



# Kenya National Highways Authority

Quality Highways, Better Connections

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## ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT PROJECT REPORT OF WAJIR – EL WAK (A13) ROAD



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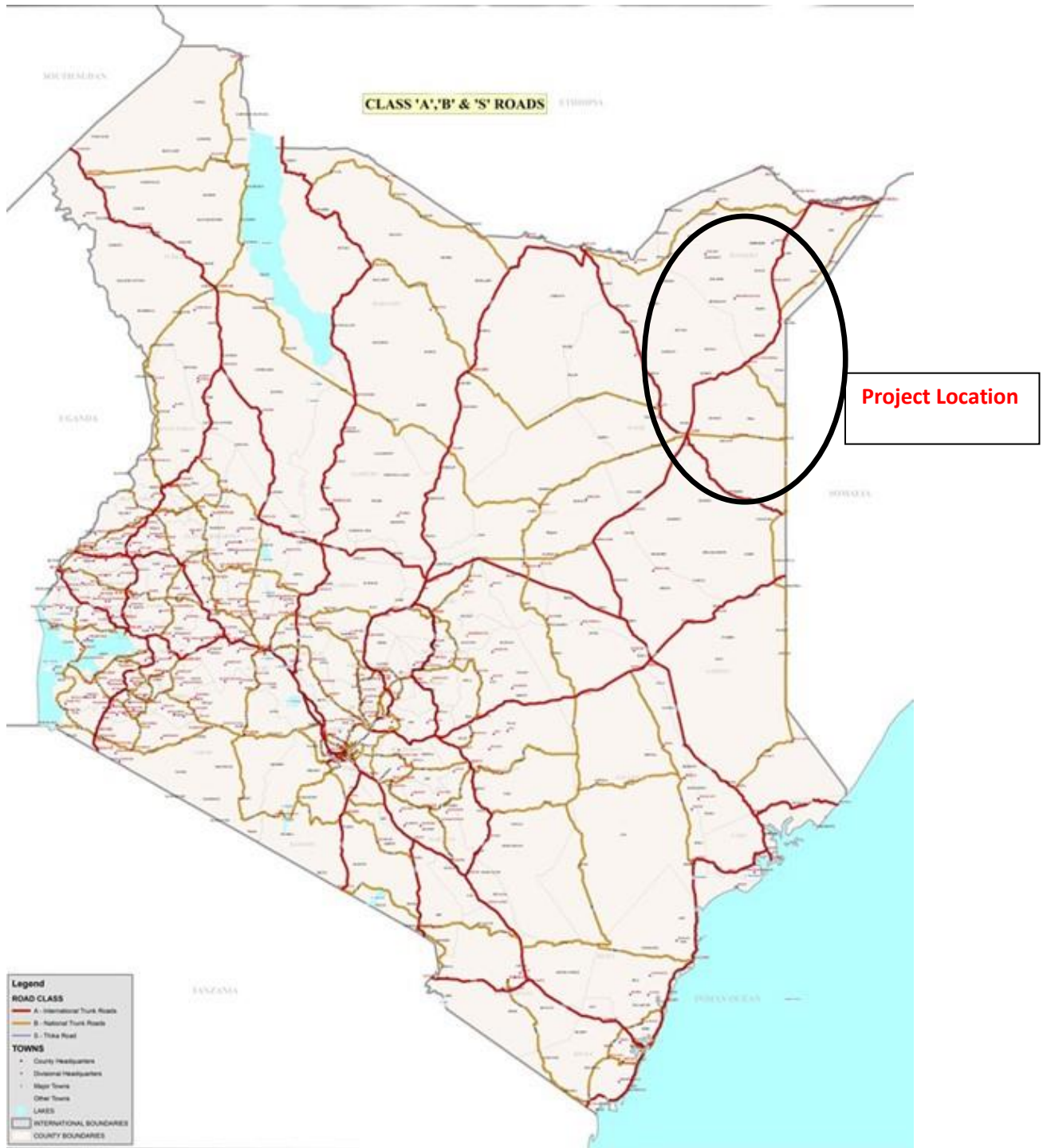
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## **LIST OF ACRONYMS AND ABBREVIATIONS**

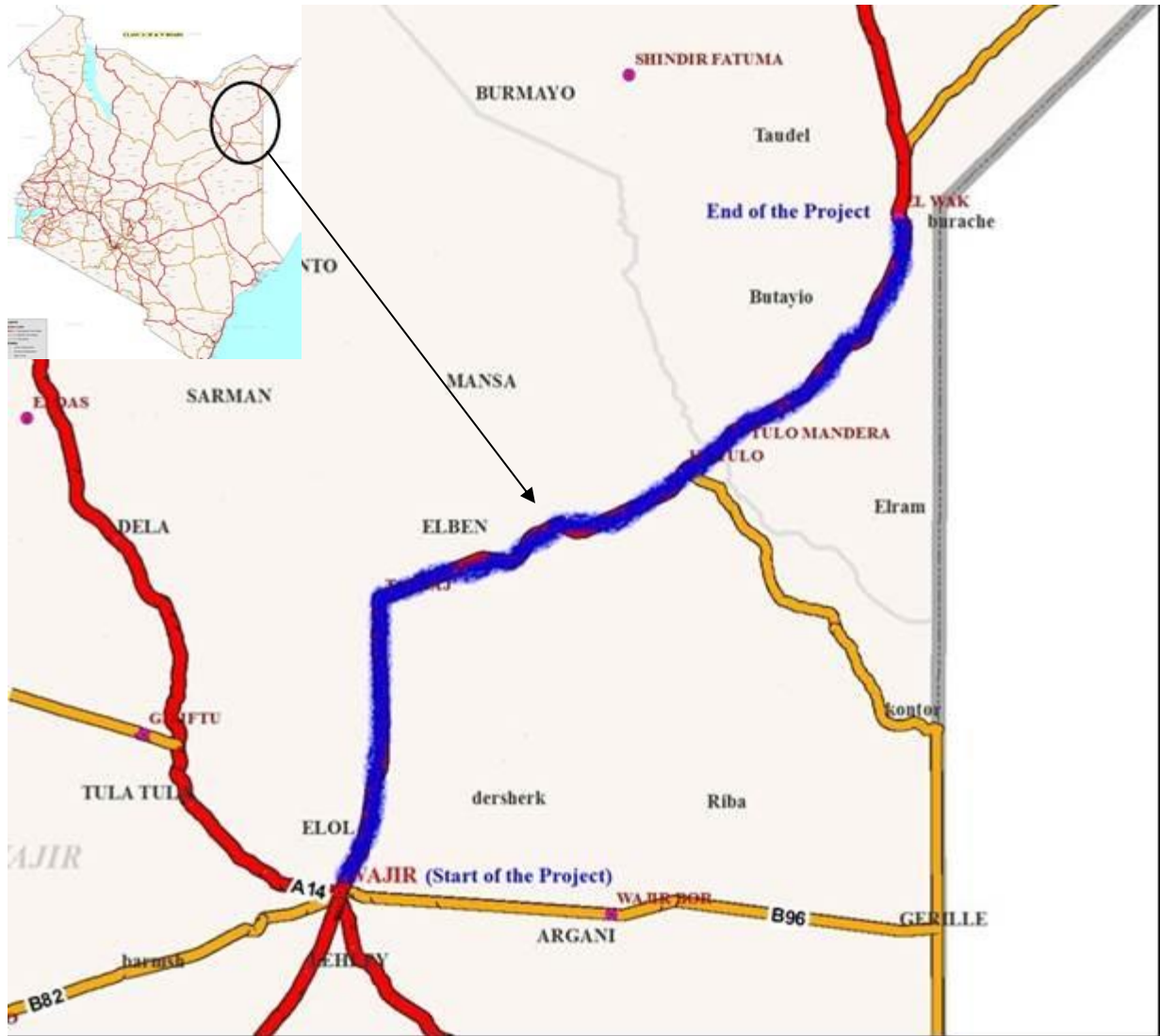
CBO	Community Based Organization
CPP	Consultation and Public Participation
CSR	Corporate Social Responsibility
dB (A)	Decibels of noise measured with A-weighted filter
DCC	Deputy County Commissioner
DOSHS	Directorate of Occupational Safety and Health Services
EA	Environmental Audit
EIA	Environmental Impact Assessment
EMC	Environmental Management and Coordination
EMCA	Environmental Management and Co-ordination Act
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Monitoring Plan
ESO	Environment and Social Officer
GoK	Government of Kenya
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immuno Deficiency Syndrome
IDA	International Development Association
KeNHA	Kenya National Highways Authority
KM	Kilometre
MDG	Millennium Development Goals
MoTIHUD	Ministry of Transport, Infrastructure, Housing, and Urban Development
MTP	Medium Term Plan
NEMA	National Environment Management Authority
NETIP	North-Eastern Transport Improvement Project
NGO	Non- Governmental Organization
NMT	Non-Motorized Transport
NPEP	National Poverty Eradication Plan
OD	Operational Directives
OP	Operational Policy
OSHA	Occupation Safety and Health Act
PAPs	Project Affected Persons
PEC	Poverty Eradication Commission
PPE	Personal Protective Equipment
PRSP	Poverty Reduction Strategy Paper
PSVs	Public Service Vehicles
RE	Resident Engineer
SDGs	Sustainable Development Goals
STD	Sexually Transmitted Diseases
UNFCCC	United Nations Framework Convention on Climate Change
WHO	World Health Organization
WB	World Bank
WRA	Water Resources Authority
WSSD	World Summit for Social Development

### Project Location in relation Kenya Road Networks Map



Source: KeNHA website, [www.kenha.co.ke](http://www.kenha.co.ke)

Map Showing the Road Project



## EXECUTIVE SUMMARY

### Introduction and Project Objectives

1. The Government of the Republic of Kenya (GoK), through the construction of the North-Eastern Transport Improvement Project (NETIP), intends to upgrade sections of the Isiolo - Manderla Road to bitumen standard. The objectives of NETIP are partly to improve the movement of goods and people along Isiolo – Wajir - Manderla part of the Mombasa – Garissa – Wajir – Manderla - Mogadishu road corridor and to enhance connectivity between other parts of Kenya and the North Eastern region as well as between Kenya and Somalia and Ethiopia. With improved transport connectivity, access to social services and commodities will be made easier and cheaper. The NETIP project is being financed through credit from the International Development Association (IDA).

### Project Location and Description

2. The road project transverse through Wajir and Manderla counties. The project road starts at Wajir Town in Wajir East subcounty and proceeds in a northerly direction to Lafaley (Km 11) and Tarbaj Town (Km51) in Tarbaj Subcounty. It then takes an easterly course through Hungai (Km 61), Wargadud (Km 81), to Kutulo-Wajir (Km110) in Wajir County. The road then enters Manderla county at Kutulo-Manderla (Km119), located at the border between Wajir and Manderla Counties. The road then takes north to north-easterly course through Dimu (Km132), Dabasiti (Km148), Garsesala (Km156), Borehole-11 (Km162+400) and ends in El Wak Town Centre (Km175+400), all in Manderla Subcounty. The Right of Way for the project road is 60 meters. Administratively, the road project traverses four sub-counties: Wajir Central, Tarbaj, Kotulo and Manderla Central.
3. In Tarbaj Town, the main road has been aligned to bypass the town centre to avoid resettlement impacts on businesses and properties that have encroached the road reserve. The design however provides for a 1.8 km spur through the town centre (Tarbaj Spur). The Right of Way in the spur is 40 meters. The total length of the road is approximately 175km. Out of the total road length, approximately 119km is in Wajir, while 56km is in Manderla county. The project road steadily rises from 260m above mean sea level (amsl) at Wajir, 380m in Kutulo to as high as 515m at Wargadud, and then descends to 380m amsl in El Wak.

### Need for the ESIA Review and Update

4. In 2018 KeNHA engaged the services of GiBB International to conduct a design review and which included preparation of an ESIA and RAP reports. The original ESIA was prepared as Environment Assessment Category 'B' based on the due diligence conducted by the World Bank at the concept stage. However, due to emerging new information, of the project potential to have the significant adverse environmental and social impacts that are sensitive, diverse, and unprecedented, the project was reclassified as Category 'A'. This necessitated the review and updating of the draft ESIA by an independent consultant, per World Bank safeguards policies for the project assigned as Category A.

### Objective of ESIA

5. 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 and social environmental management strategy for the project, which complies with EMCA requirements and World Bank Operational Safeguards Policies (OP) and World Bank Group Environmental, Health, and Safety General Guidelines related safeguards. 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 with World Bank Environmental and Social Safeguards Policies and Procedures for Environment Assessment (OP/BP 4.01), for project assigned **Category A** and laws and regulations of the Government of Kenya,
- 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 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 World Bank Safeguards Policies, WBG EHS guidelines and EHS guidelines for Toll Roads

### **Approach and Methodology**

6. The systematic investigative and reporting methodologies specified in the conduct of Project Report Studies (Legal Notice 101 of EMCA) and WB Operational Policies and Procedures were applied in the ESIA Study. Baseline data on the project was carried out through discussion with the client and review of project documents. Opinions formed were revalidated 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 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 meeting, 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 management during all phases of project development.

7. 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 and ESMPP.

### Challenges experienced during the study

8. Security remains a major concern especially with the porous borders with the neighbouring unstable Somalia that faces instability challenges. Other compounding aspects include poor communication network connectivity as well as poor road infrastructure. At the time the study was being conducted, the security alert in the area between Wargadud and Kotulo was high because of threats of attack by Al-Shabab militants. There were two incidences of attacks the week before the site visit and one attack in Mandera which borders with Wajir County during the time the studies were being conducted. The militants have also destroyed telephone boosters in Kotulo in Wajir County for one of the leading network providers, leaving the area paralyzing communication in the area<sup>1</sup>.

The security personnel who were escorting the study team advised the team not to hold meetings with the community between Kotulo Wajir and Kotulo Mandera on various occasions. However, the team held public meetings at Kotulo on a limited basis later due to security concerns and as advised by the security personnel in this area of the road.

### Policy, Legal, and Regulatory Framework

9. This ESIA Report has been developed to ensure that the proposed construction of the road conforms with 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) 2015 which is Kenya's supreme environmental law, the Constitution and World Bank's 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 149 (Regulations for Environmental Assessment and Audit (Amendment) of 2016.

### Legal and Regulatory Framework

10. 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;

<sup>1</sup> Standard newspaper, Jan 7, 2018, <https://www.standardmedia.co.ke/article/2001265204/communication-paralysed-in-parts-of-wajir-as-al-shabaab-militants-destroy-safaricom-mast>

- Wildlife Conservation and Management Act, 2013;
- Public Health Act, Chapter 242;
- 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;
- Physical Planning Act, 2007;
- Climate Change Act, 2016;
- Urban Areas and Cities Act, No. 13 of 2011;
- The National Museums and Heritage Act (2006);
- Energy Act, 2006;
- Mining Act, 2016 and
- Intergovernmental Relations Act.

The World Bank safeguard policies triggered by the project include

- OP/BP 4.01 Environmental Assessment;
- OP/BP 4.04 Natural Habitats
- OP/BP 4.11 Physical Cultural Resources;
- OP/BP 4.10 Indigenous Peoples; and
- OP/BP 4.12 Involuntary Resettlement.
- World Bank Group Environmental, Health, and Safety (EHS) General Guidelines.

### **Project Alternatives**

11. After review of the project alternatives, there is no feasible option to complement or to substitute the project road with air, rail, and water transport. The project road is the only faster, cheaper land transportation means. The proposed alignment is an essential link between Nairobi and Mandera and also connects with the entire North Eastern region. The alignment follows an existing road and therefore does not require major horizontal or vertical realignment except a few locations at Wajir (Km 0+00), Tarbaj (Km 50), Hungai (km 60), Kotulo (Km 119), Borehole 11 (Km 162+400) and Elwak Town (Km 175) where realignments have been considered to reduce resettlement impacts and avoid burial sites. The “No Action” alternative is not environmentally, socially, and economically, the preferred option. It will require frequent and long-term extraction of material from borrow sites, which in the end, degrades the environment, increase in dust pollution. The status quo implies that the current road connectivity challenges will persist that stagnate delivery of social services and enforcement of security.

### **Baseline Environmental and Social Conditions**

12. Wajir and Mandera counties are in the semi-arid regions experiencing Kenya’s typical bi-modal wet seasons with peaks in November and March. Mean annual rainfall is below 255mm. Temperature range between 34°C (maximum) and 18°C (minimum). The Counties experience longer daytime sunshine hours (about 11hours) that increases evaporation rates.

**Topography:** The terrain is dynamic from flat to undulating. Abandoned excavated pits along the project road indicate ongoing material borrowing and quarrying.

**Soils and geology:** Soils are sandy from Wajir to Wargadud but become rolling from Wargadud to Kutulo. In particular, the soils are sandy loam to sandy clay loam extending from 1.0m up to 15m and tiny rock outcrops. Soils are sandy from Kutulo to Elwak.

**Drainage:** The project area falls within the Northern Ewaso Ng'iro River Basin, but no perennial rivers cross the road except lagas (which experience flow in the wet season).

**Vegetation:** Along the project road, the floral characteristics of the wildlife habitats closely resemble the Somali - Masai *Acacia - Commiphora* deciduous woodland/shrubland and thickets (White, 1983). Habitats represented include:

- Built and settled environments comprised houses and buildings and infrastructures with a spread of invasive alien species, garbage sites, and planted fence line. Avifauna and other wildlife attracted to these areas were habituated to human environments.
- Water and wetland habitats that were mainly earth dams and attracted shoreline and other water birds such as spoonbill, shanks, sandpipers, heron, etc.
- Terrestrial vegetation associations include *Acacia – Acacia, Acacia-Commiphora-Combretum* Associations, Novel Habitats (*Prosopis juliflora* and *Calotropis procera*), *Acacia tortilis* Woodlands and *Commiphora - Boswellia* Woodlands.

**Administration** The project road traverses 5 wards in Tarbaj Subcounty in Wajir county and 5 wards in Mandera Central Sub County.

**Population:** The Kenya Population and Housing Survey report (KPHC) 2019 showed that Mandera County had a population of 867,457 persons with an annual growth of 3.96%, while Wajir county had a total population of 781,263 persons, with an annual growth of 3.22%. The Counties have similar higher male proportion (55 percent) and 45% females.

**Ethnic communities:** The local population is predominantly Muslim Somalis and generally practices nomadic pastoralism and depends on the livestock and their products. Along the project road, human settlements are sparse and occur as clusters in trading centres that interrupt long stretches of natural vegetation. The constitution recognizes area and people living in the project area of influence as Marginalized.

**Wildlife and birds:** Mammals spotted during the site visit include giraffes, dik-dik, gerenuk, impala, grant gazelle, reticulated giraffe, ground squirrel, and lesser kudu. The lesser kudu and gerenuk feature in the International Union for Conservation of Nature (IUCN) Red list database as Near Threatened and therefore are of conservation interest. Some birds in the area include White-headed buffalo weaver, Guinea fowl, Marabou Storks, among others.

**Land Ownership:** Land is mainly communal but held in trust by the County Governments of Wajir and Mandera under the repealed Community Trust Land Act before the implementation of the Community Land Act. Much of the land in the project area is under rangeland livestock production. The project area faces serious water challenges where there is lack of enough water for human and livestock consumption.

**Water sources:** The water sources in the area include boreholes, unprotected shallow wells or springs, water delivered by tanker trucks and surface water. Access to shallow wells is under the control of sub-clans, which has reduced use-conflicts between the communities



**Literacy Rates:** Literacy rates and schooling enrolment within the Counties are lower, compared to the national average. Adult literacy levels in Wajir and Mandera Counties stands at 23.6 and 24.8 percent, respectively as compared to the national average of 78%.

**Health:** The most prevalent diseases include; the disease of upper respiratory tract infection (URTI), malaria, pneumonia, urinary tract infection (UTI), and skin disease. The HIV prevalence among women in Wajir and Mandera Counties are higher (2.9%) than that of men (0.6%). There are various health facilities located within the project area at Wajir (Level V Hospital) and Level 4 Hospital (at Elwak, Kutulo, Tarbaj) and other Health Dispensary and Health clinic at Borehole 11 and Hungai.

### **Community conflicts**

13. The road traverses a territory occupied by different Somali clans, who are mainly pastoralists and occasionally, there is continuous and sporadic inter-communal conflict between the ethnic groups. The inter-ethnic tensions and conflicts are caused by; disagreements on county boundary, superiority on administrative positions, land ownership, water scarcity and sources, and conflict over pasture. The contractor will have to ensure any sources of materials (such as water and road construction materials) will not contribute to potential conflict between the communities; all sources have to be widely consulted and agreed upon before utilization.

### **Security Challenges**

14. The project is located in an area that is known to have security issues due to the threats of Al Shabaab group which operates from the neighbouring country of Somali. Due to porous border, the group members have in the past crossed the border and attacked various installations such as police and army posts, injured and killed members of the public, police and army personnel in the area along the proposed road. This will create some challenges on the project during implementation in ensuring the contractor's workforce will be safe from potential attacks from this militant group in the area. KeNHA in coordination with the relevant security agencies has carried out Security Risk Assessment for the proposed project corridor and prepared Security Management Plan (SMP), the SMP has incorporated 'World Bank-Good Practice Note on Assessing and Managing the Risks and Impacts of the Security Personnel'.

### **Gender Based Violence:**

15. Gender Based Violence (GBV) is rampant in the project corridor and in some cases normalized. Normalization of GBV and stigma influenced by religious and 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 Offenses 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.
16. The study indicates that culturally there is very serious actions on the perpetrators for which the project must be aware about with respect to contractors and project workers. The project is in the process of engaging the services of a local non-governmental organization to manage the incidences of GBV/SEA on the project corridor. These services will involve awareness and response systems.

### **Stakeholder Engagement and consultations**

17. 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.

18. The public meetings and consultations were carried out as follows;
- By Design consultant; (i) Wajir -Kotulo Section – conducted on 21<sup>st</sup> February to 1<sup>st</sup> March 2018 and (ii) Kotulo – Elwak - conducted in 20<sup>th</sup> October 2018 and 3<sup>rd</sup> November 2018
  - By Independent Consultant; (i) Wajir Kotulo Section – conducted 27<sup>th</sup> Dec 2018 to 5<sup>th</sup> Jan 2019, and 28<sup>th</sup> February to 4<sup>th</sup> March 2019 and (ii) Kotulo – Elwak - conducted on April 1<sup>st</sup> to 5<sup>th</sup> 2019.
19. A total of twenty-six (26) consultative meetings were held with community members and other stakeholders including civil society organizations (CSOs) in the area and County Government representatives of the two counties of Mandera and Wajir at different locations along the project corridor. A total of 1,118 stakeholders (722 men and 396women) were reached during the exercise. The list of participants consulted during the ESIA study is attached in the Annex 4.
20. The stakeholder consultations highlighted the following positive and negative environmental and social impacts of the proposed project.

Positive Impacts	Negative Impacts
<ul style="list-style-type: none"> <li>• Creation of employment opportunities</li> <li>• Increased business opportunities:</li> <li>• Improved social infrastructure</li> <li>• Faster means of transport:</li> <li>• Cheap / affordable fares</li> <li>• Easy and fast movement of goods and people</li> <li>• Easy and fast movement of goods</li> <li>• Interaction of people from different communities</li> <li>• Growth of towns</li> <li>• Potential for increased economic activities</li> <li>• Transfer of skills</li> <li>• Improved security</li> <li>• Reduction in vehicle maintenance costs</li> </ul>	<ul style="list-style-type: none"> <li>• Dust generation</li> <li>• Noise pollution</li> <li>• Increased Accidents – human and wildlife</li> <li>• Impact on water resources</li> <li>• Waste disposal and spoils</li> <li>• Loss of vegetation cover</li> <li>• Loss of pasture for livestock and wildlife</li> <li>• Displacement of local communities and loss of property and assets (including graves)</li> <li>• Disruption and loss of businesses</li> <li>• Cultural erosion</li> <li>• Potential conflicts on water resources</li> <li>• Increase in the spread of STD, HIV and AIDS</li> </ul>

21. The following proposals came out of the various institutional stakeholders and public meetings during the consultations.
- Consider upgrading the existing Right-Of-Way (ROW), where by-passes have been provided;
  - Compensation of PAPs due to land-take to pave the way for the road construction should be done before commencement of the civil works;
  - A competent contractor should be selected to undertake the road construction;
  - 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;
  - Burial sites affected by the project should be avoided and if not avoidable, enough time should be given to the owners to conduct the cultural rituals as required;
  - Importance of timing and duration of construction of the project road;

- KeNHA will conduct Community awareness and sensitization (civic education) especially on sensitive aspects such as the compulsory acquisition of the right-of-way (ROW), HIV/AIDS, cultural cohesion with the locals;
- Livestock and wildlife crossings should be discussed when the construction commences;
- Livelihood restoration during resettlement should be considered;
- 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

## Impact Assessment

22. The positive impacts envisaged during construction include;

- Creation of employment opportunities for local people who will be engaged during the construction period;
- Acquisition of new skills for local people involved in construction;
- Increased business opportunities for small and medium -scale traders such as hotel and shop owners, food vendors, etc. especially during construction phase.

23. During operation, the main positive impacts envisaged include:

- Increased access to economic and social services-e.g. government services, hospitals, schools, businesses in major towns along the road, e.t.c
- Cultural Integration due to influx of people;
- Spurring economic development, including urbanization of the centres along the road;
- Reduced travel time and cost;
- Reduced dust pollution;
- Improved drainage along the road;
- Reduced habitat disturbance;
- Improving regional security;
- Increased regional trade;
- Contribution of revenue to the county, national and regional governments.
- Creation of faster means of transport for passengers and goods in the North eastern region of Kenya, especially within Mandera and Wajir counties.
- Reduced cost of public transportation;
- Reduced vehicle maintenance and operational costs for vehicles plying along the road

## Cumulative impacts

24. 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. Wajir – Elwak road will be developed concurrently with other roads sections (Isiolo-Modogashe and Modogashe-Wajir) under NETIP. 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. Potential cumulative impacts include;

- impacts on vegetation due to an increase of vehicular traffic and people within the region;
- the project can also contribute to potential community impacts identified for the project, such as changes in social and cultural norms due to labour influx and in-migration;
- potential increase in crime and terrorism as a result of better access to the area;
- increased use in energy, water and other use of natural resources as a result of growth population in the area;
- increased traffic patterns and accidents;
- increased human-wildlife conflicts and road kills and accidents with wildlife
- housing availability, and

- increased employment opportunities.

**Proposed Mitigation Measures**

25. 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	Proposed mitigation and management measures	ESMP Costs
<b>ENVIRONMENTAL IMPACTS</b>		
Vegetation Loss	<ul style="list-style-type: none"> <li>• Minimize unnecessary vegetation clearance</li> <li>• Revegetation and landscaping of vegetation and trees along the road</li> <li>• Siting of camp sites should be done away from densely vegetated areas.</li> <li>• Compensate for the valuable trees to be felled within the settlements as per the project RAP recommendations.</li> </ul>	No additional cost to the BoQ (see habitat loss and disturbance)
Workmen's camps management	<ul style="list-style-type: none"> <li>• Locate camp sites away from residential areas and settlements</li> <li>• Contractor to prepare a Waste Management Plan for all worksites, especially the campsites</li> <li>• Provision of adequate water and sanitation (fixed toilets with running water and changing rooms) at the campsites, separate for men and women;</li> <li>• Provide for septic tanks and soak pits</li> <li>• 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;</li> <li>• No waste at the campsite shall be buried or burnt;</li> <li>• Treatment of the campsite for rodents and other pests shall be done regularly;</li> <li>• Completely decommissioning of the camp including permanent foundations and floors to discourage future informal settlement at the campsite</li> </ul>	Costs build in the planning and administration costs of the contractor
Excessive Noise and Vibration	<ul style="list-style-type: none"> <li>• Contractor to prepare Health and safety plan</li> <li>• Monitor environmental and occupational noise levels as per the EMCA provisions of regulations and World Bank Group EHS guidelines;</li> <li>• The noise emission characteristics should be considered during selection and mobilization of construction equipment;</li> <li>• Sensitize construction workers to switch off machinery and vehicles when not in use;</li> <li>• Provision of appropriate and adequate Personal Protective Equipment (PPEs) to workers;</li> <li>• Proper selection of project auxiliary sites, e.g. locate noisy operations like batching plant away from the densely settled areas;</li> </ul>	To be provided under Bill No 1 – KSHS 1,500,000 for PPEs (ear plugs, maintenance of vehicles in administrative costs of the contractor)
Construction Dust	<ul style="list-style-type: none"> <li>• Sprinkling water (at least twice a day) on the accesses and excavated surfaces during the construction period to suppress dust generation;</li> <li>• Limit the speed of construction vehicles (maximum speed limit 40 kph/25 mph) on earth road;</li> <li>• Provision of appropriate protective personal equipment including</li> <li>• respirators and dustcoats to exposed workers;</li> <li>• Ensuring the location of material stockpiles are away from human settlements and business premises;</li> </ul>	To be provided under Bill No 1 - Kshs 5 million  (Dust masks and other accessories)

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>• Covering loaded trucks during the transportation of material;</li> <li>• Sensitize workers on best practice on management of air pollution from vehicles and machinery;</li> <li>• Undertake regular air quality (dust level) monitoring and conduct corrective adjustments where necessary.</li> </ul>	(NB water sprinkling part of the main BoQ – Bill No 9)
Generation of Solid Wastes	<ul style="list-style-type: none"> <li>• Contractor will prepare Solid Waste Management Plan</li> <li>• Waste be managed as per Environmental Management and Coordination (Waste Management) Regulations 2006;</li> <li>• Utilize the 3C strategy – Reduce, Reuse and Recycling;</li> <li>• Segregation of solid wastes and provision of suitable and well labelled waste receptacles within the camp and at active construction sites;</li> <li>• Disposed solid waste at designated sites through licensed waste handlers;</li> <li>• 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.</li> </ul>	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	<ul style="list-style-type: none"> <li>• Material excavation should be minimized and restricted to designated locations;</li> <li>• Excavated material should be properly piled and managed - sprinkled with water and covered (where possible) to prevent possible wash-out into seasonal watercourses.</li> <li>• The contractor should ensure that construction related impacts like erosion and cut slope destabilization should be addressed through rock pitching;</li> <li>• Re-vegetation should be done in tandem with construction activities to avoid exposure of bare ground to agents of erosion;</li> <li>• 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 and Ministry of Agriculture, and Irrigation.</li> </ul>	Part of Bill no 8
Contamination by Liquid Waste and Hydrocarbon Spills	<ul style="list-style-type: none"> <li>• Contractor will prepare waste management plan</li> <li>• Machinery maintenance should be done only on purpose-built garages that meet hydrocarbon containment measures and controlled drainage;</li> <li>• Fueling and servicing of vehicles will be undertaken from only designated and lined area</li> <li>• Contractor will be required to have an emergency spill containment and response plan;</li> <li>• Minor service and washing areas placed/ constructed with containment basins to ensure that the surrounding areas (including groundwater) are not polluted;</li> <li>• 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;</li> <li>• Water containing such pollutants as cements, concrete, lime, chemicals and fuels shall be discharged into a conservancy tank for removal from site.</li> </ul>	To be provided under Bill No 1 - Kshs Kshs 3 million Rest of the budget under administrative costs of the contractor

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
Habitat Loss and Disturbance	<ul style="list-style-type: none"> <li>• Locate project auxiliary features like camps and batching plants in areas already disturbed or outside of wildlife habitats.</li> <li>• Construction activities should be confined on the demarcated corridor and discourage movement or intrusion into wildlife habitats;</li> <li>• Throughout the construction cycle, project staff should be sensitized regularly on wildlife conservation.</li> <li>• The Contractor should sensitize workers on nature conservation, and enforce unauthorized intrusion or use of the wildlife habitats through signed code of conduct;</li> <li>• Wasted areas under invasion of <i>Prosopis juliflora</i> or <i>Calotropis procera</i> should be prioritized for batching and other contractor's facilities over other areas with native vegetation.</li> <li>• Cleared invasive species should be destroyed under the guidance of KFS and other specialist agencies.</li> <li>• 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).</li> <li>• Existing diversions and diversions should be considered before opening up new ones during construction.</li> </ul>	<p>Under Bill No 1</p> <p>Extra KShs. 5,000,000 for reforestation program through establishment of a tree nurseries along the road project</p>
Spread of Invasive and Alien Species	<ul style="list-style-type: none"> <li>• Borrow sites should be inspected for invasive species, with invaded areas are avoided;</li> <li>• Sensitize workers on invasive alien species, some of which they may improperly handle or transfer to other locations such as <i>Prosopis Juliflora</i> and <i>Calotropis procera</i>;</li> <li>• Areas along the project road invaded by <i>Prosopis juliflora</i> and <i>Calotropis procera</i> should have all cuttings or clearing destroyed as guided by KFS and other relevant agencies rather than disposing them into un-invaded areas.</li> <li>• Soil should also not be transferred from those areas into other areas of the project road or outside the region;</li> <li>• Destroy immediately any invasive plants uprooted during construction works, and revegetate the bare surfaces with native species;</li> </ul>	<p>KShs. 3,000,000 Revegetation and monitoring by KFS</p>
Impacts on Materials Borrow Sites	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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;</li> <li>• Construction materials including sand, stones and borrow materials must be sourced from duly approved sources only;</li> <li>• The contractor shall locate material sites away from settlements if possible;</li> <li>• Where material sites are located near settlements, the contractor shall carry out baseline studies of structural integrity assessments of nearby structures;</li> <li>• 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;</li> <li>• All material sites shall always be fenced with controlled entry .</li> </ul>	<p>No additional cost to the BoQ Costs built in the planning and administration costs of the contractor</p>

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
Increased Incidences of Poaching and Human-Wildlife Conflicts	<ul style="list-style-type: none"> <li>Engage KWS to monitor wildlife distribution and movement in relation to the project during construction and subsequent stages to advise accordingly;</li> <li>Contractor should liaise with KWS to handle and capture reptiles (especially snakes) hiding under rocks and sheltered terrains and safely release them in suitable habitats;</li> <li>Sensitize staff on wildlife encounters and discourage animal persecution or provocation through pre-informed and signed code of conduct;</li> <li>Sensitize all construction staff on dealing with wildlife encounters and enforce zero-tolerance on wildlife poaching by signing code of conduct.</li> <li>Any cases on wildlife poaching should be forwarded to KWS for further action and prosecution.</li> </ul>	<p>KShs. 500,000 Annually for KWS emergency response</p> <p>Total 1.5 Million</p> <p>Wildlife crossings to be provided under Bill No 17</p>
<b>SOCIAL IMPACTS</b>		
Land take and disruption of livelihoods	<ul style="list-style-type: none"> <li>RAP Study Report for the project should be implemented to guide the compensation and resettlement process;</li> <li>Compensation for all affected properties should be compensated before construction commences;</li> <li>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.</li> </ul>	Cost as per RAP Study Report
Increased Water Demand	<ul style="list-style-type: none"> <li>The contractor to develop independent construction water sources to avoid straining existing local resources;</li> <li>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; and</li> <li>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.</li> </ul>	No additional cost to the BoQ Under and administrative costs of the contractor
Construction works induced traffic and inconveniences	<ul style="list-style-type: none"> <li>The contractor shall be required to formulate and implement a traffic management plan</li> <li>Provision of alternative routes in areas where accesses have been disrupted;</li> <li>Provision and maintenance of clear traffic signages of ongoing construction works, regulate speed limits and diversion signage to notify approaching traffic;</li> <li>Contractor to carry out road safety awareness for community members and institutions along the project corridor</li> <li>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</li> </ul>	No additional cost to the BoQ Under Bill No 4 and 9
Disruption of Public Utilities	<ul style="list-style-type: none"> <li>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;</li> <li>Relocation plans shall include adequate notification of affected customers.</li> </ul>	Under Bill No 1 – Relocation of services
Communicable Diseases	<b>Upper Respiratory Tract Infections (URTI)</b>	To be provided under Bill 1 - Kshs 6,000,000



Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>• 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;</li> <li>• Maintain a grievance register to log any complaints from local community;</li> <li>• Provide dust masks for all staff and visitors to active construction areas;</li> <li>• Install screens and scrubbers on crusher sites to minimize dust emissions;</li> <li>• Locate ancillary facilities away from residential/institutional to minimize dust or other emissions to the residents;</li> <li>• Regular maintenance contractors' equipments</li> </ul> <p><b>Spread of HIV/AIDS and Other STDs</b></p> <ul style="list-style-type: none"> <li>• 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;</li> <li>• Sensitize workers on the need to refrain from risky behaviours;</li> <li>• Provision of condoms both male and female in the sanitary facilities and various locations for the members of public;</li> <li>• 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;</li> <li>• Workers should be given regular leave, preferably monthly to cool off period and join their families</li> </ul>	<p>For sensitization and awareness programs</p> <p>Kshs 15,000,000 for HIV/AIDS Awareness programs and campaigns To be included under Bill No 25</p>
Conflicts with local communities on labour issues	<ul style="list-style-type: none"> <li>• Contractor to formulate and implement a labour management plan for his workforce;</li> <li>• Contractor will be required to have a transparent external communication plan covering among others, how available opportunities will be advertised;</li> <li>• The Contractor should prioritize employing locals as casuals to reduce the need for labour influx;</li> <li>• Consultations with the local council of elders to ensure that available opportunities are fairly distributed across different clan members;</li> <li>• Maintain a grievance register to log any complaints from workers and local community.</li> </ul>	<p>No additional cost to the BoQ Costs build in the planning and administration costs of the contractor</p>
Workers Welfare	<ul style="list-style-type: none"> <li>• The contractor shall comply with the required Law of Kenya under DOSH, and Labour requirements;</li> <li>• Have fulltime nurse on the campsite, with all first aid facilities are available at all times;</li> <li>• In collaboration with local health facilities, ensure that the workers have access to ambulance services and health facilities in the area;</li> <li>• The contractor shall provide portable water and mobile toilets (separate for women and men) for the workers at all worksites along the road;</li> <li>• 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.</li> <li>• Contractor should hire qualified Human Resources staff to manage labour related risks in the project</li> </ul>	<p>No additional cost to the BoQ Costs build in the planning and administration costs of the contractor</p>

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
Community Safety and Health	<ul style="list-style-type: none"> <li>• Ensure that all active work areas have controlled access limited to authorized persons only;</li> <li>• Establish and maintain continuous liaison with the host communities including sensitization on safety and health issues on construction sites;</li> <li>• Install and maintain appropriate safety and warning signages along road sections and all other construction sites and facilities;</li> <li>• Ensure proper and adequate provision of sanitation and waste management facilities at all construction sites;</li> <li>• Maintain a system of receiving and responding to any safety concerns by the communities;</li> <li>• Undertake general and third-party insurance liability covers as appropriate.</li> </ul>	No additional cost to the BoQ Under Bill 9, and administrative costs of the contractor
Labour influx and Social Change	<ul style="list-style-type: none"> <li>• The contractor shall develop a labour management plan for the project ;</li> <li>• The Contractor should prioritize employing locals as casuals to reduce the need for labour influx;</li> <li>• 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;</li> <li>• 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;</li> <li>• 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;</li> <li>• Contractor to establish a grievance management system to handle internal and external complaints.</li> <li>• Workers will be sensitized and sign code of conduct regarding interactions, behaviours and relations with the local communities.</li> </ul>	No additional cost to the BoQ - administrative costs of the contractor
Crime Management	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Sensitize the construction workers, locals, and security to be on the lookout on suspicious activities near the site</li> <li>• Enforce the crime related clauses in the Code of conduct signed by all workers</li> </ul>	No additional cost to the BoQ - administrative costs of the contractor
Child Protection, Sexual exploitation and abuse (SEA) of underage girls	<ul style="list-style-type: none"> <li>• Workers will be educated by relevant agencies such as police and probation officers on the relevant laws and polices protecting children</li> <li>• 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</li> <li>• Mobilize and strengthen child protection institutions and structures near construction sites</li> <li>• Reach out to school authorities and parents near construction sites on paying special attention to child protection in light of labour influx</li> <li>• 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</li> <li>• Ensure no children are employed on site in accordance with national labor laws</li> </ul>	Kshs 10,000,000 For sensitization and awareness

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>• Ensure that any sexual exploitation and abuse (SEA) of children by the contractors' workers are promptly reported to the police</li> <li>• Popularize /put in place confidential mechanisms and hotlines for reporting child abuse cases</li> <li>• Enforce the child protection related clauses in the Code of conduct signed by all workers</li> <li>• Ensure visibility of signage and information, education and communication materials on such issues in the construction sites</li> <li>• 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</li> </ul>	
Absenteeism in Schools	<ul style="list-style-type: none"> <li>• 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;</li> <li>• Ensure no children are employed on site in accordance with national labor laws;</li> <li>• The contractor shall sensitize the workers not to engage with children conducting business activities near the worksites of campsites</li> <li>• Impose zero tolerance for employees on sexual relationship with students that would encourage dropping or being absent from school</li> </ul>	Kshs 3,000,000 for sensitization and awareness (under Bill No 1), and administrative costs of the contractor
Gender Equity and Mainstreaming	<ul style="list-style-type: none"> <li>• Contractor and KeNHA will 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);</li> <li>• Ensure that women are given adequate employment opportunities during recruitment and job postings, including equal payment</li> <li>• Regular sensitization and awareness campaigns to the workers should be done to promote gender equity in employment during the construction works and during operation</li> <li>• Provision of gender disaggregated accommodation, bathing, changing, sanitation facilities</li> </ul>	Kshs 3,000,000 for sensitization and awareness (under Bill No 1)
Gender based violence (GBV), Rape and Sexual Harassment	<ul style="list-style-type: none"> <li>• Contractor will prepare a GBV Prevention and Response Plan and implementation arrangements</li> <li>• Contractor to prepare and enforce a No Sexual Harassment and discrimination Policy in accordance with national laws;</li> <li>• 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;</li> <li>• Popularize /put in place confidential mechanisms and hotlines for reporting GBV and sexual offences cases;</li> <li>• Strategies such as male involvement will be employed in preventing and responding to GBV and sexual harassment;</li> <li>• 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;</li> </ul>	Kshs 5,000,000 for sensitization and awareness (under Bill No 1)

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>• Provision of gender disaggregated facilities - separate bathing, changing, sanitation facilities for men and women;</li> <li>• Grievance redress mechanisms including non-retaliation should be set up for the workers;</li> <li>• 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</li> </ul>	
Alcohol and drug abuse by workers	<ul style="list-style-type: none"> <li>• All workers (including subcontractors) to sign and comply with Code of Conduct on zero-tolerance on alcohol and drug abuse.</li> <li>• 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.</li> <li>• 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.</li> <li>• Prohibiting alcohol, drugs, arms, and ammunition on the worksite among personnel.</li> <li>• 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</li> </ul>	No additional cost to the BoQ, administrative costs of the contractor
Increase in the prices of goods and services in the community	<ul style="list-style-type: none"> <li>• 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</li> </ul>	No additional cost to the BoQ administrative costs of the contractor
Loss of life, injury or damage to people and private property	<ul style="list-style-type: none"> <li>• The construction site shall be fenced off to prevent access to members of the public</li> <li>• Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, at all times</li> <li>• 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</li> <li>• All fatalities or severe accidents/incidences shall be reported to the client (KeNHA) immediately (KeNHA) shall report to the WB 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 .</li> </ul>	No additional cost to the BoQ Part of contract requirements
Complaints and grievances/social conflicts	<ul style="list-style-type: none"> <li>• Provide grievance redress mechanism for the local communities and workers;</li> <li>• Advise the public and workers on where to report grievances;</li> <li>• Consider prioritizing the local manpower for both skilled and unskilled labour.</li> <li>• Implement proposed grievance resolution mechanism</li> <li>• Grievance redress mechanisms especially for workers should incorporate non-retaliation policies</li> </ul>	Kshs 10,000,000 For GRC operations

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
Impacts on Cultural Resources and Archaeological Sites	<ul style="list-style-type: none"> <li>Use “Chance Finds” procedures in case of any discovery of archeological or important physical or cultural resources</li> </ul>	No additional cost to the BoQ administrative costs of the contractor
Impacts on Indigenous People	<ul style="list-style-type: none"> <li>The project has conducted a standalone Social Assessment (SA) report for the project to determine how the communities will benefit from the project activities, and the recommendations will be incorporated into the project design;</li> <li>Develop an Indigenous Peoples Plan (IPP) that sets out the measures through which the will ensure that potentially adverse effects on the peoples’ communities are avoided, minimized, and mitigated, and/or compensate for such effects;</li> <li>The project has conducted Free, Prior and Informed Consultation in order to achieve broad IP community support;</li> <li>The project will make the development process more inclusive of Indigenous Peoples by meaningful consultations and incorporating their perspectives in the design of development programs and poverty reduction strategies;</li> <li>Provide the IPs with opportunities to benefit more fully from development programs associated with the project, such as social infrastructure projects along the road project.</li> </ul>	No additional cost to the BoQ – defined in the SA report
<b>OCCUPATIONAL HEALTH AND SAFETY</b>		
Occupational Safety and Health Hazards	<ul style="list-style-type: none"> <li>Contractor will prepare Health and Safety Plan and Emergency Response Plans and operationalize them</li> <li>Contractors’ selection criteria should include ability to demonstrate having some defined minimum requirements for Safety and Health Management System.</li> <li>Contractor’s should comply OSHA 2007 requirements as bare minimum;</li> <li>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;</li> <li>Enforce use of defined standard operating procedures for handling various activities, depending on risks levels;</li> <li>Establish an emergency response procedure and display on all work areas;</li> <li>Provision of a standard first aid kit at active construction sites at all times;</li> <li>Designate qualified first-aider as per the OSHA requirements;</li> <li>Contractor to have a full time Health and Safety advisor on site</li> <li>Engage a qualified Health and Safety auditor to conduct routine and annual Health and Safety (H&amp;S) audits;</li> <li>Establish a Health and Safety Committee for the project construction team as per the Health and Safety Committee Rules 2004 of the OSHA Act</li> <li>Provide medical care for all staff as necessary as allowed in the Kenyan Law including securing a worker insurance cover as required under WIBA;</li> <li>Conduct risk assessment before commencing new assignments/tasks;</li> </ul>	<p>To be included in Bill 1 - Kshs 8 million for operations of clinical facilities at campsites and other OHS arrangements</p> <p>Other costs under Bill 1, 9, and administrative costs of the contractor</p>

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>• Provide appropriate and adequate Personal Protective Equipment (PPE) to all workers that is commensurate with construction site activities;</li> <li>• Abide by standard best practice health and safety provisions in the construction contract;</li> <li>• Conduct daily toolbox and monthly safety meetings for the construction workforce;</li> <li>• Undertake routine worksites safety inspections;</li> <li>• Carry out induction and training on Health and Safety for workers and visitors to site</li> <li>• Display of appropriate safety signs around the construction site</li> <li>• All operators shall be trained and skilled in their area of operations;</li> <li>• Regular trainings to workers on OHS and first aid administration;</li> <li>• Contractor (s) to maintain an accident register; carry out accident and incidents investigations and implement corrective actions.</li> </ul>	
Workers Security	<ul style="list-style-type: none"> <li>• KeNHA to support the contractor in liaison with government security agencies for security planning and continuous surveillance;</li> <li>• The contractor will mainstream the project SMP and prepare site specific Security Management Plan and Emergency Response Plan for his employees, and conduct regular briefs on security emergency, including drills on worksites and campsites;</li> <li>• Contractor to appoint fulltime security coordinator to coordinate with security agencies in the area on issues related to security for the construction workers;</li> <li>• Workers should be sensitized on security arrangements with regular updates as necessary;</li> <li>• Travel plans to remote locations like off-road borrow sites and quarries should be discouraged based on the prevailing security situation;</li> <li>• Emergency contact list shall be maintained on site and by various teams. This should incorporate satellite communication services between camp-based and Nairobi based offices;</li> <li>• Enough security should be provided 24/7 at all worksites and campsites, including use of armed policemen.</li> </ul>	<p>No additional cost to the BoQ</p> <p>Under administrative costs of the contractor</p>
Road Safety	<ul style="list-style-type: none"> <li>• Copies of insurance policies for the contractor's drivers and vehicles should be provided to the Supervision Consultant.</li> <li>• The contractor's vehicles and equipment must be in proper working condition and have registration plates, and numbering.</li> <li>• The contractor to sensitize all drivers and equipment operators to adopt safe driving and operation behaviors, to ensures proper discipline by these personnel, and sanctions those in breach.</li> <li>• Ensure that safety is included in the driver's contracts as part of "Code of Conduct" and any non-compliances are sanctioned;</li> <li>• Excavated sites, embankments, and dangerous locations are protected with proper safety barriers, tape and warning signs.</li> <li>• Install temporary speed calming measures such as bumps and speed signs at high risk areas such as shopping centres, hospitals, and schools;</li> </ul>	<p>No additional cost to the BoQ</p> <p>Under administrative costs of the contractor and Bill No 9</p>

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>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.</li> <li>KeNHA in collaboration 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.</li> </ul>	
Impacts Related to High Temperature and Humidity Levels	<ul style="list-style-type: none"> <li>Contractor must ensure Project staff have access to adequate potable water;</li> <li>Provisions should be made for adequate ventilation and air conditioning for in-house work spaces;</li> <li>Sensitize staff on health concerns and avoiding heatstroke, dehydration and fatigue;</li> <li>Work schedules should be such that workers are allowed adequate break durations in between working sessions;</li> <li>Ensure adherence to OSHA, 2007.</li> </ul>	No additional cost to the BoQ  Under administrative costs of the contractor
Stakeholder Engagement	<ul style="list-style-type: none"> <li>KeNHA will prepare and implement a communication and community/stakeholder engagement plan that addresses all project issues</li> </ul>	Kshs 10,000,000
Grievance Redress Mechanisms	<ul style="list-style-type: none"> <li>Proper, effective and strong Grievance Redress Mechanisms (GRM)</li> </ul>	Kshs 10,000,000

### ESMP during operation phase

Environmental / Social impact	Recommendation, mitigation, monitoring and/or Management Measures	Cost (KSHS)
<b>ENVIRONMENTAL IMPACTS</b>		
Road Maintenance Impacts	<ul style="list-style-type: none"> <li>Incorporate recycling of road resurfacing waste where possible;</li> <li>All vegetation cuttings for road clearance maintenance suspected to be from invasive alien species should be burnt on site translocated to minimize dispersal;</li> <li>Manage sediment and sludge removed from storm water;</li> <li>All removed paint materials suspected or confirmed as containing lead should be treated as a hazardous waste.</li> </ul>	No additional cost to the BoQ – under KeNHA maintenance budget
Increased Deadwood Collection and Charcoal	<ul style="list-style-type: none"> <li>KWS and KFS should conduct routine habitat surveillance and patrols as well as thorough inspection of vehicles by security personnel at manned roadblocks (at the exit points) to rid off illegal loggers and timber dealers;</li> <li>Multi government agencies should institute campaigns on sustainable charcoal production, incorporating revegetation of affected areas with native species;</li> <li>Locals should be sensitized on the importance of conserving woody vegetation.</li> </ul>	No additional cost to the BoQ – under various agencies operational budget

Environmental / Social impact	Recommendation, mitigation, monitoring and/or Management Measures	Cost (KSHS)
Inhibited Wildlife and Livestock Movements	<p><b>Mitigations to consider for wildlife structures include:</b></p> <ul style="list-style-type: none"> <li>• Wildlife crossings are considered to provide safe and convenient road crossing locations and this should be achieved in the type and design of the structure.</li> <li>• The Crossing structure should factor a diversity of species than targeting a few. The designs should consider animals with the most stringent demands for crossing.</li> <li>• The structures should have shorter length and wider width;</li> <li>• Design of structures should provide natural lighting as possible and minimize noise and vibration;</li> <li>• Fences are important to guide animals to the structures as well as for problem animal control;</li> <li>• Recreation of habitats and continuity of ecosystem processes near and within the structure is encouraged to increase animal appeal.</li> </ul>	No additional cost to the BoQ – under KeNHA and various agencies operational budget
<b>SOCIAL IMPACTS</b>		
Cultural Clash	<ul style="list-style-type: none"> <li>• Cultural awareness campaigns involving stakeholders (public and private sectors) to enhance coexistence with changing lifestyles.</li> </ul>	No additional cost to the BoQ
Increased Vehicle Accidents	<ul style="list-style-type: none"> <li>• The public should be sensitised on safety measures to observe while using the road;</li> <li>• KeNHA to liaise with NTSA for close monitoring of the road usage and impose penalties on those going against the set roads usage rules;</li> <li>• KeNHA should ensure maintenance of installed road furniture and safety signages along the road;</li> <li>• Undertake periodic roadside bush clearance that may reduce visibility clearance or obstruct critical signages.</li> </ul>	No additional cost to the BoQ Under KeNHA and other various agencies operational budget
Communicable Diseases	<ul style="list-style-type: none"> <li>• Vehicles to adhere to emission criteria set under the Environmental Management and Co-ordination (Fossil Fuel Emission Control) regulations, 2006.</li> <li>• Vehicle maintenance and servicing of vehicle engine.</li> </ul>	No additional cost to the BoQ
Human Encroachment along the Project Roads	<ul style="list-style-type: none"> <li>• 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;</li> <li>• Install and maintain road reserve boundary posts at appropriate intervals;</li> <li>• Conduct awareness talks and presentations about the road reserve.</li> </ul>	No additional cost to the BoQ – county government budgets and KeNHA management of road reserves



Environmental / Social impact	Recommendation, mitigation, monitoring and/or Management Measures	COST (Kshs)
Community Health and Safety	<ul style="list-style-type: none"> <li>Contractor must prepare detailed decommission plan for approval by local government, NEMA and department of mines as applicable;</li> <li>KeNHA should consider satisfactory rehabilitation of decommissioned sites as part of contractual requirement with enforceable penalties including financial disincentives.</li> </ul>	No additional cost to the BoQ
Loss of Income	<ul style="list-style-type: none"> <li>Notify the employees in advance on the project closure date and adequately compensate them;</li> <li>Dismissal procedures to be compliant with Employment Act, 2007;</li> <li>Provide counselling &amp; alternative skills for alternative activities;</li> <li></li> </ul>	No additional cost to the BoQ
Noise pollution	<ul style="list-style-type: none"> <li>Prepare a decommissioning plan to guide activities;</li> <li>Monitor noise levels as per the NEMA Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009 &amp; OSHA, 2007;</li> <li>The noise emission characteristics should be considered during selection and mobilization of decommissioning equipment; and</li> <li>Sensitize staff to switch off machinery and vehicles when not in use.</li> </ul>	No additional cost to the BoQ
Dust and Fumes	<ul style="list-style-type: none"> <li>Prepare a decommissioning plan to guide staff on proper handling of sensitive facilities;</li> <li>Enforce stand operating procedures while undertaking demolition works;</li> <li>Provide and enforce the appropriate use of PPE against dust; and</li> <li>Employ dust suppression measures such as sprinkling water on loose soil surfaces and providing cover for spoil batches.</li> </ul>	No additional cost to the BoQ
Waste Accumulation	<ul style="list-style-type: none"> <li>Decommissioning plan should cover waste management;</li> <li>Waste be managed as per Environmental Management and Coordination (Waste Management) Regulations 2006;</li> <li>Establish a segregation and grading waste management system to manage garbage and other forms of waste generated;</li> <li>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</li> <li>Disposed waste at designated sites through licensed waste handlers.</li> </ul>	No additional cost to the BoQ
<b>Total ESMP Costs</b>		<b>Ksh103,500,000</b>

## Resettlement Action Plan

26. 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.
27. The census was carried out to document the current occupants of the Project Affected People (PAPs) within the road RoW in all the thirteen (13) 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 0-2: **Number of PAPs Enumerated According to Settlement**

S No.	Settlement	No. of PAPs
1	Wagberi	18
2	Halane	19
3	Lafaley	19
4	Tarbaj	206
5	Hungai	105
6	Wargadud	122
7	Kutulo (Wajir)	165
8	Kutulo (Mandera)	156
9	Dimu	14
10	Daba city	76
11	Garse Sala	63
12	Bore hole 11	176
13	Elwak	215
<b>Total No of PAPs</b>		<b>1, 354</b>

Table 0-3 : **RAP Implementation Costs**

Aspect	Value (Ksh)
Financial/Money Management Training/Meetings of Resettlement Committees / Administrative Costs (5%)	34, 310, 232
External monitoring and coordination for RAP Implementation (2%)	13, 724, 093
<b>Total</b>	<b>48, 034, 325</b>

Table 0-4 : **Total Compensation for Structures, Livelihoods and Trees**

Aspect	Value (Ksh)
Compensation for structure, trees and livelihoods	596, 699, 700
Compensation for disturbance (15%)	89,504, 955
<b>Total</b>	<b>686, 204, 655</b>

Table 0-5 : **Total RAP Budget**

Total RAP Cost	Kshs.
Total RAP compensation	686, 057, 370
RAP Implementation Cost	48, 034, 325
Contingency (5%)	36, 704, 584
<b>Grand Total</b>	<b>770, 796, 279</b>

Source, RAP Report, September 2019

**ESMP Implementation and Monitoring**

28. 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.
29. The ESMP implementation will be monitored by a team of key experts with experience in Environment, Social, Health and Safety (ESHS) matters. The key ESHS Personnel will include; Supervising Engineer; Environmental Safeguards Specialist; Social Safeguards Specialist and Civil works contractor. KeNHA will be required to put in place a Project Management Team (PIT) which will include Environmental and Social Specialists to ensure the contractor complies with the ESHS requirements.
30. It is recommended that 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.
31. The Supervising Consultant will assist KeNHA to provide full time presence on site to ensure environmental and social compliance with the applicable World Bank Safeguards Policies and National legislations, regulations and agreements. KeNHA (under the directorate of Environment and Social Safeguards) will conduct regular and annual internal monitoring of the project to ensure proper implementation of environmental and social mitigation measures contained in the ESMoP and construction contract clauses for the Project.

**Client's Capacity to Implement Safeguards**

32. 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 NETIP project, based on similar projects financed by the WB 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.
33. 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.
34. The proposed capacity building and training requirements would cover among others; NEMA Environmental Management and Coordination Act and Regulations, World Bank safeguards policies, WBG 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.
35. 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.

## Grievance Redress Mechanisms

36. Proper, effective and strong Grievance Redress Mechanisms (GRM) are very important in ensuring the stakeholders grievances and issues are addressed in a timely and appropriate manner, to enhance the relationship between the KeNHA, contractor, and the stakeholders. It is important to emphasize that grievance redress mechanisms are for all aspects of a project, not just environmental and social safeguards. The KeNHA will prepare and disseminate grievance redress guidelines for the project, including a hierarchy of reporting levels for redress, roles, and responsibilities.
37. The SA study established that the project area resolves their conflicts through a Grievance Resolution Mechanism (GRM) outside the legal system called maslaha and the Kadhi courts run by Muslim magistrate. The maslaha system works closely with the local chief's office from which it derives its legitimacy. In most cases, a settlement is through compensation while the Kadhi courts have the power of adjudicating civil disputes according to Islamic law, otherwise referred to as Shariah law. The kadhi court's jurisdiction is limited to the determination of questions of Muslim law relating to personal status, marriage, divorce or inheritance in proceedings in which all parties are Muslims
38. The study identified a few weaknesses in the maslaha and recommends that KeNHA sets up a less formal GRM, where disputes can be resolved before they escalate to the official judicial system. GRM is meant for the project stakeholders to enable them to voice their concerns, complaints, or dissatisfaction with the project and seek redress.

**Table 0-6: ESMoP during Construction**

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
<b>ENVIRONMENTAL IMPACTS</b>						
Vegetation Loss	Construction	% 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
Asphalt and Crusher Plants	Construction	TSP, NOx, SO2, CO, Dust particles, particulate matter etc.	Use of PPE Pre-medical checks Compliance with NEMA regulations Daily air quality measurements	Active areas	Daily	Contractor  KeNHA
Excessive Noise and Vibration	Construction	dB and m/s, respectively	Noise levels <sup>2</sup> , complaints log	Active areas	Daily	Contractor, KeNHA
Construction dust and Air Quality	Construction	TSP, NOx, SO2, 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	Daily	Contractor, KeNHA
Solid Waste management	Construction, Decommissioning	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
Hazardous waste collection	Construction	Waste oil Bitumen	Waste management plan Agreement with licensed waste handlers Waste management records	Entire site	Weekly	Contractor, KeNHA
Soil Erosion	Construction	Eroded surfaces	Gulley formation; Sedimentation Protection measures in place	Entire Site	Quarterly	Contractor, KeNHA

<sup>2</sup> 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	Weekly	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
Spread of Invasive and Alien Species	Construction	% cover	Identified invasive species	Entire Site	Quarterly	Contractor, KeNHA
Impact on borrow and quarry sites	Construction	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
Increased in poaching and Human-Wildlife Conflicts	Construction	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 and crossings	Construction	Animal crossing	Number of animal crossings provided Installed signages	Entire site	Project life	Contractor, KWS, KeNHA
Increased deadwood collection and charcoal	Construction	% cover	% cover declining or increasing	Entire site	Project life	KFS, KWS, County government
Environmental and Social Risks	Construction	Fire outbreaks, floods, terrorism, etc	Areas for potential hazards	Entire site	Continuous during project life	KeNHA
<b>SOCIAL IMPACTS</b>						
Disruption of Livelihood due to land take	Construction	PAPs	RAP implementation progress report	Right of way	Quarterly	Contractor, KeNHA
Increased water demand	Construction	Projected water requirements against available water volumes	Water assessment report; abstraction permits	Entire site	Monthly	Contractor, KeNHA, WRA

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
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	Sensitization and testing campaigns	Number of reported infections; Number of Medical camps held;	Entire site and immediate neighbouring communities	Quarterly	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	Quarterly	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	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

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
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	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 and Marginalized groups	Construction	Participation by VMGs	Number of projects targeting VMGs Number of grievances related to VMGs participation	Entire site	Monthly	Contractor/ KeNHA
<b>OCCUPATIONAL HEALTH AND SAFETY</b>						
Occupational Safety and Health Hazards	Construction	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 WB 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	Road accidents	Traffic management Plan Number of awareness trainings and sensitization campaigns Installed signages and traffic calming devices Accident records	Entire site	Quarterly	Contractor; KeNHA, NTSA
Security challenges	Construction	Incidences	Number of intelligence briefings and reports Incident records	Entire site	Daily	Contractor, KeNHA



Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
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
Traffic management	Construction	Accidents and incidents Complaints	Number of accidents Number of fatalities Number of claims/grievances	Entire Site	Daily	Contractor KeNHA

### ESMoP during Operation phase

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
<b>ENVIRONMENTAL IMPACTS</b>						
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	Quarterly	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	Quarterly	KeNHA
Spread of Invasive and Alien Species	Operation	% cover	Identified invasive species	Entire road section	Quarterly	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	Quarterly	KWS, KeNHA
<b>SOCIAL IMPACTS</b>						

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
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
<b>OCCUPATIONAL HEALTH AND SAFETY</b>						
Road safety	Operation	Road accidents	Traffic accident records Police operation book records Installed signages and traffic calming devices	Entire road section	Quarterly	; KeNHA, NTSA

## Conclusion

39. The improvement to bitumen standards of the project road is foreseen to attract significant benefits to the remote areas of northern 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, it is recommended that the KeNHA and contractor implement 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.
40. The total direct amount of implementation of ESMP is estimated to be about Kshs 103,500,000, 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 88.5 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. 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

41. 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. In this case, a stakeholder engagement plan will be developed by the Supervision Consultant 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'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.

# 1 PROJECT INTRODUCTION

## 1.1 Project Background

1. The Government of the Republic of Kenya (GoK), through the Ministry of Transport, Infrastructure, Housing and Urban Development (MoTIHUD) has applied for credit from the International Development Association (IDA) towards the cost of the construction of the North-Eastern Transport Improvement Project (NETIP). A portion of the credit will be allocated to the upgrading of 175km section of the Wajir to Elwak (A13) Road to bitumen standard.
2. The rationale of the project is founded on the realization that poor road access to the North Eastern part of Kenya constrains the social and economic development prospects of the area. The region is marginalized geographically and is historically underserved. Due to poor road condition, the region is cut-off from the rest of the country during the rainy season while still the journey times during dry season are relatively longer for comparable distances in other parts of Kenya.

## 1.2 NETIP Project Components

The proposed NETIP will comprise the following preliminary components, activities and costs.

### 1.2.1 Component 1: Upgrading Selected Critical Road Infrastructure and associated roadside amenities (US\$455.50 million). This component includes

- a) Support to KeNHA to carry out design review and feasibility and detailed design studies and construction the for upgrading 344km of the Isiolo-Wajir-Mandera comprising the following road sections: (i) Isiolo-Kula Mawe (77km) (ii) Modogashe-Habaswein (51km); (iii) Habaswein-Samatar (41km); and (iv) Wajir-Elwak (175km);
- b) Provisions for road side social amenities and Human Immunodeficiency Virus Infection/Acquired Immune Deficiency Syndrome (HIV/AIDS) prevention measures to help raise awareness and provide mitigation interventions to support efforts to protect the local community, drivers and contractors' personnel;
- c) Carry out a program of activities designed to implement transport, trade and development facilitation measures, for instance, a program to cover activities such as carrying out a study to enhance social infrastructure and social services delivery along the corridor;
- d) Designing and establishing facilities and marketing system for pilot pastoralist road side markets;
- e) Provision of market shades, milk cooler, slaughter houses, veterinary posts, livestock holding area in selected locations;
- f) Designing and implementing activities to support key Project stakeholders such as county governments, communities, and households on management and operational modalities of these facilities;
- g) Strengthening the capacity of KeNHA in enhancing the road design manuals and specifications as well as contract management, value engineering, road maintenance, safeguards and procurement management and training; and
- h) Preparation of future projects.

### 1.2.2 Component 2: Institutional Development and Project Monitoring and Management (US\$12.50 million)

- a) Support to the State Department of Infrastructure on enhancing project management and oversight capacity, maintenance management and engineering capabilities in the transport sector;
- b) Support to Materials department in mapping road construction material sites;

- c) Supporting the State Departments of Infrastructure and Transport in the monitoring and evaluation of the projects;
- d) Support to strengthen the National Transport and Safety Authority to: (i) conduct needs assessment, vehicle safety inspection and safety audits; (ii) strengthening enforcement capability of the Authority and post-impact care; and (iii) assessing road safety on the Isiolo-Mandera Corridor;
- e) Strengthening the capacity of the National Construction Authority in overseeing and developing the local construction industry; and
- f) Training and coordination of Project implementation activities, including audits, and the monitoring and evaluation of progress achieved in the execution of the Project.

**Component 3: Enhancing Internet Connectivity (US\$34.00 million).** Support to Information and Communication Technology Authority (ICTA) for:

- a) Carrying out feasibility and detailed design and the construction of a fiber optic cable network, alongside the part of the Isiolo-Mandera Corridor;
- b) Construction of fiber spurs and rings and provision made for connecting selected schools, hospitals and other strategic locations including pastoralist road side markets, rest stops and community and service centers along the corridor;
- c) Connecting community information centers with fiber optic connection and advisory services in the management of these facilities and services; and
- d) Institutional strengthening of ICTA and training.

### 1.3 Overall Project Objectives and Expected Results

3. The objectives of NETIP are partly to improve the movement of goods and people along Isiolo – Wajir - Mandera part of the Mombasa – Garissa – Wajir – Mandera - Mogadishu road corridor and to enhance connectivity between other parts of Kenya and the North Eastern region as well as between Kenya and Somalia and Ethiopia. With improved transport connectivity, access to social services and commodities will be made easier and cheaper. The expected results indicators includes improvements in:
  - i. Travel time between Isiolo-Mandera;
  - ii. Vehicle operating costs;
  - iii. Internet connection charges;
  - iv. Transport cost to users;
  - v. Passenger numbers per day along the Isiolo-Mandera corridor;
  - vi. Direct project beneficiaries along the Isiolo-Mandera corridor (thousands, of which percentage women); and
  - vii. Kilometers of roads (non-rural) rehabilitated (core indicator).
4. The Kenya National Highways Authority (KeNHA) is the implementing agency that will be responsible for design review and update of the project's environmental and social safeguard instruments namely an Environmental and Social Impact Assessment (ESIA) and a Resettlement Action Plan (RAP) for the project road. This is in line with KeNHA's mandate as provided for in the Kenya Roads Act, 2007.

### 1.4 Need for the ESIA Review and Update

5. In 2018 KeNHA engaged the services of GiBB to conduct a design review and which included an ESIA and RAP reports. The original ESIA was prepared as Environment Assessment Category 'B' based on the due diligence conducted by the World Bank at the concept stage. However, due to emerging new information, of the project potential to have significant adverse environmental and social impacts that are sensitive, diverse and unprecedented, the project was reclassified as Category 'A'. This necessitated the review and updating of the draft ESIA by an independent

consultant, per World Bank safeguards policies for the project assigned as Category A, which includes also additional stakeholder's consultations.

6. This ESIA Report provides up to date study findings to allow for the changes that have occurred since the year 2018 when the initial ESIA was conducted by the engineering design firm. For the assessment and management of impacts arising from land take as a result of this project, this ESIA Study Report is supported by a RAP Report that is presented as a separate document.
7. The proposed project Component 1 c, d and e will provide for social infrastructure that include market shades, milk cooler, slaughterhouses, veterinary posts, livestock holding area, whose exact locations and designs are unknown at this stage of project preparation . Thus, the Borrower has prepared the Environmental and Social Management Framework (ESMF), the ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social impacts of the subprojects prepared during Project implementation i.e. ESIA/ESMPs, ARAP and RAPs. It includes guidelines to prepare measures and plans to reduce, mitigate and/or offset adverse impacts and enhance positive impacts of subprojects, provisions for estimating and budgeting the costs of such measures, and information on the agencies responsible for addressing project impacts. The supplementary safeguard instruments will be prepared by KeNHA, reviewed and approved by the Bank.

## 1.5 Objectives of the ESIA Study

8. 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.
9. The objectives of the ESIA study are: (i) review and update the existing draft ESIA report, identify any gaps vis-à-vis WB safeguards policy requirements of OP/BP 4.01 (Environment Assessment) for Category A projects 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.
10. The specific objectives of the assignment are:
  - To review and update the draft ESIA report to conform with World Bank Environmental and Social Safeguards Policies and Procedures for Environment Assessment (OP/BP 4.01), for project assigned **Category A** and laws and regulations of the Government of Kenya,
  - 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 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 World Bank Safeguards Policies, WBG EHS guidelines and EHS guidelines for Toll Roads

## 1.6 Project Location and Description

### 1.6.1 Project Location

11. The project area is located in Wajir and Mandera Counties in the North Eastern region of Kenya, between latitudes 1° 43'N and 2° 47'N and Longitudes 40° 03'E and 40° 55' E. Wajir is a county in the middle of the former North Eastern Province. It borders Somalia to the East and Ethiopia to the North West. Within Kenya, it borders Garissa to the South and South West, Isiolo and Marsabit to the west and Mandera to the North and North East. Its capital and largest town is Wajir. Wajir County has only one local authority: Wajir county council. The county has fourteen administrative divisions and six constituencies namely: Eldas, Tarbaj, Wajir North, Wajir West, Wajir East, and Wajir South.
12. Mandera is also in Northern Kenya Kenya: bordered on the East by Gedo Region of Somalia, on the North by Ethiopia, and on the West and South by Wajir County of Kenya. Mandera County is divided into six constituencies/sub-counties – Mandera West, Mandera East, Mandera South, Mandera North, Banissa, and Lafey. The county covers a total of square kilometres of Northeast Kenya. Wajir and Mandera counties have a population and area of 661,941<sup>3</sup> and 1,025,756, and areas of 55,840.6 km<sup>2</sup> and 25,797.7 km<sup>2</sup> respectively.
13. The project road traverses through the administrative units as shown in the table below. A map showing the project location is also presented in the table below.

**Table 1-1: Administrative units along the proposed road alignment**

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<sup>3</sup> KNBS, 2009

County	Sub-County	Division	Location	Chainage (Km)
Wajir	Wajir East	Wajir Central	Halane	km 0 - Km 6 LHS
			Wagberi	km 0 - Km 6 RHS
			Lafaley	km 10+800 to km 11+500
	Tarbaj	Tarbaj	Tarbaj	Km 50 – Km 53
			Hungai	km 60 to km 62
			Wargadud	Km81-Km 83
Kutulo- Wajir			km 110+500 to km 113	
Mandera	Mandera Central	Kutulo	Kutulo-Mandera	Km 119
			Dabasit	Km 148
Garsesala	Km 156			
Borehole11	Km 162+400			
		Elwak	Elwak Town	Km 175

### 1.6.2 Project Description

14. The project road starts at Wajir Town and proceeds in a Northerly direction to Lafaley (Km 11) and Tarbaj Town (Km51). It then takes an easterly course through Hungai (Km61), Wargadud (Km81), Kutulo-Wajir (Km110), to Kutulo-Mandera (Km119), located at the border between Wajir and Mandera Counties. The road then takes a north to north-easterly course through Dimu (Km132), Dabasiti (Km148), Garsesala (Km156), Borehole-11 (Km162+400) and ends in El Wak Town Centre (Km175+400). The Right of Way for the project road is 60 meters.
15. In Tarbaj Town, the main road has been aligned to bypass the town centre. The design however provides for a 1.8 km spur through the town centre (Tarbaj Spur). The Right of Way in the spur is 40 meters. The total length of the road is approximately 175km. Out of the total road length, approximately 119km is in Wajir, while 56km is in Mandera county. In terms of altitude above mean sea level, the project road steadily rises from 260m at Wajir, 380m amsl in Kutulo to as high as 515m amsl at Wargadud, and then descends to 380m amsl in El Wak.

**Figure 1-1 Map showing the project road**

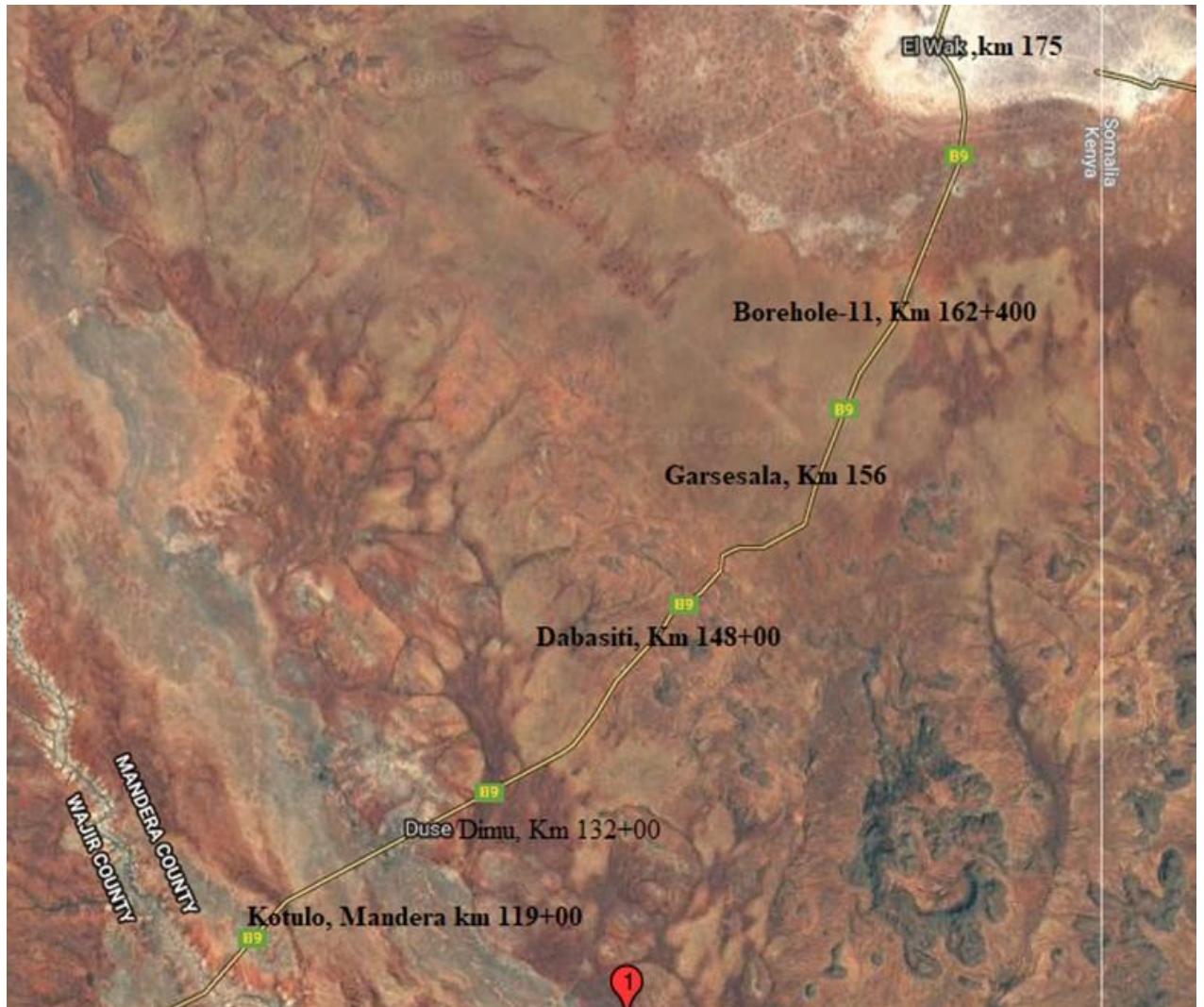




**Figure 1-2 Aerial map of road section between Wajir to Kotulo (Wajir)**



Figure 1-3 Aerial map of the road section between Kotulo (Mandera) and Elwak towns



## 1.7 Project Justification

16. The Wajir - Elwak road (A13) is part of the Isiolo - Mandera Road which is the major international link with the Republic of Somalia and Ethiopia. It is therefore vital that the road should meet minimum international standards and its importance from a security perspective cannot be over-emphasized. Key highlights of the expected project outcomes are presented below.

### **Improved Local and Regional Development and Trade**

17. The project road is located in the North-Eastern part of Kenya that has been identified by NETIP as an area experiencing a range of socio-economic development setbacks associated with low infrastructural development. Poor road conditions have also contributed to geographic and historical marginalization of the people in the project area. Construction of this road to an all-weather standard will open up North Eastern region of the country. In addition, considering that over 80% of the livestock in Kenya is found in arid areas, the Government, through the Arid Lands Resource Management Plan (ALRMP) II Strategic Plan, earmarked immediate attention to infrastructure development in North Eastern and other arid regions in the country.

18. At the local level, the population in the immediate project area mainly rely on livestock and trading. The economic potential of livestock keeping and trade is not met as transportation of products as well as materials and resources to support these economic activities is hampered by the poor road network in the region.

19. During the rainy season, the state of roads in the project area worsens as the roads become impassable thus making travel time longer and further increasing business costs due to high transportation costs and slow movement within the region. Accordingly, this project falls within the overall Government strategy for economic recovery and poverty eradication in the North-Eastern Region of the Republic. The road project will be of importance to the area as it is expected to bring about the following changes:

- Open up the Counties of Mandera and Wajir in the short term, but in the long run also connect Mandera and Western Somalia to the LAPSSET corridor which will lead to economic growth, employment generation and eventually poverty reduction; in the area;
- Reduce production and marketing costs, particularly in the livestock sectors, through faster delivery of livestock produce to the markets. This is expected to have a positive trickle-down effect to the economic potential of the area with regard to improvement of incomes from livestock keeping; and
- Reliability and accessibility of extension services will be increased and available at low costs, which have been hampered by poor road condition due to fast and efficient transportation of goods and services in and out of the project area.

### **Improved Security**

20. Security is still an issue of concern in most parts of this region and a bitumen road would enable the Government security personnel to offer rapid response whenever peace is threatened, either from within or from across the Kenya/Somalia or Kenya/Ethiopia borders.

21. There have been several incidences of terrorist's attacks in the area but partly due to bad roads, more often than not, the security forces are not adequately facilitated to provide rapid response. At the village level therefore, the project will contribute to improved security in the area as the villages will be easily accessible by road in the event of security distress.

### **Linkage to the Development of the LAPSSET Corridor**

22. With regard to Kenya's Vision 2030, the NETIP will link Wajir and Mandera counties as well as western Somalia to the LAPSSET Corridor. This component of the project will therefore also contribute to the actualization of the goals of the LAPSSET Project.

## **1.8 ESIA Methodology**

### **1.8.1 Inception Stage**

23. 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 in March 2019.

#### **1.8.1.1 Desktop Review**

24. Desktop review of design consultant ESIA 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:

- Draft ESIA Study Reports for Design Review of the Wajir – Kotule and Kutulo - Elwak Road, December 2018 prepared by GIBB Africa Ltd;
- Final Draft RAP Study Reports for Design Review of the Wajir – Kotulo and Kutulo - Elwak Road, December 2018 prepared by GIBB Africa Ltd;

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

- First County Integrated Development Plan 2013-2017 – Wajir County;
- First County Integrated Development Plan 2013-2017 – Mandera County;
- The 2009 Kenya Population and Housing Census – Population Distribution by Administrative Units. Volume 1, August 2010 prepared by KNBS;
- Exploring Kenya's Inequality: Pulling Apart or Pooling Together? Prepared for the Mandera County in 2013 by Kenya National Bureau of Statistics (KNBS) and Society for International Development (SID);
- Project Information Document / Integrated Safeguards Data Sheet (PID/ISDS). Prepared on 11 October 2016 for the World Bank North Eastern Transport Improvement Project (P161305).

25. 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.

#### **1.8.1.2 Site Reconnaissance**

26. The reconnaissance visit was undertaken from 1<sup>st</sup> to March 7 to 11 September 2017. 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.

### 1.8.1.3 Stakeholder Consultations

27. In addition to stakeholder consultations that had been carried out by the previous consultant, the consultant reviewing the ESIA also conducted other Stakeholder consultations along the road as shown in the Table below. The consultations were mainly conducted with the help of the local chiefs who would play an active role in community coordination during the project implementation.

## 1.8.2 ESIA Study Phase

### 1.8.2.1 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 19 October and 4 November 2018. In addition, more data was collected during the ESIA review stages conducted in December 2018, February, and April 2019.

#### **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.
- Data samples were collected from all different locations spread along the project area from Wajir to Elwak. A review of previous data collected indicated that a total of 944 households' information was collected through questionnaires as part of the ESIA study along the project area of influence. In addition to that, the review team collected additional 102 household questionnaires along the road to compare the results from the previous study.
- The household survey was carried out between 21<sup>st</sup> February 2018 to 4<sup>th</sup> March 2018 for Wajir – Kotulo section, and 20 October 2018 and 3 November 2018 for Kotulo – El Wak section with the help of the local chiefs, village elders and enumerators from the locality. The ESIA review team also conducted additional sample surveys between December 2018 and April 2019.

#### **Stakeholders' consultations and public meetings**

28. Stakeholders' consultations and public meetings were conducted through key informant interviews (KII), meetings with institutional representatives and community meetings as elaborated in Chapter Six. Stakeholders' consultations were undertaken between 29<sup>th</sup> November and 7 December 2018

by the design consultant. Other stakeholder meetings were held in December 2018, January 2019, February 2019, and April 2019 during updating of the ESIA by the independent consultant. See chapter 5 for more information on consultations.

### 1.8.2.2 Baseline Ecological Environment

29. 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 (Draft Final Report, June 2018) for the Preliminary and Detailed Design of Wajir - Mandera Road (B9).

Parameter under review includes:

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

### 1.8.2.3 Assessment of Project Impacts

30. 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).

#### 1.8.2.3.1 Impact significance

31. 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.

### **1.8.2.3.2 Impact identification, Analysis and Mitigation Measures**

32. 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.

#### **1.8.2.1 Preparation of an ESMP and ESMoP**

33. 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.

34. 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.

### **1.8.3 Constraints and Limitations**

35. This report presents information that was reviewed to ensure that the content meets the requirements of the WB and the Client, and relied on the data and information gathered through various sources and approaches mentioned above previously and sampled during the review.

36. The biggest challenge experienced during the assignment was insecurity in the project areas, which posed critical dangers to the study team. During the study, there were several instances where the security personnel advised the team not to visit Kotulo towns (in Wajir and Mandera) due to warnings of attack from terrorist groups in the area. In addition, data collection in this area was difficult because the security team would not allow a long stay in one area due to security threats. On two occasions, the security personnel who were escorting the study team advised the team to suspend works before meetings could be held with communities in the area along the stretch between Kotulo Wajir and Duse in Mandera County.

37. However, a drive through along the project indicates the socio-economic, environmental and ecological information and conditions are more or less similar for the whole section of the road, and the team is confident the information collected was adequate to enable a development of an ESIA, with proper mitigation measures that will be effective during the project implementation. Analysis of the findings and issues presented by the stakeholder and community engagement programs were also found to be a representative of the general views and perceptions of the proposed project.



## 2 RELEVANT POLICY, LEGAL AND REGULATORY FRAMEWORK

### 2.1 Policy Framework

#### 2.1.1 Environment Policy, 2014

38. 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**

39. 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.

#### 2.1.2 Vision 2030

40. 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.

41. 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-eastern parts of Kenya constraints the social and economic development prospects of the area. The project road is under the North Eastern Transport Improvement Project (P161305) – NETIP under which the government intends to improve the road from Isiolo to Mandera to bitumen standards. This road section is also part of Garissa – Mandera Road, which is listed as part of the flagship projects in the latest briefing under Vision 2030.

42. 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**

43. The improvement of the existing ESIA for the Wajir – El Wak Road aims at observance of the principle policy directives of Vision 2030.

### **2.1.3 National Land Policy, 2009**

44. 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.
45. 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***

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

### **2.1.4 Integrated National Transport Policy (INTP), 2009**

47. 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.
48. 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***

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

### **2.1.5 The National Biodiversity Strategy, 2007**

50. 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**

51. 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.

**2.1.6 Gender Policy, July 2011**

52. 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.

53. 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 Wajir and Mandera is a concern as most of them are usually housewives as identified in the counties' CIDPs.

**2.2 Legal Framework****2.2.1 The Constitution of Kenya, 2010**

54. 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.

55. "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".

56. 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.

57. 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.

## **2.2.2 Environmental Management and Coordination Act (EMCA)**

58. 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.
59. 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.
60. 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.
61. This ESIA Report has been prepared in accordance with the provisions of EMCA. The following regulations under EMCA operationalize various provisions under the Act.

### **2.2.2.1 Environmental (Impact Assessment and Audit) Regulations, 2003 and Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2016**

62. 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.

### **2.2.2.2 Environmental Management and Coordination (Air Quality) Regulations, 2014**

63. 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.
64. 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.

### **2.2.2.3 Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009**

65. 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.

66. 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.
67. Measures shall be put in place to ensure the permissible noise levels by the regulation are not exceeded by the project road implementation activities. These regulations are summarised in the table below.

**Table 2-1 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 Inside bedroom	Speech interference Sleep disturbance	35 30	16 8	-	-
Outdoor bedroom	Sleep disturbance	45	8	35	-
School classroom Indoor	Speech and communication	35	During class time	Day 60 Night 35	14 14
School playground outdoor	Annoyance External	55	During play	45	Day
Hospital, treatment room indoor	night time daytime	30 30	8 16	-	-
Industrial, Commercial and traffic areas	Hearing impairment	70	24	60	12
Ceremonies, festivals entertainment events	Hearing impairment	100	4	-	-

#### 2.2.2.4 Environmental Management and Coordination (Waste Management) Regulations 2006

68. 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.
69. 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.

#### 2.2.2.5 Environmental Management and Coordination (Water Quality) Regulations 2006

70. 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 summarised in the table on the next page.
71. 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 in form 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.

### **2.2.3 Water Act, 2016**

72. 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.
73. 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.
74. 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.

Table 2-2: 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 20° 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
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	-	+/- 2° of the ambient temperature of the sewer	+/- 2° C of ambient temperature of the water body
Oil/ grease	Mg/l	No trace	Nil/ no trace
Toxic substances	Mg/l	Nil	Nil
Odour	-	-	Not objectionable to the nose
Colour	-	-	Not objectionable to the eye or not to exceed 5 mg Pt/l

#### 2.2.4 Kenya Roads Act, 2007

75. 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.
76. 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).
77. **Part IV**, Sections **22 to 28** provides for the powers of the authority as a statutory body to; -
- a) Maintain, operate, improve and manage the roads under its jurisdiction;
  - b) Construct new roads;
  - c) 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.
78. **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

79. 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.

#### 2.2.5 Traffic Act, 2014

80. 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.



## 2.2.6 Occupational Health and Safety Act (OSHA), 2007

81. 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.

82. 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

## **2.2.7 Subsidiary Legislations under OSHA Chapter 514**

### **2.2.7.1 The Factories and Other Places of Work (Hazardous substances) Rules 2007**

83. 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.

84. 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.

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

85. 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.

86. 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 emitting noise. This

legislation provides mitigation to excessive noise levels especially those beyond 85 dB(A) at the workplace.

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

87. 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.

88. 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.

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

89. 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.

90. 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.

#### **2.2.8 Employment Act, 2007**

91. 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.

92. 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.

### **2.2.9 Work Injury Benefits Act (WIBA) Chapter 236**

93. This Act provides for compensation to employees for work related injuries and diseases contracted in the course of their employment and for connected purposes.
94. 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.

### **2.2.10 Wildlife Conservation and Management Act, 2013**

95. 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).
96. Although there is no legally protected wildlife area in the immediate project alignment, sections of the road traverse areas with wild vegetation and inhabited by wildlife species. The KWS office in Wajir County have identified high wildlife concentration areas that include Lafaley, Four Miles and Tarbaj. These areas are of interest with regard to wildlife conservation and protection.

### **2.2.11 Public Health Act, Chapter 242**

97. 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.
98. 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.

#### **2.2.11.1 The Public Health (Drainage and Latrine) Rules**

99. 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.
100. 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.

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

#### **2.2.12 HIV/AIDS Prevention and Control Act, 2006**

102. 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.

103. 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.

#### **2.2.13 National Construction Authority Act, 2011**

104. 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.

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

#### **2.2.14 Land Act (No.6 of 2012)**

106. 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.

107. 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.

#### **2.2.15 The National Lands Commission Act, 2012**

108. 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.

109. 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.

110. 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.

111. 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.

### **2.2.16 The Prevention, Protection and Assistance to Internally Displaced Persons and Affected Communities Act, 2012**

112. 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;

113. 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.

114. 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.

115. 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.

116. The proposed project will result in some unavoidable land take and displacement of individuals. The RAP study and implementation shall consider provisions of this Act in addition to the relevant World Bank OP/BP 4.12 Involuntary Resettlement.

### **2.2.17 The Land Registration Act, 2012**

117. 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.

118. 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.

### **2.2.18 Land and Environment Court Act, 2012**

119. 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**

120. 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.

### **2.2.19 Land Laws (Amendment) Act, 2016**

121. 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

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

### **2.2.20 Physical Planning Act, 2007**

123. This is the main Act that governs land planning and it is a 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.

124. 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.

### **2.2.21 Climate Change Act, 2016**

125. 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**

126. KeNHA will be required to work closely with Wajir and Mandera 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.

#### **2.2.22 Urban Areas and Cities Act, No. 13 of 2011**

127. 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 neighbourhood, and to prescribe the conditions subject to which businesses, factories and workshops shall be carried on.

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

#### **2.2.23 The National Museums and Heritage Act (2006)**

129. 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.

130. 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.

#### **2.2.24 Energy Act, 2006**

131. 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”.

132. This Act also creates the Energy Regulatory Commission (ERC) 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.

133. 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.



### 2.2.25 Mining Act, 2016

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

135. 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

### 2.2.26 Intergovernmental Relations Act

136. 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.

137. 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

138. This project section starts in Wajir town in Wajir county and terminates at El Wak in Mandera county. It will be necessary for KeNHA to work with both county governments consistently throughout the project period as the act may require.

## 2.3 Institutional framework

The main administrative structures are described in the following sections.

### 2.3.1 The Ministry of Transport, Infrastructure, Housing and Urban Development

139. 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

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

### 2.3.2 Kenya National Highways Authority

141. 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).

142. 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

143. 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

144. 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.

### **2.3.3 The National Environment Management Authority**

145. 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.

146. 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**

147. 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.

### **2.3.4 Water Resource Authority (WRA), formerly WRMA**

148. 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**

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

### **2.3.5 National Transport and Safety Authority**

150. 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**

151. 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.

152. Similarly, KeNHA should liaise with NTSA in conducting road safety education along the project corridor, given the area has had no bitumen standard road before this project.

### **2.3.6 Kenya Roads Board**

153. 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**

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

### **2.3.7 Wajir and Mandera County Governments**

155. 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.

156. Wajir and Mandera 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.

157. 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**

158. The county government 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.

### 2.3.8 Directorate of Occupational Safety and Health Services (DOSHS)

159. 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

160. 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.

## 2.4 World Bank Safeguard Policies

161. The following safeguards policies are triggered for NETIP:

- OP/BP 4.01 Environmental Assessment;
- OP/BP 4.04 Natural Habitats;
- OP/BP 4.11 Physical Cultural Resources;
- OP/BP 4.10 Indigenous Peoples;
- OP/BP 4.12 Involuntary Resettlement;

162. The safeguard policies are intended to reduce and manage risk and impacts for the Borrowers' and the World Bank 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.

### 2.4.1.1 OP / BP 4.01 Environmental Assessment

163. 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. And further advances integration of environmental and social aspects of project into the decision-making process. OP/BP 4.01 covers impacts on the natural environment (air, water and land); human health and safety; physical cultural resources; and trans-boundary and global environment concerns.

#### Relevance

164. In accordance with the Bank's Project Information Document, NETIP has been assigned as Category A 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

165. 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 the disclosure requirements met.

#### 2.4.1.2 OP/BP 4.04 Natural Habitats

166. The policy promotes developments that are environmentally sustainable by advancing the protection, conservation, maintenance, and rehabilitation of natural habitats and their functions. Natural habitats<sup>4</sup> are diverse including terrestrial, freshwater, coastal, and marine ecosystems. Due to human activities, these habitats may be modified; nonetheless the remnants may still support critical ecosystem functions and harbor native species. The Bank recognizes that environmentally sustainable development can enhance natural habitats through conservation practices that apply a precautionary approach.

##### **Relevance**

167. This policy is triggered by the project because the project road traverses a mixed-use arid and semi-arid area, where natural habitats are present. The dominant natural habitat trees in the project area is the Acacia-Commiphora thorn bush. In addition, the project Project passes a wildlife dispersal area/ wildlife migratory routes for various species including giraffes, birds, hyenas etc. Some of the wildlife (such as the Lesser Kudu) relies on Acacia-Commiphora habitats and rarely moves from cover but avoids open spaces and long grass. Significant degradation of such habitats may lead to population decline or local extinction of such species that are already listed in the IUCN RedList database to be of conservation concern.

#### 2.4.1.3 OP/BP 4.10 Indigenous Peoples

168. This policy aims to ensure any project development fully respect the dignity, human rights, economies, and cultures of Indigenous Peoples; thus, the need for prior and informed consultation. This will assist in avoiding potentially adverse effects on the peoples' communities; or minimize, mitigate, or compensate for such effects. Some of the impacts associated with indigenous people include loss of identity, culture, and customary livelihoods, as well as exposure to disease. Impacts can complicate the gender and intergenerational issues among the affected. Moreover, as part of the national social groups, indigenous peoples are frequently among the most marginalized and vulnerable segments of the population.

169. This policy is triggered by the project because Wajir and Mandera Counties, where the project is located, are dominated by Somali people that have preserved their pastoralist culture while maintaining a nomadic lifestyle. The area is well known to have the Somali clans Garre, Murulle, and Degodia (in Mandera County) and Ogaden, Ajuran and the Degodia (in Wajir County), among others who are considered as marginalized groups. A Social Assessment will be carried out for the project to determine how the communities will benefit from the project benefits.

#### 2.4.1.4 OP/BP 4.11 Physical Cultural Resources

170. The Policy defines physical cultural resources as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above or below ground,

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<sup>4</sup> Natural habitats are land and water areas where (i) the ecosystems' bio-logical communities are formed largely by native plant and animal species, and (ii) human activity has not essentially modified the area's primary ecological functions.

or under water. Their cultural interest may be at the local, provincial or national level, or within the international community (The World Bank Group, 2017).

171. Along the project road alignment, the following features of local cultural significance were identified through consultations with the community members and key informants:

- Within Wajir town (Km 0+000 to Km 0+600) There is a reported heritage site (hosting wells, World War II bunkers and religious activities) protected by the National Museums of Kenya (NMK) within this section. However, official protection status is yet to be confirmed by NMK;
- At Tarbaj (Km50-53) a communal grave yard which had been used up to late 2017 was identified to be partly affected by the proposed alignment. Since exhumation is unacceptable by the community, a realignment of this section was recommended.
- At Elwak, the road alignment includes a bypass (Km173+700 – 175+400); where a communal grave yard which had been used was identified to be partly affected by the proposed alignment. Though no longer in use, realignment has been proposed to avoid the grave yard. Exhumation is unacceptable by the community.
- At Tarbaj (km 51), the project road passes through settlements and some proposed road alignment sections require land acquisitions where presence of religious places (Mosque) in the centres triggers the relevance of the policy.

172. This study has recommended realignment of the road to avoid and preserve the above features. In addition, a Chance Find Procedures has been provided in this report to manage previously unknown or any unprecedented Physical Cultural Resources that may be discovered during the project implementation.

#### 2.4.1.5 OP/BP 4.12 Involuntary Resettlement

173. This policy ensures that prior planning is done before any resettlement activities and subsequent implementation of the project. The policy (i) avoids or minimizes involuntary resettlement where feasible, exploring all viable alternative project designs; (ii) assists displaced persons in improving their former living standards, income earning capacity, and production levels, or at least in restoring them; (iii) encourage community participation in planning and implementing resettlement; and (iv) provide assistance to affected people regardless of the legality of land tenure.

174. 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, areas regarded as an important water source for the town during the dry season, and areas having cultural heritage significance and hosting mosques. To avoid or minimize impacts related to involuntary resettlement, a realignment for these areas have been proposed. 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 Wajir town, Lafaley, Hungai, Wargadud, Tarbaj and Kutulo Wajir, Kutulo (Mandera), Dimu, Garsesala, Dabasiti, Borehole-11 and Elwak. This and other realignments have necessitated the undertaking of a Resettlement Action Plan (RAP).

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

175. 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.

176. 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. 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.



### 2.4.3 Alignment of WB and Government of Kenya (GoK) Policies relevant to this ESIA

177. Both the World Bank 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	WB 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 OP 4.01, all projects under Category A 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	OP 4.01 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 WB will publish the report on the WB infoshop as part of the public disclosure	None

## 2.5 International Treaties and Conventions

178. 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.

179. 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:

### 2.5.1 The 1985 Vienna Convention for the protection of the Ozone Layer

180. 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**

181. 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.

### **2.5.2 The 1987 Montreal Protocol on Substances that Deplete the Ozone Layer**

182. The Montreal Protocol on Substances that Deplete the Ozone Layer was adopted on December 7 1987 and is a significant milestone in international environmental law. It came into force on January 1 1989 and ratified by Kenya on May 1 1989. 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**

183. 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).

### **2.5.3 The United Nations Convention on Climate Change (“1992 UNFCCC”)**

184. The objective of the 1992 UNFCCC is to tackle the negative effects of climate change. The Convention's 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).

185. 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**

186. 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 Gases leading to climate change.

### **2.5.4 The Kyoto protocol**

187. The Kyoto Protocol was adopted in December 1997 at the Third Conference of the Parties held in Kyoto. The Kyoto Protocol requires stronger commitments from Annex 1 parties to achieve quantified emission reductions within a specific timeframe. These commitments cover the six Green House Gases (GHGs) listed in Annex A of the Kyoto Protocol (Carbon dioxide, Methane, Nitrous oxide, Hydro chlorocarbons, Perfluorocarbons and Sulphur hexafluoride). Each Annex 1 party particular 'quantified emission reduction target' is listed in Annex B of the protocol.

188. Kenya's accession was presented on 25 February 2005 and the Protocol acceded on 26 May 2005.

**Relevance**

189. 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.

**2.5.5 Convention on Biological Diversity**

190. 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**

191. 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.

### 3 PROJECT DESCRIPTION

#### 3.1 Existing road condition

##### 3.1.1 Alignment and Geometry

192. The road is characterized by the following conditions;
- The road is on flat and rolling terrain;
  - The condition of the road alternates between earth and gravel surface between Wajir and El Wak. The road has a poor cross section with no proper drainage and the roadway is generally lower than the original ground level;
  - The carriageway width is not uniform and ranges from 7m to 12m. However, the formation is at least 10m over long sections of the road, with reduced sections where soil erosion is rampant, eg section between Km 146+000 - 147+500 in Dabasiti;
  - This road is characterised by local bends and detours occasioned by poor drainage and corrugations over gravelled sections;
  - The horizontal alignment from Wajir to Tarbaj (Km 51) is well engineered;
  - The horizontal alignment from Tarbaj to Kutulo (Km 119) is not clearly defined; and there are several detours on this section

##### 3.1.2 Existing Drainage Structures

193. Drifts and pipe culverts are the only drainage structures installed on the project road. Due to the flat terrain, the water courses crossing the road are shallow channels. Pipe culverts have been installed on the raised gravel sections while drifts have been provided at the shallow crossings. Most drifts are narrow but in fairly good condition except a few that have significant deformation and whose road fill approaches have been eroded.

194. The earth sections lack side drains and water runs on the surface. This makes the road impassable during the wet season. Side drains appear to have been constructed over gravelled sections but they have since silted up.

195. Due to flash floods that occur during the wet weather and the flat terrain in this area, it is necessary that the road be appropriately raised over the flat terrain to protect pavement from water damage. However, due to the long stretches involved, this must be coupled with cost considerations otherwise the project could become economically unviable.

##### 3.1.3 Existing Road Reserve

196. The project road has been reclassified to Class A13 that requires a road reserve of 60m as per the road design manual. The topographical survey conducted during the design review identified that the existing road reserve varies along the road, with some sections like Wajir town having at least 60m provision, while in other towns the road reserve is small to about 15 m (eg at Tarbaj, Hungai, Kotulo) due to encroachment.

197. In Elwak town, a bypass has been proposed maintaining the 60m road corridor whereas the spur road through Elwak town has been reduced to 40m corridor to minimize the demolition and compensation cost. However, this will require some land acquisition in some sections or realignment to avoid impacts on property located along the road reserve.

### 3.2 Design Speed and Standards

198. The terrain allows suitable design speed of 120km/hr along Wajir –Elwak road. The requisite geometric design standards for the project road are summarised in the Table 3-1.

**Table 3-1 Wajir-Elwak Road Design Standards**

Description	Wajir - Elwak
Terrain	Flat
Design speed (Km/hr)	120
Carriageway width (m)	6.5
Shoulder width (m)	1.5
Minimum horizontal radius (m)	1000
Maximum super-elevation	6%
Maximum grade	3%
Minimum lengths of sag and crest curves	240

### 3.3 Pavement Design

199. 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 3-2 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

### 3.4 Other design features

#### 3.4.1 Shoulders

200. 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 0.5m to accommodate guardrails in high fills i.e. where the fill is greater than 3m.

#### 3.4.2 Crossfalls and slopes

201. 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.

#### 3.4.3 Side drains and cut slopes

202. 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.

203. 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.

#### **3.4.4 Junctions**

204. A roundabout is the most viable junction at the start of the project. This will accommodate a transition from the Garissa end of the project and also allow the town's monuments to be retained for aesthetic and cultural reasons. Another roundabout with the A2 to Moyale is seen as the only viable junction type in Wajir. Another major junction on the route is Km 51 B9/D500 at Tarbaj. The junctions will be either Type B or C depending on the class of the minor road.

#### **3.4.5 Service, Loop and Market Roads**

205. 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.

#### **3.4.6 Bus Bays**

206. 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.

#### **3.4.7 Lorry Parking**

207. The improvement of Isiolo - Mandera road will be a part of key transportation corridor linking the north-eastern cities of Wajir and Mandera to key ports of Mombasa, Isiolo and Nairobi. Although the corridor currently is not attracting large number of long-distance traffic ferrying transit goods, it is expected than this will happen in future. These long-distance vehicles will compose of various trucks of various types, making long distance journeys over long time, which will require stopovers in major towns. It is therefore important for the project to designate and design special facilities for parking and resting.

#### **3.4.8 Road reserves**

208. The right of way is 60m and shall be cleared in its entirety for safety and security reasons. The minimum recommended road reserve of 40m will still require that a number of buildings on both sides of the road be demolished in most urban centres. Accordingly, the urban cross section has been amended to reflect the constrained road reserve of 21m.

### **3.5 Proposed General Works**

#### **3.5.1 Construction works**

209. The Wajir – Elwak Project Road covers approximately 175 km of single carriageway, two-lane 6.5 m wide, bitumen surfaced road with 1.5 m shoulders on each side. 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;
- Provision of road furniture e.g. signs, guardrails, marker posts, wire fencing, etc.;
- Operations ancillary to the main Works such as the construction of offices, laboratories and staff housing, accommodation works, diversion of services, the operations in quarries and borrow areas, the provision of water supply, the diversion of existing services.

### 3.5.2 Road Furniture and Ancillary Services

210. 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, 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.
- **Animal and Wildlife Crossings:** Since this is an area where communities livelihoods rely on livestock, and most of them are nomadic in nature, it is recommended that the signage will be installed at all towns and centres, and spread along the road project. Consultations with the local communities will also be necessary to identify key exact points or areas that will require signage. In addition, the wildlife crossings should be installed after consultation with KWS on major crossings that are known to be historically a crossing point for wildlife along the road.
- **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.

**NB:**

211. It is appreciated that the education level of the local communities in the region is low, and therefore, all road signs shall use pictorial or animated signage as much as possible to compliment written signage along the road project.

### 3.5.3 Temporary works

212. 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.

## 3.6 Material Investigations

### 3.6.1 Borrow Material

213. A total of 34 borrow areas have been investigated along the Wajir – El Wak Road. Summary details on these sites are presented in the **Table 3-3** below.

**Table 3-3: Material Sites**

Road Chainage	Material Description
MS-WML/1 (KM0+000) LHS	Predominantly silty gravel weathered coral limestone pebbles
MS-WMR/2 (KM0+000) LHS	Predominantly silty gravel within weathered coral limestone pebbles
MS-1R (KM9+700) LHS	Weathered silty calcerous gravel and sandy gravel
MS-1L (KM9+700) LHS	Weathered silty calcerous gravel with weathered sandy gravel
MS-2 (KM16+200) LHS	Weathered sandy gravel with traces of weathered silty gravel
MS-3 (KM20+900) LHS	Weathered sandy gravel with traces of weathered silty gravel
MS-4 (KM24+100) RHS	Weathered silty calcerous gravel with traces of weathered silty gravel
MS-4A Right (KM40+700) RHS	Weathered silty calcerous gravel
MS-5 (KM42+000) RHS	Iron stained weathered sandy gravel with traces of weathered quartzitic gravel
MS-5A (KM51+100) RHS	Iron stained weathered sandy gravel with traces of weathered quartzitic gravel
MS-5B Right (KM49+800) RHS	Weathered sandy gravel and weathered quartzitic sandy gravel
MS-5C Left (KM51+900) LHS	Weathered calcerous gravel and weathered quartzitic gravel
MS-5D Left (KM50+800) LHS	Not sampled
MS-5E Left (KM51+800) LHS	Iron stained weathered sandy gravel with traces of weathered quartzitic gravel
MS-6 (KM64+800) RHS	Weathered silty calcerous gravel, weathered coral limestone rocks and fine-grained mudstones
MS-6B Right (KM66+600) RHS	Weathered calcerous gravel and weathered mudstones mostly over weathered coral limestone rocks



Road Chainage	Material Description
MS-6A (KM63+500) LHS	Weathered silty calcerous gravel, weathered coral limestone rocks and weathered fine mudstones
MS-7 (KM69+200) RHS	Weathered silty calcerous gravel, weathered coral limestone rocks and grained mudstones
MS-8 (KM77+800) RHS	Weathered coral limestone rocks, weathered silty calcerous gravel and fine-grained mudstones
MS-8A Right (KM83+000) RHS	Weathered coral limestone rocks, weathered silty calcerous gravel
MS-8B (KM83+500) RHS	Weathered calcerous gravel
MS-9 (KM97+800) RHS	Weathered silty calcerous gravel and fine-grained pebbles
MS-10 (KM106+300) RHS	Weathered silty calcerous gravel with traces of quartzitic gravel
MS-11 (KM106+300) RHS	Weathered silty calcerous gravel with traces of quartzitic gravel
MS-11A Left (KM111+600) LHS	Weathered calcerous gravel and weathered quartzitic gravel
MS-11B Left (KM112+500) LHS	Weathered calcerous gravel with traces of weathered fine coral limestone rocks
MS-12 (KM119+700) RHS	Weathered silty calcerous gravel with traces of quartzitic gravel
MS-13 (Km. 130+300 - 0.1 Km RHS)	Weathered silty gravel with traces of calcerous gravel.
MS-13A Right (Km. 132+000 – 180m LHS)	Weathered calcerous gravel
MS-13B Left (Km. 132+700 – 0.1 Km LHS)	Existing, weathered calcerous gravel with traces of quartzitic gravel and weathered coral limestone rocks
MS-14 (Km. 141+250 – 0.2 Km LHS)	Used before, weathered sandy gravel with traces of silty gravel
MS-15 (Km. 147+000 – 0.1 Km RHS)	Weathered silty clayey gravel with numerous coral rock pebbles
MS-16 (Km. 165+150 – 0.2 Km RHS)	Weathered coral limestone gravel with traces of silty gravel
MS-17 (Km. 170 +250 – 0.35 Km LHS)	Weathered silty gravel with limestone pebbles

### 3.6.2 Rock Sources

214. Two potential stone sources have been identified from rocks outcrops along the project Road; at Km7 (RQ1), Km64.8 (RQ2) and at Km 170.25 (RQ3). The sources were accessible and samples were collected and analysed and found to be of good quality.

### 3.6.3 Sand Sources

215. In the Design review studies, two rivers with sand were sampled and analysed that is Takaba River (about 95Km to the north west of El Wak) and River Daua (two points at Rhamu and Handadu). 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.

### 3.6.4 Water for Construction

216. The project road traverses an area of arid/semi-arid climate, with low water availability. Water for human and livestock consumption along the project road is currently sourced from a few boreholes and water pans. These existing water supply points are located at selected centres and due to nature of water scarcity, the contractor will be required to find his own source of water for construction and not use already existing water sources.
217. The alternative sources of water include sinking boreholes to tap ground water, rain water harvesting during the wet seasons through construction of water pans, or damming of the seasonal rivers. Sinking of boreholes is considered the most feasible for the project, as the other alternatives would be expensive and would take too long to complete or gather enough water for the works. Sharing arrangements and handover of the water sources will have to be agreed upon during and after completion of the road project to avoid any conflict between the contractor and the local communities along the road project.

### 3.6.5 Use of Borrow and Quarry Sites

218. 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. All borrow and quarry sites will be used and rehabilitated as guided by this report, and following the conditions and requirements of NEMA.

## 3.7 Project Costs

219. The construction of the proposed road project is estimated to cost **KES 25 billion, including the cost of ESMP implementation**. This ESMP cost is provided in chapter 8 of this report.

## 4 ENVIRONMENTAL AND SOCIAL SETTING

### 4.1 Physical Environment

#### 4.1.1 Climate

220. The project road is within an arid and semi-arid region. The area experiences long rains in October-November-December (OND) and short ones in March-April-May (MAM) period with peaks in November and March. Mean annual rainfall is below 255mm. Largely, no rains occur in the period June to September and the moisture index is considered as arid.

221. Maximum temperature in Wajir and Mandera counties ranges from 30°C to over 34°C while minimum temperatures fall up to 18°C. Generally, the County has long daytime sunshine hours (about 11 hours) thus high evaporation rates.

#### 4.1.2 Geology and Soils

222. The geology of the project road is as represented in Table 4-1, below.

Table 4-1: **Geology**

Approximate Chainage (Km)	Age in Geological Column	Geological Description
0 - 66	Recent	Reddish brown sandy soils
66 - 70	Jurassic (callovian-Bathonian series).	Grey and faun generally non-oolitic limestones, calcites, mudstones, marls
70 - 75	Jurassic (callovian-Bathonian series).	Grey and faun oolitic limestones, calcites, mudstones, marls
75 - 80	Cretaceous (Marehan series)	Claystones and indurated sandstones
80 - 83	Jurassic (callovian-Bathonian series)	Grey and faun oolitic limestones, calcites, mudstones, marls
83 - 87	Cretaceous (Marehan series).	Claystones and indurated sandstones
87 - 115	Jurassic (callovian-Bathonian series)	Grey and faun oolitic limestones, calcites, mudstones, marls
115 - 119	Recent	Reddish brown sandy soils
120 - 125	Jurassic (callovian-Bathonian) series	Grey and faun oolitic limestones, calcites, mudstones, marls
125 - 132	Recent.	Reddish brown or grey saline clays with Kunkur limestone
132 - 158	Recent.	Reddish brown sandy soils
158 - 160	Triassic.	Cross bedded sandstones and quartzites.
160 - 174	Recent.	Reddish brown sandy soils
174- 175 + 400	Pleistocene.	Elwak series-Kunkur limestone.

*Source: Project Road Engineering Report, May 2018*

223. Abandoned excavated pits along the project road are an indication of material borrowing and quarrying for murrum and hard rock.

224. Soils are sandy from Wajir to Wargadud but become rolling from Wargadud to Kutulo. In particular, the soils are sandy loam to sandy clay loam extending from 1.0m up to 15m and very small rock out crops. Soils are sandy from Kutulo to Elwak. In particular, the soils are sandy loam to sandy clay loam extending from 1.0m up to 15m with very small rock out crops. According to

the Transport and Road Research laboratory (TRRL) Report 706 classification, the soil drainage characteristics of the project area are presented in Table 4-2.

**Table 4-2 Soil Permeability Classification**

Soil Class	Description
Impeded Drainage	Very low permeability Clay soils with high swelling potential Shallow soils over largely impermeable layer, very high-water table
Slightly Impeded Drainage	Low permeability Drainage slightly impeded when soil fully wetted
Well drained	Very permeable Soil with very high infiltration rates such as sands, gravels and aggregated clays.

Source: Project Road Engineering Report, May 2010

225. Along the project road, the problem of soil erosion was observed and this could be attributed to:

- Run-off from blockage of culverts or lack of drainage facilities;
- Lack of scour checks on the side drains;
- Animal activities such as wear and tear caused by the movement of livestock on tracks within road embankments.

226. During construction activities such as excavation and hauling of material from borrow pits and cuts for construction of embankments will also result in soil erosion to some degree (see plate 4-1).



*Gully formation adjacent to the project road*

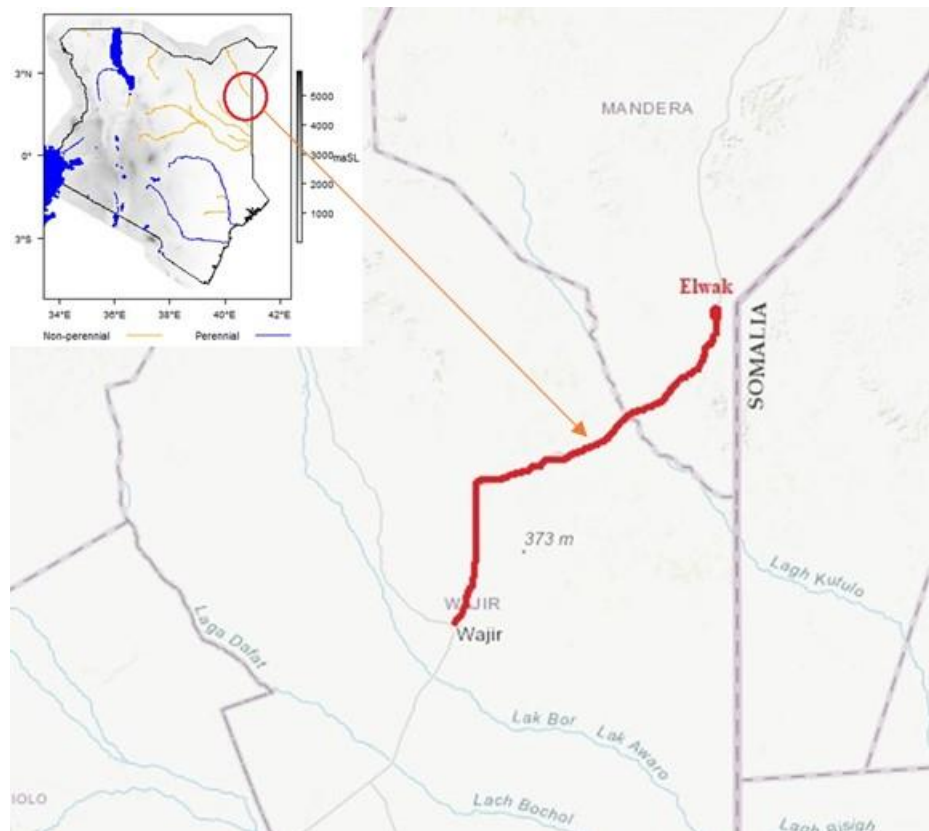
**Plate 4-1: Example of soil erosion**

#### 4.1.3 Topography and Drainage

227. The terrain of the project area is predominantly flat from Wajir up to Wargadud. Thereafter, the terrain is alternating from flat, undulating to rolling all the way to Elwak.

228. The project area is within the Northern Ewaso Ng'iro River Basin. There are no perennial rivers / streams crossing the project road; but there are laghas (seasonal streams/riverbeds that are dry except during the rain seasons in the area or upstream when some flow is experienced). The major lagha crossing the road is Kotulo lagha near Kotulo town Manderla (Km 119).

**Figure 4-1** Hydrology map of the area showing the main stream crossings



229. Seasonal stream networks were observed as either running to the road or across the road. Most of the stream channels had deposits of sand and twigs. The streams seemed highly modified by erosive flows that mostly occurred during the rainy seasons. Inspection of the channels indicated that the rivers channels were unstable and vulnerable to erosion. The gullies running parallel to the project road were also confirmed to be expanding in size. These sections require serious slope protection. Different vegetation was also observed to have been influenced by the flow regime. For example, places prone to flooding or regarded as a flood plain had different vegetation from other road sections.

**Figure 4-2 Drainage features along the project road**

	
<p>Erosion on the Right-hand side at km 139+220, Elevation 332 m.</p>	<p>A channel at km 139+300, Elevation 375 m.</p>
	
<p>Vegetation at km 146+000, Elevation 382 m.</p>	<p>Laga near Dabasiti (km148)</p>
	
<p>A Channel and a gully on the Left-hand side at km 131+500, Elevation 315 m.</p>	<p>Gully on the Left-hand side at km 149+400 (Dabasiti), Elevation 447 m</p>

#### 4.1.4 Flooding Conditions

230. Floods are destructive and can jeopardize road projects, especially where flood plains dominate long sections of the road and where the road alignment passes through major crossings. Wajir and Mandera counties are prone to flooding due to the topography of the counties during the rainy seasons. For example, at Kutulo market, floods are quite often and maximum water levels have ever reached 2m during the rainy seasons. At Dabasiti, flood water originates from hills bordering Kenya and Somalia. At Borehole 11, flood waters originate from three directions, first from hills at the border of Kenya and Somalia. Secondly, flood waters from Dabasiti and from Elwak area, causing major floods in the area.

231. Interviews with key informants and local residents proposed the following as potential long-term solutions to reduce flood intensities:

- Rehabilitation of water pans along major centres like Wajir should be desilted and expanded
- The current water ponds could be filled with earthworks during road construction.
- An existing dam at Falama area (Right Hand Side to Elwak at Borehole 11) is currently silted. They proposed desilting and extension so that some volumes could be directed there instead of flooding Borehole 11.
- Locals also proposed construction of a water pan at Kobo (an area between Dabasiti and Borehole 11) in order to store excess volumes that flow from Dabasiti to Borehole 11.
- A second water pan could be constructed between Elwak and Borehole 11 in order to dampen the aggressive flood intensities.

#### 4.1.5 Air Quality and Noise

##### a) Air Pollution

232. 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. 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 industrial activities that constitute major point sources of air pollution.

233. Random samples taken along the road indicates the particulate matter levels are below the occupational health standards (10mg/m<sup>3</sup>). There are lower levels in isolated sections of the corridor with low population and human activities with an average of 1 – 3.mg/m<sup>3</sup>. Sections of the corridor with high human habitation and economic activities, and particularly the town centres displays high concentration of particulate matter ranging between 3.5 – 7.5mg/m<sup>3</sup>, e.g. at Elwak, Tarbaj and Wajir town centres. A significant of the particulate matter is associated with traffic on the gravel road surfaces, especially during the dry seasons, where high concentrations were noted<sup>5</sup>.

234. 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

<sup>5</sup> 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.

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.

b) Noise Pollution

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

236. 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.

237. Spot checks of the area noise levels were done along the road and ranged between 0dBa to 67dBa, with the high noise levels observed at the town centre areas, eg at Wajir, Tarbaj, Kotulo, and Elwak. 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 3). 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 Ecosystem / Ecoregion

238. The general habitat characteristic of the project area closely resembles the Somali - Masai *Acacia – Commiphora* deciduous woodland/shrubland and thickets. In the Somali - Masai *Acacia – Commiphora*, the vegetation comprises of dense shrublands with height ranging between 3 and 5m but with scattered emergent trees of over 9m (White, 1983). The vegetation in this ecoregion are influenced by semi desert climate and edaphic conditions. Most of the plant species (especially along the project road) are deciduous shading their leaves simultaneously for weeks or months. They regain their leafy vegetation during the wet season. The most common of the *Acacia* and *Commiphora* species in the project area are spinous and depending on the aridity may be separated by open spaces allowing movement of game or used as cattle tracks. The dominant vegetation along the project road is wooded and bush grassland.

### 4.2.2 Habitats / Vegetation Communities

#### 4.2.2.1 Built Environment

239. Built environment presented human disturbed habitats and modified environments. The following observations were made:

- Spread of invasive alien species such as *Prosopis juliflora* and *Calatropis procera* (at Kutulo and Tarbaj) presented novel habitats that colonize native floral species.
- Houses and buildings and infrastructures (powerlines) within the trading centres provide nesting areas, perching space especially for avifauna habituated to human environments such as the sparrows (house), swifts, swallows, starlings (superb and fischer's), doves (laughing and ring-necked) and pigeons (feral).



- Garbage sites (at Kutulo) and degraded sites attract scavenging species such as marabou storks, brown-necked raven, black kites.
- Planted fence line (such as *Euphorbia turicalli*) and green space vegetation (such as *Azadirachta indica*) formed important roosting and perching spaces.

240. Disturbance of native vegetation especially importing fill material or use of contaminated machinery (with propagules) has potential (re)introducing non-native and invasive species. This could be the case with pockets of *Calotropis procera* and *Prosopis juliflora* sighted in some recently gravelled road sections. These invasive species are likely to spread linearly along the road or disperse to other areas with aid of dispersal agents such as wind and water (see plate 4-1).

**Plate 4-2** *Calotropis procera* an invasive species along the project road



#### 4.2.2.2 Woodland/shrubland associations

241. Natural vegetation in the project area is deciduous, shedding leaves simultaneously and flake their bark during the dry spell. Most woody species are stunted, developing multiple stems at ground level or forming low-lying canopies. Vegetation associations that were readily observed during the reconnaissance visit include *Acacia – Commiphora* (that formed the dominant association) and *Acacia senegal* (was patchy but occurred an interrupted). Others are *Combretum* mix, *Grewia - Terminalia* and *Commiphora - Boswellia*.

#### 4.2.2.3 Water and temporary Wetland Environments

242. The area has no permanent water bodies but some laghas have developed riverine vegetation comprised of *Acacia xanthophloea*, among others. Laghas are important wet season watering points for wildlife. Numerous excavated earth dams were spotted along the project road whose main purpose is to collect surface runoff after rains and provide to the nearest community settlements. Persistence of water in the dams depend on length of drought spells, amount of water collected and consumption levels. The dams at Wajir (Km 3) the Kutulo Dam at Km118 at Kutulo Manderu had water, thus was an attraction of a range of water birds such as Abdim's stork (an Intra-African migrant), common greenshank, marsh sandpiper, sacred ibis, great egret, African spoonbill, grey heron, spur-winged plover and marabou stork. Abdim's stork, African spoonbill, grey heron, great stork, and sacred ibis were rarity records in the project area [Zimmerman et al. 2001]). See plate 4-2.

		
<p>Kutulo Dam at KM 118 at Kutulo Mandera along the project road</p>		
		
<p>Grey heron and Sacred ibis on the dam shoreline</p>	<p>A congregation of marabou storks</p>	<p>Spur-winged plover on the shoreline</p>
		
<p>Abdim's Storks (an Intra-African Migrant) on flight</p>		<p>Abdim's Storks on the shoreline</p>

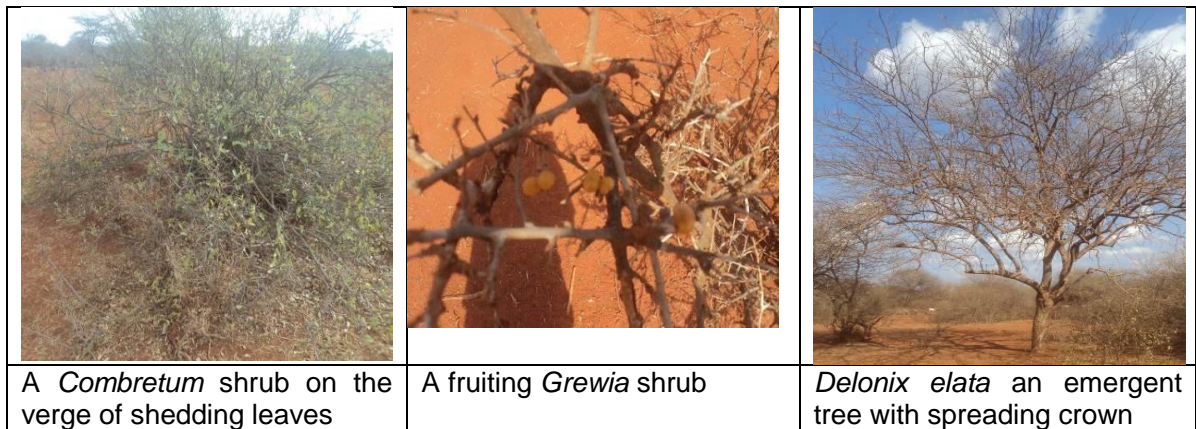
**Plate 4-3: Water Birds at Kutulo Mandera (KM 118)**

### 4.2.3 Wild Vegetation

#### 4.2.3.1.1 General vegetation

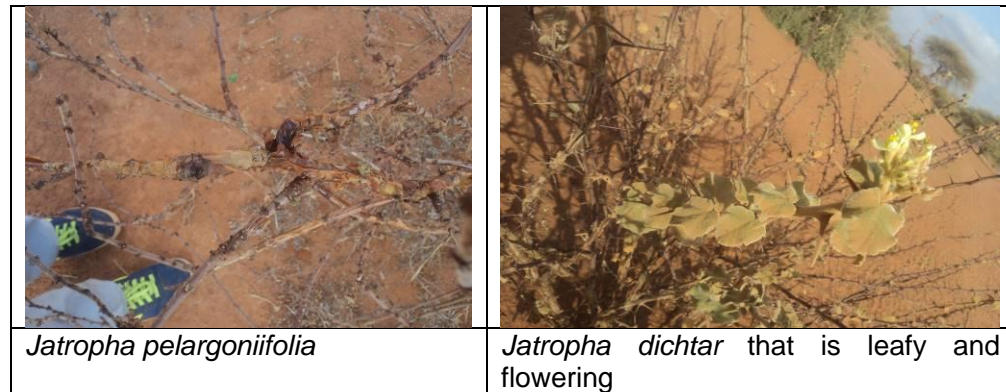
243. The vegetation type observed comprised of trees, canopy shrubs (forming scrublands), and climbers dominated by *Acacia* spp., *Commiphora* spp., *Maerua* spp., *Delonix elata*, *Grewia* spp., *Boswellia* spp., *Terminalia* spp., and *Combretum* spp.

244. Non-native species were also observed along the road corridor and include *Calotropis procera* and *Prosopis juliflora*. Such vegetation patches are an indication of human disturbance and the signs of vegetation succession in the affected localities.
245. *Acacia firozei*, a Kenyan endemic confined to North Eastern (Dharani, 2006) was observed along the project area. There is limited information about the conservation status for *A. firozei*. The species presence is associated and also is an indicator of areas with murram soil.
246. The site visit was conducted during the dry spell when most undergrowth layer had succumbed to grazing and harshness of the dry spell conditions. During wet season most species are expected to vegetate hence easily identified.



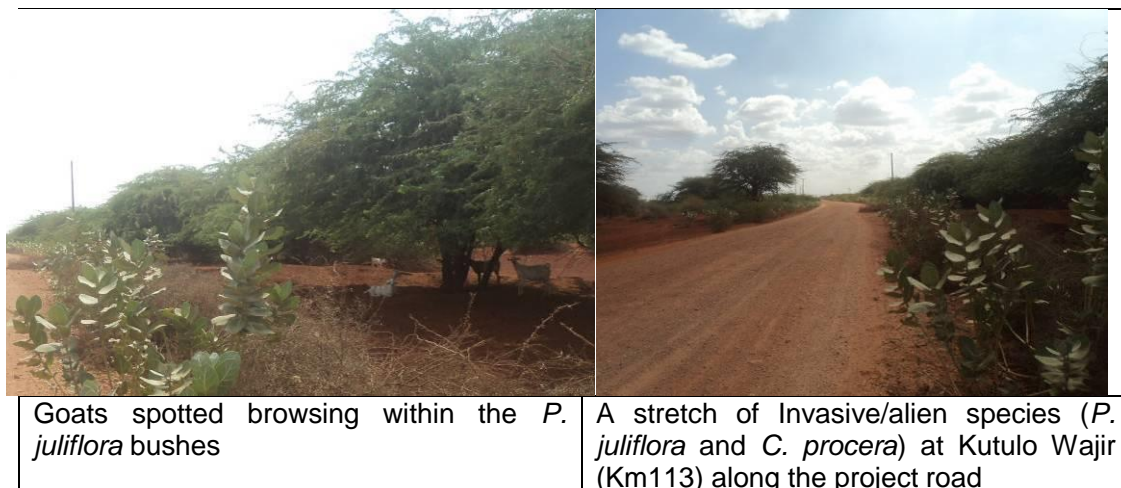
247. The *Jatropha* shrubbery occurred as patches along the project up to Tarbaj (km 51). The shrubs are characterized by dark reddish-purple bark, papery-peeling (to show the under bark). See Plate 4-5. The dominant species were *Jatropha pelargoniifolia* and *Jatropha dichter*. The species are easily differentiated by the presence/absence of spines. *J. pelargoniifolia* spinous spreading throughout the stem. The local community is known to utilise stem juice from the *Jatropha* species. Stem juice from *J. dichter* is used as eyedrops; while that of *J. pelargoniifolia* is applied on wounds. The shrubbery provided the necessary ground cover for bare sandy areas that appeared to hardly support other woody species. During the survey period, the Somali Ostrich were spotted frequenting the shrubbery.

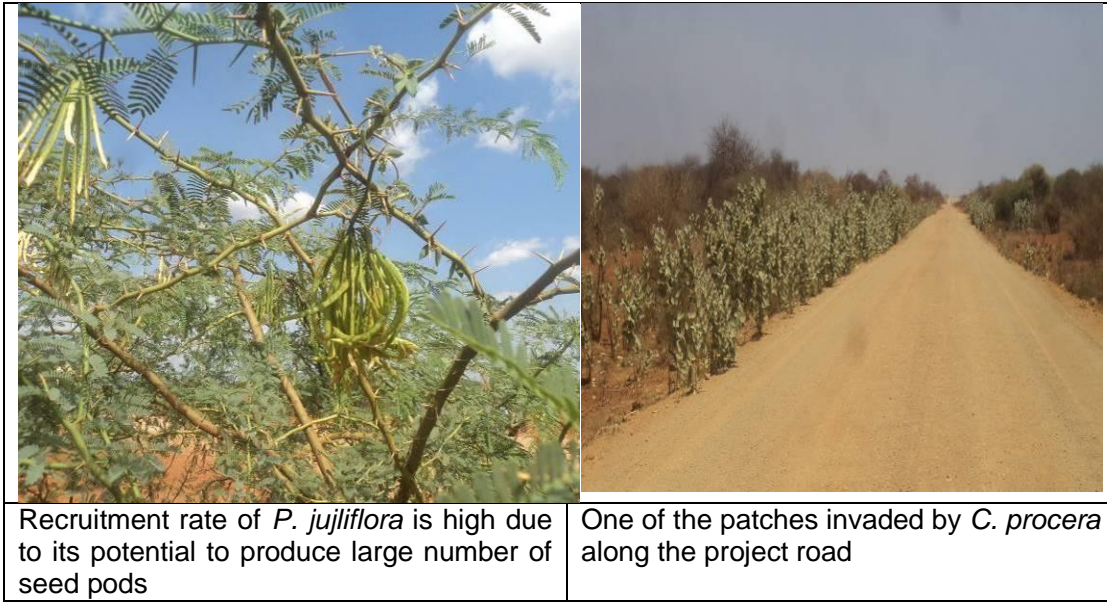




#### 4.2.3.1.2 Novel Habitats

248. These vegetation habitats occurred linearly along the project road signifying secondary succession of the natural vegetation and the introduction of alien/invasive species as well as their aided dispersal due to human activities or translocation along water corridors. Invasive/alien species (mainly *Prosopis juliflora* and *Calatropis procera*) occurred in isolated patches along the project road and this could be an indicator of the intense human activities and other habitat management practices that are leading to loss of cover of native vegetation such as urbanizing (in Wajir Town Km 0+000 to Km 4+000, Kutulo, Tarbaj Centre, Hungai Centre), surrogate or alternative forage for livestock (especially during prolonged drought) leading to endozoochorous seed dispersal (Km 112+500 to Km 113+100), road maintenance using equipment contaminated with propagules etc. See plate 4-6.





#### 4.2.4 Wildlife

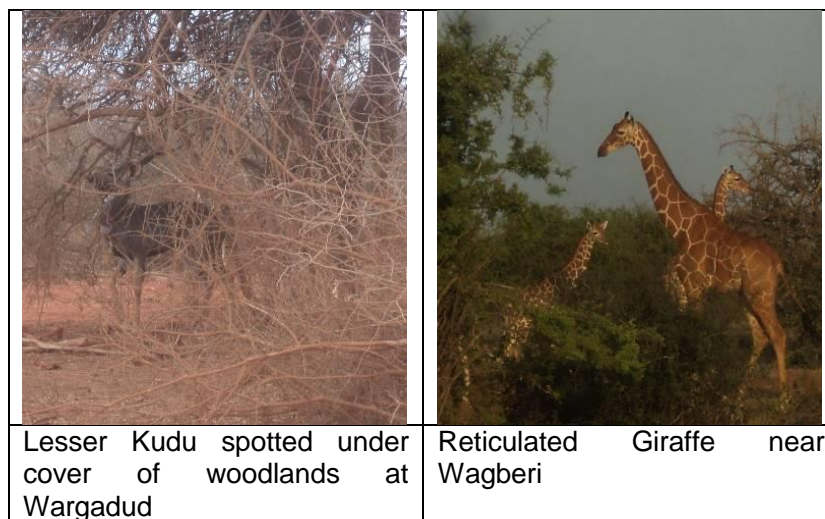
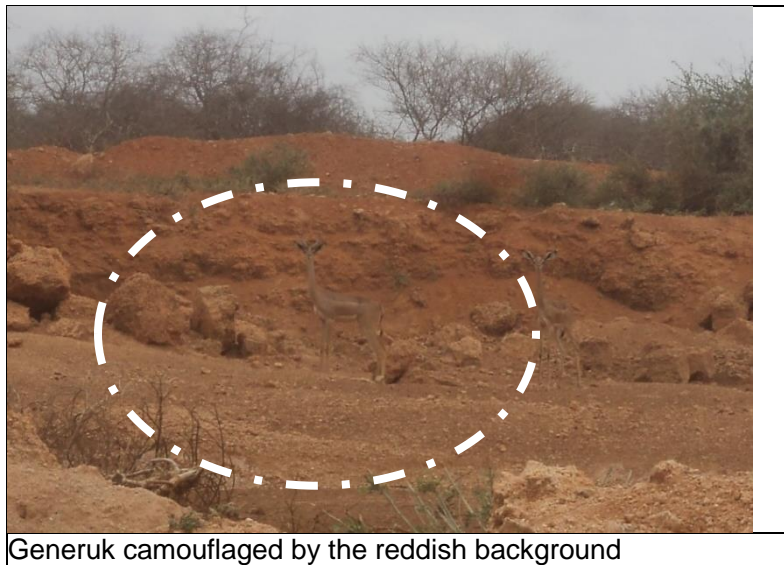
##### 4.2.4.1 Mammals

249. Mammals spotted during the site visit include dik-dik, gerenuk, impala, grant gazelle, reticulated giraffe, ground squirrel and lesser kudu (see plate 4-2). The lesser kudu and gerenuk feature in the International Union for Conservation of Nature (IUCN) Redlist database as Near Threatened and therefore are of conservation interest. Lesser Kudu is also listed as Vulnerable in the Sixth Schedule of the Wildlife Conservation and Management Act 2013. The Act also lists African wild dog, elephants, striped hyaena and leopard as endangered.

250. Giraffe presence was high in areas with tall *A. tortilis* trees. At their height, has few herbivores competing for browse of *A. tortilis* crowns. During project interviews, KWS indicated that there were areas of high wildlife concentrations along the road that are of conservation interest. For instance, high concentrations of reticulated giraffes occur in Wagberi, Lafaley, Tarbaj, El Noor and Four Mile. However, these areas are not designated as conservation areas. In addition, the wildlife along the project road do not have specific crossings that they use, unlike elephants which are known to have specific migration routes.

251. Observations of giraffe herds along the project road were made in the morning (up to 10am) and late evening (around 4pm). During the day, they receded in the woodland interiors depicting higher nocturnal movements/browsing than diurnal. Giraffes prefer to browse at night because vegetation is covered with dew reducing its water demands.

**Plate 4-4 Mammals in the IUCN RedList Database**



**Plate 4-5: Mammal Species**

**4.2.4.2 Herpetofauna**

252. A total of 35 herpetofauna are known to exist along the proposed project area. Out of these, 2 species of tortoise, 12 species of lizards and geckos, chameleons (2), snakes (17), frogs (3) and one species of squeckers.

253. The rock python, puff adder and the flap necked chameleon are among the herpetofauna known to occur in the area. The rock python is classified as endangered while the flap-necked chameleon, savanna monitor lizard and puff adder are classified as protected reptiles by the Wildlife Conservation and Management Act 2013.

254. The Red Headed Rock Agama was confirmed present in the project area. Red headed rock agama is listed as an invasive species.

#### 4.2.4.3 Avifauna

255. Birds identified during the reconnaissance visit include:

- White Headed Mousebird
- Eastern Pale Chanting Goshawk
- Somali Golden-breasted Bunting
- White-bellied Go-away Bird
- Vulturine Guineafowl
- Fan-tailed Raven
- Black Kite
- Superb Starling
- Fischer's Starling
- White-headed Buffalo Weaver
- White-headed Buffalo Weaver
- Crested Bustard
- Sacred Ibis
- Black-faced Sandgrouse
- African Mourning Dove
- Laughing Dove
- Red-eyed Dove
- Namaqua Dove
- Common Drongo
- Marabou Stork

Some of the general macrofauna are presented in Plate 4-3.

#### Plate 4-6 General Macrofauna



Vulturine guinea fowl (in the Family: Numididae) are adapted to dry land conditions. This species move in flocks (gregarious except when breeding) as seen along the project road



Isabelline Wheatear

Grey Wagtail

Both species are *Palaearctic Migrants*, their passage period is October - March



Somali Ostrich at Lefaley, Listed by the IUCN Database as Vulnerable

#### 4.2.5 Wildlife Safety and Crossings

256. The project road is likely to experience high traffic and increased vehicle speeds at operation phase, this will increase concerns on wildlife safety among species fond of criss-crossing the road. Wildlife safety concerns arise because:

- Some of the wildlife present in the area are gregarious (e.g. guinea fowls, hyena and giraffe) move in numbers, which may result in mass fatalities in the event of run over by vehicles;
- In the natural habitats, some of the species have already established territorial ranges adjacent to the project and are likely to have frequent movements to the road. Dik dik, impalas and gerenuks occur in high numbers and are territorial. Presence of fresh dung piles in the proximity to the project road corridor was an indication of territorial occupation;
- Nocturnal species criss-crossing the road at night may fall victim due poor visibility of glares by vehicle headlights.

257. During field surveys, it was observed that wildlife movement was influenced by availability of suitable forage/prey and water as well as human avoidance. Interviews with KWS noted that access to water resources (watering points) along the road contributed to most of the human-wildlife interactions. These areas with watering points were also considered to have high wildlife concentrations. All the water resources (earth dams and pans) are located near town centres along the project road. Nonetheless, areas with dominant cover of tall *Acacia tortilis* at Wajir Town (Km 3) up to Tarbaj (Km 50) had a high concentration of giraffes relative to the neighbouring areas.



Giraffes criss-crossing the project road at the outskirts of Wajir Town (KM 3)



**Plate 4-7: Wildlife Movement along the project road****4.3 Social Environment****4.3.1 Administration**

258. The project is located in Wajir and Mandera Counties, traversing through several administrative areas as presented in Table 4-3 below.

**Table 4-3 Administrative Areas**

County	Sub County	Division	Wards	Villages
Wajir	Wajir East	Wajir Central	Wagberi	Wagberi
		Tarbaj	Tarbaj	Tarbaj
		Kutulo (Wajir)	Kutulo	Kutulo
			Lafaley	Lafaley
			Wargadud	Wargadud
Mandera	Mandera Central	Elwak	Elwak Town	Elwak Town
		Kutulo	Borehole 11	Borehole 11
			Dabasiti	Dabasiti
			Garsesala	Garsesala
			Kotulo	Kotulo

Source: Wajir and Mandera CIDPs, 2018-2022

**4.3.2 Population**

259. The Kenya Population and Housing Survey report (KPHC) 2009 showed that Mandera County had a population of 1,025,756 persons. This comprised 559,943 males (54.6%) and 465,813 females (45.4%). The county's population was projected to be 1,399,503 persons, comprising 763,966 males and 635,537 females in 2017. It was also projected that the population would be 1,699,437 persons comprising 927,695 males and 771,742 females in the year 2022, based on annual growth rate of 3.96%<sup>6</sup>. The county was projected to have a population density of 54 people per square kilometre in 2017.

260. The population of Wajir county according to the Kenya 2009 Population and Housing census indicate that the county had a total population of 661,941 persons. This comprised of 55 percent male and 45 percent females. The population was projected to 852,963 and 1,000,397 in 2018 and 2022 respectively.

261. The county has an inter-censal growth rate of 3.22 per cent which is higher than the national population growth rate of 3.0 per cent (First CIDP 2013–2017, Wajir County). Considering Wajir county population growth rate, the projected population for Wajir East Sub County in 2018 is 157,952 people.

262. Wajir and Mandera Counties has a child rich population structure, where 0-14 year olds constitute 52% and 54% of the total population respectively. This makes Mandera county with the highest proportion of children in Kenya. This is a result of very high fertility rates among women as shown by the percentage household size of 7+ members at 79%. The small percentage of 0-3 year olds is due to high mortality of children under five years<sup>7</sup>.

<sup>6</sup> Commission on Revenue Allocation (CRA): <https://cra.go.ke/county/mandera/>

<sup>7</sup> KIHBS, 2015/16, Mandera County

263. The population age and gender structure for Wajir County are provided in Table 4-8, below.

**Table 4-4: Population, Age and Sex Structure, Wajir County**

Age group	2009 (Census)			2022 (Projections')		
	Male	Female	Total	Male	Female	Total
Under 5	54,066	50,579	<b>104,645</b>	81,706	76,437	158,143
Primary school Age (6-13)	113,909	91,224	<b>205,133</b>	172,144	137,861	<b>310,005</b>
Secondary School age (14-17)	48,037	30,745	<b>78,782</b>	72,594	42,463	<b>119,057</b>
Youth Population (15-29)	95,977	73,116	<b>169,093</b>	145,044	110,496	<b>255,540</b>
Female reproductive age (15-49)		126,064	<b>126,064</b>		190,513	<b>190,513</b>
Labour force (15-64)	167,349	136,748	<b>304,097</b>	252,904	206,659	<b>459,563</b>
Aged Population (65+)	8,619	5,927	<b>14,546</b>	13,025	8,956	<b>21,981</b>

Source: Draft CIDP 2018–2022, Wajir County

**Table 4-5: Population, Age and Sex Structure, Mandera County**

Age group	2009 (Census)			2022 (Projections')		
	Male	Female	Total	Male	Female	Total
Under 5	73,452	71,408	<b>144,860</b>	121693	59988	239998
Primary school Age (6-13)	153315	125560	<b>278875</b>	254007	114364	<b>462031</b>
Secondary School age (14-17)	59323	37328	<b>96651</b>	98284	37959	<b>160128</b>
Youth Population (15-29)	167299	134591	<b>301890</b>	277176	123575	<b>500162</b>
Female reproductive age (15-49)		153638	<b>153638</b>		254542	<b>254542</b>
Labour force (15-64)	203221	170234	<b>373455</b>	336689	153475	<b>618727</b>
Aged Population (65+)	7263	4118	<b>11381</b>	12033	4354	<b>18855</b>

Source: Draft CIDP 2018–2022, Mandera County

### 4.3.3 Human Settlement

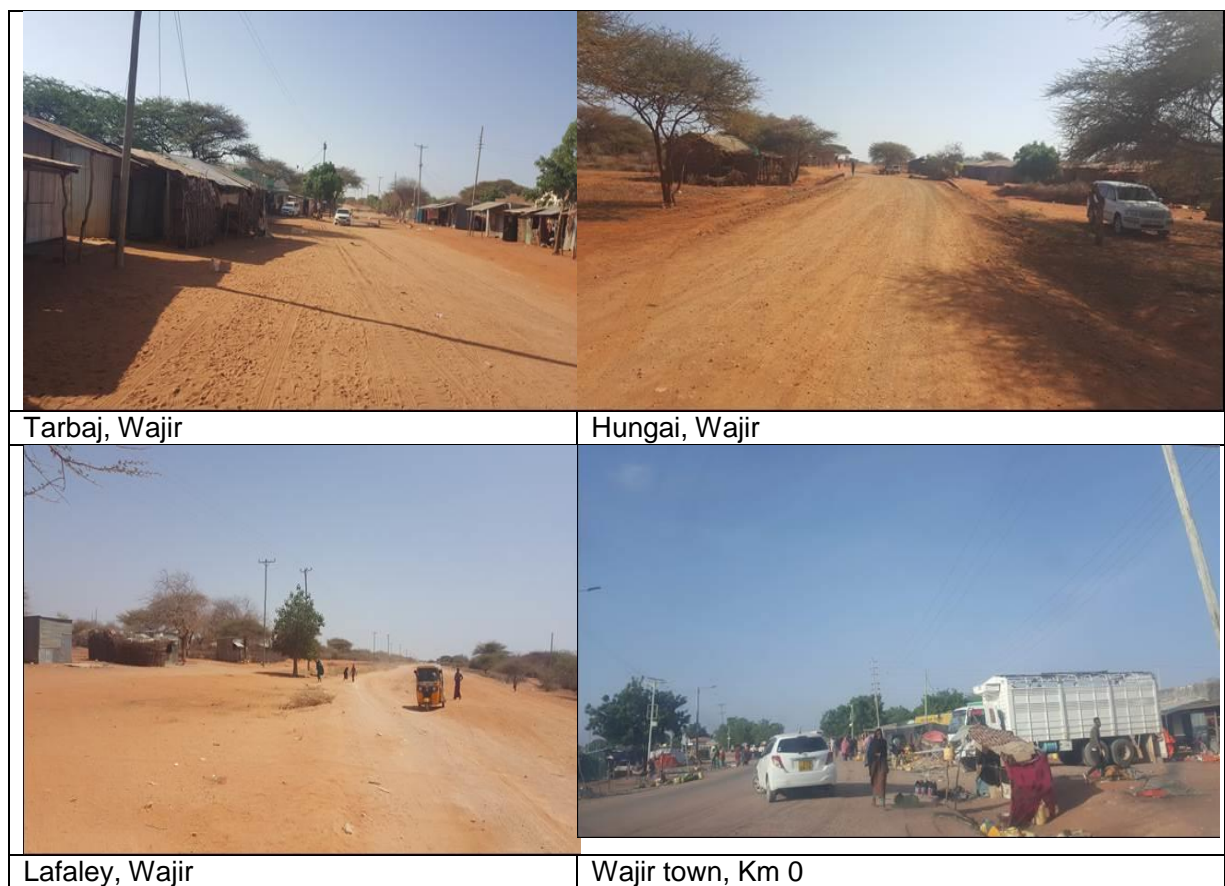
264. Along the project road, human settlements are sparse and occur as clusters in trading centres that interrupt long stretches of natural vegetation. Most of the urban settlements are found at the sub-county headquarters. Scattered, linear and nucleated are the main types of settlement patterns. Nucleated refers to a pattern where there are a lot of buildings around a certain point, especially in the main urban centers. In scattered settlement, the buildings are scattered over a wide area, as happens in rural settings. In linear settlement, the pattern is established in a line-like pattern and is mostly pronounced along road.

265. There is high increase in number of new settlements which threatens rangeland management and strains delivery of essential social services such as water, education and health & sanitation. Urbanization has also increased tremendously since devolution came in place, as more people sought jobs at the urban centres.

Major centres along the project road are presented in Table 4-6 and Figure 4-3.

**Table 4-6 Major Centres along the project road**

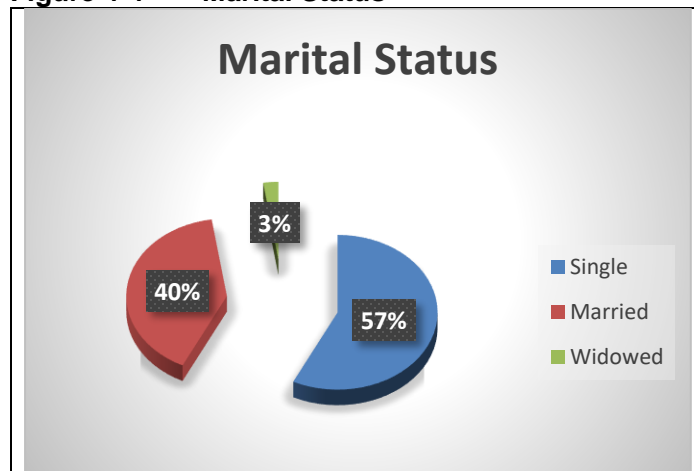
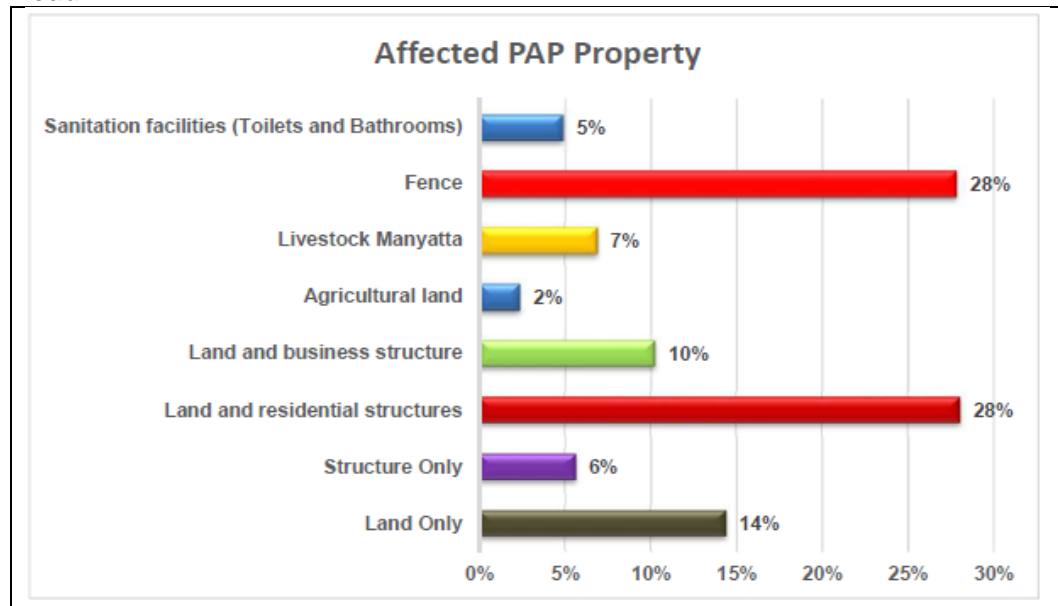
Chainage	Trading Centre
Km 0	Wajir town
Km 11	Lafaley
Km 51	Tarbaj Town
Km 61	Hungai
Km 81	Wargadud
Km 110	Kotulo Wajir
Km 119	Kutulo Mandera
Km 132	Dimu
KM148	Dabasiti
Km 156	Garsesala
Km 162 + 400	Borehole 11
Km 175 + 400	Elwak

**Figure 4-3 Towns and Villages along the project road**



#### 4.3.4 Marital status

266. Religion and culture of the people was considered as encouraging marriages; however, more than half of the sampled persons were not married (but single). Among those married women were affected by early marriages below the statutory required age of 18 years. See Figure 4-4, below. Most families were polygamous.

**Figure 4-4 Marital Status****Figure 4-5 Livelihoods and Property to be Affected by the Designed Project Road**

#### 4.3.5 Ethnic Communities and Language composition

267. The project area population is predominantly the pastoral Somali community, with the main spoken language being the Somali language.

268. In Mandera County, there are three ethnic Somali clans – the *Garre*, *Murulle*, and *Degodia* – comprise most of the population, with the *Garre* being the most populous especially in Elwak. The other Somali clans have settled in the north (Ajuuraan) and south (Ogaden). *Garre* clan has two sub-clans. They are *tuff* and *Quranyowa*. These two are also divided into another two. Tuff is divided into '*Ali*' and *Adholla*. *Quranyowa* is also divided into *Asarre* and *Furkesha*. The *Gare* is the only clan along the project area. Other Somali clans that are present in small numbers are referred to as 'corner tribes'. Non-Somali, mainly highland Kenyans in Mandera County reside

primarily in Mandera town and a few other urban settlements and are mostly in the military, police, civil service, or service professions such as health and education. This group lives in Mandera only temporarily, to secure temporary and seasonal employment and typically relocate once their contract is finished.

269. Wajir county has three major Somali clans - Ogaden, Ajuran and the Degodia, who are "the majority". Among the major Somali clans, the Degodia have settled in Wajir East and West. The other Somali clans have settled in the north (Ajuuraan) and south (Ogaden). These clans and other minor ones have all settled within Wajir Town.

270. The Constitution of Kenya defines "Marginalized Community" to mean a traditional community that, out of a need or desire to preserve its unique culture and identity from assimilation, has remained outside the integrated social economic life of Kenya as a whole, or an indigenous community that has retained and maintained a traditional lifestyle and livelihood based on hunter or gatherer economy; or pastoral persons and communities whether they are nomadic or a settled community that because of its relative geographic isolation has experienced only marginal participation in the integrated social and economic life of Kenya as a whole. In this regard, the communities living along the project areas meet the criteria of being referred to as Marginalized. They also qualify to be considered Indigenous Peoples according to World Bank OP 4.10 because the people in the area have;

- a) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
- b) collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories, and
- c) customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture.

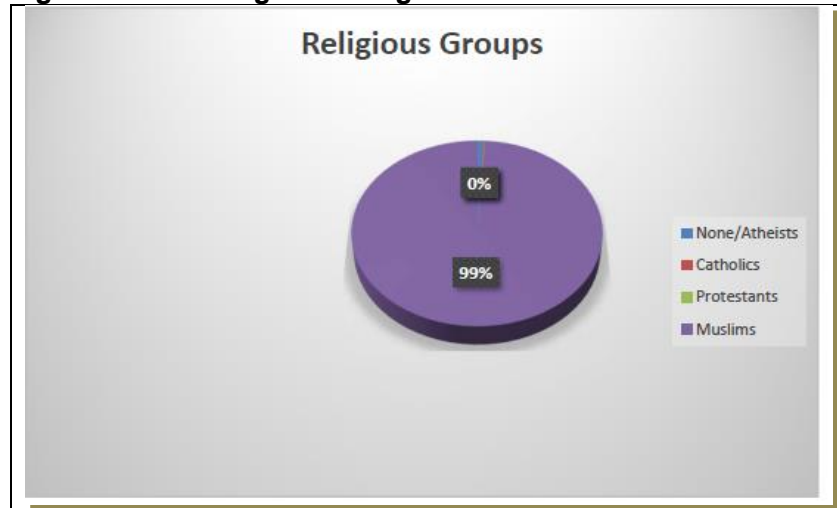
271. The project has conducted a separate Social Assessment (SA) that sets out the measures through which the project will ensure that (a) Indigenous Peoples affected by the project receive culturally appropriate social and economic benefits; and (b) when potential adverse effects on Indigenous Peoples are identified, those adverse effects are avoided, minimized, mitigated, or compensated for. In doing so, the project will make the development process more inclusive of Indigenous Peoples by incorporating their perspectives in the design of development programs and poverty reduction strategies, and providing them with opportunities to benefit more fully from development programs associated with the project, such as community driven projects along the road project.

#### **4.3.6 Religion**

272. The population along the project road is predominantly Muslim (99%); however, a minority non-Muslim group were also recorded forming part of the business operators in Kutulo and These non-muslim have migrated in from other parts of the country (mainly Nyeri and Machakos) in search of better income sources. See

273.

274. Figure 4-6, below.

**Figure 4-6 Religion among the Local Communities**

275. Mosques are located at the heart of every trading centre. Along the project road corridor, 9 number of mosques were observed. However, there are a few churches, particularly in Wajir town. This is because although 100% of the population interviewed in the project area were Muslims, there are a few Christians in Wajir town but they were not along the project area, since most of them are business owners.

#### 4.3.7 Education

##### Wajir County

276. Literacy level in Wajir County is at 23.6 per cent. The low literacy levels are partly attributed to the nomadic lifestyle, early marriages, female genital mutilation and exploitation of women among other negative vices (First CIDP 2013-2017, Wajir County). Three-quarters of the county residents have no formal education. A fifth of the residents have attained primary school level of education only. About 4 percent of the residents have secondary level of education or above. A total of 20% of Wajir County residents have a primary level of education only, and as many as 76% of Wajir County residents have no formal education. Tarbaj constituency where the road transverse has the highest share of residents with no formal education at 86%<sup>8</sup>.

**Table 4-7 Education Parameters**

Parameter	County level	National level
Literacy rate (2005/2006)	23.6 percent	71.4 recant
Primary school enrolment	27.2	77.2
Secondary school enrolment	5.4	24
Tertiary enrolment	0.9	9.8

<sup>8</sup> KNBS, 2017, Wajir County Report

277. The sample collected during the household survey confirms that the level of illiteracy among the adults is very high. Among the sample interviewed, 28.1% of the male population against 39.9% of the female population had no education at all for adults above 18 years of age. The highest level of education achieved for majority of the educated adults is primary school level.

### **School enrolment**

278. There are 218 primary schools with a total enrolment of 63,912 pupils of which 38,584 are boys and 25,328 are girls. The primary school retention and transition rates are 51 per cent and 58 per cent respectively. There are 41 secondary schools with 7,780 boys against 4,408 girls. The completion and retention rates are 90 per cent and 87 per cent. Moreover, there are four youth polytechnics (Wajir, Habaswein, and Griftu polytechnics) and one tertiary institution. Adult literacy is low at 23.6 per cent<sup>9</sup>.

279. There is one Medical Training College, one Livestock Training Centre (GPTC Griftu), Two Teacher training colleges and two other tertiary institution. There is need to improve on the institutions as well as coming with a constituent university. The county has no technical training centres although the national government is in the process of building six constituency technical institutions.

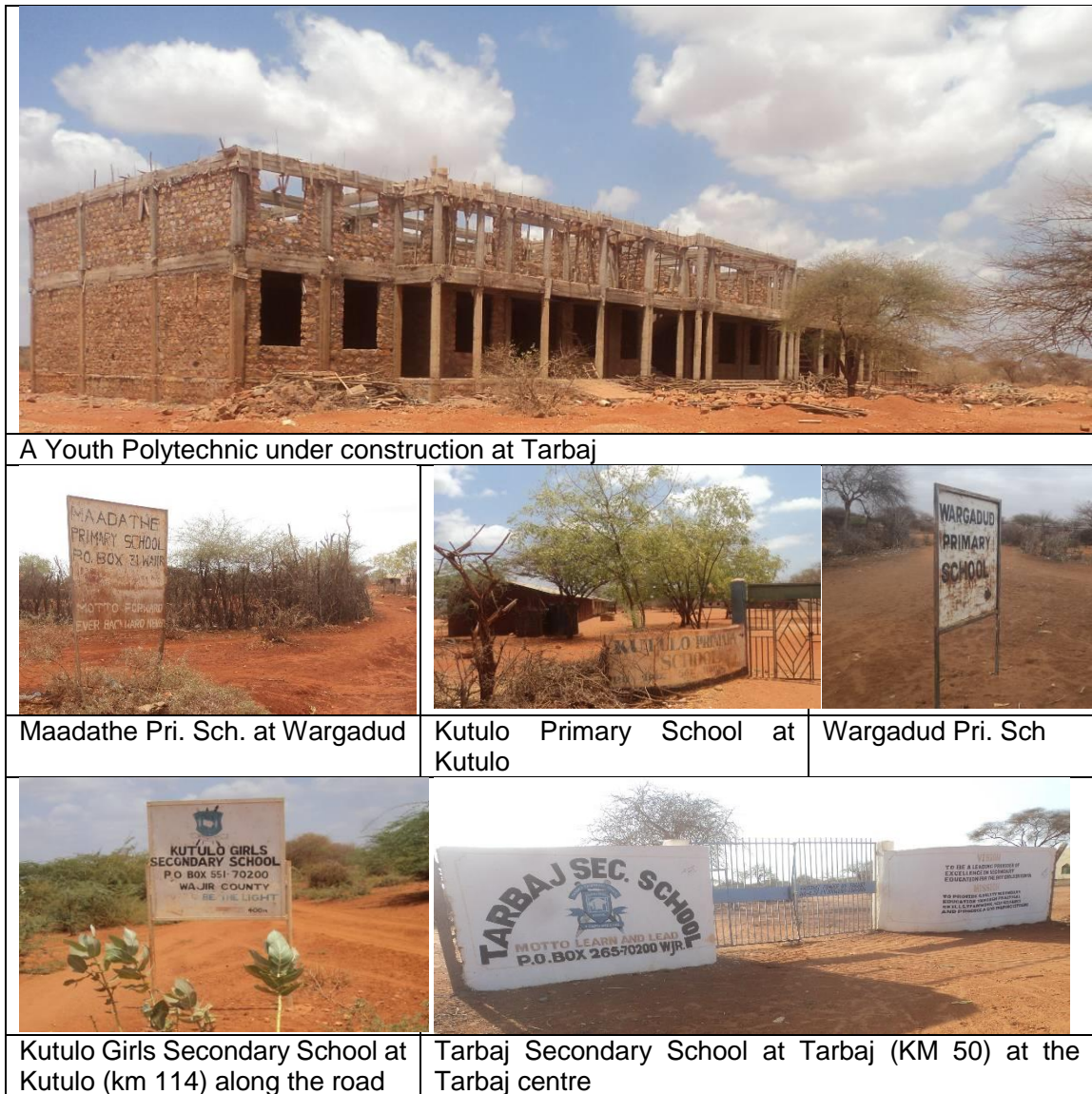
The table below shows the number of schools in the project area and their enrolment level according to the data collected from the Key informants.

**Table 4-8: Schools in the project area (Wajir County) and their Enrolment Level**

<b>Location</b>	<b>School</b>	<b>Level</b>
Wagberi	Wagberi	ECD& Primary
Halane	Halane	ECD &Primary
Lafaley	Lafaley	ECD &Primary
Tarbaj	Tarbaj	ECD& Primary
	Tarbaj Boys	Secondary Boarding
Hungai	Wargadud	ECD & Primary
Kutulo	Kutulo	Boys Primary
	Kutulo	Girls Primary
	Kutulo	Girls Secondary

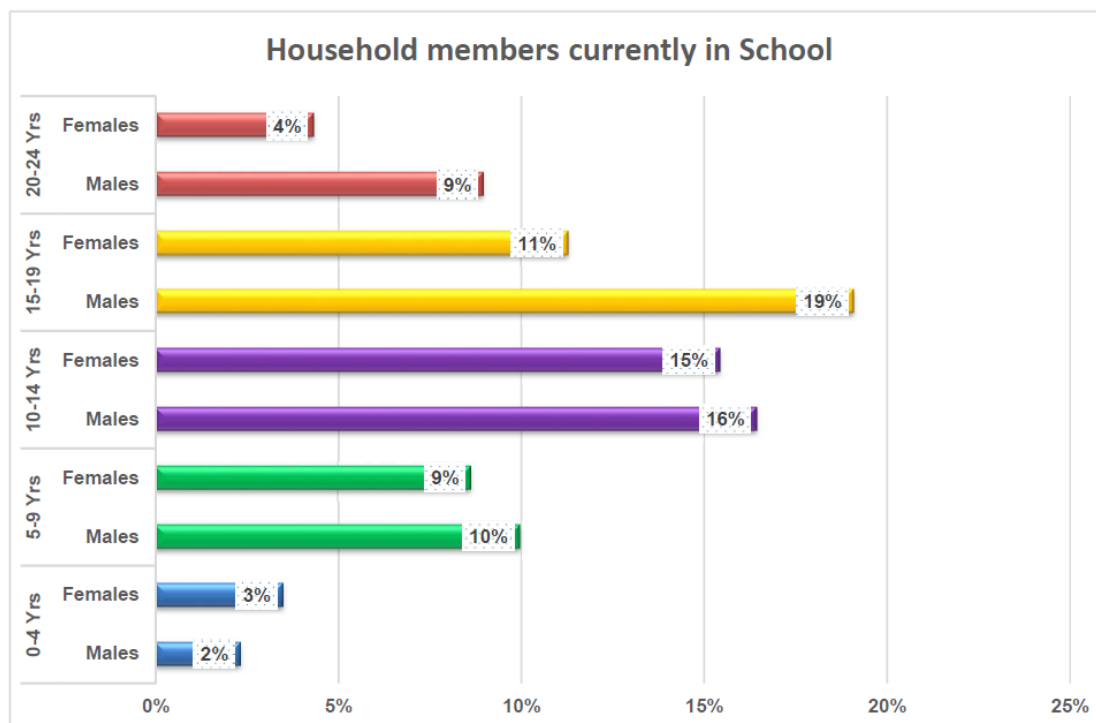
<sup>9</sup> Wajir CIDP, 2017-2017





**Plate 4-8: Selected education Facilities in the project area**

280. Since the area is predominant of Muslims, they prioritize “dugsi “system of education which involves recitation and learning of the Quran thereby they join school at the age of 10 years. The sample collected during the household survey shows that only 10% of males and 9% of females between the ages of 5-9 are enrolled in school.



### **Mandera County**

281. Literacy level and schooling enrolment within the County are lower than the national level. The teacher pupil ratio in Mandera County is 1:88 due to a shortfall of 703 teachers. At secondary school level, the teacher student ratio was 1:33. Other education parameters are presented in **Table 4-9**.

**Table 4-9 Education Parameters**

Parameter	County level	National level
Literacy rate (2005/2006)	24.8 percent	71.4 recant
Primary school enrolment	42.4	77.2
Secondary school enrolment	5.2	24
Tertiary enrolment	0.8	9.8

### **School enrolment**

282. Mandera County has 175 public Primary schools, 30 mobile schools, 27 low-cost boarding schools (funded by the national government) and 46 public secondary schools. The low school enrolment in the north eastern region is associated with cycles of poverty, remoteness, insecurity, and the nomadic lifestyle. During discussions with school heads within the project area, the study team was informed that children from pastoral households in the area do not enjoy education benefits because of the household roles assigned to them. In such households, the girls herd goats whereas the boys herd camels.

Education facilities identified along the project road as presented in **Table 4-10**.

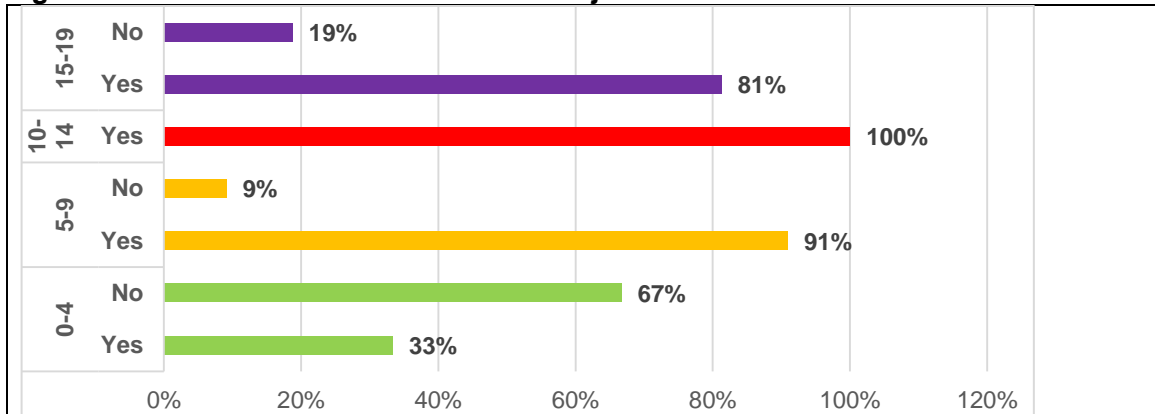
**Table 4-10 Education Facilities**

	Settlement	Primary School	Secondary School
1	Bore-hole 11	Bore-hole11 Primary	Borehole secondary School
2	Dimu	Gode primary	
		Primary school	

3	Kutulo	Primary school	Secondary school
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283. Pastoralism affects the enrolment of children in schools since the parents move with the children and their animals in search of water. See **Figure 4-7**. There are a few incidences where some pastoral households leave the children behind with relatives in order for them to attend school.

**Figure 4-7 School Attendance in the Project Area**



Source: ESIA Study Team

#### 4.3.7.1 Challenges facing education in the area

284. According to KNBS indicators in 2014 the net primary school enrolment rates was 23.6 percent. The enrolment rates were higher for the boy than the girl child. The pupil teacher ratio at primary and secondary school levels is at 1:75 and 1:45 respectively. This is higher than the ratio recommended by the government. Teacher student ratio recommended by the government is 1:40 respectively.

285. From the ESIA findings, the sample collected from the household survey confirms the above information about enrolment rates. Effort to take children through the formal education in the project area is made difficult by the pastoral lifestyle. Pastoralism affects the enrolment of children in schools since the parents move with the children and their animals in search of water.

286. Insecurity in the project area that has led to high transfer turnover of teachers from non-local communities who are the majority of the teaching staff. Following the mass exit of non-local teachers during the height of insecurity; the sector has not fully recovered in terms of teaching staff. Majority of the locals do not enrol for education courses and the few that graduate prefer to work with NGOs and other government agencies including county Government.

#### 4.3.7.2 Impact of the road to education

287. 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 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 equipments.
288. Due to low literacy levels, it will be important for most of the materials to be used for communication in the project area, such as campaign materials for HIV/AIDS awareness and signages to be translated to the local Somali language.

#### 4.3.8 Health

289. Prevalent diseases in the project area are malaria, upper respiratory infections, intestinal worms, skin and eye infections and rheumatism. According to the data collected from hospitals, the top ten infections across all the locations are respiratory tract infections, urinary tract infections, diarrhea, ear infections, malnutrition, injuries, eye infections, arthritis, malaria, and snakebites. From the data collected at the household level, Malaria infection is leading at 34 % followed by common cold at 25%. Diarrhea follows at 12 % while eye infections and URT infections are at 7% each.
290. The root cause of malaria is that the landscape (low altitude and relatively flat ground that encourage water ponding) and high temperature have made mosquito breeding to thrive. During the hot seasons some of the local residents sleep outside to avoid the heat in the houses. Unless they use mosquito nets, they are exposed to mosquito attacks that spread malaria.
291. Eye infections as well as Respiratory Tract Infections affect especially those who interact with livestock due transmission of infected livestock, and dusty conditions especially when its windy. Diarrhea comes about as a result of drinking contaminated water. Urinary tract Infections is one of the leading ailments as reported from the health centres.

#### Health Facilities

292. Settlements along the road at Lafaley, Hungai, Wargadud, Kotulo and Borehole 11 have public dispensaries that offer outpatient services, while Kutulo has a dispensary with a small section for inpatient. Tarbaj and Elwak has a health centre with level IV capacity. Wajir town has a Level V hospital and is more equipped.

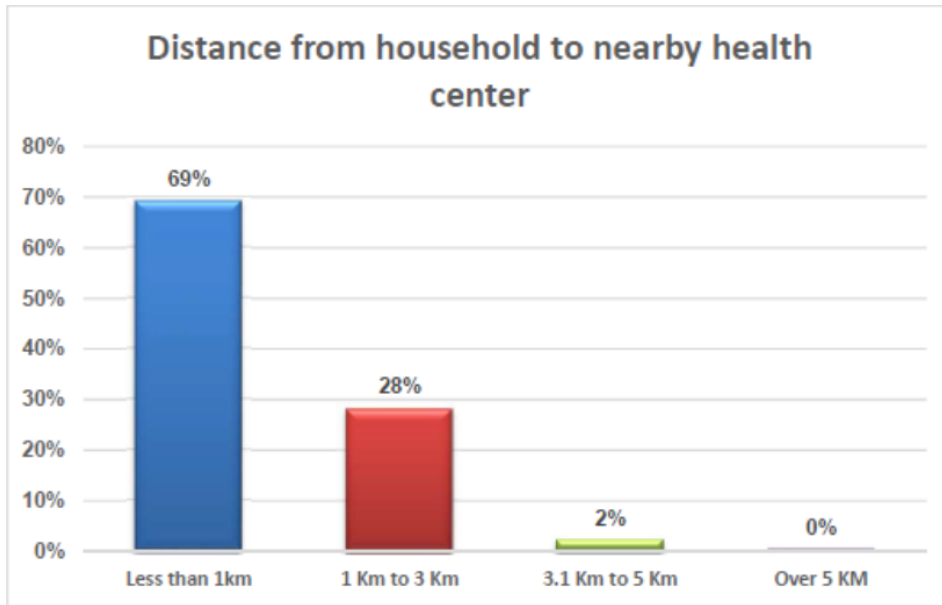




Kutulo Health Centre at Kutulo Wajir (KM 113)

**Plate 4-9: Example of Health facilities in the project area**

293. From data collected from the sample population, 69% of those interviewed indicated that the distance from their household to the nearest health facility is less than 1 Km. 28% of those interviewed indicated that the distance was between 1Km to 3 Km, while 2% indicated that the distance was between 3.1Km to 5 Km. The average distance to access the health facilities is therefore less than 1 Km. The major hospitals along the road that can handle serious accidents, trauma and serious emergency cases are located at Elwak, Tarbaj (both Level IV) and Wajir (Level V), which are not accessible easily by majority of the population due to poor road conditions. The construction of the road will assist in accessing these hospitals faster, and therefore reduce mortality rates which occur as a result of poor access to better medical services.



#### 4.3.9 HIV/AIDS

294. The HIV adult prevalence in Wajir and Mandera counties is 0.9 percent which is lower than the national one at 6.7 percent. The HIV prevalence among women in Mandera County is higher (1.3%) than that of men (0.6%), compared to Wajir County with 0.8% and 0.2% respectively, indicating that women are more vulnerable to HIV infection than men in the County<sup>10</sup>. One of the leading cause of higher prevalence among the girl child is the Female Genital Mutilation (FGM). Adolescents aged 10-19 years and young people aged 15-24 years contributed to 19% and 35% of all new HIV infections in the Counties respectively (Kenya HIV County report, 2016).

295. County wide campaign on fight against HIV/AIDS and drugs and substance use through community forums are part of the two County Governments Projects and Programmes, targeting to lower HIV prevalence by 50 percent.

#### ***Impact on the proposed project***

Based on the available information, any labour influx to the project area could have an impact on the HIV/AIDS infections along the project area. Mitigation measures for these risks are discussed in Chapter 8 of this document.

<sup>10</sup> Kenya HIV County Profiles, 2016

#### 4.3.10 Labour Challenges

296. According to the CIDPs for Wajir and Mandera County 2018-2022, the labour force aged between 15 – 64 years as per 2017 projections stands at 391,853 and 509,528 persons respectively. The contribution of this labour force is about 55% by men and 45% by women. This represents 45.9% and 36% of the total population for Wajir and Mandera respectively. This age group is projected to increase by 17% (459,563) and 21% (618,727) in 2022 in Wajir and Mandera respectively.

297. Most of the people that are within the labour bracket are mainly involved in livestock keeping. Therefore, they are not available for work. This is because they are more indulged in pastoralism and with low literacy levels, they have not developed other skills in order to fit into the labour market for construction. This could be a challenge during the road construction, with the contractor having to rely on labour from outside the project region, leading to labour influx in the area (see chapt 8 for more discussion on labour influx).

298.

#### 4.3.11 Land Tenure and Use

299. There are two types of land tenures in the counties; Private and Communal land. Private land is mainly found in towns like Wajir or Elwak and used for residential, business and crop/fodder production. The communal land is for grazing. The average land size for private land is a quarter of an acre.

300. The largest bit of the land in the both Wajir and Mandera Counties is communally owned, widely used to support rangeland livestock productions, with only a few parcels within Mandera, Wajir Towns and other small centres like Elwak having title deeds (less than 0.1%). This forms an insignificant percentage of land surveyed in the counties and especially in urban centers where private ownership is vital in attracting intensive investments.

301. In some sections of the project road (mainly the proposed Elwak Bypass), a few land parcels and owners claimed they had land titles, deed plans and allotment letters for their properties.

#### 4.3.12 Archaeological and Cultural Heritage

302. A cultural site along the project road was identified at Km 0+000 to Km 0+400 within the market place in Wajir Town. Within this site are the Horray wells (source of water even during dry season) and World War II bunkers. The wells and bunkers have been preserved by the National Museums of Kenya. Muslims also go to the site to conduct prayers three times a year. At Tarbaj (Km50-53) a communal grave yard which had been used up to late 2017 was identified to be partly affected by the proposed alignment. Though no longer in use, realignment is being considered to avoid the grave yard. Exhumation is unacceptable by the community. Following the establishment of this site, realignment has been proposed at the affected section of the road.

#### 4.3.13 Transport and Communication Infrastructure

303. Mandera County has a total of 2,155.80km (county roads) of the road network, most of it under earth and gravel. All-weather murrum gravel roads cover an approximate length of 921km while earth surface covers an approximate length of 1390km. Within Mandera Town, the County Government has upgraded a 24km to bitumen status. An additional 135km of low-volume seal road (from Elwak to Rhamu) has been contracted out by the National Government and construction works are still in progress.

304. The county has neither rail network nor sea/lake ports. The county is served by four functional airstrips in Rhamu, Elwak, Mandera and Takaba. There are four other non-serviceable airstrips in Malkamari, Arabia, Banissa and Lafey.

305. Wajir county has 28 kilometers of tarmac (mainly located in Wajir town), one airport and seven airstrips. It lacks key infrastructure like rail network, major bus and lorry parks. The poor road network is inhibiting connectivity with settlements and other counties for inter and cross county collaboration. There is need to build all weather road infrastructure to ensure durability and efficient delivery of essential services. The total number of Kilometres of roads in the county both classified and unclassified roads is approximately 8,000 Kilometers.

306. Safaricom and Airtel mobile network services cover most sections of the project road. Both networks have mobile money transfer services. Internet is accessed through mobile phone and computers using modems. The counties are linked with fibre optics which has boosted the financial service transactions such as IFMIS within the County Government's Treasury and interconnectivity with the rest of the world.

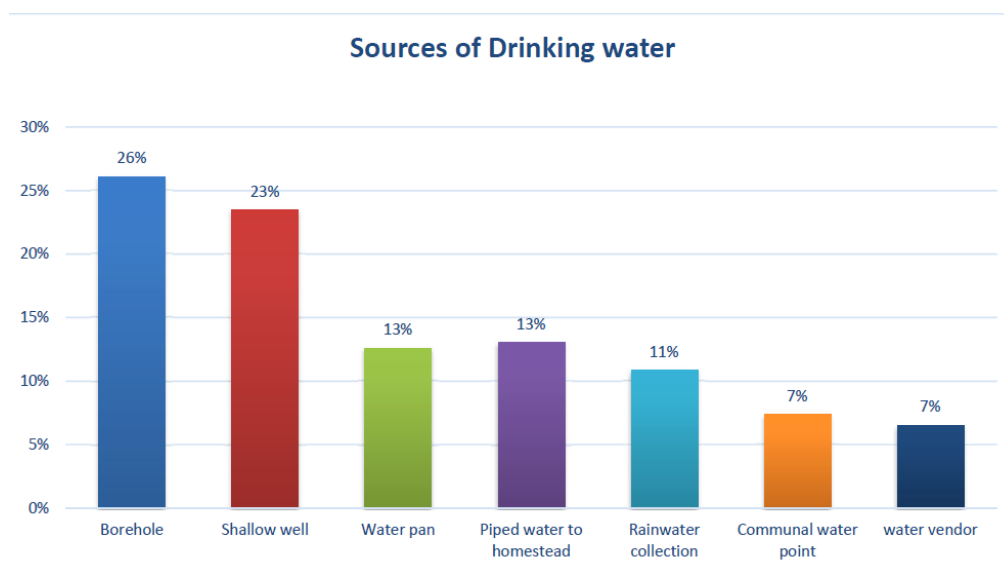
#### 4.3.14 Water Situation

##### 4.3.14.1 Existing Community Water Sources

307. The project road is within an arid climate with limited water sources. In addition, water loss through evaporation is extremely high due to high temperatures in the area. Nevertheless, during road construction large quantities of water will be required for the following activities:

- Processing earthworks, subgrade and pavement layers;
- Curing cement treated subbase and base materials;
- Concrete works;
- Laboratory and office uses; and
- Human consumption.

308. From the survey, water for domestic purposes is obtained from various sources. Boreholes account for 26% while shallow wells account for 23%. Water pans account for 13% while communal water points and water vendors account for 7% each.







Woman fetching from the well for camels



Woman feeding her flock of sheep individually.



Flocks of sheep at a water pan in Tarbaj location.



A community watering hole in Tarbaj location.

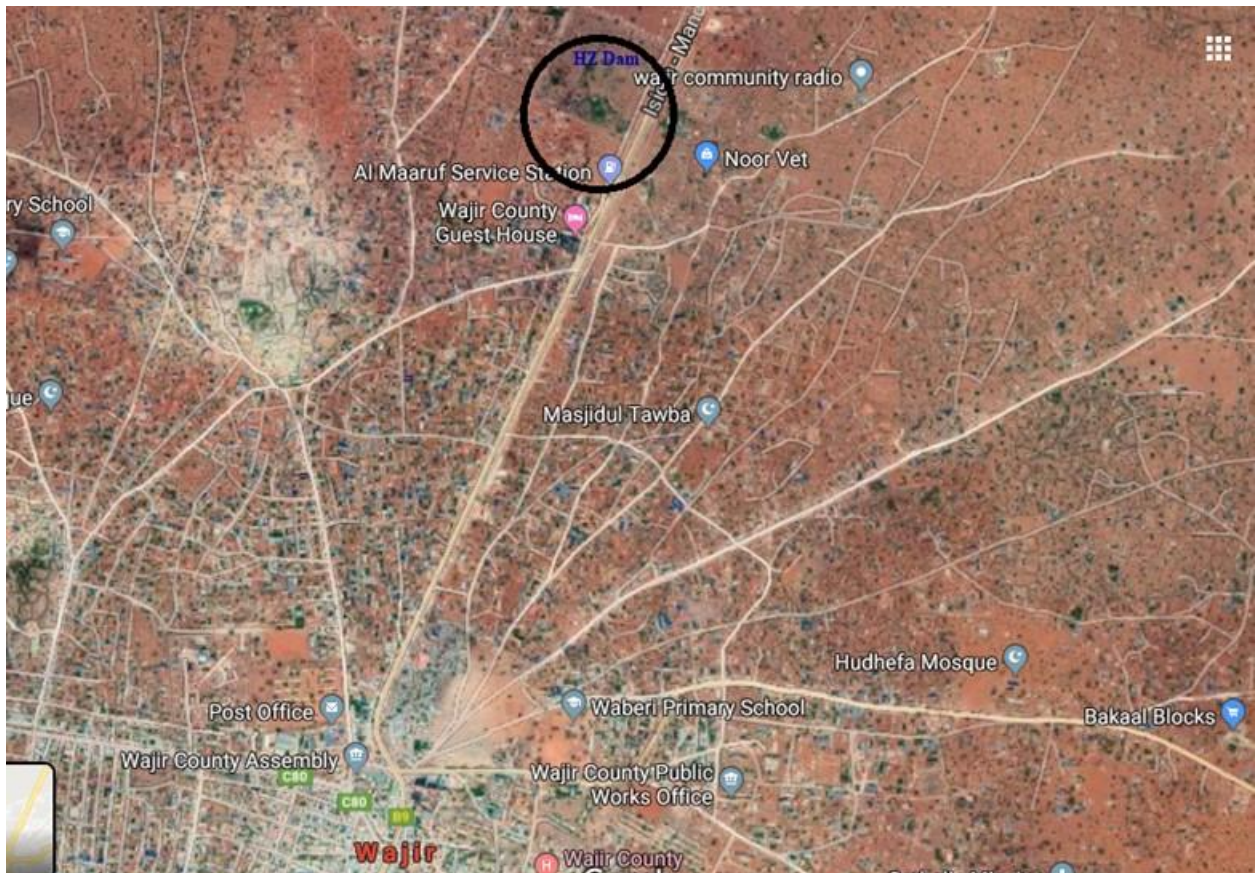


Water storage tank at Dimu settlement. The tank is replenished by truck (owned by the County) deliveries



Residents fetching water at Wajir HZ dam (km 4+00)

**Plate 4-10: Some of the Community Water Sources in Use**

**Figure 4-8: Location of HZ Dam near Wajir town (Km 4+00)**

#### 4.3.14.2 Sourcing Water from Wajir Town and Its Environs

##### Shallow Hand Dug Wells (Traditional Water Sources)

309. Wajir Town residents depend on shallow wells as their sources of water. Almost every household/plot in the town has a well. It is estimated that there are between 4,000 and 5,000 wells whose discharges vary and their depths are about 6m. An inventory of the wells has never been carried out.

##### Wajir Minor Water Supply

310. This well, drilled before 1940 for local community use, has an electrical submersible pump of capacity 3.5 kW and pumps of 3.6m<sup>3</sup>/hr against a head of 20m. At the time of the investigation, water was rationed since it was not enough.

##### Army Camp Water Supply

311. The army camp located near Wajir Airport has 4 wells and currently, there is only one well operating, which has a depth of 2.1m. The well is equipped with a submersible electrical pump of capacity 1.1kW (1.5HP) Linz type centrifugal pump. The pump generates about 5.65 m<sup>3</sup>/hr, against a head of about 22m.

### **Arid land Resource Management Project Water Supply**

312. Arid land Resource Management Project Water Supply has a well of depth (W.R.L.) 5.2 m and width 0.75 m. The well is equipped with a submersible electrical pump of capacity 4.5 HP.

### **H.Z. Dam ("Lake Yahudi") (Km 4+00)**

313. This dam near Wajir town resulted from excavation for crusher run aggregates when Wajir Airstrip was being constructed. It probably resulted from puncturing of the shallow aquifer underlying Wajir Town. The dam withstands long periods of droughts and waters livestock from as far as Somalia. Its surface area is approximately 500 m<sup>2</sup> but its depth could not be established.
314. In general, "HZ dam/Lake Yahudi", the only permanent surface water resource near Wajir town, and the groundwater sources within 100 m depth were identified as able to meet the construction demand requirements for the road in this section. Additional boreholes to the existing ones can be drilled at Tarbaj (Km 51), Wargadud (Km 81) and Kotulo Mandera (Km 117). These areas had already been surveyed in 2010 and the locations are marked on the ground.

#### **4.3.14.3 Potential Water Sources in Mandera**

##### **Rhamu Water Supply**

315. There exists one borehole capable of pumping water up to 12 m<sup>3</sup>/hr to an elevated steel tank of capacity 90 m<sup>3</sup> located near Rhamu Police Station.

##### **Daua River**

316. The Daua River runs approximately 150 km along the borders of the three countries, Kenya, Ethiopia and Somali. There are various motorable tracks ranging from 1 to 10 km from the existing road (A13) to the river. Water flows in the river for about eight (8) consecutive months of the year and runs to nearly dry for four (4) consecutive months of the year. Currently, there are 15 No. boreholes along the river with only 6 No. boreholes operational.
317. Sampling studies undertaken in 2010 on Daua River found the water moderately hard and neutral (that is moderately mineralized) therefore suitable for concrete works. However, the iron level exceeded the WHO maximum guideline value of 0.3 ppm for drinking water. Tests subjected on surface and underground sources have found water treatment necessary to make it suitable for human consumption.
318. According to the 2010 studies, surface water in the general area (sampled from river Daua) were found to be moderately hard and neutral that is moderately mineralized, therefore suitable for concrete works. However, the iron level exceeded the WHO maximum guideline value of 0.3 ppm for drinking water. The chloride content of water from a UNICEF borehole was substantially higher than the maximum recommended value. It will be therefore necessary to subject water from surface and underground sources to the necessary treatment to make it suitable for human consumption<sup>11</sup>.

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<sup>11</sup> Preliminary design of Wajir – Mandera road, GIBB, 2010

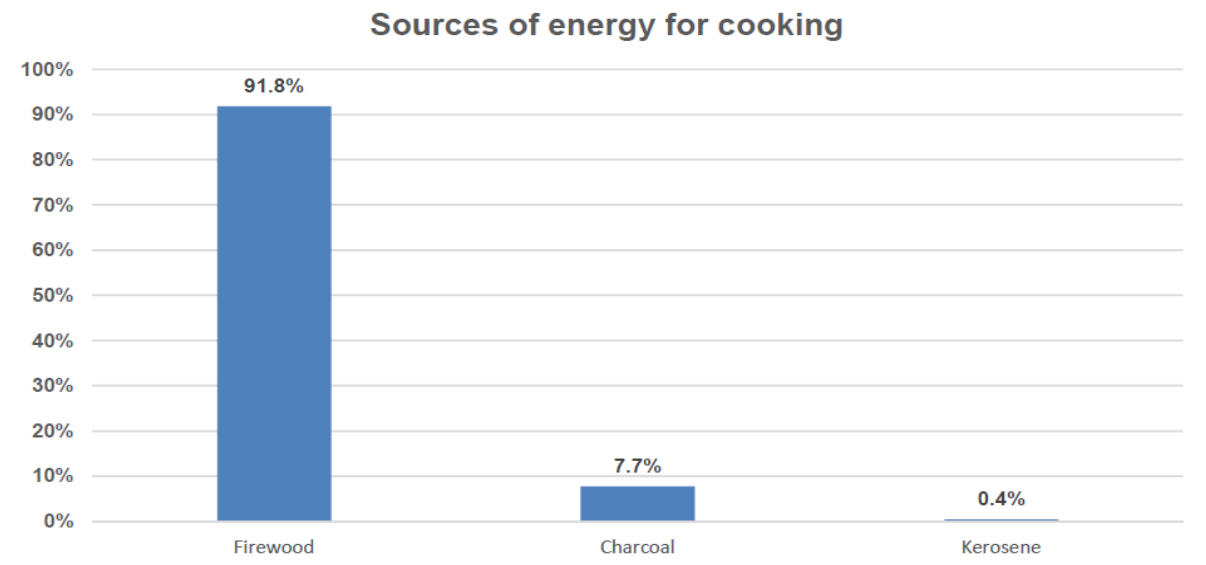
#### 4.3.15 Sanitation

319. The project transverse in an area where there is no sewerage systems and mainly relies on septic tanks, bucket latrines, pit latrines and VIP Latrines in some towns and institutions. Latrine coverage is low at approximately 30 per cent. There has been outbreaks of public health related emergencies especially in Wajir county e.g. cholera as a result of high e-coli levels partly attributed to water contamination. There is need to improve on the sanitation facilities to alleviate the negative effects it can pose on the environment given that most parts have poor drainage and experience floods during rainy seasons.

320. The contractor will be required to construct approved septic tanks and soak pits at the campsites where his workers will be staying. In addition, he will be required to provide mobile toilets for his workers at all worksites.

#### 4.3.16 Energy and Fuel

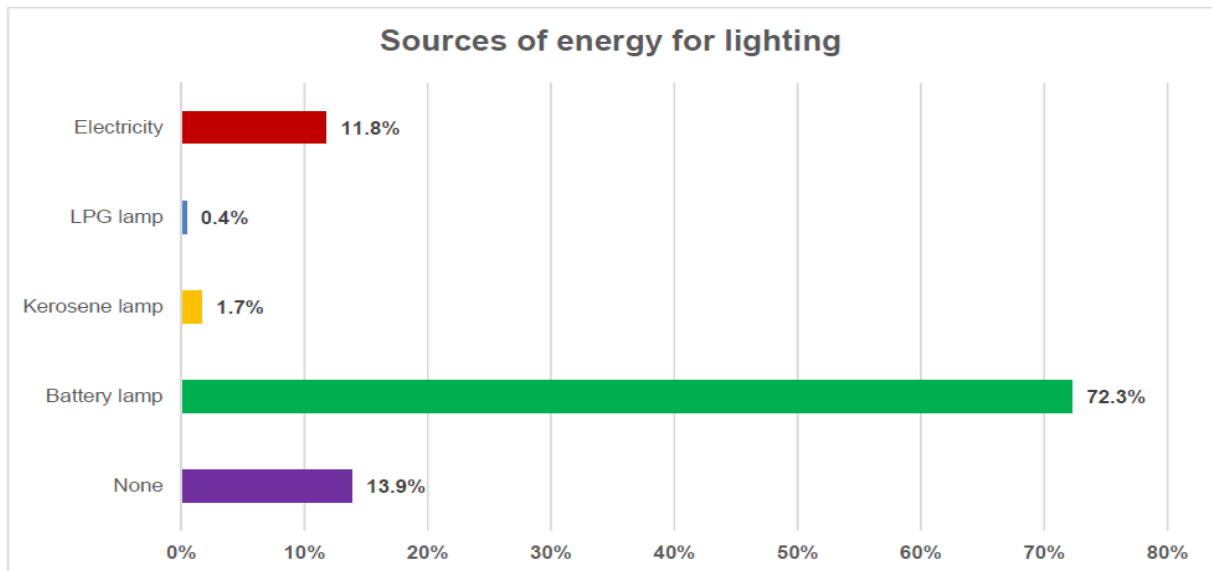
321. Firewood is the major source of energy for cooking at 91.8% followed by charcoal which accounts for 7.75. Kerosene use is minimal at 0.4%. the firewood is fetched from the forest by young men who sell it to the households.



#### Sources of energy for lighting

322. From the data collected from the sample population, battery lamps at 72.3% are the main source of lighting used by the locals followed by 13.9% of the population who use no source of lighting. 11.8 % of the population use electricity for lighting. Electricity has been connected in Wajir town, Tarbaj. Hukai, Wargudud, Elwak, Kotulo Mandera, but Kotulo Wajir is not connected to electricity. Small solar panels are also being used as source of light in the counties.

323. The contractor will be required to ensure that efficient use of energy is maintained at the campsite, especially the use of firewood to discourage degradation of forests by the workers. Energy efficient methods such as usage of one kitchen with centralized gas facility, or use of solar power will assist in mitigating impacts brought about by poor use of energy sources.



A security check point at Kutulo

**Plate 4-11 Security Check Point**

#### 4.3.17 Livelihood Activities

##### (a) Livestock Pastoralism

324. Nomadic pastoralism is the dominant way of life for the local populace. Over 90% of the total population depends on livestock and livestock products for their livelihood. Main livestock kept include cattle (Borana), camels (Dromedary-Somali type), goats (Galla), sheep (Black Head Persian), and donkeys. Drought persistence and seasonality are known to influence the pastoralist lifestyle (see Figure 4-9). Livestock markets exist at all centres along the road project. There is a donkey slaughter house along the proposed Elwak Bypass right opposite the Rural Border Patrol Unit.

325. According to the 2009 population and housing census, Wajir county 794, 552 cattle, 1,406,883 sheep, 1,866,226 goats, 115,503 donkeys and 533,651 camels. The production of milk and meat is estimated at 3,875,940 litres and 191,100 Kgs respectively per year<sup>12</sup>.
326. As at 2014, Mandera county had 863,625 head of cattle, 1,016,970 camels, 3,415,484 goats, 1,164,238 sheep, 56,874 chickens, 23,388 beehives, 141 bee apiaries and 208,126 donkeys. In addition to this, the county government procured 12 dairy cattle to train riverine farmers on dairy production and breeding. This population of dairy cows has increased to 28<sup>13</sup>.
327. Livestock is acquired through dowry negotiation, inheritance, purchase, loans and gifts. Others are acquired through exchange of animals either sheep or goats to acquire camels and cattle in the quest to diversify herds types or vice versa. Some families keep their herds together or relatives join up to pool manpower needed for livestock rearing. A household head with several sons keeps their livestock together too. Except those given in inheritance to the sons, the rest of the flock belongs to the homesteads. In this case, sale is not permitted without the consent of the father.

**Figure 4-9 A Herd Of Camels Grazing Near Dabasiti**

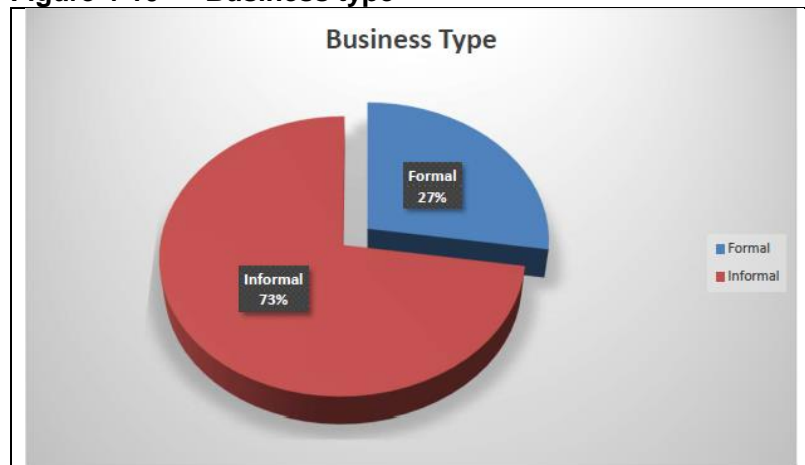


**(b) Businesses**

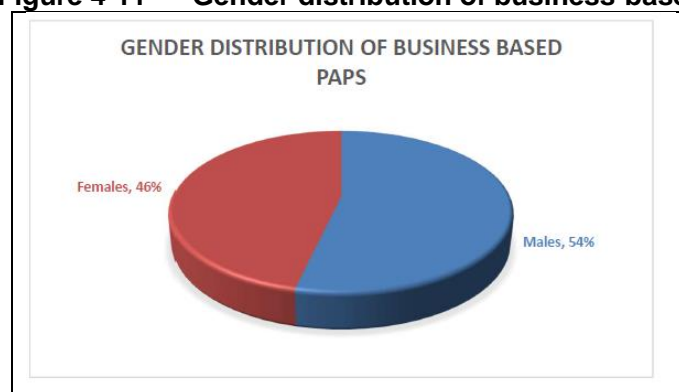
328. Along the project road, there were more fewer formal businesses than informal. See **Figure 4-10**. In Lafaley, Hungai, Wargadud, Dabasiti, Garsesala and Borehole 11, the land use is mainly makeshift kiosks. Major businesses are found at major towns of Wajir, Tarbaj, Kotulo and Elwak. Some businesses along the road project that is within the project road reserve will be affected by the project road.

<sup>12</sup> Wajir county, CIDP 2018-2022

<sup>13</sup> Mandera county, CIDP 2018-2022

**Figure 4-10 Business type**

329. Pastoral nomadism lifestyle influenced a lot the nature of economic activities found in settlements along the project road. In towns, women contributed to running of businesses. See **Figure 4-11**. Interviewed women indicated that a greater proportion of their independent incomes is spend on things that enhance household welfare including nutrition, water and sanitation, health care and education.

**Figure 4-11 Gender distribution of business-based PAPS.**

330. Women run small grocery shops by the road side along the right of way. These shops are income generating activity for the largely polygamous homesteads. Women's productive roles include; running the family businesses whether they be small businesses that generate very little income or they be whole sale shops like those found in Wajir, Tarbaj, Kutulo and Elwak.

See

**Figure 4-12.** Women are also involved in herding, watering, and selling small stock.

**Figure 4-12 Some of the Small Businesses Operated by Women**



331. The trading activities at the centres include businesses like Kiosk, food stalls, clothing store and tailoring shops. There is also a lot of trading of watermelon during the high seasons along the streets of Wajir which come from irrigation farming in Wajir County.



Shops and trading centre along the project road at Tarbaj



Collection of firewood from wild and selling is an income generating activity among rural population



Small gardens for dryland farming at Kutulo (Km 118)



A large herd of sheep and goats cross over the project road. Most of the rural population are involved in livestock keeping



**Plate 4-12: Some of the local economic activities****4.3.18 Gender based Violence**

332. Gender Based Violence (GBV) is rampant in the project corridor and in some cases normalized. Normalization of GBV and stigma influenced by religious and 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 Offenses 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.
333. The study indicates that culturally there is very serious actions on the perpetrators for which the project must be aware about with respect to contractors and project workers. The project is in the process of engaging the services on a local non-governmental organization to manage the incidences of GBV/SEA on the project corridor. These services will involve awareness and response systems.

**4.3.19 Community conflicts**

334. The road traverses a territory occupied by different Somali clans, who are mainly pastoralists and occasionally, there is continuous and sporadic inter-communal conflict between the ethnic groups. The inter-ethnic tensions and conflicts are caused by; disagreements on county boundary, superiority on administrative positions, land ownership, water scarcity and sources, and conflict over pasture. The contractor will have to ensure any sources of materials (such as water and road construction materials) will not contribute to potential conflict between the communities; all sources have to be widely consulted and agreed upon before utilization.

**4.3.20 Security**

335. Security remains a major concern especially with the porous borders with the neighbouring unstable Somalia that faces political instability challenges. Other compounding aspects include poor communication network connectivity as well as poor road infrastructure.
336. At the time the study was being conducted, the security alert in the area between Wargadud and Kotulo was high because of threats of attack by Al-Shabab militants. There were two incidences of attacks the week before the site visit and one attack in Mandera which borders with Wajir County during the time the studies were being conducted. In one of the instances the telephone booster for one of the leading network providers had been destroyed leaving that area inaccessible through telephone.
337. Inter clan conflicts have also manifested in Wajir in efforts to seize control or access over resources such as land, water and grazing land (First CIDP - Wajir County 2013-2017). The conflicts have been associated with reliance on livestock keeping, limited grazing areas and watering points (especially, during drought periods) as well a political influence.
338. Al Shabab-related violence and threats in Kotulo towns in Wajir and Mandera has driven away most education and health care professionals, most of whom are non-locals (Kenyan nationals). Nonetheless, there has been increased military and police deployment to boost security in the region.

339. The Project has carried out Security Risk Assessment and Prepared Security Management Plan. The security assessment mapped the following: (i) Boundary disputes on the at Kotulo-between the Garri and Degodia Somali clans; (ii) Natural Resources Conflicts-based on the availability of water and pasture during the dry season; and (iii) Terrorism -Al Shabab attacks on foreigners (non-local Somali), Improvised Explosive Devices attacks on security forces, Abductions and kidnappings for ransom in Wajir and Mandera Counties near the borders areas.
340. In preparing the Security Management Plan-the project has adopted the WB Good Practice Note-Assessing and Managing the Risks and Impacts of the Use of Security Personnel; and the IFC Good Practice Handbook-Use of Security Forces: Assessing and Managing Risks and Impacts.

## 5 STAKEHOLDER CONSULTATION AND PUBLIC PARTICIPATION

### 5.1 Introduction

341. 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.

342. 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.

343. Stakeholder Engagement and Public Participation is also necessary for Category 'A' projects provided under World Bank Safeguards Policies. OP/BP 4.01 Environment Assessment requires stakeholder engagement with project affected persons (PAPs) and local NGOs in the preparation/designing and implementation of World Bank financed projects. For Category "A" projects, the policy also requires at least two consultation cycles to be carried out with project affected people and other stakeholders. To fulfil this condition, consultations were done by the design engineer during initial ESIA preparation, and further consultations done by the Independent Consultant.

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

### 5.2 General information

345. 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.

### 5.3 Methodology

#### 5.3.1 Stakeholder Identification

346. 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;
- ✓ Courtsey visits to CECs 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.

347. 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	<ul style="list-style-type: none"> <li>• Assistant County Commissioners</li> <li>• Sub County Administrator</li> <li>• KPLC</li> <li>• NEMA</li> <li>• Kenya Wildlife Service (KWS)</li> <li>• Kenya Forest Service (KFS)</li> <li>• National Drought Management Authority (NDMA)</li> </ul>	Introduction letter and one-on-one Interviews
County Government	<ul style="list-style-type: none"> <li>• CEC Members for Lands, Housing, Physical Planning and Urban Development</li> <li>• Chief Officer in charge of Land</li> <li>• District Administration Police Commandant</li> </ul>	Introduction letter and one-on-one Interviews

Stakeholder	Identified Stakeholders	Consultation Method
	<ul style="list-style-type: none"> <li>• Chief Officer - Transport</li> <li>• Sub-county Lands Officer</li> <li>• Sub-county Adjudication Officer</li> <li>• Sub-county Surveyor</li> <li>• District Medical Officer for Health.</li> <li>• Sub-county Social and Gender Officers</li> <li>• County Public Health Officers</li> <li>• Sub-county Livestock Development Officer</li> <li>• Sub-county Water Officer</li> </ul>	
Project areas residents and PAPs	<ul style="list-style-type: none"> <li>• Locations of public meetings (all settlements along the road).</li> </ul>	Public Meetings ( <i>Baraza</i> ) Small Group Meetings Focus Group Discussions
CSOs and NGOs	<ul style="list-style-type: none"> <li>• Wajir Peace and Development Agency</li> <li>• Arid Lands Development Focus (ALDEF)</li> <li>• Wajir Human Rights Network</li> <li>• WASDA</li> <li>• Mercy Corps</li> <li>• ACTED</li> </ul>	One on one meeting
Sample groups representing vulnerable and marginalized groups among residents and PAPs	<ul style="list-style-type: none"> <li>• Location of FGDs</li> </ul>	FGDs

## 5.4 Key Informant Meetings

### 5.4.1 Approach

348. Stakeholders consultations for the proposed Wajir - Elwak road in Wajir and Mandera Counties were carried out in February 2018 for the section between Wajir and Kotulo, and November and December 2018 for Kotulo and Elwak section of the road by the design engineer ESIA team (See Table 5-2). Further consultations were held by the consultant updating the ESIA in December 2018, February, March and April 2019 along the whole road sections to update data and information collected in the first consultations. Information collected in the updating of the ESIA were found to correspond to the information collected in the initial consultations by the previous consultant.

349. The consultations were done through courtesy calls, questionnaires and one-on-one meetings. While most of the stakeholders were cooperative, there are some who did not wish to respond or be recorded as having given any input. 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.

**Table 5-2 Stakeholders Consulted****During design and initial ESIA**

	<b>Stakeholder consulted</b>	<b>Method of consultation</b>	<b>Record of consultation</b>
1	County Commissioner for Mandera	Courtesy call	None
2	Governor for Mandera county	Courtesy call	Minutes of meeting
3	Deputy County Commissioner for Elwak	Courtesy call	None
4	County Secretary for Mandera County	Courtesy Call	None
5	CEC lands, housing and physical planning (also, in charge of Adjudication and Survey)	One on one meeting	Filled questionnaire
6	CEC Gender and Social Services	One on one meeting	Filled questionnaire
7	CEC Education, Sports and Culture	One on one meeting	Filled questionnaire
8	CEC Youth and Gender	One on one meeting	Filled questionnaire
9	CEC Livestock, Agriculture and Irrigation	One on one meeting	Filled questionnaire
10	CEC Water and Sanitation	One on one meeting	Filled questionnaire
11	CEC of Water, Environment and Energy	One on one meeting	Filled questionnaire
12	CEC for Trade and Industries	One on one meeting	Filled questionnaire
13	CEC for Roads and Transport	One on one meeting	Filled questionnaire
14	CEC for Health	One on one meeting	Filled questionnaire
15	NEMA	One on one meeting	Filled questionnaire
16	WRA	One on one meeting	Minutes of meeting
17	KFS	Questionnaire	Filled questionnaire
18	KWS	One on one meeting	Filled questionnaire

**By Independent Consultant during Updating of the ESIA**

<b>Date</b>	<b>Stakeholder Consulted</b>	<b>Venue</b>
<b>Wajir County</b>		
December 27 <sup>th</sup> , 2018	County Commissioner, Wajir	C.C Office, Wajir Town
December 27 <sup>th</sup> , 2018	CEC – Road – Wajir County	Wajir County Hqs
December 27 <sup>th</sup> , 2018	Deputy County Commissioner Tarbaj	Wajir Town
December 28 <sup>th</sup> , 2018	Deputy County Commissioner, Wajir East	D.C.C Office
December 28 <sup>th</sup> , 2018	Director- Social Development and Gender – Wajir county	Wajir County Office
December 30 <sup>th</sup> , 2018	National Museums of Kenya	NMK – Wajir Town
December 30 <sup>th</sup> , 2018	Chief – Wagberi Location	Chief s office – Wajir Town
December 30 <sup>th</sup> , 2018	OCS – Tarbaj police station	OCS Office – Tarbaj Town
February 1 <sup>st</sup> , 2019	CEC – Lands – Wajir County Government	County Headquarters, Wajir Town
February 2 <sup>nd</sup> , 2019	County Land Surveyor - Wajir	County offices - Wajir
February 2 <sup>nd</sup> , 2019	Chairman- Wajir County Land Tribunal	Wajir Town
February 3 <sup>rd</sup> , 2019	Coordinator – NLC Wajir county	Wajir Town
February 3 <sup>rd</sup> , 2019	Chief – Halane Location	Chief's office – Wajir Town
<b>Mandera County</b>		
April 12 <sup>th</sup> , 2019	ACC- Mandera South - Sub County	DCC Office – Elwak Town
April 12 <sup>th</sup> , 2019	OCPD – Mandera South	Elwak Police station
April 14 <sup>th</sup> , 2019	Sub – County Social Dev. Office	Kotulo Town
April 14 <sup>th</sup> , 2019	DCC – Kotulo (Mandera) Sub County	DCC Office – Kotulo Town
April 14 <sup>th</sup> , 2019	OCPD – Kotulo Sub County	OCPD Office – Kotulo Town

**NB:** The governor for Wajir could not be consulted even after trying through his PA office and impromptu visits to his office twice. The records of consultation including the signed attendance list for those consulted, filled questionnaires, minutes of meetings attached in the Annex.

#### 5.4.2 Institutional Stakeholders' Meetings

350. Stakeholders meetings targeted grassroots institutions such as sub county offices, primary schools and health centres along the project road. During site reconnaissance, grassroots institutions were mapped along the project road. Thereafter, visits were made to hold informant discussions with the persons in-charge. The thematic areas for discussion during the meeting include:

- Population served by the facility;
- Catchment area of the facility;
- Challenges faced by communities accessing the facility; and
- Recommendations on how the road can enhance benefits to target population.

Meetings were held with the institutions presented in **Table 5-3**.

**Table 5-3: Institutional Stakeholder's Meeting**

Institutions	Name	County	Person in Charge (Consulted)	Dates for Meeting Held
Health Centres	Tarbaj	Wajir	Head Nurse	23 February, 2018
	Hungai	Wajir	Nutritionist	23 February 2018
	Kutulo	Mandera	Nutritionist	22 February 2018
	Elwak	Mandera	Head Nurse	
Primary School	Tarbaj	Wajir	Head Teacher	23 February, 2018
	Wargadud	Wajir	Head Teacher	24 February 2018
	Kutulo Primary School	Wajir	Head Teacher	22 February 2018
Sub County office (National Government)	Tarbaj	Wajir	Assistant County Commissioner (ACC)	23 February, 2018
NDMA	Tarbaj	Wajir	Sub county Representative	23 February, 2018

**Table 5-4** is a summary of the comments from the Stakeholder consultations. Detailed records are presented in Annex 4 of this report.



**Table 5-4 Stakeholder consultations comments**

Institution/Stakeholder Consulted	Comments	Opinion on the road project
Ministry of lands, housing and physical planning (Wajir and Mandera)	This is a welcome project in the county. The county is in dire need of better linkage with other towns hence the road project is a good initiative.	<p>The larger part of the land is communally owned with only a few parcels within Mandera and Wajir Towns having title deeds.</p> <p>Most of the urban settlements are found at the sub county headquarters. Scattered, linear and nuclear are the main types of settlement patterns. They are mostly established in a line-like pattern and mostly pronounced along the roads.</p> <p>The counties do not have valuation roll and therefore land is valued by market rates which differ from place to place. The rate is high in the urban centres, furthermore most of the land is undocumented.</p> <p>It is imperative that the county Governments and especially the Ministries of Lands is involved in the event of acquiring land for the road construction and in the compensation process.</p>
Ministry of Agriculture, Livestock and Irrigation (Department of Agriculture and Irrigation, Wajir)	<p>It will open up the counties as farmers will have a reliable means of transport for their products.</p> <p>It will boost economic activities in the region by providing employment opportunities of the area's youth. It is a viable project for the counties at large.</p>	<p>Most of the production takes place between Rhamu and Mandera along Daua River and crops such as onions, Watermelons, bananas, lime, simsim oil are transported through the road to Wajir, Garissa, Nairobi and beyond</p> <p>The project will have an impact to the potential agriculture in the area. It will encourage more people to do farming since farmers will be able to access the markets further than Wajir and Mandera counties</p>
Ministry of Agriculture, Livestock and Irrigation (Department of Livestock, Mandera)	This is a noble project which is long overdue. It will open up the county in-terms of business opportunities and the people of Mandera county will benefit immensely from the project.	<p>Livestock populations are concentrated in areas along the project corridor that are located close to water sources.</p> <p>An estimated animal population (in the locations along the project corridor) that are likely to be affected are as follows:</p> <ul style="list-style-type: none"> <li>• Cattle-520,000</li> <li>• Camel-400,000</li> <li>• Sheep-800,000</li> <li>• Goats-2,500,000</li> </ul>

Institution/Stakeholder Consulted	Comments	Opinion on the road project
Ministry of Education, Sports and Culture, Wajir	It is a great project. Schools and social amenities along the road should be considered. During mobilization a lot of emphasis should be placed on not rerouting the road towards school area, playgrounds and social amenities.	Rerouting of the roads during construction towards school, social amenities should be discouraged. It should only occur if there is no alternative. Prior to the project setup, public participation should be done with key stakeholders
Ministry of Trade and Industries, Wajir	The project will have great impact on the trade sector in that it will reduce time taken between the location of the project, thus delivery of goods and services efficiently and effectively/ it will open up cross border trade.	<p>Interconnectivity with other roads is of major concern, this being one of the main trunks accessing the capital city, the county government would wish to connect to this road other smaller roads leading to nearby towns and centres.</p> <p>KeNHA should clearly mark the road reserve with permanent markers to discourage encroachment by roadside developments.</p> <p>Each centre along the road has a market that will benefit from the road project</p> <p>Products traded include:</p> <ul style="list-style-type: none"> <li>• Food stuff- rice, sugar, oil, wheat flour</li> <li>• Financial services</li> <li>• Electronic items</li> <li>• Livestock products</li> <li>• Agricultural products</li> <li>• Hardwares in major towns</li> <li>• Non-food items like clothing</li> </ul> <p>Most of the foodstuff, non-food items, electronics and hardwares are in Nairobi and across the border (Somalia).</p>
Ministry of Road and Transport, Wajir & Mandera	The ministries of both counties welcome the road project and believe it is an excellent opportunity for the people of North Eastern and the Kenyan public at large.	<p>The road is narrow within the towns/centres due to encroachment. Consider shifting the road to areas where resettlement will be minimized or not necessary</p> <p>Compensate Mandera county by building new airstrip outside town.</p> <p>The narrow roads within Mandera town to be tarmacked as well. Consider expanding the project to cover Wajir airport section</p>
Water Resource Authority (WRA), Wajir office	The project would enhance communication, security; reduce cost of transport and commodities. It will improve business of trade.	The flow of the lagas as waterways across several points of the project areas to be designed for worst case scenario.

Institution/Stakeholder Consulted	Comments	Opinion on the road project
		<p>General flat area like Elwak township drainage to be properly designed to allow for free storm water flows.</p> <p>Surface water source should not be accessed without prior notice to WRA.</p>
Ministry of Youth Gender and Social Services, Wajir	It's a much-needed project that we hope would bring down the transaction time for doing business, which will result in cheaper goods. We feel it is a long overdue project that should be done a long time ago.	<p>The estimated population in the area is 60% women and 40% men. 57% are below 35years and are unemployed and it is the major challenge together with lack of basic social amenities.</p> <p>A major way of integrating the population into project is by holding public barazas in the area and gauging the expectation of the people.</p>
Kenya Forest Service (KFS)	It is long overdue, it will open up the region to other parts of Kenya spurring increase of development and lead to road transportation	<p>The road might encourage clearance of forests and cutting of trees since transportation will be easier for charcoal and firewood from the region.</p> <p>The project should have initiatives to plant trees in the area as part of the project</p>
Ministry of Interior and Coordination of National Government (County Commissioner Mander county)	The road is welcome as it will make it easier for response of security challenges in the area.	Ease of transport might assist in insecurity in the area, because insurgents are able to run away with vehicles faster. It will be important for the road to have more road blocks, especially between Wajir and Elwak sections of the road.

**Table 5-5: Other comments from Key Informants**

Issue	Comment	Response
Risk related to water use / water use conflict	<p>The contractor should provide his own source of water away from the community water sources to avoid artificial water shortage within the community areas.</p> <p>Low water yield in the area contributing to scarcity of water in the area</p> <p>Provision of signages that indicate watering points for human and livestock</p> <p>High water consumption leading to drying up of existing wells.</p>	<p>The specifications in the bid document will be structured to accommodate this recommendation. A balance will be sought between cost effectiveness for the construction and prevention of over-drawing from aquifers by requiring the contractor provides a hydrogeological assessment report before a borehole is approved.</p> <p>Consultations with the community on siting of boreholes and development of agreements and subsequent operating procedures for sharing of water resources will be important during construction period</p>

Issue	Comment	Response
	<p>Measures should be put in place to avoid loss of human and animal life by drowning at the water points.</p> <p>Depletion of water on the ground due to high consumption that will affect the grazing potential of the land</p>	
Material Use conflicts	<ul style="list-style-type: none"> <li>Resistance by the community in some areas due to excavation of materials;</li> <li>Land disputes arising between the contractor and the locals.</li> </ul> <p>Interruption of grazing areas due to excavation sites for material</p>	<p>Co-opting of Peace Committee, “Maslaha” Committee and clan elder representatives in the grievance management system for the project construction phase.</p> <p>All material sites shall be agreed upon with the local communities</p> <ul style="list-style-type: none"> <li>Proper stakeholder mapping and adequately resources stakeholder engagement programs during ESIA for material sites;</li> <li>All material sites must have EIA Licenses prior to issuance of approval for use by the supervising team.</li> </ul>
Loss of access to ground water resource	<p>RoW at km0+000 to km 0+400 should be re-aligned to avoid Horay wells.</p> <p>Horay wells serves a radius of 60km and in some places 150km from the town. Road cannot pass through the wells to avoid damage or contamination.</p> <p>All other water resources in the area should be avoided at all costs</p>	<p>This will be done within the updated Design Report as complimented by direct PAP engagement and update of census records and valuation roll.</p>
Livestock and Wildlife crossings	<p>Structures such as overpass and underpass should be considered to facilitate easy movement of livestock and Wildlife especially in key livestock and Wildlife movement routes.</p>	<p>Wide areas of critical animal movements were identified and noted for consideration by relevant agencies and incorporated in the final design. Overpass and underpasses might be expensive but clearly marking the areas and speed reduction measures in such areas will assist in minimizing accidents along the road</p>
Risk of population influx	<p>Clan and cultural conflicts due to influx of migrants from other areas seeking for employment</p>	<p>The Influx Management Strategies has considered these threats in development of recommendations for further development at the construction phase of the project.</p>
	<p>Boreholes and other water sources should be blocked or dug in area agreed with the residents to avoid creation of</p>	<ul style="list-style-type: none"> <li>Need for water by the existing community in some areas is high.</li> <li>The County Governments should prepare for proper land use planning and equitable allocation of community land as demand for land is likely</li> </ul>

Issue	Comment	Response
	settlements once the contractor has left. This can also create conflict between communities	to increase with development and enhanced security along the project road corridor.
Sanitation	<ul style="list-style-type: none"> <li>• There is no proper functional sewerage system;</li> <li>• The contractor should have in place a septic tank for waste collection and procure a waste handler who will liaise with the County Governments on proper waste disposal.</li> </ul>	The specifications in the bid document have been structured to accommodate this recommendation.
Enhancement of project benefits	<ul style="list-style-type: none"> <li>• KENHA and other stakeholders in this project should constantly liaise with the County Governments as an integrated project to achieve the development goals of the area</li> <li>• The contractor should prioritize the local supplies and services such as milk and meat.</li> </ul>	The contractor will be encouraged to use local resources as much as possible These aspects informed the development of the future strategy for community engagement.
Future stakeholder engagement	<ul style="list-style-type: none"> <li>• The project should do public awareness and public relations to establish any new developments that are taking place along the project road that may not have been reported but are of interest.</li> <li>• Hold comprehensive community participation forums along the project road/corridor</li> </ul>	Stakeholder engagement is a continuous process that will go on until the end of the project completion. A stakeholder engagement plan will also be developed for the project by KeNHA and the other parties for use during the project execution.
Community health and safety	<ul style="list-style-type: none"> <li>• The contractor should fence off excavated sites to avoid safety risks;</li> <li>• The contractor should put in place adequate sanitary measures such as toilets and washing of hands with soap to avoid diseases such as Cholera;</li> <li>• Water pans are a danger to children-risk of drowning and should be fenced is the contractor will be using any</li> </ul>	The specifications in the bid document will be structured to accommodate this recommendation.
	<ul style="list-style-type: none"> <li>• KeNHA should seek technical advice from the public health officer on requirements on community health and safety;</li> <li>• KeNHA should initiate contact with the public health office until the end of the project.</li> </ul>	These aspects informed the development of the future strategy for stakeholder engagement.

Issue	Comment	Response
	<ul style="list-style-type: none"> <li>Procurement of a qualified food service supplier who is aware of the necessary public health requirements should be hired at camp sites</li> </ul>	<p>A licensed food handler will be used at campsites This has been identified as a potential area for enhancement of benefits to low income households, especially women.</p>
Impacts on education	Discourage child labor so that there is no absentees in school by children.	This aspect has been considered in the development of child protection strategies for the project.
Impacts on local culture	<ul style="list-style-type: none"> <li>Interference with the migration and nomadic lifestyle that has been in existence;</li> <li>Creating awareness on cultural integration;</li> <li>Design integration to cater for the existing migration and nomadic routes;</li> <li>Need to be sensitive on grazing areas especially the animal's pools;</li> <li>Need to be sensitive to the local community's culture and lifestyle;</li> <li>Being sensitive to the social, cultural, economic and religious diversity of the local communities.</li> </ul>	<p>The contractor will be required to</p> <ul style="list-style-type: none"> <li>Sign code of conduct by all staff;</li> <li>Sensitization of project staff on the community's way of life, areas of convergence and areas of conflict as well as culturally appropriate responses should a culture clash arise;</li> <li>Sensitization of site and human resource managers for the project team on appropriate response measures in the event of occurrences with a risk of culture clash;</li> <li>Continuous and clear communication of sanctions to be enforced on staff should they breach the code of conduct;</li> <li>Evaluation of efficacy of grievance response mechanisms to promote a structured improvement of the system.</li> </ul>
Road Safety	<ul style="list-style-type: none"> <li>Road accidents- Measures should be put in place by observation of the required speed limits to avoid accidents in the future;</li> <li>Over speeding by vehicles which often results in loss of human lives and livestock;</li> <li>Liaise with chiefs to know the hotspots for animal crossing;</li> <li>Provision of furniture and structures to allow safe animal crossings.</li> </ul>	<p>Road design incorporates safety measures and associated furniture including signages Training of local community on road safety has been recommended in the ESMP</p>
Security	<ul style="list-style-type: none"> <li>Security challenges around Kotulo area needs to be considered;</li> <li>Tarmac roads are safer as land mines cannot be planted on the road, however, insurgents can speed off after anarchy</li> </ul>	<p>The costs for security personnel has been integrated as one of the required items for pricing by the Contractor.</p> <p>Close liaison between KeNHA, security agencies, the contractor and the peace committees is recommended in ESMP</p>
Decommissioning of material sites and environmental restoration	<p>Excavation sites should be rehabilitated to collect water which can benefit the adjacent communities.</p> <p>Conversion of excavated sites to water pans as a form of CSR which will benefit the community.</p>	<p>The ESMP required that proper plans for hand-over and change of use of these sites be done in consultation with the community and with the full participation of NEMA, area water user associations (WUAs) and County Government to promote sustainability of the water resources and to ensure</p>

Issue	Comment	Response
	Community will benefit from owning the boreholes and wells dug by the contractor after exiting the project	<p>that proper community health and safety measures and procedures are continually implemented and enforced.</p> <p>Any material sites that has not been agreed upon to remain as water pan by the county government, communities and the contractor shall be rehabilitated to avoid social conflict. Restoration / rehabilitation of the material sites will be as per the ESMP developed for each site and approved by NEMA</p> <p>Capacity building of the County Governments and existing WUAs should be done with the support of the nearest WRA office on managing water pans in the area.</p>
Potential programs	<p>CSR</p> <p>Creation of incentives, jobs, building water pans and earth dams to benefit the community</p> <p>Putting up facilities for the community along the route</p>	<p>For consideration by the client under the support social programs for the project.</p> <p>Deliberate inclusion for training of students from local middle level colleges during implementation is recommended</p>

## 5.5 Public Meetings

### 5.5.1 Mobilization for Public Meetings

351. With the assistance of the Chiefs along the proposed road corridor, and Assistant County Commissioner Wajir East and Mandera South subcounty, appropriate dates /days to consult with the community in their respective locations were set and publicized at local administration forums and other public places such as mosques in a language understood by the community to allow them time for preparation and consensus building of their views and preferences with regards to the project. In addition to this, the Chiefs deployed their assistants and village headmen to make announcements and post notices at market centres informing the public about planned meetings in their local language (Somali). The meetings were arranged for each settlement along the project road except for Dabasiti and Garsesala for which joint meetings were held. Notices for meetings were given at least three days to one week for public meetings.

352. The consultations were done in an open and honest manner where the study team shared both the positive and negative impacts of the project and opened a discussion with the community to articulate the issues and come up with possible mitigation measures to avoid, minimize or mitigate the negative impacts. From this exercise the following outputs were obtained:

- Feedback from PAPs on the project including perceptions on its implementation;
- Program for household surveys for the census, socio economic survey and preparation of the land and asset inventory.

A total of 30 public participation meetings were held between March 2018 and April 2019.

**Table 5-6** presents a schedule of community consultation meetings held along the project area by the design consultant and the independent consultant. Detailed meeting minutes and records are presented in the annex 4 of this report.

**Table 5-6 Schedule for the Community Consultation Meetings**

#### Consultations by Design Engineer consultant

Date	Area Name (Settlement)	Venue	No. of Attendees			Main Focus of the Meeting
			Male	Female	Total	
1 March 2018	Wagberi	Orhai Market	n/a	n/a	69	Community consultation meeting, ESIA and RAP Sensitization
21 Feb 2018	Lafaley	Lafaley Centre			23	Community consultation meeting, ESIA and RAP Sensitization
24 Feb 2018	Tarbaj	Sub County Offices			6	Community consultation meeting, ESIA and RAP Sensitization
23 Feb 2018	Hungai	Hungai Centre			33	Community consultation meeting, ESIA and RAP Sensitization
26 Feb 2018	Wargadud	Wargadud Centre			43	Community consultation meeting, ESIA and RAP Sensitization
26 Feb 2018	Wajir-Kutulo	AP Camp			9	Community consultation meeting, ESIA and RAP Sensitization



Date	Area Name (Settlement)	Venue	No. of Attendees			Main Focus of the Meeting
			Male	Female	Total	
19 Oct 2018	Elwak	Elwak Youth Resource Centre			76	Community consultation meeting, ESIA and RAP Sensitization
24 Oct 2018		Elwak Youth Resource Centre			64	Grievance Address Meeting The meeting was used to engage community in realigning the proposed Elwak by-pass and minimize resettlement. The proposed bypass was going to leave a lot of people, mostly vulnerable low-income earners displaced.
27 Oct 2018		Elwak Youth Resource Centre			14	Council of Elders ESIA consultation and to clarify to them about modalities involved resettlement for project affected persons.
18 Oct 2018	Borehole 11	At the 'trading centre near the 'Borehole'	50		50	Community consultation meeting, ESIA and RAP Sensitization
18 Oct 2018	Dabasiti & Garsesala	At the Chief residence at Dabasiti			40	1 <sup>st</sup> Community Consultation Meeting To sensitize the host community on the project, its merits, the processes to be followed and to gain their trust & social license to operate
26 Oct 2018					40	2 <sup>nd</sup> Community Consultation Meeting To further clarify to them about the issue of land take for the project road as well as the need and procedures for the preparation a RAP Report for the affected areas.
27 Oct 2018	Dimu	At the trading centre			40	Community consultation meeting
19 Oct 2018	Kutulo	DCs office			51	Community consultation meeting
27 Oct 2018		DCs office			14	Grievance address meeting Explain to the locals the issue of land take for the project road as well as the need and procedures for the preparation a ESIA and RAP Report for the project.
<b>TOTAL</b>					<b>572</b>	

**Consultations by Independent consultant**

Date	Venue	No. of Participants			Main focus of the meeting
		Men	Women	Total	
3/2/2019	Lafaley	23	12	35	Community consultation meeting, ESIA and RAP Sensitization
28/12/2018	Tarbaj	17		17	Local administration and elders consultation
2/2/2019	Tarbaj	13		13	Administration and Community leaders consultation meeting, ESIA and RAP Sensitization
2/2/19	Tarbaj	47	17	64	Community consultation meeting, ESIA and RAP Sensitization
14/4/19	Kotulo Mandera	13			Administration and Community leaders consultation meeting, ESIA and RAP Sensitization
14/4/19	Borehole 11	11	4	15	Community consultation meeting, ESIA and RAP Sensitization
27/12/18	Wajir/ Wagberi			4	Wajir county government
2/2/19	Wajir/ Wagberi			8	Local leaders consultation
3/2/19	Wajir/ Wagberi	17	7	24	Community consultation meeting, ESIA and RAP Sensitization
2/2/19	Hungai	12	3	17	FGD – business owners
2/2/19	Hungai	12	3	14	FGD – Livestock owners
12/4/19	Elwak	17	7	24	Administration and Community Leaders meeting, ESIA and RAP Sensitization
15/4/19	Dabasit	11	7	18	Community consultation meeting, ESIA and RAP Sensitization
15/4/19	Garsel sala	12	5	17	Community consultation meeting, ESIA and RAP Sensitization
2/1/19	Wargadud			7	FGD Youth and community leaders
<b>TOTAL</b>		<b>205</b>	<b>65</b>	<b>290</b>	

**5.5.2 Feedback from Public Meetings**

353. The main concerns raised at all community meetings were generally connected to project impacts on their livelihoods as well as who among them would receive compensation. Relocation procedures also came up, with a proposal to KeNHA to compensate those who would be affected before giving them notice to relocate.

354. The communities in areas such as Elwak, Wagberi and Tarbaj were categorical that grave sites were to be avoided. As a result of this, the alignment and its RoW were re-aligned (twice in the case of Tarbaj) to avoid burial sites.

355. From the project benefit perspectives, there were also concerns about how local people would benefit in terms of employment opportunities during the construction of the proposed road. The communities also indicated the road construction is way overdue, and it will be a game changer for the Northern Frontier Counties that will be served by the road.

Minutes of Meeting and attendance sheets are presented in the annex 4 of this Report.

### 5.5.3 Focus Group Discussions

356. To supplement community consultation meetings, Focus Group Discussions (FGDs) were also held with selected groups such as youth, men and women along the proposed road corridor. The members were drawn from the settlements and called to a central location for the meetings as presented in **Table 5-7**.

**Table 5-7: Program and location of Focus Group Discussions**

	Settlements	Demographic	Number of Attendees	Date
<b><i>By Design Engineer</i></b>				
	Wargadud	Youth	11	24 <sup>th</sup> February 2018
		Women	7	
	Kutulo, Wajir	Women	13	22 <sup>nd</sup> February 2018
	Tarbaj	PWLD	6	23 <sup>rd</sup> February 2018
		Men	13	
	Lafaley	Men	14	23 <sup>rd</sup> February 2018
		Youth	13	
		Women	7	
	Wagberi	Youth	7	22 <sup>nd</sup> February 2018
		Women	8	
	Kutulo, Mandera	Men	74	19 <sup>th</sup> October 2018
	Elwak	Youth	21	23 <sup>rd</sup> October 2018
	Borehole 11	Women	13	2 <sup>nd</sup> November 2018
<b><i>By Independent consultant</i></b>				
	Wagberi	Women	8	2 <sup>nd</sup> February, 2019
		Men	18	
	Halane	Men	4	3 <sup>rd</sup> February, 2019
		Women	3	
	Lafaley	Women	8	3 <sup>rd</sup> February, 2019
	Hungai	Youth	17	2 <sup>nd</sup> February, 2019
	Tarbaj	Women	6	2 <sup>nd</sup> February, 2019
		Men	11	
		PWLD	4	
	Kotulo Mandela	Men	10	14 <sup>th</sup> April 2019
	Garsel Sala	Men	3	15 <sup>th</sup> April 2019
		Women	4	
	<b>TOTAL</b>		<b>307</b>	

The team also met the following NGOs/CBOs during the consultation period

Name of the group	Chairlady	Contact
Mother to mother group	Qamar Mohammed	0707467177
Maendeleo Women group	Arfom modamal	0718234251
Bisharouw women group	Fatuma Ugas	0724693966
Towfiq women group	Sharif Jimale	0704068871
Tawakalal women group	Nathifa Mohammed	0725143348
Wajir Peace and Development Agency	Mohamud Mohhamed	0728448326
Arid Lands Development Focus (ALDEF)	Omar Sid Abdi	072104343
Wajir Human Rights Network	Wajir rep, Hassan Ali	0700103843

## 5.6 Disclosure and Consultation During Project Duration

357. 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 World Bank external website which can be accessed by interested parties. The ESIA will also be availed 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. A summary of the same will be availed in local Somali language once the report is approved by NEMA.

358. 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 proposed Stakeholder Engagement Plan (SEP) has been provided in the Annex 1 of this report. A proposed grievance redress procedure is also provided in chapter 9 of this report.

**Figure 5-1 Photo Impressions of Community Consultation Meetings**





Meeting at Kutulo on the 18<sup>th</sup> October 2018



Meeting at Elwak Town





Meeting at Bore-hole11



Pictures: Public Participation Meeting in Dabasiti



FGD with women in Lafaley



FGD with youth Wagberi

Table 5-8 provides summary of the views raised community meetings and responses provided at the meeting.

**Table 5-8: Feedback from Public Meetings and Focus Groups Discussions on the Project Road**

	ISSUES	COMMENTS	RESPONSE TO COMMENTS
1.	Compensation for land take	<ul style="list-style-type: none"> <li>• Will the community be genuinely compensated by the government or will this only turn into forced evictions?</li> <li>• Compensations should be made before road construction process begins.</li> <li>• Whether compensation amount to PAPs will be payable to the community or to individuals?</li> <li>• Will the poor and the orphans (children) who have established settlements along the road be compensated?</li> <li>• Poverty levels are high and the structures are not of better value. The community proposes that considerations be made during compensation so that their living standards can be uplifted.</li> <li>• How will those with Businesses be compensated?</li> <li>• Is it possible for there to be a small traders section constructed for the business owners whose businesses have been affected in Borehole 11?</li> </ul>	<p>The community was assured that in-line with the World Bank Operational Policies on involuntary resettlement and the Constitution of Kenya Section 40, both required prompt and complete compensation prior to construction of the road and a charge of 5% on any money yet to be paid if the construction should start prior to complete compensation.</p> <p>The compensation will be at individual level for businesses and personal households affected and at community level for any communal land. Relevant laws and procedures will be used when valuing properties and we shall abide by the law</p> <p>The poor and the orphaned children who have established homes on the ROW will be compensated as it is their right. A separate RAP report shall be prepared to guide compensation on all affected persons to be paid out the particular owners, so long as they were present by the cut-off dates.</p> <p>Relevant safeguard measures will be included additional measures, on project design modification, that may be required to address adverse effects on the vulnerable Population and to provide them with culturally appropriate project benefit.</p> <p>Road side amenities are part of the design consideration made for road projects. Such amenities include parking, market stalls etc. For businesses premises that have not encroached the existing RoW and affected by the project road at Borehole 11 will by compensated as per the RAP valuation report.</p>
2.	Land Ownership	<ul style="list-style-type: none"> <li>• Conflict, lifestyle and drought pulled the community to living together so as to get resources distributed by the government. This by design has made them live along the road. Therefore, they do not have land ownership documents. What will happen to the plots they have allocated ourselves</li> </ul>	<ul style="list-style-type: none"> <li>• As there is adequate space just outside of the proposed new RoW and beyond, identification of land for resettlement will not be a problem in the areas outside of Wajir Town. Therefore, it is possible for them to get new space even as they cede the current space;</li> <li>• For Wajir Town, the affected persons claim to have allotment letters, the County Government will have to verify authenticity of the plot allocation document. The County Government will again be instrumental in identifying land for resettlement around the Town;</li> <li>• In all the above case, County Government representatives were clear that the RoW boundary is required to ensure that persons are not</li> </ul>

	ISSUES	COMMENTS	RESPONSE TO COMMENTS
			resettled within the Road Boundary. The role of CG in RAP implementation is therefore key for livelihood restoration through in-kind replacement of land.
3.	Awarding of Road Construction Tender	<ul style="list-style-type: none"> <li>The Community requested that the contract for construction of this road be given to an international company for purposes of getting a quality road done.</li> <li>The community stated that the process for tender awarding be very corruption free. Without bribery.</li> </ul>	<p>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 regulations as well as industry best practices.</p> <p>The procuring of the contractor will be transparent.</p>
4.	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.	<p>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.</p> <p>In addition, the outcomes of RAP survey and documentation will undergo disclosure to inform the community before the implementation the report.</p>
5.	Employment of local staff during road construction	<ul style="list-style-type: none"> <li>The locals requested that their youth get formal and casual employment in the project so as the community can benefit further economically.</li> <li>The community asked that the government give their youth priority. It is also worthy to note that a lot of non-locals who have come in search of jobs from Nyeri and Meru Sub-county have been killed in Mandera and Elwak.</li> </ul>	<p>At the construction phase, the Contractor will be required to have a policy that prioritizes qualified locals and that they get:</p> <ul style="list-style-type: none"> <li>Casual Labor opportunities as supplementary income sources;</li> <li>Equal opportunities to both men and women as the women are very interested in these jobs;</li> </ul> <p>That interest is shown, women who would like to provide support services to the construction workers be assisted to understand the procedures required to legalize their small businesses.</p>
6.	Community engagement in designing of this road and other feeder roads	The community lamented heavily that the road alignment was designed in Nairobi and only when it was complete is when they are notified that their land may be among that which may be acquired. They requested that in future the government and consulting company consult them in choosing which road / Bypass alignment suits them best to avoid unnecessary and excessive involuntary	The project design engineers were physically on site making physical assessment and meeting with relevant stakeholders that generates data to inform the new alignment and by-passes. The ESIA and RAP prepared for the project will be part of the project reports to inform the final designs.



	ISSUES	COMMENTS	RESPONSE TO COMMENTS
		movement of affected people which may be avoidable since the community know the places that have least inhabitants.	
7.	Haste of Building the road.	The community asked about the duration of the road construction from start to finish and when the road construction would commence.	The community was assured that the road construction would only take place after compensation. This process prior to construction would be done over a duration of time that the government would communicate.
8.	Provision of community Civic Education of the project, its components & logical process as well as the process of compulsory acquisition.	<p>It was noted that the community had no prior understanding of what compulsory acquisition is and what compensation is as well as those eligible for it. The public participation meetings doubled up as civic education meetings. Some of the more educated members of community asked that in future the members of community be educated first on the process before it begins; i.e. having a budget set aside for civic education prior to introductory and public participation meeting</p> <p>It is also worthy to note that as per sessional paper No.10 ('<i>African Socialism and its Application to Planning in Kenya</i>') and its implementations, the community has a perception that the government never consults them and that it is biased against them and their right to be heard at the decision-making table. Thus, a civic education programme</p>	The community was assured that this would be taken into consideration in future engagements. As for the PAPs, a committee had been proposed to provide a participatory process during the RAP implementation - RAP Implementation Committee (RAPIC)
9.	Burial sites/ Graveyards that fall in the ROW	<p>Request that graveyards should not be touched by the project because culturally and Islamically it is forbidden.</p> <p>There are burial sites along the proposed road; one at Wagberi, chainage 1+200 and the other at Tarbaj 50 +300.</p> <p>At Elwak where the Bypass was proposed to pass, the settlement has a lot of burial sites</p>	<p>All areas where the RoW has affected graveyards has been re-aligned to avoid the graves and structures. Boundaries of these cultural physical resources was collected to ensure that the re-alignment does not affect them.</p> <p>This was also done in Elwak with regards to the Bypass that prior to realignment was to cut across a settlement that had a lot of graveyards.</p>
10.	Livelihood Restoration	<p>KeNHA should discuss with the County Governments of Wajir and Mandera so that those doing business along the road can be relocated to continue running their businesses.</p> <p>The community asked that the project uplift their livelihood means and not leave them with worse off conditions and it was agreed that</p>	<ul style="list-style-type: none"> <li>From consultations with the Physical Planning Office (See Annex 4 for record of meeting discussions) at County Government, considering that all this land is community land, the County can at County Government level, re-allocate land to these traders. The only support they would require from the KeNHA is the Right of Way boundaries</li> </ul>

	ISSUES	COMMENTS	RESPONSE TO COMMENTS
		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 community in Borehole-11 requested for a traders' park adjacent to the road to enable them to benefit from the Traffic.	<p>clearly surveyed to ensure that PAPs are not re-allocated land within the RoW;</p> <ul style="list-style-type: none"> <li>• The re settlement of these traders will require participation from the County Physical Planning, Markets and Trades and ICT Department;</li> <li>• 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.</li> </ul>
11.	Businesses along the road	<p>Participants wanted to know whether those doing business along the road will be compensated. Similarly, whether markets and market structures will be valued for compensation</p> <p>The community (especially those in Borehole 11 where the road affected land for the entire market) requested for a bus-park traders market to be constructed adjacent to the proposed road so as to allow them not just continue with trading but to benefit from the myriad of buses passing by on their way to upper Mandera and Elwak.</p>	The community was assured that the World bank doesn't believe in destruction of livelihoods whether or not the affected person has good title of the land on which his/her business is sitting.
12.	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.	<p>On discussions with PAPs on grievance resolution, in addition to the Chiefs, the community asked that the "maslaha" dispute committee, the peace committee and representatives of women, men, youth and PLWD and an elder from each clan should be involved for impartiality. This is especially because natural resource conflicts are high, even before compounding these problems with project related issues.</p> <p>This system has been adopted into the project's grievance resolution mechanism as presented in both the RAP and ESIA Reports.</p>
13.	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.

## 6 ALTERNATIVES TO THE PROJECT

### 6.1 Alternative mode of transportation

359. There are no alternatives to this road that fulfil the functions of providing relatively fast, cheap land transportation. Air, rail, and water transport are unlikely to either complement or to substitute roads or highways in this region. There is no railway transport system close to the project area connecting the two towns of Wajir and Elwak and no water body that can be used as a mode of transportation in the project area. The only possible means is air transport but, this is a rather expensive alternative and cannot be used as an alternative to the road.

### 6.2 Alternative alignments

360. The road is part of the most important link between Nairobi and Mandera and serves the entire North Eastern region. 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. However, in selected sections of the proposed alignment which were determined to be affecting worship places (Mosques), communal graves etc, realignment has been proposed.

361. The proposed project road alignment is on an existing road reserve and its upgrading will not involve any major horizontal or vertical realignment except at few locations in Wajir, Tarbaj, Hungai, Kutulo, Borehole-11, and Elwak centres where some resettlement will be necessary due to either encroachment of the existing reserve or optimisation of the engineering design for safety reasons.

### 6.3 “No action” scenario

362. Wajir and Elwak towns are already connected by a continuous gravel surface road, 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.

363. 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.

364. The “No action” alternative is expensive in the long term and would involve frequent extraction of material from borrow sites (see Plate 6-1). This will necessitate further development of borrow pits and continuous use gravel road resulting in the following negative environmental impacts:

- Landscape scarring creating unpleasant changes in scenery when a gaping hole is left behind due to the excavation;

- Road surfaces will remain dusty exposing large number of people, especially at the centres along the road, to constant dust pollution;
- Incidences of malaria in the vicinity of pits where drainage is not possible;
- Open un-protected seasonal water bodies which pose a potential drowning hazard, particularly for young children and livestock;
- Increased flow of surface run-off, particularly in areas where the vegetation is removed and is not re-vegetated; and
- Increased soil erosion due to lack of durable roadside drainage structures.

365. In addition, the status quo will mean that the area will still face problems of poor access to social services, poor economic interconnectivity and incidences of insecurity. From the foregoing, the no action alternative is not environmentally, socially and economically the preferred option.

## 7 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

366. This chapter highlights significant impacts which may arise due to proposed road improvement activities of the Wajir – Elwak Road.

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

- To identify and analyse 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.

### 7.1 Construction Phase Impacts

#### 7.1.1 Positive Impacts

##### 7.1.1.1 Employment Opportunities

367. 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.

368. 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.

#### ***Enhancement Measures***

- Require the contractor have an employment policy that covers local communities as an affirmative action that ensures marginalised 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.

##### 7.1.1.2 Business Opportunities for Local Suppliers and Service Providers

369. 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.

#### ***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.

#### **7.1.1.3 Knowledge and skills transfer**

370. 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.

#### ***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 Wajir and Mandera counties should be used for training local workers to be integrated into the project activities.

#### **7.1.2 Negative Impacts**

### **ENVIRONMENTAL IMPACTS**

#### **7.1.2.1 Vegetation Loss**

371. 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 is typical of the Acacia-Commiphora deciduous bushland and thicket with some of the species endemic and/or regionally restricted. Moreover, some of the fully grown and mature trees have ethnobotanical uses among the local community such as Acacia, Maerua, Commiphora and Azadirachta indica. A number of trees, especially within towns and centres will also be cut to allow for construction of the road project.

#### ***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.

#### 7.1.2.2 Workmen's Camp

372. 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.
373. 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.
374. 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.
375. 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.

#### **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;
- 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

#### 7.1.2.3 Noise pollution - Excessive Noise and Vibration

376. 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.
377. 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.

378. 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.

379. 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.

#### ***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 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;
- 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 neighbouring occupants must be informed in advance and works limited to day time only.

#### **7.1.2.4 Air quality**

380. 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.

381. 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.



382. 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.

### **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 daily regular air quality (dust level) monitoring and conduct corrective adjustments where necessary with the use of portable devices .

#### **7.1.2.5 Generation of Solid Wastes**

383. 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.

384. 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.

385. 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.

### ***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.

#### **7.1.2.6 Increased Soil Erosion Incidences**

386. 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.

387. 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.

### ***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

#### **7.1.2.7 Contamination by Liquid Waste and Hydrocarbon Spills**

388. 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 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.

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

#### **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.

#### **7.1.2.8 Habitat Loss and Disturbance**

390. 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 impalas, gerenuks and dik-dik) 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.

391. Among the herbivores, increasing or opening up spaces within habitats will increase foraging range and increase exposure to potential predators. This may be evident in dryland areas where the natural regeneration of floral cover is slow in previously closed habitats. Moreover, the road might interfere with the migration routes of the wildlife and distort their natural movements. There is potential increase of wildlife kills along the road as a result of speeding of vehicles along the road. However, given that the project is proposed along an existing right of way, the anticipated impact is of low-medium significance.

#### **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;
- Wasted areas under invasion of *Prosopis juliflora* or *Calotropis procera* should be prioritized for batching and other contractor's facilities over other areas with native vegetation. Cleared invasive should be burned on-site. 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.
- The project should clearly mark areas with wildlife movements and construct speed measures to protect the wildlife from accidents

**NB:** The giraffe was found to have the stringiest demands for wildlife crossings along the project road due to its height. Due to the area terrain, it might not be economically feasible to provide an underpass or overpass due to design challenges of such provisions, where the animal require structures with minimal constricted views. Consultations with KWS recommended allowing animals to cross along the road but the client to ensure adequate road signage and speed measures where the animals are prevalent are provided.

#### 7.1.2.9 Spread of Invasive and Alien Species

392. Small pockets of invasive and alien floral species are established along the project road and pose a threat of colonizing native species leading to vegetation succession. The spread of novel habitats along the project habitats may be as a result of ongoing road maintenance and rehabilitation, drainage flows leading to dispersal of seeds or spread by nomadic livestock or wildlife.

393. Invasive species of *Calotropis procera* and *Prosopis Juliflora* were readily identified along the project road. Implementation of the project road may enhance the threat of invasive species through:

- Reuse of equipment and machinery from other sites that are already contaminated with invasive propagules may lead to further spread or introduction;
- Excavation and material borrowing in already affected areas for use in the construction works;
- Improper handling or disposal of uprooted or cleared plant material that have invasive propagules leading to translocation.

#### **Mitigation Measures**

- Borrow sites should be inspected for invasive species with invaded areas avoided;
- Sensitize workers on invasive alien species, some of which they may improperly handle or transfer to other locations such as *Prosopis Juliflora* and *Calotropis procera*;
- Areas along the project road invaded by *Prosopis Juliflora* and *Calotropis procera* should have all cuttings or clearing burnt on site under the guidance of KFS and KWS rather than disposed into un-invaded areas. Care should be taken to ensure forest fires do not spread while burning. Soil should also not be transferred from those areas into other areas of the project road or outside the region;
- Uproot any invasive/exotic plants and burn on site after construction;
- Re-vegetate bare surfaces with native species as soon as possible, in order to avoid colonization by opportunistic and invasive species. Monitor re-vegetated sites in liaison with KFS and county government to ensure survival of the seedlings.
- No workers should be allowed to bring to the region plant species unless allowed and certified by Kenya Plant Health Inspectorate Service (KEPHIS)
- Monitoring composition of species regenerating along road reserves and taking prompt actions in case of emergence of invasive species.

### 7.1.2.10 Impacts on Quarries and Borrow Sites

394. 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.

#### ***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 quarry and 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;
- Prohibit vertical faces exceeding 2.5 m when quarrying on soil, sand, gravel, soft rock or debris – these shall be worked in terraces/ benches or at a safe angle of slope.
- Hard rock quarry faces to be benched or worked from top to bottom.
- All quarry faces/cliffs should be securely fenced. The fence should be at least 3 meters from the edge of the cliff using chain link of at least 1.5meters high.
- Warnings signs of appropriate font size and in the appropriate language should be erected in all quarry entries and in areas with high cliffs e.g. Danger Quarry Deep Pit' or 'Caution Flying Stone and Debris'.
- All roads to and from quarries to be made safe and accessible and transportation of quarried material to follow a designated route.
- Quarry operators to ensure provision of clean water, sanitation and well equipped first aid kit with trained first aiders
- Provide protective gear for persons working in quarries as provided for in the Public Safety Regulations
- Quarry operators to be trained on safety, health and environmental issues and the quarry site should have a person in charge of safety and ensure establishment of 'Safety, Health and Environment Committees' (SHEC).
- Each quarry site (where blasting is required) should have suitable skilled blaster to carry out safe blasting and acquiring blasting permits.
- Quarry sites should be designated, mapped and Change-of-User permits effected before the establishment of a new quarry site.

- Adherence to the Noise and Excessive Vibrations Regulations, 2009.
- Establish at least 10 meters buffer zone between the quarry and the 30 meter riparian reserve of the river, wetland and water catchment areas. (i.e. 40 meters buffer zone between the quarry and the edge of the river, wetland and water catchment area)
- Comply with the NEMA Integrated National Land Use guidelines
- 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.

#### 7.1.2.11 Potential Increase in Incidences of Poaching and Human-Wildlife Conflicts

395. During construction, there is potential for workers poaching and attacks from wildlife in the area, including snake bites. With presence of wildlife in areas along the project road, the following activities will increase human - wildlife interaction:

- Disruption of their natural passage;
- Construction vehicles knocking wild animals;
- Wildlife poaching or collection of trophies by construction staff. The target prey may also retaliate injuring or killing the poacher;
- Construction staff working at night in areas with poor visibility may be accosted by nocturnal wildlife especially predators (lions, hyaenas);
- Some of the wildlife may be attracted to the contractor's camp (staff quarters) as prey and forage availability are on the decline. In the event the animal may leave behind a trail of destruction or may be hurt (entangled, electrocuted, poisoned, human persecuted, vehicle run-over) as they forage within the human environment.
- Active animal burrows and dens as well as ground nests (especially for the aardvark) occur within the project area and may be buried or collapsed during compaction along the project road corridor or vehicle off road driving through into wildlife habitats.
- Construction activities may destroy snake nests leading to poisonous snake attacks and bites

396. As documented in the baseline condition, some of the wildlife in the project area like lions, puff adder, hyaenas and ring-neck lizards are under different categories of vulnerability under both local laws and international conventions. Even though outside conservation areas, conflicts involving such species may negate existing local and international conservation efforts.

#### ***Mitigation Measures***

- Engage KWS to monitor wildlife distribution and movement in relation to the project during construction and subsequent stages to advise accordingly;
- Provide enhancements to wildlife crossings as part of the road designs such as warning signs, over/underpasses, fences and strategically placed watering holes to direct wildlife to safe passage ways;
- Clearly markings along the road with signages, for segments of the road falling within existing designated wildlife corridors
- Identify and construct additional natural wildlife crossings based on reports from the locals;
- Liaison with KWS on handling dangerous wildlife like snakes, wild carnivores. Contractor should liaise with KWS to capture reptiles (especially snakes) hiding under rocks and sheltered terrains and safely release them in suitable habitats;
- Sensitize staff on wildlife encounters and discourage animal persecution or provocation through pre-informed code of conduct;

- Sensitize construction staff against wildlife poaching and enforce strict code of conduct (zero tolerance especially prohibit wildlife poaching/unreasonable persecution of wildlife, and wildlife trading). Any cases on wildlife poaching should be forwarded to KWS for further action, including prosecution of the workers involved.

## **SOCIAL IMPACTS**

### **7.1.2.12 Land take and disruption of livelihoods**

397. 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 1450 PAPs (mainly for properties affected excluding affected livelihoods) who are mainly in the urban centres traversed by the road. Wajir, Tarbaj, Hungai, Wargadud, Kutulo, Elwak and Borehole 11 registered the highest number of PAPs.

398. To minimize the resettlement impacts, realignments have been proposed therefore this number is expected to go down once the revised alignment is finalised. A RAP study report has been compiled as a separate Report describing the type of impacts and entitlement of each affected PAP.

#### ***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.***

### **7.1.2.13 Increased Water Demand**

399. Water scarcity is a major problem in the area covered by the road given its aridity and lack of well-developed water storage infrastructure. Due to high water demand for construction works, 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. There is also a potential risk of local communities demanding water from the contractor for his construction works, leading to a conflict.

#### ***Mitigation Measures***

- The contractor will need to develop independent construction water sources, with potential to abstract water from groundwater resources. With perennial water problem in the area, drilling of boreholes is ideal as it will also support the locals after the road construction works are complete;
- Consider supplementing ground water supplies with harvesting seasonal surface flows through shallow pans;
- 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;
- The contractor shall have an agreement with the local communities and county governments on the management of any water sources after the construction of the project. This will include details on how handover and operation will be managed to avoid social conflict within the local communities;

#### 7.1.2.14 Construction works induced traffic and inconveniences

400. 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.

401. 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.

402. 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.

#### ***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

#### 7.1.2.15 Disruption of Public Utilities

403. At major centres, especially where there is encroachment of the road reserve at centres along the road (eg Tarbaj, Elwak, Wajir, among other centres) overhead powerlines are running on the road reserve, and will require relocation away from the road reserve, thereby affecting electricity supply along the target areas. There are no water pipes noted in the area, although there are some ongoing water projects in Wajir, Tarbaj and Elwak 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.

### ***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.

#### **7.1.2.16 Spread of Communicable Diseases**

404. 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.

405. 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 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).

### ***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' equipments
- 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;

### 7.1.2.17 Spread of HIV/AIDS and Other STDs

406. 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 Wajir and Mandera counties. 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.

407. In Mandera and Wajir Counties, the HIV prevalence among adults is 1.7% which is significantly lower than the national one at 6.7 percent. Women (2.9%) are more affected by prevalence than men (0.6%) (Ministry of Health, 2014).

#### ***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.

### 7.1.2.18 Workers Welfare

408. 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.

#### ***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.

#### 7.1.2.19 Community Health and Safety

409. 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.

410. 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 KeNHA. 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.

411. 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.

#### ***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.

#### 7.1.2.20 Conflicts between construction workers and local communities

412. 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.

#### ***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.

#### 7.1.2.21 Labour Influx and Social Change

413. 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.
414. 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.
415. Similarly, interaction between non-Muslim 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 behaviour such as improper sexual relationships between immigrant workers and local girls/women (including married women), which can also lead to gender-based violence.

#### **Mitigation measures**

- The contractor shall develop a labour management plan for all his project activities;
- 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. 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, behaviours and relations with the local communities.

#### 7.1.2.22 Crime Management

416. 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. Migration and settlement by new people could lead to increase of negative vices in the project area during operational stages of the road.

**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

**7.1.2.23 Child Protection, Sexual exploitation and abuse (SEA) of under-age girls**

417. 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.

418. 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.

**Mitigation measures**

- 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
- 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 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

**7.1.2.24 Absenteeism in Schools**

419. 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.

**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

#### 7.1.2.25 Gender Equity and Mainstreaming in employment

420. 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.

##### **Mitigation Measures**

- Contractor and KeNHA 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.

#### 7.1.2.26 Gender Based Violence (GBV), Rape and Sexual harassment

421. 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 favours 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.

422. 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.

423. 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.

##### **Mitigation Measures**

The proposed measures shall include but not limited to:

- KeNHA will engage services of CSP 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 centred 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 (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

#### 7.1.2.27 Alcohol and drug abuse

424. 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.

#### ***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 (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

**7.1.2.28 Increase in the prices of goods and services in the community**

425. 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.

***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

**7.1.2.29 Complaints and Grievances/Social Conflicts**

426. 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.

***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

**7.1.2.30 Impacts on Cultural Resources and Archaeological Sites**

427. 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. In the engineering design, realignment has been proposed at Elwak where a communal grave site exists, at Wajir town where a historical market, and a section of communal grave site at Tarbaj was noted during public consultations.

***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 3.

**OCCUPATIONAL HEALTH AND SAFETY****7.1.2.31 Occupational Safety and Health Hazards**

428. 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 injures 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.

***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 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;
- 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;
- 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.

#### 7.1.2.32 Impacts Related to High Temperature and Humidity Levels

429. In Mandera and Wajir counties, temperatures may reach extremes (42°C) and with an average relative humidity of 45 percent, which may have health impacts on construction workers such as dehydration, heat stroke, and other heat related illnesses.

##### ***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.

#### 7.1.2.33 Road safety

430. Activities related to construction works will undoubtedly induce uncharacteristic 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 sources of potential accidents to humans and livestock/wildlife, disturbance of normal living conditions to the local population, dust pollution, etc during the construction phase.

##### ***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.
- KeNHA in collaboration with the relevant government agencies, 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.

#### 7.1.2.34 Security Challenges

431. The general project area experiences security challenges with sporadic incidents of attacks by armed gunmen. Security incidences may pose challenges to contractors' workforce, discourage potential workers from working in the area and also risk of loss of construction equipment like vehicles and other valuable inputs. These may affect overall project delivery and also subject affected workers or their relative to psychological stress. Closer liaison between the KeNHA, the contractor and government security agencies are thus crucial to managing this risk.

##### ***Mitigation measures for security management***

- The contractor shall develop Security Management and Emergency Response Management Plan for his employees, and conduct regular briefs on security emergency, including drills on worksites and campsites;
- KeNHA to support the contractor in liaison with government security agencies for security planning and continuous surveillance;
- Contractor to appoint fulltime security coordinator to coordinate with security agencies in the area on issues related to security for the construction workers;

- Workers should be sensitized on security arrangements with regular updates as necessary;
- Travel plans to remote locations like off-road borrow sites and quarries should be discouraged based on the prevailing security situation;
- Emergency contact list shall be maintained on site and by various teams. This should incorporate satellite communication services between camp-based and Nairobi based offices;
- Enough security should be provide 24/7 at all worksites and campsites, including use of armed policemen.

#### 7.1.2.35 Loss of life, injury, or damage to people and private property

432. 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.

##### ***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 WB 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.

## **7.2 Impacts on Vulnerable and Marginalized Groups (VMGs)**

433. The project is located in Wajir and Mandera Counties, which are dominated by Somali people that have preserved their pastoralist culture while maintaining a nomadic lifestyle. The area is well known to have the Somali clans Garre, Murulle, and Degodia (in Mandera County) and Ogaden, Ajuran and the Degodia (in Wajir County), among others who are considered as vulnerable and marginalized group<sup>14</sup>s. This triggers WB OP 4.10 (Indigenous People), which will require KeNHA to fulfill the requirements of the policy with respect to these IP groups, from a short term (eg VMG employment benefits during construction period) and long term (eg strategies and projects that target poverty reduction) perspective of the project.

434. The project has conducted a standalone Social Assessment (SA) report for the project to determine the impacts to the VMGs, and how the communities will benefit from the project activities. Some of the impacts highlighted in the report included but not limited to; loss of land, loss of identity, culture, and customary livelihoods, as well as exposure to disease. Others include increase in resources competition, increase in gender-based violence (GBV), Sexual Abuse and Exploitation (SEA), among others to the vulnerable and marginalized groups (VMGs) in the region<sup>15</sup>.

##### ***Mitigation measures for impacts on IPs***

<sup>14</sup>Constitution of Kenya Article 260 describes marginalized community as pastoral persons and communities whether they are (i) nomadic; or (ii) a settled community that, because of its relative geographic isolation, has experienced only marginal participation in the integrated social and economic life of Kenya as a whole.

<sup>15</sup> Social Assessment for The Proposed Upgrading Of Isiolo-Wajir-Mandera Road Corridor (A13), June 2019

- The has carried out a standalone Social Assessment (SA) report for the project to determine how the communities will benefit from the project activities, the recommendation will be incorporated to the project design;
- The project will make the development process more inclusive of Indigenous Peoples by meaningful consultations and incorporating their perspectives in the design of development programs and poverty reduction strategies;
- The project team will be cognizant of the importance of clannism among the Somali VMGs. It should therefore ensure inclusivity during the sharing of project benefits to avoid conflicts;
- Conduct of Free, Prior and Informed Consultation in order to achieve broad IP community support, during implementation;
- Provide the VMGs with opportunities to benefit more fully from development programs associated with the project, such as employment, community driven projects along the road project.

## **7.3 Operation Phase Impacts**

### **7.3.1 Positive Impacts**

#### **7.3.1.1 Spurred Economic Development**

435. The project road will also improve connectivity between other parts of Kenya, Wajir and Mandera Counties. 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 Wajir and Mandera Growth Areas covered by LAPSET Corridor project hence will be important trade route with the neighbouring Somalia and Ethiopia as well.

436. 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.

#### **7.3.1.2 Reduced Vehicle Operational costs**

437. 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.

#### **7.3.1.3 Improved Travel Comfort and Response**

438. 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.

#### 7.3.1.4 **Reduced Travel Time and Cost**

439. 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

#### 7.3.1.5 **Cultural Integration due to Influx of People**

440. 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.

#### 7.3.1.6 **Reduced Dust Pollution**

441. Vehicle traffic plying along the existing road cause fugitive dust because of the unpaved conditions and prolonged dry weather conditions, which may cause respiratory complications and discolouration of surrounding vegetation. In the paved state, the problem of fugitive dust associated with the road will be mitigated.

#### 7.3.1.7 **Improved Drainage**

442. 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.

443. 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.

#### 7.3.1.8 **Reduced Habitat Disturbance**

444. The unpaved state of the existing road has led to proliferation of unofficial road diversions as vehicles maneuver to avoid impassable or deteriorated road sections. The diversions traverse natural habitats causing disturbance to wildlife. Paving the project road will negate the need to divert thus consolidate traffic and minimize habitat disturbance.

#### 7.3.1.9 **Improved Regional Security**

445. The current poor road conditions partly contribute to insecurity due to inhibited ground surveillance by the security agencies. This means that even during and insecurity incident or emergency situation, the response by security personnel is slowed down. With improved road conditions connecting different town centres in different counties, the surveillance and response time by security agencies will be greatly enhanced.

### **7.3.2 Negative Impacts**

#### **7.3.2.1 Increase in migration to the region leading to Cultural Clash**

446. With improved roads, diverse people will stream into the project area. The varying backgrounds, cultures and lifestyles of people some may be alien to the native or local community triggering clash or conflict. The local areas are attached to the Islam lifestyle and have established clan identities. Actually, access and control of local resources (especially grazing grounds) in the past has triggered inter clan conflicts.

**Mitigation measures**

- Cultural awareness campaigns involving stakeholders (public and private sectors) to enhance coexistence with changing lifestyles.

### 7.3.2.2 Increase in Communicable Diseases

447. 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 Wajir and Mandera counties. 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.

448. 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<sub>2.5</sub>), 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.

**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.

### 7.3.2.3 Increased Vehicle Accidents

449. 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. 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

#### **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.

#### **7.3.2.4 Inhibited Wildlife and Livestock Movements**

450. Over 90 percent of the project road traverse areas of natural vegetation that are important foraging ground for local livestock and wildlife. Some of the wildlife inhabiting the project area are of conservation interest and feature in the IUCN RedList Database and the Sixth Schedule of the Wildlife Conservation and Management Act 2013. Livestock keeping (herding) is the mainstay of the rural communities within the project area.

451. Due to high concentration of livestock and wildlife in the project area, it is necessary to enhance safety through provision of appropriate signages to alert drivers on sections of the road where animal frequently cross. Watering points and search for pasture were the main factors that increase movement across the project road. During the ESIA process, *it was noted that there are no specific or a particular historical/regular wildlife crossing* for the wildlife along the road corridor. However, areas identified to have high concentration of wildlife include Wajir, Lafaley, Kutulo, Dabasiti, Borehole 11 and Elwak.

452. Wildlife crossings are considered to provide safe and convenient road crossing locations and this should be achieved in the type and design of the structure. The Crossing structure should factor a diversity of species than targeting a few. The designs should consider animals with the most stringent demands for crossing. The giraffe was found to have the stringiest demands for wildlife crossings along the project road due to its height and terrain of the area.

453. Past experience from wildlife crossings around the world show that very often, underpass crossings become death traps for wild animals because poachers and other predators (hyenas, wild dogs, lions, etc.) learn quickly to target the underpasses. On the other hand, overpasses are expensive, and special design to mimic natural habitat is necessary to encourage wildlife to use the overpasses. The Design should also evaluate social, environmental and economic costs of different crossing options, augmented where possible, by provision of water supply pans / ponds at strategic locations to keep wildlife away from crossing the road.

#### **Mitigation Measures**

- Install and maintain road signages including those to alert drivers on sections frequently crossed by livestock and wildlife;
- Identify and construct wildlife and livestock crossings based on consultations with the KWS and locals - critical areas identified that will require consideration of animal crossings include Wajir, Lafaley, Kutulo, Dabasiti, Borehole 11 and Elwak.
- Set and post speed limit signs at frequently crossed sections of the road;
- The structures should have shorter length and wider width;

- Design of structures should provide natural lighting as possible and minimize noise and vibration;
- Fences are important to guide animals to the structures as well as for problem animal control;
- In consultation with relevant agencies, especially KWS, consider provision of water supply pans / ponds at strategic locations to keep wildlife away from crossing the road regularly;
- Recreation of habitats and continuity of ecosystem processes near and within the structure is encouraged to increase animal appeal.

#### 7.3.2.5 Increased Deadwood Collection and Charcoal

454. Increase in road connectivity will lead to more access to areas previously considered remote along the project road that have intact and close stands of tall naturally occurring trees (such as *Acacia*, *Balanites*, *Commiphora*, *Maerua*, *Grewia*, *Combretum*, *Delonix* and *Boswellia*). These may be a target for charcoal burners and timber dealers causing accelerated loss of vegetation cover critical for wildlife browsing and livestock herding. Being an arid area, the recruitment rate for plants is slow thus some wildlife may disappear due to exposed cover or loss of certain preferred tree species. For instance, gerenuks are strict browsers with high preference for new leaves, buds, flowers and twig tips particularly *Acacia*. Giraffes and savannah baboons are highly reliant on the tall *Acacia* and *Delonix* trees to provide browse forage at convenient heights. Moreover, most of the resident wildlife are independent of drinking water and rely on forage for provision.

##### **Mitigation measures**

- KWS and KFS should conduct routine habitat surveillance and patrols as well as thorough inspection of vehicles by security personnel at manned roadblocks (at the exit points) to rid off illegal loggers and timber dealers;
- Multi government agencies should institute campaigns on sustainable charcoal production, incorporating revegetation of affected areas with native species;
- Locals should be sensitized on the importance of conserving woody vegetation.

#### 7.3.2.6 Human Encroachment along the Project Roads

455. 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.

##### **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.

#### 7.3.2.7 Road Maintenance Impacts

456. 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).



**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.

**7.3.2.8 Drainage and Storm water Management**

457. 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.

458. 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.

**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

**7.3.2.9 Spread of Invasive species**

459. *Prosopis juliflora* is one of the invasive species recorded along the proposed road alignment. It is a gap colonizer widely associated with ecosystem disturbances. Spread of such invasive species will mitigated by:

- Reducing open gaps in road reserves by planting appropriate tree species suitable for highway or road side tree planting that can flourish under arid conditions;
- Carrying out routine road reserves maintenance mainly to clear bushes that may harbour invasive species;
- Monitoring composition of species regenerating along road reserves and taking prompt actions in case of emergence of invasive species;

**7.3.2.10 Solid Waste**

460. 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.

**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 especially inside wildlife zones;
- 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)

**7.4 Cumulative Impacts of the Project Road**

461. 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. The Wajir - Elwak road will be constructed simultaneously with other roads under NETIP. As such, 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.

462. 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;

- The LAPSSET road project from Lamu to Isiolo to South Sudan and Ethiopia.
- The Garissa – Modogashe (A13), Isiolo – Modogashe (A10), Modogashe - Wajir (A10), which joins the project road at its end in Wajir.
- Other road projects along or near the road corridor by other 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;
- Any other initiatives in the project road corridor (eg water and sanitation projects) that may result in positive or negative cumulative impacts in the region.

#### 7.4.1 Identification of Potential Cumulative Impacts

463. 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. It is assumed that each of these projects have or will carry out ESIA studies that propose mitigation measures to be implemented during construction and operation phases of the projects. If well implemented, the proposed measures are expected to minimize the overall cumulative impacts from these projects in the region.

**Table 7-1: Summary of the Likely Potential Cumulative Impacts**

Environmental and Social Item	Potential Cumulative Impacts and proposed mitigation measures	
	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	Regional growth and increase in population as a result of easy access to the North Eastern region will increase solid waste generated in

Environmental and Social Item	Potential Cumulative Impacts and proposed mitigation measures	
	Construction Phase	Operation Phase
	such as at camp sites, soil spoil, cement bags, among others	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 coincides with that of the proposed project	The impacts of the proposed road on regional air quality and greenhouse gases are predicted to be negligible. 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.
Impact on Wildlife	Cumulative impacts expected from displacement of wildlife from their natural habitat as a result of projects development in the region. Mitigation measures have been proposed in the ESMP will reduce the impact	Growth in vehicular traffic along the roads will increasingly disrupt wildlife crossing, resulting increased incidents of wildlife kills and vehicular accidents involving wildlife. Further intensification of traffic may eventually result in the fragmentation wildlife habitat, foraging and roaming ranges.
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

Environmental and Social Item	Potential Cumulative Impacts and proposed mitigation measures	
	Construction Phase	Operation Phase
		operating in the region with the support of the local county governments

## 7.5 Potential Impacts during Decommissioning

464. 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.

465. 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.

### 7.5.1 Positive Impacts

#### 7.5.1.1 Reuse of Contractor's Facilities

466. 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

### 7.5.2 Negative Impacts

#### 7.5.2.1 Community Safety

467. 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.

#### 7.5.2.2 Loss of Income

468. 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.

#### 7.5.2.3 Noise pollution

469. 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.

#### 7.5.2.4 Dust and Fumes

470. 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.

#### 7.5.2.5 Waste Accumulation

471. 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.

## **7.6 Resettlement Action Plan**

472. 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.

473. The census was carried out to document the current occupants of the Project Affected People (PAPs) within the road RoW in all the thirteen (13) 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 7-2 : Number of PAPs Enumerated According to Settlement**

<b>S No.</b>	<b>Settlement</b>	<b>No. of PAPs</b>
1	Wagberi	18
2	Halane	19
3	Lafaley	19
4	Tarbaj	206
5	Hungai	105
6	Wargadud	122
7	Kutulo (Wajir)	165
8	Kutulo (Mandera)	156
9	Dimu	14
10	Daba city	76
11	Garse Sala	63
12	Bore hole 11	176
13	Elwak	215
<b>Total No of PAPs</b>		<b>1, 354</b>

**Table 7-3 :**

**RAP**

#### **Implementation Costs**

<b>Aspect</b>	<b>Value (Ksh)</b>
Financial/Money Management Training/Meetings of Resettlement Committees / Administrative Costs (5%)	34, 310, 232
External monitoring and coordination for RAP Implementation (2%)	13, 724, 093
<b>Total</b>	<b>48, 034, 325</b>

**Table 7-4 : Total Compensation for Structures, Livelihoods and Trees**

<b>Aspect</b>	<b>Value (Ksh)</b>
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Compensation for structure, trees and livelihoods	596, 699, 700
Compensation for disturbance (15%)	89,504, 955
<b>Total</b>	<b>686, 204, 655</b>

**Table 7-5 : Total RAP Budget**

<b>Total RAP Cost</b>	<b>Kshs.</b>
Total RAP compensation	686, 057, 370
RAP Implementation Cost	48, 034, 325
Contingency (5%)	36, 704, 584
<b>Grand Total</b>	<b>770, 796, 279</b>

Source, RAP Report, September 2019

## 7.7 Environmental and Social Risks to the Project

474. In any project, there are risks associated with it during the project cycle. For the proposed Wajir - Elwak road project, the following environmental and social risks were identified and some recommendations have been proposed to reduce their occurrence are discussed below.

### 7.7.1 Flush Floods along the road corridor

475. The project area is characterized by seasonal streams and being a low-lying area, most parts of the road are prone to flooding during rainy seasons. Parts of the road are usually impassable during heavy downpour especially at seasonal rivers and low areas locations. The project area is also flat and low lying which makes it prone to flooding. 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.

476. KeNHA will consider the highest recorded flood levels of these rivers and include the data in the design of the various river crossings. 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.

### 7.7.2 Transport of Dangerous Goods

477. 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.

478. 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.

### 7.7.3 Fire

479. 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;
- Removal of blow down and other high-hazard fuel accumulations;
- 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.

### 7.7.4 Terrorism

480. The issue of terrorism cannot be completely be ruled out of the project, owing to the fact that the proposed project is located near the Somali border. Majority of the road alignment, especially between Kotulo and Elwak towns are usually under high alert most of the times due to threat of terrorists from Somali. Several cases of terrorism have been reported in the past of terrorism where lives have been lost. It will be prudent for the County and National Governments to provide adequate security both during construction and operation phase of the proposed project. This will ensure that terrorism activities have been minimized.

### 7.7.5 Socio – Political Conflicts

481. The construction of the proposed road project can spur inter-clan conflicts (due to sharing of resources such as water, land, human resources etc) leading to paralyzing the transportation in some sections of the proposed project. These conflicts are therefore likely pose a risk to the project development. It will be prudent for both the County and National Governments to provide adequate security both during construction and operation phase of the proposed project. This will ensure that inter-ethnic activities do not interfere with the project.

## 7.8 Environmental and Social risk management

482. 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 bush fires during dry seasons;
- 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 share contractor's resources especially water.
483. 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.

## **8 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)**

### **8.1 Environmental and Social Management Plan**

484. 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.

### **8.2 Purpose and Objectives of ESMP**

485. 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.

486. 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.

### **8.3 Auditing of the ESMP**

487. 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.

#### **8.4 Responsibilities for the Implementation of the ESMP**

488. 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)
- Mandera and Wajir County Governments.

##### **8.4.1 Kenya National Highways Authority (KeNHA)**

489. 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 World Bank Safeguards Policies that are applicable to the project.
- Submit to the CESMP and other plans to the Bank for review and clearance
- Regular reporting on the project compliance with the Bank's safeguards policies

##### **8.4.2 Ministry of Transport, Infrastructure, Housing and Urban Development**

490. 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.

##### **8.4.3 National Environment Management Authority**

491. 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.

#### **8.4.4 Construction Contractor**

492. 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

#### **8.4.5 Supervising Consultant**

493. 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.

#### **8.4.6 Directorate of Safety and Health Services (DOSHS)**

494. DOSH 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

#### **8.4.7 Community Based Organizations and Civil Society Groups**

495. 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, wildlife 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).

#### **8.4.8 Mandera and Wajir County Governments**

496. The relevant departmental officers in the County Governments of Wajir and Mandera should be called upon where necessary during project implementation to provide the necessary permits and advisory services to the project implementers.

### **8.5 Environmental and Social Management Plan (ESMP) during Construction and Operation Phases**

497. 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 8-1**, 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 8-1 ESMP during Construction Phase**

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
Vegetation Loss	<ul style="list-style-type: none"> <li>• Minimize unnecessary vegetation clearance</li> <li>• Revegetation and landscaping of vegetation and trees along the road</li> <li>• Siting of camp sites should be done away from densely vegetated areas.</li> <li>• Compensate for the valuable trees to be felled within the settlements as per the project RAP recommendations.</li> </ul>	No additional cost to the BoQ (see habitat loss and disturbance)
Workmen's camps management	<ul style="list-style-type: none"> <li>• Locate camp sites away from residential areas and settlements</li> <li>• Contractor to prepare a Waste Management Plan for all worksites, especially the campsites</li> <li>• Provision of adequate water and sanitation (fixed toilets with running water and changing rooms) at the campsites, separate for men and women;</li> <li>• Provide for septic tanks and soak pits</li> <li>• 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;</li> <li>• No waste at the campsite shall be buried or burnt;</li> <li>• Treatment of the campsite for rodents and other pests shall be done regularly;</li> <li>• Completely decommissioning of the camp including permanent foundations and floors to discourage future informal settlement at the campsite</li> </ul>	Costs build in the planning and administration costs of the contractor
Excessive Noise and Vibration	<ul style="list-style-type: none"> <li>• Contractor to prepare Health and safety plan;</li> <li>• Monitor environmental and occupational noise levels as per the EMCA provisions of regulations and World Bank Group EHS guidelines;</li> <li>• The noise emission characteristics should be considered during selection and mobilization of construction equipment;</li> <li>• Where feasible, fit equipment with rock mufflers, sound insulations, silencers to lower the levels of noise emission;</li> <li>• Sensitize construction workers to switch off machinery and vehicles when not in use;</li> <li>• Provision of appropriate and adequate Personal Protective Equipment (PPEs) to workers;</li> <li>• Proper selection of project auxiliary sites, e.g. locate noisy operations like batching plant away from the densely settled areas;</li> <li>• Where noisy activities must be undertaken near sensitive receptors, the neighbouring occupants must be informed in advance and works limited to day time only.</li> </ul>	To be provided under Bill No 1 – KSHS 1,500,000 for PPEs (ear plugs, maintenance of vehicles in administrative costs of the contractor)
Construction Dust and Air Quality	<ul style="list-style-type: none"> <li>• Sprinkling water (at least twice a day) on the accesses and excavated surfaces during the construction period to suppress dust generation;</li> </ul>	To be provided under Bill No 1 - Kshs 5 million

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>• Limit the speed of construction vehicles (maximum speed limit 40 kph/25 mph) on earth road;</li> <li>• Where feasible, fit equipment with rock mufflers, sound insulations, silencers to lower the levels of noise emission;</li> <li>• Provision of appropriate protective personal equipment including respirators and dustcoats to exposed workers;</li> <li>• Ensuring the location of material stockpiles are away from human settlements and business premises;</li> <li>• Covering loaded trucks during the transportation of material;</li> <li>• Sensitize workers on best practice on management of air pollution from vehicles and machinery;</li> <li>• Demolition of existing structures shall be done in a manner that the dust from demolitions can be controlled;</li> <li>• Undertake daily air quality (dust level) monitoring with portable devices and conduct corrective adjustments where necessary.</li> </ul>	<p>(Dust masks and other accessories)</p> <p>(NB water sprinkling part of the main BoQ – Bill No 9)</p>
Generation of Solid Wastes	<ul style="list-style-type: none"> <li>• Contractor will prepare Solid Waste Management Plan</li> <li>• Waste be managed as per Environmental Management and Coordination (Waste Management) Regulations 2006;</li> <li>• Utilize the 3C strategy – Reduce, Reuse and Recycling;</li> <li>• Reuse excavated top soil for landscaping of the site as far as practical;</li> <li>• Segregation of solid wastes and provision of suitable and well labelled waste receptacles within the camp and at active construction sites;</li> <li>• Disposed solid waste at designated sites through licensed waste handlers;</li> <li>• 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.</li> </ul>	<p>TO be provided under Bill 1 - KShs. 2,500,000 annually for waste management (total 7,500,00 for duration of the contract)</p>
Increased Soil Erosion	<ul style="list-style-type: none"> <li>• Material excavation should be minimized and restricted to designated locations;</li> <li>• Excavated material should be properly piled and managed - sprinkled with water and covered (where possible) to prevent possible wash-out into seasonal watercourses.</li> <li>• The contractor should ensure that construction related impacts like erosion and cut slope destabilization should be addressed through rock pitching;</li> <li>• Re-vegetation should be done in tandem with construction activities to avoid exposure of bare ground to agents of erosion;</li> <li>• Enforce landscaping and restoration of the construction site prior to decommissioning of the construction site;</li> <li>• 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</li> </ul>	<p>Part of Bill no 8</p>

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
Contamination by Liquid Waste and Hydrocarbon Spills	<ul style="list-style-type: none"> <li>• Contractor will prepare waste management plan</li> <li>• Machinery maintenance should be done only on purpose-built garages that meet hydrocarbon containment measures and controlled drainage;</li> <li>• Fueling and servicing of vehicles will be undertaken from only designated and lined area</li> <li>• Contractor will be required to have an emergency spill containment and response plan;</li> <li>• Minor service and washing areas placed/ constructed with containment basins to ensure that the surrounding areas (including groundwater) are not polluted;</li> <li>• 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;</li> <li>• Flash toilets at camp sites should be connected to septic tanks or other treatment facilities approved by the county government and NEMA;</li> <li>• Water containing such pollutants as cements, concrete, lime, chemicals and fuels shall be discharged into a conservancy tank for removal from site.</li> </ul>	<p>To be provided under Bill No 1 - Kshs Kshs 3 million</p> <p>Rest of the budget under administrative costs of the contractor</p>
Habitat Loss and Disturbance	<ul style="list-style-type: none"> <li>• Locate project auxiliary features like camps and batching plants in areas already disturbed or outside of wildlife habitats.</li> <li>• Construction activities should be confined on the demarcated corridor and discourage movement or intrusion into wildlife habitats;</li> <li>• Throughout the construction cycle, project staff should be sensitized regularly on wildlife conservation.</li> <li>• The Contractor should sensitize workers on nature conservation, and enforce unauthorized intrusion or use of the wildlife habitats through signed code of conduct;</li> <li>• Wasted areas under invasion of <i>Prosopis juliflora</i> or <i>Calotropis procera</i> should be prioritized for batching and other contractor's facilities over other areas with native vegetation;</li> <li>• Cleared invasive species should be destroyed under the guidance of KFS and other specialist agencies;</li> <li>• 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).</li> <li>• To avoid random off-road driving that leads to trampling of vegetation in sensitive habitats, vehicles should be provided with designated routes</li> <li>• Existing diversions and diversions should be considered before opening up new ones during construction.</li> </ul>	<p>Under Bill No 1</p> <p>Extra KShs. 5,000,000 for reforestation program through establishment of a tree nurseries along the road project</p>
Spread of Invasive and Alien Species	<ul style="list-style-type: none"> <li>• Borrow sites should be inspected for invasive species, with invaded areas are avoided;</li> <li>• Sensitize workers on invasive alien species, some of which they may improperly handle or transfer to other locations such as <i>Prosopis Juliflora</i> and <i>Calotropis procera</i>;</li> <li>• Areas along the project road invaded by <i>Prosopis juliflora</i> and <i>Calotropis procera</i> should have all cuttings or clearing destroyed as guided by KFS and other relevant agencies rather than disposing them into un-invaded areas.</li> </ul>	<p>KShs. 3,000,000</p> <p>Revegetation and monitoring by KFS</p>



Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>• Soil should also not be transferred from those areas into other areas of the project road or outside the region;</li> <li>• Destroy immediately any invasive plants uprooted during construction works, and revegetate the bare surfaces with native species;</li> <li>• Re-vegetate bare surfaces with native species as soon as possible, in order to avoid colonization by opportunistic and invasive species. Monitor re-vegetated sites in liaison with KFS and county government to ensure survival of the seedlings.</li> </ul>	
Impacts on Materials Borrow Sites	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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;</li> <li>• Construction materials including sand, stones and borrow materials must be sourced from duly approved sources only;</li> <li>• Materials haulage routes must be pre-determined to avoid unnecessary off road driving;</li> <li>• Contractor to develop a system of tracking materials received viz a vis utilization to ensure proper materials management to avoid wastage;</li> <li>• The contractor shall locate material sites away from settlements if possible;</li> <li>• Where material sites are located near settlements, the contractor shall carry out baseline studies of structural integrity assessments of nearby structures;</li> <li>• 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;</li> <li>• All material sites shall always be fenced with controlled entry at all times.</li> </ul>	No additional cost to the BoQ Costs built in the planning and administration costs of the contractor
Increased Incidences of Poaching and Human-Wildlife Conflicts	<ul style="list-style-type: none"> <li>• Engage KWS to monitor wildlife distribution and movement in relation to the project during construction and subsequent stages to advise accordingly;</li> <li>• Contractor should liaise with KWS to handle and capture reptiles (especially snakes) hiding under rocks and sheltered terrains and safely release them in suitable habitats;</li> <li>• Sensitize staff on wildlife encounters and discourage animal persecution or provocation through pre-informed and signed code of conduct;</li> <li>• Sensitize all construction staff on dealing with wildlife encounters and enforce zero-tolerance on wildlife poaching by signing code of conduct.</li> <li>• Any cases on wildlife poaching should be forwarded to KWS for further action and prosecution.</li> </ul>	KShs. 500,000 Annually for KWS emergency response  Total 1.5 Million  Wildlife crossings to be provided under Bill No 17
<b>SOCIAL IMPACTS</b>		

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
Land take and disruption of livelihoods	<ul style="list-style-type: none"> <li>• RAP Study Report for the project should be implemented to guide the compensation and resettlement process;</li> <li>• Compensation for all affected properties should be compensated before construction commences;</li> <li>• 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.</li> </ul>	Cost as per RAP Study Report
Increased Water Demand	<ul style="list-style-type: none"> <li>• The contractor to develop independent construction water sources to avoid straining existing local resources;</li> <li>• 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;</li> <li>• The Contractor must adhere to the Water Act, 2016 and associated rules and regulations as administered by WRA and NEMA; and</li> <li>• Relevant water abstraction permits must be obtained from these authorities.</li> </ul>	No additional cost to the BoQ Under and administrative costs of the contractor
Construction works induced traffic and inconveniences	<ul style="list-style-type: none"> <li>• The contractor shall be required to formulate and implement a traffic management plan</li> <li>• Provision of alternative routes in areas where accesses have been disrupted;</li> <li>• Provision and maintenance of clear traffic signages of ongoing construction works, regulate speed limits and diversion signage to notify approaching traffic;</li> <li>• 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;</li> <li>• Contractor to carry out road safety awareness for community members and institutions along the project corridor</li> <li>• Obtain permission from inhabitants and county governments if diversion routes go beyond the Right of Way;</li> <li>• Reinstatement of diversion routes (and old tracks) to original condition;</li> <li>• Institute a traffic management plan incorporating adequate temporary signages and flagmen as necessary; and</li> <li>• 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</li> </ul>	No additional cost to the BoQ Under Bill No 4 and 9
Disruption of Public Utilities	<ul style="list-style-type: none"> <li>• 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;</li> <li>• Relocation plans shall include adequate notification of affected customers.</li> </ul>	Under Bill No 1 – Relocation of services
Communicable Diseases	<p><b>Upper Respiratory Tract Infections (URTI)</b></p> <ul style="list-style-type: none"> <li>• 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;</li> <li>• Maintain a grievance register to log any complaints from local community;</li> <li>• Hold inductions for staff and people visiting the construction sites on the health and safety aspects;</li> </ul>	To be provided under Bill 1 - Kshs 6,000,000  For sensitization and awareness programs

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>• Provide dust masks for all staff and visitors to active construction areas;</li> <li>• The Contractor should plan work program's activities and timing to avoid emission impact on sensitive receptors, especially urbanized areas;</li> <li>• Install screens and scrubbers on crusher sites to minimize dust emissions;</li> <li>• Locate ancillary facilities away from residential/institutional to minimize dust or other emissions to the residents;</li> <li>• Regular maintenance contractors' equipments</li> </ul>	
	<p><b>Spread of HIV/AIDS and Other STDs</b></p> <ul style="list-style-type: none"> <li>• 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;</li> <li>• Sensitize workers on the need to refrain from risky behaviours;</li> <li>• Provision of condoms both male and female in the sanitary facilities and various locations for the members of public;</li> <li>• 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;</li> <li>• Workers should be given regular leave, preferably monthly to cool off period and join their families</li> </ul>	<p>Kshs 15,000,000 for HIV/AIDS Awareness programs and campaigns To be included under Bill No 25</p>
Conflicts with local communities on labour issues	<ul style="list-style-type: none"> <li>• Contractor to formulate and implement a labour management plan for his workforce;</li> <li>• Contractor will be required to have a transparent external communication plan covering among others, how available opportunities will be advertised;</li> <li>• The Contractor should prioritize employing locals as casuals to reduce the need for labour influx;</li> <li>• Consultations with the local council of elders to ensure that available opportunities are fairly distributed across different clan members;</li> <li>• Maintain a grievance register to log any complaints from workers and local community.</li> </ul>	<p>No additional cost to the BoQ Costs build in the planning and administration costs of the contractor</p>
Workers Welfare	<ul style="list-style-type: none"> <li>• The contractor shall comply with the required Law of Kenya under DOSH, and Labour requirements;</li> <li>• Have fulltime nurse on the campsite, with all first aid facilities are available at all times;</li> <li>• In collaboration with local health facilities, ensure that the workers have access to health facilities in the area;</li> <li>• Contractor to ensure that first aid facilities are available at all times at the work sites, and arrangement to access to ambulance service;</li> <li>• The contractor shall provide portable water and mobile toilets (separate for women and men) for the workers at all worksites along the road;</li> </ul>	<p>No additional cost to the BoQ Costs build in the planning and administration costs of the contractor</p>

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>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.</li> <li>Contractor should hire qualified Human Resources staff to manage labour related risks in the project</li> </ul>	
Community Safety and Health	<ul style="list-style-type: none"> <li>Ensure that all active work areas have controlled access limited to authorized persons only;</li> <li>Establish and maintain continuous liaison with the host communities including sensitization on safety and health issues on construction sites;</li> <li>Prepare and implement construction traffic management plan, incorporating safety of other traffic;</li> <li>Install and maintain appropriate safety and warning signages along road sections and all other construction sites and facilities;</li> <li>Ensure proper and adequate provision of sanitation and waste management facilities at all construction sites;</li> <li>Maintain a system of receiving and responding to any safety concerns by the communities;</li> <li>Undertake general and third-party insurance liability covers as appropriate.</li> </ul>	No additional cost to the BoQ Under Bill 9, and administrative costs of the contractor
Labour influx and Social Change	<ul style="list-style-type: none"> <li>The contractor shall develop a labour management plan for project;</li> <li>The Contractor should prioritize employing locals as casuals to reduce the need for labour influx;</li> <li>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;</li> <li>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;</li> <li>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;</li> <li>Contractor to establish a grievance management system to handle internal and external complaints.</li> <li>Workers will be sensitized and sign code of conduct regarding interactions, behaviours and relations with the local communities.</li> </ul>	No additional cost to the BoQ - administrative costs of the contractor
Crime Management	<ul style="list-style-type: none"> <li>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;</li> <li>Sensitize the construction workers, locals, and security to be on the lookout on suspicious activities near the site</li> <li>Enforce the crime related clauses in the Code of conduct signed by all workers</li> </ul>	No additional cost to the BoQ - administrative costs of the contractor
Child Protection, Sexual exploitation and abuse (SEA) of underage girls	<ul style="list-style-type: none"> <li>Workers will be educated by relevant agencies such as police and probation officers on the relevant laws and polices protecting children</li> </ul>	Kshs 10,000,000 For sensitization and awareness

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>• 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</li> <li>• Mobilize and strengthen child protection institutions and structures near construction sites</li> <li>• Reach out to school authorities and parents near construction sites on paying special attention to child protection in light of labour influx</li> <li>• 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</li> <li>• Ensure no children are employed on site in accordance with national labor laws</li> <li>• Ensure that any sexual exploitation and abuse (SEA) of children by the contractors' workers are promptly reported to the police</li> <li>• Popularize /put in place confidential mechanisms and hotlines for reporting child abuse cases</li> <li>• Enforce the child protection related clauses in the Code of conduct signed by all workers</li> <li>• Ensure visibility of signage and information, education and communication materials on such issues in the construction sites</li> <li>• 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</li> </ul>	
Absenteeism in Schools	<ul style="list-style-type: none"> <li>• 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;</li> <li>• Ensure no children are employed on site in accordance with national labor laws;</li> <li>• The contractor shall sensitize the workers not to engage with children conducting business activities near the worksites of campsites</li> <li>• Impose zero tolerance for employees on sexual relationship with students that would encourage dropping or being absent from school</li> </ul>	Kshs 3,000,000 for sensitization and awareness (under Bill No 1), and administrative costs of the contractor
Gender Equity and Mainstreaming	<ul style="list-style-type: none"> <li>• Contractor and KeNHA 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);</li> <li>• Ensure that women are given adequate employment opportunities during recruitment and job postings, including equal payment</li> <li>• Regular sensitization and awareness campaigns to the workers should be done to promote gender equity in employment during the construction works and during operation</li> <li>• Provision of gender disaggregated accommodation, bathing, changing, sanitation facilities</li> </ul>	Kshs 3,000,000 for sensitization and awareness (under Bill No 1)
Gender based violence (GBV),	<ul style="list-style-type: none"> <li>• Contractor will prepare a GBV Prevention and Response Plan and implementation arrangements</li> </ul>	Kshs 5,000,000 for sensitization and

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
Rape and Sexual Harassment	<ul style="list-style-type: none"> <li>• Contractor to prepare and enforce a No Sexual Harassment and discrimination Policy in accordance with national laws;</li> <li>• 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;</li> <li>• Popularize /put in place confidential mechanisms and hotlines for reporting GBV and sexual offences cases;</li> <li>• Strategies such as male involvement will be employed in preventing and responding to GBV and sexual harassment;</li> <li>• 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;</li> <li>• Provision of gender disaggregated facilities - separate bathing, changing, sanitation facilities for men and women;</li> <li>• Grievance redress mechanisms including non-retaliation should be set up for the workers;</li> <li>• 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</li> </ul>	awareness (under Bill No 1)
Alcohol and drug abuse by workers	<ul style="list-style-type: none"> <li>• All workers (including subcontractors) to sign and comply with Code of Conduct on zero-tolerance on alcohol and drug abuse.</li> <li>• 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.</li> <li>• 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.</li> <li>• Prohibiting alcohol, drugs, arms, and ammunition on the worksite among personnel.</li> <li>• 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</li> </ul>	No additional cost to the BoQ, administrative costs of the contractor
Increase in the prices of goods and services in the community	<ul style="list-style-type: none"> <li>• 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</li> </ul>	No additional cost to the BoQ administrative costs of the contractor
Loss of life, injury or damage to	<ul style="list-style-type: none"> <li>• The construction site shall be fenced off to prevent access to members of the public</li> <li>• Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, at all times</li> </ul>	No additional cost to the BoQ

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
people and private property	<ul style="list-style-type: none"> <li>The contractor shall have insurance for his workers as required by law;</li> <li>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</li> <li>All fatalities or severe accidents/incidences shall be reported to the client (KeNHA) immediately (KeNHA) shall report to the WB 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.</li> </ul>	Part of contract requirements
Complaints and grievances/social conflicts	<ul style="list-style-type: none"> <li>Provide grievance redress mechanism for the local communities and workers;</li> <li>Advice the public and workers on where to report grievances;</li> <li>Consider prioritizing the local manpower for both skilled and unskilled labour.</li> <li>Implement proposed grievance resolution mechanism</li> <li>Grievance redress mechanisms especially for workers should incorporate non-retaliation policies</li> </ul>	Kshs 10,000,000 For GRC operations
Impacts on Cultural Resources and Archaeological Sites	<ul style="list-style-type: none"> <li>Use "Chance Finds" procedures in case of any discovery of archeological or important physical or cultural resources</li> </ul>	No additional cost to the BoQ administrative costs of the contractor
Impacts on Indigenous People	<ul style="list-style-type: none"> <li>The project has conducted a standalone Social Assessment (SA) report for the project to determine how the communities will benefit from the project activities, and the recommendations will be incorporated into the project design;</li> <li>Develop an Indigenous Peoples Plan (IPP) that sets out the measures through which the will ensure that potentially adverse effects on the peoples' communities are avoided, minimized, and mitigated, and/or compensate for such effects;</li> <li>The project has conducted Free, Prior and Informed Consultation in order to achieve broad IP community support;</li> <li>The project will make the development process more inclusive of Indigenous Peoples by meaningful consultations and incorporating their perspectives in the design of development programs and poverty reduction strategies;</li> <li>Provide the IPs with opportunities to benefit more fully from development programs associated with the project, such as social infrastructure projects along the road project.</li> </ul>	No additional cost to the BoQ – defined in the SA report
<b>OCCUPATIONAL HEALTH AND SAFETY</b>		
Occupational Safety and Health Hazards	<ul style="list-style-type: none"> <li>Contractor will prepare Health and Safety Plan and Emergency Response Plans and operationalize them</li> <li>Contractors' selection criteria should include ability to demonstrate having some defined minimum requirements for Safety and Health Management System.</li> <li>Contractor's should comply OSHA 2007 requirements as bare minimum;</li> </ul>	To be included in Bill 1 - Kshs 8 million for operations of clinical facilities at campsites

Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>• 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;</li> <li>• Enforce use of defined standard operating procedures for handling various activities, depending on risks levels;</li> <li>• Establish an emergency response procedure and display on all work areas;</li> <li>• Provision of a standard first aid kit at active construction sites at all times;</li> <li>• Designate qualified first-aider as per the OSHA requirements;</li> <li>• Contractor to have a full time Health and Safety advisor on site</li> <li>• Engage a qualified Health and Safety auditor to conduct routine and annual Health and Safety (H&amp;S) audits;</li> <li>• Establish a Health and Safety Committee for the project construction team as per the Health and Safety Committee Rules 2004 of the OSHA Act</li> <li>• Provide medical care for all staff as necessary as allowed in the Kenyan Law including securing a worker insurance cover as required under WIBA;</li> <li>• Conduct risk assessment before commencing new assignments/tasks;</li> <li>• Provide appropriate and adequate Personal Protective Equipment (PPE) to all workers that is commensurate with construction site activities;</li> <li>• Abide by standard best practice health and safety provisions in the construction contract;</li> <li>• Conduct daily toolbox and monthly safety meetings for the construction workforce;</li> <li>• Undertake routine worksites safety inspections;</li> <li>• Carry out induction and training on Health and Safety for workers and visitors to site</li> <li>• Display of appropriate safety signs around the construction site</li> <li>• All operators shall be trained and skilled in their area of operations;</li> <li>• Regular trainings to workers on OHS and first aid administration;</li> <li>• Contractor (s) to maintain an accident register; carry out accident and incidents investigations and implement corrective actions.</li> </ul>	<p>and other OHS arrangements</p> <p>Other costs under Bill 1, 9, and administrative costs of the contractor</p>
Workers Security	<ul style="list-style-type: none"> <li>• KeNHA to support the contractor in liaison with government security agencies for security planning and continuous surveillance;</li> <li>• The contractor will mainstream the project SMP and prepare site specific Security Management Plan and Emergency Response Plan for his employees, and conduct regular briefs on security emergency, including drills on worksites and campsites;</li> <li>• Contractor to appoint fulltime security coordinator to coordinate with security agencies in the area on issues related to security for the construction workers;</li> <li>• Workers should be sensitized on security arrangements with regular updates as necessary;</li> <li>• Travel plans to remote locations like off-road borrow sites and quarries should be discouraged based on the prevailing security situation;</li> </ul>	<p>No additional cost to the BoQ</p> <p>Under administrative costs of the contractor</p>



Environmental / Social impact	Proposed mitigation and management measures	ESMP Costs
	<ul style="list-style-type: none"> <li>Emergency contact list shall be maintained on site and by various teams. This should incorporate satellite communication services between camp-based and Nairobi based offices;</li> <li>Enough security should be provided 24/7 at all worksites and campsites, including use of armed policemen.</li> </ul>	
Road Safety	<ul style="list-style-type: none"> <li>Copies of insurance policies for the contractor's drivers and vehicles should be provided to the Supervision Consultant.</li> <li>The contractor's vehicles and equipment must be in proper working condition and have registration plates, and numbering.</li> <li>The contractor to sensitize all drivers and equipment operators to adopt safe driving and operation behaviors, to ensures proper discipline by these personnel, and sanctions those in breach.</li> <li>Ensure that safety is included in the driver's contracts as part of "Code of Conduct" and any non-compliances are sanctioned;</li> <li>Excavated sites, embankments, and dangerous locations are protected with proper safety barriers, tape and warning signs.</li> <li>Install temporary speed calming measures such as bumps and speed signs at high risk areas such as shopping centres, hospitals, and schools;</li> <li>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.</li> <li>KeNHA in collaboration with other 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.</li> </ul>	<p>No additional cost to the BoQ</p> <p>Under administrative costs of the contractor and Bill No 9</p>
Impacts Related to High Temperature and Humidity Levels	<ul style="list-style-type: none"> <li>Contractor must ensure Project staff have access to adequate potable water;</li> <li>Provisions should be made for adequate ventilation and air conditioning for in-house work spaces;</li> <li>Sensitize staff on health concerns and avoiding heatstroke, dehydration and fatigue;</li> <li>Work schedules should be such that workers are allowed adequate break durations in between working sessions;</li> <li>Ensure adherence to OSHA, 2007.</li> </ul>	<p>No additional cost to the BoQ</p> <p>Under administrative costs of the contractor</p>
Stakeholder Engagement	<ul style="list-style-type: none"> <li>KeNHA will prepare and implement a communication and community/stakeholder engagement plan that addresses all project issues</li> </ul>	Kshs 10,000,000
Grievance Redress Mechanisms	<ul style="list-style-type: none"> <li>Proper, effective and strong Grievance Redress Mechanisms (GRM)</li> </ul>	Kshs 10,000,000

**Table 8-2 ESMP during operation phase**

Environmental / Social impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals	Responsibility for Implementation	Timeframe	Cost (KSHS)
<b>ENVIRONMENTAL IMPACTS</b>					
Road Maintenance Impacts	<ul style="list-style-type: none"> <li>Incorporate recycling of road resurfacing waste where possible;</li> <li>All vegetation cuttings for road clearance maintenance suspected to be from invasive alien species should be burnt on site translocated to minimize dispersal;</li> <li>Manage sediment and sludge removed from storm water;</li> <li>All removed paint materials suspected or confirmed as containing lead should be treated as a hazardous waste.</li> </ul>	Conserve environment during road maintenance	KeNHA	Operation	No additional cost to the BoQ – under KeNHA maintenance budget
Increased Deadwood Collection and Charcoal	<ul style="list-style-type: none"> <li>KWS and KFS should conduct routine habitat surveillance and patrols as well as thorough inspection of vehicles by security personnel at manned roadblocks (at the exit points) to rid off illegal loggers and timber dealers;</li> <li>Multi government agencies should institute campaigns on sustainable charcoal production, incorporating revegetation of affected areas with native species;</li> <li>Locals should be sensitized on the importance of conserving woody vegetation.</li> </ul>	Conserving natural vegetation cover	KeNHA / KFS	Operation	No additional cost to the BoQ – under various agencies operational budget
Inhibited Wildlife and Livestock Movements	<p><b>Mitigations to consider for wildlife structures include:</b></p> <ul style="list-style-type: none"> <li>Wildlife crossings are considered to provide safe and convenient road crossing locations and this should be achieved in the type and design of the structure.</li> <li>The Crossing structure should factor a diversity of species than targeting a few. The designs should consider animals with the most stringent demands for crossing.</li> <li>The structures should have shorter length and wider width;</li> <li>Design of structures should provide natural lighting as possible and minimize noise and vibration;</li> </ul>	Livestock and wildlife safety	KeNHA / Construction Contractor	Construction / Operation	No additional cost to the BoQ – under KeNHA and various agencies operational budget

Environmental / Social impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals	Responsibility for Implementation	Timeframe	Cost (KSHS)
	<ul style="list-style-type: none"> <li>Fences are important to guide animals to the structures as well as for problem animal control;</li> <li>Recreation of habitats and continuity of ecosystem processes near and within the structure is encouraged to increase animal appeal.</li> </ul>				
<b>SOCIAL IMPACTS</b>					
Cultural Clash	<ul style="list-style-type: none"> <li>Cultural awareness campaigns involving stakeholders (public and private sectors) to enhance coexistence with changing lifestyles.</li> </ul>	Cultural coexistence	KeNHA	Operation	No additional cost to the BoQ
Increased Vehicle Accidents	<ul style="list-style-type: none"> <li>The public should be sensitised on safety measures to observe while using the road;</li> <li>KeNHA to liaise with NTSA for close monitoring of the road usage and impose penalties on those going against the set roads usage rules;</li> <li>KeNHA should ensure maintenance of installed road furniture and safety signages along the road;</li> <li>Undertake periodic roadside bush clearance that may reduce visibility clearance or obstruct critical signages.</li> </ul>	Road use safety	KeNHA	Construction / Operation	No additional cost to the BoQ Under KeNHA and other various agencies operational budget
Communicable Diseases	<ul style="list-style-type: none"> <li>Vehicles to adhere to emission criteria set under the Environmental Management and Co-ordination (Fossil Fuel Emission Control) regulations, 2006.</li> <li>Vehicle maintenance and servicing of vehicle engine.</li> </ul>	Prevent communicable diseases	KeNHA	Operation	No additional cost to the BoQ
Human Encroachment along the Project Roads	<ul style="list-style-type: none"> <li>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;</li> <li>Install and maintain road reserve boundary posts at appropriate intervals;</li> <li>Conduct awareness talks and presentations about the road reserve.</li> </ul>	Curb human encroachment onto road reserve	KeNHA	Operation	No additional cost to the BoQ – county government budgets and KeNHA management of road reserves

**Table 8-3 ESMP during Decommissioning Phase**

<b>Environmental / Social impact</b>	<b>Recommendation, mitigation, monitoring and/or Management Measures</b>	<b>Goals</b>	<b>Responsibility for Implementation</b>	<b>Timeframe</b>	<b>Cost (KSHS)</b>
Community Health and Safety	<ul style="list-style-type: none"> <li>Contractor must prepare detailed decommission plan for approval by local government, NEMA and department of mines as applicable;</li> <li>KeNHA should consider satisfactory rehabilitation of decommissioned sites as part of contractual requirement with enforceable penalties including financial disincentives.</li> </ul>	Enhance public safety	KeNHA	Decommissioning	No additional cost to the BoQ
Loss of Income	<ul style="list-style-type: none"> <li>Notify the employees in advance on the project closure date and adequately compensate them;</li> <li>Dismissal procedures to be compliant with Employment Act, 2007;</li> <li>Provide counselling &amp; alternative skills for alternative activities;</li> <li>Employer should possibly identify alternative means of livelihood for the staff who were employed at the construction camp.</li> </ul>	Improve local financial safety nets	KeNHA	Decommissioning	No additional cost to the BoQ
Noise pollution	<ul style="list-style-type: none"> <li>Prepare a decommissioning plan to guide activities;</li> <li>Monitor noise levels as per the NEMA Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009 &amp; OSHA, 2007;</li> <li>The noise emission characteristics should be considered during selection and mobilization of decommissioning equipment; and</li> <li>Sensitize staff to switch off machinery and vehicles when not in use.</li> </ul>	Mitigate noise pollution	KeNHA	Decommissioning	No additional cost to the BoQ
Dust and Fumes	<ul style="list-style-type: none"> <li>Prepare a decommissioning plan to guide staff on proper handling of sensitive facilities;</li> <li>Enforce stand operating procedures while undertaking demolition works;</li> <li>Provide and enforce the appropriate use of PPE against dust; and</li> <li>Employ dust suppression measures such as sprinkling water on loose soil surfaces and providing cover for spoil batches.</li> </ul>	Suppress pollution from dust and fumes	KeNHA	Decommissioning	No additional cost to the BoQ

Environmental / Social impact	Recommendation, mitigation, monitoring and/or Management Measures	Goals	Responsibility for Implementation	Timeframe	Cost (KSHS)
Waste Accumulation	<ul style="list-style-type: none"> <li>• Decommissioning plan should cover waste management;</li> <li>• Waste be managed as per Environmental Management and Coordination (Waste Management) Regulations 2006;</li> <li>• Establish a segregation and grading waste management system to manage garbage and other forms of waste generated;</li> <li>• 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</li> <li>• Disposed waste at designated sites through licensed waste handlers.</li> </ul>	Waste management	KeNHA	Decommissioning	No additional cost to the BoQ
<b>Total ESMP Costs</b>					<b>Ksh103,500,000</b>

## 9 GRIEVANCE REDRESS MECHANISM

### 9.1 Grievance Redress Mechanism (GRM)

498. 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.

499. 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.

500. 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.

501. 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.

### 9.2 Grievance Handling Mechanism Structure

#### 9.2.1 Members of the Grievance Redress Committee (GRC) at project Level

502. 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
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.**

503. 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.

504. The GRC shall be issued with ToRs by 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.

### **9.3 Key staff coordinating Grievance Redress**

505. 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).

### **9.4 Receiving Complaints**

#### ***Points of receipt of complaints***

506. 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***

507. 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.

508. 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.

509. 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.

## **9.5 Registry and Monitoring**

510. 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.

511. 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 9-1: 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 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, 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

## 9.6 Grievance Redress Mechanism Process

512. 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.

513. 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 three parts :- Maslaha, Village GRC and Resident Engineer, where a complainant can register his grievances and resolved quickly.

**i. *Maslaha GRM***

514. The Maslaha is a body comprising of village elders that plays a significant role among the local communities and is respected, and is based on Muslim traditions and teachings. They have the mandate to resolve conflicts including land related conflicts; natural resources related conflict e.g. pasture; interclan conflicts; among others. Maslaha is composed of village elders of good reputation and who have knowledge of customs and culture of the local communities. Village elders forming the Maslaha are not elected, as long as one has a good reputation in the society and is regarded as impartial then he is welcomed in the council. Women are not part of this forum. Maslaha decisions are strongly respected. In case a person defies their decision, the person will be fined and/or banned from attending any social functions e.g. burials, marriages or any other function that brings the community together. The person may also be excommunicated from the community.

515. This is the preferred as the first level of grievance or conflict redress. A record of any/all grievances received and handled will be kept at all phases of the implementation process. However, the use of Maslaha as an alternative system of dispute and conflict resolution in solving issues of rape and other forms of gender and sexual based violence is not advocated for in this project based on the fact that the system is recognized as contributing to the rise of such cases due to the nominal compensation required from offenders. In addition, handling cases through these systems denies survivors access to medical, psycho-social services and legal redress.

**ii. *Village Level GRM***

516. Non-muslim parties have shown a preference for an alternative mechanism which utilizes the use of Village Level GRC. The village level GRC is categorized with the following membership;

- Assistant/sub locational chief,
- One youth
- One woman
- One project affected youth,
- One project affected woman,
- One project affected male
- Persons with Disability
- Ward Administrator
- Contractor representative
- KeNHA representative

**iii. *Resident Engineer***

517. 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 two mechanisms above, he is also free to forward his grievances to the Resident Engineer's office directly.

518. Resolutions at Maslaha, 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 three 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**

519. 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 constituted and get the necessary circulars issued in this regard so that they can be convened whenever required.

520. 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).

521. 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.

522. 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**

523. 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.

524. 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.

525. 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.

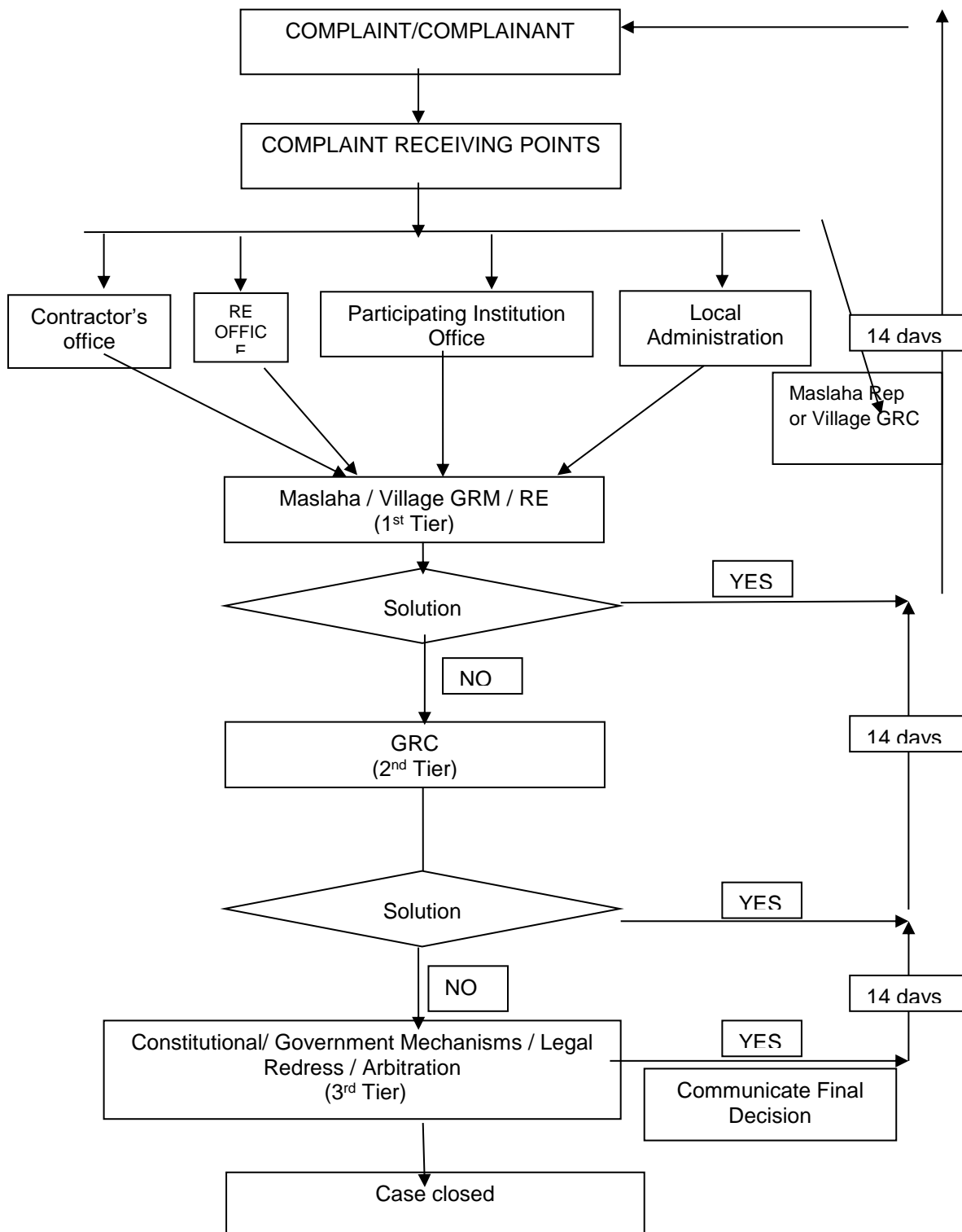
526. The Complainant may decide to take a legal or any other recourse if he /she is not satisfied with the resolutions of the deliberations of the three tiers of GRM.

***It should be encouraged that the 3 levels of handling the grievances should be exhausted extensively before one goes to courts as last resort.***

## 9.7 GRM Jurisdiction

527. 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.
528. 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 9-1 Grievance Redress Flow Process**



## 10 ENVIRONMENTAL AND SOCIAL MONITORING PLAN (ESMoP)

### 10.1 Environmental and Social Monitoring

529. 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.

530. 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.

531. 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

532. 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 laghas. Information on exact locations and distance away from the final established road centerline shall also be collected using GPS equipment.

533. 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.

#### 10.1.1 Internal Monitoring

534. 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 WB Safeguard Policies, Environmental Management & Coordination (Amendment) Act, 2015

535. 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.

536. 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 WB 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.

537. 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.

#### **10.1.2 External Monitoring and Evaluation**

538. 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.

539. 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 10-1.

### Environmental and Social Monitoring Plan (ESMoP) During Construction

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
<b>ENVIRONMENTAL IMPACTS</b>						
Vegetation Loss	Construction	% 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
Asphalt and Crusher Plants	Construction	TSP, NO <sub>x</sub> , SO <sub>2</sub> , CO, Dust particles, particulate matter etc.	Use of PPE Pre-medical checks Compliance with NEMA regulations Daily air quality measurements	Active areas	Daily	Contractor  KeNHA
Excessive Noise and Vibration	Construction	dB and m/s, respectively	Noise levels <sup>16</sup> , complaints log	Active areas	Daily	Contractor, KeNHA
Construction dust and Air Quality	Construction	TSP, NO <sub>x</sub> , SO <sub>2</sub> , 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	Daily	Contractor, KeNHA
Solid Waste management	Construction, Decommissioning	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

<sup>16</sup> Noise, Air, and Water quality baseline parameters will be undertaken before commencement of the project



Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
Hazardous waste collection	Construction	Waste oil Bitumen	Waste management plan Agreement with licensed waste handlers Waste management records	Entire site	Weekly	Contractor, KeNHA
Soil Erosion	Construction	Eroded surfaces	Gully formation; Sedimentation Protection measures in place	Entire Site	Quarterly	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	Weekly	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
Spread of Invasive and Alien Species	Construction	% cover	Identified invasive species	Entire Site	Quarterly	Contractor, KeNHA
Impact on borrow and quarry sites	Construction	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
Increased in poaching and Human-Wildlife Conflicts	Construction	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 and crossings	Construction	Animal crossing	Number of animal crossings provided Installed signages	Entire site	Project life	Contractor, KWS, KeNHA
Increased deadwood collection and charcoal	Construction	% cover	% cover declining or increasing	Entire site	Project life	KFS, KWS, County government

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
Environmental and Social Risks	Construction	Fire outbreaks, floods, terrorism, etc	Areas for potential hazards	Entire site	Continuous during project life	KeNHA
<b>SOCIAL IMPACTS</b>						
Disruption of Livelihood due to land take	Construction	PAPs	RAP implementation progress report	Right of way	Quarterly	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	Sensitization and testing campaigns	Number of reported infections; Number of Medical camps held;	Entire site and immediate neighbouring communities	Quarterly	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	Quarterly	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

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
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	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
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	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 and Marginalized groups	Construction	Participation by VMGs	Number of projects targeting VMGs Number of grievances related to VMGs participation	Entire site	Monthly	Contractor/ KeNHA
<b>OCCUPATIONAL HEALTH AND SAFETY</b>						

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
Occupational Safety and Health Hazards	Construction	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 WB 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	Road accidents	Traffic management Plan Number of awareness trainings and sensitization campaigns Installed signages and traffic calming devices Accident records	Entire site	Quarterly	Contractor; KeNHA, NTSA
Security challenges	Construction	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
Traffic management	Construction	Accidents and incidents Complaints	Number of accidents Number of fatalities Number of claims/grievances	Entire Site	Daily	Contractor KeNHA

**ESMoP Operational Phase:**

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
<b>ENVIRONMENTAL IMPACTS</b>						
Vegetation Loss	Operation	% cover	No. of Trees felled and compensated  Areas of land cleared	Entire Site	Monthly	KeNHA

Monitoring Item	Monitoring Phase	Parameters	Indicators	Location	Frequency	Responsibility
Soil Erosion	Operation	Eroded surfaces	Blocked drains Gully formation; Sedimentation Protection measures in place	Entire road section	Quarterly	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	Quarterly	KeNHA
Spread of Invasive and Alien Species	Operation	% cover	Identified invasive species	Entire road section	Quarterly	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	Quarterly	KWS, KeNHA
<b>SOCIAL IMPACTS</b>						
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
<b>OCCUPATIONAL HEALTH AND SAFETY</b>						
Road safety	Operation	Road accidents	Traffic accident records Police operation book records Installed signages and traffic calming devices	Entire road section	Quarterly	; KeNHA, NTSA

## 10.2 Other Enhancement Measures

540. KeNHA will 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 comply in each of these areas and sanctions for non-compliance.

### 10.2.1 Community engagement and communication

541. KeNHA will 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 KeNHA'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.

542. 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.

543. A sample Stakeholder Engagement Plan (SEP) is provided in the annex 1. The Structure of the project's Stakeholder Management Plan shall include the following;

- **Identification of Stakeholders** – this section 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, Wajir and Mandera 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 proposed engagement plan shall 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 should include level of awareness, number of grievances received and solved, level of participation by the stakeholders, and general satisfaction of the project activities.

### 10.3 Contractor Clauses

544. 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;

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

545. 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.

546. 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 10-1: ESMoP during Construction and Operation phase**



## 11 CAPACITY TO IMPLEMENT ESMP & SAFEGUARDS

547. 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.

### 11.1 Client capacity

548. 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 WB 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.

549. 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.

### 11.2 Training objectives

550. 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

551. 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.

552. 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. It is proposed that this should be done for all projects under NETIP.

553. 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.

554. 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 (and other NETIP projects).

The following capacity building and training programmes are proposed.

### 11.3 Capacity Building Enhancement

555. Awareness creation, training and sensitization will be required for personnel of the following agencies, institutions, and other stakeholders.

- Kenya Wildlife Services;
- Kenya Forest Services;
- 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;
- Any other relevant agencies that will be supporting the project

### 11.4 Training

556. The training will focus on the following but not limited to;

- Background of the project (and overall NETIP) – its objectives, target groups and footprints;
- Role of ESIA/ESMP in implementation of NETIP sub-projects;
- Relevant environmental and social regulations;
- Compliance with World Bank 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

### **11.5 Capacity Building and Training Responsibilities**

557. 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, KWS, KFS etc), and if necessary, the WB safeguard specialists involved in the project. The resources for implementing the training will be allocated from the respective component of NETIP, and will be coordinated by the Deputy Director, Environment and Social Safeguards at KeNHA.

## 12 CONCLUSION AND RECOMMENDATIONS

558. The prioritization for development in the north eastern parts of Kenya under NETIP through road and connectivity development justifies the need for upgrading Wajir – Elwak Road to bitumen standard. Poor road connectivity has contributed to regional development imbalance due to remoteness and poor access to services. Under NETIP, the development of the project road will contribute to economic growth of the local community. Nonetheless, this ESIA has put in place mitigation measures against the identified adverse social and bio-physical impacts arising from road development. Alongside this ESIA, a RAP Study Report has been prepared to address land take within the settlement areas along the project road.

### 12.1 Conclusion

559. The primary objective of the study on the Wajir – Elwak (A13) road is to upgrade the road project to bitumen standards by identifying the most appropriate and economically justified upgrading solution to the road to provide further design lives at least 15 years. The construction works will be confined to the existing alignment, and limited new alignments will be constructed, apart from proposed bypasses at Elwak and Tarbaj centres.

560. The construction of the road is expected to improve the road transport services along the road 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.

561. 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, human-wildlife conflict, 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.

562. The main social issues identified includes but not limited to; increased energy demand, 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 loss of human and livestock due to road accidents, security and terrorism challenges, and potential community conflicts due to resources. There will also be some resettlement of people because some sections of the road are already encroached, although the design will utilize existing wayleave to minimize resettlement.

563. 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.

564. 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 Wajir – Elwak (A13) road in Wajir and Mandera counties have positive impacts that outweigh the key negative impacts which can be mitigated.
565. The total direct amount of implementation of ESMP is estimated to be about Kshs 103,500,000, 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 88.5 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. 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. It is thus our recommendation that the project be allowed to go ahead with construction from an environmental and social impacts perspective.

## 12.2 Recommendations

566. 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

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## **Annex 1: Stakeholder Engagement Plan (SEP)**

### **Purpose**

The purpose of the Stakeholder Management Plan is to formulate a procedure and implement a set of actions that will create a platform and process for sustained and broader stakeholder involvement in the Wajir – Elwak Road project.

The Stakeholder Management plan includes the processes required to identify the people, groups and organizations that could affect or be affected by the proposed project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate strategies and tactics for effectively engaging stakeholders in a manner appropriate to the stakeholders' interest and involvement in the proposed project. The Stakeholder Management Plan helps to ensure that stakeholders are effectively involved in project decisions and execution throughout the lifecycle of the project, to gain broad support for the project and anticipate resistance, conflict, or competing objectives among the project's stakeholders.

### **Goal**

The goal of the Stakeholder Management Plan is to support KeNHA in attaining maximum benefits of wider stakeholder participation in the development and management of the Wajir - Elwak project.

### **Specific Objectives**

The objective of this Stakeholder Engagement Plan (SEP) is to ensure that the stakeholders' involvement, participation and commitment in making decision in the project activities is well implemented. Communication is critical to transmission of clear concise and factually correct information, either through inter-personal communication or communication with a group of persons.

The Specific Objectives of the Guidelines 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.

Some of the key risks to poor communication for this phase of the project include:

- Reduced community buy-in on critical project needs such as material sources;
- Misinformation on project activities, impacts and outcomes resulting in disagreement and in heightened cases, demonstrations by aggrieved communities;
- Overt Opposition to the project and its staff;
- Increased costs and serious delays in project implementation due to stakeholder and community objections to the project.

### **Identification of Stakeholders**

In order to develop an effective plan for managing stakeholders, the stakeholders first need to be clearly identified and assessed. Stakeholders will be identified by performing a stakeholder analysis in which potential stakeholders and relevant information (proximity to the project, interests, involvement, interdependencies, influence, and potential impacts on project lifecycle) are gathered, documented and analyzed.

There will be many stakeholders, each evaluated individually and prioritized in terms of what resources will be required and how they will be focused.

Those who are directly affected clearly need closer attention; taking into consideration other cross-cutting analysis such as vulnerability, project stages, cultural and social issues.

The ESIA has identified some of the key stakeholders that will be consulted as part of the stakeholder management plan.

According to the categories and identification criteria described above, the following stakeholders were identified within the area of influence of the project:

**Local Stakeholders:** Composed of all individuals and organizations that could be directly affected by any activity of the project or that could oppose project implementation. The area directly affected by the Project is considered to be the geographic boundary where the physical, biological or social-economical elements are located.

**Regional Stakeholders:** This group comprises those individuals or organizations that are indirectly affected by the implementation of the Project and that may have interest on its development. This includes the local county governments, CBOs, national government representatives and ministries, etc

**National Stakeholders:** This group includes the National Government institutions which are responsible for the approval and supervision of the project such as the Ministries of Environment and Natural Resources, Transportation, Infrastructure, Housing and Urban Development, Tourism & Wildlife, Water and Irrigation, Agriculture & Livestock, Industrialization, Energy and Petroleum, among others.

## Stakeholder Categorization

The stakeholder categories are as follows:

**Politicians:** these include local members of county assemblies, within the county and sub-county, Members of Parliament and Senators, and the governor.

**The local community;** - these include the PAPs, village representatives from villages located within the project area

**Private sector:** comprising the different production groups, either individuals or organizations, such as farmers, horticulture, merchants, fishermen, manufacturers, transportation service, etc.

**Public Administration:** National and county government administration, comprising the civil servants in charge of security (police), environment, education and health

**Media:** comprising the owners, managers, and representatives of radio stations, TV channels, and local written press.

**Grass Root Organizations:** comprising the representatives of social groups organized according to different interest such as the neighborhood associations, women and youth groups, village organizations, etc.



**Public Services Providers:** comprising of representatives of public service providers such as the water resources and management boards, power/energy, water service providers, solid waste management companies, etc.

**Local and International NGOs:** comprising the local and international non-governmental organizations involved with the different topics covered by the Project such as interest groups in environment, social, education, health, environment, among others.

**Religious Groups:** comprising the representatives of the different religions.

The project has identified the following major stakeholder groups;

- Project Affected Persons;
- Communities along the road project corridor;
- KENHA;
- World Bank;
- Ministry of Transport Infrastructure Housing and Urban Development;
- Ministry of Lands;
- Ministry of Health;
- National Aids Control Council;
- The Children's Department;
- Ministry of Labor and Social Services;
- National Land Commission;
- Water Resource Management Authority;
- Provincial Administration;
- Gender and Social services;
- NEMA;
- County Governments of Wajir and Mandera;
- Kenya Wildlife Services;
- Kenya Forest Services
- Civil Societies;
- NGOs;
- CBOs;
- Self Help Groups;
- Livestock and Fisheries; and
- Vulnerable groups- Vulnerable or marginalised stakeholders are defined as affected groups or individuals within the Project area of influence who could experience adverse impacts more severely than other stakeholders based upon their disadvantaged or vulnerable status. Such vulnerability may be evident due to factors such as ethnicity / race, national or social origin, gender / sex, language, religion, political or other opinion, property, birth or other status. Vulnerable stakeholders will require an open and inclusive approach to engagement that provides them with suitable opportunities to participate and voice their concerns. Some vulnerable stakeholders will need special attention in this SEP due to the factors that define their vulnerability. Accordingly, differentiated measures may be applied to ensure the effective participation and obtain feedback from vulnerable stakeholders
- The Contractor and the Consulting Engineer – Executors of the Project
- Any other Person of Relevance to the Project.

### Monitoring Indicators

The monitoring results should be made available to the public for their review and comments in an accessible place, mainly at the RE project office and website for transparency. Stakeholder

perceptions will also be monitored by RE's Social safeguards officers and, if necessary, consultants or other third parties to provide continual feedback to KeNHA. As part of this Stakeholder Engagement Plan, it is envisaged that consideration will be given by KeNHA on whether independent third parties may also be engaged to monitor Project impacts, community concerns, and the project's response to complaints and monitoring results.

The following table shows the proposed Stakeholder Engagement Plan for the Wajir – Elwak Road project.

Stakeholder	Engagement Strategy	Time/Frequency of engagement	Monitoring tools	Responsibility
PAPs, Residents and representatives of Project affected Communities	Baraza/Public consultation meetings. Door to door consultations Print notice KeNHA website	During RAP and ESIA reports Quarterly on project progress Ad hoc meetings Publications and notices on a need to basis during construction	No of community meetings/Barazas conducted including minutes and attendance  Grievance logs (open, closed and pending logs)	KeNHA, Consultant
Ministries, Regulators, County Governments, National Government Authorities (KeNHA, NEMA, KURA, KeRRA, KWS)	Key Informant Interviews Print notice Official letters/ reports	During ESIA fieldwork Reporting as frequent as required by various authorities. During RAP and ESIA reports Quarterly on project progress Ad hoc meetings Publications and notices on a need to basis during construction	Reports/responses in ESIA, RAP, SA etc.  Official correspondences such as letters, notices, approvals etc.  Grievance logs (open, closed and pending logs)	KeNHA, Consultant
NGOs/CBOs	Face to face meetings Print notices Official letters Key Informant Interviews KeNHA website	Quarterly on project progress Ad hoc meetings Publications and notices on a need to basis during construction	No of meetings with NGOs/CBOs conducted including minutes and attendance  Grievance logs (open, closed and pending logs)	KeNHA, Consultant
Vulnerable and marginalized groups/ Indigenous Peoples	Focus Group meetings. Door to door consultations (personal) Print notice KeNHA website Publications/Announcements in media (local and/or national)	During SA, RAP, ESIA fieldwork Quarterly on project progress Ad hoc meetings Publications and notices on a need to basis during construction	Social Assessment report, RAP, ESIA  Official correspondences such as letters, notices, approvals etc.  Grievance logs (open, closed and pending logs)  Inclusion of group specific mitigation into project implementation or its exclusion e.g. gender balancing for labourers  Projects initiated for VMGs/IPs	KeNHA, Consultant

Stakeholder	Engagement Strategy	Time/Frequency of engagement	Monitoring tools	Responsibility
General public	Baraza/Public consultation meetings. Door to door consultations Print notice KeNHA website Publications/Announcements in media.	During ESIA fieldwork Ad hoc meetings Publications and notices on a need to basis during construction	No of meetings with NGOs/CBOs conducted including minutes and attendance Grievance logs (open, closed and pending logs) Media (print, audio and visual) awareness campaigns	KeNHA, Consultant

## Annex 2: Sample Grievance Redress Form

<b>Reference No.</b>	
Contact Information  Please mark how you wish to be contacted (mail, telephone, e-mail)	Address:  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 3: 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 4: Minutes of public consultation meetings**

### **MINUTES OF CONSULTATION MEETING ON UPDATING OF THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT OF THE PROPOSED UPGRADING TO BITUMEN STANDARDS OF WAJIR – ELWAK ROAD SECTION 175KM (A13) HELD AT IN LAFALEY TOWN ON 3/2/2019**

*SIGNED ATTENDANCE REGISTER ATTACHED*

#### **AGENDA OF THE MEETING**

1. Opening prayer
2. Introduction of the participants
3. Purpose of Holding the Consultation Meeting on the ESIA update
4. Brief description of the proposed road;
5. Project impacts
6. Grievances redress mechanism
7. Feedback from attendees
8. Community needs.

#### **MINUTE 01: OPENING PRAYER**

The meeting was called to order at 1200hrs by the Area chief and began with a word of prayer from one of the participants.

#### **MINUTE 02: INTRODUCTION OF THE PARTICIPANTS.**

The area chief Mr. Idle A Abdile welcomed everyone in attendance to the meeting. He thanked the members of public for attending the meeting and introduced the ESIA team and the role they play and the main purpose of the meeting. The chief called upon the environmentalist to give an overview of the project and purpose of the meeting.

#### **MINUTE 03: PURPOSE OF CONDUCTING THE PUBLIC AND STAKEHOLDERS MEETING**

Mr. Maina Githinji informed the attendees that the main objective of the meeting is to get the community views about the project and what the community would want to be done during the implementation of the Project. He also gave a brief introduction of the project route from Wajir to Elwak. The attendees were informed on the ESIA process as it is a requirement by NEMA and the World Bank, he also informed the participants on the importance of public consultation and participation on the Project. The attendees were informed to participate fully in the discussion and ask any question concerning the Project.

#### **MINUTE 04: BRIEF DESCRIPTION OF THE PROPOSED NEW ROAD.**

Currently the road is gravel and the Government through KeNHA is planning to tarmac the road from Isiolo to Wajir to Mandera. The road design shall include road signs, speed calming mechanisms shall be applied in towns or centres where there are institutions such as schools, religious institutions towns and markets. It is a requirement by NEMA that before the construction of any project such as road an ESIA study should be done to ensure that all the environmental and social impacts have been identified and mitigations to these impacts are fully addressed.

#### **Minute 05: Project Impacts.**

The attendees were informed on the possible project impacts, both positive and negative.

##### **Positive impacts.**

The new tarmac road shall be of great impact to the growth and development of the area, travel time shall be reduced, quick response to security, availability of labour during construction. Dust will also be minimized. Security response and service delivery will also be improved by the new road. The road will also attract new investors in the region because of ease of transportation of goods and people.

##### **Negative impacts**

- i. Dust.

They were informed that during construction there shall be dust emanating from the activities of the road construction. They were informed that mitigation measures shall be recommended in the ESIA report.

ii. Population influx

Due to available employment there shall be influx in population. People from other counties may come to the area seeking for employment. The attendees were informed that population influx may lead to conflict in the available resources such as water, increase of the spread of HIV/Aids, erosion of the culture fabric and religious believes.

### **Minute 06: Grievances Redress Mechanism**

The attendees were informed that a grievance redress mechanism shall be developed where all the issues regarding the Project shall be reported. The grievance redress mechanism shall outline a communication channel where any grievance shall be logged. The grievance committee members shall be formed with incorporation of community members as part of the team.

### **MINUTE 07: FEEDBACK FROM THE COMMUNITY**

1. Mohammed Antel: The road project is a good initiative. The benefits of the road are more than the negative impacts. He recommended that compensation of affected properties to be done. Local youths lack skills but during construction the non skilled labor should be given to the youths. The consultant informed the meeting that locals will be given preference for hiring skilled and non-skilled workers, including training opportunities. In terms of compensation, works will not commence until compensation of affected properties is completed.
2. Mohammed; There shall be increased accidents due to speeding vehicles. Proper mitigation measures should be considered. The road design should include proper signage showing crossing areas for livestock, school going children bumps should also be provided where necessary in towns. The meeting was informed that design of the road is ongoing and measures suggested will be passed to design team to incorporate them. The meeting was also informed that the communities will also play a key role in advising the contractor where speed measures and signage will be important.
3. Amina Arrow; The project is a good initiative that shall reduce travel time, and ease access to other towns. Women groups within the areas should be supported during the construction of the road to provide various services such as food supplies. The women were informed to take an active role when the project commence and take advantage of various ways they can participate, eg cooking for workers, laundry services, and even working at the construction sites. They were also advised to form groups that can advocate for their agenda to benefit from the project activities.
4. Halima Mohammed; What is the road corridor width? KeNHA should provide water to the community as part of CSR activity. Women should be considered for employment during the road construction. The road corridor width is 60 meters. Compensation of affected structures shall be done through a RAP process. The local community shall be considered for skilled and non-skilled labor. Women shall also be part of the project and shall be considered for employment and they were encouraged to get involved when the project commence.

### **Minute 08: Community needs**

The attendees listed the following as the most important needs

- Water for the communities
- Support Schools in the area
- Support women groups

Having no any other business the meeting ended at 0115 hrs.





Kenya National Highways Authority

Quality Highways, Better Connections

Blue Shield Towers, Hospital Road, Upper Hill P.O. Box 49712 - 00100 Nairobi  
Tel 020 - 8013842 Email dq@kenha.co.ke / info@kenha.co.ke Website www.kenha.co.ke

## CONSULTATIVE MEETINGS FOR WAJIR - ELWAK ROAD PROJECT

Date: 3/12/2019.

VENUE: LAFALEY.

## List of people consulted

No	Name	Organization	Designation	Tel No	Signature
1.	Hassan Gabow		lifestock keeper	0727723073	
2.	Haree Noor Seney		lifestock	N/A	
3.	ADan Mohamed		lifestock	0705500247	
4.	Mohamed <del>Abdi</del>		lifestock	0707361191	
5.	Ibrahim Haree		lifestock	0729763340	
6.	Diriye Hagg		business	0724626645	
7.	Mohamed Omar		lifestock	0790995820	
8.	Abdullahi Haree		lifestock	0719738673	
9.	Robe bashe		lifestock	0745772950	
10.	Atmeel Salac		life business	0724426179	
11.	Diyaad Mumin		lifestock	N/A	
12.	Ali Yarow Noor		lifestock	0743084311	
13.	Abdihakim Mohamed		lifestock	0787887043	
14.	Muhammed antar		lifestock	0710825208	
15.	Abdulahi Hassan		lifestock	0710611509	
16.	Adawa Yarow		lifestock	07027183	

Adile A. Abdille  
SNR. CHIEF  
LAFALEY LOCATION  
KUTUPAQ DIVISION

## CONSULTATIVE MEETINGS FOR WAJIR - ELWAK ROAD PROJECT

Date: 3/2/2019.

VENUE: LAFALEY

## List of people consulted

No	Name	Organization	Designation	Tel No	Signature
1.	Hayed Adan		livestock	072027929	
2.	Jella Hujale		livestock	0727205285	
3.	Denye Ibrahim		livestock	0707935984	
4.	Halima Hassan		livestock	0726467391	
5.	Iachan Bishar		livestock	0726467391	
6.	Amina ARBOW		livestock	0720303162	
7.	Omar Mohamed		business	0707467177	
8.	Arfan Mohamed		business	0718234251	
9.	Rahma Mohamed		livestock	072233613	
10.	Fatuma macum Hassan		livestock	0721670003	
11.	Sharifa Jimale		business	0704068871	
12.	Kheira Sillew		livestock	0716266553	
13.	Garow Garow		livestock	N/A	
14.	Halima Mohamed		GLS	0726375570	
15.	Hasiba Abdi		livestock	0727701858	
16.	ADAN Abdi		livestock	0729824193	

17 Abass haile

business

0724838330

18 Zainab Jimale

livestock

0722414760

19 Omar Abdi Hassan

livestock

0720834073

0723918738

Gate A. Abdille  
Page 11  
SNR. CHIEF  
LAFALEY LOCATION  
KUTULO DIVISION

**MINUTES OF CONSULTATION MEETING ON UPDATING OF THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT OF THE PROPOSED UPGRADING TO BITUMEN STANDARDS OF WAJIR – ELWAK ROAD SECTION 175KM (A13) HELD AT TARBAJ SUB - COUNTY HEADQUARTERS ON THURSDAY 28<sup>TH</sup> DECEMBER, 2018**

**ATTENDANCE LIST:** *SIGNED ATTENDANCE REGISTER ATTACHED*

**AGENDA OF THE MEETING**

9. Opening prayer
10. Introduction of the participants
11. Purpose of Holding the Consultation Meeting on the ESIA update
12. Brief description of the proposed road;
13. Project impacts
14. Grievances redress mechanism
15. Feedback from attendees
16. Community needs.

**MINUTE 01: OPENING PRAYER**

The meeting was called to order at 11.50am and began with a word of prayer from one of the participants.

**MINUTE 02: INTRODUCTION OF THE PARTICIPANTS.**

The area chief Mr Hassan Mohammed welcomed everyone in attendance to the meeting. He thanked the members of public for attending the meeting and introduced the ESIA team and the role they play and the main purpose of the meeting. The chief called upon the environmentalist to give an overview of the project and purpose of the meeting.

**MINUTE 03: PURPOSE OF CONDUCTING THE PUBLIC AND STAKEHOLDERS MEETING**

Mr. Maina Githinji informed the attendees that the main objective of the meeting is to get the community views about the project and what the community would want to be done during the implementation of the Project. He also gave a brief introduction of the project route from Wajir to Elwak. The attendees were informed on the ESIA process as it is a requirement by NEMA and the World Bank, he also informed the participants on the importance of public consultation and participation on the Project. The attendees were informed to participate fully in the discussion and ask any question concerning the Project.

**MINUTE 04: BRIEF DESCRIPTION OF THE PROPOSED NEW ROAD.**

Currently the road is gravel and the Government through KeNHA is planning to tarmac the road from Isiolo – Wajir -Mandera. The road design shall include road signs, speed calming mechanisms shall be applied in towns or centres where there are institutions such as schools, religious institutions towns and markets. It is a requirement by NEMA that before the construction of any project such as road an ESIA study should be done to ensure that all the environmental and social impacts have been identified and mitigations to these impacts are fully addressed.

**Minute 05: Project Impacts.**

The attendees were informed on the possible project impacts, both positive and negative.

Positive impacts.

They were informed that the new tarmac road shall be of great impact to the growth and development of the area, travel time shall be reduced, quick response to security, availability of labour during construction.

Negative impacts

iii. Dust.

They were informed that during construction there shall be dust emanating from the activities of the road construction. They were informed that mitigation measures shall be recommended in the ESIA report.

iv. Population influx

Due to available employment there shall be influx in population. People from other counties may come to the area seeking for employment. The attendees were informed that population influx may lead to conflict in the available resources such as water, increase of the spread of HIV/Aids, erosion of the culture fabric and religious believes.

#### **Minute 06: Grievances**

The attendees were informed that a grievance redress mechanism shall be developed where all the issues regarding the Project shall be reported. The grievance redress mechanism shall outline a communication channel where any grievance shall be logged. The grievance committee members shall be formed with incorporation of community members as part of the team.

#### **MINUTE 07: FEEDBACK FROM THE COMMUNITY**

**Andrew Mwiti, ACC:** The ACC noted that the improvement of the road will bring benefits to residents and administration staff working in the area. He said that the intervention will address insecurity and make it difficult the use of IEDs by terror agents that are usually buried on the road, but with a tarmac, it will be difficult for the terrorists to bury them. In addition, security response will be better with the improvement of the road. He urged all the security personnel present to provide support to the team and the government in future when works start in providing security to the workers.

Geoffrey Mutwiri: He noted that the road will bring about a lot of developments in the area, including investments in the area by other people from other region who have been shunning the area. He indicated that his team will provide support necessary to ensure there will be no insecurity incidents during construction.

Hassan Mohammed: He requested that compensation to be done before the construction of the road to ensure there will be no negative image of the project by the local communities. He noted that the local people are eagerly waiting for the project and the benefits the road will bring in the area. He indicated that it will also be important for the local people to benefit from the project through construction of water pans and/or dams. He requested that material borrow sites can be converted to water pans for water like in other regions of the country. The team informed the chief that this is a very potential area of conflict in the region due to scarcity of water, and if this was to be considered, the local communities will have to agree and sign agreements to ensure that it won't create future conflict. The county governments will also have to be involved in selection if such sites

Idle Ahmed: He noted that there is a lot of youth unemployment in the region which encourage them to join terrorism groups and if these youths can be considered for training during construction of the project, it will go along way in reducing insecurity in the area. The youths will also be able to move out to other regions of Kenya to seek work with their skills developed from this project.

Other comments from participants:

- The contractor and his workers should respect the culture and religious beliefs of the people.
- The contractor should conduct HIV/AIDS awareness which is usually ignored by the local people due to lack of knowledge especially when the project is expected to spur growth in the area
- Young school going children should not be involved in the Project works or labor – the contractor should work with the local authorities to ensure this does not happen
- All mitigation measures as explained by the consultant should be implemented.
- The project should consider constructing markets for livestock in the area, or improving existing ones

Having no any other business the meeting ended at 1420 hrs.

**MINUTES OF CONSULTATION MEETING ON UPDATING OF THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT OF THE PROPOSED UPGRADING TO BITUMEN STANDARDS OF WAJIR – ELWAK ROAD SECTION 175KM (A13) HELD AT TARBAJ TOWN ON 2/2/2019**

**ATTENDANCE LIST:** *SIGNED ATTENDANCE REGISTER ATTACHED*

**AGENDA OF THE MEETING**

17. Opening prayer
18. Introduction of the participants
19. Purpose of Holding the Consultation Meeting on the ESIA update
20. Brief description of the proposed road;
21. Project impacts
22. Grievances redress mechanism
23. Feedback from attendees
24. Community needs.

**MINUTE 01: OPENING PRAYER**

The meeting was called to order at 1.30 pm and began with a word of prayer from one of the participants.

**MINUTE 02: INTRODUCTION OF THE PARTICIPANTS.**

The area chief Mr Hassan Mohammed welcomed everyone in attendance to the meeting. He thanked the members of public for attending the meeting and introduced the ESIA team and the role they play and the main purpose of the meeting. The chief called upon the environmentalist to give an overview of the project and purpose of the meeting.

**MINUTE 03: PURPOSE OF CONDUCTING THE PUBLIC AND STAKEHOLDERS MEETING**

Mr. Maina Githinji informed the attendees that the main objective of the meeting is to get the community views about the project and what the community would want to be done during the implementation of the Project. He also gave a brief introduction of the project route from Wajir to Elwak. The attendees were informed on the ESIA process as it is a requirement by NEMA and the World Bank, he also informed the participants on the importance of public consultation and participation on the Project. The attendees were informed to participate fully in the discussion and ask any question concerning the Project.

**MINUTE 04: BRIEF DESCRIPTION OF THE PROPOSED NEW ROAD.**

Currently the road is gravel and the Government through KeNHA is planning to tarmac the road from Isiolo – Wajir -Mandera. The road design shall include road signs, speed calming mechanisms shall be applied in towns or centres where there are institutions such as schools, religious institutions towns and markets. It is a requirement by NEMA that before the construction of any project such as road an ESIA study should be done to ensure that all the environmental and social impacts have been identified and mitigations to these impacts are fully addressed.

**Minute 05: Project Impacts.**

The attendees were informed on the possible project impacts, both positive and negative.

Positive impacts.

They were informed that the new tarmac road shall be of great impact to the growth and development of the area, travel time shall be reduced, quick response to security, availability of labour during construction.

Negative impacts

- i. Dust.

They were informed that during construction there shall be dust emanating from the activities of the road construction. They were informed that mitigation measures shall be recommended in the ESIA report.

- ii. Population influx

Due to available employment there shall be influx in population. People from other counties may come to the area seeking for employment. The attendees were informed that population influx may lead to conflict

in the available resources such as water, increase of the spread of HIV/Aids, erosion of the culture fabric and religious believes.

### **Minute 06: Grievances**

The attendees were informed that a grievance redress mechanism shall be developed where all the issues regarding the Project shall be reported. The grievance redress mechanism shall outline a communication channel where any grievance shall be logged. The grievance committee members shall be formed with incorporation of community members as part of the team.

### **MINUTE 07: FEEDBACK FROM THE COMMUNITY**

#### **1: Mohammed Tede**

Compensation. He requested that compensation to be done before the construction of the road. Water ways. Along the road there are water ways that direct rain water to water pans during the rainy season, during the construction they should be considered and where possible culverts should be constructed to allow the continuous flow of water to the water pans.

#### **2: Yunis Adam**

Mitigation measures should be taken during construction to mitigate the dust within the town. The contractor and the workers should respect the culture and religious beliefs of the people. Young school going children should not be involved in the Project works or labor. The contractor and the workers should have good working ethics to respect women and young girls in the area to avoid conflict with the local community and prevent teenage pregnancies and luring young girls.

#### **3. Yusuf Mowlid**

The trees along the road corridor in the town centre are of great use to the community, they hold the meetings under these trees, some of the trees hold cultural value and some of the tree leaves are used as vegetables.

4: Hassan Mohammed; while sourcing for labor the contractor should consider the local skilled and non skilled personnel. Priority should be given to the local youths.

5. Mohammed Awal. The campsite should be constructed away from the town this will help in reducing the population within the town. The contractor should seek his own sources of water to avoid conflict with the community.

### **Minute 08: Community needs**

The attendees listed the following as the most important needs

- Water
- Primary school
- Girls secondary school

Having no any other business the meeting ended at 0230 hrs.



Blue Shield Towers, Hospital Road, Upper Hill P.O. Box 49712 - 00100 Nairobi  
 Tel 020 - 8013842 Email dq@kenha.co.ke / info@kenha.co.ke Website www.kenha.co.ke

REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR - ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS

ATTENDANCE

Area: TARBAG SUB-COUNTY

Date: 28.12.2018

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
	ANDREW MUKI	NATIONAL GOVERNMENT	DCC	13241572	0725657384	dctorbag@nmail.co.ke	[Signature]
	SIMON KIRMI	NBS	QCS	22171252	0722608042	S. Kirmi@nbs.go.ke	[Signature]
	DR JOSEPH MUKATI	RAP Consultants	TIL SDRS	11113796	0726493988	Josephmukati@yahoo.com	[Signature]
	CHRISTOPHER	RAP Consultants	Value	4939226	072232578	C. Njiru@value.com	[Signature]
	Mohamed A Aden	RAP member	Member	9572261	0721239197	mohamedulla72@yahoo.com	[Signature]
	MURIBI GEOFFREY	DCI	NGO	25617793	0729644536	DCI0-tarbag@gmail.com	[Signature]
	MOHAMED A. ADEN	AP. SUBCO	SP	042707077	0720112226	adcbogey@gmail.com	[Signature]
	AHMED M. ADEN	RAP committee	1-Number	27492601	0724266817	Sobnaif@fufu.com	[Signature]
	FADWA F. MUMIN	RAP Consultants	ENVIRONMENTAL	29762737	0723953585	Fadwa@fufu.com	[Signature]
	BRUNO CHIRI	NATIONAL GOVT	SECURITY	2263100	0727312602	chiribruno@gmail.com	[Signature]
	DAUD AHMED ADEN	RAP Consultant	Environment	37100028	0701265200	daudahmed@gmail.com	[Signature]
	Issac P. Osman	NGAO	Asst-Chief	21559178	0703900136	issacp@ngao.go.ke	[Signature]
	HASSAN SHIBU MOHAMMAD	NGAO	Asst-Chief	13002726	0722318151	hassan@shibu.com	[Signature]
	Muhammad Farah Jamic	NGAO	Asst-Chief	20983044	0725812305	Muhammad@ngao.go.ke	[Signature]
	Mohammed Ali Omer	NGAO	CHIEF	13256486	0721536338	ali@hussen.com	[Signature]
	Laila Ahmed	NGAO	CHIEF	0052473	0723919737	lailaahmed@ngao.go.ke	[Signature]
	Isabellina Isack	NGAO	CHIEF	0058058	0711806440	isabellina@ngao.go.ke	[Signature]



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR - ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: TARBAJ.

Date: 30-12-2018

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1	Simon Kirui	NPS - KPS	DES	2217282	0722608042	s.kirui@yahooinc	
2	DR JOSEPH MUSA?I	RAP - WJR - GATIL		1113776	0726493984	josephmusa@yeh	
3	CHRISTOPHER MURRAY	RAP Way - Slum Values		4439226	0722325778	c.murray@yeh	
4	Mohammed A.	RAP WJR - Elwak Member		9572261	0721239197	mohabodullah@yeh	
5	Beatrice Wajim	ES&S expert Consultant			0727306792		





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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR – ELWAK (A13) ROAD

PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: TANBA

Date: 02-02-2019

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
	Shmed Hassan	AL-ABBA	Chairman	0040118	074093218		<i>[Signature]</i>
	Abdulhamid Alaso	Mogul	Secretary	004469	071119504		<i>[Signature]</i>
	Osman Mohammed	Dibsi	V-Chairman	21360144	0706200947		<i>[Signature]</i>
	Yunis Hassan	HASAN	TRAINER	6883164	0718392615		<i>[Signature]</i>
	OSMAN HASSAN		Vice-Chair	13255010	0701842659		<i>[Signature]</i>
	FUSIE MUKHID		member	21066862	0722448992		<i>[Signature]</i>
	RODWIN KANYATE		member	4884061	0714432543		<i>[Signature]</i>
	KHALIF HASSAN		Member	0039749	0727986787		<i>[Signature]</i>
	HASSAN SHIDAN		Chief	13002926	0722318151	hassan.shidan@gmail.com	<i>[Signature]</i>
	MUHAMMAD ALI ELWAK		Chief	13256466	0721536339		<i>[Signature]</i>
	Muhammad Jelle		Vice-Secretary	6822777	0707904405		<i>[Signature]</i>



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR – ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: TARBAJ

Date: 2-2-19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1	OBSTE O CLAUSE	INTERIOR	ACC	27358462	0729585950	clauseobite@gmail.com	<i>[Signature]</i>
2	HASSAN A. HUSSEIN	INTERIOR	COTI	27036065	0700138852	-	<i>[Signature]</i>
3	DR Joseph Mwach	Consultant	TLL	1113796	0726493584	joephmwaich@yahoo.com	<i>[Signature]</i>
4	CHRISTOPHER Mbandi	Consultant	Valuez	14839226	072232578	c.mbandi@yahoo.com	<i>[Signature]</i>



**CONSULTATIVE MEETINGS FOR WAJIR - ELWAK ROAD PROJECT**

Date: 21/2/2019.

VENUE: TARBAJ

List of people consulted

No	Name	Organization	Designation	Tel No	Signature
1.	Kusow Mahamid				
2.	Abdullahi Mahamid				
3.	Abdi Mudo				
4.	Muhammad Ismael				
5.	Amr Ali				
6.	Mahomed Mahamid				
7.	Ismael Ali				
8.	Abdulqadir Haskida				
9.	Mohid Wamoga				
10.	Jimab Dakkar				
11.	Noor Mulat				
12.	Ibrahim Isack				
13.	Adow Gedi				
14.	Mohid Abdul				
15.	Amr Ali				
16.	HASSAN I. MONTAGE	oop	Alchief	0722318151	

**ASSISTANT CHIEF**  
 ARBAJ SUB-LOCATION  
 ARBAJ LOCATION  
 ARBAJ SUB-COUNTY  
 WAJIR COUNTY



**CONSULTATIVE MEETINGS FOR WAJIR - ELWAK ROAD PROJECT**

Date: 21/2/2019

VENUE: TARBAJ

List of people consulted

No	Name	Organization	Designation	Tel No	Signature
1.	Mohamed Jelle Madi				
2.	Hassan Sheldar				
3.	Ronald Kenyere				
4.	Muafin Abdulle				
5.	Fuad Abdulle				
6.	Yussuf Atim				
7.	Abdi Husein				
8.	Hadiy Mahomud				
9.	Atim Aden gasi				
10.	Jimale Hassan				
11.	Hassan Abd-Nour				
12.	Oman Madu				
13.	Yunis Adan				
14.	Abdi Hassan				
15.	Mohid Abdi MORN				
16.	Yussuf Mohamed				

 **ASSISTANT CHIEF**  
 TARBAJ SUB-LOCATION  
 TARBAJ LOCATION  
 TARBAJ SUB-COUNTY  
 WAJIR COUNTY



## CONSULTATIVE MEETINGS FOR WAJIR - ELWAK ROAD PROJECT

Date: 2/2/19

VENUE: TARBAT

## List of people consulted

No	Name	Organization	Designation	Tel No	Signature
1.	Shawika Jimale	Livestock	Livestock	0704068271	
2.	Abasi balle		b/s	0728832330	
3.	Haret Adan		Livestock	0725027822	
4.	Taimba Jimale		Livestock	0722914764	
5.	Husein Gabow		Livestock	0727723073	
6.	Nour Muhammed		Livestock	0724089639	
7.	Adan Mohamed		Livestock	0705500247	
8.	Ali Yarow Nour		Livestock	0743084311	
9.	Muhammed Antar		Livestock	0710825208	
10.	Abdibakim Mohamed		Livestock	0727827043	
11.	Arriye Hassi		b/s	0724626645	
12.	Aminah Arrow		b/s	0720303162	
13.	Mahamed Hussein		Livestock	0704602782	
14.	Habibin Abdi		Livestock	0727701858	
15.	Qamar Mohamed		b/s	0707467177	
16.	Jere Hussein		b/s	0727205265	



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**CONSULTATIVE MEETINGS FOR WAJIR - ELWAK ROAD PROJECT**

Date: 2/2/19

VENUE: TARBAJ

List of people consulted

No	Name	Organization	Designation	Tel No	Signature
1.	Abdulahi Noor				
2.	Issa Khalley				
3.	Mahamud Mohamed				
4.	Shukh Osman				
5.	Asha Abdulahi				
6.	Jussuf Adan Abikar			0725 36 4311	
7.	Mohammed Hassan			0712 454995	
8.	Abdullahi Farah			0718 229276	
9.	Abdullahi Muhammed			0710 90 00047	
10.	Mohammed Mawlid				
11.	Antar Abdulle				
12.	Junis Adan				
13.	Ugas Ifein				
14.	Ibrahim Noor Sheikh				
15.	Issa Abdi				
16.	Abukar Ali Gedi				

*[Signature]*  
 ASSISTANT CHIEF  
 TARBAJ SUB-LOCATION  
 TARBAJ LOCATION  
 TARBAJ SUB-COUNTY  
 WAJIR COUNTY



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR – ELWAK (A13) ROAD  
**RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS**  
ATTENDANCE

Area: TARBAS

Date: 3-2-19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1	Indey Mohamed	TARBAS	BAP	6391625	0700103389		
2	Shamsa Adan	TARBAS	BAP	25226568	0779406164		
3	Ruhig Mude	TARBAS	BAP	25225282	0721419433		
4	Amin Adalke	TARBAS	BAP	22946196			
5	Shea Willow	TARBAS	BAP	85699118			
6	Sawada Ali	TARBAS	BAP	21435181			
7	Yamina Mohamed Karai	TARBAS	BAP	35596313	0729164722		
8	Adan Adan Elmi	TARBAS	BAP	0055783	0729930093		
9	Mawlid Adil Mude	TARBAS	BAP	0039091	0720088915		

**MINUTES OF CONSULTATION MEETING ON UPDATING OF THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT THE PROPOSED UPGRADING TO BITUMEN STANDARDS OF WAJIR – ELWAK ROAD SECTION 175KM (A13) HELD AT KOTULO MANDERA – MANDERA SOUTH SUBCOUNTY HEADQUARTERS ON 14/4/2019**

*SIGNED ATTENDANCE REGISTER ATTACHED*

**AGENDA OF THE MEETING**

1. Opening prayer
2. Introduction of the participants
3. Purpose of Holding the Consultation Meeting on the ESIA update
4. Brief description of the proposed road;
5. Feedback from attendees
6. Closing Prayer.

**MINUTE 01: OPENING PRAYER**

The meeting was called to order at 09.20 am and began with a word of prayer from one of the participants.

**MINUTE 02: INTRODUCTION OF THE PARTICIPANTS.**

The Assistant County Commissioner, Mr Wambua welcomed everyone in attendance to the meeting. He thanked the members of public for attending the meeting and introduced the ESIA and RAP team and the role they play and the main purpose of the meeting. The ACC called upon the environmentalist to give an overview of the project and purpose of the meeting.

**MINUTE 03: PURPOSE OF CONDUCTING THE PUBLIC AND STAKEHOLDERS MEETING**

Ms Beatrice Wanjiru informed the attendees that the main objective of the meeting is to get the community views about the project and what the community would want to be done during the implementation of the Project. He also gave a brief introduction of the project route from Wajir to Elwak. The attendees were informed on the ESIA process as it is a requirement by NEMA and the World Bank, he also informed the participants on the importance of public consultation and participation on the Project. The attendees were informed to participate fully in the discussion and ask any question concerning the Project.

**MINUTE 04: BRIEF DESCRIPTION OF THE PROPOSED NEW ROAD.**

Currently the road is gravel and the Government through KeNHA is planning to tarmac the road from Isiolo - Wajir - Mandera. The road design shall include road signs, speed calming mechanisms shall be applied in towns or centres where there are institutions such as schools, religious institutions towns and markets. It is a requirement by NEMA that before the construction of any project such as road an ESIA study should be done to ensure that all the environmental and social impacts have been identified and mitigations to these impacts are fully addressed

**Minute 05: Project Impacts.**

The attendees were informed on the possible project impacts, both positive and negative.

**Minute 06: Grievances**

The attendees were informed that a grievance redress mechanism shall be developed where all the issues regarding the Project shall be reported. The grievance redress mechanism shall outline a communication channel where any grievance shall be logged. The grievance committee members shall be formed with incorporation of community members as part of the team.

**MINUTE 07: FEEDBACK FROM THE COMMUNITY**



Mr Wambua: The ACC indicated the participants are representing Kotulo Manda and Borehole 11. There was also a representation of Dabasit, and Garse Sala, but another meeting was to be held the following day at Dabasit for Dabasit and Garse sala the following day on 15<sup>th</sup> April 2019. He informed the meeting of the security concerns in the area, and one of the reasons why he could not call for a larger public meeting in the area is due to security concerns and risks posed to people gathering together which the government is discouraging in the area. He indicated that the proposed road will bring development in the area. He requested the consultant team to ensure comments given by the participants along the road is important because they will be the largest beneficiaries by the road.

**Abdi Noor:** The Senior chief proposed that the community felt that they should be considered for construction of a market for the PAPs who lose their trading kiosks. The team informed the participants that no one will be forced to move out of their business without facilitation. They were advised KeNHA will be looking at various methods of enhancing business development in the area and one of them will be a market. This will be done on a separate study to determine the priorities of the communities along the road and one of the considerations would be a market.

**Mohammed Abdullahi:** Security in the area of major concern. He urged the government to ensure they will enhance security for the workers to avoid any attacks to the workers. He indicated the road will go a long way in improving the security of the area.

**Abdikadir Abdullah:** Consideration for women in the region: The women require a market so that they can establish more lucrative businesses such as hotels. If the road will be tarmacked, dust will reduce and transport services will be more efficient. This will provide opportunities for the women to travel to further towns such as Mandera to source stock for their businesses at a cheaper price in order to make more profits that will improve their livelihoods.

The comments from the participants circled around the issues of security concerns in the area. They indicated the most important thing the road will bring into the area is security response in the region. The area has for many years been shunned by people from other regions because of security and they hope that the improvement will bring development in the area which will reduce insecurity in the area.

There being no other business, the meeting adjourned at 11:15 A: M.





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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR - ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: KEOTULO (MANDERA)

Date: 14/04/2019

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1.	AHMED M. Nour	D.O.P	CHIEF	11192211	0721515521		<i>[Signature]</i>
2.	ABDIKADIR IBRAHIM	" "	MEMBER	0013328	0725435609		<i>[Signature]</i>
3.	Abdisalam IBRAHIM	OOP	CHIEF	57646	09-22268979		<i>[Signature]</i>
4.	IBRAHIM TEND	OOP	MEMBER	1151008	0733925274		<i>[Signature]</i>
5.	JOSPH NDIRITU	OOP	OCPD	3415853	0722244691	ndiritu25@gmail.com	<i>[Signature]</i>
6.	KEROW ADAN HUKA	O.O.P	MEMBER	8760046	0720361782	Kerow@keotulo.org	<i>[Signature]</i>
7.	ISSAK Osman Ibrahim	Chief	Chief	29979716	0729290083	N/A	<i>[Signature]</i>
8.	HUSSEIN I. OSMAN	Chief	MEMBER	10088663	0729641437		<i>[Signature]</i>
9.	ALINUR NURUN ISSAK	O.O.P	MEMBER	16026663 21550578	072931632	abocamabaon@gmail.com	<i>[Signature]</i>
10.							
11.	Abdikadi Abdullah	elder	Kotulo	8496338	0724731518		<i>[Signature]</i>
12.	Mohammed ABUWAH	twite	Kotulo	23511887	0724660081		<i>[Signature]</i>
13.	Mohamed Pache	elder	Kotulo	0208053	0722179589		<i>[Signature]</i>



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR - ELWAK (A13) ROAD  
**RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS**  
**ATTENDANCE**

Area: Borehole 11

Date: 14/2/19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1.	<del>Abdullah Ibrahim</del> Abdullah Ibrahim	RCSI Bore 11	Bore 11	6823579	0726565852		[Signature]
2	Abd Hassan Abdulla	RCSI	Bore 11	25681284	0722460245		[Signature]
3	Abdi Satar Hassan	RCSI	Bore 11	27977263	0715027282		[Signature]
4	Hassanur Issack	RCS	Bore 11	671116408	0713067614		[Signature]
5	Hassan Ibrahim	RCSI	Bore 11	25967468	0725411820		[Signature]
6	Fajima Hussein	RCSI	Bore 11	26901791	0720810671		[Signature]
7	Abdullah Ibrahim	RCSI	Bore 11	26272955	0721743309		[Signature]
8	Abdi Issack Hassan	RCSI	Bore 11	25963516	0710749738		[Signature]
9	Abdi Ibrahim	RCSI	Bore 11	4766363	071864321		[Signature]
10	Abdi Hassan	RCSI	Bore 11	0206404	0710301287		[Signature]
11	Abdi Hassan	RCSI	Bore 11	12426872	0721978819		[Signature]
12	Abdi Hassan	RCSI	Bore 11	1193067	0725883147		[Signature]
13	Hassan Issac Hassan	Bore hole 11	Imam	-	0708826106		[Signature]
14	Kala Hassan Diga	Bore hole 11	elder	2113646	-		[Signature]
15	Masit Abdurahman	Bore hole 11	youth	32219855	0799630925	Hassan1@tdie.com	[Signature]
16	Mariam Mohamed	Bore hole 11	bl/woman	1193418	0722156877		[Signature]
17	Muhammad Ibrahim	Bore hole 11		020	-		[Signature]

**MINUTES OF CONSULTATION MEETING ON UPDATING OF THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT OF THE PROPOSED UPGRADING TO BITUMEN STANDARDS OF WAJIR – ELWAK ROAD SECTION 175KM (A13) HELD AT WAJIR TOWN ON 3/2/2019 for WAGBERI / HALANE**

**ATTENDANCE LIST: SEE ATTACHED**

**AGENDA OF THE MEETING**

Opening prayer

1. Introduction of the participants
2. Purpose of Holding the Consultation Meeting on the ESIA update
3. Brief description of the proposed road;
4. Project impacts
5. Grievances redress mechanism
6. Feedback from attendees
7. Community needs.

**MINUTE 01: OPENING PRAYER**

The meeting was called to order at 9.00 am and began with a word of prayer from one of the participants.

**MINUTE 02: INTRODUCTION OF THE PARTICIPANTS.**

The area chief Mr Hassan Abdi welcomed everyone in attendance to the meeting. He thanked the members of public for attending the meeting and introduced the ESIA team and the role they play and the main purpose of the meeting. The chief called upon the environmentalist to give an overview of the project and purpose of the meeting.

**MINUTE 03: PURPOSE OF CONDUCTING THE PUBLIC AND STAKEHOLDERS MEETING**

Mr. Maina Githinji informed the attendees that the main objective of the meeting is to get the community views about the project and what the community would want to be done during the implementation of the Project. He also gave a brief introduction of the project route from Wajir to Elwak. The attendees were informed on the ESIA process as it is a requirement by NEMA and the World Bank, he also informed the participants on the importance of public consultation and participation on the Project. The attendees were informed to participate fully in the discussion and ask any question concerning the Project.

**MINUTE 04: BRIEF DESCRIPTION OF THE PROPOSED NEW ROAD.**

Currently the road is gravel and the Government through KeNHA is planning to tarmac the road from Isiolo to Wajir to Mandera. The road design shall include road signs, speed calming mechanisms shall be applied in towns or centres where there are institutions such as schools, religious institutions towns and markets. It is a requirement by NEMA that before the construction of any project such as road an ESIA study should be done to ensure that all the environmental and social impacts have been identified and mitigations to these impacts are fully addressed.

**Minute 05: Project Impacts.**

The attendees were informed on the possible project impacts, both positive and negative.

**Positive impacts.**

The new tarmac road shall be of great impact to the growth and development of the area, travel time shall be reduced, quick response to security, availability of labour during construction. Dust will also be minimized. Security response and service delivery will also be improved by the new road. The road will also attract new investors in the region because of ease of transportation of goods and people.

**Negative impacts**

- i. Dust.

They were informed that during construction there shall be dust emanating from the activities of the road construction. They were informed that mitigation measures shall be recommended in the ESIA report.

ii. Population influx

Due to available employment there shall be influx in population. People from other counties may come to the area seeking for employment. The attendees were informed that population influx may lead to conflict in the available resources such as water, increase of the spread of HIV/AIDS, erosion of the culture fabric and religious believes.

**Minute 06: Grievances**

The attendees were informed that a grievance redress mechanism shall be developed where all the issues regarding the Project shall be reported. The grievance redress mechanism shall outline a communication channel where any grievance shall be logged. The grievance committee members shall be formed with incorporation of community members as part of the team.

**MINUTE 07: FEEDBACK FROM THE COMMUNITY**

1. Ali Noor Hussein. The road design should be reviewed to reduce the impact of relocating the community since the existing corridor is enough and the new design of the road have affected permanent building in Wagbere.  
He was concerned about the vegetation along the road corridor, and the impact on the environment if the vegetation and trees along the corridor shall be cleared during construction. He recommended that a tree planting initiative should be undertaken to recover the lost vegetation.  
Compensation value; He was concerned about the compensation value of properties since Wajir town land is very expensive  
Response; He was informed that all properties affected shall be compensated and considerations for market value shall be done. He was also informed that proper mitigations shall be recommended on all the impacts identified.
2. Ismael Mohammed. He was concerned on dust emission during construction and recommended that proper mitigation should be undertaken since the area is urban. The dust could be a cause of many respiratory illnesses if not properly mitigated. The contractor should get his own water sources to avoid conflict with the communities in the area. The consultant informed the attendants that dust will be mitigated by sprinkling the road regularly. In addition, the contractor will be responsible for his construction water and should not interfere with the water resources in the area which are already depleted.
3. Eng Ali Abdi; He was concerned about noise pollution during construction and recommended that the construction should be undertaken during the day. He also recommended that during construction the contractor should provide alternative route for vehicle for the purposes of continuous traffic movement.  
The contractor should ensure that all the material sites have been rehabilitated after getting the raw materials. This will reduce open borrow pits that would encourage settlement due to collection of water in the borrow pits which would leave the community with conflicts.  
Excavation of borrow pits should be controlled.  
The consultant informed the meeting that mitigation measures proposed will be incorporated in the ESIA including other mitigation measures to ensure the impacts will be minimal. In addition, selection of material sites will be done in consultation with the local communities to avoid social conflict on the use of the sites in future such as water pans.
4. Habiba; She was concerned about the change of the existing road corridor on the design which have affected residential homes, she recommended that the existing road corridor to be considered for the expansion of the road.  
Relocation. She was concerned about relocation since the cost of land in town have gone up and available land is in the villages where the women have no access to water and social amenities.

The meeting was informed that relocation will be avoided as much as possible, where it affects the most vulnerable groups

5. Ahmed Hussein: The contractor should provide a diversion during construction to allow free movement of vehicles. The contractor and the workers should respect the culture and religious beliefs of the community in Wajir. The workers should be cautioned against luring women and young girls. The communities members were informed that the project will have a policy on child protection and against any form of sexual abuse for underage girls or women in the region. Any worker found to be engaging on those activities will be reported and fired.
6. Zainab: the road should be realigned within town to reduce the Impact of moving people. The design of the road will reduce negative impacts as much as possible.

**Minute 08: Community needs**

The attendees listed the following as the most important needs

- Modern health facility.
- Chief camp in Wagbere
- Mixed secondary school.

Having no any other business the meeting ended at 11.00 hrs.







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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR - ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: WAJIR

Date: 27-12-2018

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
	Loyford E. Kibara	Intervenor	CC	9214951	0727929751	ccwajir@outlook.com	<i>[Signature]</i>
	Dr. Joseph Mushi	T.L. RAP	Sociologist	11113706	0726493884	josephmushi@gmail.com	<i>[Signature]</i>
	Christopher Mwendu	Courtesy Call	Valuez	4839226	0722325778	c.mwendu@valuez.co.ke	<i>[Signature]</i>
	Mohamed A. Adan	RAP member		9572261	0721239197	mohamedadani72@gmail.com	<i>[Signature]</i>



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR – ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: Wajir

Date: 2-2-19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1	ABDULLAH ABDILADIE	Wajir County	Land Surveyor	29191449	0713272232	abdullahiswale@gmail.com	
2	NAEMA SOMIWO	COUNTY GOVT	CEM LAND	25785283	0725109677	naema.somiwo@gmail.com	
3	ABDI ISRAHIM ABDI	COUNTY GOVT	Director Land	0721250190			
4	DR JOSEPH MUKI	Committee	TC	1113796	0726493984	joseph.muki@yuku.com	
5	CHRISTOPHER MUKULU	Consultant	valuator	4839226	0722325778	c.mukuluh@yuku.com	



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR - ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: WAGBERI

Date: 29/12/18

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1.	FARAH H. NOOR	WATERBURY	As/chief	20051485	0723575127	Hannon@gmail.com	[Signature]
	M Joseph Mwach		TLL	1113796	0726493194	Josephmwaich@gmail.com	[Signature]
	Mohamed A Aden		RAP member	9572261	0721239197	mohabdullaali72@yahoo.com	[Signature]
	CHRISTOPHER MBWATA		RAP	4839226	0722325778	c.mbwata@yahoo.com	[Signature]
	MUSTAFA Boreman		RAP	22506211	0726654019	MustafaBoreman@gmail.com	[Signature]
	Mudir Zak Abdulkadir		RAP	32492859	0728642511	mdzak@gmail.com	[Signature]
	FARHANA -TUDU		RAP	29762737	0723493559	Farhanetudu@gmail.com	[Signature]
	ATTORNEY M. SINDIGA		RAP	27452601	0724266877	Sindiga17@yahoo.com	[Signature]
	David Alfred Aden		RAP	27502288	0701265300	davidadengis@gmail.com	[Signature]



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR - ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
 ATTENDANCE

Area: WAKOBBU / HIRANE

Date: 08/02/2019

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1	Hassan Abdi Sheikh	Chief-Hirane	Chief	22253509	0720426041	ChiefHirane119@gmail.com	[Signature]
2	Noor H. Farah	Asst chief	Chief	20051485	0723515127	Chief Noor farah@gmail.com	[Signature]
3	Ali Nuw Hassan	Resident		0010694	0722694993	alimur@igmail.com	[Signature]
4	Habiba Issaak Yusuf	Resident		12331167	0724225206	Habibayussuf2017@gmail.com	[Signature]
5	Ahmed Musa	Resident		1173205	0725866943	ammas@ram.com	[Signature]
6	Isma'il Hilbani	Resident		8491163	0722655277		[Signature]
7	Issa Hassan Ibrahim	Resident		21532396	0720890491	issa16722018@yahoo.com	[Signature]
8	Amos Hussein	Resident		8488790	0727623413		[Signature]
9	Salim Gule	Resident		0036592	0723472333	abaisysalim@gmail.com	[Signature]
10	Osman Dahir	Resident		4884127	0729970071		[Signature]
11	Mohammed Khalid	Resident		0825550	0720277324		[Signature]
12	Abdullah Salim	Resident		2486550	0723438350		[Signature]
13	Ali Gule	Resident		2806245	0220872909	ali.gule@gmail.com	[Signature]
14	Sharmila Devi	Resident		29303212	0721263641	Sharmila@jhu.edu	[Signature]
15	Khalid Ibrahim	Resident		04825028	0727357688	Khalid@jhu.edu	[Signature]
16	Semias Abdulla	Resident		1173556	0727608400	Semias.abdulla@yahoo.com	[Signature]
	Nadir Abdulla	Resident		27276585	0722-278064		[Signature]



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR – ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: Wajir Road / HALANE

Date: 03-02-2019

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
	Ahmed Khe Dalga	Resident		20460880	070295700	gaidahm@yahoo.com	
	Gulab Hussein	Resident		12965862	0722249253	gubylhussain@gmail.com	
	Ahmed Osman	Resident		80362246	0717312734		
	ABDUL HASSAN ISAK			20580143	0722399249	HAQVOCAL@GMAIL.COM	
	Abdullah Mohamed Saleh	Resident		23570847	0723919828	-	
	Mohamed Abdallah	Resident		13404973	0722889091	-	
	Samir Akhi	Resident		4673546	0727608450	seriusnkh@yahoo.com	

**MINUTES OF CONSULTATION MEETING ON UPDATING OF THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT OF THE PROPOSED UPGRADING TO BITUMEN STANDARDS OF WAJIR – ELWAK ROAD SECTION 175KM (A13) HELD AT HUNGAI CENTRE ON 2/2/2019**

*SIGNED ATTENDANCE REGISTER ATTACHED*

**AGENDA OF THE MEETING**

1. Opening prayer
2. Introduction of the participants
3. Purpose of Holding the Consultation Meeting on the ESIA update
4. Brief description of the proposed road;
5. Feedback from attendees
6. Closing Prayer.

**MINUTE 01: OPENING PRAYER**

The meeting was called to order at 11.15 am by area chief, Mr Gedi and began with a word of prayer from one of the participants.

**MINUTE 02: INTRODUCTION OF THE PARTICIPANTS.**

The area chief Mr Musa Gedi welcomed everyone in attendance to the meeting. He thanked the members of public for attending the meeting and introduced the ESIA team and the role they play and the main purpose of the meeting. The chief called upon the environmentalist to give an overview of the project and purpose of the meeting.

**MINUTE 03: PURPOSE OF CONDUCTING THE PUBLIC AND STAKEHOLDERS MEETING**

Mr. Maina Githinji informed the attendees that the main objective of the meeting is to get the community views about the project and what the community would want to be done during the implementation of the Project. He also gave a brief introduction of the project route from Wajir to Elwak. The attendees were informed on the ESIA process as it is a requirement by NEMA and the World Bank, he also informed the participants on the importance of public consultation and participation on the Project. The attendees were informed to participate fully in the discussion and ask any question concerning the Project.

**MINUTE 04: BRIEF DESCRIPTION OF THE PROPOSED NEW ROAD.**

Currently the road is gravel and the Government through KeNHA is planning to tarmac the road from Isiolo - Wajir - Mandera. The road design shall include road signs, speed calming mechanisms shall be applied in towns or centres where there are institutions such as schools, religious institutions towns and markets. It is a requirement by NEMA that before the construction of any project such as road an ESIA study should be done to ensure that all the environmental and social impacts have been identified and mitigations to these impacts are fully addressed

**Minute 05: Project impacts**

The attendees were informed on some of the anticipated project impacts

**Negative impacts**

**Influx in population:** It was explained that due to the availability of labor people from other areas shall settle in the project area while they seek employment. This would trigger the population of people in the settlement and hence available resources shall be shared by a higher number of people.

People seeking employment and locals seeking employment on the same project may bring about conflict.

**HIV/AIDS:** Due to influx of population there could be a risk of increase on the spread of HIV/aids Culture fabric due to influx in population people from other areas may not understand the culture or recognize the beliefs of the local community.

**Child labor:** Children shall not be allowed to work on the Project as it is illegal and children are protected in child labor act.

**Labor:** Skilled and unskilled labor shall be available. Local people shall be considered for employment

**Grievances:** A grievance redress mechanism shall be developed where all the issues regarding the Project shall be reported.

## **MINUTE 06. FEEDBACK FROM THE COMMUNITY**

### **Adan Suleiman**

The project have both negative and positive impacts. On the positive the travel time shall significantly reduce, The town centres along the road shall develop, new investor shall come to the areas, reduced vehicle damage, increase security response,. The negative impacts; increased accidents, increase livestock and wildlife road kills

In Hungai the community produces gum Arabica in small scale, cutting trees along the road shall impact negatively on production.

The community living in Hungai are very poor and demolition of existing structures shall contribute to more poverty. The structures in Hungai centre were built by the help of OXFAM. During construction the structures should be compensated.

### **Wario Omar**

Hungai town have no access to water and the water available is mainly from boreholes and water pans in the area. Consider providing water point or bore hole in Hungai as a CSR.

### **Kusow Dakane Samata**

He wanted to know what is the process of compensation and if compensation shall be done before or after construction of the road. He was informed that Compensation shall be done prior to project implementation.

**Idle Hishaw :** All the structures within the town are located within the road corridor as per the design of the road. Shall compensation consider business people whose livelihood depend on these businesses. Comment; if the contractor shall have a borehole in the area after construction consideration to hand over the borehole to the community

**Haredha Abdile:** Many of the women residing on the town centre depend on business as the only source of livelihood if the structures will be demolished their livelihood shall be negatively affected. The meeting was informed that all the affected people shall be involved in the compensation process. Valuation of the affected properties shall be done. A livelihood restoration programme shall be developed. An agreed cut-off date shall be given during the RAP. Notices to move shall be given 6 months prior project implementation or before the PAPs are moved.

**Hassan:** Any behavior that is not acceptable to the community shall not be allowed in the community from workers coming from outside the area. The workers should respect the Muslim religion which is dominant in the area

Having no any other business the meeting ended at 12.30 hrs.



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR - ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: HUNGA

Date: 2-2-19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1	MUSSA GEDD ABDIE		Architect	0039629	0727482380	N/A	
2	MUSSUF ABDI		motor driver	35639524	07270930	N/A	
3	HASSAN IBRAHIM		Teacher	29413321	0720094401	Hassan1621363mudun	
4	YAKUB ABDI		BUSINESS	21628070	0723068423	N/A	
5	OMAR BILLOW		Booda boda	2442465	0729057104	N/A	
6	ADAM ROROW		Booda boda	27068798	0714879569	N/A	
7	SINAD JELE		CHW	20880425	0729657695	N/A	
8	MUSSA ABDI		HERDSMAN	10116446	0790765755	N/A	
7	MOHAMED <del>ABDI</del>		BUSINESS	24362589	0719146667	N/A	
10	HUSSEIN HUJALE		CHW	29261953	0724467289	DORALMILCA@gn	
11	ABDUL BILLOW		herdsman		0715135399	N/A	
12	HARUN BILLOW		BUSINESS	3453732	0701516722	N/A	
13	ISSACK ABUKAR		BUSINESS	25249301	0725267825	N/A	
14	ISSACK AEL		BUSINESS	0040208		N/A	
15	KUSOW DAKANE		BUSINESS	10112021		N/A	
16	MOHAMED SULEMAN		BUSINESS	0039948	0726947421	N/A	
17	AFARETHA ABDIC		BUSINESS				





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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR – ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: HUNGAI

Date: 2/2/19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
	Osmán Hassan Abdillo	Hungai		13256855	0727138641		
	Mohamed Adan Suluman	"		20879112	0707904396		
	Abdi Ali Salat	"		0656050	0723276763		
	Adan Maulim Dahir			0178843	0792808142		
	Hussen Hujala Amin			29261953	0724962287		
	Hussen Mudi Ali			29250377	0700103843		
	Abdi Ibrahim Omar			25192222	0795696207		
	Issa Ibrahim Abdi			25664470	0706915627		
	Bishar Salat Ali			0056735			
	Abdi Gulet Ali			4824046	0729222630		
	Osmail Mohamed Farah			0056507			
	Abdi Ali Mohamed			27135636	0727136336		
	Ibrahim Omar Ali			0039115	0713847435		
	Adan Suluman Wada						

**MINUTES OF CONSULTATION MEETING ON UPDATING OF THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT THE PROPOSED UPGRADING TO BITUMEN STANDARDS OF WAJIR – ELWAK ROAD SECTION 175KM (A13) HELD AT ELWAK POLICE STATION MANDERA SOUTH ON FRIDAY 12TH APRIL, 2019 and 15<sup>th</sup> April 2019**

*SIGNED ATTENDANCE REGISTER ATTACHED*

**AGENDA OF THE MEETING**

1. Opening prayer
2. Introduction of the participants
3. Purpose of Holding the Consultation Meeting on the ESIA update
4. Brief description of the proposed road;
5. Feedback from attendees
6. Closing Prayer.

**MINUTE 01: OPENING PRAYER**

The meeting was called to order at 2.10 pm and began with a word of prayer from one of the participants.

**MINUTE 02: INTRODUCTION OF THE PARTICIPANTS.**

The Assistant County Commissioner, Mandera South, Mr Robin Ngeyo welcomed everyone in attendance to the meeting. He thanked the members of public for attending the meeting and introduced the ESIA and RAP team and the role they play and the main purpose of the meeting. The ACC called upon the environmentalist to give an overview of the project and purpose of the meeting.

**MINUTE 03: PURPOSE OF CONDUCTING THE PUBLIC AND STAKEHOLDERS MEETING**

Ms Beatrice Wanjiru informed the attendees that the main objective of the meeting is to get the community views about the project and what the community would want to be done during the implementation of the Project. He also gave a brief introduction of the project route from Wajir to Elwak. The attendees were informed on the ESIA process as it is a requirement by NEMA and the World Bank, he also informed the participants on the importance of public consultation and participation on the Project. The attendees were informed to participate fully in the discussion and ask any question concerning the Project.

**MINUTE 04: BRIEF DESCRIPTION OF THE PROPOSED NEW ROAD.**

Currently the road is gravel and the Government through KeNHA is planning to tarmac the road from Isiolo - Wajir - Mandera. The road design shall include road signs, speed calming mechanisms shall be applied in towns or centres where there are institutions such as schools, religious institutions towns and markets. It is a requirement by NEMA that before the construction of any project such as road an ESIA study should be done to ensure that all the environmental and social impacts have been identified and mitigations to these impacts are fully addressed

**Minute 05: Project Impacts.**

The attendees were informed on the possible project impacts, both positive and negative.

**Minute 06: Grievances**

The attendees were informed that a grievance redress mechanism shall be developed where all the issues regarding the Project shall be reported. The grievance redress mechanism shall outline a communication channel where any grievance shall be logged. The grievance committee members shall be formed with incorporation of community members as part of the team.

**MINUTE 07: FEEDBACK FROM THE COMMUNITY**

MR Ngeyo: The ACC informed the meeting on the importance of this road in the region. He indicated the region has been for a long time been neglected which has led to poverty level in the area

increasing. He informed the meeting that Elwak is only a few kilometers from the Somali border and security in the area is of major concern. He mentioned that response to emergency cases, including taking people to hospitals has been hampered by the poor road conditions in the area. He also indicated the road is very dusty and people living along the roads and businesses near the roads are heavily affected by the poor road condition. He also indicated the road is impassable during the rainy seasons because the areas near the seasonal streams are flooded. He recommended the team of doing stakeholder engagement and noted that this is very important so that people in the area knows the potential impacts, and benefits the project bring to the area.

He urged the team to ensure that a) people will be compensated for their lost properties or businesses, and b) that the proposed mitigation measures explained by the environment team will be implemented as described, with no shortcuts by the contractor.

He also indicated that the security personnel in the area will be more than ready to provide protection to the workers who will be doing the construction works in the area.

**Abdi Noor:** The Senior chief proposed that the community felt that they should be considered for construction of a market for the PAPs who lose their trading kiosks. The team informed the participants that no one will be forced to move out of their business without facilitation. They were advised KeNHA will be looking at various methods of enhancing business development in the area and one of them will be a market. This will be done on a separate study to determine the priorities of the communities along the road and one of the considerations would be a market.

**Harun Abdullahi:** He appreciated the team on informing the community members the impacts expected from the project. He requested the contractor to avoid clearing unnecessary vegetation during construction, noting the dry conditions in the area, and therefore the need to preserve as much vegetation as possible. He also requested if the project could consider establishment of tree nursery along the road for afforestation in the region. KFS would be ready to assist in advising the project on the type of trees that can be planted in the area.

**Ibrahim Hussein:** He noted that there are some graves within some properties which some people had indicated they have been told that they might be affected by the road. He requested the team involved to ensure they talk to the owners and understand the process of compensation and relocation of the graves if it will they will have to be moved. The RAP and ESIA team indicated that they will be enumerated and be included in the RAP report and budget.

**Fatuma Hallow (representing local Self- help Women Group in ELWAK and DIMU region):** She noted that women are usually forgotten in road projects and they rarely benefit. She requested women to be given a chance during the construction works. She also told the meeting that HIV/AIDS awareness should be carried out during the works because they expect a lot of labour influx in the area, and also other migrants after the road is complete, whereby they expect social changes in future. The workers should also be sensitized on local culture and how they should behave when dealing with the local people.

Other comments from participants:

- Contractor to consider employing the local youths during construction
- The area is very dusty and construction works will exacerbate air pollution. The contractor to ensure dust is managed through watering
- The members also requested is the contractor can do water pans for the community members. They were informed that this will depend on the budget but this will be considered as part of a wider project and how the project can assist the communities along the road on the scarcity of water experienced in the region.

There being no other business, the meeting adjourned at 3.25 pm.



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR - ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS

ATTENDANCE

Area: Elwak

Date: 12/4/19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1	KHALIF MOHAMMED ASKAR	APS / DAPC	C.I.P	8761829	0722713676		[Signature]
2	ROBIN NGETWA	ACE ODP	ACC	13650322	0714230068	robinng24@gnaf.com	[Signature]
3	Issa Ibrahim Abd	KenHA	RAP TEAM	25664470	0706915607	issa.ibrahim@gnaf.com	[Signature]
4	Abdirizq Ibrahim	ICEN HM	RAP TEAM	2958252	0725043532	abdirizq.ibrahim@gnaf.com	[Signature]
5	DR JOSEPH MWATI		T/L	1113798	0726493984	josephmwati@yahoo.com	[Signature]
6	Christopher Abudoh	Kwaka	Values	15839226	0722825778	c.abudoh@fahoc.com	[Signature]
7	Osman M Yusuf	Elwak Sauti	SNA Chief	4404406	082476466		[Signature]
8	Mohamed Nur Ali	Elwak Sauti	S/Chief	1008383	0722403823		[Signature]
9	Hussain Mohamed Abd	Ek-AD1	A/Chief	12427446	0725372717	hussain2007@gmail.com	[Signature]
10	Hussain Ibrahim	GoLCHA	A/Chief	0196732	0725017374		[Signature]
11	JOSEPH NDIRITU	OCPO KBTULO	KSP	3415853	0722244691	shelwite25@gmail.com	[Signature]
12	Hussain T. Mohamed	DSIC MDM	D	21641902	0724407252	hussain2007@gmail.com	[Signature]
13	Hussain Abd	Alchi	Chief	1331305	0728558955		[Signature]
14	Ahmed Basher	Wanta	Alchi	1320620	0720340120		[Signature]
15	Mohamed Abd Elwak B/Aye		Alchi	25775628	0722963908	abudwak1987@gmail.com	[Signature]
16	Abdirizq Ibrahim	TOWN ASSEMBLY	Town Assembly	24537635	0723418157	abdirizq.ibrahim@gnaf.com	[Signature]
	MARTIN ABUJAWA		KFA	8857702	07225357210		[Signature]



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR – ELWAK (A13) ROAD  
**RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS**  
ATTENDANCE

Area: ELWAK

Date: 12/11/19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1	Abdi Kala dido	Elwak		0207778	0722633331	---	[Signature]
2	Muhtar Ag. Isman	Elwak		20270398	0720827876	---	[Signature]
3	Hassan Adan	Elwak		2644814	0726060920	---	[Signature]
4	Abdullah Yussuf	Elwak		14650559	0722963948	---	[Signature]
5	Abdimaad Ali	Elwak		29306990	0722615055	---	[Signature]
6	Ali Abdin	Elwak		0723062392	0723062392	---	[Signature]
7	Ali Abdindos	Elwak	Chairman	22839726	0703063290	---	[Signature]
8	Abdiaziz Issack Beron	Elwak		29282394	072236642	---	[Signature]
9	Mohamed Othman	Elwak		11551159	0722343097	---	[Signature]
10	Omar Sid	Elwak		0192169	072104343	---	[Signature]



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR – ELWAK (A13) ROAD  
**RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS**  
ATTENDANCE

Area: ELWAK / DIMU

Date: 15/04/19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1	FATUMA HILLO	ELWAK	PAP	21686550	0711304630		
2	ALI ABDIMOHAMAD	ELWAK	PAP	14468117	072775357		
3	HASSAN BASHIR	ELWAK		1192800	0725027709		
4	Abraham Mohamed	DIMU	PAP	0209350	0702665742		
5	BOYA NODY WAGA	DIMU	PAP	25865158	0727354660		
6	Placencia ISSACK	DIMU	PAP	NIL	NIL		
7	MURRAY ABUJAYI	DIMU	PAP	29766733	0720507355		
8	ABDIKADIR BASHIR	DIMU	NS CHIEF	0012325	0725435609		
9	Abdi moady	DIMU	PAP	12428825	0724829426		
10	HASSAN MOHAMAD	DIMU	PAP	23428522	0701640221		
11	ASLI ANJOLU MOHAMAD	DIMU	PAP	25812774	078924141		
12	Abdullahi Mohamed Horak	DIMU	PAP	29702436	0720050720		
13							
14							
15							
16							
17							



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR - ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: DABACITY

Date: 15/4/19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
	Abdiwala Hassan Aden	Rolle Settlement		22425303	0716-421966		[Signature]
	Hafsumu Nur Adan	Dabacity		1192272	0729289954		[Signature]
	Abdulkadir Adan	Chief		0013326	0725436609		[Signature]
	Adan Mohamed	Dabacity		20273282	0745612219		[Signature]
	Fatuma Wacamed	Dabacity		23473526	0729734221		[Signature]
	Adan Somo	S		20381594	0755293811		[Signature]
	Fatuma Manul			23342791	0720113421		Fatuma
	Halima Shaka			2034222	0711752236		[Signature]
	Rishat Jidin Rony		2032225	20344222	0721442109		[Signature]
	Rama Baraka			9220185			[Signature]
	Husein Ado			23512086	0724677734		[Signature]
	Hatima Adow			12427489	0725493081		[Signature]
	Khatija Adika			23473425	0724817605		Halima
	Ali Mustafa			20194135	0711567055		[Signature]
	Abdila Abow			12427005	0795400941		[Signature]
	Nurto Modukhilo			23479256	0727944138		[Signature]
	Ames Ado			60461622	0712414368		[Signature]



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REVIEWING AND UPDATING OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR WAJIR - ELWAK (A13) ROAD

RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: GARSEL SALA

Date: 15/4/19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
1	Mali Adau Edin	Garsel sala	P/A	0197194	07091265561		
2	Issack Osman Ibrahim	Garsel sala		29979716	0729290085		
3	Kerot Hussein	Garsel sala	P/A	25876619	0721868662		
4	Sagala Adau Mohamed	Garsel sala	P	22615419	0710915517		
5	Fahim Mohamed Adau	Garsel sala	P	11650540	0724660078		
6	Muhammed Ibrahim Adau	Garsel sala	P	20916488	0704667674		
7	Ibrahim Mohamed	Garsel sala	P	2024206	0724716200	N/A	
8	Ibrahim Issack Ibrahim	Garsel sala	P	1206004	0723623097		
9	Abdullah Ibrahim	Garsel sala	P	25871353	0713319472	N/A	
10	Fahim Mohamed Adau	Garsel sala	P	23483181	0726765415	N/A	
11	Kerot Hussein	Garsel sala	P	23473525	0709079977	N/A	
12	Sultan Ibrahim	Garsel sala	P	0266887	0728628914	N/A	
13	Muhammed Osman	Garsel sala	P	25821929	0797988090	N/A	
14	Abdullah Ibrahim	Garsel sala	Resi	21671470	0722074567	N/A	
15	Muhammed Adau	Garsel sala	Resi	21671470	0705374997	N/A	
16	Muhammed Edin	Garsel sala	Resi	2566988	0702740490	N/A	
17	Ibrahim Nuri	Garsel sala	Resi		0713911896	N/A	





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RECONNAISSANCE & PUBLIC STAKEHOLDER CONSULTATIONS  
ATTENDANCE

Area: WARIGADUD

Date: 2-1-19

S/ No	Name	Organisation/ Department/ Settlement	Designation	ID No	Telephone	Email	Signature
	Abraham Isaac Hussein	Warigadud	Senior Chief	0058058	0711304940		<i>[Signature]</i>
	Bikini Murtar Abdi	Warigadud	elder	3422921	0718669163		<i>[Signature]</i>
	Kule Mohamed Ali	Warigadud	Elder	70118471	0705950603		<i>[Signature]</i>
	Hassan Yussuf	Warigadud	Elder		0726987838		<i>[Signature]</i>
	Hassan Mahat	Warigadud	Youth	15116344	0700410704		<i>[Signature]</i>
	Muhammed Salah	Warigadud	Tombi	4885620	0715605022		<i>[Signature]</i>
	Abdulla Mohamed Yusuf	Warigadud	Elder		0711685934		<i>[Signature]</i>

# Annex 5: Sample Filled Questionnaires



**Kenya National Highways Authority**

Quality Highways, Better Connections

Blue Shield Towers, Hospital Road, Upper Hill P.O. Box 49712 - 00100 Nairobi  
Tel 020 - 8013842 Email [dg@kenha.co.ke](mailto:dg@kenha.co.ke) / [info@kenha.co.ke](mailto:info@kenha.co.ke) Website [www.kenha.co.ke](http://www.kenha.co.ke)

## QUESTIONNAIRE FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

### PROJECT: Wajir - Elwak Road(A13)

In order to carry out a proper Environmental Impact Assessment for the above project, we would like your views on the project based on the questions below. Please note that your name and information will not be used for any other purposes but ONLY for this particular project, to ensure that all Environmental and Social Impacts are identified, captured, and used during the implementation of this project:

NAME: Issack Hussein Ismail Area & Sub county: JARRAJ  
 OCCUPATION: SICHER COMPANY/ORGANIZATION:  
 Tel No: 0723409250 Location/Area of residence: KUJULU

1. Are you aware of this ROAD project? Circle one YES NO
2. Do you believe this project will be of any economic benefit to the area? YES NO
3. Please tell us how this project will be of benefit to you, the community, and its impact to the local economy
  - a. boosts the local economy / low pricing of commodities
  - b. Easy to access markets
  - c. Security
  - d. \_\_\_\_\_
  - e. \_\_\_\_\_
  - f. \_\_\_\_\_
4. What are the current problems/issues with the existing road? Indicate NONE if you don't have any
  - a. Very rough and becomes impassable during rainy season.
  - b. Defacement of Perishable goods
  - c. Plots of IED by Terror groups.
  - d. A lot of time is wasted during traveling
5. Do you have any environmental or social concerns on the proposed project? Indicate NONE if you don't have any
  - a. Deforestation due to bush clearing for the road.
  - b. Displacement of people
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_
6. What POSITIVE ENVIRONMENTAL AND SOCIAL impacts do you think a new road will bring to the area?
  - a. Movement of people to and from within a short time.
  - b. Enhancement of transport.
  - c. No much pollution because of the dust from the rough road.
  - d. \_\_\_\_\_
7. What NEGATIVE ENVIRONMENTAL AND SOCIAL impacts do you anticipate and how should they be minimized/mitigated during construction of the construction of the road project?

CONCERN	Proposed MITIGATION
<u>Deforestation</u>	<u>Minimise wastage during bush clearing.</u>
<u>Displacement</u>	<u>Relocation of the displaced.</u>
<u>Highway robbery</u>	<u>Police Patrols</u>

8. How would you like the LOCAL COMMUNITY to be involved in the road project?
  - a. Creation of awareness of the project.
  - b. Constructing social amenities for the community (schools, hospitals) etc.
  - c. Giving them employments during the construction.
  - d. \_\_\_\_\_
9. Tell us any other comments/concerns you would like to give on the road project?
  - a. Where there are ~~both~~ permanent structures
  - b. Consideration of ~~the~~ public utilities and institutions during
  - c. the demolition.
  - d. compensation of the properties demolished

THANK YOU IN ADVANCE FOR YOUR TIME AND HELP IN PROVIDING THIS INFORMATION.



**QUESTIONNAIRE FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT**

**PROJECT: Wajir - Elwak Road(A13)**

In order to carry out a proper Environmental Impact Assessment for the above project, we would like your views on the project based on the questions below. Please note that your name and information will not be used for any other purposes but ONLY for this particular project, to ensure that all Environmental and Social Impacts are identified, captured, and used during the implementation of this project.

NAME: Judith Nyabayo Area & Sub county: Wajir East  
 OCCUPATION: Business lady COMPANY/ORGANIZATION: Soko njinga  
 Tel No: 0721269860 Location/Area of residence: South C

1. Are you aware of this ROAD project? Circle one  YES  NO
2. Do you believe this project will be of any economic benefit to the area?  YES  NO
3. Please tell us how this project will be of benefit to you, the community, and its impact to the local economy
  - a. Open way to transport any products fast
  - b. Lower the cost of transport
  - c. Access to other social amenities like schools
  - d. and hospitals will be much easier
  - e. \_\_\_\_\_
  - f. \_\_\_\_\_
4. What are the current problems/issues with the existing road? Indicate NONE if you don't have any
  - a. Dust on the road
  - b. Pumpy and almost impassible road
  - c. Insecurity (fear of attack)
  - d. \_\_\_\_\_
5. Do you have any environmental or social concerns on the proposed project? Indicate NONE if you don't have any
  - a. Pollution due to inappropriate dumping
  - b. of dust during construction works
  - c. Conflict due to displacement of people
  - d. \_\_\_\_\_
6. What POSITIVE ENVIRONMENTAL AND SOCIAL impacts do you think a new road will bring to the area?
  - a. Clean roads after tarmacking
  - b. Improved living standards
  - c. reduce crime in the area due to creation
  - d. of jobs

7. What NEGATIVE ENVIRONMENTAL AND SOCIAL impacts do you anticipate and how should they be minimized/mitigated during construction of the construction of the road project?

CONCERN	Proposed MITIGATION
<u>Pollution</u>	<u>NEMA MUST SUPERVISE</u>
<u>Erosion of culture</u>	<u>Sensitization of community</u>
<u>People displacement</u>	<u>proper compensation</u>

8. How would you like the LOCAL COMMUNITY to be involved in the road project?
  - a. Through provision of jobs & subcontracting
  - b. Through public participation process by
  - c. implementation of project
  - d. Capacity building
9. Tell us any other comments/concerns you would like to give on the road project?
  - a. In order for the project to succeed the
  - b. locals must be given food or trained in
  - c. how to cultivate their own crops for food
  - d. \_\_\_\_\_

THANK YOU IN ADVANCE FOR YOUR TIME AND HELP IN PROVIDING THIS INFORMATION.



**QUESTIONNAIRE FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT**

**PROJECT: Wajir - Elwak Road(A13)**

In order to carry out a proper Environmental Impact Assessment for the above project, we would like your views on the project based on the questions below. Please note that your name and information will not be used for any other purposes but ONLY for this particular project, to ensure that all Environmental and Social Impacts are identified, captured, and used during the implementation of this project.

NAME: YAKUB ABDI Area & Sub county: HUNGA  
 OCCUPATION: BUSINESSMAN COMPANY/ORGANIZATION: \_\_\_\_\_  
 Tel No: 0715135723 Location/Area of residence: HUNGA

1. Are you aware of this ROAD project? Circle one YES NO
2. Do you believe this project will be of any economic benefit to the area? YES NO
3. Please tell us how this project will be of benefit to you, the community, and its impact to the local economy
  - a. Transport will be easier
  - b. Road will be permanent and passable
  - c. business will improve
  - d. The face and the look out of the town will be beautified
  - e. livestock purchase will be easier
  - f. Easier communication and improved hygiene
4. What are the current problems/issues with the existing road? Indicate NONE if you don't have any
  - a. Road is impassable during rainy season
  - b. dust that creates health problems and congestion
  - c. low demand for product
  - d. Delay in transportation of goods
5. Do you have any environmental or social concerns on the proposed project? Indicate NONE if you don't have any
  - a. Demolition of religious learning institutions
  - b. dust that creates health challenges
  - c. Deforestation and cutting down of trees
  - d. business disruption
6. What POSITIVE ENVIRONMENTAL AND SOCIAL impacts do you think a new road will bring to the area?
  - a. business will improve
  - b. beautification of town outlook
  - c. easier transportation of goods
  - d. Modern transport will be available

7. What NEGATIVE ENVIRONMENTAL AND SOCIAL impacts do you anticipate and how should they be minimized/mitigated during construction of the construction of the road project?

CONCERN	Proposed MITIGATION
<u>dust that cause health</u>	<u>pouring water on the road</u>
<u>demolition of religious</u>	<u>leaving religious centre</u>
<u>business disruption</u>	<u>compensation of business</u>
<u>Social evil or illegal</u>	<u>maintaining health standards</u>

8. How would you like the LOCAL COMMUNITY to be involved in the road project?
  - a. Employing workers
  - b. consultation - giving information
  - c. Respect and maintain ethics
  - d. Compensation
9. Tell us any other comments/concerns you would like to give on the road project?
  - a. Planting other trees
  - b. Compensating people's property
  - c. Respect to religious centre
  - d. giving alternative option to people

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**QUESTIONNAIRE FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT**

**PROJECT: Wajir - Elwak Road (A13)**

In order to carry out a proper Environmental Impact Assessment for the above project, we would like your views on the project based on the questions below. Please note that your name and information will not be used for any other purposes but ONLY for this particular project, to ensure that all Environmental and Social Impacts are identified, captured, and used during the implementation of this project.

NAME: Mohamed Abdi Area & Sub county: Wajir East  
 OCCUPATION: Businessman COMPANY/ORGANIZATION: Businessman  
 Tel No: 0713183449 Location/Area of residence: Makator

1. Are you aware of this ROAD project? Circle one  YES  NO
2. Do you believe this project will be of any economic benefit to the area?  YES  NO
3. Please tell us how this project will be of benefit to you, the community, and its impact to the local economy
  - a. The project itself will job to the locals.
  - b. Once completed it will provide easy accessible
  - c. provide efficiency
  - d. provide or enhance security since it directly
  - e. links several counties.
  - f. easy transportation of perishable commodities
4. What are the current problems/issues with the existing road? Indicate NONE if you don't have any
  - a. Not passable during rainy seasons.
  - b. Dust and unhealthy
  - c. Enhance road accidents due to its
  - d. poor state.
5. Do you have any environmental or social concerns on the proposed project? Indicate NONE if you don't have any
  - a. The quarries used during this project
  - b. can result environmental hazards
  - c. The laborers and workers may be a burden
  - d. to the host community.
6. What POSITIVE ENVIRONMENTAL AND SOCIAL impacts do you think a new road will bring to the area?
  - a. Transportation of people and goods easily.
  - b. Security enhancements.
  - c. Economical
  - d. Builds the confidence of people in travelling by road.
7. What NEGATIVE ENVIRONMENTAL AND SOCIAL impacts do you anticipate and how should they be minimized/mitigated during construction of the construction of the road project?

CONCERN	Proposed MITIGATION
<u>Quarries</u>	<u>Landfilling it during after project.</u>
<u>Spread of disease like cholera</u>	<u>The laborers and workers should undergo testing before commencing the project.</u>

8. How would you like the LOCAL COMMUNITY to be involved in the road project?
  - a. Public participation.
  - b. Aware them in case changes happen.
  - c. Committee of concern should be
  - d. appointed from them.
9. Tell us any other comments/concerns you would like to give on the road project?
  - a. The contracts should make
  - b. the durability of the project
  - c. is assured.
  - d. is assured.

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**QUESTIONNAIRE FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT**

**PROJECT: Wajir - Elwak Road(A13)**

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NAME HASAN OSMAN Area & Sub county: TOWNSHIP  
 OCCUPATION: BUSINESS COMPANY/ORGANIZATION:  
 Tel No: 0705955538 Location/Area of residence BABAZA PARK

1. Are you aware of this ROAD project? Circle one YES  NO
2. Do you believe this project will be of any economic benefit to the area? YES  NO
3. Please tell us how this project will be of benefit to you, the community, and its impact to the local economy
  - a. BUSINESS EXPANSION
  - b. EASY TRANSPORTATION OF GOODS & PEOPLE
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_
  - e. \_\_\_\_\_
  - f. \_\_\_\_\_
4. What are the current problems/issues with the existing road? Indicate NONE if you don't have any
  - a. DIFFICULT IN NAVIGATION
  - b. INSECURITY ON THE ROAD
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_
5. Do you have any environmental or social concerns on the proposed project? Indicate NONE if you don't have any
  - a. ERODING OF CULTURE
  - b. DISPLACEMENT OF PEOPLE
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_
6. What POSITIVE ENVIRONMENTAL AND SOCIAL impacts do you think a new road will bring to the area?
  - a. IMPROVED LIVING STANDARD OF PEOPLE
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_

7. What NEGATIVE ENVIRONMENTAL AND SOCIAL impacts do you anticipate and how should they be minimized/mitigated during construction of the construction of the road project?

CONCERN	Proposed MITIGATION
<u>POLLUTION</u>	<u>MITIGATION PLAN</u>

8. How would you like the LOCAL COMMUNITY to be involved in the road project?
  - a. \_\_\_\_\_
  - b. PROVISION OF EMPLOYMENT
  - c. CONSULTATION OR IMPLEMENTATION
  - d. \_\_\_\_\_
9. Tell us any other comments/concerns you would like to give on the road project?
  - a. THE PROJECT IMPLEMENTATION WILL
  - b. ERODE OUR CULTURE IF DONE
  - c. UPHOLZADLY
  - d. \_\_\_\_\_

THANK YOU IN ADVANCE FOR YOUR TIME AND HELP IN PROVIDING THIS INFORMATION.