: Section 1 – Lesseru – Kitale (B2) – 55 Km

Figure



3: Morpus – Marich Pass – Lokichar (A1) – 142km

1.3 Project Rationale

The Lesseru – Juba is a main corridor that provides the only road link to Turkana and West Pokot counties in Kenya, all the way to South Sudan, serving people living in extreme poverty. The improvement of the corridor will help reduce regional development imbalance in Kenya as well as improve the environment for stimulating economic development in the area, including attracting private investment. Further, the corridor traverses a region that is home to refugees in Turkana. Its improvement will help in the reduction in time and transportation costs of humanitarian aid to refugees in Turkana and the people of South Sudan, presently suffering from conflict.

The project road is part of the international trunk road connecting Southern Sudan, Kenya and Tanzania. The Biharamulo - Sirari - Lodwar - Lokichogio corridor (Corridor 3) is one of the five main corridors that the East African Community has identified, which constitute a strategic priority and require rehabilitation and upgrading. The section of this corridor that is within Kenyan is about 900 Km long starting at Isebania at the border with Tanzania and ending at Nakodok at the border with Southern Sudan. The road intersects with other critical international corridors including the Northern Corridor (Corridor 1) A8 Highway and the LAPSSET Corridor A10 Highway at Webuye and Lokichar respectively.

The Kitale – Kapenguria – Morpus section is programmed for improvement through support from by KfW, while the Kainuk River Bridge which falls under the proposed Morpus – Lokichar Project has been reconstructed, as well as various road development projects between Lokichar and Nakodok now nearing completion under the IDA financed East Africa Regional Transport , Trade and Development Facilitation project (EARTTDFP).

Furthermore, the Government recently procured contracts for the upgrading of sections of Nakuru – Marigat- Loruk – Barpel – Marish Pass through local (GoK) financing. The 142 Km long Morpus – Lokichar section therefore constitutes a missing link yet to be financed to enable seamless connectivity between Kenya and East African Communities (EAC) neighbours, and local communities in Northern Kenya.

1.4 Project Location and Description

The project can be divided into 2 distinct sections.

Section 1 – Lesseru – Kitale (B2) section

The Lesseru – Kitale highway, forms part of the Suam-Endebes-Kitale-Matunda-A8 Soy (B2) road and measures approximately 55kms. The road starts at Lesseru (at the Junction of A2 and B2) and runs in a North westerly direction, passing through Soy, Nangili, Furfural, Matunda, Moi's Bridge, and Maili Saba townships, and ends at Kitale town. It traverses through Uasin Gishu, Kakamega and Trans Nzoia Counties and is located within the North Rift Region of KeNHA's road network.

The road is currently in fair condition but the shoulders have been completely eroded in most areas. The road carriageway has a narrow width thereby compromising the safety of road users. The project road traverses through a flat and rolling terrains.

The scope of services for this section will involve, inter-alia, improvement of road geometrics, design review of road pavement layers to extend economic life of the road, widening of carriageway and shoulders to address highway safety concerns. The services will also involve, but not limited to the following enhancements to the road network, in line with the stated development objectives:

- Design of the highway to 7.0 m carriageway (2 lanes) with 2.0 m wide shoulders
- Design/ Design review of three (3) Road over rail bridges near Lesseru, at Matunda and Moi's Bridge Townships and in Kitale Town.
- Design/Design review of additional Highway Bridges to accommodate dual carriageway at Moi's Bridge
- Design of Dual carriageway for highway sections through the urban area and critical sections of the highway including the section into Kitale town and connecting to the ongoing works on Kitale – Endebess – Suam Road
- Design/Design review of Service Roads through townships en-route (9 KAR/KR/Kenya Rifles, Soy, Nangili, Furfural, Matunda, Moi's Bridge, and Maili Saba
- Design for Re-alignment eastwards of approximately 6-km of road A1 to give way for future expansion of Kitale Airport, and dualization of the section of A1 to the existing interchange with B14
- Design/Design review of NMT facilities through Townships enroute, and in Kitale Municipality at the section joining the ongoing Kitale – Endebess – Suam road project to the Start of Kitale – Morpus (Kfw) Project.
- Design/Design review of Local Produce Markets at Matunda, Soy, Nangili, Moi's Bridge and Maili Saba Townships.
- Design review of Interchange approaches at Lesseru and at the Junction of A1 and B14 near Kitale Town.
- Design/Design Review of a proposed bypass for Soy Township
- Design/Design review of the link road from C45 to C628 (B14 to C628)

Section 2 Morpus – Lokichar (A1) section

The project road traverses two Counties in Kenya, namely West Pokot County (60Km) and Turkana County (82 Km). The road starts at Morpus (approximately 66.4km from Kitale town) and runs in a North-Easterly direction through the trading centres of Marich Pass, Kainuk, Kalemngorok, before terminating at Lokichar, 140km from Morpus, where it connects with the proposed LAPSSET Road A10 Corridor.

The entire road is in fair condition, having been rehabilitated to bitumen standards recently. However, the road is narrow and has no shoulders. The road traverses hilly terrain with long steep sections and sharp bends that are a

safety hazard to motorist. Some sections of the road are overtopped by storm runoff. The last section of the road from Marich Pass to Lokichar has a generally flat terrain.

The scope of services will involve design review of the road pavement layers with widened carriageway and shoulders. The services will comprise, but not limited to the following:

- Design of the highway to 7.0 m carriageway (2 lanes) with 2.0 m wide shoulders
- Design review of highway geometrics and widenings including provision climbing lanes at critical sections to improve safety and highway capacity
- Design/ Design review of Service Roads and NMT facilities through townships en-route (Morpus, Ortum, Marich Pass, Kainuk, Lokichar) and at the end
- Design/Design review of Truck stops and roadside resting areas at key locations along the highway
- Design/Design Review of Local Produce Markets at Morpus and Lokichar Towns.

1.5 Main Works of the proposed Project

The proposed project will include construction to bitumen standards of 2 lanes of 7.0m wide, with shoulders of 2m width for the entire road section. The works will also involve construction of drainage bridges, and road over rail bridges near Lesseru, at Matunda and Moi's Bridge Townships and in Kitale Town. In addition, dualling will be done along some sections of the road including but not limited at highway sections through the urban area and critical sections of the highway including the section into Kitale town and connecting to the ongoing works on Kitale – Endeless – Suam Road. Other works will include construction road safety considerations and amenities such as NMT facilities at major centres - 1.5 m footpaths, and 1.5m Cycle paths on each side of road. Finally, the scope of work will include construction of local produce markets at select centres along the road.

The major items of Works to be executed under the construction contract will include but not limited to the following:

- Setting out, referencing and taking cross sections;
- Site clearance and removal of top soil;
- Earthworks;
- Constructing drainage structures (box and pipe culverts including protection works);
- Construction of pavement comprising bitumen surfacing, cement 10tabilized base and improved material subbase;
- Construction of other road facilities such as lay-bays, bus bays and widening at market centres along the road
- Works necessary to effect the safe and convenient passage of traffic through the Works;
- Construction of pedestrians crossings
- Provision of road furniture and ancillary services, e.g. signs, guardrails, marker posts, fencing, etc.;
- Operations ancillary to the main Works such as the construction of offices, diversion of services, the operations in quarries and borrow areas, the provision of water supply, the diversion of existing services, spoil areas for disposal of unsuitable or surplus materials, etc.

1.6 Project Objectives

This project will contribute to the principal Project Development Objective (PDO), which is to improve access to the North Western part of Kenya and between Kenya and South Sudan, through improving road infrastructure and ICT links, reducing transport and ICT costs, and facilitating the reduction of non-fiscal trade barriers, which help reduce the cost of doing business and development. The project also improves South Sudan's access to sea ports by improving the Lesseru – Lokichar road section, part of the Eldoret – Nadapal – Juba (Kenya - South Sudan regional link) corridor that connects to the Northern Corridor (A8 at Lesseru) serving the landlocked countries in the sub region to Mombasa Sea port. This section of the road project provides part of the most cost-efficient transit corridor for South Sudan that crosses only one border post.

The overall Project objectives for construction of road projects are to;

- Improve the efficiency of road transport along the project Corridor
- Spur economic activity along the project road and enhance social welfare
- Enhance security and promote peace along the project corridor
- Enhance regional integration
- Enhance road safety along the project road

1.7 Project Beneficiaries

The beneficiaries of the project will include: pastoralist communities, farmers and businesses along the road corridor, tradable sectors of the economy, agriculture, and the extractive industry, as well as road users (passengers and transporters), consumers and producers both inside and outside the sub-region. Through the export processing facilities and pastoralist road-side markets, the project will offer new jobs and income earning opportunities to the people in Turkana and West Pokot in the Kenyan territory. Currently this region has not received adequate attention and exhibits very high levels of poverty. With the improvement of the whole road corridor to South Sudan, the occasional cut off from the rest of Kenya and South Sudan, particularly during the rainy season, will be reduced.

2 Stakeholder Engagement Plan (SEP)

The purpose of this Stakeholder Engagement Plan (SEP) is to ensure appropriate stakeholder consultations and information disclosure by establishing the timing and methods of engagement throughout the implementation of the road project. The SEP is also applicable during the Environmental and Social Management Plan (ESMP), Resettlement Action Plan (RAP) and livelihood restoration activities, and any other activities that requires engagement of different stakeholders during implementation of the project.

This Stakeholder Engagement Plan (SEP) is prepared in accordance with the African Development Bank (AfDB) Principles on Stakeholder Engagement (2015) on Stakeholder Engagement and Information Disclosure as well as Kenyan Laws and Regulations.

The SEP supports the development of strong, constructive and responsible relationships with project stakeholders that are important to and integral for the successful management of the project's environmental and social risks.

The scope of the Stakeholder Engagement Plan seeks to be proportionate to the nature and scale of the project and its potential risks and impacts. The specific objectives of the stakeholder engagement plan are as follows:

- To Provide guidance for stakeholder engagement such that it meets the country regulatory framework and the AfDB standards;
- To identify key stakeholders that are affected, and/or able to influence the Project and its activities
- To develop a stakeholder engagement process that gives stakeholders the opportunity to participate and influence project design and implementation
- To define the information disclosure provisions under the project
- To establish a formal Grievance Redress Mechanism under the project
- To define roles and responsibilities for the implementation of the SEP
- To define the reporting and monitoring arrangements to ensure that the SEP remains an effective and up-to-date tool for stakeholder engagement, including periodic review of SEP performance

The SEP will be updated as necessary throughout the project's life cycle.

This Stakeholder Engagement Plan will take into account the existing national regulatory framework as well as the AfDB policies.

2.1 Regulations and Requirements

This Stakeholder Engagement Plan will take into account the existing national regulatory framework as well as the AfDB policies.

2.1.1 Relevant National Laws, Policies and Strategies

According to Kenyan regulations, public consultation is included in the project development process where a given project may significantly affect the quality of the environment, and are part of the environmental impact assessment. However, for other projects which might involve policy and system set up, public participation and consultation is still necessary.

The most important Kenyan legislation concerning public participation in the decision- making process is as follows:

- i. The constitution of Kenya 2010, Article 69 1(d) empowers the state to encourage public participation in the management, protection and conservation of the environment;
- ii. Environmental Management and Coordination Act (EMCA) 1999, as amended in 2015 emphasizes on public participation in development of policies plans and processes for the management of the environment is made mandatory in the Act
- iii. Environment and Social Impact Assessment Guidelines and Administrative Procedures required public participation and disclosure of project information during ESIA procedure in the development of projects, policies, plans and programmes.

2.2 AfDB Operating Safeguard 1 (OS 1): Stakeholder Engagement and Information Disclosure

AfDB Operating Safeguard 1 (OS1) states that the borrower or client shall be responsible for carrying out and providing evidence of meaningful consultation (i.e. consultation that is free, prior and informed) with communities likely to be affected by environmental and social impacts, and with other local stakeholders. The key focus of meaningful consultation is inclusivity; namely, the approach taken needs to ensure that all groups (including those that are disadvantaged or vulnerable) are embraced within the consultation process on equal terms, and that all groups are given the capacity to express their views with the knowledge that these views will be properly considered.

OS 1 also states that the borrower shall be responsible for ensuring the satisfaction of broad community support. The Bank requires that stakeholder engagement starts at an early stage during project preparation and that it should continue throughout. The results of such engagement should be adequately reflected in project design, as well as in the preparation of project documentation. In all cases, consultation should be carried out after, or in conjunction with, the release of environmental and social information.

Once all stakeholders are identified, the borrower should develop and implement a Stakeholder Engagement Plan (SEP) that is proportionate to the project risks, impacts and development stage, and that is tailored to the characteristics and interests of the affected communities. The advantage of having a SEP is that it provides a formal commitment, defines responsibilities, and ensures that adequate funds are made available to carry out the program of consultation.

A SEP typically describes measures to allow the effective consultation and participation of all affected communities, a description of any consultations that have already taken place, and a definition of the reporting procedures. A Grievance Mechanism should also be developed by the borrower, and it will detail the procedures that a project will establish for managing complaints and grievances.

The Borrower will disclose project information to allow stakeholders to understand the risks and impacts of the project, and potential opportunities. The Borrower will provide stakeholders with access to the following information, as early as possible before the Bank proceeds to project appraisal, and in a timeframe that enables meaningful consultations with stakeholders on project design:

- a) The purpose, nature and scale of the project;
- b) The duration of proposed project activities;
- c) Potential risks and impacts of the project on local communities, and the proposals for mitigating these, highlighting potential risks and impacts that might disproportionately affect vulnerable and disadvantaged groups and describing the differentiated measures taken to avoid and minimize these;
- d) The proposed stakeholder engagement process highlighting the ways in which stakeholders can participate;
- e) The time and venue of any proposed public consultation meetings, and the process by which meetings will be notified, summarized, and reported; and
- f) The process and means by which grievances can be raised and will be addressed.

2.3 Summary of prior stakeholder engagement activities relevant to the project

Prior surveys and consultations were conducted to better understand the views of different stakeholders (key government agencies, Civil Society Organizations (CSOs), Non-governmental organizations (NGOs) as well as the needs and expectations of local communities) to inform all the stages of the projects. These consultations started in 2014 and 2015 during the preliminary and detailed design and development of the initial ESIA for the roads.

Consultation with all project stakeholders began during the Scoping phase and continued throughout the entire process of development of safeguard documents (ESIA, RAP and Gender Analysis report) and will continue throughout the implementation and operational phases. Consultations with County administration, community

members, church leaders, project staff, and project affected persons (among others) were or will be organized. Interactive discussions with KeNHA project team and AfDB has also been held in various stages of the project.

Table 2-1: Identified Stakeholders and Modes of Consultation Used

Stakeholder	Identified Stakeholders	Consultation Method
National Government	- Assistant County Commissioners - Sub County Administrator - KPLC - NEMA - Kenya Wildlife Service (KWS) - Kenya Forest Service (KFS) - National Drought Management Authority (NDMA)	Introduction letter and one-on-one Interviews
County Government	- Governors - CEC Members for Lands, Housing, Physical Planning and Urban Development - Chief Officer in charge of Land - District Administration Police Commandant - Chief Officer - Transport - Sub-county Lands Officer - Sub-county Adjudication Officer - Sub-county Surveyor - District Medical Officer for Health. - Sub-county Social and Gender Officers - County Public Health Officers - Sub-county Livestock Development Officer - Sub-county Water Officer	Introduction letter and one-on-one Interviews
Project areas residents and PAPs	Locations of public meetings (all settlements along the road).	Public Meetings (<i>Baraza</i>) Small Group Meetings Focus Group Discussions
Sample groups representing vulnerable and marginalized groups among residents and PAPs	Location of FGDs	FGDs

All stakeholders are favorable to the project and see it as the possibility of bringing economic and social development in the project area of influence, as well as improving the economic status of many people along the road. Communities requested to get information earlier on when works will start, and the project proponent to consider various opportunities the communities can benefit as a result of the project. Other comments given by the stakeholders included;

- Compensation of PAPs due to land-take to pave the way for the road construction should be done before commencement of the civil works;
- Adequate notice (time and resources) for PAPs should be given in preparation for the resettlement;
- Prioritize locals for the employment opportunities arising from the project;
- Participatory/Engage the local community and other relevant institutional agencies throughout project implementation;
- Importance of timing and duration of construction of the project road, to ensure the project proponent select a good contractor to finish the works on time and within the budget;
- Livelihood restoration during resettlement should be considered;
- The contractor should ensure they adhere to the proposed mitigation measures on environmental, social health safety of the project;

- The project should consider investing in projects that will benefit the local population in the areas of water, livestock, markets, education, and training the youths and women

There are many positive impacts for the project, as well as negative impacts. However, people have a right to be informed in advance and to receive information on the expected impacts and how the project is proposing to mitigate these negative impacts, and enhance the positive benefits.

Table 2-2: Stakeholder engagement activities

Lesseru – Kitale (B2) Section

MEETING DATE	COUNTY	VENUE	Stakeholders	Format	Objectives of the meeting
7/12/2021	Uasin Gishu / Kakamega	Soy	Public meeting	Physical meeting	Project sensitization Sensitization of project impacts
8/12/2021	Uasin Gishu	Furfarol	Public meeting		
8/12/2021	Kakamega	Matunda	Public meeting		
9/12/2021	Uasin Gishu	Mois Bridge	Public meeting		
7/12/2021	Uasin Gishu	Nangili	Public meeting		
22/3/2022	Kakamega / Uasin Gishu	Soy Club	County governments of Kakamega and Uasin Gishu, Civil Society Organizations, Non-Governmental Organizations		
22/03/2022	Uasin Gishu	Matunda SDA Church	Public meeting		
23/03/2022	Uasin Gishu	AIC Moi's Bridge	Public meeting		
24/03/2022	Trans Nzoia County	Kitale Arturukan	County government of West Pokot, Civil Society Organizations, Non-Governmental Organizations		

Morpus – Lokichar (A1) Section

MEETING DATE	COUNTY	VENUE		Format	Objectives of the meeting
30/11/2021	Turkana	Lokichar	Public meeting	Physical meeting	Project sensitization Sensitization of project impacts
30/11/2021	Turkana	Kalemngorok	Public meeting		
2/12/2021	West Pokot	Wakor	Public meeting		
2/12/2021	West Pokot	Marich Pass	Public meeting		
3/12/2021	West Pokot	Sebit	Public meeting		
3/12/2021	West Pokot	Ortum	Public meeting		
3/12/2021	West Pokot	Morpus	Public meeting		
24/03/2022	West Pokot	Kapenguria	County government of West Pokot, Civil Society Organizations, Non-Governmental Organizations		
24/03/2022	West Pokot	Ortum	Public meeting		

MEETING DATE	COUNTY	VENUE		Format	Objectives of the meeting
25/03/2022	Turkana	Cradle Hotel	Turkana County Government, Civil Society Organizations, Non-Governmental Organizations		
28/3/2022	Turkana	Kainuk	Public meeting		
28/3/2022	Turkana	Kakong	Public meeting		

In addition, consultations with the project proponent (KeNHA) has been continuous with input on the project, including comments on how to ensure participation of all stakeholders is considered throughout the project cycle.

A list of names of stakeholders met is presented in Annex 4 of this document.

Table 2-3 Summary of comments and issues raised from Public Consultations on the Road Project

	ISSUES	COMMENTS	RESPONSE TO COMMENTS
1.	Road Safety	The design should incorporate road safety especially at main centres along the road	The participants were informed that during the design, the consultant will identify areas with high accidents and risks and incorporate road safety measures in the road design, including installation of speed calming measures, foot bridges, and signage. In addition, footpaths and service roads will be constructed in major centres to ease traffic flow at these areas
2.	Environmental and Social mitigation measures	The meetings highlighted the need for proper environmental and social mitigation measures, for issues like dust, safety of community members, drainage, among others to be incorporated and enforced during construction	The Consultant is conducting the ESIA (and RAP) to identify impacts of the project, and will come up with mitigation measures to eliminate or minimize negative impacts of the project. The Contractor will be required to adhere to the mitigation measures proposed throughout the project duration.
3.	Awarding of Road Construction Tender	- The Community requested that the contract for construction of this road be given to a reputable company for purposes of getting a quality road done, and on time to avoid inconveniences	The contractor to be mobilised for the construction assignment will be awarded through a competitive tendering process. The contractor will be required to comply with national engineering and construction regulations as well as industry best practices. The procuring of the contractor will also be transparent.
4.	Employment of local staff during road construction	- The locals requested that their youth get formal and casual employment in the project so as the community can benefit further economically. - The community asked that the government give their youth priority.	At the construction phase, the Contractor will be required to have a policy that prioritizes qualified locals and that they get: - Casual Labor opportunities as supplementary income sources; - Equal opportunities to both men and women as the women are very interested in these jobs; For women who would like to provide support services to the construction workers, they will be assisted to understand the procedures required to legalize their small businesses.
5.	Compensation of traders and construction of a market	Participants wanted to know whether those doing business along the road will be compensated. Similarly, they wanted a clarification whether markets and market structures will be valued for compensation. The community asked that the project uplift their livelihood means and not leave them with worse off conditions and it was agreed that the community would be consulted as to the mode of livelihood restoration engagements that they would like to ensure that this project leaves them in a better place.	- The traders were informed that those trading along the road reserve will not be compensated but will be assisted in moving out of the road reserve. - The traders were assured that the National Government, together with the county government will consult to find land suitable for their relocation, which can fit a bus stop also, to minimize losses of businesses for the traders.

	ISSUES	COMMENTS	RESPONSE TO COMMENTS
		The traders at Ortum, where there are a lot of traders along the road reserve requested for a market to be constructed for them, and a bus-park to be constructed adjacent to the proposed market so that they don't lose customers when the road is constructed	- The re settlement of these traders will require participation from the County Physical Planning, and Markets and Trades and other relevant Departments; - This RAP has included the County Government as a key member of the RAP Implementation Unit (RAPIC). They should be actively involved in the monitoring and evaluation of livelihood restoration of traders who were relocated from the project RoW.
6.	Timing of relocation	The community requested that other than the compensation being done properly and prior to relocation, that the public be consulted prior to it for there to be adequate time and resources to assist those moving to make a move that's not coerced or forced.	The community was assured of constant engagement with regards to such important information as this was their right. They have as Kenyan citizens a right to free and all access to information relevant to them with regards to this project. In addition, the outcomes of RAP survey and documentation will undergo disclosure to inform the community before the implementation the report.
7.	Decision making	Involvement of the local leadership when coordinating issues affecting the locals is very critical. Chiefs should be involved in coordinating any involvement with the community since they are impartial.	On discussions with PAPs on grievance resolution, GRC will comprise of administration, and members to be selected by the affected persons, with representatives of women, men, youth and PLWD. This system has been adopted into the project's grievance resolution mechanism as presented in both the RAP and ESIA Reports.
8.	Population influx	The communities acknowledged that with road construction there was bound to be population influx of people from other areas coming in search of jobs during project construction.	Contractor shall be encouraged to local labour as feasible. An open and transparent employment policy especially for semiskilled and unskilled workers shall be required of the contractor.

Table 2-4 Summary of comments and issues raised County Governments and Non-Governmental Organizations on the Road Project

Stakeholders	Engagement method	Key outcomes
County Governments	Physical meeting	- County governments should be part of the project team to assist the PMT in issues such as resettlement, assistance in identifying land for associated facilities such as markets, and advising the client on access roads that will add value to the project - The design of the roads should consider NMTs - Ensure that all PAPs are compensated fairly, and no one should be evicted from the road reserve without an alternative place for trading - Project to consider constructing Trauma centres along the road at a hospital facility to be agreed upon with the county governments - The road project should construct public amenities such as toilets and water points at key towns for travellers and markets. - Other amenities to be considered – markets, livestock markets - Road safety awareness should be carried out to members of the public
Civil Society Organizations (CSOs), Non-Governmental Organizations (NGOs)	Physical meeting	Participants were very happy with the project. They however expressed the following: - Ensure communities are engaged throughout the project cycle - Communities should benefit from the project through employment, associated facilities, and promotion of - Ensure PWDs are catered for and considered during the design of the road and work during construction - There should be fair recruitment of workers for the project, with preference given to local people - CBOs/NGOs in the GBV space should be hired to ensure GBV issues are handled well during the project implementation - Access roads that enhance and empower women in trade should be considered - GBV reporting systems should be strengthened, including capacity building with law enforcement officers - Create more awareness to the communities on child labour - Proper establishment of GRM including relevant people in the GRC to manage all issues, including GBV - Organizations like National Aids Control Commission (NACC) should be involved in HIV/AIDS monitoring of the project
AfDB, KeNHA	Virtual and physical meeting	The following was expressed: - Ensure considerations of county and other stakeholders' input on the project - Designs to incorporate NMTs and other safety amenities in key sections of the road - Ensure all documents are disclosed to the PAPs and other key stakeholders during the project cycle - Road design should be within the existing road corridor as much as possible - Road to consider climate change impacts during the design - Gender aspects to be incorporated in the design that enhance gender participation and benefits - Project to consider VMGs to enhance their participation and project benefits of the project - Special considerations for women in providing them with access to project sites, such as transport near to their homes - Road safety considerations should be given a priority along the road

3 AN OVERVIEW OF STAKEHOLDER ENGAGEMENT

3.1 What is Stakeholder Engagement?

The term “stakeholder engagement” is emerging as a way to describe a broader, more inclusive, and continuous process between a client and all project stakeholders. Stakeholder engagement can encompass a range of activities and approaches, and usually spans the life of a project. A broad array of terms describes this new approach to engaging stakeholders, including consultation, engagement, external relations, information disclosure and dissemination, and participation. These terms have been used loosely and interchangeably, because all these components can be part of an integrated engagement process. Stakeholder Engagement will be free of manipulation, interference, coercion, and intimidation, and conducted on the basis of timely, relevant, understandable and accessible information, in a culturally appropriate format. It involves interactions between identified groups of people and provides stakeholders with an opportunity to raise their concerns and opinions (e.g., by way of meetings, surveys, interviews and/or focus groups), and ensures that this information is taken into consideration when making project decisions.

Effective stakeholder engagement develops a “social license” to operate and depends on mutual trust, respect and transparent communication between stakeholders. It thereby improves decision-making and performance by:

- **Managing costs:** Effective engagement will help the project to avoid unnecessary costs, in terms of money and reputation;
- **Managing risk:** Engagement helps the project and communities to identify, prevent, and mitigate environmental and social impacts that can threaten project viability;
- **Enhancing reputation:** By publicly recognizing human rights and committing to environmental protection, the project and financial institutions involved in financing the project can boost their credibility and minimize risks;
- **Avoiding conflict:** Understanding current and potential issues such as land rights and proposed project activities;
- **Improving practices and/or policies:** Obtaining perceptions about a project, which can act as a catalyst for changes and improvements in practices and policies of the client;
- **Identifying, monitoring and reporting on impacts:** Understanding a project’s impact on stakeholders, evaluating and reporting back on mechanisms to address these impacts; and
- **Managing stakeholder expectations:** Consultation also provides the opportunity for the project team to become aware of and manage stakeholder attitudes and expectations.

3.2 2.2 Principles for Effective Stakeholder Engagement

Stakeholder engagement is usually informed by a set of principles defining core values underpinning interactions with stakeholders. Common principles based on International Best Practices include the following:

- **Commitment** is demonstrated when the need to understand, engage and identify the community is recognized and acted upon early in the process;
- **Integrity** occurs when engagement is conducted in a manner that fosters mutual respect and trust;
- **Respect** is created when the rights, cultural beliefs, values and interests of stakeholders and affected communities are recognized;
- **Transparency** is demonstrated when community concerns are responded to in a timely, open and effective manner;
- **Inclusiveness** is achieved when broad participation is encouraged and supported by appropriate participation opportunities; and
- **Trust** is achieved through open and meaningful dialogue that respects and upholds a community’s beliefs, values and opinions.

3.3 Stakeholder Engagement Considerations

The following considerations should be made when planning for stakeholder engagement:

Time and resources:

It takes time to develop and build trust-based relationships with stakeholders. The consensus from practitioners is that from the outset relationships with stakeholders should develop and grow, and that these relationships should be nurtured and fostered not to fade.

Additional stakeholders might be identified that also want to be engaged. No willing stakeholder should be excluded from the process of engagement. Some stakeholders will need to be educated about the concept of engagement itself, as well as on the complex issues requiring specialized and technical knowledge. These demands can increase the cost of consultation required to meet external expectations, and often this occurs at a time when a project lacks the internal capacity and resources to implement a broad engagement strategy.

It raises expectations:

Stakeholders can have unrealistically high expectations of benefits that may accrue to them from a project. As such, the project team from the outset must be clear on what they can and cannot do, establishing a clear understanding of their roles and responsibilities.

Securing stakeholder participation:

Cultural norms and values can prevent stakeholders from freely participating in meetings. Often there are conflicting demands within a community, and it can be challenging for a project to identify stakeholders who are representative of common interests. This might be avoided by employing local consultants who are sensitive to local power dynamics, which requires project proponents to develop an awareness of the local context and implementing structures to support and foster effective stakeholder engagement.

Consultation fatigue:

Stakeholders can easily get tired of consultation processes especially when promises are unfulfilled, and their opinions and concerns are not taken into consideration. Often stakeholders feel their lives are not improving as a result of a project and this can lead to consultation meetings being used as an area to voice complaints and grievances about the lack of development. This might be avoided by coordinating stakeholder engagement and by ensuring that practitioners do not make promises to stakeholders, but rather use the public consultation process as an opportunity to manage expectations, challenge misconceptions, disseminate accurate project information, and gather stakeholder opinions which are feedback to the client and other project specialists.

Culturally appropriate engagement:

It is critical that engagement is culturally appropriate, especially, but not exclusively, in terms of impacted communities. Prior to any engagement event the following actions will occur:

- Preparation of standard 'question and answer' sheets tailored for specific stakeholder types (based on lessons learnt, analysis and common issues raised in previous engagements or encounters);
- Planning/design of engagement action(s) with project team and other relevant authorities and staff;
- Selection of individual stakeholders with whom engagement will occur;
- Selection of methods for disclosure of information (including such topics as format, language, and timing);
- Selection of location and timing for engagement event(s) (avoiding busy work times, which may be seasonal, and days/times when special events may be occurring);
- Agreeing on mechanisms for ensuring stakeholder attendance at engagement event(s) (if required);
- Identification and implementation of feedback mechanisms to be employed.

4 STAKEHOLDER IDENTIFICATION AND ANALYSIS

4.1 Project Stakeholders

Project stakeholders are defined as individuals, groups or other entities who:

- a. Are impacted or likely to be impacted directly or indirectly, positively or adversely, by the project (also known as 'affected parties'); and
- b. May have an interest in the project ('other interested parties'). They include individuals or groups whose interests may be affected by the Project and who have the potential to influence the project outcomes in any way.

Cooperation and negotiation with the stakeholders throughout the project development also require the identification of persons within the groups who act as legitimate representatives of their respective stakeholder group, i.e., the individuals who have been entrusted by their fellow group members with advocating the groups' interests in the process of engagement with the Project. Community representatives may provide helpful insight into the local settings and act as the main conduits for dissemination of Project-related information and as a primary communication/liaison link between the Project and targeted communities and their established networks. Verification of stakeholder representatives (i.e., the process of confirming that they are legitimate and genuine advocates of the community they represent) remains an important task in establishing contact with the community stakeholders.

For the purposes of effective and tailored engagement, stakeholders of the proposed project can be divided into the following core categories:

Affected Parties – persons, groups and other entities within the Project Area of Influence (PAI) that are directly influenced (actually or potentially) by the project and/or have been identified as most susceptible to change associated with the project, and who need to be closely engaged in identifying impacts and their significance, as well as in decision-making on mitigation and management measures. These will include, among others:

- Landowners or land users along the rights of way (ROW) of the construction works whose assets/properties or incomes may be impacted;
- Residents and community members who may be inconvenienced by construction works activities (e.g., by noise, dust, vibration, accidental damages);
- Business owners who may be inconvenienced and/or financially impacted by the project works;
- Local households and businesses whose activities may be positively impacted

Other Interested Parties – individuals/groups/entities that may not experience direct impacts from the Project but who consider or perceive their interests as being affected by the project and/or who could affect the project and the process of its implementation in some way. These will include among others:

- County governments, Line Ministries, public agencies, and their regional offices, providing public services, for example Education, Health, Social Protection / Social Service Agency, Police, Justice, etc.;
- Civil society organizations;
- International organizations who implement projects in the targeted areas;
- Community and social organizations;

Vulnerable and Marginalized Groups – these are persons who may be disproportionately impacted or further disadvantaged by the project(s) as compared with any other groups due to their vulnerable status and that may require special engagement efforts to ensure their equal representation in the consultation and decision-making process associated with the project. They include among others:

- Women;
- Youth;
- Elderly;

- Persons with disabilities;
- Poor and unemployed persons;
- Child-headed families
- Widows
- Minority or marginalized groups
- Nomadic pastoralists.

Indigenous Groups: The majority of the population in West Pokot and Turkana counties are Indigenous People / Vulnerable and Marginalized Groups (IPs/VMGs), thus any subproject that will affect community members' homes/structures, access to land they traditionally occupy or utilize, or to any other resources including cultural or sacred sites or sources of herbal medicines, will be subjected to a Free, Prior, Informed Consent (FPIC) consultation process with the affected sections of the community.

Where other affected parties, interested parties and vulnerable groups are identified in the course of the project implementation, their needs will also be taken into consideration and reflected in the SEP document.

In general, engagement is directly proportional to the impact and influence, and as the extent of impact of a project on a stakeholder group increases, or the extent of influence of a particular stakeholder on the project increases, engagement with that particular stakeholder group should intensify and deepen in terms of the frequency and the intensity of the engagement method used. All engagement should proceed on the basis of what are culturally acceptable and appropriate methods for each of the different stakeholder groups targeted.

4.2 Identification of Stakeholders

There are several categories of people and institutions that will be affected directly by the project and those with an interest in the project at different levels that will need to be consulted and engaged in the project activities.

The following table shows the potential role, interest and influence of each of the above identified stakeholders or stakeholder categories:

Table 4-1: Summary of Stakeholders Identification

Stakeholder	Potential Role of Stakeholder	Interest	Influence	Key Characteristics /Mandate	Language needs	Preferred notification	Specific needs
Project Affected Parties							
National Government	Borrower, Facilitate interactions, encounters with other key stakeholders	High	High	Support and ensure project implementation High awareness on the project activities	Use of local languages /translation	Meetings, email, phone, internal memo,	• Accessibility of venues (when contact and physical meetings are possible and planned) • Coordination of activities to avoid duplication of efforts
County Governments and relevant line ministries	Project beneficiaries, Facilitate interactions, encounters with other local stakeholders	High	High	Support and ensure project implementation Protect interests of local communities	Use of local languages /translation	Meetings, email, phone, internal memo,	• Get and share accurate information about the project • Regular updates on the project • Accessibility of venues (when contact and physical meetings are possible and planned)
Ministry of Transport, Infrastructure, Housing and Urban Development (MoTIHUD, including organizations directly or indirectly participating in the project - KeNHA, ICT	Main project driver and implementer of the project	High	High	Support and ensure project implementation Involve and ensure participation by all relevant stakeholders	Use of local languages /translation	Meetings, email, phone, internal memo,	• Get and share accurate information about the project • Accessibility of venues (when contact and physical meetings are possible and planned)
National Environmental and Management Authority (NEMA)	Monitoring E& S safeguards	High	High	Protect environment, ensure proper mitigation measures are implemented	Use of local languages /translation	Meetings, email, phone, internal memo,	• Get and share accurate information about the project • Accessibility of venues (when contact and physical meetings are possible and planned)
Ministry of Lands - National Land Commission (NLC)	Compensation of PAPs	High	High	Compensation of PAPs	Use of local languages /translation	Meetings, email, phone, internal memo,	• Get and share accurate information about the project • Details of PAPs • Accessibility of venues (when contact and physical meetings are possible and planned)
Ministry of Labour	Monitoring Labour management, OHS	High	High	Monitoring OHS measures are observed	Use of local languages /translation	Meetings, email, phone, internal memo,	• Accessibility of venues (when contact and physical meetings are possible and planned)

Stakeholder	Potential Role of Stakeholder	Interest	Influence	Key Characteristics /Mandate	Language needs	Preferred notification	Specific needs
							• Full disclosure about the project to explore partnerships • Get and share accurate information about the project
Ministry of Public service, Youth, Gender, Senior Citizens Affairs	Gender, Child Protection, and gender participation and monitoring	High	High	Overseeing gender, youth and child protection implementation	Use of local languages /translation	Meetings, email, phone, internal memo,	• Accessibility of venues (when contact and physical meetings are possible and planned)Full disclosure about the project to explore partnerships • Get and share accurate information about the project
Project Affected Persons (PAPs)	Directly impacted by the project activities	High	High	Low access to infrastructure Vulnerability due loss of livelihood limited participation and involvement, time low awareness	Use of local languages /translation	Use of local languages /translation	• Travel costs, assistance for mobility, sign language, • Accessibility of venues (when contact and physical meetings are possible and planned) • Full disclosure about the project • Get and share accurate information about the project • Prompt compensation • Access to employment opportunities
Business companies or organizations/investors	Their businesses/interventions might be impacted either positively or negatively	High	High	Interest in access to investment opportunities	Use of local languages /translation	Meetings, email, phone, internal memo,	• Accessibility of venues (when contact and physical meetings are possible and planned) • Full disclosure about the project • Get and share accurate information about the project • Prompt compensation
Community members	Beneficiaries of the project	Moderate	Moderate	Low access to infrastructure High poverty level limited participation and involvement, time	Use of local languages /translation	Use of local languages /translation	• Consultation close to home, , Travel costs, assistance for mobility, sign language • Accessibility of venues (when contact and physical meetings are possible and planned) • Full disclosure about the project • Get and share accurate information about the project

Stakeholder	Potential Role of Stakeholder	Interest	Influence	Key Characteristics /Mandate	Language needs	Preferred notification	Specific needs
				low awareness			• Prompt compensation • Access to employment opportunities
Other Interested parties							
NGOs and CSOs	Advocacy, advise and holding governments to account Facilitate encounters with other stakeholders	Moderate	Moderate	High awareness Partnership and monitoring interests of project activities	Use of local languages /translation	Meetings, email, phone, internal memo,	• Accessibility of venues (when contact and physical meetings are possible and planned) • Full disclosure about the project • Get and share accurate information about the project • Involvement in their area of expertise
Other Interested parties (Other international financial organizations)	Can facilitate encounters with other stakeholders, can advise the project	Moderate	Moderate	Various interests	Use of local languages /translation	Meetings, local languages, email, phone, internal memo,	• Accessibility of venues (when contact and physical meetings are possible and planned)
Development partners and UN agencies engaged in livestock, transport, water and climate change and resilience sectors, etc	Can facilitate encounters with other stakeholders, can advise the project	Moderate	Moderate	High awareness Development and Monitoring interests of other development projects	International or local languages	Meetings, email, phone, internal memo,	• Full disclosure about the project to explore partnerships • Share lessons learnt from their own work for the benefit of the project • Coordination of development work and build synergies and avoidance of duplication of efforts
Media (print and electronic) and online communication platforms	Can facilitate communication and encounters to other stakeholders Advocacy, advise and holding governments to account	Low	High	High awareness Monitoring interests of other parties Educating citizens	International or local languages	Meetings, email, phone, internal memo,	• Get and share accurate information about the project • To have clear channel of information flow from the project teams • Complaints and grievances shared on social media platforms will be picked and addressed as necessary
Disadvantaged Groups							

Stakeholder	Potential Role of Stakeholder	Interest	Influence	Key Characteristics /Mandate	Language needs	Preferred notification	Specific needs
Vulnerable and marginalized groups & Indigenous Peoples	Beneficiaries of the project	High	High	Low access to infrastructure High poverty level limited participation and involvement, time low awareness	Use of local languages /translation	Use of local languages /translation	• Consultation close to home, Travel costs, assistance for mobility, sign language, accessibility of venues (when contact and physical meetings are possible and planned) • That the project involvement in decision making processes using their own local structures • That their priority needs are catered for by the project (as part of project target communities) • Provision of associated facilities such as water points
Older people and those with chronic illnesses	Beneficiaries of the projects	High	Low	Low access to infrastructure High poverty level limited participation and involvement, time low awareness	Use of local languages /translation	Use of local languages /translation	• These people have limited movement and may not be able to attend meetings and be part of decision-making • That some are illiterate and would require communication to be delivered to them in a language they understand using channels they can access • That they, or their caregivers/representatives, will be informed and engaged in project processes That they will have access to project services once the project is operationalized
People with Disabilities	Beneficiaries of the projects	High	Low	Low access to infrastructure High poverty level limited participation and involvement, time low awareness	Use of local languages /translation	Use of local languages /translation	• Involvement in them in decision making processes • That their priority needs are catered for by the project (as part of project target communities) • Accessibility of venues (when contact and physical meetings are possible and planned) • Get and share accurate information about the project • Provision of employment or supply opportunities

Stakeholder	Potential Role of Stakeholder	Interest	Influence	Key Characteristics /Mandate	Language needs	Preferred notification	Specific needs
Nomadic pastoralists	Beneficiaries of the projects	High	Low	- Low access to infrastructure - High poverty level - limited participation and involvement, time - low awareness	Use of local languages /translation	Use of local languages /translation	- Investments in infrastructure at strategic sites and location to strengthen resilience - Accessibility of venues (when contact and physical meetings are possible and planned) - Get and share accurate information about the project

•

5 STAKEHOLDER ENGAGEMENT PROCESS

5.1 Engagement methods and tools

The Stakeholder Engagement Plan envisages that consultation meetings will take place with relevant interested parties prior to the commencement of the Project as well as during the project implementation and on an 'as-needed' basis.

Consultation and engagement activities are required to address stakeholder suggestions, ideas or concerns. Consultations will take place, as much as possible in face-to-face interactions within the affected and beneficiary settlements, and in line with the national guidelines and other measures to prevent the spread of the COVID-19 pandemic.

Local public institutions, such as community centers and public service halls, will be equipped with dissemination materials, contact point information, and other project related information. The person in charge of citizen and stakeholder engagement at KeNHA will have access to mechanisms under project activities—such as demand assessment surveys, training activities etc.—to proactively disseminate information and collect feedback from local population, organize consultations, support survey works, and ensure the functioning of the project grievance redress mechanism (GRM) at the local level. In addition, stakeholders will be able to use several channels (phones, e-mails, social media and project website) in order to receive more details about the project or provide/receive comments, ideas throughout the project life cycle.

Detailed record of all public consultations will be kept in the office. Whenever possible, minutes should be supported with photos taken during consultations and lists of attendees with their contact information and original signatures.

Engagement with stakeholders will continue during the construction phase, and records of environmental and social issues raised, resettlement/livelihood restoration activities, complaints received during consultations, field visits, informal discussions, formal letters, etc., will be followed up.

The project will ensure that the different activities for stakeholder engagement, including information disclosure, are inclusive and culturally sensitive. Measures will also be taken to ensure that the vulnerable groups outlined above have the chance to participate and benefit from project activities.

Community consultations should be well documented and kept in the local administration office for reference. Where consultations are done through local administrations, basic guidelines and reporting formats should be provided by implementing agencies. Where possible, community facilitators from local NGOs and CSOs could be called to assist the consultation process.

5.2 Covid -19 Guidelines on Consultations

The guidelines will include social distancing, wearing face masks, etc. (the measures will be updated based on the guidance from the World Health Organization (WHO) and Kenya's Ministry of Health

A precautionary approach will be taken to the consultation process to prevent infection and/or contagion, given the highly infectious nature of COVID-19. The following are some considerations for selecting channels of communication, in light of the current COVID-19 situation:

- Avoid public gatherings (taking into account national restrictions or advisories), including public hearings, workshops and community meetings;
- If smaller meetings are permitted/advised, conduct consultations in small-group sessions, such as focus group meetings. If not permitted or advised, make all reasonable efforts to conduct meetings through online channels;
- Diversify means of communication and rely more on social media and online channels. Where possible and appropriate, create dedicated online platforms and chatgroups appropriate for the purpose, based on the type and category of stakeholders;
- Employ traditional channels of communications (TV, newspaper, radio, dedicated phone-lines, and mail) when stakeholders do not have access to online channels or do not use them frequently. Traditional

channels can also be highly effective in conveying relevant information to stakeholders, and allow them to provide their feedback and suggestions;

- Where direct engagement with project affected people or beneficiaries is necessary, identify channels for direct communication with each affected household via a context specific combination of email messages, mail, online platforms, dedicated phone lines with knowledgeable operators;
- Each of the proposed channels of engagement should clearly specify how feedback and suggestions can be provided by stakeholders

5.3 Engagement with disadvantaged and Vulnerable Groups

Incorporating the views of disadvantaged and vulnerable groups at various stages in project implementation should be done using appropriate communication methods. Information on consultation should be provided in advance, and appropriate venues and times (taking into account stakeholders' availability) should be selected in consultation with local community leaders who have local knowledge.

The use of local language and translation is critical. Focus group discussions, interviews and other participatory methods should be used. Meeting places should consider mobility and other physical constraints for participants and person to person interviews at convenient locations including door to door interviews should be considered, when measures and guidelines against COVID-19 can allow. Local institutions including schools, community-based organizations and community leaders should be approached to facilitate consultations.

There are several vulnerable groups and people along the proposed road project and who will be required to participate in stakeholder engagement activities. These include youths, women and individuals with low literacy levels, students, and persons with disabilities. These groups are at risk of exclusion from consultations and at risk of harm from poor project design.

Limitations related to participation include:

- limited representation or lack of opportunity to express self
- Fear of expressing themselves.
- Language and technology barrier;
- Transport limitations.
- Nature of the disability; and
- Cultural limitations.

The vulnerable groups normally rely on representatives for information. Representatives of the various groups will be identified along the road for engagement. Invitations for the consultations shall be made accessible in good time and with adequate information on the agenda to allow for meaningful participation of a broad range of stakeholders.

Engagement with the vulnerable groups and individuals often requires the application of specific measures and assistance aimed at facilitating their participation in the project-related decision making so that their awareness of and input to the overall process are commensurate with those of the other stakeholders. Consultations will be made at time and places that are suitable for participation by the identified groups including women, youths and others. The services to be offered to ensure an inclusive participation and consideration of concerns of the various groups will be based on identified communication needs and may include the following services: provision of transport to venues, translation into appropriate language, sign language, large print or leaflets; accessible venues for events; consultations in culturally appropriate manner and convenient venues and timing; small, focused and short meetings where vulnerable stakeholders are more comfortable asking questions or raising concerns.

5.4 Consultations and Inclusion Plan for Indigenous Peoples (IPs) groups

This project will be implemented in West Pokot and Turkana counties (Morpus – Lokichar Section) that are characterized with high levels of poverty, high unemployment, low literacy levels, food insecurity and poor access to basic services including health, education, and water. Most of the population along the road fit the criteria as Indigenous Peoples, thus those considerations will be included in the design. The Borrower will proactively engage with all groups fitting these criteria to ensure their ownership and participation in project design, implementation,

monitoring and evaluation. The Borrower will also consult with them as to the cultural appropriateness of proposed services or facilities and will seek to identify and address any economic or social constraints (including those relating to gender) that may limit opportunities to benefit from, or participate in, the project. Thus, relevant channels, including local FM radio stations in local languages, will be used for communication and reference to traditional structures, e.g., elders or traditional leaders who are responsible for water management and conflict resolution, etc.

There are, however, additional vulnerabilities that affect the community, relegating some categories of people and groups to further disadvantage. These individuals and groups include: (i) minority groups such as minor clans and sub-clans; (ii) those who live in remote rural areas bereft of social services and amenities; (iii) nomadic pastoralists; (iv) PWDs; (v) female/child-headed households; and (vi) older people and those with chronic illnesses. Women and youth may encounter difficulties due to the way in which the communities are structured culturally and religiously, with authority vested in older men who then tend to make decisions with little or no regard to them.

There are social, economic, and physical barriers that prevent the groups from fully participating in development projects. These include lack of financial resources, inaccessibility of meeting venues, social stigma, low levels of literacy, lack of awareness and/or poor consultation. In this regard, the project will adopt and strengthen continuous stakeholder engagement to promote inclusion and ensure the representation of the disadvantaged and vulnerable groups in all project activities. Project teams will be trained on inclusion of IPs, disadvantaged and vulnerable the individuals and groups. In addition, the monitoring tools will have questions on inclusion and the results will be used to strengthen the project strategies. The project social specialists / Community Liaison officers (both at KenHA, Supervising consultant and contractors), and county PIT representatives will be very critical in promoting the social accountability and cohesion agenda and strengthening the relationship between the project and the IPs.

The selection of project investment sites shall take into consideration all the groups. For instance, construction of social amenities by the project (eg schools, health centers borehole rehabilitation and/or construction, etc) will consider access for minority groups like women and PWDs (e.g., access to the schools and borehole will need to be made friendly to PWDs).

5.5 Proposed strategies to incorporate the view of IPs

The project will take deliberate measures to ensure that the IPs are consulted and have equal access to project benefits. This will include ensuring that they are involved in consultations on project siting and design, have access to employment and training opportunities, are involved in project management, and have access to benefits. In addition, efforts will be made to promote diversity in staffing and community level committees to reflect the local context. Communities also know vulnerable members of their communities better than external actors and should be engaged in the identification of the vulnerable and disadvantaged individuals and groups. Continuous stakeholder and community engagement will also be key in the sensitization of community level structures on the grievance mechanism.

The selection of sites will be discussed and agreed upon with the local communities to ensure that the IPs, are served as much as areas inhabited by the dominant clans and/or groups. To ensure equity in the distribution of the job opportunities, access to social amenities such as schools, health centres, water resources and points, etc, the engagement of representatives and members of these IP groups is critical. Where adverse impacts are likely, the PMT will undertake prior and informed consultations with the affected communities, based on the results of a local mapping exercise of the proposed subprojects. The primary objectives will be to:

- i. Understand the operational structures in the respective communities;
- ii. Seek the input/feedback of the IPs into the project to avoid or minimize the potential adverse impacts associated with the planned interventions;
- iii. Ensure equitable access to the social amenities and other project benefits;
- iv. Identify culturally appropriate impact mitigation measures; and
- v. Assess and adopt economic opportunities, which KeNHA could promote to complement the measures required to mitigate the adverse impacts.

Consultations will be carried out broadly in two stages. First, prior to commencement of any project activities, the PMT will arrange for consultations with community leaders, the existing local level development committees and representatives of the IPs, disadvantaged and vulnerable individuals and groups about the need for, and the

probable positive and negative impacts associated with, the project activities. Secondly, after initial roll-out of the project activities, a rapid assessment (perception survey) will be conducted to ascertain how the groups in general perceive the interventions and gather any inputs/feedback they might offer for better outcomes which would inform the project delivery. The PMT will:

- i. Facilitate the active participation of Ips, disadvantaged and vulnerable individuals and groups with adequate gender and generational representation; community elders/leaders; and CBOs;
- ii. Provide the groups with all relevant information about project activities including on potential adverse impacts;
- iii. Organize and conduct the consultations in forms that ensure free expression of the participants' views and preferences;
- iv. Document details of all consultation meetings, with the groups on their perceptions of project activities and the associated impacts, especially the adverse ones;
- v. Share any input/feedback offered by the target populations; and
- vi. Provide an account of the conditions agreed with the people consulted.

Once the IPs (and vulnerable and disadvantaged) groups are identified in the project area, the project will ensure mitigation measures of any adverse impacts of the project are implemented in a timely manner. The project should ensure benefits to the groups by facilitating their consultation, access to trusted complaints mechanism and benefits from project interventions.

The following activities will be undertaken during the implementation stage of the project:

- i. Provision of an effective mechanism for monitoring the implementation of this stakeholder engagement plan including the Ips, ;
- ii. Development of accountability mechanisms to ensure that planned benefits of the project are received by IPs, disadvantaged individuals and marginalized/vulnerable groups;
- iii. Involve suitably experienced CBOs/NGOs to assist in developing and implementing action plans;
- iv. Ensuring appropriate budgetary allocation of resources for the inclusion of this inclusion Plan;
- v. Provision of technical assistance for sustaining the activities that address the needs of the disadvantaged and vulnerable individuals and groups; and
- vi. Ensure that disadvantaged and vulnerable individuals and groups' traditional social organizations, cultural heritage, political and community organizations are respected and protected.

The plan presented in the Table below for when engagement is needed will be reviewed and updated throughout the lifecycle of the Project. During this process the focus and scope of the SEP may change to reflect the varying stages of project implementation and to encompass any changes in project design and lessons learnt from previous phases of the Project.

Table 5-1: Stakeholder Engagement Methods and Tools

Target stakeholders	Topic(s) of engagement	Means of Communication	Project Activity	Timing / Frequency	Responsibilities
National and County Governments and relevant institutions	Project information including Environmental and Social Safeguards instruments, benefits of the project, Grievance Redress Mechanism, Feedback	Information meetings (physical or virtual), Correspondence by phone/email Memos Letters Telephone presentations, workshops	Preparation stage Throughout project cycle	As needed to establish intervention Channels for continuous feedback will also be in place (information desks, phone, email, web-platform).	KenHA
People likely to be affected by the project	Project information including Environmental and Social Safeguards instruments, benefits of the project, Compensation, livelihood/income restoration, Grievance Redress	Information meetings - One to one meeting Focus group discussions, Surveys, training programs, assessment studies Project leaflets, presentations, workshops	Preparation stage Implementation stage Throughout project cycle	As needed to establish intervention Open channels for continuous engagement, GRC	KeNHA
Village and Local Authorities	Project progress, project information, benefits of the project, Grievance Redress Mechanism, Feedback	Information meetings - One to one meeting Focus group discussions, Surveys, training programs, assessment studies Project leaflets, presentations, workshops	Preparation stage Implementation stage Throughout project cycle	As needed to establish intervention Open channels for continuous engagement, GRC	KeNHA

Target stakeholders	Topic(s) of engagement	Means of Communication	Project Activity	Timing / Frequency	Responsibilities
Civil society organizations and NGOs	Project progress, project information, benefits of the project, partnerships and joint programs, Feedback	Information meetings - One to one meeting Periodic project consultations, Project related surveys, Trainings		As needed to establish intervention Open channels for continuous engagement, GRC Centrally managed and implemented consultations with wider stakeholder group	KeNHA
Vulnerable and Indigenous Peoples groups (Vulnerable includes but not limited to Women and women/child-headed households; elderly; persons with disabilities and their caregivers; minority groups, etc.)	In addition to including them in all consultation activities listed above, vulnerable groups will be targeted for: Enhancing project bene	Information meetings - One to one meeting Focus group discussions, presentations, workshops Periodic project consultations, Project related surveys, Trainings	Preparation stage Implementation stage Throughout project cycle	In each settlement as part of demand assessment studies and project related surveys; Training programs and other activities implemented under the project	KeNHA
Other interested parties	Project progress, project information, benefits of the project, Grievance Redress Mechanism, Feedback	Information meeting, presentation	Preparation stage Implementation stage Throughout project cycle	Various places throughout project implementation on a need basis	KeNHA

5.6 Proposed Strategy for Consultation

A variety of methods will be used to disclose information to project stakeholders. Disclosed information will allow stakeholders to understand the risks and impacts of the project, and potential opportunities. The project team will provide stakeholders with key information about the project:

- a) The purpose, nature and scale of the project;
- b) The duration of proposed project activities;
- c) Potential risks and impacts of the project on local communities, and the proposals for mitigating these;
- d) The proposed stakeholder engagement process highlighting the ways in which stakeholders can participate;
- e) The time and venue of any proposed public consultation meetings, and the process by which meetings will be notified, summarized, and reported; and
- f) The process and means by which grievances can be raised and will be addressed.

5.7 Review of stakeholder comments

Upon disclosure of project information, a provision will be made for websites of implementing agencies where dedicated space in their portal will be provided for the general public and concerned stakeholders to submit their comments, observations and questions regarding the projects and various studies, assessments, proposals and draft regulations.

For information disclosed through meetings, instant feedback will be collected through designated rapporteurs who will be available during the meetings. Participating stakeholders shall also be given the freedom to take their own minutes of the proceedings and share a copy with the rapporteurs.

The project will conduct a survey at least bi-annually and receive feedback on various aspects of the project from the targeted project stakeholders, vulnerable and disadvantaged groups and the general public, and integrate the results into the project annual planning and review cycle. The results of the surveys will be disclosed through the website of the implementing agency.

5.8 Proposed strategy for Information Disclosure

The project strategies for information disclosure will be tailored to the different stakeholders at the national and district levels.

In consideration of Covid-19 restrictions, the project will innovate ways for effective and meaningful consultations to meet project and stakeholder needs and adhere to the restrictions put in place by the government to contain virus spread. Strategies to be employed will include smaller meetings, small Focus Group Discussions (FGDs) to be conducted as appropriate taking full precautions on staff and community safety. Where meetings are not permitted, traditional channels of communications such as radios and public announcements will be implemented. Other strategies will include one-on-one interviews through phones and skype for community representatives, CSOs and other interests' groups. Appropriate formats and methods of disclosure and information sharing will be used. A central/national depository of all disclosed information will be maintained with the project implementing agency website.

Information on the different project components will be disclosed on the websites of the respective project implementing partners. Other means of communication including print media, local radio, television, public events, brochures fliers, social media, etc., will also be used.

In addition, information disclosure (including any safeguards documents) will be available at all county administration offices and county offices, with a summary of documents in local languages that can be understood by the local communities.

The information will also be disclosed in a variety of ways including on relevant government websites (on the website of the KeNHA that will be implementing the project, in a manner that is accessible and culturally appropriate, taking into account any specific needs of groups that may be differentially or disproportionately affected by the project or groups of the population with specific information needs (such as, disability, literacy, gender, mobility, differences in language or accessibility

6 GRIEVANCE REDRESS MECHANISM (GRM)

Grievance redress mechanisms (GRM) provide a formal avenue for affected groups or stakeholders to engage with the project implementers or owners on issues of concern or unaddressed impacts. Grievances are any complaints or suggestions about the way a project is being implemented. They may take the form of specific complaints for damages/injury, concerns about routine project activities, or perceived incidents or impacts. Identifying and responding to grievances supports the development of positive relationships between projects and affected groups/communities, and other stakeholders.

Grievance mechanisms should receive and facilitate resolution of the affected institutional or communities' concerns and grievances. AfDB Safeguard Policies states the concerns should be addressed promptly using an understandable and transparent process that is culturally appropriate and readily acceptable to all segments of affected communities, at no cost and without retribution. Mechanisms should be appropriate to the scale of impacts and risks presented by a project.

Grievances can be an indication of growing stakeholder concerns (real and perceived) and can escalate if not identified and resolved. The management of grievances is therefore a vital component of stakeholder management and an important aspect of risk management for a project. Projects may have a range of potential adverse impacts to people and the environment in general, and identifying grievances and ensuring timely resolution is therefore very necessary.

The following sections describe the proposed procedures that will be followed to address complaints or concerns submitted by people who may benefit from or impacted by the proposed project. It intends to provide clarity and predictability on how complaints will be received, assessed, sorted, resolved and monitored.

6.1 Grievance Handling Mechanism Structure

6.1.1.1 Members of the Grievance Redress Committee (GRC) at project Level

The Deputy County Commissioner will be the chairman of the GRC, with the RE being the secretary of the committee or a person the RE might appoint as his representative.

The proposed members of the grievance committee are as follows.

Table 6-1: Proposed structure of the GRC

Name / organization	Representing
Local Administration (eg Sub County Commissioner)	Government - Chairman
Area Administration (eg Chief)	Government - member
Community representative	Community - member
Resident Engineer (RE)	Consultant – Secretary
Safeguard specialist (Consultant)	Consultant - Member
NEMA representative	NEMA – Member
Contractor representative	Contractor - Member
NGOs	NGOs – representative of various NGOs
County Government	Appointed member from the county - Member
Institution stakeholders (eg traders, transporters etc)	Users – Member
Other Stakeholders	As may be determined during the implementation of the project

NB: Other members can be added or removed as required depending on the needs of the communities as advised by the local leadership.

The main role of the committee will be arbitration through mediation and negotiation when complaints arise to ensure that cases are resolved quickly and fairly. The above committee shall normally meet once per month and may form special sub-committees or ad-hoc committee that shall meet on a weekly basis or more frequently as the nature of some grievances may demand. Such sub-committees or special ad-hoc committee will report their findings and recommendations to the main committee for ratification or approval.

The GRC shall be issued with ToRs by the implementing agency (KeNHA) on their roles and responsibilities, with a clear period of tenure. In addition, facilitation of the GRC shall be done accordingly based on applicable government rates. A provisional budget of Kshs 20 Million for GRM implementation and facilitation has been provided for in the ESMP of the projects.

6.2 Key staff coordinating Grievance Redress

The Resident Engineer will be designated as the person in charge of Grievance Redress. In regard to GRM, the following will be their responsibilities;

- Coordinate formation of Grievance Redress Committees (GRCs) before the commencement of construction to resolve issues.
- Act as the Focal Point for the client (KeNHA) on Grievance Redress issues and facilitate the grievance mechanisms.
- Create awareness of the Grievance Redress Mechanism (GRM) amongst all the stakeholders through public awareness campaigns.
- Assist in Redress of all Grievances by coordinating with the concerned parties.
- Maintain information of grievances and Redress.
- Monitor the activities on Redress of Grievances.
- Prepare the progress for monthly/quarterly reports.
- Provision of resources to cover the operational costs of the GRM (facilitation costs etc).

6.3 Receiving Complaints

Points of receipt of complaints

The various points of receiving complaints would be as follows:

- i. County Governments administration;
- ii. Local chief's office;
- iii. KeNHA office (at headquarters)
- iv. Contractor or RE office
- v. Ministry of Transport, Infrastructure, Housing and Urban Development (MoTIHUD)
- vi. Representative at the community level

Mode of receipt and recording of Complaints

The complaints can be made in writing, verbally, over the phone, by fax, emails or any other media. As soon as the officer receives a complaint he /she would issue an acknowledgement of the complaint, including the details of the person bringing the grievance. The officer receiving the complaints should try to obtain relevant basic information regarding the grievance and the complainant and will immediately inform the safeguard specialist the receipt of the complaint.

The RE will maintain a Complaint / Grievance and Redress register or log book and the responsibility of keeping records collected from relevant bodies will be the responsibility of the supervising consultant safeguard specialist.

After registering the complaint in the Grievance Redress Registration and Monitoring Sheet, the safeguard specialist would study the complaint made in detail and forward the complaint to the concerned officer with specific dates for replying and redressing the same. He/she would hold meetings with the affected persons / complainant and then attempt to find a solution to the complaint received. If necessary, meetings have to be held with the concerned affected persons / complainant and the concerned parties to find a solution to the problem and fix up plans to redress the grievance. The deliberations of the meetings and decisions taken are recorded and minutes of the meetings filed.

A grievance process is presented in Table 9-1 in the next page.

Registry and Monitoring

All complaints received will be entered into a publicly accessible system that will allow complaints to be tracked and monitored. The system will also present a database showing:

- No of complaints received.
- No and % of complaints that have reached agreement.
- No and % of complaints that have been resolved.
- No and % of complaints that have gone to mediation
- No and % of complaints that have not reached agreement.

The database should also show the issues and geographic areas most complaints circle around. The information provided by the database is expected to help KeNHA to improve the Grievance Redress Mechanism and better understand and address the environmental and social impacts of the project.

Table 6-2:: **Grievance Redress Process**

Process	Description	Time frame	Other information
Identification of grievance	Face to face; phone; letter, e-mail; recorded during public/community interaction; others	1 Day	Email address; hotline number
Grievance assessed and logged	Significance assessed and grievance recorded or logged (i.e. in a log book)	4-7 Days	Significance criteria: Level 1 –one off event; Level 2 – complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law or policy or provisions in other project documents
Grievance is acknowledged	Acknowledgement of grievance through appropriate medium	7-14 Days	-
Development of response	Grievance solved at Tier 1 Resolved at East Africa Skills for Transformation and Regional Integration Project (EASTRIP level) Response development with input from management/ complainant/relevant stakeholders.	4-14 Days	RE and complainant to sign off
Response signed off	Grievance closed Redress action approved at appropriate levels	Within above timelines	RE to sign off
Grievance not solved, passed to GRC	Grievance passed to appropriate party for resolution (GRC) – Tier 2. Redress action approved at appropriate levels.	7-14 Days	GRC and complainant to sign off
Implementation and communication of response	Redress action implemented and update of progress on resolution communicated to complainant.	Within 7 days	
Complaints Response	Redress action recorded in grievance log book. Confirm with complainant that grievance can be closed or determine what follow up is necessary.	4-7 Days	
Grievance not solved,	Grievance passed to appropriate party for resolution. Final decision communicated to complainant.	7 -14 days	Complainant to sign off
Close grievance	Record final sign off of grievance. If grievance cannot be closed, return to step 2 or refer to sector minister or recommend third-party arbitration or resort to court of law.	4-7 Days	Final sign off on by KeNHA

6.4 Grievance Redress Mechanism Process

The stakeholders are informed of various points of making complaints (if any) and the RE collect the complaints from these points on a regular basis and record them. This is followed by coordinating with the concerned people

to address the grievances. The RE will manage the grievance activities at the respective stakeholder's level to address the Grievances and would act as the focal point in this regard.

The complaints are received at various points as described above.

A 3- tier Redress structure is proposed to address all complaints for the proposed project effectively.

a) First tier of Redress

The first tier is divided into two parts where a complainant can register his grievances and resolved quickly:

- i. Village redress led by local leadership such as the Local Chief or Assistant chief, Nyumba Kumi leaders, or any other locally recognized respected member of the society
- ii. Project level redress led by Resident Engineer and/or Contractor's representative

i. Village Level GRM

Some parties show preference for an alternative mechanism which utilizes the use of Village Level GRC. The village level GRC is categorized with the following recommended membership;

- Assistant/sub locational chief,
- Nyumba Kumi Leader
- Nyumba Kumi representatives
- One project affected youth,
- One project affected woman,
- One project affected male
- Persons with Disability
- Ward Administrator
- Contractor representative

ii. Resident Engineer

The other resolution at this first tier will be normally be by the RE at the project level. If the affected party / complainant does want to use the Village level GRC, he is free to forward his grievances to the Resident Engineer's office directly.

Resolutions at Village GRC or the RE shall be done within 14 working days and notified to the concerned through a disclosure form. Should the Grievance not be resolved within this period, this would be referred to the next level of Grievance Redress. However, if any of the above two mechanisms feels that adequate solutions are worked out but it would require a few more days for actions to be taken, the leaders of these mechanisms can decide on retaining the issue at this level by informing the complainant accordingly. However, if the complainant requests for an immediate transfer of the issue to the next level, it would be accepted and the issue would be taken to the next tier, especially if the issue is not addressed within 21 days.

b) Second tier of Redress

The Grievance Redress Committee (GRC) would be the one which would address the grievance in the next level in case the problem is not solved at the first tier. The RE will coordinate with the respective chairman of the GRC in getting this Committee to meet and get the necessary circulars issued in this regard so that they can be convened whenever required.

The RE will coordinate the convening of the meetings of the GRC. He / She is also responsible for briefing the GRC on the grievances and deliberations of the first level of Redress, outcomes and on the views of both the parties (project and complainant).

The GRC will hold the necessary meetings with the affected party / complainant and attempt to find a solution acceptable at all levels. The GRC would record the minutes of the meeting and filed by the RE. The decisions of the GRC will be communicated to the complainant formally and if he/she accepts the resolutions, the complainant's acceptance is obtained in writing and signing off is done between the complainant and the GRC.

If the complainant does not accept the solution offered by the GRC, then the complaint is passed on to the next level / or the complainant can reach the next level for redress. The Chairman of the GRC would be required to forward the issue to the Third Tier to facilitate in exploring a solution to the grievance. In any case, the grievance should be forwarded to the next level if no solution is reached within 14 days of the case reaching the second level. However, in cases nearing offering an amicable solution, it can be retained to an extent of 21 days.

c) Third tier of Redress

If the affected party / complainant does not agree with the resolution at the 2nd level, or there is a time delay of more than a month in solving the issue, the complainant can opt to consider taking it to the third level.

Where an agreement has not been reached, the complainant will be offered the option of an independent mediation process at an alternative arbitration body such as local arbitration arrangements, local administration, or other avenues as might be prescribed in the country constitution before legal redress. The RE will collect all the details of the Grievance including the deliberations of first tier efforts and of the GRC and present it to the 3rd level tier. The 3rd tier structure will deliberate upon the issue and give suitable recommendations. The minutes of the meetings will be recorded and kept at KeNHA office.

The decisions of the 3rd tier structure would be final from the project side and will be communicated to the complainant formally and if he/she accepts the resolutions, the complainant's acceptance is obtained and signed off by the complainant and the 3rd tier structure, including the project GRC.

The Complainant may decide to take a legal or any other recourse if he /she is not satisfied with the resolutions of the deliberations of the three tiers of GRM.

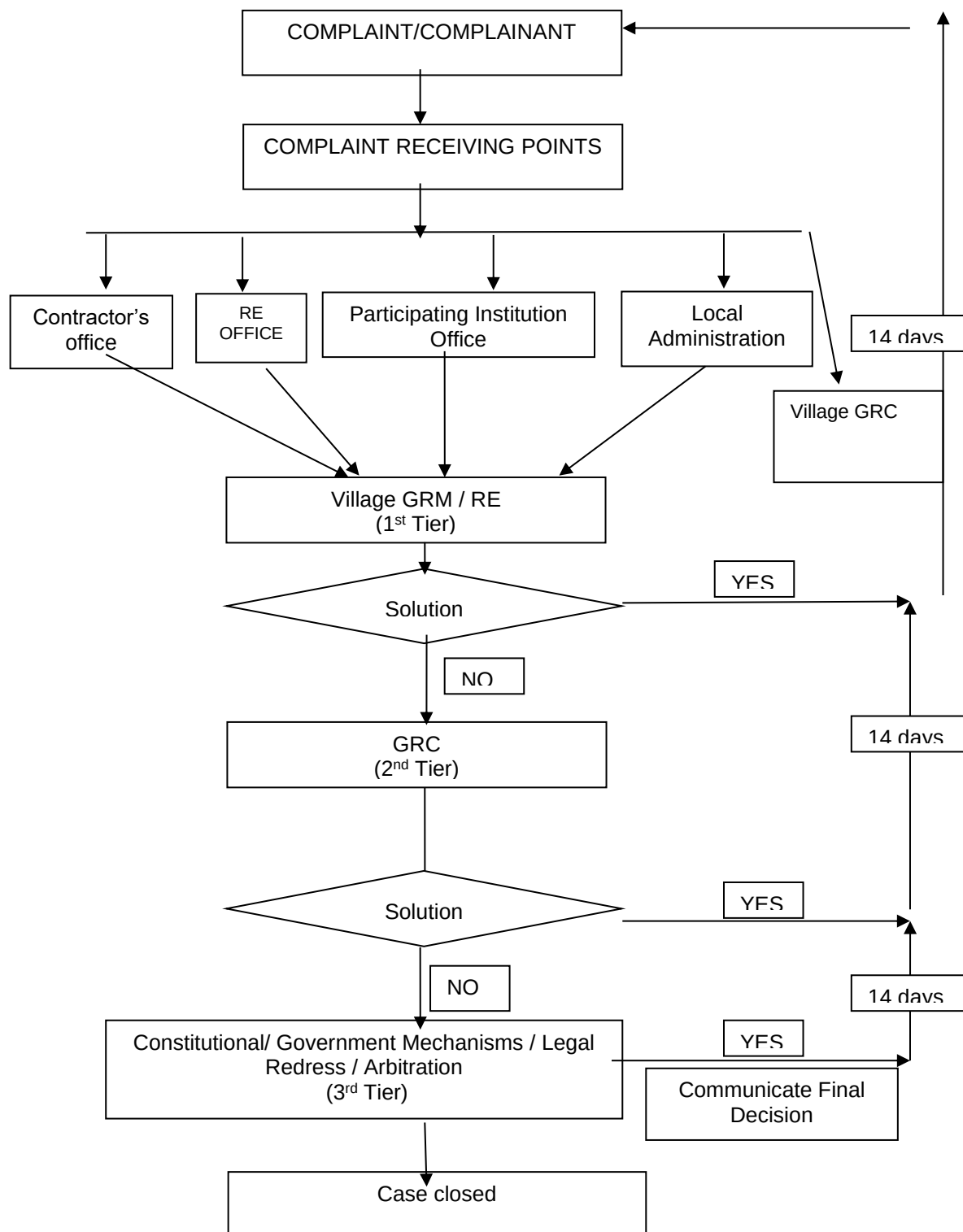
It should be encouraged that the 2 levels of handling the grievances should be exhausted extensively before one goes to courts as last resort.

6.5 GRM Jurisdiction

The proposed GRM is project specific and scaled to the risks and impacts of the Project. It is meant to solve the project's concerns by the stakeholders or any complainant. The proposed GRM is however not intended to bypass any Governments' own existing redress process; rather is intended to address affected people's concerns and complaints promptly, making it readily accessible to all segments of the affected people. Any established Government Redress mechanisms takes priority over the proposed GRM. The GRC's term shall have a Terms of Reference (ToR), tenure and timeless when the GRC will be closed.

The figure on the next page shows a proposed Grievance Redress Mechanism flow process for the proposed project. This will be reviewed and customized to address any missing gaps before establishment as required.

Figure 6-1 Grievance Redress Flow Process



6.6 GBV Related Grievance Redress Mechanism

When GBV related complaint is received at the first or second tier of GRM, the complaint should be kept confidential, by the person/persons receiving the complaint, and immediately reported to KeNHA and the national police as required by the law. The complaint should be reported to the relevant committee and immediate actions should be taken that is consistent with the wishes and choices, rights and dignity of the complainant. The complainant should be given information in simple and clear terms on the steps for filing complaints and the possible outcomes, the timelines and the types of supports available to be able to make informed decision.

For GBV cases, it is important to ensure that access to the complaints processes is as easy and as safe as possible for the complainant survivor. The recording of incidence should be limited to the nature of complaint put exactly in the words of the complainant, the age of the survivor and if possible, to the best of their knowledge, the perpetrator was associated with the project. The complainant should decide on whether they would like to be referred to the grievance committee and the complainant should give consent to share basic monitoring data.

Safety & Well-Being: The safety of the survivor shall be ensured at all times including during reporting, investigation, and the provision of victim assistance. Those involved in the management of complaints will need to consider potential dangers and risks to all parties (including the survivor, the complainant if different, the subject of the complaint, and the organizations involved), and streamline ways to prevent additional harm in all the complaint handling process.

The survivor is never to blame for reporting an act of GBV and should never be made to feel investigated. On the contrary, it is important that she/he feels that her/his story is heard, believed and valued. The actions and responses of the complaint mechanism will be guided by respect for the choices, needs, rights, and the dignity of the survivor.

Confidentiality: The confidentiality of complainants, survivors, and other relevant parties must be respected at all times. All GBV-related information must be kept confidential, identities must be protected, and the personal information on survivors should be collected and shared only with the informed consent of the person concerned and on a strict need-to-know basis.

Survivor-Centred Approach: All prevention and responses action will need to balance the respect for due process with the requirements of a survivor-centred approach in which the survivor's choices, needs, safety, and wellbeing remain at the center in all matters and procedures. As such, all actions taken should be guided by respect for choices, needs, rights and dignity of the survivor, whose agency and resilience must be fostered through the complaint process.

Accessibility and non-discrimination: The mechanism must be accessible to all potential complainants and sufficient information must be given on how to access it, making the complaints process accessible to the largest possible number of people. This includes identifying and instituting various entry points that are both gender and context sensitive. To facilitate incidents reporting and avoid stigmatization, reports from third parties (witnesses, people suspicious or aware of an incident, etc.) must also follow accountability protocols.

6.7 Handling GBV and SEAH

Cases of GBV/SEAH can be reported through the general Project Grievance Mechanism (GM). However, GBV/SEAH survivors will have the opportunity and right to report an incident to anyone: project staff, community member; GBV case manager; or service provider. Given to the sensitive nature of GBV/SEAH complaints, the GM will provide different ways to submit grievances such as phone, text message and email. All relevant staff of the PMT and contractors will receive training on handling GBV/SEAH complaints and referral systems, ideally during the project initiation phase and as part of the staff welcome package. The GM operators will be trained on key protocols including referral, reporting and informed consent protocols on receiving GBV/SEAH cases in an appropriate manner and immediately forward them to the GBV/SEAH referral system. The GM operators will ensure appropriate response by: (i) providing a safe caring environment and respect confidentiality and wishes of the survivor; (ii) if the survivor agrees, obtain informed consent, and make referrals; and (iii) provide reliable and comprehensive information on the available services and support to GBV/SEAH survivors.

The GM proposes the following key features on preventing GBV/SEAH: (i) establish quotas for women in community level grievance management to facilitate safe reporting; (ii) provide multiple channels to receive complaints (channels to be determined after community consultation); (iii) resolve complaints at the point of service delivery to reduce information and transaction costs; (iv) avail gender sensitive independent channels for redress; and (v) communicate GM services at the community level to create GBV/SEAH awareness and enable project-affected persons to file complaints.

Beneficiaries and communities will generally be encouraged to report all GBV/SEAH cases through the dedicated GBV/SEAH referral system and complaints resolution mechanism. This will be made explicit in all community awareness sessions, as well as be part of the publicly disclosed information. The GBV/SEAH referral system will guarantee that survivors have access to the critical services they may need, including medical, legal, counselling, safety and that cases are reported to the police should the survivor choose to do so. Formal processes for disclosing, reporting, and responding to cases of GBV/SEAH will be articulated within the SEAH Prevention and Response Plan.

If a GBV/SEAH case is reported through the Project GM, the GM operator will report the case within 72 hours to the PMT, and the PMT is obliged to report this case to the AfDB within 24 hours. Furthermore, cases of SH will be reported through the workers' GM, if it concerns a direct worker or a worker from a sub-contractor, NGO partner or even a community worker following a survivor-centered approach. The PMTs will oversee holding sensitization sessions for contractors and primary suppliers regarding the Code of Conduct (CoC) obligations and awareness raising activities in communities. All reporting on GBV/SEAH will limit information in accordance with the survivor's wishes regarding confidentiality, and in case the survivor agrees on further reporting, information will be shared only on a need-to-know-basis, avoiding all information which may lead to the identification of the survivor and any potential risk of retribution.

6.7.1 Gender Based Violence Referral System

Given the sensitivity and the low level of understanding of GBV related matters in the community at large and the stigma attached to it; also taking into consideration the social and psychological damages that are usually associated with it, all cases of GBV will be handled through a special Internal Task Force for GBV. The task force will include project staff namely: Social Safeguards Specialist from the PMT, County Gender Monitoring Officer, Social Safeguards Specialist from the supervising firm, Women representative from the GRC at project level and Contracted GBV service provider in the area of GBV prevention and referral pathways for the GBV survivors for the project (and any other relevant person or stakeholder that might be identified in the area). From there onward, all existing legal channels will be used and in case of conviction the perpetrator will be punished in accordance with the law. The same mechanism applies to any sexual interaction between employees with underage children. In any case, the PMT E&S Specialists will closely follow up.

6.8 Building Grievance Redress Mechanism Awareness and Training

The Project Environmental and Social Specialists will initially train all staff of the project office, the KeNHA Project team, and consultants on the Grievance Redress Mechanism and GBV complaints mechanism of the Project and explain to them the procedures and formats to be used including the reporting procedures.

The project Social Specialist will brief all project stakeholders on the Grievance Redress Mechanism of the Project and explain the procedures and formats to be used including the reporting procedures. Training and awareness campaigns shall be conducted targeting project stakeholders to inform them of the availability of the mechanism; various mediums will be used. The GRM will also be published on the website of the implementing agency and those of the implementing partners. A project site board will be erected on the project sites indicating the existence of the mechanism and a phone number, email and address for further information. The GRM will be translated into the local language as appropriate, and information about the GRM distributed at all administration offices and county offices along the project area of influence.

6.9 Monitoring and Reporting of GRM

The Social Safeguards Specialists and/or Environmental Specialists for the project will prepare the Monthly Reports on the Grievance Redress issues of the project.

The Grievance Redress Committee may review the nature of grievances that have been represented and if grievances are repeated, recommend suitable changes in implementation procedures and forward these to the Project team for implementation.

The following indicators could be used as monitoring purposes:

- Number of active project complaints and appeals recorded and reported in different sites
- Percentage of grievance redressed claims settled within the specified/reporting period
- Percentage of unresolved complaints or disputes during the monitoring/reporting period
- Comments received by government authorities, women, youth, family, community leaders and other parties and passed to the Project.

7 STAKEHOLDER ENGAGEMENT MONITORING AND EVALUATION

Stakeholder Engagement monitoring involves collecting data, assessing the level of engagement and using insights from the data collection to adjust strategies and tactics for engaging effectively with stakeholders. These will be responsibility of KeNHA Project team in collaboration with stakeholders at the project level.

Monitoring will verify Compliance and effectiveness of the SEP and other safeguards instruments, and application of the recommended standards, stakeholder engagement and implementation of the grievances redress mechanism

Annual reviews of the project and the implementation of the SEP and other Safeguards Instruments will be conducted at the end of each year. The monitoring reports for E&S implementation will be prepared by an independent consultant and will be used as a monitoring and review tool to track effectiveness. In the review process, the Project team will play the lead role in coordinating the process with key stakeholders.

7.1 Monitoring and Evaluation

The project will establish and maintain a database and activity file detailing public consultation, disclosure information and grievances collected throughout the project, which will be available for public review on request. Stakeholder engagement shall be periodically evaluated by the Project team. The following indicators (but not limited) will be used for evaluation:

- i). Bi-annual grievances received, speed of resolution and how they have been addressed; and
- ii). Level of involvement and participation of stakeholders including project affected people (disaggregated by gender and vulnerable groups).
- iii). Incidents and accidents
- iv). Number of women who participated in focus group meetings, workshops and other public meetings
- v). Number of women and men in underserved communities who participated in FGD, public meetings and workshops
- vi). Number of communication materials produced and disseminated in local languages in underserved places

7.2 Reporting

The Project team will prepare and regularly avail important information on project status to stakeholders (based on information need) including project implementation progress, actions on commitments made to various stakeholders and any new or corrected information since the previous report. Table 10 outlines some of the reports, target audience, method of correspondence and timelines

Table 7-1: Methods and frequency of reporting to stakeholders

Reporting Party	Reporting Method	Stakeholder	Reporting Information	Frequency
KeNHA Project Team (led by Safeguard Team)	Official Correspondence ✓ Correspondence by email or postal mail ✓ Website and social media	✓ All relevant stakeholders	Project progress ✓ Plans for next step ✓ Issues and changes	Quarterly ✓ when changes occur

7.3 Stakeholder Monitoring Plan

Stakeholders' engagement plan shall be developed and implemented in the project, and shall aim at identifying the key stakeholders, their roles in the program, and form and frequency of engagement over the project cycle. Further, monitoring will be done to assess overall progress in implementation, and if implementation is as per the plan, any challenges and lessons learnt in the process of implementation and possible corrections. The monitoring results will be made available to the stakeholders for review and comments in an accessible place, mainly at the project level for transparency

Table 7-2: Stakeholder Monitoring Plan- SEP

No.	Program Phase	Type of Stakeholder	Consultation Method	Expected Outcome	Monitoring Indicator
1.	Planning and Assessment	Implementing institutions	meetings, Information Education and Communication (IEC) Materials	Full participation of Institutions on design and implementation	Report of the meetings
		Beneficiaries, Vulnerable individuals	meetings, Information Education and Communication (IEC) Materials	Extends program knowledge to beneficiaries	Disseminated materials
		Ministries/Agencies, Development Partners (DPs)	Information sharing, meetings, workshops	Attain needed support from other stakeholders, systematic engagement of stakeholders	No of consultations, Report of the meetings
		ALL	Information sharing, meetings, workshops Publication of environmental and social documents in the website	Informed all interested parties on the activities to be undertaken	Documents published on the website No. accessing the documents on the site
2.	Implementation phase	implementing institutions	Information sharing, meetings, workshops meetings, Information Education and Communication (IEC) Materials	Full participation on design, implementation and participatory monitoring	Disseminated materials, implementation reports
		PAPs, Participants, Vulnerable individuals	Information sharing, meetings, workshops Information Education and Communication (IEC) Materials, FGD	Full participation of communities (including vulnerable groups) on Program design, implementation and monitoring.	Minutes of FGD, Disseminated materials
		Project financier	Meetings	Provide needed support to Program design, implementation and participatory monitoring	Report from meetings, missions executed

7.4 Proposed SEP Timelines

A proposed SEP implementation timeline is proposed below. However, this can be changed to fit the dynamics of the project during implementation.

Table 7-3: Stakeholder engagement plan and timeline

Activity	Responsibility	Timing
Printing of communication materials for SEP and GM, establishment of toll free number, websites, etc	PMT	1 month before commencement of the civil works
Training of stakeholders on SEP and GM	PMT	1 month before commencement of the civil works
Inclusive consultations on selection and design of associated facilities	PMT and Counties	During the first year of project implementation
National and county stakeholder consultations workshop and updates on the project and GM	KeNHA	Quarterly
Community Engagement outreach meetings/workshop and updates on the project and GM, GBV/SEAH etc	County departments of transport and environment/Social	Quarterly
Communication on GRM, GBV/SEAH	PMT and independent consultants	Monthly
Project affected persons and beneficiary communities' awareness creation and progress reporting meetings	PMT/Supervising Consultants, 3 rd party monitoring consultants	Monthly
Stakeholder satisfaction/feedback survey	PMT/ Consultants	Annually

7.5 Performance of the SEP

The SEP will be periodically revised and updated as necessary (at least every 3 months) in the course of project implementation in order to ensure that the information presented therein is consistent and is the most recent, and that the identified methods of engagement remain appropriate and effective in relation to the project context and specific phases of the development.

8 RESOURCES AND RESPONSIBILITIES FOR IMPLEMENTING STAKEHOLDER ENGAGEMENT

The overall responsibility for implementation of the SEP lies with KeNHA. A designated staff member within the project implementation team will be designated to oversee implementation of the SEP and manage the grievance redress mechanism and all related outreach and training activities.

The project coordinator, other project team members, and all contractors and consultants implementing project activities will also share some of the responsibilities in the SEP and in the GRM process.

Table 8-1:: *Roles in the implementation of SEP*

Task team	Roles in implementation
KeNHA Project Management team (Including supervising consultants)	- Manage and implement the Stakeholder Engagement Plan (SEP) - Dissemination of project information monitoring and reporting on project progress to all the relevant stakeholders – KeNHA will organize, at regular intervals, workshops involving representatives of all stakeholders to present project progress and seek stakeholder input
Environmental and social specialists	- Implement stakeholder engagement in line with the SEP. - Interface with stakeholders and respond to comments or questions about the project or consultation process. - Provide contact information if stakeholders have questions or comments about the project or consultation process. - Document any interactions with external stakeholders. - Maintain database, records for the SEP - Coordinating public meetings, workshops, focus groups etc. - Make sure the SEP is being adhered to and followed correctly. - Raise awareness of the SEP among project implementation unit, employees, contracted firms and relevant external stakeholders - Deliver information to stakeholders on complaint mechanism and procedures of the SEP - Update the SEP including updating the stakeholder identification, as relevant

The stakeholder engagement activities featured above cover a variety of issues, which may be part of other project documents, so it is possible that they might have also been budgeted in other plans.

The table below summarizes key stakeholder engagement activities for better coordination and monitoring. KeNHA will review this plan on an annual basis to determine if any changes to stakeholder classification or engagement are required. If so, the plan will be updated and the budget will be revised accordingly.

Table 8-2: Estimated SEP Budget

<i>Stakeholder Engagement Activities</i>	<i>Quantity</i>	<i>Unit Cost, Kshs</i>	<i>Total cost (USD)</i>	<i>Remarks</i>
Community Engagement outreach meetings in different counties	12	400,000	4,800,000	Quarterly for 3 years
County Project Coordination team meeting	12	400,000	4,800,000	Quarterly for 3 years
Trainings on outreach and GRM for project staff, local authorities, other stakeholders (KeNHA & Counties)	6	200,000	2,400,000	3 Uasin Gishu, Trans Nzoia and Kakamega counties 1 West Pokot 2 Turkana 1 month before commencement of the civil works
Communication materials (leaflets, posters, PR kits including design, per county, establish tollfree lines, websites, etc)	-LS	-	2,000,000	Materials for distribution to counties and stakeholders 1 month before civil works commencement
Stakeholders satisfaction/feedback surveys	3	2,000,000	6,000,000	Annual for 3 years
Total (SEP Management)			20,000,000	Figure provided in the BoQ
Project management costs for GRM Implementation	LS		20,000,000	Provisional sum provided in the BoQ for staff travel, GRC allowances, hiring of halls, meals and accommodation, etc

ANNEXES

8.1 Annex 1: Grievance Receipt and Resolution

Grievance/Complaint Registration Number..... Date.....

A. COMPLAINANT
1. Important information of the Complainant First Name Middle Name Last Name: Occupation: Title..... Address: Mob. Phone..... E-mail: Does the Complainant want his/her name to be revealed? YES..... NO.... 2. Who is complaining? i. Project Affected Persons (PAPs)..... Specific PAPs are: • Institution staff..... • Student • Representative of complainant..... • Others ii. Technicians
B. EXPLANATION OF THE GRIEVANCES
1. Source of Grievance/Complaint..... 2. Brief explanation of the Grievance/Complaint emanating from the project implementation.... 3. Event/person being complained about 4. Place where the event occurred Date of the event 5. Have you ever filed the same grievance before? Yes..... No.....
C: LODGING THE GRIEVANCE/COMPLAINT
1. Method used to lodge the grievance/complaint Letter Phone Face to face E-mail Others (Mention)..... 2. Name of Person registered and filed the complaint Name..... Position..... Date..... 3. Agreed time frame for feedback on the processed grievance/complaint: (a) Immediately (b) Three days (c) One week (d) Two weeks
GRIEVANCE/COMPLAINTS RESOLUTION
1. Date of conciliation session..... 2. Was the complainant present? Yes No 3. Was field verification of complaint conducted? Yes No 4. Findings of field investigation 5. Summary of Conciliation Session

..... 6. Was agreement reached on the issues? Yes No 7. If agreement was reached, give the details of the agreement 8. If agreement was not reached, specify the points of disagreement and promise given to the client 	
Signed (Arbitrator/ Complaints handling Officer-GHO): Date..... Signed (Complainant).....Date..... Signed (Independent Observer) Date.....	

8.2 Annex 2: Grievance Acknowledgement Form (GAF)

The project acknowledges receipt of your complaint and will contact you within 7 working days.

Date of grievance/complaint: (dd/mm/yyyy)	
Name of Grievant/Complainant:	
Complainant's Address and Contact Information:	
Summary of Grievance/Complaint: (Who, what, when, where)	
Name of Project Staff Acknowledging Grievance:	
Signature:	
Date: (dd/mm/yyyy)	

8.3 Annex 3: Grievance Redressal Registration Monitoring Sheet

No	Date	Name	Sex	Contact	Address	Institution/ Organization	Complaint detail	Feedback	Date of closure
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									

8.4 Annex 4: People met during consultations

Uasin Gishu County

S/n	Name	Designation	Organization
1.	H.E Governor Jackson Mandago	Governor, Uasin Gishu County	Uasin Gishu County Government
2.	Eng Gedion Birir	CECM Roads, Transport, Public Works and Energy	Uasin Gishu County Government
3.	Eng Nelson Maritim	CECM Lands, Housing, Physical Planning and Urban Development	Uasin Gishu County Government
4.	Mr Kenneth Mbeka,	Chief Office Physical Planning and Urban Development	Uasin Gishu County Government
5.	Planner Daniel Koech	Director, Physical Planning and Urban Development	Uasin Gishu County Government
6.	Ms Ruth Chelashaw	Chief Officer, Lands and Housing	Uasin Gishu County Government
7.	Eng Benjamin Kironko	Director, Roads	Uasin Gishu County Government
8.	Cyprian Chesire	Senior Planner	Uasin Gishu County Government
9.	Jael Maritim	Communication	Uasin Gishu County Government
10.	Stephen K Kihara	County commissioner office Uasin Gishu County	National Government

Trans Nzoia County

1.	HE Governor Patrick Khaemba	Governor, Trans Nzoia County	County Government
2.	Pierra Ntongai	Assistant County Commissioner (ACC) Moi's Bridge (Uasin Gishu)	National Government
3.	Charles Moyaya	DCC Lukuyani(Kakamega County)	National Government
4.	Catherine sicela	Head teacher	St Teresa Matunda- Kakamega County
5.	Jane Makokha	Head teacher	Matunda primary -Kakamega County
6.	Tima Omar	Administrative 1 officer 1	Trans-Nzoia County
7.	Charles Munialo	Deputy CEC road and transport-	Trans-Nzoia county

West Pokot County

S/n	Name	Designation	Organization
11.	H.E Governor John Lonyangapou	Governor	West Pokot County Government
12.	Mr. Luka Chepelion	, County Executive Committee (CEC), Department of Water, Environment and Natural Resources	West Pokot County Government
13.	Eng Nelson Maritim	CECM Lands, Housing, Physical Planning and Urban Development	West Pokot County Government
14.	Mr. Abraham Powon,	Director of Water	West Pokot County Government
15.	Mr. Cliff Barakach	, County Director	NEMA

S/n	Name	Designation	Organization
16.	Stephen K Kihara	Deputy County Commissioner	National Government
17.	Johnathan Karita	County Secretary	West Pokot county
18.	Linus Losialima	Chief Officer Civic Education	West Pokot county
19.	Partson Lipa	Security advisor	West Pokot county

Turkana County

S/n	Name	Designation	Organization
1.	Josphine Ekal	Snr. Chief	Lokichar
2.	Henry Etabo	Chief	Kalemongorok
3.	Patrick Longit	Ass. Chief	Kaptir Junction (Katilu Location)