



**Ministry of Roads and Transport**

**State Department of Transport  
Horn of Africa Gateway Development Project**

**DRAFT SESA POLICY REPORT  
For  
Strategic Environmental and Social Assessment  
(SESA) on the Reviewed Integrated National  
Transport Policy (INTP)**

**RFP NO: KE-SDOT-279573-CS-CQS**

**31<sup>st</sup> July 2023**



## ABBREVIATIONS AND ACRONYMS

<b>AFCAC</b>	African Civil Aviation Commission
<b>AfDB</b>	African Development Bank
<b>AFI</b>	African and Indian Ocean Region Air Navigation Plan
<b>AFRAA</b>	African Airlines Association
<b>ASAL(s)</b>	Arid and Semi-Arid Land(s)
<b>ATMP</b>	Air Transport Master Plan
<b>AU</b>	African Union
<b>BASA(s)</b>	Bilateral Air Services Agreement(s)
<b>BOO</b>	Build Own and Operate
<b>BOOT</b>	Build Own Operate and Transfer
<b>BOT</b>	Build Operate Transfer
<b>BRT</b>	Bus Rapid Transit
<b>CBD</b>	Central Business District
<b>CFS</b>	Container Freight Station
<b>CIF</b>	Cost of Insurance, and Freight
<b>CNS/ATM</b>	Communication, Navigation Surveillance/Air Traffic Management
<b>COMESA</b>	Common Market for Eastern and Southern Africa
<b>CP</b>	Catholic Protection
<b>CRS</b>	Computer Reservation System
<b>CSR</b>	Corporate Social Responsibility
<b>DCA</b>	Directorate of Civil Aviation
<b>DOT</b>	Department of Transportation (United States)
<b>DRC</b>	Democratic Republic of Congo
<b>DWT</b>	Dead Weight Tonnage
<b>E&amp;S</b>	Environmental and Social
<b>EAC</b>	East African Community
<b>EACSO</b>	East African Common Services Organization
<b>EARC</b>	East African Railways Corporation
<b>ECA</b>	Economic Commission for Africa
<b>EHS</b>	Environmental, Health, and Safety

<b>EIK</b>	Environmental Institute of Kenya
<b>EMCA</b>	Environmental Management and Coordination Act
<b>EPZ</b>	Export Processing Zone
<b>ERC</b>	Energy Regulatory Commission
<b>ESAP</b>	Environmental and Social Assessment Procedures
<b>FAA</b>	Federal Aviation Administration
<b>FGDs</b>	Focus Group Discussions
<b>FO</b>	Fuel Oil
<b>FOB</b>	Free on Board
<b>FTZ</b>	Free Trade Zone
<b>GATT</b>	General Agreement in Trade and Tariffs
<b>GBHL</b>	Grain Bulk Handlers Ltd
<b>GBV</b>	Gender-Based Violence
<b>GDP</b>	Gross Domestic Product
<b>GESI</b>	Gender and Social Inclusion
<b>GHGs</b>	Greenhouse Gas emissions
<b>Government</b>	Government of Kenya
<b>HDI</b>	Human Development Index
<b>HGV(s)</b>	Heavy Goods Vehicle(s)
<b>HIV/AIDS</b>	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
<b>IAPH</b>	International Association of Ports & Harbours
<b>IASA</b>	International Aviation Safety Assessment
<b>IATA</b>	International Air Transport Association
<b>ICAO</b>	International Civil Aviation Organization
<b>ICC</b>	International Chamber of Commerce
<b>ICD(s)</b>	Inland Container Depot(s)
<b>ICT(s)</b>	Information and Communication Technologies
<b>IDO</b>	Industrial Diesel Oil
<b>IGAD</b>	Inter-Governmental Authority for Development
<b>ILO</b>	International Labour Organization
<b>IMO</b>	International Maritime Organization
<b>IMT</b>	Intermediate Means of Transport

<b>INCOTERMS</b>	International Commercial Terms
<b>INTP</b>	Integrated National Transport Policy
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>ISC</b>	Information Sharing Centre
<b>ISPS</b>	Integrated Sustainable Urban Development Plan
<b>ISUDP</b>	International Ship and Port Security Code
<b>ITMP</b>	Integrated Transport Master Plan
<b>IWTMP</b>	Inland Water Transport Master Plan
<b>JIT</b>	Just In Time
<b>JKIA</b>	Jomo Kenyatta International Airport
<b>CAA</b>	Kenya Airports Authority
<b>CAA</b>	Kenya Airports Authority
<b>CAAO</b>	Kenya Association of Air Operators
<b>KAPU</b>	Kenya Airports Police Unit
<b>KATO</b>	Kenya Association of Tour Operators
<b>KCAA</b>	Kenya Civil Aviation Authority
<b>KCAA</b>	Kenya Civil Aviation Authority
<b>KeNHA</b>	Kenya National Highways Authority
<b>KeNHA</b>	Kenya National Highways Authority
<b>KeRRA</b>	Kenya Rural Roads Authority
<b>KeRRA</b>	Kenya Rural Roads Authority
<b>KFSL</b>	Kenya Ferry Services Limited
<b>KICD</b>	Kenya Institute of Curriculum Development
<b>KIIs</b>	Key Informant Interviews
<b>KIPPRA</b>	Kenya Institute for Public Policy Research and Analysis
<b>KMA</b>	<i>Kenya Maritime Authority</i>
<b>KMA</b>	Kenya Maritime Authority
<b>KNSL</b>	Kenya National Shipping Line
<b>KOSF</b>	Kipevu Oil Storage Facility
<b>KOT</b>	Kipevu Oil Terminal
<b>KPA</b>	Kenya Ports Authority
<b>KPA</b>	Kenya Ports Authority

<b>KPC</b>	Kenya Pipeline Company
<b>KPC</b>	Kenya Pipeline Company
<b>KRA</b>	Kenya Revenue Authority
<b>KRB</b>	<i>Kenya Roads Board</i>
<b>KRB</b>	Kenya Roads Board
<b>KRC</b>	Kenya Railways Corporation
<b>KSh</b>	Kenyan Shillings
<b>KURA</b>	Kenya Urban Roads Authority
<b>KURA</b>	Kenya Urban Roads Authority
<b>KWS</b>	Kenya Wildlife Services
<b>LAC</b>	Limits of Acceptable Change
<b>LAPSSET</b>	Lamu Port, South Sudan, Ethiopia Transport Corridor
<b>LAPSSET</b>	Lamu Port, South Sudan and Ethiopia
<b>LATF</b>	Local Authority Transfer Fund
<b>LPG</b>	Liquid Petroleum Gases fuel oils (FO) (IDO).
<b>LV</b>	Lake Victoria
<b>MaRPs</b>	Most at Risk Populations
<b>MDGs</b>	Millennium Development Goals
<b>MEPC</b>	Marine Environment Protection Committee
<b>MGR</b>	Metre Gauge Railway
<b>MoE</b>	Ministry of Energy
<b>MoF</b>	Ministry of Finance
<b>MoLG</b>	Ministry of Local Government
<b>MoR</b>	Ministry of Roads
<b>MoR&amp;T</b>	Ministry of Roads and Transport
<b>MoT</b>	Ministry of Transport
<b>MPDP</b>	Mombasa Port Development Project
<b>MRT</b>	Mass Rapid Transit
<b>MTA</b>	Metropolitan Transport Authority
<b>MTL</b>	Maritime Transport Logistics
<b>NACC</b>	National Aids Control Council
<b>NaMATA</b>	Nairobi Metropolitan Area Transport Authority
<b>NATRI</b>	National Transport Research Institute

<b>NAVAIDS</b>	Navigational Aids
<b>NCTTA</b>	Northern Corridor Transit Transport Authority
<b>NEMA</b>	National Environment Management Authority
<b>NEMA</b>	National Environmental Management Authority
<b>NEPAD</b>	New Partnership for African Development
<b>NLC</b>	National Land Commission
<b>NLPM</b>	National Land Policy Management
<b>NMIMTs</b>	Non-Motorized and Intermediate Means of Transport
<b>NMT</b>	Non-Motorized Transport
<b>NMTs</b>	Non-Motorized Means of Transport
<b>OB</b>	Occurrence Book
<b>OSHA</b>	Occupational Safety and Health Administration
<b>OSMAG</b>	Oil Spill Mutual Aid Group
<b>PPM</b>	Parts Per Million
<b>PPP</b>	Policy, Plan, or Program
<b>PPP</b>	Public Private Partnership
<b>PRSP</b>	Poverty Reduction Strategy Paper
<b>PSC</b>	Port State Control
<b>PSO(s)</b>	Public Service Obligation(s)
<b>PTP</b>	Passenger Transport Plan
<b>PU</b>	Pwani University
<b>PWDs</b>	Persons with Disabilities
<b>RAP</b>	Resettlement Action Plan
<b>RARP</b>	Rural Access Roads Programme
<b>RaTMP</b>	Rail Transport Master Plan
<b>RICS</b>	Road Condition and Inventory survey
<b>RMRCC</b>	Regional Maritime Rescue Co-ordination Centre
<b>RSS</b>	Road Side Station
<b>RTMP</b>	Road Transport Master Plan
<b>RVR</b>	Rift Valley Railway
<b>SACCO</b>	Savings and Credit Cooperative
<b>SADC</b>	Southern Africa Development Community

<b>SAP</b>	System Application Products
<b>SAR</b>	Search and Rescue
<b>SARP(s)</b>	Standards and Recommended Practices
<b>SCADA</b>	Supervisory Control and Data Acquisition
<b>SDoT</b>	State Department of Transport
<b>SDoT</b>	State Department for Transport
<b>SESA</b>	Strategic Environmental and Social Assessment
<b>SEZs</b>	Special Economic Zones
<b>SGR</b>	Standard Gauge Railway
<b>SIDS</b>	Small Island Developing States
<b>SMME(s)</b>	Small, Medium and Micro Enterprises
<b>SOLAS</b>	Safety of Life at Sea
<b>SOT</b>	Shimanzi Oil Terminal
<b>STCW</b>	Standards of Training, Certification, and Watch Keeping for Seafarers
<b>TEU</b>	Twenty Foot Equivalent Unit
<b>TIMS</b>	Traffic Integrated Management System
<b>TOD</b>	Transit Orientated Development
<b>TUK</b>	Technical University of Mombasa
<b>TVET</b>	Technical and Vocational Education and Training
<b>UNCLOS</b>	United Nations Convention on the Law of the Sea
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>UNDP</b>	United Nations Development Programme
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VAT</b>	Value Added Tax
<b>VOCs</b>	Vehicle Operating Costs
<b>WHO</b>	World Health Organization
<b>WPCI</b>	World Ports Climate Initiative
<b>WTO</b>	World Trade Organization
<b>YD</b>	Yamoussoukro Decision/Declaration

## DEFINITION OF TERMS AND CONCEPTS

**Alternatives Analysis:** means of finding the most effective way of meeting the need and purpose of the proposal, either through enhancing the environmental benefits of the proposed activity, and or through reducing or avoiding potentially significant negative impacts.

**Baseline data:** Data that describes issues and conditions at the inception of the SEA. Serves as the starting point for measuring impacts, performance, etc., and is an important reference for evaluation.

**Biological diversity:** means the variability among living organisms from all sources including, terrestrial ecosystems, aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, among species and of ecosystems;

**Biological resources:** include genetic resources organisms or parts thereof, populations, or any other biotic component or ecosystems with actual or potential use or value for humanity

**Cumulative effects/impacts:** Are combined or additive effects on the environment over time or space when added to other past, present or reasonably foreseeable actions. They may seem to be insignificant when seen in isolation, but collectively they have a significant effect.

**Decommissioning** – is the strategic approach to deactivating a project or facility from service. It entails all steps leading to the release of a facility, other than a disposal facility, from regulatory control other than confirming the decommissioned status of a facility. These steps include the processes of decontamination and dismantling.

**Ecosystem:** means a dynamic complex of plant, animal, micro-organism communities and their non-living environment interacting as a functional unit;

**Effluent:** means gaseous waste, water or liquid or other fluid of domestic, agricultural, trade or industrial origin treated or untreated and discharged directly or indirectly into the aquatic environment;

**Environment:** includes the physical factors of the surroundings of human beings including land, water, atmosphere, climate, sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics and includes both the natural and the built environment;

**Environmental audit:** means the systematic, documented, periodic and objective evaluation of how well environmental organisation, management and equipment are performing in conserving or preserving the environment;

**Environmental and social impact assessment (ESIA):** (often used synonymously with Environmental Impact Assessment -EIA), is the umbrella term for the process of examining the environmental risks and benefits of project level proposals. It implies a systematic examination conducted to determine whether or not a programme, activity or project will have any adverse impacts on the society and environment;

**Environmental management:** includes the protection, conservation and sustainable use of the various elements or components of the environment;

**Environmental monitoring:** means the continuous or periodic determination of actual and potential effects of any activity or phenomenon on the environment whether short-term or long term;

**Environmental planning:** means both long-term and short-term planning that takes into account environmental exigencies;

**Environmental resources:** includes the resources of the air, land, flora, fauna and water together with their aesthetical qualities;

**Hazardous substance:** means any chemical, waste, gas, medicine, drug, plant, animal or microorganism which is likely to be injurious to human health or the environment;

**Indicator:** a signal that reveals progress (or lack thereof) towards objectives, and provides a means of measuring what actually happens against what has been planned in terms of quantity, quality and timeliness.

**Lead agency:** means any Government ministry, department, parastatal, state corporation or local authority, in which any law vests functions of control or management or any element of the environment or natural resources;

**Natural resources:** include resources of the air, land, water, animals and plants including their aesthetic qualities

**Pollutant:** includes any substance whether liquid, solid or gaseous which: may directly or indirectly alter the quality of any element of the receiving environment; is hazardous or potentially hazardous to human health or the environment; and includes objectionable odours,

radio-activity, noise, temperature change or physical, chemical or biological change to any segment or element of the environment;

**Pollution:** means any direct or indirect alteration of the physical, thermal, chemical, biological, or radio- active properties of any part of the environment by discharging, emitting, or depositing wastes so as to affect any beneficial use adversely, to cause a condition which is hazardous or potentially hazardous to public health, safety or welfare, or to animals, birds, wildlife, fish or aquatic life, or to plants or to cause contravention of any condition, limitation, or restriction which is subject to a licence under EMCA, 1999.

**Policy:** is broad statement of intent that reflects and focus the political agenda of government and initiate a decision cycle; a general course of action or proposed overall direction that a government is or will be pursuing that guide's ongoing decision making.

**Plan:** A purposeful forward-looking strategy or design, often with co-ordinated priorities, options and measures that elaborate and implement policy.

**Programme:** A coherent, organized agenda or schedule of commitments, proposals, instruments and/or activities that elaborate and implement policy.

**Sustainable development:** means development that meets the needs of the present generation without compromising the ability of future generations to meet their needs by maintaining the carrying capacity of the supporting ecosystems;

**Waste:** includes any matter prescribed to be waste and any matter whether liquid, solid, gaseous or radioactive, which is discharged, emitted or deposited in the environment in such volume, composition or manner likely to cause an alteration of the environment;

**Wetland:** means areas permanently or seasonally flooded by water where plants and animals have become adapted.

**Scoping:** The process of defining the extent and detail of a SEA, including the identification of strategic issues.

**Stakeholder:** those who may be interested in, potentially affected by, or influence the implementation of a Policies, Plans and Programmes (PPPs).

**Strategic Environmental and Social Assessment (SESA)** - means a formal and systematic process to analyses and address the environmental effects of policies, plans, programmes and other strategic initiatives. In the context of this report, Strategic Environmental Assessment

(SESA) and Strategic Environmental Assessment (SEA) are used interchangeably. Suffice to mention that SESA is now the international and NEMA official title to the process in Kenya.

## ACKNOWLEDGEMENTS

Conducting a SESA exercise for a policy is both engaging and complex. It calls for patience, humility and understanding of actors, individuals and processes associated with it. The State Department of Transport that commissioned this exercise and that was conducted by two lead environmental experts, Dr. John Njagi Muriuki-EIA/EA 050 and Dr. Thomas Njuguna Kibutu-EIA/EA 1994) wishes to acknowledge and appreciate the contribution of very many actors and individuals in the process of bringing this exercise into near completion.

To begin we appreciate Horn of Africa Gateway Development Project (HoAGDP) for financing and constantly following up and advising on the program and processes to be completed. The staff at World Bank have tirelessly given their valuable comments and this is highly appreciated. The Ministry of Roads and Transport under which SDoT is housed staff under the Cabinet Secretary and his able Permanent Secretaries (Permanent Secretary SDoT and Permanent Secretary State Department of Transport) are also appreciated for their immense support in approving documents and facilitating movement to various offices relevant for carrying out of the SESA exercise. The staff in the various agencies, departments and other areas in the Ministry were always available for consultation physically and virtually. Your cooperation and patience are greatly acknowledged. Your efforts at designing and formulation of a policy aimed at guiding operations of the transport sector with improved air quality, decreased dependence on fossil fuels and that constantly mitigates greenhouse emissions(GHG) do not go unappreciated. Globally, transport contributes a considerable amount of current global energy-related GHG emissions and arresting this phenomenon is imperative. The Ministry of Roads and Transport efforts at ensuring that the sector abides by the National Energy Efficiency and Conservation Strategy (2020) must be applauded. We sincerely, say thank you to staff in both SDoR and SDoT for providing relevant documents, information and contacts needed for this exercise.

The Ministry of Environment, Climate Change and Forestry deserves special mention. The staff in this Ministry greatly assisted the consultant with relevant documents, information and advice on conducting the exercise. The National Environment Management Authority (NEMA) staff are greatly appreciated and applauded for being at hand to assess and give important comments on the various documents for approval of the exercise. We say a big thank you and acknowledge the selfless efforts at ensuring the protection and management of the environmental, socio-economic and occupational health and safety issues in all development

projects. The survival of future generations greatly depends on how efficient, effective and sustainable efforts will be done in dealing with climate change related challenges. NEMA, is always available to guide on related efforts.

The consultants wish to render their gratitude to staff in the Ministries of; Water & Sanitation and Irrigation, Labour and Skills Development, Public Service, Gender and Affirmative Action, Energy, Health, Interior and National Administration, National Treasury And Economic Planning and Roads, Transport and Public Works and Foreign and Diaspora Affairs. Staff in these ministries provided important information for this exercise. The county government staff in Isiolo, Mombasa, Lamu, Nairobi, Kisumu, Eldoret, Muranga and Nyeri are also appreciated. Identified staff members were instrumental in helping the consultant understand the need for collaborations and liason with the SDoT in ensuring the management of environmental, socio-economic and health and safety issues.

We also wish to appreciate Dubai Road and Transport Authority and South Africa department of transport staff that were in place to receive and give valuable information to learn from for the aim of improving the transport sector in Kenya. The teams from the SDoT and the consultants are grateful to respective Embassies of Kenya in these countries for facilitating in travel logistics.

The role of academia in providing information on research gaps and suggesting ways of mitigating such is also greatly acknowledged and appreciated. Continuous assessment and review of transport sector trends forms part of what academia should focus on for sustainable development. Analysing trends in building and strengthening climate-resilient transport systems should be upheld by the academia. In this regards we greatly appreciate staff from Pwani University, University of Nairobi, Maasai Mara University, United States International University, Kenyatta University, Meru Institute of Science and Technology, Bandari Maritime Academy and the Technical University of Mombasa who were instrumental in generating and engaging in debates on the need for rethinking collaborations between governments and the academia in suggesting ways of reducing greenhouse emissions through the use of energy efficient transport modes and systems.

To our able and willing informants from all walks of life, we say a big thank you and hope that assessments on environmental, socio-economic and occupational health and safety needs will greatly help mitigate against negative impacts associated with transport sector development

projects. This SESA will play a great role in drawing guidelines for management of issues that you willingly raised during the public and stakeholder meetings. To our Program Manager, Albert Okinda Ochieng, thank you so much for being there to communicate and organise for required logistics. Your immense contribution in the completion of this exercise cannot go unnoticed.

## CERTIFICATION

The lead Consultants were Dr John N. Muriuki (EIA/EA Reg. No.) and Dr Thomas N. Kibutu (EIA/EA Reg. No. 1994) who were commissioned by The State Department of Transport (SDoT) to undertake this Strategic Environmental and Social Assessment for the Reviewed Integrated National Transport Policy. This Strategic Environmental and Social Assessment Report has been compiled for submission to the National Environment Management Authority (NEMA).

The Consultants submit this SESA Draft Report, to NEMA Kenya. To the best of our knowledge, all the information in this report is true and correct.

PPP Owner: The State Department of Transport (SDoT)



Programme Head

Mr. Wilson Njuki

Signature / Official Stamp \_\_\_\_\_ Date: \_\_\_\_\_

### Submitted by:

*SESA Experts:*

- |                        |               |           |   |                 |
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| 1. Dr John N. Muriuki  | Reg. No. 050  | Signature |   | Date:04/08/2023 |
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## **NON-TECHNICAL EXECUTIVE SUMMARY**

### **Introduction**

Among other development blueprints, the Government of Kenya recognizes the transport sector as one of the critical enablers in achieving Kenya's Vision 2030. Thus, the sector is deemed important in improving the competitiveness of products from Kenya and the region and serves as a significant basis for the economic, social, and political pillars of this long-term development strategy. Further, the sector is expected to remain a key component in tackling such challenges as poverty reduction and overall improvement in the general welfare of the population. The Government of Kenya developed the Integrated National Transport Policy (INTP) in 2010 to achieve these developmental goals. The government recognizes that an appropriate Integrated National Transport Policy (INTP) is the prerequisite for attaining an excellent transport system that is responsive to the needs of the people and the industry. The INTP is intended to promote the country's development in terms of integrating production, marketing, and population centres, hence facilitating mobility in rural and urban areas; national and regional integration; trade promotions, improving the overall welfare of the people and Kenya's competitiveness. There is a need to eliminate impediments to the development and use of non-motorized and intermediate means of transport in order to enhance transport safety and security, develop and maintain a safe and secure transport system, sustainable utilization of the environment, integrate of meteorological information as well as the development of the requisite human capacity.

When this policy document was conceptualized, the Government of Kenya (GoK) finalized a road map for implementing an integrated transport policy. However, questions remained regarding how much the INTP conformed to World Bank's ESS, which is an important requirement for all development projects funded by the Bank. The Bank thus identified the need for analytical work on the INTP's economic, environmental, and social implications to ensure compliance with the SESA National Guidelines and WB standards, an endeavour that the current review seeks to carry out.

The institution-centered Strategic Environmental and Social Assessment (SESA) aim to assist the GOK with implementing the Integrated National Transport Policy (INTP) and inform the Ministry of Roads and Transport of priority areas for successful implementation. To achieve its objective, the SESA blends analytical work with information from consultations with key

stakeholders, including community views, civil servants from diverse ministries, the private sector, academia, and non-governmental organizations. The SESA provides recommendations regarding concrete actions necessary to mainstream and implement relevant World Bank standards and guidelines to improve the reviewed INTP.

## **Project background**

The project was developed in response to a request by SDOT to carry out a Strategic Environmental and social assessment (SESA). SESA is a well-established, practical and efficient planning and decision-making support tool. Its effective application should ensure that the strategic documents (plans, programs, policies, strategies, etc.) in the key sectors, including for instance energy, water, or waste management, which may cause significant adverse environmental and social; including health/safety effects are developed taking into account these likely effects. Strategic Environmental and Social Assessment (SEA) aims to promote sustainable development by mainstreaming environmental and health issues into the planning and decision-making processes at the national, regional and local levels. The SESA seeks to provide a high level of protection of the environment and social entities by integrating Environmental-Social considerations into the INTP for to manage implementation of SDOTs policy, programs and plans and programmes. The INTP SESA has its base anchored in the Kenya's NEMA regulatory frameworks and also on World Bank's Environmental and Social Standards. Other equally important documents related to SESA are also consulted and inform the overall review of the current SESA project.

## **Strategic Environmental and Social Assessment (SESA)**

In recent years, Kenya has revolutionized its transportation systems, mainly through the modernization and expansion of infrastructure and transportation modes, including incorporating new technologies. As a result, areas that previously had limited accessibility are becoming increasingly accessible and thus open to new investments. Policies and regulatory frameworks guiding such developments need to be scaled up, entrenching environmental, social, and climate change requirements. They, in particular, need to conform to Kenya's EMCA (2009) and to good international practices such as the WB standards. This SESA aims to ensure that environmental and social implications or options within the INTP document have been assessed to ensure compatibility with WB's environmental-social planning and management.

This is a requirement by the WB, which endeavours to build countries' capacity to formulate and implement sustainable development policies and plans.

### **Analysis of Alternatives**

The requirement for a policy document guiding the design, implementation, monitoring and evaluation of programs, projects and plans of all government ministries and government institutions is enshrined in the Constitution of Kenya (2010). There is therefore no alternative for having a policy by the Ministry of roads and transport. International and national instruments also require that PPPs go through constant review to ensure that they are not only responsive but also sustainable and adhere to environmental, socio-economic, health safety and security measures as required by SESA. In Kenya, EMCA (2009) amended in 2015 and World Bank ESS, Operational procedures(OP) and Environmental Health and Safety(ESH) also requires that all policies, plans and programs (PPPs) be subjected to SESA. Section 41 (1) of EMCA clearly indicates that in consultation with county governments, lead agencies, institutions and private entities subject all proposals for policy, plans or programs to a SESA. The main objective of the SESA as per the authority are geared towards guiding policy, programme or plan proposals to ensure that they are compatible with sustainable environmental planning and management. The law requires that all entities undertake or cause the SESA to be undertaken, at their own expense, and consequently submit such assessments to NEMA for consideration and approval. In addition, NEMA remains the main agency responsible for guiding the process of SESA. It prescribes and provides guidelines to stakeholders related to all SESA. In this regard, there is no alternative to conducting SESA for the reviewed Integrated National Transport Policy(INTP). This is because the policy has proposed transport infrastructure projects that will have both negative impacts and benefits to the environment, socio-economic, occupational health, safety and security of communities. The SESA has thus proposed relevant design review where larger recovery sections are provided especially in the highways. An increase in road lanes on the LAPSSET corridor was also proposed. In majority of the proposed transport infrastructure projects, a no alternative action was suggested because relevant agencies are expected to conduct individual SESA activities on proposed transport infrastructure development projects.

### **Assessment Approach and Methodology**

The SESA was based on a wide range of data obtained from both primary and secondary sources. Primary data was gathered by use of;

- a) Key Informant Interview Guides
- b) Interview schedules
- c) Focus-group discussions guides
- d) Observation sheets.

Secondary data collection was collected from government documents including strategic plans, sector guidelines, reports and other relevant documents. This was done against the background of the transport sectors and transport modes in relation to INTTP. In order to establish the necessary baseline information on potential environmental impacts, the assessment focused on biodiversity, physical factors of the environment: - solid, liquid, and gaseous pollutants, noise, vibrations, and their impacts; occupational health and safety issues and social impacts and risks.

## **Findings and Discussions**

### **a) Policy, legislative and institutional framework for assessment**

The legal basis of Strategic Environmental Assessment defines the scope of the law, its purpose, principles of regulation, and the subjective composition of legal relations. It also establishes the procedure for implementing SESA. SESA allows compliance with the requirements of the law and brings other acts into line with environmental and social impact considerations during project design and implementation. The Constitution of Kenya 2010<sup>1</sup>: - empowers persons to seek redress when their right to a healthy and clean environment has been violated or infringed. In particular, Article 42 of Kenya Constitution 2010 (The Enforcement of Environmental Rights) guarantees the people a clean and healthy environment. It, in particular, references the "Environmental Management and Coordination Act" of 1999 (EMCA), which was enacted to provide an appropriate legal and institutional framework for the management of the environment and for matters connected therewith and incidental thereto; revised in 2015.

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<sup>1</sup> The Constitution of Kenya 2010. available at: [http://www.kenyalaw.org/kl/fileadmin/pdfdownloads/Constitution\\_of\\_Kenya\\_2010.pdf](http://www.kenyalaw.org/kl/fileadmin/pdfdownloads/Constitution_of_Kenya_2010.pdf) (Accessed on 12/01/2023)

EMCA also established the National Environmental Management Authority (NEMA) under the Environmental Management and Coordination Act (EMCA) No. 8 of 1999 as the principal instrument of government in the implementation of all policies relating to the environment. This Strategic Social and Environment Assessment has subjected the reviewed INTP to ensure that it is in accordance with the provisions and requirements of the Environmental Management and Coordination Act (EMCA), 1999 and subsidiary regulations. Other national policies consulted include but are not limited to; Environment and Land Court Act (No. 19 Of 2011),The Occupational Safety and Health Act, 2007,Kenya National Social Protection Policy Act, 2011,National Police Service Act, 2011,State Corporations Act (No. 11 Of 1986),Public Procurement and Asset Disposal Act (No. 33 Of 2015),Exchequer and Audit Act (Cap. 412),Public Private Partnerships Act (No. 14 Of 2021),Lake Basin Development Authority Act (Cap. 442),Kenya Revenue Authority Act (No. 2 Of 1995),Land Act (No. 6 of 2012),Land Adjudication Act (Cap. 284),Land Control Act (Cap. 302),Children Act 2001,National Children Policy, 2010,Sexual Offences Act 2006,Gender Policy of 2011,Standard Act (CAP 496),HIV and AIDS Prevention and Control 2006,Sessional Paper No. 10 of 2012 on Kenya Vision 2030,National Environmental Action Plan (NEAP) of 2009-2013,The National Poverty Eradication Plan of 1999,The Poverty Reduction Strategy Paper (PRSP) of 2000,The National Biodiversity Strategy of 2000,The Kenya National Climate Change Response Strategy of 2010,Technical Guidelines on the Management of Used Oil and Oil Sludge in Kenya (NEMA 2014),National Sand Harvesting Guidelines 2007,Integrated Land Use Guidelines among others.

The SESA process has also subjected the reviewed INTP to WB's SESA guidelines to identify gaps, suggest action plans, and propose ways of improving the INTP for Kenya's transport sector. They include; OP/BP 4.01 Environment Assessment, OP/BP 4.04 Natural Habitat, OP/BP 4.10 Indigenous People, OP/BP 4.11 Physical Cultural Resources, OP/BP 4.12 Involuntary Resettlement, World Bank Policy on access to information 2010 and World Bank Group General Environmental Health and Safety (HIS) guidelines among others.

Other International legislations include United Nations Convention on Biological Diversity (UNCBD), African Convention on the Conservation of Nature and Natural Resources (ACCNNR), United Nations Convention to Combat Desertification (UNCCD), Rio Declaration on Environment and Development (RDED), Earth Summit on Sustainable Development Agenda 21 (ESSDA21), Convention on the Rights of the Child (CRC),

Convention on the Elimination of All forms of Discrimination Against Women (CEDAW) and the International Convention on Labour (ICL). The African Development Bank's environmental and social safeguards; European Union / European Investment Bank Environmental and Social Principles and Standards; International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability<sup>2</sup>; and other appropriate international conventions were also consulted. The matrix for reviewing the INTP is; conformity, non-conformity and/or partial conformity.

### **b) Institutional Capacity analysis**

It was revealed that there exist agencies and departments in the transport sector to handle environmental, social, occupational health and safety issues. NEMA, however plays the most critical role of regulating and management of issues related to environment while the DOSHS housed in the Ministry of Labour and Skills development deals with among others occupational health and safety issues. Social issues are dealt with by diverse ministries including Ministry of Public service, Gender and affirmative action, Ministry of labour and skills development, Ministry of sports, culture and heritage among others. These institutions, while possessing adequate requisite training, knowledge and skills on some issues are, however, greatly understaffed especially in ensuring the establishment of climate-resilience transport infrastructure; under-funded and at times ill-equipped when it comes to specialized equipment and instruments for dealing with advanced aspects such as air transport satellite imaging to deal with flight monitoring, fire-fighting equipment's at both national and county-levels, road recovery and patrol vehicles to monitor accident sports and electric bikes for operating short distances all with the aim of reducing GHG emissions, improving air quality and addressing the need for dependence on fossil fuels. It is recommended that transport sector continuously trains, hires and capacity-builds staff in climate-resilience, purchases specialized instruments for each agency e.g unmanned drones for surveillance and mapping, radars for surveillance and control of avian birds and solar cells to reduce energy consumption at the airports. For ease of handling incoming and outgoing cargo at ports modern RTGs are needed.

### **c) Stakeholder Engagement and Public participation**

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<sup>2</sup>International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability. Available at: [https://www.ifc.org/wps/wcm/connect/c02c2e86-e6cd-4b55-95a2-b3395d204279/IFC\\_Performance\\_Standards.pdf?MOD=AJPERES&CVID=kTjHBzk](https://www.ifc.org/wps/wcm/connect/c02c2e86-e6cd-4b55-95a2-b3395d204279/IFC_Performance_Standards.pdf?MOD=AJPERES&CVID=kTjHBzk)

Public and stakeholder engagements were conducted in six identified sites namely; Mombasa, Nairobi, Kisumu, Eldoret, Nairobi, Isiolo and Lamu. Purposive and snowballing sampling methods were used to identify other equally important individuals to be consulted. In total, 3,897 people were consulted out of which 53% were men and 47% were women. Their views have been collated and analyzed. The lower percentage of women is attributed to the patriarchal nature of communities selected. Free prior and Informed Consent was sought, and special attention given to VGs. The main languages used during the consultations was English and Kiswahili. However, where discussions in the two languages were not possible local research assistants were recruited to help in language translation and transliterations of the interviews. FPIC should be included in the reviewed INTP document to allow PAPs to engage effectively during projects, plans and policy implementation of transport sector processes. This will also allow for sustainability of the processes.

#### **d) Women's roles in transport policy decisions and implementation.**

The reviewed INTP has provided for the protection, participation and inclusion of women in the design, implementation monitoring and evaluation of transport sector infrastructural developments. It was however, established that the levels and extent of participation is not clearly provided for in the document. It is thus recommended that at each stage of policy design and implementation and at the project level, the role of women (both skilled and otherwise) be clearly spelt out in appreciation of Kenya's COK (2010) and World Banks ESS, OP and EHS among other national and international laws on women. Mainstreaming gender issues as opposed to emphasising on numbers and fairness is recommended as this will ensure that the needs and aspirations of all women and men, boys and girls regardless of their localities, age and class are taken care of

#### **e) Mitigation and Monitoring**

As a rule, all transport infrastructure development projects should undergo Environmental and Social Impacts Assessments (ESIAs) and subsequently annual Environmental and Social Audits (ESAs). This is missing from the reviewed INTP document. Annual audits are important in ensuring that projects not only adhere to national and international environmental, social, safety, and security standards but also contribute to sustainability of the projects an aspect that needs to come out strongly in the reviewed INTP document. The current SESA exercise has identified and recommended areas where SDOT needs to work with the Ministries of; Water &

Sanitation and Irrigation, Labour and Skills Development, Public Service, Gender and Affirmative Action, Energy, Health, Interior and National Administration, National Treasury and Economic Planning and Roads, Transport and Public Works among others to mitigate negative impacts of existing and proposed transport sector infrastructure projects in all the six subsectors. In particular agencies Importantly, and as a requirement by the TOR, the consultant has identified relevant national and international SESA safeguards and guidelines to be followed by diverse agencies in the transport sector to ensure that these projects are not only sustainable but also monitored by relevant departments and agencies for avoidance of duplication and overlap of mandates as it is currently. The SESA has also drawn an action plan to be considered by SDoT and its partners including government agencies such as NEMA, Water Resources Authority (WRA), Kenya Forest Service(KFS), Kenya Plant Health Inspectorate Service (KEPHIS), National Police Service (NPS), National Land Commission and the Kenya Institute of Surveying & Mapping among others. For effective mitigation of environmental, socio-economic, health and safety issues, the report notes that several guidelines need regular review.

#### **f) Conclusion and recommendations**

##### **➤ Conclusions derived from this SESA include;**

- a) The reviewed INTP document is well thought-out, written, formatted and critical SESA issues as required by EMCA (1999) and World Bank standards and guidelines and operational Standards identified for the stimulation of rapid development and efficient management of a safe, widely accessible transport system in a rapidly globalizing world handled. The concept and spirit of integration is, however, not clearly adhered to in the reviewed INTP.
- b) The INTP document has addressed challenges and identified policy recommendations related to transport infrastructure planning, development and management
- c) The INTP has clearly delineated gender, sexual exploitation and abuse as important issues in the transport sector development projects, plans and programs.
- d) Climate change has been identified as an important impact related to transport sector infrastructure development project.
- e) The transport sector opportunities and prospects have also been drawn and provisions for growth of the sector provided for the five subsectors.
- f) The INTP document has identified strategic directions for the transport sector with clear strategic goals and principles

- g) The INTP document has clearly highlighted legal, institutional and regulatory frameworks governing the transport sector as required by EMCA (1999)
- h) The INTP has discussed impacts for existing and proposed transport sector infrastructure projects with an emphasis on impacts for these projects on vulnerable groups and indigenous communities
- i) The INTP has identified mitigation measures for dealing with negative impacts of existing and proposed transport sector development projects

➤ **Recommendations drawn from the conclusions;**

1. Review the transport sector framework to ensure the integration of all modes of transport.
2. Implementing the Transport Act should be done in close/ effective, and productive conjunction with county governments.
3. Establish a protocol for working with NEMA on government's policy, plans and projects – and “walk together” in PPPs processes in order to minimize delays in projects' execution and avoid misalignments associated with economic and social costs.
4. Establish and designate transport sector casualty investment to deal with accidents and injuries.
5. To strengthen the SESA framework, there is a need to integrate the missing environmental, socio-economic, and occupational health and safety national policy, regulatory and legislative frameworks, and international instruments. The socio-economic aspect of the policy document must be prioritized.
6. The INTP document should use SESA throughout the document as required by NEMA, World Bank and other environmental, social, occupational, health, safety and security safeguards
7. A clear timeline for monitoring, evaluation and review of projects, programs and policies should be indicated in the reviewed INTP.
8. Gender mainstreaming and importantly, clearly ensuring protection and participation of women in decision-making should be mandatory at all levels of PPPs.
9. The development and operationalization of the Integrated National Transport Master Plan (INTMP) should be fast-tracked, expedited and a timeline for completion provided.
10. Establishment and designation of transport sector casualty investment to deal with accidents and injuries.

11. Procurement of specialized equipment in all sectors including air (radars, unmanned drones and solar cells) Pipeline(RTGs), Road (patrol and surveillance vehicle, convex reflectors and ambulances) and NMIMTs (Ministry specific e-bikes for each county and solar charging centres) is recommended to ensure environmental, socio-economic and health and safety issues are handled effectively and efficiently.

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## CHAPTER ONE

### 1.0 Introduction

The Ministry of roads and transport (Kenya) is one of the twenty-one (21) ministries in Kenya. Its mission is to provide efficient, affordable and reliable transportation services for sustainable economic growth and development. The ministry houses two state departments namely; state department of transport (SDoT) and state department of roads (SDoR) each of which is headed by a Permanent Secretary (PS). The SDoR deals with road infrastructure while SDoT specializes in the rolling stock. The table below shows the organization of the Ministry of Roads and Transport as at January 2023;

**Table 1: Ministry of Roads and Transport**

<p><b>STATE DEPARTMENT OF ROADS</b></p> <p><b>Functions:</b></p> <ul style="list-style-type: none"> <li>✓ National Roads Development Policy;</li> <li>✓ Development, Standardization and Maintenance of Roads;</li> <li>✓ Materials Testing and Advice on Usage;</li> <li>✓ Protection of Road Reserves.</li> <li>✓ Maintenance of Security Roads;</li> <li>✓ Administer Mechanical and Transport Fund;</li> <li>✓ Registration of Engineers;</li> <li>✓ Mechanical and Transport Services;</li> <li>✓ Enforcement of Axle Load Control.</li> </ul>	<p><b>Institutions</b></p> <ul style="list-style-type: none"> <li>✓ Kenya Roads Board (Kenya Roads Board Act, 1999 &amp; 2007)</li> <li>✓ Kenya National Highways Authority</li> <li>✓ (Kenya Roads Act, 2007)</li> <li>✓ Kenya Urban Roads Authority (Kenya Roads Act, No. 2 of 2007)</li> <li>✓ Kenya Rural Roads Authority (Kenya Roads Act, No. 2 of 2007)</li> <li>✓ Kenya Institute of Highways and Building Technology</li> <li>✓ Kenya Institute of Technology</li> <li>✓ Engineers Board of Kenya (Engineers Registration Act, Cap. 530A)</li> <li>✓ Kenya Engineering Technologists</li> <li>✓ Registration Board (Engineering Technology Act, 2016)</li> <li>✓ Mechanical and Transport Fund (Public Finance Management Act, No. 18 of 2012).</li> </ul>
<p><b>STATE DEPARTMENT FOR TRANSPORT</b></p> <p><b>Functions:</b></p> <ul style="list-style-type: none"> <li>✓ Transport Policy Management;</li> <li>✓ Rail Transport and Infrastructure Management;</li> <li>✓ Fast Tracking Identified Northern and LAPPSET Transport Corridor Projects;</li> </ul>	<p><b>Institutions:</b></p> <ul style="list-style-type: none"> <li>✓ Kenya Railways Corporation (<i>Kenya Railways Corporation Act, Cap. 397</i>)</li> <li>✓ Northern Corridor Transit and Transport Co-ordination (NCTTCA)</li> <li>✓ LAPSSET Development Authority (<i>State Corporations Act, Cap. 446, Gazette Notice-2013</i>)</li> <li>✓ Kenya Airports Authority (<i>Kenya Airports Authority Act, Cap. 395</i>)</li> </ul>

<ul style="list-style-type: none"> <li>✓ Oversight and Co-ordination of Northern Corridor Transport and Lamu South Sudan Ethiopia Transit (LAPSSET)</li> <li>✓ Programmes Implementation;</li> <li>✓ Civil Aviation Management and Training;</li> <li>✓ Registration and Insurance of Motor Vehicles;</li> <li>✓ Motor Vehicles Inspection;</li> <li>✓ National Transport Safety;</li> <li>✓ National Road Safety Management;</li> <li>✓ National Roads Transport Policy;</li> <li>✓ Axle Load Control Policy and Standards;</li> <li>✓ Development and Maintenance of Air Strips; and</li> <li>✓ Oversee the establishment of an integrated, efficient, effective and sustainable Urban Public Transport system within the Nairobi Metropolitan Area.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Kenya Civil Aviation Authority (<i>Civil Aviation Act, No. 21 of 2013</i>)</li> <li>✓ East African School of Aviation(<i>Civil Aviation Act, No. 21 of 2013</i>)</li> <li>✓ Kenya Ports Authority (<i>Kenya Ports Authority Act, Cap. 391</i>)</li> <li>✓ National Transport and Safety Authority (<i>The National Transport and Safety Authority Act, No. 33 of 2012</i>)</li> <li>✓ The Nairobi Metropolitan Area Transport Authority (<i>The Nairobi Metropolitan Area Transport Authority Order, 2016</i>)</li> <li>✓ The Railway City Development Authority</li> <li>✓ Railway Training Institute</li> </ul>
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Over the years' transport sector has grown at an average annual rate of 13.3% compared to 11.8% for the overall economy. The sectors contribution to GDP according to the reviewed INTP of May 2023 was 11.4%. This increase was propelled by external as opposed to internal financing. The reviewed INTP emphasizes private sector infrastructure financing in addition to traditional sources of funding of all the six sub-sectors including the Non-Motorized Transport (NMT). The five subsectors are; road, rail, water, air, and pipeline as indicated in the table above.

### 1.1 Project background and context

The State Department of roads hereafter SDoT, which commissioned this SESA exercise draws its mandate and functions from the Executive Order No.1 of January 2020 revised May 2020 and is responsible for formulation of transport Policy for all modes of transport, Legislation and providing oversight of State Corporations established through various Acts of Parliament as follows:

- Civil Aviation Act No.21 of 2013 establishes Kenya Civil Aviation Authority and the East African School of Aviation;
- Kenya Airports Authority Act No 3 of 1991 establishes Kenya Airport Authority; and

➤ Traffic Act of 2008.

The assessment was based on the recognition that the construction of transport infrastructure systems and their maintenance often affect the environment through the destruction of flora, fauna and physical entities of the environment, displacement of human settlements and livelihoods, habitat fragmentation and negative changes in environmental aesthetics. As such, there is a need to ensure that environmental, social, health and safety considerations are incorporated in transport infrastructure development, management, and operations. A Strategic Environmental and Social Assessment (SESA) which is a systematic process for evaluating environmental and social implications of a proposed policy, plan or programme and provides means for looking at cumulative effects and appropriately addresses them at the earliest stage of decision making alongside economic and social considerations, is a major tool for assessing and ensuring conformity to such standards and guidelines. This particular Strategic Environmental and Social Assessment (SESA) is based on the reviewed Integrated National Transport Policy (INTP) which was developed in 2009 and later approved by through Sessional Paper No. 2 of 2012; and which is expected to operate in conformity with (EMCA 1999, and (EMCA Amendment, 2015). One key aim of reviewed INTP is to establish rules and regulations governing the management and ensure decrease in the levels of greenhouse gas emissions within Kenya cities, improve on air quality, and reduce dependency on fossil fuels. This is in addition to addressing other environmental and social concerns as Kenya strives to achieve its developmental goals as envisioned in the “Big Four Agenda”; Vision 2030 and 2063 Africa development Goals, all alongside UN Sustainable Development Goals. Implementation of this policy anticipates various environmental and social linkages manifested through the proposed projects. The SESA identified key environmental and social risks and recommended ways of integrating environmental and social sustainability strategies in the implementation of the reviewed policy.

As a practical and efficient planning and decision-making support tool, the effective application of recommendations from the SESA exercise should ensure that the strategic documents (plans, programs, policies, strategies, etc.) in the key sectors, including for instance energy, water, or waste management, which may cause significant adverse environmental and social; including health/safety effects are developed taking into account these likely effects. The reviewed INTP SESA has its base anchored in the Kenya’s NEMA regulatory frameworks, national policies, statutes, action plans and regulations and on World Bank’s Environmental

and Social Standards. Other equally important documents related to SESA are also consulted and inform the overall review of the current SESA project.

## **1.2 Rationale for the SESA**

There is a need to ensure that social and environmental considerations are incorporated in transport infrastructure development, management, and operations. The construction of infrastructure and maintenance of transport systems often affect the environment through destruction of flora and fauna, displacement of human settlements and livelihoods, habitat fragmentation and negative changes in environmental aesthetics. This realization is one of the factors that set-in motion the development of an Integrated National Transport Policy (INTP) in 2009. This was later approved through Sessional Paper No. 2 of 2012. The review of the policy was undertaken in 2019 to incorporate recent developments and other emerging issues. The policy recommendations will be implemented through pre-determined programs.

Implementation of the policy anticipates various environmental and social linkages manifested through the proposed projects. This SESA involved a comprehensive assessment of the policy in light of the proposed series of projects to establish basic environmental and social settings, standard methodologies and management plan structures. These concepts were applied in the scoping process and impact studies for each project for necessary review and approvals.

## **1.3 Overall Objective of the SESA**

The SESA is designed to assist in decision making and implementation of projects in the policy through highlighting the specific developments, associated potential environmental and social impacts and risks, costs and benefits wherever possible. It also provides alternatives and broad mitigating measures and action plans. An appropriate mix of initiatives for the implementation of the policy is also provided. The SESA helps ensure that specific initiatives aligned to the policy are designed in ways that they are environmentally sensitive and sustainable, thus supporting the overall success of the policy. This SESA project broadly seeks to provide a comprehensive assessment of Kenya's transport sector-wide policy (as contained in the reviewed INTP document) for potential environmental and social impacts (both positive and negative) of both transport systems and related developments. This also includes the identification of environmental and social gaps in legislation, regulations, and institutional capacity and strengthening public consultation mechanisms. This is important in order to

ensure that transport systems/modes' development and operation strategies of Kenya's transport sector are sustainable, inclusive, and equitable. This will also help in identifying institutional capacity gap, build capacity and help strengthen the public consultation mechanism. However, as with all environmental assessments, the SESA does not make decisions but rather guides the process of decision making.,

Upon completion and approval of the SESA, each of the projects related to the policy will individually be subjected to ESIA requirements.

Some key questions that guided the SESA:

- i. What is the scope of transport sectors and transport modes covered by the INTP document and what are the missing gaps?
- ii. What is the current status of environmental and social issues in the reviewed INTP document?
- iii. What are the transport sector environmental and social challenges/impacts in Kenya; and are they adequately covered in the reviewed INTP?
- iv. What are the environmental and social safeguard gaps existing in the reviewed INTP document?
- v. What are the best practices in other countries that contribute towards enriching Kenya's reviewed INTP?
- vi. What is the SESA data needed to fill the gaps; and give a policy document that is nationally and internationally acceptable, adequately addresses social and environmental safeguards, and ensures equitability and sustainability in the transport sector?
- vii. How can the SESA findings be effectively mainstreamed in the reviewed INTP document and be disseminated to the transport sector stakeholders?

#### **1.4 Specific objectives of the SESA**

The specific objectives of this SESA are as follows:

- 1) To assess transport sector systems, policies and activities for compliance to statutory and regulatory requirements; including conformity to environmental and social safeguards (as

described in World Bank, AfDB, EMCA, OSHA frameworks, and relevant International Agreements, among others);

- 2) Review INTP for Compliance with the Environmental, Health and Safety (EHS) Guidelines. The consultant will identify areas of application/mainstreaming of the EHS Guidelines in the reviewed INTP based on environmental and social issues identified.
- 3) Identify public concerns that can emanate from implementation of the reviewed INTP;
- 4) To highlight the specific transport sector systems and activities for potential environmental and social impacts and risks, costs and benefits wherever possible.
- 5) To establish and provide mitigation measures and alternatives for managing for all significant social and environmental impacts; and recommend action plans;
- 6) Provide an analysis of overarching policy issues in the transport sector on gender and recommend ways of strengthening gender equality, and especially women's roles in transport policy decisions and implementation.
- 7) To provide baseline information/data that will assist in deciding on the most appropriate mix of initiatives for the implementation, sustainability, monitoring and evaluation of the policy.

The assessment has provided a comprehensive transport sector wide assessment for information on potential impacts, both positive and negative of developments, and the identification of gaps in regulation, institutional capacity and the strengthening of the public consultation mechanism.

## **CHAPTER TWO**

### **2.0 SCOPE ASSESSMENT AND METHODOLOGY**

#### **2.1 Scope of the SESA and Criteria**

The SESA is based on the reviewed INTP 2009 and Sessional Paper No 2 of 2012<sup>3</sup>. The SESA aimed to establish key environmental and social issues related to programs, projects, and plans; and recommend actions that ensure compliance and conformity to both national and international environmental and social safeguards and related obligations. The aim is to ensure that the reviewed INTP of Kenya's transport sector addresses contemporary and pertinent social and environmental issues in line with national and international obligations; contributes to social justice and gender and social inclusion and contributes to environmental sustainability. In this SESA, the World Bank Environmental Guidelines on Social and Environmental safeguards and Kenya's EMCA 2009<sup>4</sup>, and various transport legislations and regulations, among others, formed important reference materials.

#### **2.2 Category of stakeholders consulted**

Categories of stakeholders considered for consultation included; government institutions, , government agencies, ministries departmental staff, transport sector players, research institutions, trade union representatives, members of civil society, professional bodies and other individuals as follows; Kenya Urban Roads Authority (KURA), Kenya Rural Roads Authority (KURRA), Kenya National Highways Authority (KeNHA), Kenya Rural Roads Authority (KERRA), Nairobi Metropolitan Area Transport Authority (NaMATA), Kenya Airports Authority (KPA), Kenya Civil Aviation Authority (KCAA), Kenya Pipeline Company (KPC), Kenya Railways Corporation (KRC), Kenya Maritime Authority (KMA), Kenya Roads Board (KRB), National Industrial Training Authority (NITA), LAPSSET (Lamu Port South Sudan Ethiopia Transport) Corridor Development Authority), Nairobi Transport and Safety Authority (NTSA), Engineers Board of Kenya (EBK), National Construction Authority (NCA), National Environment Management Authority (NEMA), Kenya

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<sup>3</sup> Sessional Paper No 2 of 2012 available at:

<https://repository.kippra.or.ke/bitstream/handle/123456789/3063/Sessional%20Paper%20No.%202%20of%202012.pdf?sequence=1&isAllowed=y> (Accessed on 3/01/2023)

<sup>4</sup> Environmental Management and Coordination Act (EMCA), 1999 Available at:

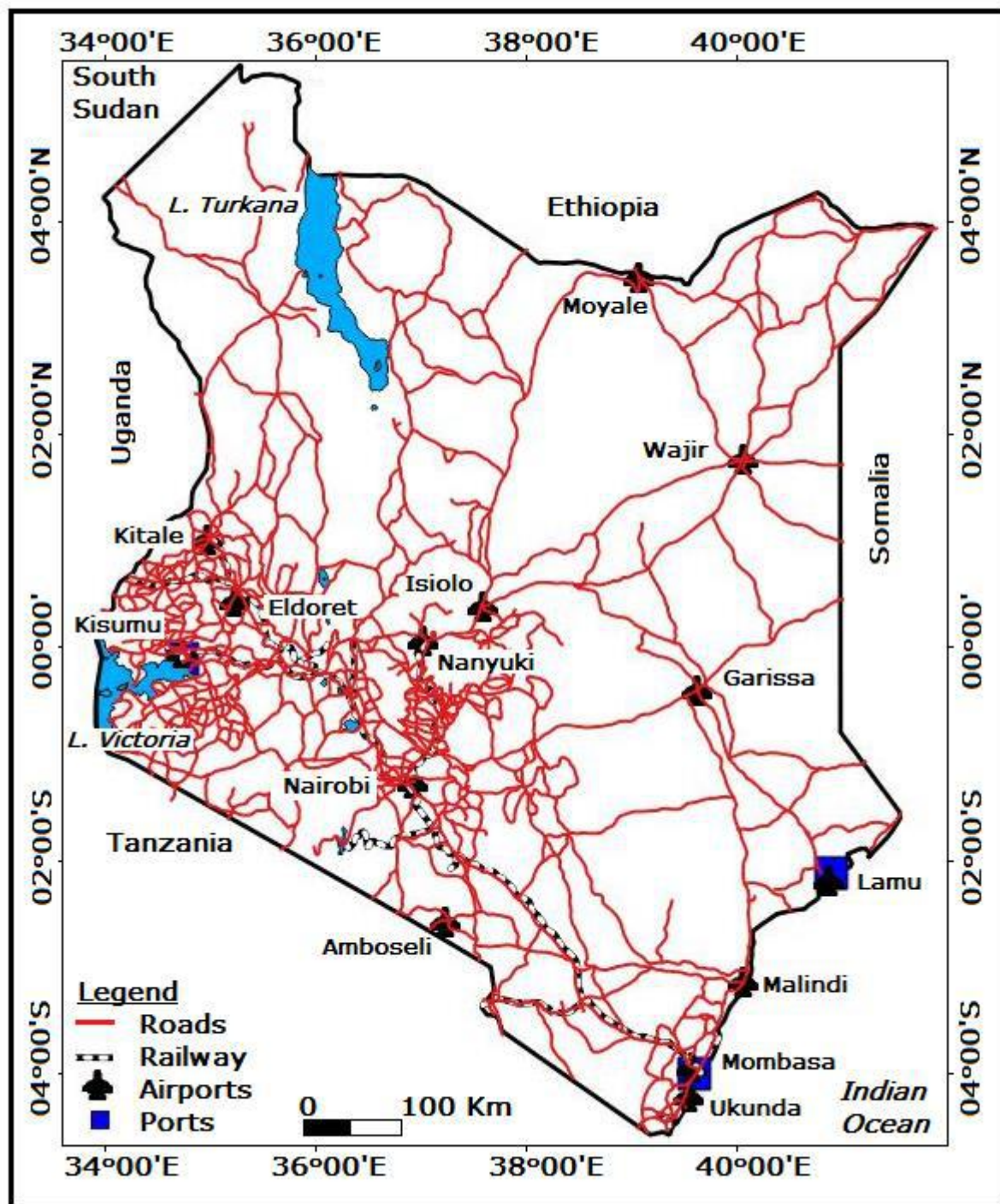
<https://www.nema.go.ke/images/Docs/Legislation%20and%20Policies/EMCA%20Act%202015.pdf> (Accessed on 3/01/2023)

Forestry Research Institute(KEFRI), Kenya Wildlife Service(KWS),National Land Commission(NLC),Kenya Water Resources Management Authority(KWaRMA), Kenya Chamber of Commerce and Industry(KNCC),Kenya Private Sector Alliance(KPSA),Kenya Transporters Association(KTA),Matatu Owners Association(MOA),*Boda-boda* Association, Kenya Long Distance Truck Drivers Association(KLDTD) and Association of Electric Mobility Vehicles Development in Africa.

### **2.3 Geographical Scope**

The geographical scope of the SESA considered the whole of Kenya, but a sample selection of stakeholder and public perceptions focused on Nairobi, Mombasa, Kisumu, Eldoret, Isiolo and Lamu. The team also conducted foreign benchmarking visits to the Dubai and South Africa (Annex 1). The technical scope considered all the guidelines provided in the TORs (appendix 1). Map 1 (one) shows Kenya's complex network with road, rail, air, and ports.

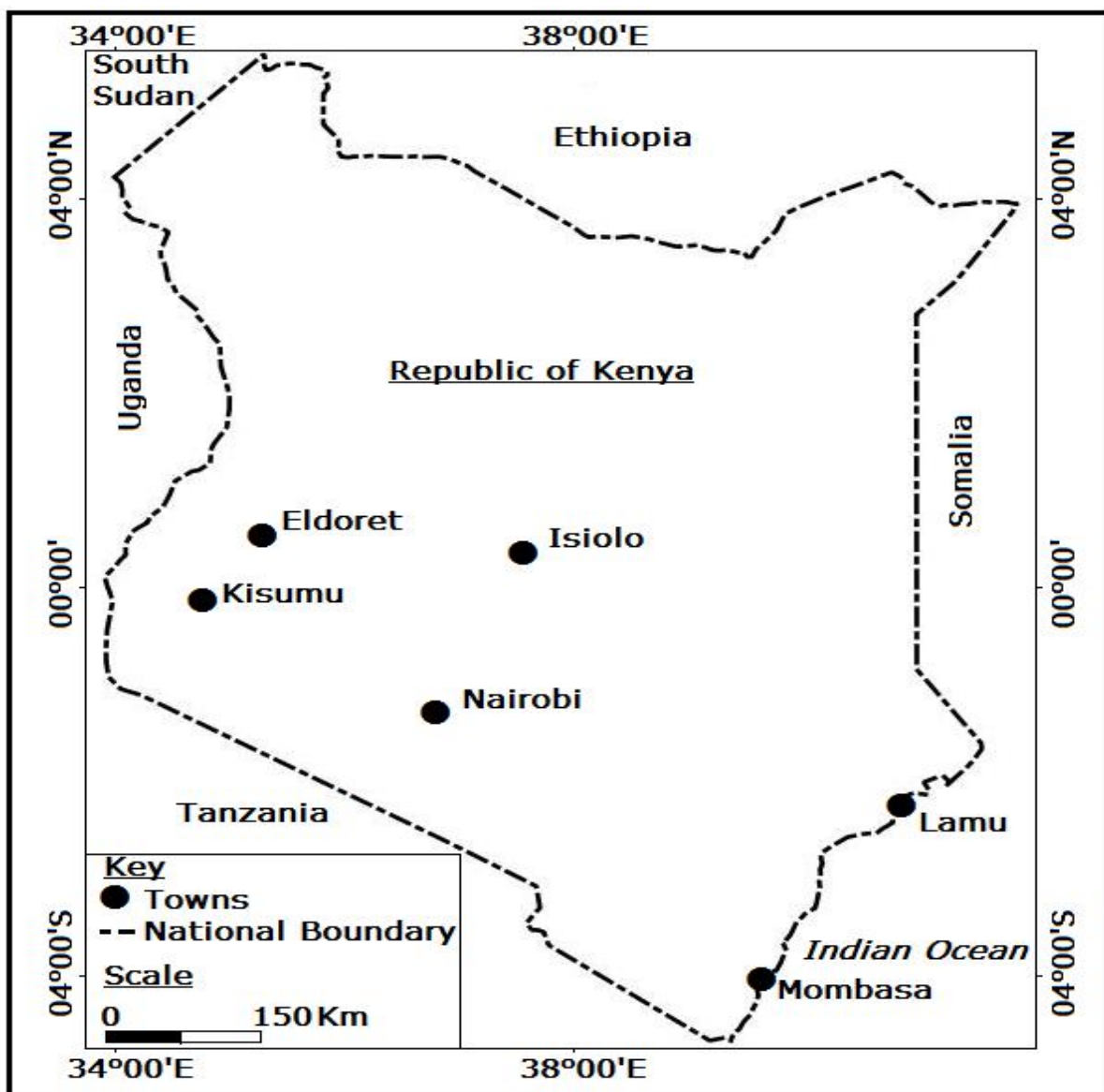
**Map 1: Map of Kenya Showing Transport Network**



The selection of areas was based on the following; Eldoret owing to the pipeline oil depot and inland container deposit which will serve the entire region through rail, air, and road. Isiolo is near the oil deposit in Turkana and serves the Lamu Port South Sudan Ethiopia Transport Corridor Project (LAPSSET) transport corridor. In addition, Isiolo is one of the proposed resort cities of the LAPSSET corridors. On its part, Kisumu connects Kenya to the hinterland and has

Lake Victoria, with the largest inland oil transport in Kenya. A site visit to the Kenol-Marua and Mombasa-Lunga Lunga roads were also done. Mombasa was sampled because it hosts Kenya's main port with the *Ndongo Kundu* industrial hub. Nairobi was selected due to its centrality and cosmopolitan nature of the city, while Lamu marks the start of the LAPSSET corridor, and it has a proposed thirty-two (32) birth. Three of the 32 births are at various levels of development through public funding, and 29 are proposed to be implemented through Policy, Plan, or Program (PPP). The maps below showing the study areas (Map 2);

**Map 2: Map of Study Areas**



Source: Kenya National Bureau of Statistics (2008)

## **2.4 Baseline environmental and socio-economic situations**

This section presents baseline environmental and social situations of the country generally and on the six selected sites in particular.

### **2.4.1 National Environmental and Social Baseline Information**

#### **1. Biodiversity**

##### **(a) Fauna**

##### **i) Birds**

Kenya boasts of diverse bird types inhabiting both forested areas settled areas. With over 1,000 bird types, many are resident while others migrate yearly to and from the African region while others move as far as Asia, Europe and some to the Middle Eastern lands. Some of these birds according to Bennun and Njoroge (1999) do not move outside of the African continent. Birds fly paths in Kenya include; around Turkana, wider Kajiado and Narok ecosystems and around the lakes.

##### **ii) Amphibians' and reptiles (*Herpetofauna*)**

Kenya has a rich herpetofauna diversity, with amphibian largely confined to wetland ecosystems and forests; while reptiles have a wider distribution especially in arid and semi-arid areas. Both amphibian and reptiles are good indicators of environmental change and are quite sensitive to ecological changes or disturbance. A number of both amphibian and reptilian species remain highly vulnerable, or endangered or threatened with extinction, and especially due to ecological disturbances and climate change.

##### **iii) Fish and Marine invertebrates**

Kenya's lakes and rivers host diverse endemic fish species. With a big number of freshwater bodies, the country also hosts marine species some of which are endangered. Fish are found in Lake Turkana, Ewaso Nyiro, Boji plains, Kombeni and Manjema, Lake Victoria. New fish types have also been introduced in Kenya in the last few years. More than 20,000 insects also inhabit marine and the inland environment in Kenya. These include beetles, butterflies, ants, locusts, bees flies and fleas many of which are important in the process of pollination. Marine

invertebrates include but are not limited to zooplankton, crustaceans' anemones, lobsters, prawns, corals and jellyfish.

#### **iv) Mammals**

Kenya has a rich diversity of both small and large mammals. Large animals including herbivores, carnivores and omnivorous types are found in plenty in Kenya. The big five wild animals are all found in big numbers in Kenya's national parks, game parks and public and private conservancies. Domesticated animals such as cows, camels, goats, sheep, cats and dogs are also found within many rural households and are domesticated for food and provision of security. Mammalian species are found in all parts of the country, with large mammals largely confined to game parks and game reserves. However, sizeable numbers also occur outside protected areas. Preservation of wildlife corridors is critical in transport infrastructure development.

#### **b. Flora**

Kenya's landscape is littered with thousands of plant types including trees, shrubs, grasses and a variety of crop species. While majority of these plants are natives' others are exotic having found their way into the ecosystem through the processes of diffusion and dispersal. Native plants of Kenya include sand forest poison rope found along the coastal region and rocky areas as well as sage bush trees. Black ironwood tree found around the Great Rift Valley areas and Mtondoo trees have existed in Kenya for hundreds of years. Flowers, tea and coffee farms are also a common feature in Kenya's highland regions of central, rift valley and parts of lower eastern regions.

### **2. Physical characteristics**

#### **(i) Topography**

Topographically, Kenya is divided into upper, lower, highland and midland zones. The upper highland zones are majorly wet and lie at an attitude of between 1800-2550 metres above sea level. The lower zones have hills plateaus and small mountainous zones lying between 1,500-1800 metres above sea level. The upper regions at between 1300 and 1500 and cover areas with volcanic activity. The lower zones have very erodible soils, steep slopes and forests making them unsuitable for farming.

## **(ii) Climatic Conditions**

Kenya lies at the equator with three types of climate namely; temperate subtropics found in south western and western regions, hot and humid temperatures and hot and drylands. Climatic conditions in Kenya are influenced by attitude, land use patterns and energy use among others. The mountainous regions in Kenya experience cold weather and in some instances Mount Kenya peaks drop to temperatures below zero during the night. Areas like the highlands that experience moderate temperatures record high crop yields with the greater Rift valley and Central regions of Kenya acting as the bread baskets for the country.

## **(iii) Water and sanitation**

Kenya depends on both surface and groundwater resources. Groundwater is majorly used in rural areas with surface water surfaces used in both rural and urban areas. The two main surface water bodies in Kenya are Tana River and Lake Victoria which are the longest while the highest yielding aquifers are found in Rift Valley, Athi, Tana and Ewaso Nyiro basins. The five water catchment areas are Lake Natron, Lake Victoria, Lake Nakuru, Lake Baringo and Lake Turkana. River Nile drains into the Mediterranean Sea through Uganda, South Sudan and Egypt thus making it a lifeline to many people in the region. A small number of people in Kenya rely on unimproved water sources from as ponds and un-purified water pans. Generally, about 10 million Kenyans use contaminated surface water sources and about 5million of this practice open defecation.

## **3. Population**

Kenya has an estimated population of about 57, 516,407 people. The growth in the population of people has been attributed to two major things namely; high fertility rates and low mortality due to improved healthcare. It is projected that by the year 2030 there will be a total of 63,860,000 persons living in Kenya. Nairobi has the highest population with a total population of about 4.4 million while Lamu has the lowest population with only 143,920 people. As at 2021 there were 98.77 males per 100 females. This translates to a 50.3% female population compared to 49.7% males. The increase in population ostensibly puts more pressure on natural resources and especially land while at the same time demanding for increased transport sector development projects to cater for the growing population. With an increased population demand for transport, housing, sewage and sanitation, water, energy sources and food continue

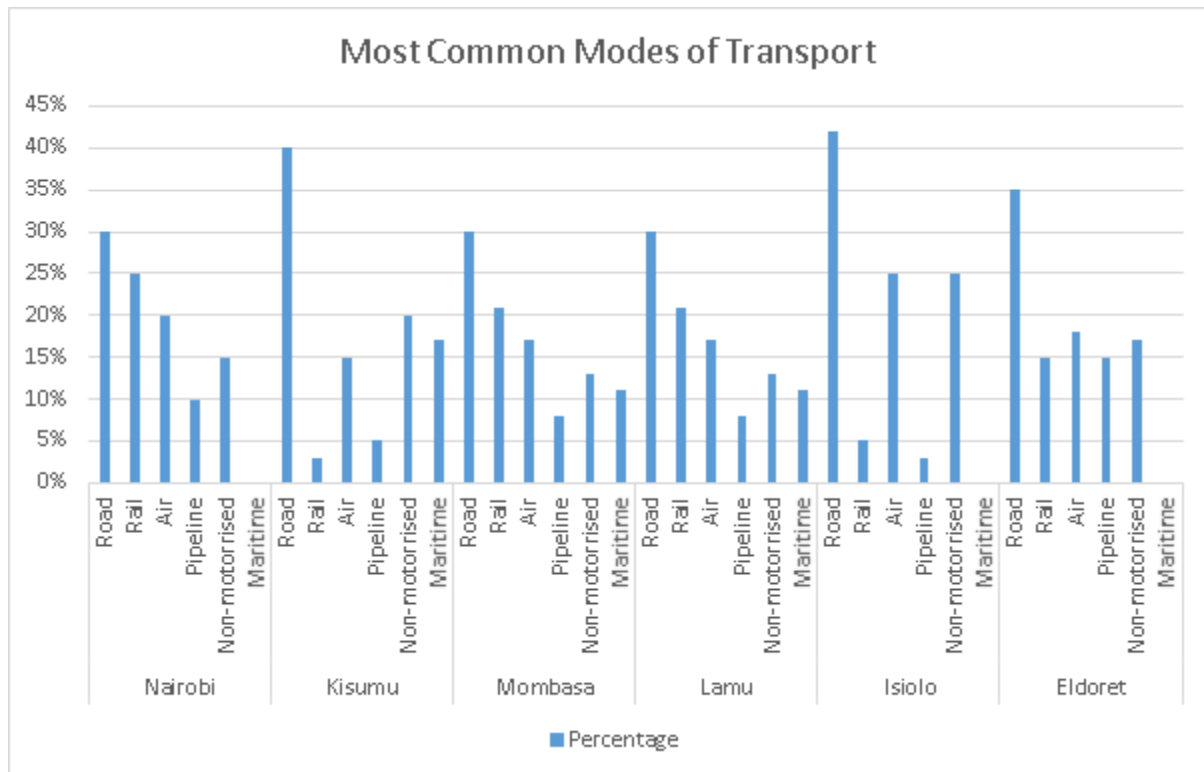
to increase. Pressure on land use and subsequent demand for agricultural land will also lead to adverse effects on the environment.

Belief systems play a significant role in the lives of Africans. In Kenya every community boasts of unique cultural norms which have passed down over the years from one generation to the other through word of mouth and by written documents. Tangible (movable, immobile and underwater) cultural heritage in Kenya clothing, artwork and archaeological sites which are majorly located in Kariandusi, FortTenan, Olorgesale and along the coastal region. Intangible (cultural Heritage) cultural assets in Kenya include oral stories and histories, legends, religious rites, songs and dances. With more than forty-three (43) speaking communities, each group possess a unique heritage related to burials, marriages, births and initiation. There also exist historic buildings for instance in Lamu and works of monumental sculpture or painting in Mombasa, Kitui and Machakos. Major livelihood patterns of majority of communities in Kenya range from pastoralism, fishing, faring, fishing, bee keeping, horticulture, poultry keeping and mining. Trade is practiced by almost all communities for either subsistence or on a commercial scale. As the basis within which all these economic activities are practiced, land is a very important and highly valued asset. Overtime, conflicts over land related resources have thus been experienced especially during electioneering periods in areas around central and the greater Rift Valley. The Luo, Turkana, Pokot and Suba communities practice fishing along lakes while large scale plantation farming is practiced in the Rift and Central regions of Kenya.

## **2.5 Baseline Environmental and Socio-economic Profile of selected Locations**

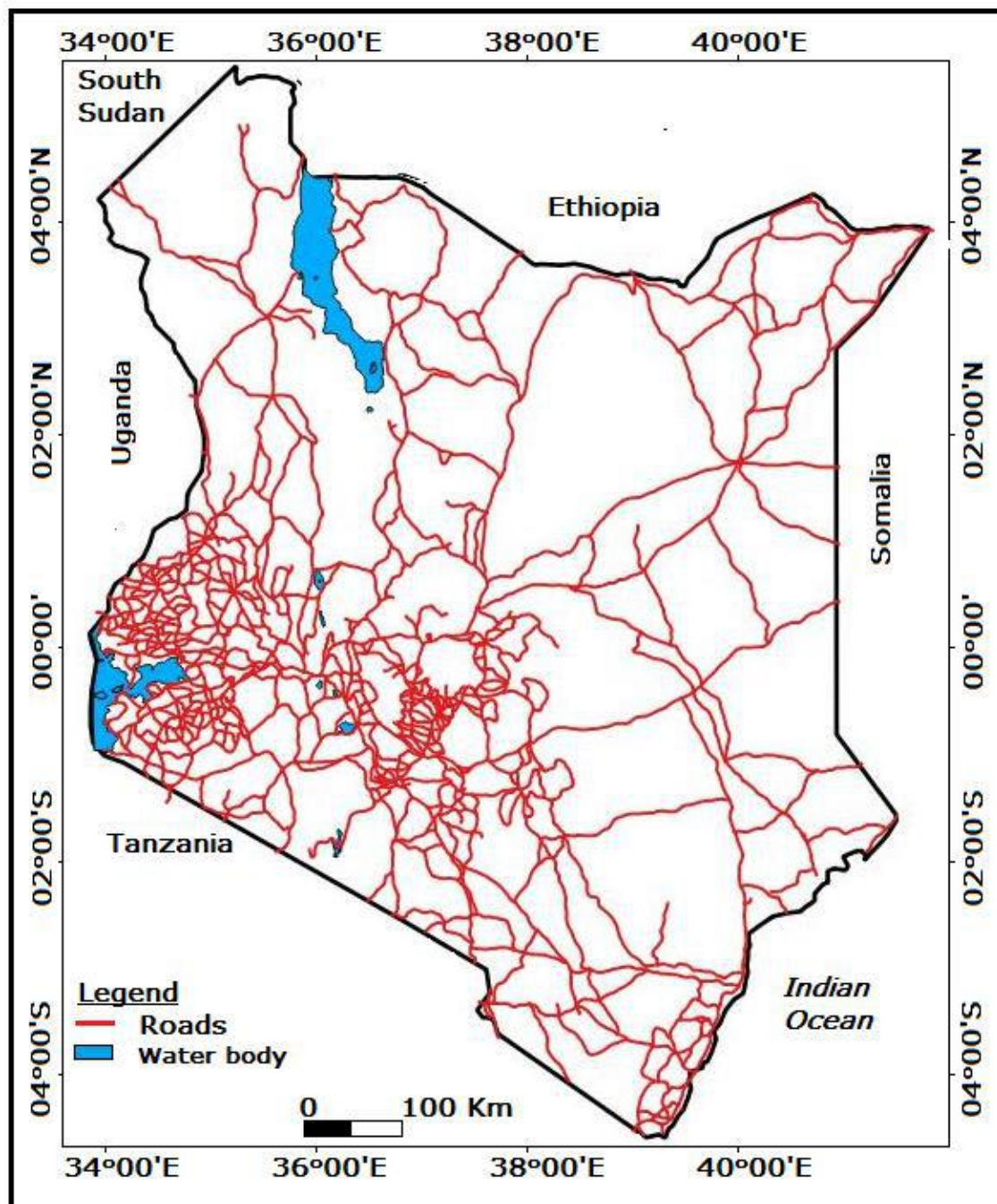
Mombasa, Nairobi, Isiolo, Lamu, Eldoret and Kisumu have a total population of about 6,992,222 as follows; Nairobi, 4,396,828; Kisumu, 714,660 Isiolo, 121,061, Lamu 15472, Mombasa 1208303 and Eldoret 445,898 (Kenya National Bureau of Statistics, 2019). The common modes of transport are presented below;

**Figure 1: Most Common Modes of Transport per Region**



From the figure above road transport is the most commonly used mode of transport. The map below shows road transport infrastructure developments in Kenya;

Map 3: Kenya Road Network



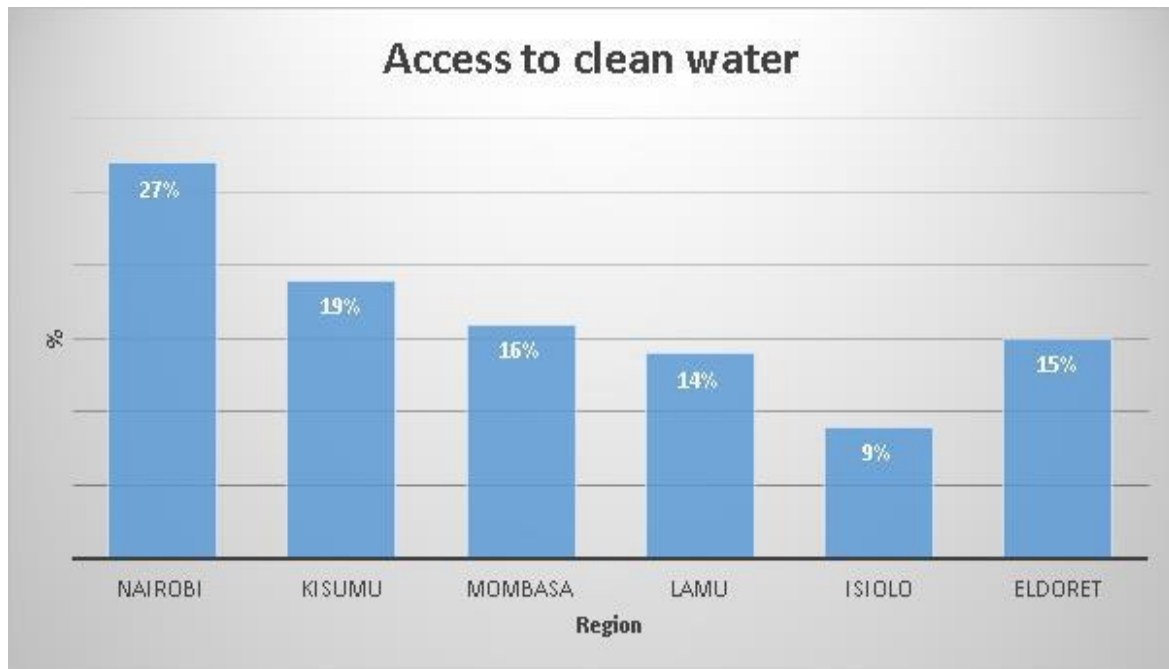
The selected sites boast of very well connected transport network with various natural resources, including land, national parks with various wildlife species and forests, which if destroyed, will have negative environmental, social, safety and health impacts/risks thus;

**Table 2: Table showing natural resources in selected locations**

<b>Location</b>	<b>Natural Resource</b>
Nairobi	Karura Forest, Wildlife species (Lions, giraffes, elephants, Rhinos, antelopes, birds etc., land, water,
Kisumu	Land, water bodies, wildlife species, fishes, crocodiles, Hippopotamus, birds etc.)
Eldoret	Land, water, wildlife species (monkeys, antelope, hundreds of bird species etc.)
Isiolo	Water resources, land, wildlife species (Hyena, monkeys, antelopes, gazelles, waterbuck, Kudu, birds etc.), livestock
Mombasa	Water, land, marine wildlife species (fishes, sea species), monkeys, endangered owls, birds, snakes, coral reefs, mangroves, celestial species etc
Lamu	Endangered bird species, gazelles, antelopes, giraffes, donkeys, land, water, forest, marine species, celestial species, coral reefs, mangroves, fossil fuels etc

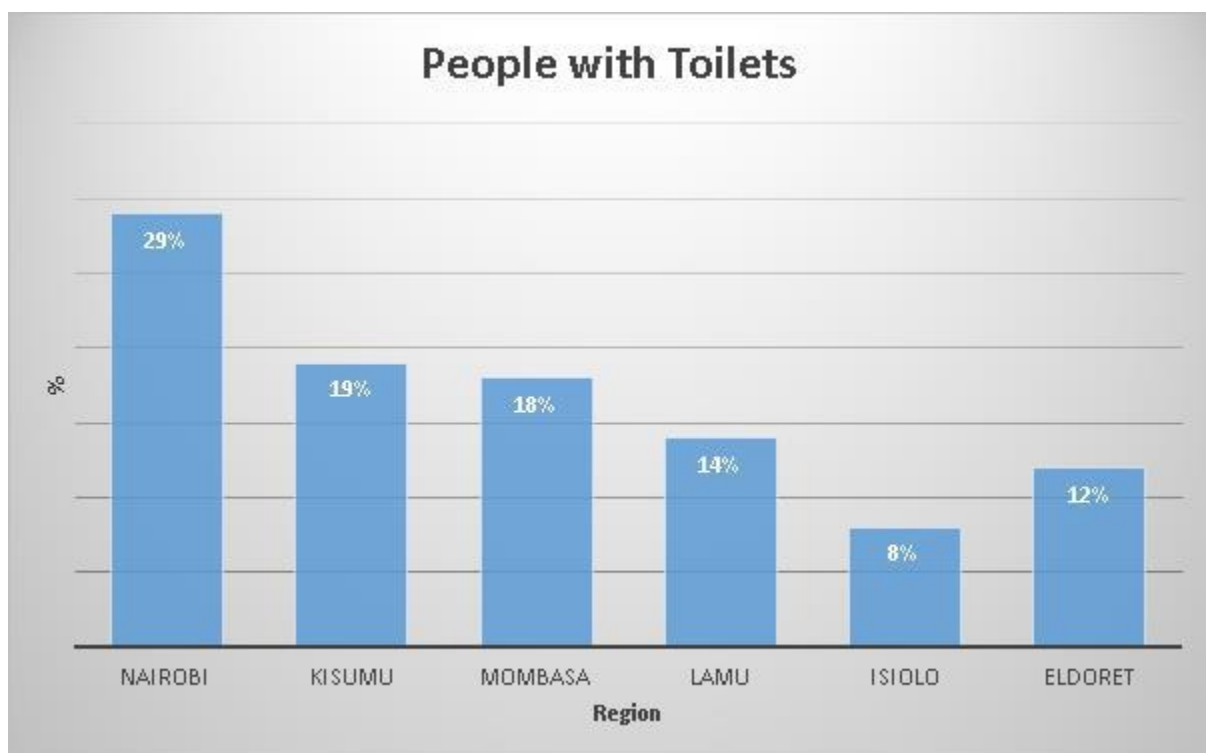
In addition, land use and livelihood strategies vary considerably across the six locations. These include (but are not limited to); livestock keeping in Isiolo, fishing in Kisumu, agriculture in Eldoret, trade and commerce in Nairobi, and tourism and marine activities in Mombasa and Lamu. All the areas suffer from water shortage, and poor sanitation is experienced periodically in these locations as follows;

**Figure 2: Access to clean water**



Community members indicated access and availability of toilets as follows;

**Figure 3: People with Toilets**



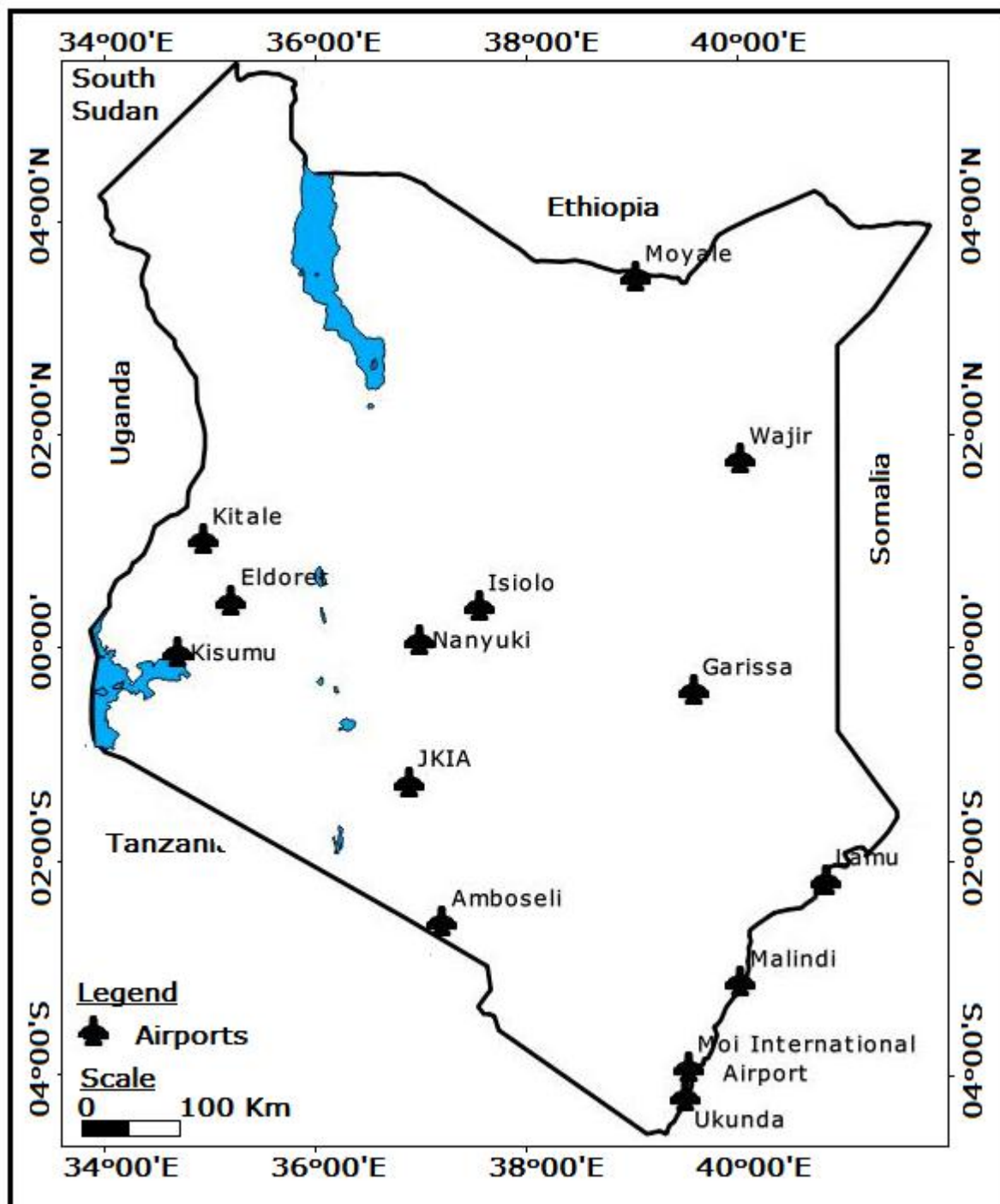
In Nairobi, Eldoret, Kisumu and Mombasa, people rely on electricity as the main source of power, while in Lamu and Isiolo, fuelwood is used for cooking and lighting. All the regions except Lamu and Isiolo have well-established government health facilities, which serve the majority of the populace. Education levels in four of the selected locations are high, while literacy levels in Isiolo and Lamu are still low. In terms of infrastructure development, Isiolo and Lamu lag behind as they still rely on a basic poor road network. Apart from Lamu, which has Manda, also called Lamu airport, all other regions have a functional International airport, with Nairobi and Kisumu having the largest ones. The six locations thus act as important connectivity areas to the whole of Kenya and the region. The figure below shows airports by region in the five locations;

**Table 3: International Airports by Regions**

<b>Region</b>	<b>Name of Airport(s)</b>
Nairobi	JKIA. Wilson Airport
Isiolo	Isiolo International Airport
Eldoret	Eldoret International Airport
Mombasa	Moi International Airport, Ukunda Airport
Kisumu	Kisumu International Airport

The map below shows Kenya airport transport network;

**Map 4: Kenya Air Transport**



In addition, the selected areas have recorded cases of insecurity and youth bulge associated with population increase induced by development activities. Mombasa and Nairobi have forest covers, for example, the Kaya and Arabuko Sokoke Forests in Mombasa and Kereita and Karura Forests in Nairobi. Some of the forests are home to some of the vulnerable and marginalized communities like the Digo and Yaaku. Mombasa, Lamu, Nairobi, and Kisumu

are endowed with large water bodies, namely, the Indian Ocean and Lake Victoria and have many other rivers feeding into them. LAPSET development projects span in all the six selected areas.

The selected areas are also characterized by insecurity due to organized criminal gangs' activities. According to the National Crime Research Center (2012), Isiolo, Mombasa, Lamu, Kisumu, and Nairobi recorded high levels of organized criminal gang activities. The increase in organized criminal gangs is also attributed to the bulging youth population in these areas.

The specific environmental, social and economic profiles of the six selected regions are presented as follows;

### **2.5.1 Socio-Economic and Environmental Profile of Eldoret**

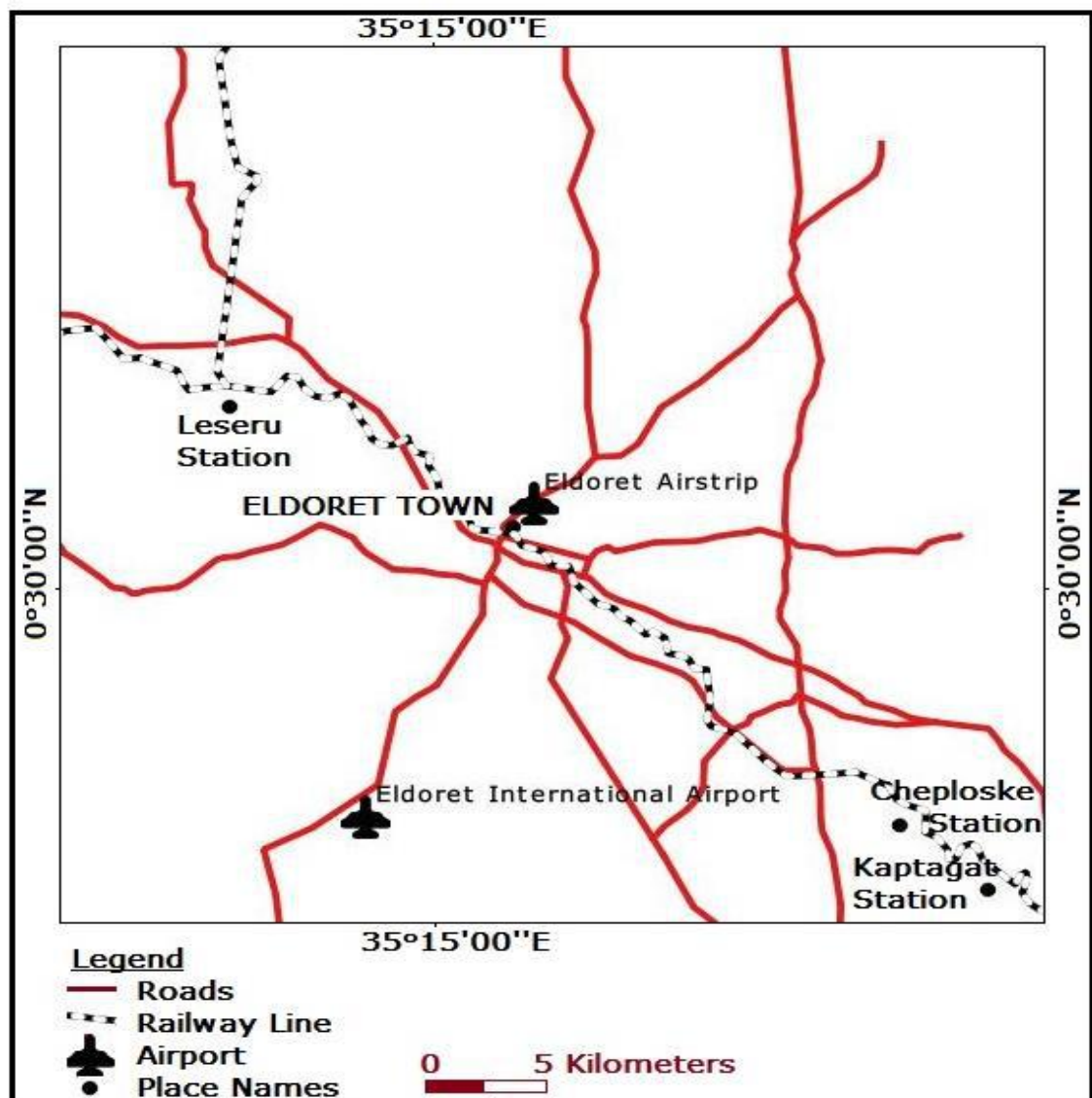
Eldoret is the headquarters of Uasin Gishu County. Eldoret is surrounded by prime agricultural lands which are used for agriculture, pastoralism, water catchments, nature reserves, urban and rural settlements, industry, mining, infrastructure, tourism and recreation. The main livelihood activity, however, is agriculture, and the county is one of Kenya's largest contributors to food security. Eldoret also acts as a trading centre for Uasin Gishu's economy, driven by large-scale grain farming, dairy and horticultural farming. The town is also a local manufacturing hub with a number of nationally recognized manufacturing concerns, including Rai Plywoods, Rupa Textiles, Kenya Pipeline Company, Kenya Co-operative Creameries as well as corn, wheat and pyrethrum factories all within the town.

Eldoret, particularly the Elgon View area, is the hometown of numerous Kenyan elite athletes. The high altitude makes it an ideal training ground for many middle- and long-distance athletes. Eldoret is also home to the International Association of Athletics Federations (IAAF)'s High Altitude Training Centre for Kenyan and international athletes. Many young people from the area have joined the athletics career and have put Eldoret on the international map. The influx of athletes has had impacts on transport, such as increased air passengers worldwide.

Culturally, Eldoret is a cosmopolitan town with many ethnic groups residing there. Society is patriarchal, with women having a lesser say in decision-making. Like most of Kenya, three categories of land tenure in Kenya, namely: private land, public land and community land.

Transport infrastructure network is diverse as shown below;

**Map 5: Map of Eldoret Town Showing Transport Network**



Eldoret has the pipeline oil depot and inland container deposit, which serves the entire region through rail, air, and road. The region's importance with regard to transport infrastructure is a result of the international airport, the pipeline terminals and important road connectivity, especially to Uganda and the western areas of Kenya. It is the gateway to the northern transit corridor and the gateway to the East African Community. It is the headquarters of the North Rift economic bloc. Its infrastructure provides a market to regional and international markets for perishable goods. With such developments, the environmental areas affected include but are not limited to loss of and reduction of biological diversity, land degradation, fragmentation and habitat loss, including loss of aesthetic value of landscapes.

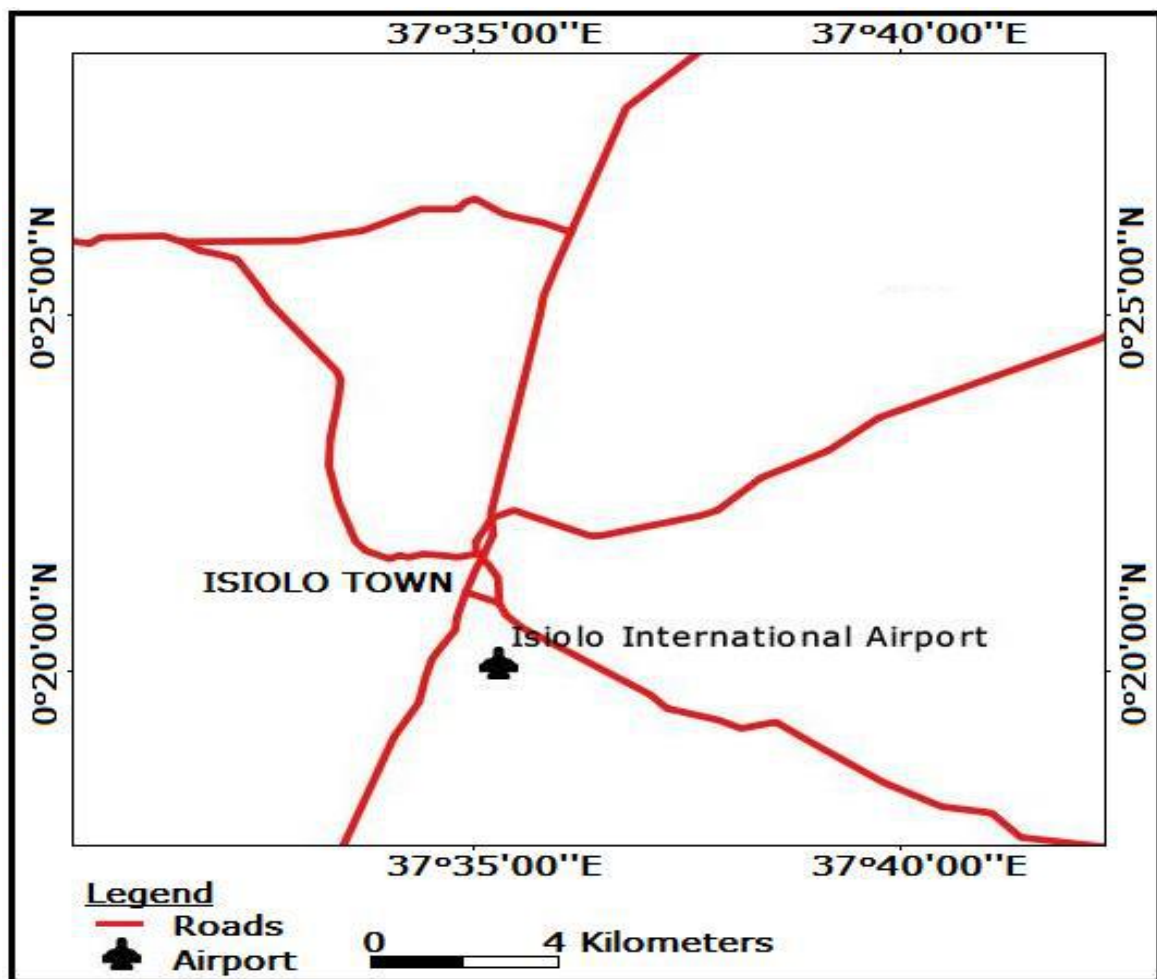
### **2.5.2 Socio-Economic and Environmental Profile of Isiolo**

Isiolo is predominantly occupied by the Somali and Boran, who are nomadic pastoralists. They are attached to their land and rely on livestock as their primary source of livelihood. They occupy large portions of land and heavily rely on the availability of water, pasture, and labour to manage their livestock. The land is mainly used for grazing (80%) and subsistence farming. Other secondary sources of livelihood are small-scale agriculture and trade. Transport infrastructure construction may have positive effects, such as opening up markets for their livestock. However, the construction of these infrastructures will take up some of their lands and result in increased pollution. The two communities are patriarchal, with women being subordinate to men. This has implications on community engagement processes and approaches. Opening up the area may create more opportunities for women, men and marginalized groups for commerce and employment.

Isiolo is forecasted to connect the oil deposits in Turkana and serve the Lamu Port South Sudan Ethiopia Transport Project (LAPSSET) transport corridor. It is one of the proposed resort cities of the LAPSSET corridors. Isiolo is also projected to connect the urban areas in the northern region and the rest of Kenya. The Isiolo, Wajir, Mandera road corridor is the only road that links the three counties and forms part of the wider Mombasa, Isiolo, Wajir, Mandera, Garissa, Kismayo and Mogadishu road corridor.

Isiolo's pastoral communities are marginalised groups that require protection when transport infrastructure developments are being carried out. These include the Borana, who reside along the transport corridor in Kachuri, Kula Mawe and Modogashe. The development of transport corridors generally has implications on biophysical structures such as land, water and biodiversity.

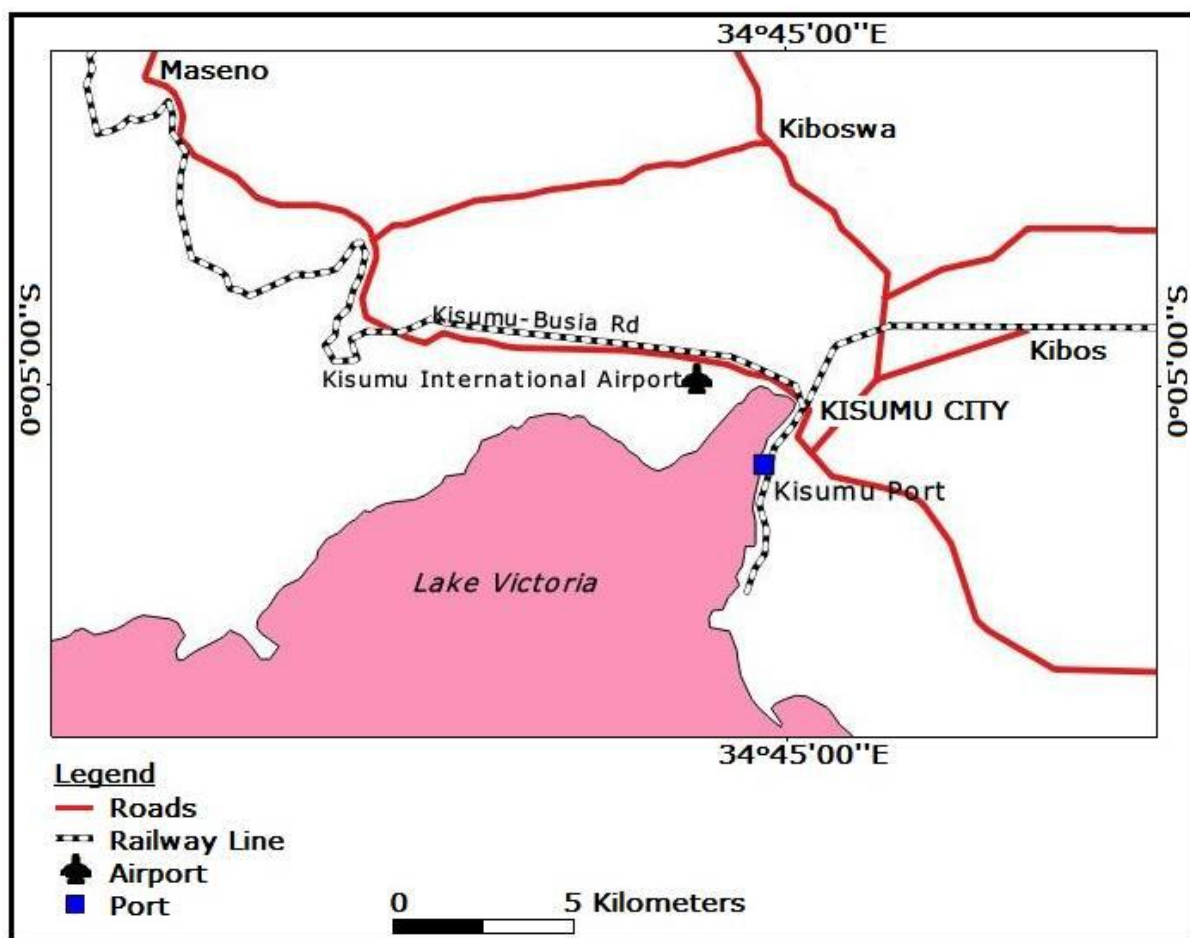
**Map 6: Map of Isiolo Town Showing Transport Network**



### **2.5.3 Socio-Economic and Environmental Profile of Kisumu**

The City of Kisumu is the commercial centre and headquarters of Kisumu County. Kisumu is an Kenyan inland port city on Lake Victoria and the headquarters of Kisumu County. It forms the commercial, industrial and transportation center majorly due to its water, rail and air connection serving western Kenya and the Great Lakes Region. The map below shows Kisumu transport network;

**Map 7: Map of Kisumu City Showing Transport Network**



The risks/impacts associated with such transport infrastructure in the Lake Victoria basin include but are not limited to;

**a. Lake Victoria Basin Ecosystem**

Lake Victoria Basin covers an area of 68 800 km<sup>2</sup>, with a long shoreline of approximately 3500 km. The Lake is a transboundary aquatic ecosystem shared by three East African countries: Tanzania, Uganda and Kenya. The region is an important socio-ecological system endowed with wetlands, rangelands (drylands), forests, woodlands and farmlands. Within these ecosystems are key natural and cultural heritage resources, which support diverse biodiversity and provide natural capital for economic development that supports livelihoods. The Basin supports a diverse set of freshwater species and habitats, which provide a wide variety of ecosystem services. The region is known for high levels of species richness and endemism.

This Basin is most at risk from human activity and has undergone enormous environmental changes. There is a lack of basic information on the status and distribution of freshwater species. Equally, there is the absence of long-term monitoring of freshwater biodiversity. Freshwater species in the basin are highly threatened, primarily by pollution, biological resource use (chiefly overfishing), agriculture and invasive species.

#### **b. Wetlands**

Biodiversity is especially abundant in wetland settings. Swamps are crucial year-round habitats for many indigenous birds and fish, and they are important seasonally for the feeding and reproduction of other species. They equally act as a refuge for species from predators. Some of the swamps are Dunga, Koguta and Kusa.

#### **c. Vegetation**

Most of the basin is characterized by tropical grasslands—land on which the dominant plant forms are primarily graminoids (grasses, sedges, and rushes) and forbs (broad-leaved herbaceous flowering plants). In combination with other trees and shrubs, they support exceptional faunal diversity of large grazing and browsing mammals and provide habitat for a wider array of smaller animal species.

#### **d. Natural Landscapes**

They are especially important for biodiversity conservation since many harbour unique assemblages of plants and animals, including high levels of endemic species. Examples of hills within the county include Kajulu, Kisian, and Got Nyabondo. The main drivers of Hills ecosystems degradation are deforestation, housing developments, mining, uncontrolled grazing, encroachment and the effects of climate change.

#### **e. Socio-economic profile of Kisumu**

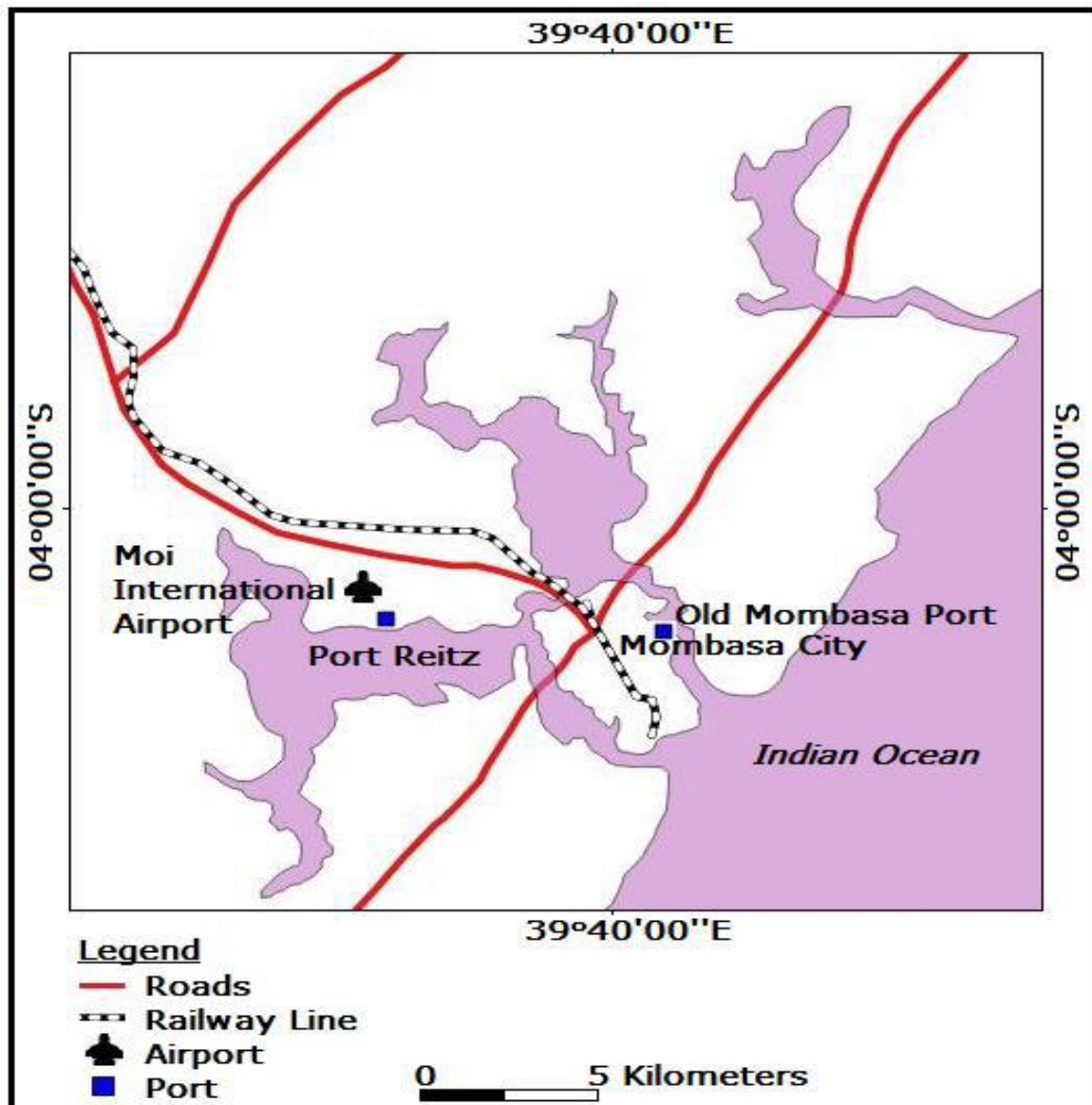
The current city population in Kisumu has a high level of skilled and unskilled unemployment. However, the city experiences a high unemployment rate, with the majority of the working population engaged in informal activities. The city's main income sources are wage employment, informal trading, urban livestock and agriculture and public transport, especially '*bodaboda*' (bicycle and motorcycle taxis).

The urban development challenges include water, sanitation, shelter, energy and electricity, transportation infrastructure, market infrastructure, solid and liquid waste management, and citizens' safety and security. The City lacks adequate, affordable shelter due to the high poverty levels with the majority of the residents living in the peri-urban and informal settlements lacking basic services resulting in high congestion of housing units in these areas.

#### **2.5.4 Socio-Economic and Environmental Profile of Mombasa and Lamu**

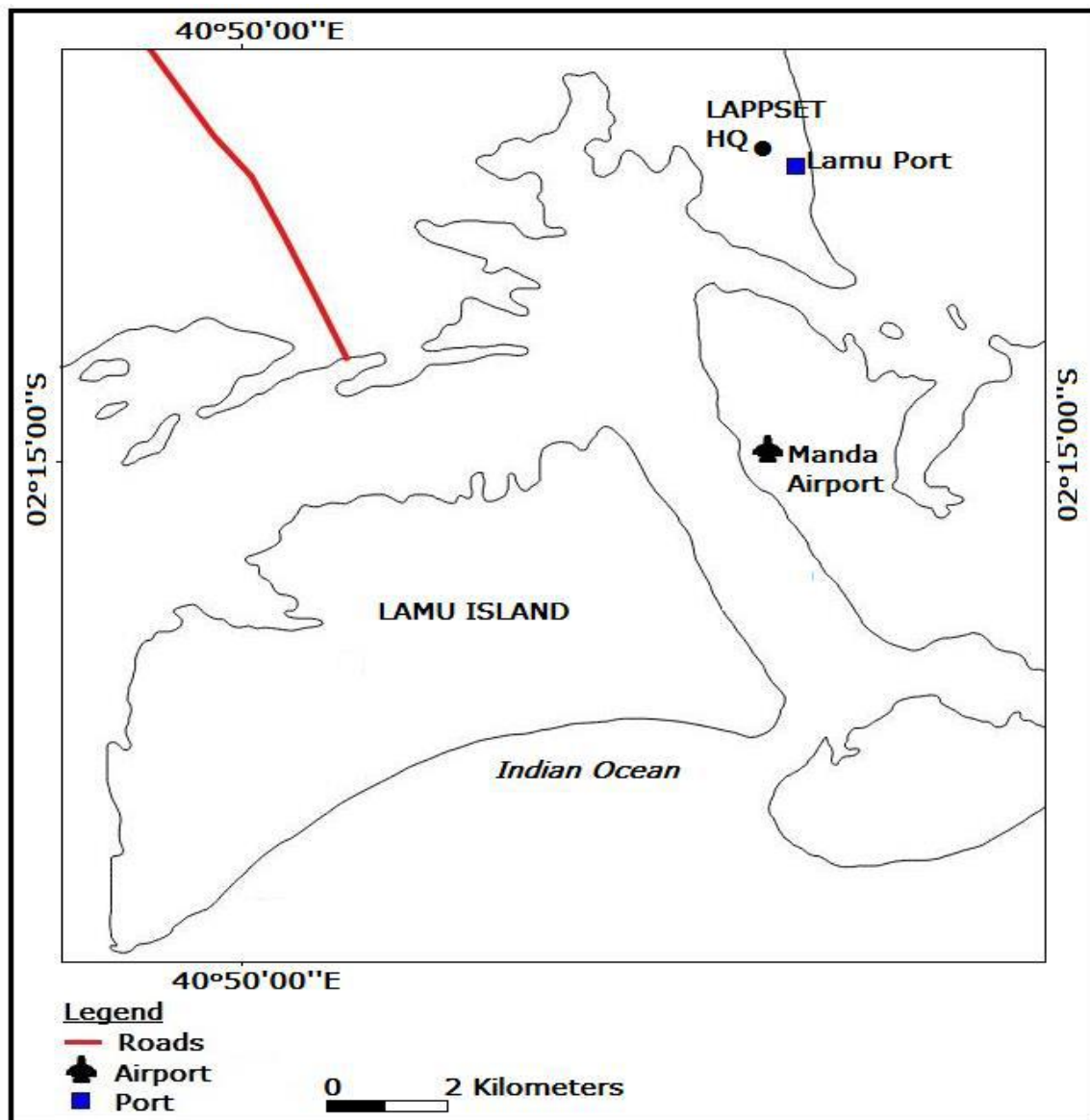
Mombasa hosts Kenya's main port with the *Ndongo Kundu* industrial hub. It also houses the Kilindini Harbour, Kipevu oil terminal and Kenya Ferry Services. Other important transport sub-sector establishments in Mombasa include Kenya Ports Authority, Kenya Maritime Authority, Kenya National Shipping Line, and Bandari Maritime Institute. The Kenya Railways Corporation manages both the Standard Gauge Railway (SGR) and the old meter gauge railway line, which are critical in transportation. The maps below (Map 8) and Map 9 show transport infrastructure network of Mombasa and Lamu.

Map 8: Map of Mombasa City Showing Transport Network



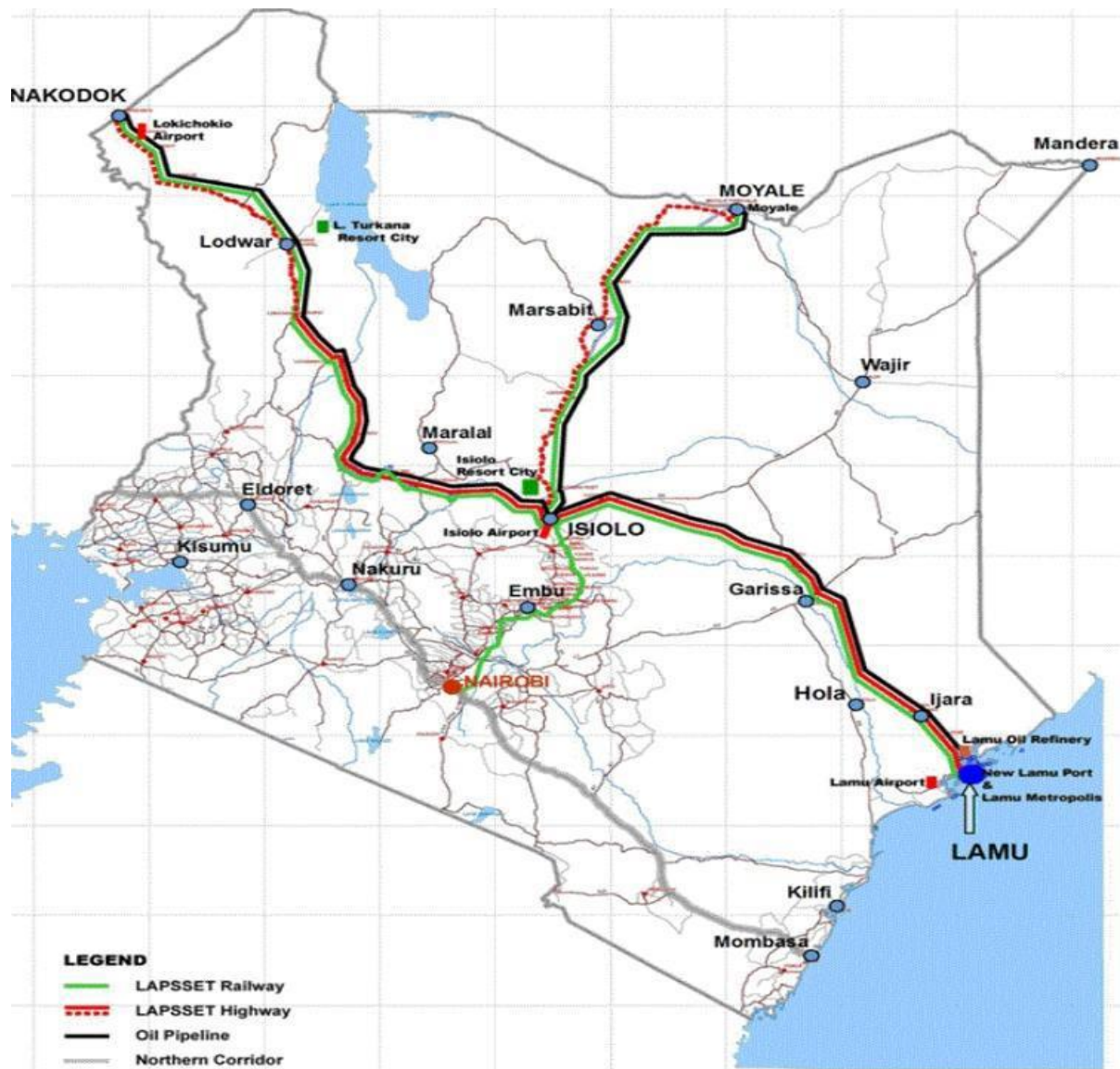
The next map shows transport infrastructure development in Lamu;

**Map 9: Map of Lamu Showing Transport Network**



With its immense potential, SGR has eased transport for those traveling home, for leisure, tourism and business to and from stations along Miritini. Unfortunately, the SGR passes through Tsavo national park and cultural heritage sites, which according to locals, possess deeper meaning to their cultural belief systems. Lamu, on its part, marks the start of the LAPSSET corridor as indicated in the map below;

**Map 10: Map Showing LAPSSET Corridor Highways**



Source: Maritime-Executive<sup>5</sup>

The two coastal towns boast of among others;

#### i. Coral Reefs

Kenya's coral reefs are at the northern end of the East African Marine Ecoregion, decreasing in extent, size and diversity from south to north in three main sections: a) a near-continuous fringing reef system borders the southern coast from Shimoni to Malindi, b) negligible reef

<sup>5</sup> Maritime-Executive. Available at: <https://maritime-executive.com/media/images/article/Photos/Maps/Cropped/LAPSSET%2016x9.png> (Accessed on 12/20/2022)

development between Malindi Kipini in the region affected by Kenya's two largest rivers, the Athi/Galana/Sabaki and Tana Rivers, and c) patch-and small fringing-reefs border the islands of the Lamu-Bajuni archipelago. Current estimates give a total reef area of 630 km<sup>2</sup>, extending from the sea surface to about and 20-25 m depth. Kenyan reefs harbour over 235 species of Scleractinia corals, more than 350 species of bony fish, and 12 seagrass species. Turtles and marine mammals that are associated with reefs are of high conservation and tourism value.

The reefs support a widespread artisan fishery and a growing commercial fishery; both made up of local and migrant fishers using a range of gears from traditional to modern. Coral reefs also support Kenya's coastal tourism industry and protect shoreline development at the major towns and all significant beachfront developments. Major threats to coral and coral reef ecosystems are from many factors ranging from sea level rise and rising sea temperatures due to global warming and seawater acidification.

## **ii. Mangrove forest**

Mangrove forests in Kenya are found along the coast between Kiunga at the Kenya-Somali border to the north and Vanga at the Kenya-Tanzania border to the south, a distance of 574km long. The forest provides goods and services that are of economic, ecological and environmental value to the people. Moreover, being renewable resources, mangroves can provide these services indefinitely only if they are managed effectively and sustainably.

As a dynamic ecotone between the land and the sea, mangrove wetlands are controlled by several interacting factors such as tides, periodicity of freshwater and sediment influx, the topography of the wetland, soil and water salinity, and sedimentation patterns. The area of mangroves in Kenya is estimated as 52,980 ha, spread over 18 forest formations along the coast. Lamu district, with 34,000 ha, has the largest area of mangroves, followed by; Kwale, Kilifi, Tana River and Mombasa counties. All the nine mangrove species recorded in the Western Indian Ocean region are found in Kenya. Two of the species, *Rhizophora* (Kiswahili, MKOKO) and *Ceriops* (MKANDAA) are dominant and form 70% of the formation. The rare species are *Heritiera* (MSIKUNDAZI) and *Xylocarpus* (MKOMAFI). The major obstacles that have prevented the rational use of mangroves in Kenya have been: the sectoral approach of mangrove resource management, lack of community inputs into management efforts; the poverty status of many indigenous coastal communities, lack of alternative livelihood; and a

lack of awareness amongst decision makers and communities about the true value of mangroves.

### **iii. Coastal Forests**

Kenya's coastal forests bear unique fauna and flora communities with high drought resilience, high levels of adaptation and endemism. The reduction in forest cover and subsequent fragmentation of forests into isolated remnant pockets has proceeded gradually due to climate change and in recent years, more rapidly due to human factors. A number of the remaining forest patches have high levels of endemism of birds, small mammals and other fauna and flora. The largest of these forest patches, the Arabuko-Sokoke forest in the Malindi and Kilifi districts, is home to six rare and endemic birds and is designated as a forest reserve. Other forest patches include Boni-Lungi, Dakacha woodlands and Dodori in the northern coast and Shimba Hills in the southern coast. The coastal region also has other small forest patches traditionally considered sacred shrines by local communities, commonly known as *Kayas*.

Major threats facing coastal forests include encroachment for settlement and farming, illegal logging, human-wildlife conflict, deforestation and loss of biodiversity, mainly attributed to a reduction of forest cover. These factors have contributed to the reduction in forest cover and subsequent fragmentation of forests into isolated remnant pockets, accelerating the loss of endemic species such as the iconic owl. Below is a photo of the endangered Sokoke scops owl.

**Figure 4: The endangered Sokoke scops owl**



**Source:** Wikimedia<sup>6</sup>

#### **iv. Sea Grass beds**

The Kenyan coast is rich in seagrasses and marine algae. Seagrass grows mostly on sandy to sandy-muddy sediments from the inter-tidal zone down to a depth of 20 m or more below the water surface. Approximately 12 species of seagrasses have been reported in the Kenyan coast. Seagrasses are closely associated with coral reefs covering extensive areas of shallow and deeper reefs in Kenya. Seagrass beds are important habitats for many fish species and act as sediment traps ensuring the good health of the coral. They are also a refuge for threatened species like the green turtle, hawks bill turtle and dugongs.

Seagrass beds are threatened by human activities within the coastal zone. These include but are not limited to destructive fishing practices, e.g. trawling, industrial development and poor farming practices, which lead to the degradation of these ecosystems, aggravated by the lack

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<sup>6</sup> Wikimedia. Available at:  
[https://upload.wikimedia.org/wikipedia/commons/3/34/Sokoke\\_scops\\_owl\\_pair\\_in\\_Arabuko-Sokoke\\_Forest.jpg](https://upload.wikimedia.org/wikipedia/commons/3/34/Sokoke_scops_owl_pair_in_Arabuko-Sokoke_Forest.jpg) (Accessed on 2/6/2023)

of awareness and inadequate enforcement of legislation on protection of sea grass beds through controlled fishing and improved monitoring.

#### **v. Deltas and Estuaries**

The Kenyan coast has a number of estuaries, which come about as a result of sea level rise (or land subsidence) during recent geological times. These include the Sabaki River estuary and others such as Uмба, Ramisi and Mwache. These estuaries are the flooded lower courses of rivers that, about 18,000 years ago flowed to a shoreline that may have stood about 160m lower than it does today, and thus several kilometres offshore. These estuaries are generally sheltered from high-energy waves and receive fine-grain sediments from inflowing streams. Mangrove trees and associated plants colonize their shores.

The Tana River Delta is the largest delta ecosystem in Kenya and the country's only major ocean delta. Diverse habitats characterize the delta, including riverine forests, grasslands, woodlands and bushland, lakes, mangroves, sand dunes and coastal waters. Traditional land use practices of small-scale agriculture, pastoralism and fishing have maintained the ecological balance of the delta for many years. However,, more recent human influence has been very strong. Most notably, land draining for agriculture and water flow control for irrigation and hydropower generation.

The major rivers, including the Tana and Sabaki, discharge into the ocean through deltas and estuaries. The rivers transport huge quantities of sediment associated with the serious degradation of various coastal and marine resources. River Tana deposits 3 million tons of sediment annually, while the Sabaki deposits 2 million tons. These enormous sediment loads are associated with poor catchment land use practices. Below is an image showing the forested banks of water bodies in the coastal areas of Kenya.

**Figure 5: The forested banks of water bodies in the coastal areas of Kenya.**



Source: Odhiambo (2018)

#### **vi. Others**

The Indo-Pacific bottlenose and humpback dolphins are the most common dolphin species found in Kenya, while the humpback whale is the most common among the whale species. Dugongs (*Dugong dugon*) are found in Malindi Marine Parks, Kipini, Lamu Archipelago, Gazi, Msambweni and Kisite marine parks.

Five key bird habitats are along the coast: the Sabaki Estuary Mida Creek, Chale Island, Malindi-Watamu area, Kisite Island, Kiunga Marine National Reserve and the Tana Delta. These form Kenya's network of Important Bird Areas (IBAs) based on designation criteria prescribed by BirdLife International. Deltas and estuaries found in Kenya's coastal region include the Tana Delta and Sabaki Estuary in Malindi. Five of the world's seven species of sea turtles are found in the Kenyan ocean waters: the Green, Hawksbill, Loggerhead, Olive Ridley, and Leatherback. In addition, cultural and heritage sites such as the Gede ruins, the Kaya Shrines, and Rabai heritage s are important intangible resources that require protection.

## **vii. Social aspects of Mombasa and Lamu**

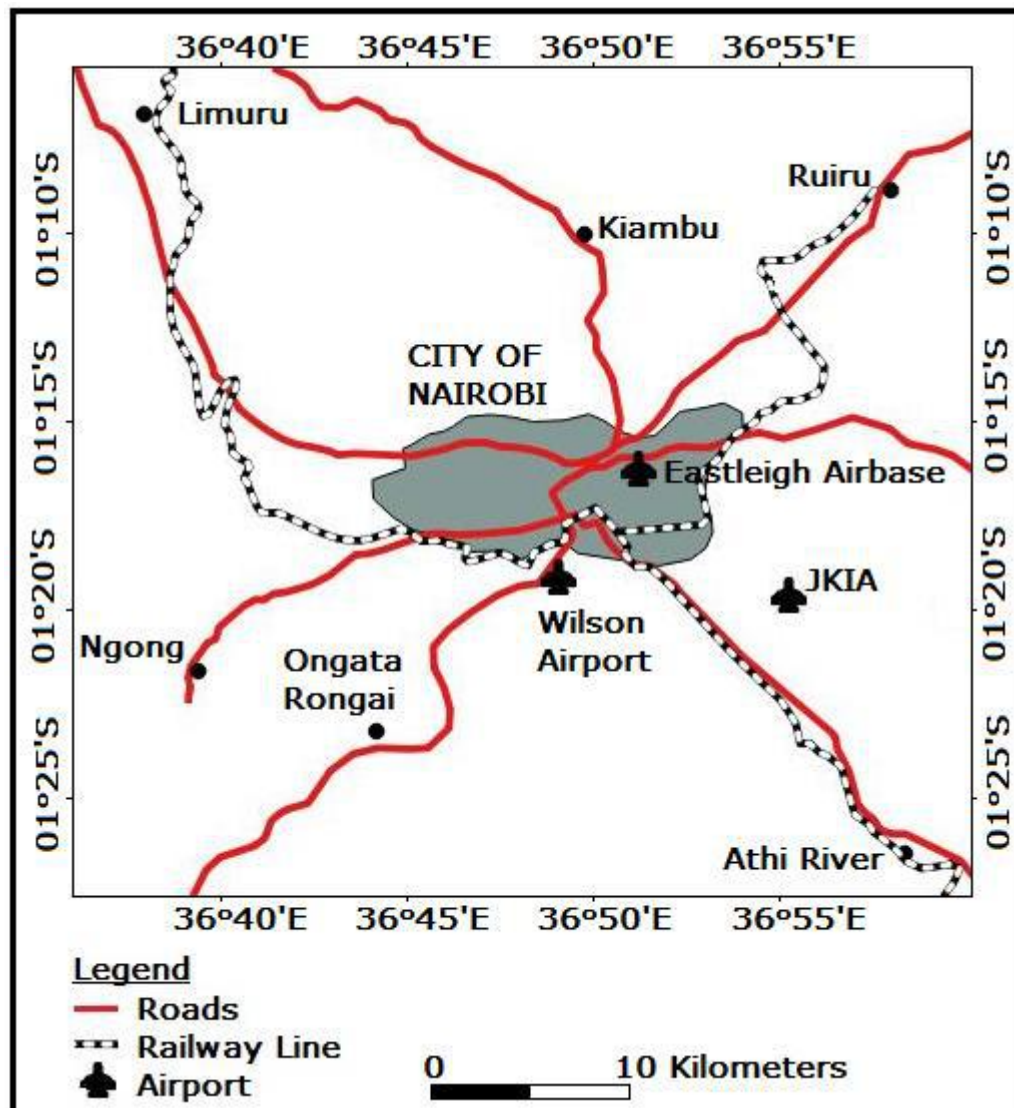
Many coastal economies rely directly on the use and/or harvest of renewable natural resources from the coastal zone environment, including fish and timber. These are some of Kenya's most valuable ecosystems and are protected by 6 marine national reserves and parks.

This important ecosystem faces various threats from the ever-increasing human population pressure through tourism, industrial pollution, overfishing, destructive fishing, mangrove logging and other unsustainable use of marine resources.

### **2.5.5 Socio-Economic and Environmental Profile of Nairobi**

Nairobi, the capital city of Kenya, is a cosmopolitan area. With its complex and diverse modes of transport, the city connects Kenya with other countries regionally and globally. The map below shows transport network in Nairobi;

**Map 11: Map of Nairobi City Showing Transport Network**



Nairobi houses all transport sector agencies and regulatory institutions including; NTSA, KeRRA, and NaMATA, among others. Nairobi is the focal point of transport interconnection in the country and the larger African region. Below is a section of the expressway in Nairobi.

**Figure 6: a section of the expressway in Nairobi**



Source. Kenyans<sup>7</sup>

Nairobi is also unique as it is the only City with a national park and forests, which play a key role as carbon sinks. The growth of Nairobi has continuously encroached on wildlife corridors and on agroecosystems in the surrounding areas, thus, putting pressure on biodiversity.

Nairobi is faced with a myriad of urban challenges, including traffic congestion, inadequate urban housing, mushrooming slums, urban poor, unemployment, delinquency, crime, unavailability of clean water, inadequate drainage and sanitation, inadequate public transport, environmental degradation, and disaster unpreparedness. The following are some important aspects of Nairobi City;

#### **i. Housing**

Housing characteristics in Nairobi reflect the socio-economic characteristics of the population. More permanent houses are found in high- and middle-income areas with tiled roofs, stonewalls, and often large gardens. They are detached houses concentrated in the areas to the west of the Uhuru highway and the north of the Waiyaki Way/ Forest Road, including the area beyond the Ngong Road Forest. Middle-income households can afford well-established

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<sup>7</sup> Kenyans. Available at:

[https://www.kenyans.co.ke/files/styles/article\\_inner\\_mobile/public/images/media/The%20Westlands%20toll%20station%20of%20the%20Nairobi%20Expressway.JPG?itok=xT0lWeQV](https://www.kenyans.co.ke/files/styles/article_inner_mobile/public/images/media/The%20Westlands%20toll%20station%20of%20the%20Nairobi%20Expressway.JPG?itok=xT0lWeQV) (Accessed 2/06/2023)

apartment buildings scattered among the detached houses. Tall apartments in urban and peri-urban areas of Nairobi pose a great risk to residents.

## **ii. Drainage and Waste Management**

Sewer mains in Nairobi City are laid along the Nairobi River, the Natari Ruiruaka and the Ngong Rivers. Nearly 20 sewage treatment plants are operational, large-scale ones being at Dandora and Kariobangi. The sewerage system does not cover the whole of Nairobi City, and septic tanks and latrines are used in some areas. Even within the Nairobi City centre, the stormwater drainage system is inadequate, often causing inundation and traffic disruption. The dumping of solid wastes in drainage channels makes the situation worse.

### **2.5.6 Methods of Data Collection**

a) **One-on-one in-depth Interviews;** were conducted in Mombasa, Lamu, Nairobi, Kisumu, Eldoret and Isiolo in from October 2022 to March 2023. Of those interviewed 52% were males while 48% were females. The reason for the disparity is that majority of the females expected in the meetings were unavailable due to reasons cited, including; household chores, denial to participate by male spouses, and reproductive health issues. Some females reported that they were not offered money for transport to enable them to travel to the meeting venue. To collect data from these interviews, an open-ended questionnaire was used, and both qualitative and quantitative data were collected.

b) **Focus-Group Discussions (FGDs);** group discussions emerged after informants identified key areas for engagement. These included occupational health and safety topics, land mapping and compensation, stakeholder engagement, and gender responsiveness in the reviewed INTP document. Each FGD comprised between six (6) and ten (10) participants. To ensure that the leave no one behind (LNB) policy was adhered to, the gender balance was observed, and inclusion of vulnerable populations and groups was considered, and their views are included in this report. Interestingly, in Isiolo and Lamu some men rejected the inclusion of women in their groups. This, however, does not mean that the perceptions of women were not taken care of. Their ideas were collected in an all-female focus-group discussion focused on areas of concern for this women category. An FGD open-question guide was utilized to solicit relevant qualitative information on this SESA exercise.

c) **Key Informant Interviews (KIIs);** Key informants were drawn from identified ministries, agencies, and departments in the ministries of Roads and Transport, Public Service, Gender and Affirmative Action, Lands, Public works, Housing, and Urban Development. In addition, from local communities. Academia and individuals drawn from non-governmental organizations working on conservation and biodiversity were also consulted. A KIIs question guide was used to gather relevant data on maritime impacts, social issues, and cultural resource management and preservation.

d) **Round-table discussions;** These were majorly done in Mombasa with academia from Pwani University (PU) and members from Technical University of Mombasa (TUK) departments of environment, tourism and maritime studies, teacher training colleges, and Nursing institutes. Three round-table discussions were also conducted in Kisumu, Nairobi and Isiolo with the aim of collecting information on their views about what they would wish to see included in the reviewed INTP document. The discussions were also aimed at collecting baseline profiles of the selected regions. Questions on public participation were of particular interest to this category of informants. As a general agreement, the group concluded that the document needs to be presented to as many stakeholders as possible for sensitization, awareness creation, consensus building, and for co-ownership with the government. The round-table discussion meeting discussed emerging issues on the document and identification and mapping of relevant stakeholders, sectors, and issues for further review.

### **2.5.7 Structure of Meetings and Discussion forums**

The structure of the meetings enabled close interaction with the participants. The meetings began with obtaining information through a registration form (Annex 2). Attached to the registration form was a brief questionnaire on an individual's willingness to participate in the exercise. A few general questions were also presented. In addition, a brief power-point presentation was done on the SESA baseline report, after which issues were identified for inclusion in the final report.

### **2.5.8 Fieldwork Process and Engagement**

Fieldwork was conducted from November 2022-June 2023. The programme and activities of the day are indicated in Annex 3. In each of the areas visited, the team leader gave a presentation of the project. The purpose and objectives and the context and background of why the review

was being conducted were also presented, and participants were asked for their views. The approach and methodology of the exercise were projected, indicating the importance of the mixed methods approach, specifically qualitative and quantitative methods, and the participatory cross-sectional design adopted for the exercise. There was an emphasis on the collection of data on existing and emerging issues, in particular on environmental impacts, gender, occupational health and safety, social impacts, land mapping, and stakeholder engagement in the reviewed INTP document. A review of available health and safety records in organizations visited was also done. Deliberations on the impact of having and implementing the reviewed INTP on the socio-economic livelihoods of people were also discussed.

## **CHAPTER THREE**

### **POLICY, LEGISLATIVE AND INSTITUTIONAL FRAMEWORKS**

#### **3.0 Introduction**

This section looks at institutions engaged in policy making, planning, implementation and regulation of environmental, safety, health and social impacts and risks. It also includes a review of legal, regulatory and institutional frameworks as well as compiling relevant policies, laws, regulations guidelines including environmental licencing requirements, relevant World Bank Group Environmental Social Standards, Operational Procedures and Environmental, Health and Safety Guidelines. The chapter concluded by an assessment of the adequacy of the World Bank framework, based on international experience, and the capacity of public agencies at national and local levels to address the potential impacts and risks associated with implementation of the Reviewed INTP. Recommendations for improvement of institutional capacity and linkages for ensuring that the policy interventions are implemented in a sustainable manner. The section also provides suggestions for improving the reviewed INTP document.

#### **3.1 The Constitution of Kenya (2010) as the basis of Policy and Legal Frameworks: An Overview**

The Constitution of Kenya (2010) acts as the main blueprint for development of the country. It clearly spells out and provides for the enjoyment of diverse rights and freedoms. Among them are security, social and environmental rights. In particular, Chapter Four of the Constitution which addresses the ‘The Bill of Rights’ has provisions that are relevant to social and environmental protection and management. Article 41 (1) on Labour relations for instance provides, *inter alia* that ‘every person has the right to fair labour practices. Article 42 on the other hand provides that ‘every person has the right to a clean and healthy environment’. These include 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 to have obligations relating to the environment fulfilled under Article 70. Article 43 on Economic and Social rights provide, *inter alia*, that every person has the right ‘to the highest attainable standard of health; freedom from hunger, accessible and adequate housing, and to reasonable standards of sanitation; social security; emergency medical treatment; and to

education. Article 44 also provides for among others, that every person has the right to use their language, and to participate in the cultural life of the person's choice and to enjoy the person's culture.

Other provisions of the Constitution relevant to a SESA exercise include Chapter five on Land and Environment. In particular, Articles 60 (1) provides for: equitable access to land; security of land rights; transparent and cost-effective administration of land; sound conservation and protection of ecologically sensitive areas; elimination of gender discrimination in law, customs and practices related to land and property in land; and encouragement of communities to settle land disputes through recognised local community initiatives consistent with the Constitution.

Article 69 (1) on obligations in respect of the environment provides that 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; 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; protect genetic resources and biological diversity; establish systems of environmental impact assessment, environmental audit and monitoring of the environment; and eliminate processes and activities that are likely to endanger the environment.

These articles in the constitution, together with actions plans of development agendas such as Vision 2030, the Big 4, and AU agenda 2063 and World Banks SESA requirements must inform the design, implementation and regulation of government policy, projects and plans. In addition, constant and consistent monitoring and evaluation of projects, plans and policies for improvement and identification of emerging issues is important especially in the context of a changing climate in a rapidly globalizing world

The Fourth Schedule of the Kenya Constitution on the distribution of function between the National and County governments on transport and communications, Section 18, provides that the national government is responsible for: road traffic; the construction and operation of national trunk roads; standards for the construction and maintenance of other roads by counties; railways; pipelines; marine navigation; civil aviation; space travel; postal services; telecommunications; and radio and television broadcasting. On the other hand, county governments are in charge of county transport, including: county roads; street lighting; traffic

and parking; public road transport; and ferries and harbours, excluding the regulation of international and national shipping and matters related thereto. Additionally, Section 69(1)(d) provides that the State shall encourage public participation in the management, protection and conservation of the environment. The next section identifies institutions mandated with policy, planning, regulating and enforcing legislation in the transport sectors.

### **3.2 Institutions responsible for policy, planning, regulating and enforcing legislation in the transport sectors**

The transport sector has a number of institutions that are responsible for policy, planning, regulating and enforcing legislation. These public institutions are created through acts of parliament to undertake specific roles with the broad aim of achieving sustainable development. These institutions are required to build synergy towards attaining desired goals by the government and its partners. While some of the institutions have broad-based overarching mandates, others have sector specific mandates. The table below shows institutions responsible for policy making, policy planning, regulation and enforcing legislation in the transport sector and sub-sectors. The table separates institutions with broad mandates from those with specific ones as shown below;

**Table 4: Institutions responsible for policy, planning, regulating and enforcing legislation in the transport sectors.**

<b>Description</b>		<b>Institutions responsibilities'</b>
		<b>National Institution</b>
	<b>Overarching Institutions</b>	<ul style="list-style-type: none"> <li>• The National Environment Management Authority (NEMA)</li> <li>• The Kenya Bureau of Standards (KEBS)</li> <li>• The Kenya Plant Health Inspectorate Service (KEPHIS)</li> <li>• The Kenya Revenue Authority (KRA)</li> <li>• The National and County Assemblies</li> <li>• The Kenya National Police Service Commission (KNPSC)</li> <li>• Port Health Services</li> </ul>
		<b>International Institutions</b>
		<ul style="list-style-type: none"> <li>• International Road Transport Union (IRU)</li> <li>• The International Air Transport Association (IATA)</li> <li>• The International Civil Aviation Organization (ICAO)</li> <li>• the International Maritime Organization (IMO)</li> <li>• Wealth Health Organisation (WHO)</li> <li>• International Labour Organisation (ILO)</li> </ul>

		<ul style="list-style-type: none"> <li>• International Maritime Organization (IMO)</li> <li>• World Meteorological Organization (WMO)</li> </ul>		
	Transport Sector	Policy	Planning & implementation	Regulation and enforcement of legislation
1	<b>Roads Transport</b>	<ul style="list-style-type: none"> <li>• Ministry of Roads and Transport               <ul style="list-style-type: none"> <li>◦ SDoT</li> <li>◦ SDoR</li> </ul> </li> <li>• County governments</li> </ul>	<ul style="list-style-type: none"> <li>• SDOT-Department of Road and Rail</li> <li>• National Transport and Safety Authority (NTSA):</li> <li>• Kenya National highways Authority (KeNHA)</li> <li>• Kenya Urban Roads Authority (KURA)</li> <li>• Kenya Rural Roads Authority (KeRRA)</li> <li>• Kenya Institute of Highways and Building Technology (KHBT)-</li> <li>• LAPPSET Coordination Authority</li> <li>• Northern Corridor Transit and Transport Coordination Authority (NCTTCA)</li> <li>• Nairobi Metropolitan Area Transport Authority (NAMATA)-</li> <li>• Kenya Wildlife Service (KWS)</li> <li>• County Governments-County Roads</li> </ul>	<ul style="list-style-type: none"> <li>• Kenya Roads Board (KRB)</li> </ul>
2	<b>Rail Transport</b>	<ul style="list-style-type: none"> <li>• Ministry-SDOT</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Road and Rail</li> <li>• Kenya Railways Corporation (KRC)</li> </ul>	<ul style="list-style-type: none"> <li>• Kenya Railways Corporation (KRC)</li> </ul>
3	<b>Air Transport</b>	<ul style="list-style-type: none"> <li>• Ministry</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Air Transport</li> <li>• Air accident investigation department</li> <li>• Kenya Airports Authority (KAA)</li> </ul>	<ul style="list-style-type: none"> <li>• Kenya Civil Aviation Authority (KCAA)</li> </ul>
4	<b>Shipping and Maritime Transport</b>	<ul style="list-style-type: none"> <li>• Ministry of Roads and Transport-SDOT</li> <li>• Mining, Blue Economy and Maritime Affairs (State Department of Shipping and Maritime)</li> </ul>	<ul style="list-style-type: none"> <li>• Kenya Ports Authority (KPA)</li> <li>• Shipping and Maritime Department</li> <li>• Kenya Ferry Services (KFS)</li> <li>• Kenya National Shipping Line (KNSL)</li> <li>• LAPPSET Coordination Authority</li> <li>• Northern Corridor Transit and Transport</li> </ul>	<ul style="list-style-type: none"> <li>• Kenya Maritime Authority</li> <li>• Coast Guards</li> </ul>

			Coordination Authority (NCTTCA)	
5	<b>Pipeline (oil) Transport</b>	<ul style="list-style-type: none"> <li>Ministry of Energy</li> </ul>	<ul style="list-style-type: none"> <li>Department of Energy</li> <li>Kenya Pipeline Company (KPC)</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Energy and Petroleum Regulatory Authority (EPRA)</li> </ul>
6	<b>Inland Water transport</b>	<ul style="list-style-type: none"> <li>Ministry of Roads and Transport - SDOT</li> <li>Mining, Blue Economy and Maritime Affairs</li> </ul>	<ul style="list-style-type: none"> <li>Shipping and Maritime Department</li> <li>Kenya Ports Authority</li> <li>Kenya Maritime Authority</li> </ul>	<ul style="list-style-type: none"> <li>Kenya Maritime Authority</li> <li>Coast Guards</li> </ul>

### 3.3 Environmental, social, safety and occupational health legal, regulatory and institutional framework

The legal basis of Strategic Environmental and Social Assessment indicates the scope of the law, its purpose, principles of regulation, and the subjective composition of legal relations. It also establishes the procedure for implementing SESA. SESA allows compliance with the requirements of the law and brings other acts into line with environmental and social impact considerations during project design and implementation. The Constitution of Kenya 2010<sup>8</sup>: - empowers persons to seek redress when their right to a healthy and clean environment has been violated or infringed. In particular, Article 42 of Kenya Constitution 2010 (The Enforcement of Environmental Rights) guarantees the people a clean and healthy environment. It, in particular, references the "Environmental Management and Coordination Act" of 1999 (EMCA), which was enacted to provide an appropriate legal and institutional framework for the management of the environment and for matters connected therewith and incidental thereto; revised in 2015. EMCA also established the National Environmental Management Authority (NEMA) under the Environmental Management and Coordination Act (EMCA) No. 8 of 1999 as the principal instrument of government in the implementation of all policies relating to the

<sup>8</sup> The Constitution of Kenya 2010. available at: [http://www.kenyalaw.org/kl/fileadmin/pdfdownloads/Constitution\\_of\\_Kenya\\_2010.pdf](http://www.kenyalaw.org/kl/fileadmin/pdfdownloads/Constitution_of_Kenya_2010.pdf) (Accessed on 12/01/2023)

environment. The aim of this particular Strategic Social and Environment Assessment is to evaluate the level of compliance of the reviewed INTP of the SDoT and ensure that it is in accordance with the provisions and requirements of the EMCA, 1999 and subsidiary regulations.

### **3.3.1 Transport Policies and Legal Frameworks**

In order to operate effectively, respective institutions design frameworks including but not limited to legal, institutional and regulatory ones. Policy and legal frameworks are instruments, tools and parameters put in place to enable a sector to operate and thrive in an orderly manner. They do this by stipulating regulations, indicating desired outcomes and how to achieve the outcomes. In addition, the frameworks assign responsibility to each institution/stakeholder. A review of existing policy and legal frameworks; however, this indicates that existence of such policies does not necessarily translate to the success and easy operation of the institution. This is often occasioned by bottlenecks, lacuna and structural challenges from the macro and/or micro environment as well as from internal constraints. A review of existing legal, institutional and regulatory framework helps in pointing out strengths, identifying weakness, highlighting opportunities and teasing out possible threats to the frameworks. This in turn assists in suggesting and recommending areas for improvement. One of the main issues that was identified during the review of the policies and regulations governing the transport sector was that the sector seems not to have a national transport Masterplan which would provide the basis for reference by all the subsectors. This has implications on the design and implementation of the reviewed INTP because it is from such a document that the reviewed INTP ought to derive its content and actualisation. Notwithstanding this major limitation, it was noted that the reviewed INTP adequately draws heavily from diverse national, regional, and international relevant policies, plans, and transport and infrastructure development programs as shown in table two (2) below.

**Table 5: Environmental, social, safety and occupational health legal, regulatory and institutional framework**

Sector		Institution	Statutes and regulations	Description
	<b>Overarching sector</b>	The State	<ul style="list-style-type: none"> <li>• The Constitution of Kenya, 2010</li> <li>• The Occupational Safety and Health Act, 2007</li> <li>• Kenya National Social Protection Policy, 2011</li> <li>• Vision 2030</li> </ul>	<ul style="list-style-type: none"> <li>• Article 41 (1) on Labour relations, Article 42 on the other hand provides that ‘every person has the right to a clean and healthy environment’, Article 43 on Economic and Social rights. Articles 60 (1) provides for: equitable access to land; security of land rights; transparent and cost-effective administration of land; sound conservation and protection of ecologically sensitive areas; elimination of gender discrimination in law, customs and practices related to land and property in land; and encouragement of communities to settle land disputes through recognised local community initiatives consistent with the Constitution. Article 69 (1) on obligations in respect of the environment. Article 56 highlights the rights of marginalized communities in the decision-making process with regards to development and their input</li> <li>• <b>The Occupational Safety and Health Act, 2007 4 77-</b> to secure the safety, health and welfare of persons at work; and protect persons other than persons at work against risks to safety and health arising out of, or in connection with, the activities of persons at work.</li> <li>• <b>Kenya National Social Protection Policy, 2011-</b> Cushioning workers and their dependants from the consequences of income-threatening risks such as sickness, poor health, and injuries at work as well as from the threat of poverty in their post-employment life.</li> <li>• <b>Sessional Paper No. 10 of 2012 on Kenya Vision 2030-</b>it is a a long term development plan for the period 2008 and 2030. It seeks to transform the country into “a newly-industrialising, middle-income country providing a high quality of life to all its citizens in a clean and secure environment”. Therefore, the reviewed INTP should promote the realisation of the Visions goals.</li> </ul>
	<b>ENVIRONMENTAL</b>			

	Statutes and Regulation	Description
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	<ul style="list-style-type: none"> <li>• <b>Wildlife Policy of 2011</b></li> <li>• <b>The National Biodiversity Strategy of 2000</b></li> <li>• <b>The Kenya National Climate Change Response Strategy of 2010</b></li> <li>• <b>The Wildlife Management and Conservation Act 2013</b></li> <li>• <b>Water Act 2016</b></li> </ul>	<ul style="list-style-type: none"> <li>• It strengthens conservation and makes it sustainable both in protected and none protected areas. Therefore, the reviewed INTP has to confirm to this policy and where proposed projects would affect appropriate mitigation measures should be put in place</li> <li>• It is a response to its international commitment under the Convention of Biological Diversity (CBD). The NBSAP seeks to conserve Kenya's biodiversity, to sustainably use its components, to fairly and equitably share the benefits arising from utilization of biodiversity resources among all stakeholder, and to enhance technical and scientific cooperation nationally and internally, including the exchange of information in support of biodiversity conservation. Therefore, any proposed project in the reviewed INTP will have to conform to the strategy requirements since some of projects could lead to lose of vegetation along the construction routes.</li> <li>• This is a strategy undertaken by the government to address the effects of climate change on various sectors of the economy and Global Greenhouse Gas emission mitigation. Thus any proposed project by the reviewed INTP should take into considerations of climate change.</li> <li>• The Act promotes the protection, conservation and management of wildlife in Kenya and related matters. It indicates that wildlife should be conserved for optimal benefits. The Act controls activities within the national parks, which may lead to the disturbance of wild animals. The proposed reviewed INTP projects like extension of SGR passes through conservation areas, such projects should to make provisions for wildlife passages.</li> <li>• The Act provides for ownership, use, and management of waters and regulation of management of water resources. It stipulates that a permit shall be required in all cases of proposed diversion, abstraction, obstruction, storage or use of water, with minor exceptions relating to use for domestic purposes (Section.36). Any projects proposed in the reviewed INTP should confirm to the Act and mitigate any impacts on water use like effluent should not be released back into water bodies unless purified.</li> <li>• It is established by Article 162(2) of the Constitution of Kenya, but given to effect by Environment and Land Court Act no.19 of 2011 (ELCA). It hears and determine disputes relating to the</li> </ul>
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	<ul style="list-style-type: none"> <li>• <b>The Environment and Land Court Act, 2011</b></li> <li>• <b>National sand harvesting guidelines, 2007</b></li> <li>• <b>The Environment Management and Coordination Act CAP 387 and Its Tools</b></li> <li>• <b>The Environmental Management and Coordination Act of 2015 (CAP 387) and its Amendment</b></li> </ul>	<p>environment and the use and occupation of, and title to land. The court has powers to deal with disputes relating to land administration and management. It 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. Therefore, in any event there are issues that relates to land it can always intervene.</p> <ul style="list-style-type: none"> <li>• The guideline ensures sustainable utilization of the sand resource and proper management of the environment. Since reviewed INTP projects will deal with sand, it is expected that the contractor activities in sand harvesting will be carried out within the stipulated legal framework.</li> <li>• This Act modifies the Environmental Management and Coordination Act, 1999 with regard to a number of issues, such as: access to any information relating to the implementation of this Act; administration; duties of the National Environment Management Authority; establishment of a County Environment Committee in each County; composition, functions, etc., of County Environment Committees; the National Environmental Complaints Committee; and the adoption of a National Environmental Action plan among others.</li> <li>• This Act has various tools that regulate different aspects namely Impact Assessment and Audit, Water Quality Regulations, waste management, Noise and Excessive Vibration Pollution Control, Air Quality, Fossil Fuel Emission Control, Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing, and Wetlands, River Banks, Lake Shores and Sea Shore Management.</li> </ul> <p>This act aims at bringing efficiency on waste management activities with emphasis on wastes sorting at source, and aiming at converting waste, including materials, chemicals and sources of energy, into useful products by reusing, recycling or composting the waste. Projects proposed in the INTP should consider efficiency in waste management in accordance with this act.</p> <p>Section 87 of EMCA 1999 states that – —(1) No person shall discharge or dispose of any wastes, whether generated within or outside Kenya, in such manner as to cause pollution to the environment or ill health to any person. AS such projects proposed in the INTP should ensure</p>
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	<ul style="list-style-type: none"> <li>• <b>Sustainable Waste Management Act, 2022.</b></li> </ul>	waste management practices examine the entire scope of possible wastes in transport operations and constructions including spent fuels, radioactive waste, e-wastes etc.
	<b>SOCIAL</b>	
	<b>Statutes and Regulation</b>	<b>Description</b>

<ul style="list-style-type: none"> <li>• <b>The Land Act, 2012</b></li> <li>• <b>The National Land Commission Act, 2012 (No. 5 of 2012)</b></li> <li>• <b>Community Land Act 2016</b></li> <li>• <b>The Environment and Land Court Act, 2011</b></li> </ul>	<ul style="list-style-type: none"> <li>• It give effect to Article 68 of the Constitution, to revise, consolidate and rationalize land laws; to provide for the sustainable administration and management of land and land-based resources, and for connected purposes. The Act applies to all land declared as (a) public land under Article 62 of the Constitution; (b) private land under Article 64 of the Constitution; and (c) community land under Article 63 of the Constitution and any other written law relating to community land. It also details with compulsory acquisition of land, lease, transfers, and contracts over land settlement programmes. The proposed reviewed INTP programmes always passes through community and private lands and affects the population living along such areas therefore, it is important in the implementation of resettlement action plan.</li> <li>• Established the National Lands Commission and defined its function and powers. The Act gives effect to Article 67 of the Constitution and for certain aspects of management and administration of land in accordance with the principles of land policy set out in Article 60 of the Constitution and the national land policy. It is important because of reviewed INTP proposed projects involve acquisition of either community or private lands.</li> <li>• It gives effect to effect to Article 63 of the Constitution of Kenya. It provides for the recognition, protection and registration of community land rights, management and administration of community land and the role of county governments in relation to unregistered community land and related matters. Most of the reviewed INTP projects are along community lands; thus, consultations and consent will be critical before construction.</li> <li>• It is established by Article 162(2) of the Constitution of Kenya, but given to effect by Environment and Land Court Act no.19 of 2011 (ELCA). It hears and determine disputes relating to the environment and the use and occupation of, and title to land. The court has powers to deal with disputes relating to land administration and management. It 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. Therefore, in any event there are issues that relates to land it can always intervene.</li> </ul>
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	<ul style="list-style-type: none"> <li>• <b>Employment (Amendment) Act, No. 15 of 2022</b></li> <li>• <b>The Children Act, 2001</b></li> <li>• <b>Persons with Disability Act, CAP 133</b></li> <li>• <b>The National Museums and Heritage Act, 2006</b></li> </ul>	<ul style="list-style-type: none"> <li>• The Act defines the fundamental rights of the employees, basic conditions of employment of employees, regulate employment of children and to provide for matters connected thereto. Since projects proposed in the reviewed INTP will require employees, the Act ensures that the contractor will make statutory deductions and submit them to responsible institutions like NHIF, NSSA among others without delay.</li> <li>• Provides for safeguards for the rights and welfare of the child, and protects children from economic exploitation and any work that is likely to be hazardous or to interfere with the child's health or physical, mental, spiritual, moral or social development.</li> <li>• Provides for the rights and rehabilitation of persons with disabilities. Establishes National Council for Persons with Disabilities to oversee the welfare of persons with disabilities. The Law also requires that both public and private sector employers reserve 5 per cent of jobs for disabled persons.</li> <li>• It establishes the National Museum of Kenya, its functions and powers for the protection of national natural and cultural heritage (as defined). Due to projects areas rich in diverse history and background there could be areas of cultural heritage, ancestral lands, among others might be affected thus the need to protect such areas.</li> </ul>
	<b>OCCUPATIONAL, HEALTH AND SAFETY</b>	
	<b>Statutes and Regulation</b>	<b>Description</b>

<ul style="list-style-type: none"> <li>• <b>Occupational Health and Safety Policy of 2012</b></li> <li>• <b>HIV/AIDS Policy of 2009</b></li> <li>• <b>National Gender and Development Policy</b></li> <li>• <b>Public Health Policy of 2014</b></li> <li>• <b>The Public Health Act (CAP. 242)</b></li> <li>• <b>Physical Planning Act (Cap 286)</b></li> <li>• <b>Occupational Safety and Health Act</b></li> </ul>	<ul style="list-style-type: none"> <li>• This Policy intends to significantly sustain continual development and implementation of the National Occupational Safety and Health systems and programs to reduce incidences of work related accidents and diseases. Additionally, it aims to provide fair compensation to those who sustain bodily harm and develop occupational disorders. The contractors are required to ensure safety of the employees.</li> <li>• The policy guide in the fight against HIV and Aids in the work place by providing guidance for those who deal with the day-to-day HIV and AIDS related issues and problems that arise within the workplace and also outlines employee's rights, responsibilities and expected behavior in the workplace.</li> <li>• The policy seeks to create a just, fair and transformed society free from gender based discrimination in all spheres of life practices. It facilitates the mainstreaming the needs of women, men, girls and boys in all sectors of development in Kenya so that they can participate and benefit equally from development initiatives.</li> <li>• The policy call on the project proponents to ensure that hat Health Impact Assessment (HIA) is conducted for any major infrastructural development</li> <li>• Outlines regulations pertaining to, among other things, animal care, public water supply protection, mosquito prevention and control, and the elimination of nuisances, particularly those brought on by sewage, among other things. The act will govern the contractors activities onsite to ensure health and safety of the employees and the environs</li> <li>• Act provides rules for physical planning in Kenya, establishes Physical Planning Liaison Committees, provides for the appointment of the Director of Physical Planning, requires regional and local authorities to adopt Physical Development Plans in accordance with this Act and provides for control of development and subdivision of land. The proposed INTP projects should be subjected to this policy.</li> <li>• The Act ensures safe and healthful working conditions for working men and women. Ensure that every workplace is free of any hazards, and complies with the laid down standards to assure safety</li> </ul>
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	<ul style="list-style-type: none"> <li>• <b>The Penal Code (Cap. 63)</b></li> <li>• <b>Work Injury Compensation Benefit Act (WIBA) 2007</b></li> <li>• <b>The HIV and AIDS Prevention and Control Act</b></li> <li>• <b>The Sexual Offences Act, 2006</b></li> <li>• <b>The National Gender and Equality Act, 2011</b></li> </ul>	<p>of employees. Article XIII states that if an employer in this the contractors has to ensure the health and safety of its employees and the environs.</p> <ul style="list-style-type: none"> <li>• It codifies offences and penalties, from murder, treason, domestic cases, defamation, assault, theft, violence, extortion, corruption, etc. Chapter XVII deals with Nuisances and Offences against Health and Convenience and Chapter XXII deal with offences endangering life and health. Therefore, any person who violates these are subject to prosecution. The contractor will ensure that all emissions are controlled during the construction and should guarantee safety to the employees and the rest of the community.</li> <li>• Enacted to guarantee the compensation of workers for injuries that arise while they are working and also for health conditions contracted in the course of their employment. Contractors are obliged to compensate workers who sustain injuries in course of their work. The contractor therefore is required to provide appropriate insurance to the workers.</li> <li>• This Act of Parliament establishes policies for the promotion and protection of public health, the appropriate care and treatment of those who are infected with HIV or who are at risk of contracting the disease, as well as for related objectives. It also establishes policies for the prevention, management, and control of HIV and AIDS. The contractor carries sensitization among the locals and employees, provision of free voluntary counselling and testing services and non-discrimination of those who are infected or affected.</li> <li>• The Act delineate the acts that qualify as sexual offences and to establish a means of punishing offenders, in an effort to prevent such offences and to protect all persons from unlawful sexual acts. It has consolidated all laws relating to sexual offences.</li> <li>• The Act establishes the National Gender and Equality Commission. The Commission is a successor in title to the Kenya National Human Rights and Equality Commission established by Article 59 of the Constitution. Functions of the Commission shall include: promote gender equality and freedom from discrimination in accordance with Article 27 of the Constitution among others. Gender mainstreaming must be incorporated into all facets of project design, execution, operation, monitoring, and assessment in order to guarantee that men and women benefit equally from reviewed INTP projects and that discrimination is not persisted.</li> </ul>
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	<ul style="list-style-type: none"> <li>• <b>Security Laws (Amendment) Act, 2014</b></li> <li>• <b>The Traffic Act Cap 403</b></li> </ul>			<ul style="list-style-type: none"> <li>• The Act deals with wide array of legal framework and jurisdiction on security matters. The reviewed INTP proposed projects are to be undertaken in areas that are facing insecurity due to terrorism, thus, there is need for enhanced security.</li> <li>• The Acts provides guidelines for registration of vehicles, licensing of vehicles, driving license and offences related traffic and the use of roads and facilities. The contractor's vehicle will have to comply with the Act.</li> </ul>
<b>sector specifi</b>	<b>Transport Sector</b>	<b>Regulating Institution</b>	<b>Statutes and Regulation</b>	<b>Description</b>

	Road transport	KeNHA KURA KERRA KRB NTSA	<ul style="list-style-type: none"> <li>• The National Transport and Safety Authority Act, 2012</li> <li>• Kenya Roads (No. 2 of 2007)</li> <li>• Kenya Roads Board (No. 7 of 1999)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>The National Transport and Safety Authority Act, 2012</b>, established the NTSA, which is in charge of ensuring road safety through licencing, inspection of motor vehicles. Conducting research and audit on road safety, sensitization of the public on road safety</li> <li>• <b>Kenya Roads (No. 2 of 2007)</b> established the Kenya National Highways Authority (KeNHA) with the mandate of managing the national roads. The Act also created KeRRA and Kenya Urban Roads Authority (KURA)</li> <li>• <b>Kenya Roads Board (No. 7 Of 1999)</b>, established the Kenya Roads Board with the objective and purpose of overseeing the road network in Kenya and coordinate the maintenance, rehabilitation and development funded by the fund</li> <li>• <b>The Public Roads and Roads of Access Act, CAP 399</b>, provides for road which the public had a right to use immediately before the commencement of this Act; all proclaimed or reserved roads and thoroughfares being or existing on any land sold or leased or otherwise held under the East Africa Land Regulations, 1897, the Crown Lands Act , 1902, or the Government Lands Act (Cap. 280), at any time before the commencement of this Act; and all roads and thoroughfares hereafter reserved for public use. The construction of any road will have to abide by the provision of this Act</li> <li>• <b>KeNHA's Environment and Social Safeguards Policy, 2018-</b> It outlines the steps KeNHA will take to make sure that the Authority's operations don't have a negative impact on the environment or the social cohesion of the areas in which they operate.</li> </ul>
	Rail transport	Kenya Railway Corporation	<ul style="list-style-type: none"> <li>• Kenya Railways Corporation Act Chapter 397</li> <li>• The Kenya Railways Corporation (Amendment) Act, 2005</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Kenya Railways Corporation Act Chapter 397</b>-Established in 1978, the Kenya Railways Corporation, is mandated to provide houses and accommodation to the employees</li> <li>-It also details on land acquisition by the Corporation in relation to compensation and power to enter land to prevent accidents,</li> </ul>

	Port and Maritime	Kenya Ports Authority	<ul style="list-style-type: none"> <li>Kenya Ports Authority Act Chapter 391</li> </ul>	<ul style="list-style-type: none"> <li><b>Kenya Ports Authority Act Chapter 391</b> established KPA to regulate and manage the ports. The KPA through the Act is mandated to ensure occupational, health and safety to its employees, provide housing to the employees, acquisition of land for the purposes of the Authority, through negotiation and agreement and power to enter land to prevent accidents</li> </ul>
		Kenya Maritime Authority/ Inland water transport	<ul style="list-style-type: none"> <li>Kenya Maritime Authority Act 2006 (Revised Edition 2012)</li> <li>The Merchant Shipping Act No. 4 of 2009</li> <li>Marine Insurance CAP 390</li> <li>Maritime Zones (Cap. 371)</li> </ul>	<ul style="list-style-type: none"> <li><b>Kenya Maritime Authority Act 2006</b>, established the KMA to regulate, co-ordinate and oversee maritime affairs <ul style="list-style-type: none"> <li>-Develop, co-ordinate and manage a national oil spill contingency plan for both coastal and inland waters</li> <li>-Enforce safety of shipping, including compliance with construction regulations, maintenance of safety standards and safety navigation rules; regular inspection of ships, overseeing welfare of seafarers,</li> <li>-Prevention of marine source pollution, protection of the marine environment and response to marine environment incidents</li> </ul> </li> <li><b>The Merchant Shipping Act No. 4 of 2009</b> details the seafarers' welfares, terms of employment, discharge, and wages. <ul style="list-style-type: none"> <li>-The Act also addresses the safety of navigation and prevention of collision, safety of life at sea, unsafe ships, safety of navigation and vessels for inland waters and maritime security.</li> <li>-The Act has domesticated various international conventions protection and preservation of the marine environment from pollution by matter from ships</li> </ul> </li> </ul>

	Air transport	Kenya Civil Aviation Authority	<ul style="list-style-type: none"> <li>• The Civil Aviation Act No. 21 of 2013</li> <li>• The Civil Aviation (Amendment) Act, 2016</li> </ul>	<ul style="list-style-type: none"> <li>• <b>The Civil Aviation Act No. 21 of 2013</b>, established KCAA with the objective and purpose to economically and efficiently plan, develop and manage civil aviation, regulate and operate a safe civil aviation system in Kenya. <ul style="list-style-type: none"> <li>-Licensing of air services and ensuring safety in airspaces</li> <li>-Protection of environment</li> <li>-It has domesticated Chicago Convention</li> </ul> </li> </ul>
		Kenya Airports Authority	<ul style="list-style-type: none"> <li>• Kenya Airports Authority (Cap. 395)- Revised Edition 2012 [1992]</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Kenya Airports Authority (Cap. 395)</b>-established the Kenya Airports Authority with the mandate to construct, operate and maintain aerodromes and other related facilities <ul style="list-style-type: none"> <li>-To ensure occupational, health and safety to employees, provide housing to the employees, acquisition of land for the purposes of the Authority, through negotiation and agreement and power to enter land to prevent accidents</li> </ul> </li> </ul>
	Pipeline (Oil) transport	Energy & Petroleum Regulatory Authority (EPRA)	<ul style="list-style-type: none"> <li>• Energy (No. 1 of 2019)</li> <li>• Petroleum (No. 2 of 2019)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Energy (No. 1 of 2019)</b> established the Energy and Petroleum Regulatory Authority <ul style="list-style-type: none"> <li>-Formulate, set, enforce and review environmental, health, safety and quality standards for the energy sector in coordination with other statutory authorities</li> </ul> </li> <li>• <b>Petroleum (No. 2 of 2019)</b>-protection of environment by requiring contractors to provide environment impact assessment study reports for upstream petroleum operations. <ul style="list-style-type: none"> <li>-Take any action for the conservation and protection of the natural resources and the environment in that area</li> <li>-The Act also details environment, health and safety obligations of the contractors engaged in petroleum exploration</li> </ul> </li> </ul>

The table below shows some of the important international conventions governing various sectors of transport

**Table 6: Sector Specific International Conventions**

Description		International Conventions
<b>Sector Specific</b>	<b>Transport Sector</b>	<b>Conventions</b>
	Road transport	<ul style="list-style-type: none"> <li>• United Nations Road Safety Conventions (seven)</li> <li>• 1968 Convention on Road Traffic</li> <li>• 1968 Convention on Road Signs and Signals</li> <li>• 1997 Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles</li> <li>• 1998 Agreement concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts</li> <li>• 1957 Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)</li> <li>• African Road Safety Charter, and TAH Harmonisation (Safety)</li> </ul>
	Rail transport	<ul style="list-style-type: none"> <li>• 1999 Convention concerning International Carriage by Rail (COTIF)</li> </ul>
	Port and Maritime/ Inland water transport	<ul style="list-style-type: none"> <li>• Convention on the Territorial Sea and the Contiguous Zone Geneva 29 April 1958</li> <li>• United Nations Convention on the Law of the Sea Montego Bay 10 December 1982</li> </ul>

		<b>International Maritime Organisation Conventions</b> <ul style="list-style-type: none"> <li>• International Convention for the Safety of Life at Sea (SOLAS, 1974, as amended.</li> <li>• International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto and by the Protocol of 1997 (MARPOL)</li> <li>• International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) as amended, including the 1995 and 2010 Manila Amendments</li> <li>• Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (LC), 1972 (and the 1996 London Protocol)</li> <li>• International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), 1990</li> <li>• Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances, 2000 (OPRC-HNS Protocol)</li> <li>• International Convention on Civil Liability for Oil Pollution Damage (CLC), 1969</li> </ul>
	Air transport	<ul style="list-style-type: none"> <li>• Chicago Convention on International Civil Aviation (Convention on International Civil Aviation (1944))</li> <li>• The Montreal Convention 1999</li> </ul>
	Pipeline transport (Oil)	<ul style="list-style-type: none"> <li>• Agreement concerning the International Carriage of Dangerous Goods by Road (ADR 2023)</li> </ul>

An analysis of the reviewed INTP document indicates that it is not only clearly written but many aspects of the environment, climate change, and social impacts are addressed in all transport modes and sectors, including; road, railway, pipeline, ports, and maritime, air, and inland water transport in both urban and rural areas as per NEMA guidelines. The non-motorized sector is also effectively dealt with. Institutional, legal, and regulatory transport frameworks are precisely adhered to, and conformity with national and international development standards is observed. With regards to World Bank Environmental and Social Standards (ESS) and guidelines, it is demonstrated in the reviewed INTP document that great importance has been placed on eight(8) of the SESA guidelines thus; environmental conservation, biodiversity protection, community health and safety, resource efficacy and pollution prevention management, financial intermediaries, transparency and good governance as well as gender equality and equity. The issue of stakeholder engagement and information

disclosure is not adequately integrated. The inclusion of vulnerable groups (VGS) is also glossed over.

### **3.4 Assessments of regulatory institutional capacity**

This section analyses the regulatory institutional capacities on environmental, social, safety and occupational health. This assessment takes into consideration various aspects among them (i) Institutions physical infrastructure, which includes available equipment and materials (ii) Human resources (iii) Financing and funding (iv) Motivation and Incentives and (v) Information Technology and Communication

Many institutions interface in the in the design, management, regulation and implementation of environmental, social and health and safety issues at the transport sector in Kenya. These include but are not limited to; NEMA, Ministry of roads and transport, The Ministry of labour and social protection, Ministry of public service, gender and affirmative action, Ministry of interior and national administration, The national Treasury and economic planning ,Ministry of lands, public works, housing and Urban development, Ministry of health, Ministry of Environment and forestry ,Ministry of tourism, wildlife and heritage, Ministry of water, sanitation and Irrigation and the Ministry of Energy and petroleum

The ministries through the various departments and agencies interface with NEMA and international players that issues related to environment, health, safety and social risks associated with projects, plans and programs are effectively and efficiently handled with minimal negative consequences. To determine institutional capacity of the transport sector, handle these issues, the consultant examined the variance in human capacity needs, programs for training and capacity building at NEMA and relevant agencies, availability of instrumentation and equipment's and plans for future expertise recruitment. The aspects of accountability and transparency in the issuance and handling of licensing permits were also checked for compliance with national and international safeguards. Levels and extent of stakeholder engagement and consultations in the design, implementation and monitoring for mitigation were also addressed.

### **3.5 Review and Analysis of NEMA'S Capacity**

NEMA classifies transport sector projects as both medium and high risk. Consultations with senior NEMA officials established that EIAs for such projects are constantly discussed,

reviewed and reports given to relevant owners (government). NEMA also engages in sensitization and awareness creation workshops and trainings on the same. It also has well established and accessible platforms for providing and disseminating information regarding transport sector development projects and policy needs for the same. To ensure adherence to all requirements NEMA a well-staffed directorate which ensures that final reports regarding projects, plans and process are subjected to a due diligence process. NEMA is keen on ensuring compliance to stakeholder consultation, biodiversity protection, labour requirements, resource efficiency, cultural and heritage protection, wildlife management, financing and funding, gender and social inclusion, health and safety and pollution issues. NEMA also requires that agencies use media platforms to reach out to as many stakeholders as possible. Kenya Gazette and radio have overtime acted as important disseminators of information regarding PPPs for NEMA.

NEMA is also keen on grievance redress and resolution. This is done through dialogue and consensus building as well as no EIA can be issued before all stakeholders are given an opportunity to be heard and their issues determined by NEMA and concerned agency. Use of courts has become so slow and tedious and a suggestion using ATDR and fast tracking of cases made at the environment and Land court was suggested. A judge of this court, however, complained of constant back and forth experienced during the court cases due to lack of clear, precise and organized evidence from complainants. A proposal for proper coordination and joint trainings on NEMA and court requirements for parties is recommended.

#### ❖ **Financing and Funding**

An analysis of relevant institutions capacities considered human resource, financing, communication needs, instrumentation and response needs.

#### ❖ **Human Resource needs**

A major issue that emerged is related to human resource capacity at NEMA. Despite the amount of work done at the agency, NEMA is understaffed in the departments of research, liaison, licensing, reviewers and reporting. The director general also pointed out the issue of the small number of inspectors who have to travel long distances because the counties are understaffed. The suggestions that more staff be recruited in all departments, retooling done, and constant and continuous capacity building be effected especially at the county government level. Financing for skills development and investment for training in new methods and

methodologies for handling EIAs is also important. Staff also need to be funded to further their competencies to ensure timely delivery of services.

#### ❖ **Financing and Funding**

The analysis concluded that while NEMA as the sole agency responsible for ensuring issuance of licenses and following up of all processes related to the management, adherence and implementation of PPPs to ensure environment, social and health and safety needs are taken care of, not much in terms of budgeting and financing is given to the agency. NEMA relies on yearly government capitation yet the agency receives more budgetary needs than it is allocated. The inadequacies in financing NEMA has resulted in piles of files and slow process of operations. Adequate and timely funding of the agency is recommended to ensure timely delivery of its mandate.

#### ❖ **Devolved Functions**

NEMA has a response unit situated in Nairobi. While this is an important development, having a single rapid response unit to handle disasters and to manage accidental risks puts locations outside Nairobi at a disadvantage. There was a suggestion that several rapid response units be spread in all counties and operators housed in respective counties. The rapid response should also be well equipped and financed with no bureaucracy experienced in the access to finances for operationalization.

#### ❖ **Use of Technology**

NEMA adequately connected in terms of technology with interconnectivity allowing good communication between and among relevant departments and clients. This connectivity has played an important role in ensuring timely communication and proper storage of documentation. Traditionally, clients complained about the use of a manual system which slowed processes in the agencies. Today, however, the use of information technology has eased the processes and automation has seen the NEMA handle many more issues than was the case in the past. Staff in the department of ICT are also well equipped and trained to follow-up and communicate on important issues. One of the issues arising from discussions was that the county governments do not possess proper coordination mechanisms related to ICT and there is therefore a need for inter connectivity between NEMA and county government relevant offices to ensure quick delivery of NEMA mandate.

### ❖ Incentives and Motivation

An important aspect of service delivery and participation in successful process is incentivization of staff. This should entail improving salaries and remunerations, hardship allowances, medical cover and housing benefits. To avoid high turnover and non-acceptance to work at the agency, there is also need to give staff packages for furthering their education at local or universities abroad, improve training allowance packages and provision of exchange programs with countries having similar agencies. This should be done continuously and consistently as opposed to anecdotal handouts.

An analysis of strategic plans and policies of various transport sectors' and subsectors' documents indicates that, mechanisms for engagement with each other for synergy building are clearly demarcated. Stakeholder participation in all the subsectors is also provided. In addition, the strategic plans and sectoral reports show that there are adequate physical infrastructure especially in terms of office spaces, office equipment and materials. The documents also indicate training and capacity building projections. However, the documents do not explicitly explain and show areas of training and capacity building expertise needed in the areas of environment, occupational health and safety as well as social issues. Generally, staff to be trained appear to be from the general transport oversight and coordination sectors. Financing for specific instrumentation for environmental, occupational health and safety assessments (specialized equipment's, software.) and which require specific expertise is not provided for in most of the documents. A sample of the sub-sectors strategic plans recognize their training and capacity needs as well as other issues related to World Bank standards as follows:

### **3.6 State Department of Roads Institutional Capacity**

To gauge the institutional capacity of the SDoT which commissioned this SESA two major aspects were identified; human resource capacity and labour needs in handling environmental, social and health and safety needs and presence or plans to procure instrumentation and equipment.

### ❖ Human Resource Needs and Incentivization

On institutional capacity it was established that while the department has adequate staff for handling technical needs, there is a serious lack of specialized staff to deal with especially environmental and climate change issues. In particular, it was noted that all modes of transport

require expertise in handling SESA issues or at least an understanding of how the design, implementation and monitoring a policy should look like in relation to dealing with environmental, social and health and safety aspects. Having experts in all departments on SESA issues is important as it may contribute to lessening workload at NEMA. In addition, continuous sensitization and awareness creation on the impacts of implementing policies on the environment and the need for stakeholder engagement while designing and monitoring policies is important. Recruitment, capacity building and retooling of existing staff on environmental issues is needed. The state department of transport in conjunction with the National land commission handles issues related to resettlement, relocation, pollution, oil spillage and gender and social exclusion issues. Adequate training of these issues is also required on a regular basis. To ensure retention of personnel incentives and rewards for work should also be encouraged and effected.

#### ❖ **Instrumentation and Equipment**

Regarding availability of instruments and equipment's for handling environmental and health and safety needs, it was noted that the department does not possess enough equipment's to check on regulation of existing laws. In some instances, existing equipment's and instruments are out of date and there is therefore need to procure newer and more advanced instruments for the same. These will also require training on capacity to handle and manage.

#### ❖ **Financing and expenditure needs**

On financing and expenditure, the SDoT relies on government funds which are hardly sufficient to cover all modes and means of transport. With the proposed developments, the SDoT will require to increase and request for an expanded budgetary allocation to be able to handle the increasing transport sector demands. This will ensure that projects are completed, and risks and injuries associated with non-completion avoided. Below are sample agencies and their institutional capacity drawn from strategic plans:

##### **i. KMA Strategic Plan (2018-2022)**

KMA strategic (2018-2022) plan recognizes and addresses key Environmental and Social Safeguards, including Occupational Health and Safety; as well as World Bank Environmental and social safeguards. They also appreciate the importance of stakeholder engagement, collaborations, synergy, capacity building and multiplicity of HR needs. However, while cognizant of EMCA and WB standards requirements, the strategic plan fails to explain in detail

specific environmental, occupational health and safety and social needs capacity needed for the agency. As a regulator it is supposed to have a well-equipped, adequately resourced department to handle such issues.

**ii. NTSA Strategic Plan 2018/2019 – 2022/2023**

In its Strategic Plan 2018/2019 – 2022/2023, the NTSA has identified key thematic areas to facilitate effective realization of the Authority's mandate in line with its core business, among which is Environment and Social Sustainability. While the Plan identifies the strengths of the institutional framework and internal capacity of the Authority in various area of operation, social and environmental issues are not mentioned. Besides, mentioning training needs, the institutional capacity to deal with environmental, occupational health and safety and social aspects are not precisely handled in the strategic plan.

**iii. Kenya Roads Board Strategic Plan (2018 -2022)**

While well written, the Strategic Plan is scanty on environmental issues; social and occupational safety aspects have not been captured. The strategic plan appreciates the need for capacity building and training of staff. However, the Plan is completely silent on training in areas that pertain to environment, occupational health and social standards. In addition, the extent of financing for specialized equipment and materials to deal with environmental issues is lacking in the document.

**iv. Kenya Civil Aviation Strategic Plan**

KCAA is the regulator of the civil aviation industry and provider of air navigation services in Kenya. The strategic plan was not available on its website but there was an Action Plan for Carbon dioxide Emissions Reduction in the Aviation Sector 2022-2028. The regulator plan includes a component of capacity building for environmental officers in the following areas: environment and aviation, noise and air monitoring, Strategic Environment assessment, benchmarking with good airport practices.

**3.7 The Ministry of labour and social protection capacity**

The ministry of labour and social protection handles several important aspects relevant to this SESA exercise namely; labour disputes, Child protection, and occupational safety and health

services. To deal with these and related issues of social protection the Ministry has various semi-autonomous agencies including; National Industrial Training Authority(NITA), National Employment Authority(NEA), National Council for Persons with Disabilities(NCPWD), Directorate of Occupational Safety and Health Services(DOSHS) Department of Children's Services(DCS) and the Department of Labour among other equally important docketts.

#### ❖ **Staffing, financing and equipment**

The DOSHS is an important directorate when it comes to handling issues of safety, health and security. The reviewed INTP has clear guidelines of how these issues will be handled and managed when and if they occur. The OSHA guidelines provided in 2007 also stipulate the requirements for handling and resolving grievances and this is partly dealt with in the document. OSHA (2007) guidelines also provide that there would be no discrimination and/or victimization when reporting issues related to occupational health and safety. It was, however, noted that cases take so long in the hands of players making those aggrieved to either give up or use more resources thus making them frustrated. In the transport sector where mistreatment, violation and exploitation of workers was noted in construction sites, complaints related to noncompliance to set OSHA rules was noted.

Measures recommended for dealing with emerging issues are; increase of staff in the DOSHS, regular sensitization and awareness creation on process of dealing and handling grievances, empowerment of local communities to peer handle grievances, retraining staff and retooling and close collaboration with enforcement agencies.

As regards funding of various departments dealing with labour, children, PWDs and employment, it was generally noted that reliance on government funding has often frustrated delivery of services. It was, for instance, noted that the labour court which employs conciliation as a method of settling labour disputes has piles of unsettled cases. This was attributed to limited number of staff and finances to recruit are also limited. Other concerns related to labour included; leave, termination and low pay.

To address budgetary issues, it is suggested that all the departments in the Ministry of labour and social protection explores possibilities of expanding private-public partnership with local and international partners including World Bank, AfDB and European Union.

On instruments and equipment's, it was established that the DOSHS has vehicles, fire extinguishing, maintenance and handling equipment's and tools; on health they have sanitary

tools, refrigeration and self-acting machines, chains and ropes among others. It was however observed that some of the equipment's are old while others require maintenance. To remedy such situation, it is suggested that the department continuously restocks, maintains and recruits enough staff to assist existing ones. At the county levels, very few equipment's and tools are available. Procurement and purchase of relevant materials is recommended.

### **3.8 Institutional capacity of other Ministries and Agencies**

Issues emerging from other relevant ministries and agencies were associated with financing and expenditure, understaffing and incentivization. Handling such issues requires collaboration, coordination and partnership between private and public national and international institutions and organizations. In addition, regular training and capacity building for existing staff and investment in education and skills building is important in all ministries and agencies handling environmental, social and health and safety issues in the transport sector.

While the capacity of the institutional agencies to address environmental, occupational health and safety and social issues was appreciated, the same may not apply at local levels where unique challenges exist. Addressing current and potential risks at both levels is also subject to capacity challenges such as sub-sector infrastructure, availability of appropriate equipment and materials, levels of synergies and linkages between institutions and availability of relevant staff to address environmental, occupational health and safety and social issues at the county levels. Collaborations and continuous training of specialized county staff is thus needed. In particular, staff to handle specialized data measuring equipment and materials, for instance, those dealing with new technologies in the transport sector are needed. Institutions with overarching mandates such as KEBs require specialized staff to handle very sensitive data on environmental, social, health and safety. Retooling of such staff to handle new equipment's and to deal with emerging issues should be adequately addressed by the reviewed INTP for implementation. An important challenge is the availability of expert personnel and capacity to identify specific risk factors of environmental, occupational health and safety and social attributes of the reviewed INTP.

### 3.9 Policies, laws, regulations, guidelines and environmental licensing requirements

The transport sector is governed by numerous statutes that fall under two broad categories, namely statutes affecting all sectors of the economy and sector-specific legislation. Among the statutes that cut across all sectors of the economy include but are not limited to; Constitution of Kenya, 2010, National Police Service Act, 2011, State Corporations Act (No. 11 Of 1986), The Environmental and Management Co-ordination Act 1999 (Appendix 2) , Public Procurement And Asset Disposal Act (No. 33 Of 2015), Exchequer And Audit Act (Cap. 412), Public Private Partnerships Act (No. 14 Of 2021), Lake Basin Development Authority Act (Cap. 442), Kenya Revenue Authority Act (No. 2 Of 1995), Land Act (No. 6 of 2012) and Environment And Land Court Act (No. 19 Of 2011). Sector specific statutes cover road, rail, port and maritime, air, pipeline and, inland water transport. The table below shows the overarching and sector specific regulatory framework as well as the regulating institutions.

**Table 7: Legal, Institutional and Regulatory Framework for the Transport Sector**

Description	Statutes and Regulation
Overarching Statutes	<ul style="list-style-type: none"> <li>• Constitution of Kenya, 2010</li> <li>• National Police Service Act, 2011</li> <li>• State Corporations Act (No. 11 Of 1986)</li> <li>• The Environment and Land Court Act, 2011</li> <li>• The Environmental and Management Co-ordination Act 1999</li> <li>• The Environmental Management and Coordination Act of 2015 (CAP 387) and its Amendment</li> <li>• Public Procurement and Asset Disposal Act (No. 33 Of 2015)</li> <li>• Exchequer and Audit Act (Cap. 412)</li> <li>• Public Private Partnerships Act (No. 14 Of 2021)</li> <li>• Lake Basin Development Authority Act (Cap. 442)</li> <li>• Kenya Revenue Authority Act (No. 2 Of 1995)</li> <li>• Land Act (No. 6 of 2012)</li> <li>• Land Adjudication Act (Cap. 284)</li> <li>• Land Control Act (Cap. 302)</li> <li>• Environment and Land Court Act (No. 19 Of 2011)</li> <li>• The Occupational Safety and Health Act, 2007</li> <li>• Kenya National Social Protection Policy Act, 2011</li> <li>• Standard Act (CAP 496)</li> <li>• National Children Policy, 2010,</li> <li>• National Environmental Action Plan (NEAP) of 2009-2013,</li> <li>• National Gender and Development Policy</li> <li>• National Police Service Act, 2011</li> <li>• National sand harvesting guidelines, 2007</li> <li>• The National Poverty Eradication Plan of 1999,</li> </ul>

		<ul style="list-style-type: none"> <li>Security Laws (Amendment) Act, 2014</li> </ul>	
sector specific	<b>Transport Sector</b>	<b>Institution</b>	<b>Specific Statutes and Regulation</b>
	Road transport	KeNHA KURA KERRA KRB NTSA	<ul style="list-style-type: none"> <li>Public Roads and Roads of Access Act (Cap. 399)</li> <li>Public Roads Toll Act (Cap. 407)</li> <li>Road Maintenance Levy Fund Act (No. 9 Of 1993)</li> <li>Kenya Roads Act (No. 2 Of 2007)</li> <li>Kenya Roads Board Act (No. 7 Of 1999)</li> <li>The National Transport and Safety Authority Act, 2012</li> <li>National Transport and Safety Authority Act (No. 33 Of 2012)</li> <li>Traffic Act (Cap. 403)</li> <li>Wildlife Conservation and Management Act (No. 47 Of 2013)</li> </ul>
	Rail transport	Kenya Railway Corporation	<ul style="list-style-type: none"> <li>Kenya Railways Corporation Act Chapter 397 (Revised Edition 2022 [1978])</li> <li>The Kenya Railways Corporation (Amendment) Act, 2005</li> <li>Wildlife Conservation and Management Act (No. 47 Of 2013)</li> </ul>
	Port and Maritime	Kenya Ports Authority	<ul style="list-style-type: none"> <li>Kenya Ports Authority Act Chapter 391</li> <li>The Ferries Ordinance Act Cap 410</li> <li>Wildlife Conservation and Management Act (No. 47 Of 2013)</li> </ul>
		Kenya Maritime Authority/ Inland water transport	<ul style="list-style-type: none"> <li>Kenya Maritime Authority Act 2006</li> <li>The Merchant Shipping Act No. 4 of 2009</li> <li>Merchant Shipping (Load Lines) Regulations, 2022</li> <li>Merchant Shipping (Recognized Organizations) Regulations, 2022</li> <li>Merchant Shipping (Tonnage Measurements) Regulations, 2022</li> <li>The Merchant Shipping (Collision Prevention and Distress Signal) Regulations, 2022</li> <li>Merchant Shipping (Maritime Labour) Regulations 2022</li> <li>Merchant Shipping (Seafarers Identity Document) Regulations</li> <li>Merchant Shipping (Carriage of Cargoes and Fuel Oils) Regulations, 2022</li> <li>Merchant Shipping (Carriage of Dangerous Goods) Regulations, 2022</li> <li>Merchant Shipping (Nuclear Ships) Regulations</li> <li>Merchant Shipping (Radio Communication) Regulations, 2021</li> <li>Merchant Shipping (Safety Measures for High Speed Craft)</li> <li>Merchant Shipping (Safety Measures for Ships Operating In Polar Waters) Regulations</li> <li>Merchant Shipping (Safety of Navigation) Regulations) 2021</li> <li>Merchant Shipping Training and Certification (Amendment) Regulations 2022</li> <li>Marine Insurance Act CAP 390</li> <li>Maritime Zones Act (Cap. 371)</li> </ul>

Air transport	Kenya Civil Aviation Authority	<ul style="list-style-type: none"> <li>• The Civil Aviation Act No. 21 Of 2013</li> <li>• The Civil Aviation (Amendment) Act, 2016</li> </ul>
	Kenya Airports Authority	<ul style="list-style-type: none"> <li>• Kenya Airports Authority Act (Cap. 395)- Revised Edition 2012 [1992]</li> </ul>
Pipeline (Oil) transport	Energy & Petroleum Regulatory Authority (EPRA)	<ul style="list-style-type: none"> <li>• Mombasa Pipeline Board (Cap. 373)</li> <li>• the Companies Act (CAP 486)</li> <li>• Energy Act (No. 1 of 2019)</li> <li>• Petroleum Act (No. 2 Of 2019)</li> <li>• Petroleum Development Fund Act (No. 4 Of 1991)</li> <li>• Companies Act (CAP 486)</li> </ul>

These national policies, regulations, guidelines and environmental licensing requirements borrow heavily from international bodies, institutions and actors. The SESA assessment utilized the following World Bank Environmental and Social Standards, Operational Procedures and Environmental, Health and Safety Guidelines as indicated below;

**Table 8: World Bank's Environmental and Social Standards, Operational Procedures and EHS Guidelines**

Item Code	World Bank Environmental And Social Standard (ESS)	Description
ESS1	Environmental and Social Standard 1: Assessment and Management of Environmental and Social Risks and Impacts	This Standard sets out the Borrower's responsibilities for assessing, managing, and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing (IPF), to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).
ESS 2		This Standard recognizes the importance of employment creation and income

ESS 3	Environmental and Social Standard 2: Labour and Working Conditions	generation in the pursuit of poverty reduction and inclusive economic growth.
ESS 4	Environmental and Social Standard 3: Resource Efficiency and Pollution Prevention and Management	This Standard sets out the requirements to address resource efficiency, pollution prevention, and management throughout the project life-cycle.
ESS 5	Environmental and Social Standard 4: Community Health and Safety	This standard addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.
ESS 6	Environmental and Social Standard 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	This Standard requires that where involuntary resettlement is unavoidable, it will be minimized, and appropriate measures to mitigate adverse impacts on displaced persons (and on host communities receiving displaced persons) will be carefully planned and implemented.
ESS 7	Environmental and Social Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	This Standard, <i>inter alia</i> , recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development, and it recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support.
	Environmental and Social Standard 7: Indigenous Peoples/Sub-Saharan	

ESS 8	African Historically Underserved Traditional Local Communities	This Standard ensures that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities.
ESS 9	Environmental and Social Standard 8: Cultural Heritage	This Standard recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present, and future.
ESS 10	Environmental and Social Standard 9: Financial Intermediaries	This Standard requires FIs to monitor and manage the environmental and social risks and impacts of their portfolio and FI subprojects and monitor portfolio risk as appropriate to the nature of intermediated financing.
	Environmental and Social Standard 10: Stakeholder Engagement and Information Disclosure.	This Standard recognizes that effective stakeholder engagement can improve projects' environmental and social sustainability, enhance project acceptance, and significantly contribute to successful project design and implementation
	<b>WORLD BANK OPERATIONAL PROCEDURES</b>	
OP/BP 4.01	Environmental Assessment	
OP/BP 4.10	Indigenous Peoples	
OP/BP 4.11	Physical Cultural Resources	
OP/BP 4.12	Involuntary Resettlement	

	<b>WORLD BANK ENVIRONMENTAL, HEALTH, AND SAFETY GUIDELINES (EHS Guidelines)</b>	
	<b>1.</b>	<b>Environmental</b>
	1.1	Air Emissions and Ambient Air Quality
	1.2	Energy Conservation
	1.3	Wastewater and Ambient Water Quality
	1.4	Water Conservation
	1.5	Hazardous Materials Management
	1.6.	Waste Management
		Noise
		Contaminated Land
	<b>2.</b>	<b>Occupational Health and Safety</b>
	2.1	General Facility Design and Operation
	2.2	Communication and Training
	2.3	Physical Hazards
	2.4	Chemical Hazards
	2.5	Biological Hazards
	2.6	Radiological Hazards
	2.7	Personal Protective Equipment (PPE)
		Special Hazard Environments
		Monitoring
	<b>3.</b>	<b>Community Health and Safety</b>
	3.1	Water Quality and Availability
	3.2	Structural Safety of Project Infrastructure
	3.3	Life and Fire Safety (L&FS)
	3.4	Traffic Safety
	3.5	Transport of Hazardous Materials
		Disease Prevention
		Emergency Preparedness and Response
	<b>4.</b>	<b>Constriction and Decommissioning</b>

	4.1	Environment
	4.2	Occupational Health and Safety
	4.3	Community Health and Safety

### **3.10 Adequacy of Strategic Environmental and Social Assessment Framework**

The World Bank SESA Framework is a comprehensive approach that integrates environmental and social considerations into decision-making processes for policies, plans, and programs. It aims to assess and manage potential environmental and social impacts of proposed initiatives, ensuring sustainable development and positive social outcomes. How appropriate is the SESA framework?

- **Provides Comprehensive Coverage:** The SESA Framework encompasses a broad range of environmental and social factors that are relevant to the proposed policy, plan, or program. It adequately addresses potential impacts on natural resources, ecosystems, biodiversity, cultural heritage, human health, social equity, and livelihoods.
- **Offer A Robust Methodology:** The SESA Framework employs a rigorous and scientifically sound methodology for data collection, impact assessment, and decision making. The framework ensures that assessments are based on accurate and reliable information, using appropriate tools, models, and techniques.
- **Inform Decision Making:** An adequate SESA Framework is integrated into the decision-making processes for policies, plans, and programs. It informs and influences decision makers, enabling them to consider environmental and social considerations alongside economic factors. The framework has a clear process for translating assessment findings into concrete actions and policy adjustments.
- **Provides Mitigation and Enhancement Measures:** The SESA Framework provides guidance on the development and implementation of robust mitigation and enhancement measures. It ensures that negative impacts are minimized or avoided through appropriate safeguards, while also identifying opportunities to enhance positive environmental and social outcomes.

- **Stakeholder Engagement:** Acceptability of the SESA Framework depends on meaningful and inclusive stakeholder engagement throughout the assessment process. It allows for public participation of affected communities, civil society organizations, and relevant stakeholders. The framework provides mechanisms for sharing information, soliciting feedback, and incorporating stakeholder perspectives into the decision-making process.
- **Monitoring and Evaluation:** The SESA Framework includes provisions for monitoring and evaluating the effectiveness of mitigation measures and the overall impact of the assessed policy, plan, or program. It establishes clear monitoring indicators, data collection mechanisms, and evaluation methodologies to track progress and ensure accountability.

The WB framework is thus adequate and should be applied in all the ministries in Kenya. This is because environmental changes as well as emerging issues associated with climate variabilities transcend boundaries outside of the country, region and globe. The transport sector in particular, with its growing demands and developments ought to be cognizant of the dynamics associated with new and forecasted infrastructural developments, and emerging transport modes which have not been adequately addressed by the reviewed INTP. Such is the case for the Non-Motorized and Intermediate means of Transport (NMIMTs). Impacts associated with such developments included pollution, loss of flora, fauna and habitats, displacement of human settlements and those linked to occupational health and safety. There could also be additional risks such as those associated with climate change, including flooding; or pandemics such as Covid-19 which affect both human resources and economies. This then calls for continuous strengthening of the frameworks.

## CHAPTER FOUR

### POLICY ANALYSIS OF REVIEWED INTP

#### 4.0 Introduction

This section deals with existing and forecasted developments and linked them to communities' environment, social, health, safety and security. These include climate change risks associated with existing developments and plans for investment in the transport sector, considering the forecasts and scenarios developed. Cumulative/synergistic/secondary impacts and consequences of individual developments under the transport policy are also be included. The priorities were identified based on existing information, expert judgement and inputs and concerns of stakeholders. In addition, the section identifies consequences/risks associated with existing and forecasted development and identifying clear prioritization criteria for future action. World Bank is keen on vulnerable groups, including women, youth, elders, and marginalized groups and culture, and children issues as discussed. A dedicated section on this group is thus provided. Recommendations derived from stakeholder engagement and observations in addressing risks and consequences associated with the transport sector have also been suggested in this chapter. This is aimed at informing improvements in the reviewed INTP document.

An assessment of the reviewed INTP document indicates various strategic proposed policy directions and specific transport development projects as follows;

**Table 9: Forecasts of Future Developments As Proposed In the Reviewed INTP**

OVERARCHING	
1. ENVIRONMENT	
	Forecasted
	<ol style="list-style-type: none"><li>1. Develop and implement the next phase of NCCAP on climate proofing transport infrastructure and in particular, development of low-carbon sustainable transport systems;</li><li>2. Enforce the Climate Change Act, Number 11 of 2016 on environment safeguards such as control of gaseous emissions, noise pollution, oil spills, construction activities, among others;</li><li>3. Develop and implement a Transport Sector Climate Change Action Plan to put in place a sectoral consensus on climate change, and monitor and review mitigation targets for transport on a regular basis;</li><li>4. Develop standards for climate proofing of transport infrastructure and a long-term strategy for climate-resilient development in the transport sector;</li><li>5. Prioritize implementation of Mass Rapid Transit Systems (MRTS) and non-motorized transport facilities in urban areas, and dis-incentives for the use of private vehicles;</li></ol>

	<ol style="list-style-type: none"> <li>6. Promote the use of renewable fuels and develop a strategy for electric mobility, including investments in new vehicle technologies;</li> <li>7. Set an enabling policy framework to incentivize efficiency improvements in freight transport, particularly the use of rail, in consultation with relevant private sector stakeholders;</li> <li>8. Provide the necessary resources for full operationalization of the Climate Change Coordination Unit of the Transport sector as set out in the Climate Change Act of 2016;</li> <li>9. Forge closer cooperation with scientists and engineers, industry, and international organizations to ensure that up-to-date information on climate change impacts and adaptation measures for transport is available, widely disseminated and taken into account by policy makers, transportation planners and development strategists;</li> <li>10. Explore ways in which further financial resources may be generated as part of mitigation efforts in the transport sector and ensure that any proceeds are reinvested within the industry in particular for the study of impacts and for the purposes of effective adaptation; and,</li> <li>11. Ratify, domesticate and implement all relevant international/regional conventions and protocols and agreements relating to climate change.</li> </ol>
<b>2. SOCIAL</b>	
	<ol style="list-style-type: none"> <li>1. Develop a framework to actively identify, through measurable indicators, and eliminate social and economic exclusion in the transport sector;</li> <li>2. Incorporate social exclusion vulnerability assessments into the planning and implementation phases of transport projects.</li> <li>3. Promote education in specialised transport disciplines at Kenyan universities, TVET institutions, including collaboration with relevant institutions in the development and regulation of the necessary curricula for all levels of the education system</li> <li>4. Establish a Transport Industry Training Levy to support training of transport industry professionals;</li> <li>5. Develop the relevant human resource required to manage sustainable transport systems in Kenya for all sub-sectors, including the capacity building of local institutions to train the required professionals;</li> <li>6. Introduce relevant courses for technical and other personnel in the design, development and maintenance of Non-Motorised and Intermediate Means of Transport (NMIMT) vehicles and facilities;</li> <li>7. Develop and support “Centres of Excellence” for each transport sub-sectors and facilitate restructuring of the Railway Training Institute (RTI) to focus on the provision of courses that are essential to the core activities of rail transport and transform it into a “Centre of Excellence” for rail transport.</li> </ol>
<b>3. OCCUPATIONAL, SAFETY AND HEALTH</b>	
	<ol style="list-style-type: none"> <li>1. The Government will cause further research to determine the nature and extent of the linkages between transport and health and develop a framework for intervention to reduce the potential and actual negative effects of transport on health. Policy interventions will be aligned with international agendas such as Sustainable Development Goals (SDGs) that cover environmental degradation, climate change resolutions among others.</li> <li>2. The Government will enhance security and safety for all transport sub-sectors through a combination of measures to that will include: improved surveillance by application of ICT; improved logistics; and, enhancement and enforcement of traffic and labour</li> </ol>

	laws and regulations. Other measures will include provision of Roadside Stations (RSS) along the major transport corridors for the safety and security of passengers
<b>SECTOR SPECIFIC</b>	
<b>Transport Sector</b>	<b>Forecasted</b>
<b>Road Transport</b>	<p>Safety, Health and Security</p> <ol style="list-style-type: none"> <li>1. Develop a framework for capacity building on road transport and health for institutions responsible for oversight on road safety measures, public health and enforcement;</li> <li>2. Promote use of green mobility; and,</li> <li>3. Develop a policy on safe scrapping/disposal of unserviceable vehicles, vehicles parts and waste.</li> <li>4. Develop a framework for regular review of road design manuals to international best practices in road safety. The manuals shall have guidelines for traffic engineering control devices such as traffic signals; road signs and road markings; protection measures; off-carriageway (roadside) safety measures; monitoring and evaluation;</li> <li>5. Enhance framework that instigates road safety audits during planning, implementation and development of infrastructure; and,</li> <li>6. Undertake continuous review of vehicle quality standards (including GHG emissions) and enforce compliance through random and periodic vehicle inspections.</li> <li>7. Establish coordination mechanisms for development and implementation of effective post-crash incident management.</li> <li>8. Build capacity for incident management and establishment of trauma centres</li> <li>9. Facilitate and enhance detailed crash investigation for post-crash preventive initiatives</li> <li>10. Operationalize the National Transport and Safety Fund.</li> <li>11. Ensure financial sustainability for lead agencies on road safety to comply with legal and international safety conventions.</li> <li>12. Strengthen the capacity of NTSA for better coordination and management of road traffic safety, particularly on: driver training and testing; vehicle inspections; crash data collection and analysis, and, using technology to pro-actively prevent road crashes from happening;</li> <li>13. Strengthen all road agencies involved in planning and developing road transport infrastructure, and regulating transport services, to have the necessary skills and adequate funding to deal with road traffic crashes through integrated and proactive planning and implementation;</li> <li>14. Enhance the level of professionalism of the Traffic Police in traffic control, modern methods of enforcement focused on the psychology of the road user and unpredictability, prosecution, and post-crash emergency response; and,</li> <li>15. Enhance traffic control, safety management and enforcement through the use of ICT (e.g. Intelligent Transport Systems (ITS), cameras, CCTVs, etc.), emergency response vehicles and equipment. This will be achieved through extensive utilization of transport information systems (ITS); setting and evaluating traffic control standards on regional, national and international levels.</li> <li>16. Develop a framework to reduce the potential and actual negative effects of freight transport health related issues;</li> <li>17. Integrate health related issues in road transport planning, design, development and operations, including the development of Roadside Service Stations (RSS) at strategic locations within the road network. The RSS will be equipped with health facilities, as well as serve as centres for sensitization on HIV/AIDS and human trafficking.</li> </ol> <p><b>Environment</b></p> <ol style="list-style-type: none"> <li>1. The Establish a coordination framework between institutions responsible for land use planning and road infrastructure planning and development. Road transport planning</li> </ol>

	<p>shall be undertaken in an integrated and complimentary approach so as to link with other modes;</p> <ol style="list-style-type: none"> <li>2. Develop and implement a Roads Transport Masterplan (RTMP) that is fully integrated with urban and regional land use plans;</li> <li>3. Secure and/or acquire land for future development; and,</li> <li>4. Establish road corridor management framework for mapping out of road reserves and ensuring they are free of encumbrances.</li> </ol> <ol style="list-style-type: none"> <li>1. Create regulatory/ institutional structure to ensure that all agencies comply with all the environmental laws and regulations throughout the project cycle. The planning and development standards shall meet climate change considerations, including incorporation of costs of CO<sub>2</sub> emissions and road crashes in assessment of economic viability of road projects;</li> <li>2. Pursue innovative technologies in the field of environmental conservation and use of alternative materials with less carbon footprints in road construction;</li> <li>3. Promote the growth and development of E-Mobility and other low carbon pathways in the road transport sector;</li> <li>4. Ensure closer co-operation between relevant government agencies in the implementation of international environmental legislation/agreements such as the Paris Agreement and the Clean Air Initiative (CAI) resolutions; and,</li> <li>5. Develop, progressively introduce and enforce vehicle emission limits</li> <li>6. Provide the regulatory framework and appropriate fiscal policies to promote energy-efficient and low-emission freight transport, including shifting long distance freight from road to rail;</li> <li>7. Ensure strict enforcement of regulations governing the transportation of hazardous materials and substances to minimize chances of occurrence of disasters, such as fires arising from spills of petroleum fuels through road accidents;</li> <li>8. Establish effective disaster management measures, along the major road corridors, will also be established to deal with such disasters when they occur; and,</li> <li>9. Put in place and enforce necessary regulations to prevent and address fuel spills and consider diverting such dangerous freight to the rail, pipeline, and inland waterway systems where population exposure is lower.</li> </ol>
Rail Transport	<b>Safety, Health and Security Safety, Health And Security</b>
	<ol style="list-style-type: none"> <li>1. Provide adequate resources for timely maintenance, renewal of railway assets and optimum staffing;</li> <li>2. Provide for the establishment of an independent railway safety regulator; and,</li> <li>3. Strengthen and enforce implementation of appropriate safety management system.</li> <li>4. The Government will protect and secure railway assets.</li> </ol>
	<b>Environment</b>
	<ol style="list-style-type: none"> <li>1. Maintain an updated Railway Transport Masterplan (RTMP) that is integrated with National and County Spatial Plans. The RTMP will align with existing national and county land use plans. The RTMP will guide reservation and acquisition of land for future rail development; and,</li> <li>2. Ensure that the RTMP is considered whenever new spatial plans are being prepared.</li> <li>3. Promote progressive transition from fossil fuels to clean energy in railway transport; and,</li> <li>4. Provide for proper disposal of waste emanating from railway operations.</li> </ol>
	<b>Social</b>
	<ol style="list-style-type: none"> <li>1. Formulate a strategy to attract and retain qualified human resources in all aspects of railway operations, development and management; and,</li> </ol>

	<ol style="list-style-type: none"> <li>2. Ensure that Railway Training Institute (RTI) has adequate equipment, facilities and other relevant infrastructure to offer courses that are essential to railway operations and development</li> </ol>
Maritime Transport	<p align="center"><b>Safety, Health And Security Safety, Health And Security</b></p> <ol style="list-style-type: none"> <li>1. Enhance institutional capacity of the maritime regulator to effectively implement the Merchant Shipping Act;</li> <li>2. Invest in registration of all boats operation on Kenyan waters and ensure capabilities in enforcing and undertaking assurance of safety of life and property at sea;</li> <li>3. Encourage private sector participation in salvage by stimulating investment from the private sector in the tug and salvage industry;</li> <li>4. Ensure maritime governance is improved through appropriate financial resources and tools to the relevant institutions to execute their mandates;</li> <li>5. Ensure operationalization of the Merchant Shipping Act for maritime safety, marine pollution. Further, undertake navigation and hydrographic mapping of the Kenyan waters; and,</li> <li>6. Establish accident investigation unit.</li> <li>7. Build human and institutional capacity to ensure enforcement of port health in all Kenyan sea and inland waters; and,</li> <li>8. Establish sea farer rehabilitation centres.</li> <li>9. Develop legislative changes to establish and designate the marine casualty investigation as a specific agency with autonomy, financial independence, powers of investigation and organizational capacity to conduct marine accident and serious incident investigations within the country; and,</li> <li>10. Ensure that the institutional framework of the maritime sector is effective and aligned with international practice.</li> </ol>
	<p align="center"><b>Environment</b></p> <ol style="list-style-type: none"> <li>1. The Government will promote green ports and shipping by encouraging adoption of energy efficient equipment, alternative fuels for marine crafts and vessels, and promoting globally good practices in cargo handling, in line with the climate action plan.</li> <li>2. The Government will secure existing land for future maritime development and undertake review of the land use plans.</li> </ol>
	<p align="center"><b>Social</b></p> <ol style="list-style-type: none"> <li>1. Support the development of adequately trained and skilled maritime professionals through public and private maritime training institutions aligned with the industry needs;</li> <li>2. Enhance the performance of Port State Control as an effective means of deterring substandard ships and their owners from calling at Kenyan ports;</li> <li>3. Encourage participation of the private sector in establishment of maritime training institutions;</li> <li>4. Strengthen existing institutions with the aim of attracting and retaining specialized pool of expertise that meet the industry's needs;</li> <li>5. Formulate a strategy to enhance talent attraction, recruitment and retention; and,</li> <li>6. <u>Encourage collaborations with international partners to promote on-the-job maritime training to obtain practical skills (Sea time) and remain relevant in a rapidly changing and dynamic industry.</u></li> </ol>
	<p align="center"><b>Safety, Health And Security Safety, Health And Security</b></p> <ol style="list-style-type: none"> <li>1. Government will strengthen the State Safety Oversight (SSO) system and the implementation and maintenance of the State Safety Programme (SSP) to achieve consistent and continuous compliance with the ICAO SARPs.</li> </ol>
Air Transport	

	<ol style="list-style-type: none"> <li>Update the National Civil Aviation Security Policy (NCASP) and Civil Aviation Security Regulations to ensure that they conform to ICAO's SARPS and international best practices.</li> <li>Enhance the level of cooperation among the airport security organs that play a critical role in the civil aviation system and capacity to implement ICAO SARPS requiring risk assessment by the relevant national or local authorities.</li> <li>Implement legislative changes to establish and designate the AAID as a specific agency with autonomy, financial independence, powers of investigation and organizational capacity to conduct aircraft accident and serious incident investigations within the country.</li> <li>Ensure that the institutional framework of the aviation sector is effective and aligned with international practice.</li> </ol>
	<b>Environment</b>
	<ol style="list-style-type: none"> <li>Develop climate adaptation and mitigation plans to help curb negative environmental and climate change impacts.</li> <li>Embrace and promote the use of improved aircraft in terms of fuel consumption, efficiency, and noise reduction.</li> <li>Develop a framework for aviation environmental protection including the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and support coordination between the aviation stakeholders and environment experts to enhance expertise, and promote knowledge sharing and harmonization of positions on issues of environment protection and climate change.</li> <li>Develop capacity in terms of personnel and technology and encourage production and deployment of alternative sources of fuels including Sustainable Aviation Fuels (Biofuels and electricity) and use of more energy-efficient infrastructure including electric vehicles.</li> <li>Promote integrated land use planning to ensure compatible land use in areas around aerodromes to mitigate noise pollution.</li> <li>Develop and enforce regulations on the responsibility for the disposal of abandoned and written-off aircraft and related aircraft waste such as aircraft parts and fluids within aerodromes.</li> </ol>
	<b>Social</b>
Pipeline Transport	<p style="text-align: center;"><b>Safety, Health And Security Safety, Health And Security</b></p> <ol style="list-style-type: none"> <li>Enact appropriate safety and security regulations that will govern the development and operation of the pipeline transport system.</li> <li>Develop a legislative framework that shall ensure all petroleum products are transported through the existing pipeline system.</li> <li>Facilitate investment in technology for real time dissemination of information in the event of pipeline vandalism.</li> <li>Establish standard emergency response procedures incorporating all inter-agencies and equipping them with the relevant resources to attend to petroleum product emergencies.</li> <li>Promote enhancement of pipeline protection from human encroachment</li> <li>Establish adequate contingency plans to deal with risks associated with spillages and fires.</li> </ol>

	<ul style="list-style-type: none"> <li>7. Ensure that imported fuel specifications adhere to internationally accepted levels on Lead and Sulphur.</li> <li>8. Enforce the Occupational Safety and Health Act (OSHA), 2007 to ensure the safety and health for all persons and property within KPC installations.</li> </ul>
	<b>Environment</b>
	<ul style="list-style-type: none"> <li>1. Enforce the Environmental Management and Coordination Act (EMCA), 1999 to ensure environmental protection in the event of product spillage.</li> </ul>
	<b>Social</b>
	<ul style="list-style-type: none"> <li>1. Develop strategies to enhance coaching and mentorship in the industry.</li> <li>2. Develop a strategy to address skill needs in the petroleum industry.</li> </ul>

In addition to these policy strategic directions and drawing from the reviewed INTP, the following future transport sector infrastructure development projects are proposed for each transport subsector. Specific sites for the envisioned projects are highlighted. The table below summarizes the proposed projects;

**Table 10: Forecasts of future developments projects as proposed in the Reviewed INTP**

Transport sector	Forecasted	scenarios
Road Transport	<ol style="list-style-type: none"> <li>1. The Northern Corridor runs from Mombasa at the Coast through Nairobi, Nakuru, and Eldoret to Malaba at the Kenya-Uganda Border and the Nakuru - Mau Summit through Kericho and Kisumu to Busia at the Kenya-Uganda Border;</li> <li>2. The Great North Road that runs from Namanga at the border with Tanzania, through Nairobi and Isiolo to Moyale;</li> <li>3. Lamu - Garissa – Isiolo to Lokichar;</li> <li>4. Tarime - Kisii - Kisumu - Kitale - Lodwar to Kenya - Sudan Border.</li> <li>5. Kitale – Endebes - Suam – Uganda;</li> <li>6. Kainuk-Uganda border corridor;</li> <li>7. Somalia Border-Lamu-Mombasa-Lunga Lunga corridor;</li> <li>8. Kainuk-South Horr-Marsabit-Moyale corridor;</li> <li>9. Mai Mahiu – Mulot – Kilgoris – Lolgorian – Isebania Corridor; and,</li> <li>10. Road transport corridor connecting Lamu to South Sudan through Lokichoggio</li> </ol>	<ul style="list-style-type: none"> <li>✓ Non-integration of land use, planning and development results to spatial dislocated settlements, urban sprawling, high cost of transport, long congested commuting distance time</li> <li>✓ Understaffing in planning departments</li> <li>✓ Lack of integrated implementation of plans for Mombasa and Nairobi</li> <li>✓ Heavily congested roads around CBDs</li> <li>✓ Lack of mandatory traffic impact assessments (TIA)</li> <li>✓ Lack of elaborate and adequate bypasses</li> <li>✓ Ineffective traffic demand management measures</li> <li>✓ Traffic congestion</li> <li>✓ Inadequate and uncoordinated traffic signals</li> <li>✓ Lack of dedicated traffic provisions for pedestrians</li> <li>✓ Lack of information on route networks</li> <li>✓ Lack of dedicated bus lanes</li> <li>✓ Inadequate, ineffective stakeholder enjoyment in the transport sector</li> <li>✓ Uncomprehensive pedestrian network</li> <li>✓ Lack of prioritization of non-motorized transport infrastructure</li> <li>✓ Parking congestion causing hazards</li> <li>✓ Increased carbon emissions</li> <li>✓ Destruction of flora and fauna</li> </ul>

Rail Transport	<ol style="list-style-type: none"> <li>1. Integrated multi-modal transport planning and development particularly to link railway systems with other transport modes for both freight and passenger transport; and,</li> <li>2. Rail Transport Masterplan (RTMP), as part of the Integrated Transport Masterplan (INTMP).</li> <li>3. Extension of SGR to Kisumu and Malaba</li> <li>4. Proposed LAPSSET SGR</li> <li>5. Regional SGR Network connecting member states</li> <li>6. Refurbishing of the meter gauge railway network (Nyahururu, Voi-Taveta, transshipment from SGR to MGR (Taveta, Kenya-Tanzania border)</li> </ol>	<ul style="list-style-type: none"> <li>✓ Passing through national parks, wild animal corridors, game reserves, cultural heritage areas</li> <li>✓ Encroachment on agricultural land</li> </ul>
Maritime Transport	<b>Port</b>	<ul style="list-style-type: none"> <li>✓ Encroachment on marine biodiversity</li> <li>✓ Increased carbon emissions</li> <li>✓ Displacement of marine</li> </ul>
	<ol style="list-style-type: none"> <li>1. Integrating planning and development of Port infrastructure with multi-modal cargo evacuation system and other auxiliary port infrastructure;</li> <li>2. Development of deep-sea ports in other areas to accommodate ultra large vessels;</li> <li>3. Modernization of the general cargo berths at the Port of Mombasa to take advantage of the economies of scale in transportation of general cargo; and,</li> <li>4. Integration of port infrastructure with development of logistics hubs and special economic/ industrial zones to generate traffic for the ports.</li> <li>5. Lamu Port-construction of additional 29 berths</li> </ol>	
	<b>Ferry</b>	<ul style="list-style-type: none"> <li>✓ Encroachment on marine biodiversity</li> <li>✓ Increased carbon emissions</li> <li>✓ Displacement of marine</li> </ul>
	<ol style="list-style-type: none"> <li>1. Encouraging inter and intra-county ferry operations to enable the shift of freight and passenger traffic from road to ferries</li> <li>2. Investments in ferry landing infrastructure</li> <li>3. Replacement plan for government owned and run ferries</li> </ol>	

Air Transport	<ol style="list-style-type: none"> <li>1. Expansion of aerodromes</li> <li>2. Upgrade of air navigation infrastructure</li> </ol>	<ul style="list-style-type: none"> <li>✓ Increased emission</li> <li>✓ Encroachment on agricultural land wild reserves</li> </ul>
Pipeline Transport	<ol style="list-style-type: none"> <li>1. Integration of pipeline transport mode with other modes</li> <li>2. Expansion and increase of storage capacity of the pipeline system within the country</li> <li>3. Extension of pipeline network to strategic regions within the country</li> <li>4. Development of compatible pipeline infrastructure with the neighbouring countries</li> </ol>	<ul style="list-style-type: none"> <li>✓ Encroachment on agricultural land wild reserves</li> </ul>

Secondary data assessment of the reviewed INTP revealed that to a large extent many of the WB ten (10) ESSs and operating procedures as well as NEMA guidelines for the transport sector have been taken into account. This has been supported by action plans which have been developed by the various transport sector agencies, regulatory institutions and the relevant subsectors in accordance with EMCA 2009, OSHA 2007 and the Social Protection Act 2007. The reviewed INTP document has also incorporated aspects domesticated from a number of other relevant international conventions and practices.

The reviewed INTP appreciates and considers environmental issues in the development, management, and operation of transportation infrastructure. More precisely the document addresses issues related to biodiversity, the displacement of human settlements and animal habitats, the division of animal herds, and unfavourable changes to the aesthetics of the environment and negative changes. On biodiversity conservation and sustainable management of living natural resources, it is noted that adherence to ESIA requirements indicates that the reviewed INTP recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support. To achieve this, it is recommended to add in the INTP requirement that each project, after an ESIA is carried out, should undergo an annual Environmental and Social Audit (ESA) as per NEMA and the World Bank Environmental and Social Framework (ESF) requirements.

In addition, the document appropriately provides guidelines for handling the effects of transport infrastructure related to environment. As an observation it was, however, noted that measures of handling the transportation of hazardous waste, which are often transported by road, thus, posing environmental and health and safety concerns have not been adequately handled in the reviewed INTP document.

It was also noted that all transport modes are taken care of in the reviewed INTP. It is, however, observed that while some modes, such as road and air, are captured in detail, others, such as inland, maritime, and pipeline, do not comprehensively conform to the NEMA and World Bank SESA standards and guidelines. It is thus recommended that all the modes need to be fully integrated into the reviewed INTP document under review. Additionally, it was noted that all the transport sectors operate under the reviewed Integrated National Transport Policy (INTP) and are therefore supposed to be in compliance with environmental and social standards, including health, safety, gender equality, and related factors. As the reviewed INTP document stands, it is unclear whether there was adequate public participation of most at-risk

populations, including the elderly, women, people with disabilities, and the youth. We recommend that this be taken care of.

It has also been observed that the reviewed INTP has used some nomenclature that does not reflect the social dimension, an important issue in the World Bank and other SESA standards and guidelines. This is evident in the use the terms Environmental and Social Impact Assessment (ESIA) and Audit (ESA) Environmental and Social Audit (ESA) instead of Environmental and Impact Assessment (EIA) and Audit (ESA) Environmental and Audit (EA). It is recommended that in order to reflect the World Bank's and other international institutions' good practice, SESA as opposed to other terminologies be used as these incorporate social aspects of PPPs. This will conform specifically to the World Bank's first Environmental and Social Assessment Standard ad contained in the World Bank Environmental and Social Framework (ESF).

In relation to land acquisition, restrictions on land use, and involuntary resettlement, the reviewed INTP clearly spells out the provisions for modernization, demographic changes, and changes in industrial and agricultural production and other economic activities. These provisions are, however; only clear for the railways' transport sector. For conformity, it is recommended that these requirements be comprehensively mainstreamed in all the transport sectors, including; road, air, inland and maritime, and non-motorized. In addition, the policy needs to make it clear that involuntary resettlement should be avoided. Where involuntary resettlement is unavoidable, it will be minimized. Appropriate measures to mitigate adverse impacts on displaced persons (and on host communities receiving displaced persons) are carefully planned and implemented in the reviewed INTP. The policy to address this is, however, not fully integrated in the document.

It was also noted that the World Bank require Financial Intermediaries (FIs) to monitor and manage the environmental and social risks and impacts of their portfolio and FI subprojects and monitor portfolio risk as appropriate to the nature of intermediated financing. It is noted that the reviewed INTP indicates the current sources for financing transport infrastructure development are from both internal and external sources. In all cases, the overriding concern will be reducing the level of subventions required in the medium and long term.” The provision for FIs to monitor and manage the environmental and social risks and impacts of their portfolio is however not explicit in the policy (INTP). It is thus recommended that the policy

acknowledge the role of FIs in monitoring and managing policies plans and programmes funded by the WB.

In the area of stakeholder engagement and information disclosure, the reviewed INTP appreciates and provides for stakeholders' engagement at all levels of the policies, plans and programmes. However, the reviewed INTP is silent on the levels and extent of public participation. In addition, how this policy pronouncement will be implemented is not mentioned in the reviewed INTP. We recommend conformity on this.

An important environmental and social issue, though absent from the World Bank's ten-point ESS provisions that the reviewed INTP document has dealt with, is on transboundary challenges related to transport and infrastructure. The reviewed INTP recognizes that transportation transcends boundaries and does not stand-alone. This recognition, thus, calls for consultation and cooperation in the formulation of policies related to cross-border modes of transport. The reviewed INTP clearly spells out the need for joint efforts in all neighbouring road transport modes and sectors. We recommend that this be extended to all transport modes, including air, inland and maritime, rail, and non-motorized modes. We also recommend that in the area of inspection, provisions be made on the policy to ensure effective, transparent, efficient, and timely completion of the exercise. We also recommend that, consultation and harmonization of policies on transport with neighbouring countries be observed to avoid transboundary conflicts related to land, oil spills, and related environmental and social issues.

Importantly also, it is acknowledged that with emerging transport infrastructure and modes development and rapid growth, each of the sub-sectors will require a separate and comprehensive SESA to allow for adaptation to these emerging dynamics in the transport sector. This will also allow for an appreciation of climate change and attendant consequences. The table below gives a summary of PPP analysis of Environmental, Socioeconomic, Occupational Health and Safety integration of policy, legislative and regulatory frameworks at both national and international levels as evidenced from the reviewed INTP. The matrix of analysis was fully integrated, moderately integrated and not integrated thus;

**Table 11: Summary of PPP analysis of Environmental, Socioeconomic, Occupational Health and Safety obligations of the Integrated National Transport Policy**

Pillar	Well Integrated	Moderately Integrated	Not Integrated
<b>Environmental</b>	<ul style="list-style-type: none"> <li>• The Constitution of Kenya, 2010 (P)</li> <li>• Vision 2030 (S)</li> <li>• Physical Planning Act (Cap 286) (A)</li> <li>• The Physical and Land Use Planning Act No. 13 of 2019 (A)</li> <li>• Climate Change Act, Number 11 of 2016 (A)</li> <li>• Kenya Roads Act (No. 2 of 2007) that established the Kenya National Highways Authority (KeNHA), KeRRA and Kenya Urban Roads Authority (KURA) (A)</li> <li>• Kenya Roads Board (No. 7 Of 1999) (A)</li> <li>• Kenya Roads Act (No. 2 of 2007) (A)</li> <li>• The Environmental Management and Coordination Act of 2015 (CAP 387) (A)</li> <li>• National Climate Change Action Plan 2018 – 2022 (NCCAP) (P)</li> <li>• The Paris Agreement (IP)</li> </ul>	<ul style="list-style-type: none"> <li>• Merchant Shipping Act 2009 for maritime safety, marine pollution (A)</li> <li>• The Civil Aviation Act No. 21 of 2013 (A)</li> <li>• Kenya Maritime Authority Act 2006 (Revised Edition 2012) (A)</li> <li>• Energy Act (No. 1 of 2019) (A)</li> <li>• The Merchant Shipping Act No. 4 of 2009 (A)</li> <li>• Convention on international Trade in Endangered Species of Wild Fauna and Flora (1973) (IC/A/P)</li> <li>• Convention on Persistent Organic Pollutant (2001) (IC/A/P)</li> <li>• Bassel Convention on the Control of Trans-Boundary Movements of Hazardous Wastes and Their Disposal (1995) (IC/A/P)</li> <li>• Convention on Climatic Change and the Kyoto Protocol (IC/A/P)</li> <li>• Lusaka Agreement on the Cooperative Enforcement Operations Directed against Illegal Trade in Fauna (1994) (IC/A/P)</li> <li>• African Convention for the Conservation of Nature and Natural Resources (2003) (IC/A/P)</li> </ul>	<ul style="list-style-type: none"> <li>• East African Community Protocol on Environment on Natural Resources (Amendment 206) (IC/A/P)</li> <li>• Convention on Biological Diversity (IC/A/P)</li> <li>• Ramsar Convention (IC/A/P)</li> <li>• Convention on Migratory Species/Bonn Convention (IC/A/P)</li> <li>• Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Waste within Africa (1997) (IC/A/P)</li> </ul>

	<ul style="list-style-type: none"> <li>• Sustainable Development Goals (SDGs) (IP)</li> <li>• United Nations Convention on the Law of the Sea (IP)</li> <li>• United Nations Framework Convention on Climate Change (IP)</li> <li>• The Public Private Partnership Act 2021 (A)</li> <li>• World Ports Climate Initiative (IP)</li> <li>• The National Transport and Safety Authority (NTSA) Act, 2012 (A)</li> <li>• The Kenya National Climate Change Response Strategy of 2010 (P)</li> </ul>	<ul style="list-style-type: none"> <li>• Technical Guidelines on the Management of Used Oil and Oil Sludge in Kenya (NEMA 2014) (A)</li> <li>• National Sand Harvesting Guidelines 2007 (F)</li> </ul>	
<b>Socioeconomic</b>	<ul style="list-style-type: none"> <li>• TVET Act 2013 (A)</li> <li>• Bilateral Air Services Agreement(s) (AG)</li> <li>• Yamoussoukro Decision/Declaration (IP)</li> <li>• Promote research and innovation in the maritime sector (AP)</li> </ul>	<ul style="list-style-type: none"> <li>• County Government Act 2012</li> <li>• Kenya Maritime Authority Act 2006 (Revised Edition 2012) (A)</li> <li>• The Merchant Shipping Act No. 4 of 2009 (A)</li> <li>• The National Transport and Safety Authority (NTSA) Act, 2012 (A)</li> <li>• Republic of Kenya National Tax Policy (A)</li> <li>• Air Passenger Service Charge Act (A)</li> <li>• Economic regulatory framework (F)</li> <li>• Single African Air Transport Market (SAATM).</li> </ul>	<ul style="list-style-type: none"> <li>• The Employment Act, 2007 (A)</li> <li>• Labour Relations Act No. 14 Of 2007 (A)</li> <li>• Labour Institutions Act No. 12 Of 2007 (A)</li> <li>• Persons With Disabilities Act No. 14 OF 2003 (A)</li> <li>• Work Injury Benefits Act Chapter 236 (A)</li> <li>• Industrial Court Act, 2011 (A)</li> <li>• The Children Act No. 29 f 2022 (A)The Land Act, 2012 (A)</li> <li>• The National Land Commission Act, 2012 (No. 5 of 2012) (A)</li> <li>• Community Land Act 2016 (A)</li> <li>• The Environment and Land Court Act, 2011 (A)</li> <li>• Access to information Act 2016 (A)</li> </ul>

		<ul style="list-style-type: none"> <li>• Unmanned Aircraft Systems regulatory framework (F)</li> <li>• Kenya National Social Protection Policy, 2011 (P)</li> <li>• National Information, Communications and Technology (ICT) Policy (P)</li> <li>• KAA Act (A)</li> <li>• Passenger Service Charge Act (A)</li> <li>• UNESCO Convention for the protection of the World Cultural and Natural Heritage (1972) (IC/A/P)</li> <li>• The National Poverty Eradication Plan of 1999 (P)</li> <li>• The Poverty Reduction Strategy Paper (PRSP) of 2000 (P)</li> <li>• Children Act 2001,</li> </ul>	<ul style="list-style-type: none"> <li>• Commission of administrative Act No 23 of 2011 (A)</li> <li>• The prevention and protection and assistance to Internally Displacement Persons and affected communities Act, IDP ACT 2012</li> <li>• Universal Declaration of Human Rights (IC/A/P)</li> <li>• ILO Declaration on Fundamental Principles And Rights At Work (IC/A/P)</li> <li>• International Covenant on Economic, Social and Cultural Rights (IC/A/P)</li> <li>• African Charter of Human and People's Rights (IC/A/P)</li> <li>• National Oceans and Fisheries Policies (IC/A/P)</li> <li>• Nation Cohesion and Integration Act 2011 (Amendment 2012) (A)</li> <li>• United Nations Conventions to Combat Desertification (UNCCD) (IC/A/P)</li> <li>• World Heritage Convention (IC/A/P)</li> <li>• Sessional paper No 1 of 2015 on the national Policy on Elimination of Child Labour (SP)</li> <li>• Sessional paper no 3 of 2014 on national policy and action plan on Human Rights</li> <li>• The Declaration on the Rights of Indigenous Peoples (UNDRIP), 2007</li> </ul>
<b>Occupational Health and Safety</b>	<ul style="list-style-type: none"> <li>• East African Community Vehicle Load Control Act, 2016 (A)</li> <li>• Traffic Act 2015 (A)</li> <li>• HIV/AIDS Policy of 2009 (P)</li> </ul>	<ul style="list-style-type: none"> <li>• Employment (Amendment) Act, No. 15 of 2022 (A)</li> <li>• The Occupational Safety and Health Act, 2007 (A)</li> <li>• Vision 2030 (S)</li> </ul>	<ul style="list-style-type: none"> <li>• County Governments Disaster Management Bill (B)</li> <li>•</li> </ul>

	<ul style="list-style-type: none"> <li>• Civil Aviation Act No. 21 of 2013 (A)</li> <li>• Civil Aviation (Amendment) Act No. 46 of 2016 (A)</li> <li>• Kenya Airports Authority (KAA) Act CAP 395, of 1991 (A)</li> </ul>	<ul style="list-style-type: none"> <li>• Energy (No. 1 of 2019) (A)</li> <li>• Petroleum (No. 2 of 2019) (A)</li> <li>• Occupational Safety and Health Act (OSHA), 2007 (A)</li> <li>• Data Protection Act 2019 (A)</li> <li>• Civil Aviation Security Regulations (R)</li> <li>• Security Laws (Amendment) Act 2014</li> <li>• The Civil Aviation Act (No. 21 Of 2013)-National Civil Aviation Security Policy (NCASP) (P)</li> <li>• Annex 9 of ICAO (F)</li> <li>• Public Health Act</li> </ul>	
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### Key

<b>A</b>	Act of Parliament	<b>S</b>	Strategy
<b>AG</b>	Agreement	<b>SP</b>	Sessional Paper
<b>B</b>	Bill	<b>AP</b>	Action Plan
<b>F</b>	Framework	<b>IC/P/A</b>	International Convention/Policy/Agreement
<b>P</b>	Policy	<b>R</b>	Regulations

In the context of transport sector in Kenya the table below indicates A summary of integration levels and the priority matrix for environmental, socio-economic and health and safety considerations is summarized below;

**Table 12: Comparative Table for Prioritization**

ENVIRONMENT				
	Fully Integrated	Moderately Integrated	Not Integrated	Total
Policy	3	-	-	3
Regulations	-	-	-	0
Sessional Paper	-	-	-	0
International Convention/ Agreement/ Policy	5	6	5	16
Legal Frameworks	7	7	-	14
Strategic and Action Plans	1	-	-	
<b>TOTAL</b>	<b>16</b>	<b>13</b>	<b>5</b>	<b>34</b>
SOCIAL				
	Fully Integrated	Moderately Integrated	Not Integrated	Total
Policy	-	5	-	5
Regulations	-	-	-	0
Sessional Paper	-	-	2	2
International Convention/ Agreement/ Policy	-	2	8	10
Legal Frameworks	-	10	15	25
Strategic and Action Plans	1	-	-	1
<b>TOTAL</b>	<b>1</b>	<b>17</b>	<b>25</b>	<b>43</b>
OCCUPATION SAFETY, HEALTH, AND SECURITY				
	Fully Integrated	Moderately Integrated	Not Integrated	Total
Policy	1	-	-	1
Regulations	-	-	-	0
Sessional Paper	-	-	-	0
International Convention/ Agreement/ Policy	-	1	-	1

Legal Frameworks	5	9	1	15
Strategic and Action Plans	-	1	-	1
<b>TOTAL</b>	<b>6</b>	<b>11</b>	<b>1</b>	<b>18</b>

The PPP analysis established that of socio-economic policy, legislative and regulatory frameworks at both national and international level considerations are the most neglected in the reviewed INTP. As indicated above twenty five (25) aspects are completely left out, one (1) aspect is integrated and fourteen (17) moderately integrated. The environmental component ranks second in terms of priority within the thirty one (34) identified obligations. Of these fifteen (16) are fully integrated, eleven (13) moderately integrated and five (5) not integrated at all. On occupational health and safety concerns eighteen(18) aspects of the framework were picked with results indicating that six(6) were fully complied with, eleven(11) moderately integrated and only one(1) showed complete non-compliance.

Drawing from the above analysis, conclusions indicate the following in relation assessing compliance or/and non-compliance to NEMA and World Bank SESA framework as follows;

Item Code	World Bank Environmental And Social Standard (ESS)	Level of Conformity		
		Integrated	Moderately integrated	Not-integrated
ESS1	Environmental and Social Standard 1: Assessment and Management of Environmental and Social Risks and Impacts		✓	
ESS 2	Environmental and Social Standard 2: Labour and Working Conditions			✓
ESS 3	Environmental and Social Standard 3: Resource Efficiency and Pollution Prevention and Management		✓	
ESS 4	Environmental and Social Standard 4: Community Health and Safety	✓		
ESS 5	Environmental and Social Standard 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement		✓	
ESS 6	Environmental and Social Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	✓		
ESS 7	Environmental and Social Standard 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities		✓	
ESS 8	Environmental and Social Standard 8: Cultural Heritage		✓	

ESS 9	Environmental and Social Standard 9: Financial Intermediaries.		✓	
ESS 10	Environmental and Social Standard 10: Stakeholder Engagement and Information Disclosure			✓
<b>WORLD BANK OPERATIONAL PROCEDURES</b>				
		<b>Integrated</b>	<b>Moderately integrated</b>	<b>Not-integrated</b>
OP/BP 4.01	Environmental Assessment		✓	
OP/BP 4.10	Indigenous Peoples			✓
OP/BP 4.11	Physical Cultural Resources			✓
OP/BP 4.12	Involuntary Resettlement			✓
	<b>WORLD BANK ENVIRONMENTAL, HEALTH, AND SAFETY GUIDELINES (EHS Guidelines)</b>			
	<b>1.</b>	<b>Environmental</b>		
	1.1 1.2 1.3 1.4 1.5 1.6. 1.7 1.8	Air Emissions and Ambient Air Quality Energy Conservation Wastewater and Ambient Water Quality Water Conservation Hazardous Materials Management Waste Management Noise Contaminated Land		
	<b>2.</b>	<b>Occupational Health and Safety</b>		
	2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9	General Facility Design and Operation Communication and Training Physical Hazards Chemical Hazards Biological Hazards Radiological Hazards Personal Protective Equipment (PPE) Special Hazard Environments Monitoring		
	<b>3.</b>	<b>Community Health and Safety</b>		
	3.1 3.2 3.3 3.4 3.5 3.6 3.7	Water Quality and Availability Structural Safety of Project Infrastructure Life and Fire Safety (L&FS) Traffic Safety Transport of Hazardous Materials Disease Prevention Emergency Preparedness and Response		
	<b>4.</b>	<b>Constriction and Decommissioning</b>		
	4.1 4.2 4.3	Environment Occupational Health and Safety Community Health and Safety		

This being a SESA on a policy and not a project analysis focused more on policy (design, implementation and regulation and their impacts on environment, social and health and safety. To draw the matrix for prioritization levels and extent thus guided the analysis and conclusion arrived as follows;

1. Socio-economic → 2. Environmental → 3. Occupational health and safety

The prioritization matrix should thus consider full compliance to NEMA and World Bank standards and guidelines by first integrating socio-economic followed by environmental and finally considering the few aspects of occupational health and safety that have been neglected.

## **CHAPTER FIVE**

### **IMPACT IDENTIFICATION ANALYSIS**

#### **5.0 Introduction**

Impact identification was based on analysis of both secondary and primary data collected. It was established that all transport sector development and maintenance projects have benefits and negative impacts. The emergence and growth of many towns and urban centres in Africa and beyond was occasioned by the construction of rails, roads, air and other ports. Business have grown and employment created. The developments generally contribute to poverty reduction and sustainable development as per the United Nations Sustainable Development Goals (2030). On the other hand though, opening up of such places and spaces has had impacts such as loss of land, complains over resettlement and involuntary relocation, erosion of culture and encroachment of indigenous people who are rarely consulted and even where/when they are, this is done without considerations to Free Prior Informed Consent Principle (FPIC).

#### **5.1 Environmental and social Consequences and risks associated with Existing and potential transport sector developments**

Existing and forecasted transport infrastructure development pose benefits, negative consequences, and risks to society and the surrounding environment. This is especially the case when considerations for environmental, safety and security and social-economic issues are considered. The following were identified as existing and potential benefits of transport sector developments in all the six sub-sectors; Employment and job creation, Reduced travel and time cost, Improved access to social services, Improved business opportunities, Improved information access through communication, better social networks, Improved cultural exchanges, Cultural exchanges and interactions, Improved tourism and related activities.

Cumulative beneficial consequences of implementing the reviewed INTP include; Improved Literacy levels, Increase in property value, improved connections, Creation of job opportunities, Improved communication network, General reduction in environmental population. The negative cumulative impacts are; Population Increase and demand for housing, Increased traffic, Increased demand for water, Increased demand for sanitation and sewerage systems, Insecurity and criminality, Soil degradation, Increased metals in rivers and

dams, Increased vibrations and noise, Loss of flora and fauna and related climate change impacts.

## 5.2 Vulnerable and Indigenous Communities in Selected Locations

While transport sector infrastructure development affects the general populace, Most-at-Risk-Populations (MARPs), including women, boys, girls, and indigenous communities' cultures and norms, are mostly impacted on by such developments. These groups thus deserve special mention and attention when development projects are discussed. This section discusses findings on potential social consequences and risks associated with future transport sector developments and failure to either conform or integrated related policies on environmental, socio-economic and occupational health and safety on vulnerable groups and indigenous communities based on consultations held in all six selected areas. Part one of the discussion highlights the benefits of proposed transport infrastructure developments to the VGs, while part two discusses existing and potential risks associated with transport sector developments.

Owing to the cosmopolitan nature of these areas, the regions are inhabited by people from all ethnic groups found in Kenya as well as nationals from other countries. All six selected areas have people with diverse disabilities such as physical, visual, mental, cerebral palsy, low vision, hearing impairment, dwarfism, autism and speech and language disabilities, among others. Marginalized and vulnerable linguistic/cultural groups in selected areas include;

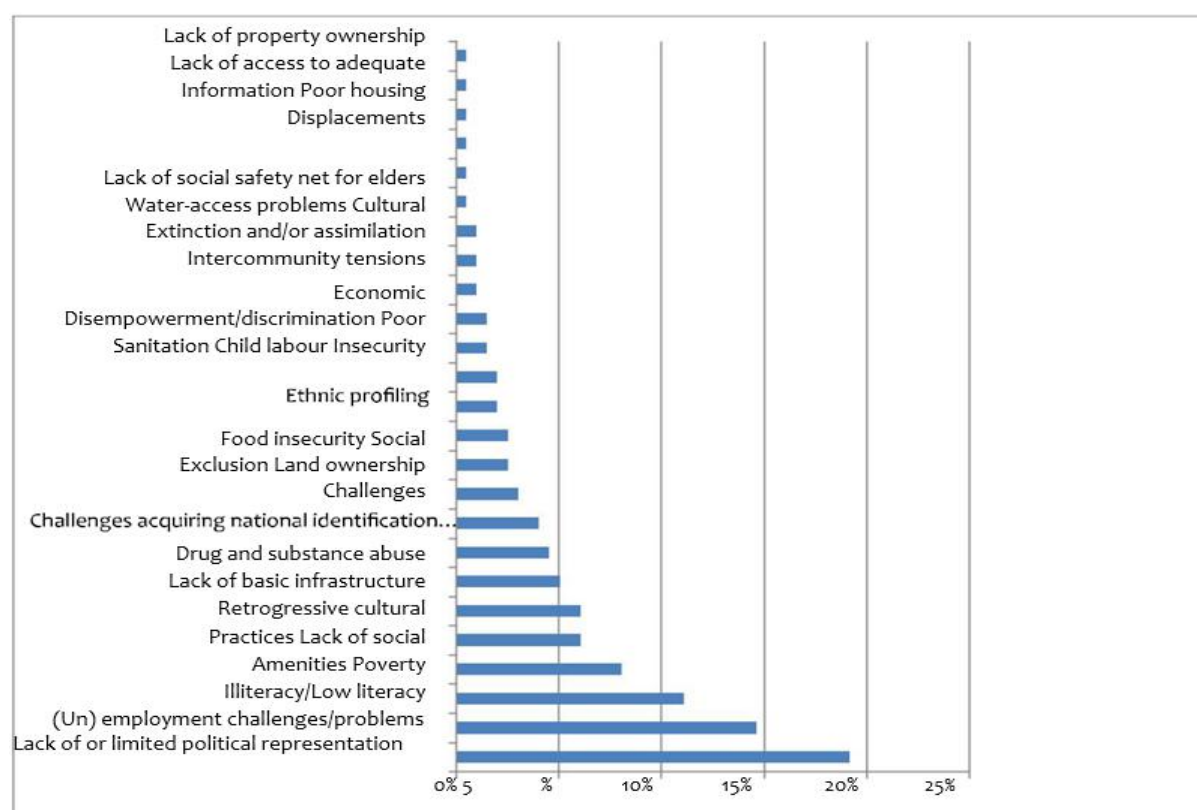
**Table 13: Vulnerable communities and marginalized indigenous groups in selected areas**

Name	Location
Kuria,Samburu, Maasai, Taita, Nubians, Borana and Somali	Nairobi
Turkana, Samburu, Nubian, Terik, and Mkendwa	Kisumu
Borana, Somali, Lesan, Dorobo, Gabra, Waata, Nubian/Arela	Isiolo
Yaaku, Boni, Orma, Pokomo, Sanya, Waata	Lamu
Makonde and Nubian	Mombasa
Okiek, Terek	Eldoret

The communities identified on figure 5 are characterized by high levels of poverty as well as low education levels. Levels of employment and job opportunities among these marginalized

and vulnerable groups are also low. In Isiolo, Lamu, Eldoret and parts of Mombasa, land ownership and land rights contestations and have engendered resource-cum ethnic-based conflicts during and after electoral periods. Mombasa, Lamu, Isiolo and Nairobi counties have high cases of undocumented individuals whose rights are hardly respected. In addition, cultural practices such as early marriages, female genital mutilation, teenage pregnancies and child exploitation are prevalent. In Nairobi, poor housing and sanitation are experienced in slums and peri-urban areas where marginalized communities live. Ethnic profiling and underrepresentation in local and national politics within these groups appear higher than among other communities in Kenya. Vulnerable groups reported minimal engagement with Free Prior Informed Consent (FPIC) requirements and even where consultations were done, marginalized groups and communities were hardly involved. The majority complained of coercion and manipulation to sign documents before reading and understanding the content therein. Some of the main issues affecting vulnerable and marginalized indigenous communities are presented in the table below;

**Figure 7: Issues affecting vulnerable communities and marginalized indigenous groups in selected areas**



**Source:** National Gender and Equality Commission (2017).

Diverse socio-economic and cultural practices deserving protection because of the attachment that concerned communities have in selected locations, including governance systems such as Adulla by the Borana, use of Kaya<sup>9</sup> among the Mijikenda and nomadic lifestyles among the Maasai, Samburu and Turkana.

Women, boys, girls, children and the elderly also form part of these vulnerable groups living in these locations. They are equally affected by existing and transport infrastructure developments as follows;

### **5.3 Gender Issues in Selected Areas**

Generally, Kenya is a patriarchal society where females are considered inferior to men. This phenomenon is engendered by the way children are socialized from birth through the education system and religious and cultural practices. Men are thus required to occupy public spaces, while women, within the Victorian concept, occupy the private realm where no decisions are made. While the COK (2010) gives women an equal role, society still accords women with very few opportunities within the public sphere. Sexual-based harassment, exploitation and abuse among women and girls are thus prevalent and permeate all sectors of society, including in the transport sector. The modes of transport, for instance, provide few provisions for women and pregnant mothers. In addition, the transport sector infrastructure rarely puts into consideration the needs and aspirations of women and girls. Few women reported engagement in the various phases of transport infrastructure project development phases including pre-construction, construction and post-construction. Participants in FGDs also reported that the protection of women and girls during such projects only appears on paper. Yet, exploitation and sexual favours are common if one is to be engaged as a worker.

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<sup>9</sup> Kaya is inscribed into the list of UNESCO World Heritage Sites

#### **5.4 Part 1: Potential Benefits of Transport Infrastructure Development to Vulnerable Groups (VGs)**

Forecasted transport infrastructure development provides important avenues for empowerment for vulnerable groups, including the elderly, women, indigenous communities and children. Such potential benefits include;

- a. **Construction and improvement of social amenities-** Future transport development projects within all the selected areas have the potential to improve and result in the construction of new schools (private and/or public), health centres opening up of hitherto closed areas and other social service provisions. In Isiolo, residents reported that they anticipate new schools to be constructed and improved around the Isiolo-Wajir-Mandera transport corridor. Health amenities and new Huduma centres may also contribute to the safety of VGs who have had to travel for long distances to access government services. Key informant interviews in Isiolo established that accessibility and inadequate education facilities had hampered the region's general development. With improved and/or refurbishment of health facilities and internet-connected schools, literacy levels are bound to improve in Wote-Lamu, Bullapesa, Wabera and Lagdima-Isiolo and along the Kisumu-Malaba route.
- b. **Employment opportunities-** Transport infrastructure development projects in Eldoret, Kisumu, Mombasa and the Central Region of Kenya will greatly contribute to jobs for locals and other construction workers. In Lamu, Muranga and Isiolo, where huge road development projects are forecasted and /or underway, which brings with it increased traffic, youth reported that many have joined or will join the industry as either skilled, semi-skilled or manual labourers. This will in turn, contribute to improved livelihoods for those employed and/or benefiting from the proceeds of the employees. Women and people living with disabilities in particular, acknowledged that while they may not benefit directly from employment, they would have an opportunity to set up on-site food kiosks, fruit *vibandas* and roadside establishments to serve construction workers. The emergence of small urban centres and towns will also greatly benefit VGs who anticipate setting up business premises in these town centres. Residents of the proposed Kisumu-Malaba road were emphatic that they anticipate employment opportunities for idle youth engaged in dangerous fishing along the expansive Lake Victoria basin.

- c. **Improved value of Land-** in Eldoret and Kisumu, PWDs who own land reported that they foresee increased land prices along construction sites. An elderly visually impaired man who owns land around the Lake Victoria shipping yard appreciated government efforts to revive the sector. He has since sold his land thrice the price he had anticipated. A widowed lady who owns land along Kenol-Marua road said that she is selling her 40\*80 plot in Kenol at a price that will afford her two acres in the interior of Ithanga in Kakuzi. The Northern Corridor, which runs from Mombasa through Nairobi, Nakuru to Malaba at the Kenyan-Uganda border portends great opportunities in terms of land value for the locals who are hoarding land in anticipation for higher prices once the construction begins.

Land in Mundoro is improving in price. No one will afford an acre in this region. I am keeping my two-acre- farm to sell once this road is complete<sup>10</sup>

- d. **Improved mobility of PWDs-** Movement by people with diverse impairments has been a big challenge in places with minimal modes of transport. With the construction of roads, rail and improved provisions on roads, airports and railways, few complaints will be reported regarding discrimination related to transport. In Nairobi, people with physical impairments hail KENHA for ensuring that there are provisions for friendly pavements for wheel-chaired users on all future roads. It is also envisaged that travel time and costs will greatly decrease, and safer and more secure routes will contribute to better mobility of VGs.
- e. **Easy access to information and interactions-**Transport development projects generally come with the opening up of marginalized locations. For instance, road construction works bring services such as telecommunication masts, improved connectivity through fibre optic cable and electricity to otherwise closed areas. With the opening-up of villages in Eldoret and Kisumu by the forecasted SGR, for example, residents anticipate that they will have better interactions through information exchange on the phone and otherwise. VGs in Isiolo Tsavo and Emali note that several Safaricom masts have been erected in remote areas where

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<sup>10</sup> An elderly woman in Kiambu along the Mau Mau Road under construction

communication has been a challenge. Locals in Isiolo, for instance, indicated that ten years ago, the use of mobile phones was practically impossible. However, with the anticipated upgrading of Isiolo airport, mobile network improvement has been noted, improving interactions between and among people within and outside the county. Elderly Somali in Isiolo, Muranga and Kisumu women reported an improvement in how they access cash transfers from the government owing to forecasted road infrastructure developments in respective areas. In each of these areas, there are more Huduma Centres, and others are still anticipated.

- f. **Increased business opportunities and Livelihoods**-Construction of transport infrastructure will contribute to the emergence of business opportunities in terms of investors, improvement of local economies, increased modes of transport, and increased business activities. Shops, gas stations, hotels and motels will spring up in hitherto closed areas and this will help improve the livelihoods of those living along areas year-marked for transport infrastructure development. The proposed Northern Corridor passing through Eldoret has already seen locals position themselves for business while investors are prospecting with land along the corridor to either resale or construct business premises.
- g. **Improved security**- All six selected areas suffer from rampant insecurity associated with poor lighting, vehicle breakdown and congestion. Unemployed youth are also accused of forming and/or joining criminal gangs that terrorise motorists, especially at night. In Mombasa, Lamu, Isiolo and Nairobi, cases of Al Shabab infiltration into local youth have increased. The proposed construction/expansion of roads and railways and improvement/upgrade of airports will open up dark alleys and reduce criminal gangs operating in these areas. In Nairobi, for example, 94% of VGs consulted were emphatic that the proposed improvement and construction of roads and upgrade of JKIA will reduce insecurity in the city. VGs suffer more from insecurity than other citizens do, and transport development will thus benefit the VGs tremendously.
- h. **Increased Livestock Production and Management**- in Isiolo, elderly men reported that poor transport has hampered the growth of the livestock industry. They lamented low prices of camels, cows and goats to intermediaries who blame poor roads and means of transport for the low prices. Borana and Somali herders complained that their livestock yields are low compared to other communities because accessibility to improved foliage and water is almost impossible. Improved

transport system will contribute to not only the opening-up of these areas but also through partnerships with the county government of Isiolo; livestock shade, watering points and slaughterhouses will be erected, thus improving the quality and quantity of livestock.

- i. **Improved cultural interactions, tourism and exchange-** Marginalized indigenous communities living in the forests rarely interact with other communities. Proposed infrastructure development in forested and remote areas where such groups reside will open up these traditional communities to interact with mainstream groups and borrowing of cultures will benefit both groups. Intermarriages, trade engagements and wider consultations with indigenous minorities will also lead to an appreciation of cultural norms and values, which require preservation for posterity. Along the Mombasa-Lungalunga-Malindi road, the Giriama living around the Gedi ruins reported that they welcome road projects because they will help them reach out to other communities in helping them preserve and protect the rich cultural diversities existing in the area. Those residing around the Arabuko-Sokoke forest welcome the expansion of Malindi airport to open up the area to improve tourism.

## **5.5 Part 2: Potential Risks of Transport Infrastructure Development to Vulnerable Groups (VGs)**

Vulnerable and marginalized groups and communities, however, lamented increased cases of violence, exploitation and further marginalization based on gender and vulnerabilities as follows;

### **1. Gender Based Violence (GBV)**

Gender-based violence (GBV) comprises acts that degrade, violate and deny women, boys and girls rights and freedoms of engagement in an activity. It also entails lack/inadequate protection, participation and prevention of acts that may be detrimental to the well-being of women, boys and girls. They include such acts as indecent touching, rape, emotional abuse, physical insults, threats based on sexual orientation and exploitation. Overall, consultations with village elders, women, members of civil society organizations, government officials, youth representatives, religious leaders, county government representatives and the general citizenry in all the selected areas indicate that everyone is aware of at least a case of a GBV in their locality.

- a. **Sexual exploitation of women and girls-** Communities in Isiolo decry the possibility of sexual exploitation and abuse when seeking employment around construction sites. This is in the form of rape, indecent touching of private parts, and demand for sex for employment as well as use of derogatory words and phrases to women labourers. Stakeholders in Isiolo, Lamu and Mombasa who majorly subscribe to Islam also added that requirements to dress in aprons and trousers infringe on their rights to dressing and religious orientation. In Nairobi and Eldoret, women and girls lament the demand for sexual favours from male construction workers in return for promotion to higher levels, specific lighter assignments and late arrival to workplaces. This happens between supervisors and labourers and among workers themselves (horizontal).
- b. **Physical assault-** It was established that existing and forecasted transport developments have the potential for insults from bosses and abuse from fellow workers. Among VGs interviewed 92% reported that while they wish to work in construction sites, they may experience abuse related to their slow pace of delivery, clumsiness and lateness in arrival at workplaces. Such abuse includes slapping, pinching, acid and metal attacks and cuts. Male workers have in particular, been accused of such assaults.
- c) **Psychological/emotional abuse-** Potential workers in Nairobi and Kisumu reported that they experience or may go through threats, intimidation, humiliation and gestural abuse related to sex. A physically impaired lady along Mlolongo reported that men often use the middle finger to humiliate and intimidate them. Such emotional abuse is experienced between and among workers as well as by seniors in sites.
- d) **Child labour and exploitation-** In Isiolo and Kisumu, children were used to carry stones, dig trenches, and as porters in sites. Parents of such children reported that the proposed development along Kisumu-Malaba road would see many children drop out of school to be used in construction sites. With high poverty levels, the propensity of adults' exploitation of children is also high in Isiolo, Mombasa and Lamu. In Nairobi, cases of the use of children by long-distance drivers for sex are common.
- e) **Early and teenage marriages-** In Isiolo and Lamu, cases of older males marrying and impregnating teenage girls are prevalent. Parents and locals generally argue that with the opening up of the villages and remote places along construction sites, children and young adults may be exposed to early sex and prostitution, which leaves them with sexually transmitted diseases and children born out of wedlock. Locals in Isiolo and Lamu are worried about the potential of proposed road constructions to contribute to early marriages as girls seek favours from male workers and bosses.

- f) Sexual harassment-**In Nairobi, Kisumu and Eldoret the assessment established that sexual harassment also takes the form of unwelcome sexual advances, verbal and physical conduct associated with reproductive organs and other subtle ways that reflect differentiated power analysis between a worker and their boss. When sex is not mutual and is not between consenting adults any act associated with it is considered harassment. Proposed transport sector developments have the potential of engendering such acts.
- g) Sexually Transmitted Diseases, HIV/AIDs and Other Diseases-**Generally, development projects have a high potential of bringing new people and behaviours to selected development sites. Transport sector development projects in Nairobi, Nakuru, Mombasa, Eldoret and Kisumu, among others, have been blamed for bringing about foreign maladies and communicable diseases in project sites. Water bodies left by construction workers have the potential to breed mosquitoes and increased unprotected sexual activities have caused sexually transmitted diseases like HIV/AIDs. Sanitation issues associated with roadside food vendors, sewage systems, open defecation and associated dirt may also cause diarrhea, vomiting and general malaise. In Lamu, locals reported an increase in STIs during the commencement of the LAPSET corridor due to an influx of foreigners.
- h) Youth-**In the construction of mega transport infrastructures, such as the proposed extension of SGR from Naivasha to Malaba border, and increased related modes of transport, youth complained of marginalization and engagement in low-paying menial jobs with little pay. This is because they are often stereotyped as 'lazy'. In Kisumu, there was a concern that some KENHA, KURA and KERRA personnel have not engaged local youth while constructing major roads. The youth in all selected regions thus reported non-inclusion and marginalization on the basis of lack of experience. They lament that this phenomenon may repeat itself during the execution of the proposed transport infrastructure in the regions.
- i) Denial of opportunities to PWDs and indigenous communities-**Persons with disabilities PWDs are rarely considered for employment. This is despite the COK (2010) explicitly stating that every individual has the right to employment on an equal basis. Employers are, however, wary of employing such people with claims that they are slow or have more risks in the workplace. People living along existing and proposed project areas along Kenol-Marua and Mombasa-Lunga-Lunga roads and Isiolo-Moyale corridors reported that only a handful of PWDs are employed in such sites. People with physical disabilities were concerned that few transport sector-related construction projects accommodated them as employees.

- j) **Displacement**-Displacements of people is a common feature in discussions about the construction of transport infrastructure. Attempts by governments to promote development often entail varying degrees of risk for some sections of society. In most cases, the victims are already impoverished due to marginalisation. Not only are they displaced, but their livelihoods are also disrupted, making it difficult to restore them even after resettlement. Resettlement and relocation have also been experienced when airports, railways, roads, pipelines and inland development projects are initiated. In Mombasa and Kisumu, where inland water transport is common, displacement without due regard to prices of land and other assets within affected households was reported. Locals in these areas envisage that such unplanned displacement and chaotic relocation will be experienced during the proposed project planning and construction phases. In Ahero, locals complained that the expansion and construction of the Ahero-Kisii interchange they were minimally consulted during the pre-construction phase. The amount they were compensated was thus not commensurate with what they owned.
- k) **Accidents**- Accidents associated with pre, during and post-construction transport sector projects are common in all transport subsectors. During the construction and/or expansion of shipyards, ferry yards and airports, increased transportation of heavy machinery, lifting weights and animal crossing caused accidents of diverse magnitudes. In some instances, deaths and injuries have been reported in large scale. In all sampled areas, the assessment concluded that all proposed transport sector projects have the potential to cause accidents, and such may be more severe for PWDs. In Isiolo and Mombasa, a Kaya elder reported that a wheelchair user fell in a ditch while riding at night near the Kilifi junction on the Mombasa-Lunga Lunga- Malindi road. During the expansion of Kisumu international airport, a middle-aged man reported that a stone fell on a construction worker, which was never reported to authorities due to fear.
- l) **VGs safety and security risks**-As reported earlier VGs especially indigenous communities, have complained about exposure to construction instruments. Among the Ogiek living in Uashin Gishu, locals noted that children often run after tractors posing great danger to their lives. The proposed transport development projects passing through the homes of such marginalized communities must be done after thorough sensitization of indigenous communities to minimise safety and security risks associated with such developments. Among the Somali and Borana herders, cases of deaths through lorry accidents in construction sites were reported. With the proposed expansion of Isiolo as a city, increased reports of animal accidents crossing construction sites are envisaged.

- m) **Disregard and Disturbance of belief systems, norms and Cultural practices**-The basic unit of survival for culturally marginalized communities is their belief systems, values and norms. Music and dance, dressing, burial practices and sites, initiation sites, worship centres, and eating habits form part of the intangible culture of indigenous communities. The Okiek, Yaaku, Waata, Borana, Somali and Nubians all form part of the UNESCO endangered communities in need of protection. Proposed transport infrastructure projects traversing these communities could result in separation, loss of oral traditions, loss of burial and others, and degradation of cultural values. While immigration may lead to cultural exchange and interactions, it may threaten the survival of Indigenous Knowledge Systems (IKS) that are so important for communal cohesion. Locals in Gedi, for instance, claim that their visitors can no longer access some communal cemeteries due to road construction projects in the area. Muslim communities in Lamu, Mombasa and Isiolo also reported that proposed projects might result in the infiltration of new cultures, such as the use of pork.
- n) **Destruction of Heritage Sites**-Heritage sites are threatened by large-scale infrastructure projects such as dams, pipelines, roads, and mega ports. These impacts emanate from direct physical disturbance or damage to the resources themselves. For example, the construction of the Mombasa –Malindi road has the cumulative effect of more settlements and commercial premises along the road corridor, increasing demand for water, power, and sanitation in Mombasa. Encroachment into the Kaya forest, Arabuko-Sokoke and Gedi historical sites have also been cited as a possible impact of the proposed road expansion projects in the area. For example, the construction of Makupa Causeway, if not undertaken carefully, would have dire consequences like water pollution in the creek, thus, affecting water quality.

The table below summarizes the potential/existing risks and impacts as well as secondary risks associated with transport sector developments. The table also indicates the perceptions of stakeholders on criteria for prioritization of environmental, social, and occupational health and safety issues in the context of the transport sector in Kenya.

**Table 14: Environmental and social consequences and risks associated with existing and potential transport sector developments**

<b>ENVIRONMENTAL RISKS</b>			
<b>Targeted Sector</b>	<b>Potential existing risks/impacts</b>	<b>Secondary impacts</b>	<b>Timeline (short/medium/Long)</b>
Road Transport	<ol style="list-style-type: none"> <li>Noise</li> <li>Air pollution, noise and dust)</li> <li>Large carbon emissions</li> <li>Oil spillage</li> <li>Hazardous waste disposal</li> <li>Deforestation,</li> <li>Soil erosion and degradation</li> <li>loss of biodiversity</li> <li>Increased water uses and diversion of water bodies</li> <li>Solid waste generation</li> <li>Increased energy use</li> <li>Poor management of borrow pits and excessive surface run-off during road construction</li> <li>Loss of flora and fauna</li> </ol>	<ul style="list-style-type: none"> <li>✓ Introduction of alien invasive species</li> <li>✓ Beauty due to landscaping</li> <li>✓ Changes in land use and new human settlement</li> <li>✓ Water abstraction</li> <li>✓ Sanitation and hygiene issues</li> <li>✓ Change in infections/disease patterns</li> <li>✓ Eutrophication of inland water bodies</li> </ul>	<ol style="list-style-type: none"> <li>Short term</li> <li>Midterm</li> <li>Short term</li> <li>Short term</li> <li>Long term</li> <li>Long term</li> <li>Long term</li> <li>Long term</li> <li>Short term</li> <li>Short term</li> <li>Short term</li> <li>Short term</li> </ol>
Rail Transport	<ol style="list-style-type: none"> <li>Excessive Noise</li> <li>Air pollution</li> <li>Large carbon emissions</li> <li>Oil spillage</li> <li>Hazardous waste disposal</li> <li>Deforestation,</li> <li>Poor management of borrow pits and excessive surface run-off during rail construction.</li> </ol>	<ul style="list-style-type: none"> <li>✓ Introduction of alien invasive species</li> <li>✓ Climate change</li> </ul>	<ol style="list-style-type: none"> <li>short term</li> <li>short term</li> <li>Long term</li> <li>Short term</li> <li>Long term</li> <li>Long term</li> <li>Short term</li> </ol>
Maritime Transport	<ol style="list-style-type: none"> <li>Loss of flora and fauna</li> <li>Destruction of biodiversity Excessive Noise</li> </ol>	<ul style="list-style-type: none"> <li>✓ Introduction of alien invasive species</li> </ul>	<ol style="list-style-type: none"> <li>Long term</li> <li>Long term</li> </ol>

	3. Air pollution 4. Water pollution 5. Large carbon emissions 6. Oil spillage 7. Hazardous waste disposal 8. Poor management of borrow pits and excessive surface run-off during rail construction;	✓ Coral bleaching, disease, and mortality of corals and fish ✓ Climate Change	3. Short term 4. Short term 5. Long term 6. Short term 7. Long term 8. Short term
Air Transport	1. Excessive Noise 2. Air pollution 3. Deforestation 4. Water pollution 5. Large carbon emissions 6. Oil spillage 7. Hazardous waste disposal 8. Poor management of borrow pits and excessive surface run-off during rail construction	✓ Introduction of alien invasive species ✓ Climate change ✓ Displacement of migratory species along aerodrome routes	1. Long term 2. Long term 3. Long term 4. Long term 5. Long term 6. Short term 7. Long term 8. Short term
Pipeline Transport	1. Soil pollution 2. Water pollution 3. Large carbon emissions 4. Oil spillage 5. Hazardous waste disposal 6. Poor management of borrow pits and excessive surface run-off during rail construction	✓ Introduction of alien invasive species ✓ Death of soil microorganisms ✓ Sanitation and hygiene issues	1. Long term 2. Short term 3. Short term 4. Long term 5. Short term 6. Short term
<b>SOCIAL RISKS</b>			
<b>Targeted Sector</b>	<b>Potential existing risks/impacts</b>	<b>Secondary impacts</b>	<b>Timeline</b>
Road Transport	1. Loss of land including trees, plants, houses/buildings and crops	✓ In-migration ✓ HIV & AIDS	1. Long term 2. Long term

	<ul style="list-style-type: none"> <li>2. Child labour and exploitation of children</li> <li>3. Displacement and conflicts</li> <li>4. Increased human-wildlife conflicts</li> <li>5. In and e-migration</li> <li>6. Competition over resources</li> <li>7. Potential tensions and conflicts</li> <li>8. Cultural erosion</li> <li>9. Destruction of tangible and intangible material culture</li> <li>10. Destruction of ancestral territories</li> <li>11. Encroachment on customary land</li> <li>12. Displacement of indigenous peoples</li> <li>13. Erosion of indigenous cultural practices and Heritage practices</li> <li>14. Increased population</li> <li>15. Increased insecurity and criminal acts</li> </ul>	<ul style="list-style-type: none"> <li>✓ Resource-based conflicts</li> <li>✓ Gender-based violence/abuse and exploitation</li> <li>✓ Food insecurity</li> <li>✓ Insecurity and crime</li> </ul>	<ul style="list-style-type: none"> <li>3. Long term</li> <li>4. Short term</li> <li>5. Short and Long term</li> <li>6. Long term</li> <li>7. Long term</li> <li>8. Long term</li> <li>9. Long term</li> <li>10. Long term</li> <li>11. Long term</li> <li>12. Long term</li> </ul>
Rail Transport	<ul style="list-style-type: none"> <li>1. Land loss</li> <li>2. Displacement</li> <li>3. In and e-migration</li> <li>4. Competition over resources</li> <li>5. Potential tensions and conflicts</li> <li>6. Cultural erosion</li> <li>7. Destruction of tangible and intangible material culture</li> <li>8. Destruction of ancestral territories</li> <li>9. Encroachment on customary land</li> <li>10. Displacement of indigenous peoples</li> <li>11. Erosion of indigenous cultural practices and Heritage</li> <li>12. Increased population</li> </ul>	<ul style="list-style-type: none"> <li>✓ In-migration</li> <li>✓ HIV &amp; AIDS</li> <li>✓ Resource-based conflicts</li> <li>✓ Gender-based violence and exploitation</li> </ul>	<ul style="list-style-type: none"> <li>1. Long term</li> <li>2. Long term</li> <li>3. Long term</li> <li>4. Short term</li> <li>5. Short term</li> <li>6. Long term</li> <li>7. Long term</li> <li>8. Long term</li> <li>9. Long term</li> <li>10. Long term</li> <li>11. Long term</li> <li>12. <b>Long term</b></li> </ul>

Mari term Transport	<ol style="list-style-type: none"> <li>1. Loss of land</li> <li>2. Displacement</li> <li>3. In and e-migration</li> <li>4. Competition over resources</li> <li>5. Potential tensions and conflicts</li> <li>6. Cultural erosion</li> <li>7. Destruction of tangible and intangible material culture</li> <li>8. Destruction of ancestral territories</li> <li>9. Encroachment on customary land</li> <li>10. Displacement of indigenous peoples</li> <li>11. Erosion of indigenous cultural practices and Heritage</li> <li>12. Increased population</li> <li>13. Labour influx</li> <li>14. Traffic congestion and disruption of service delivery</li> </ol>	<ul style="list-style-type: none"> <li>✓ In-migration</li> <li>✓ HIV &amp; AIDS</li> <li>✓ Resource-based conflicts</li> <li>✓ Gender-based violence and exploitation</li> <li>✓ Sanitation and hygiene issues</li> </ul>	<ol style="list-style-type: none"> <li>13. Long term</li> <li>14. Long term</li> <li>15. Long term</li> <li>16. Short term</li> <li>17. Short term</li> <li>18. Long term</li> <li>19. Long term</li> <li>20. Long term</li> <li>21. Long term</li> <li>22. Long term</li> <li>23. Long term</li> <li>24. <b>Long term</b></li> </ol>
Air Transport	<ol style="list-style-type: none"> <li>1. Loss of land</li> <li>2. Displacement</li> <li>3. In and e-migration</li> <li>4. Competition over resources</li> <li>5. Potential tensions and conflicts</li> <li>6. Cultural erosion</li> <li>7. Destruction of tangible and intangible material culture</li> <li>8. Destruction of ancestral territories</li> <li>9. Encroachment on customary land</li> <li>10. Displacement of indigenous peoples</li> <li>11. Erosion of indigenous cultural practices and Heritage</li> <li>12. Increased population</li> </ol>	<ul style="list-style-type: none"> <li>✓ In-migration</li> <li>✓ HIV &amp; AIDS</li> <li>✓ Resource-based conflicts</li> <li>✓ Gender-based violence and exploitation</li> <li>✓ Sanitation and hygiene issues</li> </ul>	<ol style="list-style-type: none"> <li>1. Long term</li> <li>2. Long term</li> <li>3. Long term</li> <li>4. Short term</li> <li>5. Short term</li> <li>6. Long term</li> <li>7. Long term</li> <li>8. Long term</li> <li>9. Long term</li> <li>10. Long term</li> <li>11. Long term</li> <li>12. <b>12.</b> Long term</li> </ol>

Pipeline Transport	<ol style="list-style-type: none"> <li>1. Loss of land</li> <li>2. Displacement</li> <li>3. In migration</li> <li>4. Competition over resources</li> <li>5. Potential tensions and conflicts</li> <li>6. Cultural erosion</li> <li>7. Destruction of tangible and intangible material culture</li> <li>8. Destruction of ancestral territories</li> <li>9. Encroachment on customary land</li> <li>10. Displacement of indigenous peoples</li> <li>11. Erosion of indigenous cultural practices and Heritage</li> <li>12. Increased population</li> </ol>	<ul style="list-style-type: none"> <li>✓ In-migration</li> <li>✓ HIV &amp; AIDS</li> <li>✓ Resource-based conflicts</li> <li>✓ Gender-based violence and exploitation</li> <li>✓ Sanitation and hygiene issues</li> </ul>	
<b>OCCUPATION SAFETY, HEALTH AND SECURITY RISKS</b>			
<b>Targeted Sector</b>	<b>Potential existing risks/impacts</b>	<b>Secondary impacts</b>	<b>Timeline</b>
Road Transport	<ol style="list-style-type: none"> <li>1. Sanitation and hygiene issues</li> <li>2. Fire-related accidents</li> <li>3. Uncollected waste material</li> </ol>	<ul style="list-style-type: none"> <li>✓ Occupational-related health risks and diseases</li> </ul>	<ol style="list-style-type: none"> <li>1. Short term</li> <li>2. Short term</li> <li>3. Short term</li> </ol>
Rail Transport	<ol style="list-style-type: none"> <li>1. Sanitation and hygiene issues</li> <li>2. Fire-related accidents</li> <li>3. Uncollected waste material</li> </ol>	<ul style="list-style-type: none"> <li>✓ In-migration</li> <li>✓ HIV &amp; AIDS</li> <li>✓ Resource-based conflicts</li> <li>✓ Gender-based violence and exploitation</li> </ul>	<ol style="list-style-type: none"> <li>1. Short term</li> <li>2. Short term</li> <li>3. Short term</li> </ol>

Marine term Transport	13. Oil spills 14. Noise pollution 15. Gas/air pollution 16. Marine and shore-line biodiversity loss 17. Solid waste dumping	✓ In-migration ✓ HIV & AIDS ✓ Resource-based conflicts ✓ Gender-based violence and exploitation ✓ Sanitation and hygiene issues	1. Short term 2. Short term 3. Short term 4. Short term
Air Transport	1. Sanitation and hygiene issues 2. Fire-related accidents 3. Uncollected waste material	✓ In-migration ✓ HIV & AIDS ✓ Resource-based conflicts ✓ Gender-based violence and exploitation ✓ Sanitation and hygiene issues	1. Short term 2. Short term 3. Short term
Pipeline Transport	1. Oil spills 2. Gas/air pollution 3. Biodiversity loss 4. Uncollected waste materials	✓ In-migration ✓ HIV & AIDS ✓ Resource-based conflicts ✓ Gender-based violence and exploitation ✓ Sanitation and hygiene issues	1. Short term 2. Short term 3. Short term 4. Short term

It was concluded that road transport modes had the highest levels of environmental and occupational risks related to accidents, destruction of flora and fauna and displacements. Negative environmental impacts had immense primary as well as secondary influences on land, water, air, biodiversity and its entities. In marine ecosystems, loss of mangrove forests, corals, fish, sea grasses, sedges, and other marine fauna and flora is experienced due to development encroachments, displacements or pollution. It was noted that negative impacts are widespread across all the transport sector infrastructural activities and modes, and mitigations and management have been ongoing. Cumulative/synergistic/secondary environmental impacts such as land use change, coral breaching, as well loss of coastal fisheries and climate change or secondary social risks such as emergent diseases or human migrations are significant. Their consequences serve to emphasize the need for early sectorial impacts mitigations, as occurrences are highly dependent on impacts of individual developments under the transport policy.

It was also emphasized that forecasted and existing transport sector development projects had had greater consequences and risks on VGs. These include indigenous communities, marginalized communities and groups, women, the elderly, girls, youth and children. PWDs have also been greatly affected by transport sector development in both positive and negative ways. In particular, gender-related violence and sexual abuse and harassment are common, while degradation of cultural diversities and heritage sites were reported as major issues of concern by communities living in the six selected areas. It was highlighted that issues related to occupational health, safety and security are envisaged to occur during the implementation phase of proposed transport sector infrastructure projects

## CHAPTER SIX

### PROPOSED STRATEGIC MITIGATION AND MONITORING MEASURES

#### 6.0 Introduction

This chapter presents data on potential mitigation measures and monitoring requirements for each potential strategic impact of the implementation of the reviewed INTP. The chapter also developed indicators to allow for the follow-up of the effectiveness of proposed mitigation measures. In appreciation of good practice international standards in SESA when developing mitigation and monitoring measures, this chapter has also explained how these practices can enhance the existing Environmental and Social Framework for transport taking into account the transport sector in Kenya. Recommendations derived from stakeholder engagement and observations in identifying mitigation and monitoring measures associated with the transport sector have also been suggested. This is aimed at improving the reviewed INTP document.

The proposed transport infrastructure projects will generate both beneficial and negative risks/consequences to the environment, and to people's social, health, safety, and security aspects. Anticipated negative consequences are generally associated with pollution, loss of biodiversity, loss or reduced employment, increased conflicts over scarce resources, gender-based violence, and sexual harassment, risks associated with increased maladies and HIV/AIDs, violation of rights of children, increased traffic accidents, and related risks and loss of land. Displacement and relocation of project-affected persons and erosion of cultural values and heritage of vulnerable and indigenous communities living along project areas are expected to greatly affect people. Apart from a few of the unavoidable consequences, other potential impacts of transport sector infrastructure projects need to be mitigated through compliance and conformity to/with national and international SESA standards and guidelines discussed earlier. Among the most important national guidelines EMCA (2009) and the COK (2010) which reigns supreme formed the basis for the review of the reviewed INTP. As earlier indicated, the Constitution of Kenya (2010) being the supreme document through which the country is governed establishes the basic structure of government and the rights and responsibilities of citizens. It also highlights the development needs and the need to preserve and protect natural resources. Other national policies include but are not limited to;

- i. Sessional Paper No. 10 of 2012 on Kenya Vision 2030
- ii. National Environmental Action Plan (NEAP) of 2009-2013
- iii. The National Poverty Eradication Plan of 1999

- iv. The Poverty Reduction Strategy Paper (PRSP) of 2000
- v. The National Biodiversity Strategy of 2000
- vi. The Kenya National Climate Change Response Strategy of 2010
- vii. Technical Guidelines on the Management of Used Oil and Oil Sludge in Kenya (NEMA 2014)
- viii. National Sand Harvesting Guidelines 2007
- ix. Integrated Land Use Guidelines among others highlighted in chapter 3 above.

International legislations include United Nations Convention on Biological Diversity (UNCBD), African Convention on the Conservation of Nature and Natural Resources (ACCNNR), United Nations Convention to Combat Desertification (UNCCD), Rio Declaration on Environment and Development (RDED), Earth Summit on Sustainable Development Agenda 21 (ESSDA21), Convention on the Rights of the Child (CRC), Convention on the Elimination of All forms of Discrimination Against Women (CEDAW) and the International Convention on Labour (ICL). In addition to national legislations World Bank operational safeguard policies invoked are include;

- i. OP/BP 4.01 Environment Assessment
- ii. OP/BP 4.04 Natural Habitat
- iii. OP/BP 4.10 Indigenous People
- iv. OP/BP 4.11 Physical Cultural Resources
- v. OP/BP 4.12 Involuntary Resettlement
- vi. World Bank Policy on access to information 2010 and
- vii. World Bank Group General Environmental Health and Safety (HIS) guidelines among others highlighted in Table 1 below.

Sensitization and awareness creation, respect of employment and labour rules are also discussed in the table. Monitoring through suggested indicators is also important. This will allow for easy follow-up and immediate action.

The six transport subsectors forecasted projects would have specific environmental, social, health, safety, and security impacts. It is also envisaged that generally, transport sector infrastructure has overarching impacts which cut across all the subsectors. And while some may be long term as discussed earlier, others are short-term and reversible if well-managed.

This section identifies potential mitigation measures and monitoring requirements for each potential strategic impact of implementing the reviewed INTP. Suggestions for implementing appropriate legislation, including legal environmental standards for emissions into air, water, and soil; measures specifically targeting engagement with vulnerable groups; revised institutional organization, streamlining environmental responsibility and monitoring and evaluation of proposed mitigation measures are also presented. In addition, an identification of specific indicators to allow for the follow-up of the effectiveness of proposed mitigation measures is made. The section also highlights good practice international standards, such as World Bank Safeguards, International Labour Organisation, International Civil Aviation Organisation and gender policies to be used in developing the mitigation and monitoring measures. The assessment explains how these practices can enhance the existing Environmental and Social Framework for transport taking into account the transport sector in Kenya. The interventions and action plans have been picked from diverse stakeholders, community members, and from views of international partners from Dubai and South Africa. Methods used in collecting data were both participatory and inclusive of especially MARPs in the selected areas. Respect for cultural norms, values, belief systems, ideals, and principles of free prior informed consent was done to ensure ethical issues were adhered to.

### **6.1 Gaps in the Reviewed INTP Document**

As a rule, all transport infrastructure development projects should undergo Environmental and Social Impacts Assessments (ESIAs) and subsequently annual Environmental and Social Audits (ESAs). Environmental and Social Audits requirements are omitted in the reviewed INTP. Annual audits are important in ensuring that projects not only adhere to national and international environmental, social, safety, and security standards but also contribute to sustainability. In particular, they assess the nature and extent of the risk of harm to human health, safety, and the environment. This may be from contaminated land, waste, pollution, species loss or any activity relating to transport infrastructure projects. In addition, the audits recommend measures to manage the risk of harm to human health and the environment, which are requirements by international organisations and institutions dealing with SESA issues. Table 1 below indicates proposed mitigation and monitoring measures for the reviewed INTP's adverse environmental, social and safety, security and health aspects. The indicators used to ensure follow-up are also highlighted in the table 1 below thus;

**Table 15: Proposed Strategic Mitigation, Monitoring Measures, and Indicators**

ENVIRONMENTAL ISSUES			
Issue	Mitigation	Monitoring	Indicators
1. Pollution (Air, water, noise)	<ul style="list-style-type: none"> <li>• Compliance/adherence/ conformity to:</li> <li>• NEMA policy on noise, air quality standards</li> <li>• East African Community Protocol on Environment on Natural Resources (Amendment 206)</li> <li>• Occupational Safety And Health Act, 2007</li> <li>• Public Health Act (CAP. 242)</li> <li>• Civil Aviation Act No 21 of 2013,</li> <li>• the Civil Aviation (Amendment) Act No. 46 of 2016,</li> <li>• The Kenya Airports Authority (KAA) Act CAP 395, of 1991 and the various regulations covering diverse areas.</li> <li>• The International Civil Aviation Organization (ICAO)</li> <li>• Convention on Biological Diversity</li> <li>• Ramsar Convention</li> <li>• Convention on Migratory Species/Bonn Convention</li> <li>• Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Waste within Africa (1997)</li> <li>• Convention on Persistent Organic Pollutant (2001)</li> </ul>	✓ Review guidelines on the transport sector action plan	<ul style="list-style-type: none"> <li>✓ The levels of noised generated</li> <li>✓ The quality of water and air.</li> <li>✓ Levels of stakeholders satisfaction</li> </ul>
2. Hazardous waste	<ul style="list-style-type: none"> <li>✓ Compliance/adherence/ conformity/Review to:</li> <li>• Sustainable Waste Management Act 2022</li> <li>• Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Waste within Africa (1997)</li> </ul>	✓ Review guidelines on waste management	✓

3. Wet land loss and degradation	<ul style="list-style-type: none"> <li>• Compliance/adherence/ conformity to:</li> <li>• Sustainable Waste Management Act 2022</li> <li>• Climate Change Act No 11 of 2016</li> <li>• United Nations Framework Convention on Climate Change (UNFCCC)</li> <li>• Draft National Policy on Wetlands Conservation and Management (2013)</li> <li>• Ramsar Convention</li> <li>• Wildlife Conservation and Management Act 2013</li> <li>• National Environment Policy, 2013</li> </ul>	✓ Strengthen guidelines on water catchment management.	✓
4. Destruction of flora and fauna	<ul style="list-style-type: none"> <li>• Compliance/adherence/ conformity to:</li> <li>• Convention on Biological Diversity (IC/A/P)</li> <li>• Convention on Migratory Species/Bonn Convention (IC/A/P)</li> <li>• Wildlife Conservation and Management Act 2013</li> <li>• Forest Act 2012</li> <li>• Environmental Management and Coordination Act of 2015 (CAP 387) and its Amendment</li> <li>• Lusaka Agreement on the Cooperative Enforcement Operations Directed against Illegal Trade in Fauna (1994)</li> </ul>	✓ Review guidelines on the management of flora and fauna.	✓ Annual number of wetlands affected by transport sector activities.
5. Introduction of invasive species	<ul style="list-style-type: none"> <li>✓ Compliance/adherence/ conformity/Review to:</li> <li>• National Biodiversity Strategy and Action Plan (NBSAP), 2000</li> </ul>	✓ Review guidelines for the prevention of and introduction of alien invasive species in the transport sector.	<ul style="list-style-type: none"> <li>✓ Annual number of transport sector sites and regions affected by alien invasive species.</li> <li>✓ Evidence of use of materials within similar homogenous areas.</li> </ul>
6. Deforestation	<ul style="list-style-type: none"> <li>• Compliance/adherence/ conformity/Review to:</li> <li>• Draft National Forest Policy, 2015</li> <li>• EMCA Cap 2015</li> <li>• National Biodiversity Strategy and Action Plan (NBSAP), 2000</li> </ul>	✓ Draw guidelines on the requirement of environmental rehabilitation plan (ERP)	✓ Annual number of forests affected by the transport sector activities and modes.

	<ul style="list-style-type: none"> <li>National Master Plan for Conservation and Management of Water Catchment Areas 2012</li> <li>Environmental Management and Coordination Act of 2015 (CAP 387) and its Amendment</li> </ul>		
7. Climate Change impacts (drought, floods and landslides)	✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>Sessional Paper of 2014 on National Climate Change Framework Policy</li> <li>Climate Change Act 2016</li> <li>County Governments Disaster Management Bill</li> </ul>	✓ Review guidelines on adequate integration of climate change mitigation and mitigation in transport sector project EIA Report	✓ Annual number of climate change related disasters.
8. Oil spills	<ul style="list-style-type: none"> <li>Compliance/adherence/ conformity/Review to:</li> <li>The Merchant Shipping Act No. 4 of 2009</li> <li>the Environmental Management and Coordination Act (EMCA), 1999</li> <li>International Convention for the Prevention of Pollution from Ships (MARPOL)</li> </ul>	✓ Re-assess the guidelines on for the ecosystem protection plan.	✓ Annual state of marine ecosystem.
<b>SOCIAL ISSUES</b>			
<b>Issue</b>	<b>Mitigation</b>	<b>Recommended Intervention</b>	<b>Indicators</b>
1. Increased crime rates	✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>The Penal Code (Cap. 63)</li> <li>the Security Laws (Amendments) Act, 2014</li> </ul>	✓ Draft guidelines on mainstreaming and engagement of enforcement agencies	✓ Annual number of criminal cases reported
2. Inadequate consideration of labour opportunities	✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>The Constitution of Kenya, 2010</li> <li>The Employment Act, 2007</li> <li>Labour Relations Act No. 14 Of 2007</li> <li>Labour Institutions Act No. 12 Of 2007</li> <li>Persons With Disabilities Act No. 14 OF 2003</li> </ul>	<ul style="list-style-type: none"> <li>Re-assess guidelines on labour management plan</li> </ul>	<ul style="list-style-type: none"> <li>Number of local and foreign workers</li> </ul>

3. Minimal consideration of erosion of cultural norms, values, and systems issues	<ul style="list-style-type: none"> <li>✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>• National Policy on Culture and Heritage, 2009</li> <li>• World Bank Policies, Indigenous Peoples Policy (O.P.4.10)</li> <li>• UNESCO Convention for the protection of the World Cultural and Natural Heritage (1972)</li> <li>• World Heritage Convention</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>✓ Re-assess guidelines on the protection of cultural norms, systems, and values</li> </ul>	<ul style="list-style-type: none"> <li>✓ State of existing cultural values, norms and systems</li> </ul>
4. Inadequate consideration of cultural and heritage sites and displacement of Indigenous people	<ul style="list-style-type: none"> <li>✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>• National Policy on Culture and Heritage, 2009</li> <li>• World Bank Policies, Indigenous Peoples Policy (O.P.4.10)</li> <li>• National Museums and Heritage Act 2006</li> <li>• World Bank's Operational Policy 4.11-Physical Cultural Resources</li> <li>• UNESCO Convention for the protection of the World Cultural and Natural Heritage (1972)</li> <li>• World Heritage Convention</li> <li>• The Physical And Land Use Planning Act, 2019</li> <li>• World Bank's Operational Policy 4.12: Involuntary Resettlements</li> <li>• Compliance with the Land Act 2012</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>✓ Review rules on the protection of heritage and protection/participation and inclusion of indigenous peoples.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Number heritage sites affected</li> </ul>
5. Increased loss of land, and its entities, including property.	<ul style="list-style-type: none"> <li>✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>• Land Act 2012</li> <li>• The Physical And Land Use Planning Act, 2019</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>✓ In conjunction with NLC and Environment and Land Court, review guidelines of compensation/ relocation and resettlement plan.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Acreage of land acquired</li> </ul>
6. Resource-based conflict-related issues	<ul style="list-style-type: none"> <li>✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>• Public Roads and Roads Access Act Cap 399</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>✓ Review grievance redress mechanisms in conjunction with law enforcement agencies.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Number of reported resource based conflicts</li> </ul>

		<ul style="list-style-type: none"> <li>✓ Rethink the Bill of Rights as enshrined in the COK (2010)</li> <li>✓ Draw guidelines on the African Charter on Human Rights</li> </ul>	
7. Child labour and exploitation of children	<ul style="list-style-type: none"> <li>✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>• Children Act 2001</li> <li>• National Children Policy, 2010</li> <li>• Labour Relations Act No. 14 Of 2007</li> </ul> </li> </ul>	✓ Review guidelines of enforcement laws on child labour and exploitation	✓ Annual reports of child exploitation cases
8. Inadequate consideration of issues related to increased road accidents	<ul style="list-style-type: none"> <li>✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>• Traffic Act Chapter 403</li> </ul> </li> </ul>	✓ Review guidelines on an enforcement management plan	✓ Annual number of accidents reported

#### OCCUPATIONAL SAFETY, HEALTH, AND SECURITY

Issue	Mitigation	Monitoring	Indicators
1. Death and injuries	<ul style="list-style-type: none"> <li>✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>• Occupational, Safety, and Health Act, 2007</li> <li>• Work Injury Benefits Act, 2007</li> <li>• ILO Declaration on Fundamental Principles And Rights At Work</li> <li>• Persons With Disabilities Act No. 14 OF 2003</li> </ul> </li> </ul>	✓ Review guidelines on work injury and benefits	✓ Annual number of deaths and injuries
2. Gender based violence and sexual harassment	<ul style="list-style-type: none"> <li>✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>• Sexual Offences Act 2006</li> <li>• Gender Policy of 2011</li> <li>• Sexual and Gender Based Violence Act 2017</li> </ul> </li> </ul>	✓ Re-assess guidelines on GBSH engagement and protection management plan	✓ Annual number of GBHS cases reported
3. Violation of Rights of Children (VRC)	<ul style="list-style-type: none"> <li>✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>• Children Act 2001</li> <li>• National Children Policy, 2010</li> <li>• ILO Declaration on Fundamental Principles And Rights At Work</li> </ul> </li> </ul>	✓ Review guidelines on disease sensitization management plan	✓ Cases reported on child labour and exploitation

4. STIs, HIV, and AIDS	✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>• Public Health Act</li> <li>• HIV, and AIDS Prevention and Control 2006</li> </ul>	✓ Draw guidelines on health impact assessment.	✓ Annual number of sensitization meetings
5. Sanitation and hygiene	✓ Compliance/adherence/ conformity/Review to: <ul style="list-style-type: none"> <li>• Sustainable Waste Management Act 2022</li> <li>• Compliance with the Water Act, 2016</li> <li>• National environmental Sanitation and Hygiene Policy (NESHP) 2007</li> <li>• Kenya environmental Sanitation and Hygiene Policy 2016-2030</li> </ul>	✓ Review guidelines on work injury and benefits	✓ Records on quality of water ✓ Annual number of inspections

## **CHAPTER SEVEN**

### **STAKEHOLDER ENGAGEMENT AND PUBLIC CONSULTATIONS**

#### **7.0 Introduction**

Consultations and deliberations with diverse stakeholders is an important aspect of any decision making process related to plans, policies and programs. The aim is to build relationships based on an understanding of a process, internalizing the pros and cons and buying into the process and end product. Picking and mainstreaming the needs, fears and aspirations of as many stakeholders as possible while designing, implementing and monitoring a policy document strengths and weakness helps shape and improve the overall impacts of a policy on the people that it is intended to benefit. As opposed to a one-off event stakeholder engagement and public consultation ought to be a continuous process throughout the process of formulation, design, implementation, monitoring and evaluation of the policy. The transport sector in Kenya impacts and is impacted upon by almost everyone in the country. This is because movement is integral to human beings whether in relation to goods and/or services. Like any other policy document in Kenya, Article 69 of the Constitution of Kenya (2010) empowers the state to encourage public participation in the management, protection and conservation of the environment. The COK (2010) also provides that parliament shall not bar anyone from participating in public affairs on any grounds such as age, race, colour, gender or political affiliation. National values and principles of governance thus include public participation as underscored in Article 10 which points at transparency, integrity and accountability in ensuring sustainable development. The Article also underscores the need for human dignity, equity, social justice, inclusiveness, equality, human right, non-discrimination and protection of the marginalized. Onyango and Schimidt, (2007) note that public participation is at the heart of EMCA (1999). The authority places the public at the centre of environmental justice and management. The Authority contends that the public contributes by airing their environmental concerns, giving their insights, feedback and perspectives thereby contributing to informed environmental decisions that mitigate against environmental impacts. The legal provisions for public participation under EMCA, 1999 relies of the five guiding principles thus;

- a. Polluter pay principle

- b. Precautionary principle
- c. Principle of public participation in the development of policies, plans and processes for the management of the environment
- d. Cultural and traditional principle
- e. Principle of intergenerational and intra-generational equity

### **7.1 Public participation and Stakeholder Engagement Plan**

Public participation and stakeholder consultations for this SESA exercise were done through;

- a. Consultative forums which helped identify issues of concern by diverse stakeholders in the transport sector, sensitization on the intention to implement the reviewed INTP, for a buy-in and improving the reviewed INTP document in readiness for implementation
- b. In-depth interviews with government officials, public sector, lead agencies and relevant ministries.
- c. Key Informant interviews with government officials responsible for design, implementation, monitoring and evaluation of the reviewed INTP. This category will be responsible for the implementation of the SESA recommendations
- d. Focus-group discussions with locals affected and/or likely to be affected by the reviewed INTP implementation
- e. Academic discussions and round table meetings were also held with experts in relevant areas. The experts are key in helping identify gaps in policies and suggesting recommendations for improvement. They are often engaged in carrying out ESIAs, ESAs, SESA and related activities.
- f. County and local government officials gave insight on processes of awareness creation and sensitization on the reviewed INTP. Politicians and community leaders understand transport sector politics and they are important in supporting national governments to implement policies.

### **7.2 Stakeholder and public participation findings and discussions**

Issues for discussion revolved around the impacts of the transport projects on the lives and livelihoods of people of all genders, culture, and heritagization of tangible and intangible

community resources, land compensation, environmental challenges and climate change issues associated with transport infrastructure development projects and related issues. Focus Group Discussions revealed diverse environmental and social impacts related to the reviewed INTP. With regards to compliance and conformity to World Bank and national environmental, socio and health and safety standards the matrix used integrated, moderately integrated and the not integrated options to determine the extent within which the reviewed INTP has adhered to requirements. In SESA that specifically relates to a policy document, such as the reviewed INTP, all key environmental and social issues are considered to have potential impacts and therefore earn a space in the policy document.

### **7.3 Findings from Stakeholder and public participation engagements**

The assessment utilized NEMA and World Bank standards and guidelines to identify impacts of existing and proposed transport projects to the environment, socio and health and safety. On NEMA stakeholders were emphatic that NEMA has constantly engaged them in discussions regarding; Noise, air, oil spillage, loss of flora and fauna where proposed construction sites are envisaged, unclear rules of engagement with transport sector personnel regarding environmental issues, destruction of mangroves, inadequate training on management of environment and biodiversity among others. In Mombasa, Lamu and Kisumu the question of oil spillage by boats, ferries and ships was of particular concern. Local communities complained about lack of direct communication lines to transport sector personnel regarding oil spillages and air pollution by these vessels. A concern regarding spillage by pipelines was also reported in Mombasa. Regarding social, safety and health issues stakeholders in the road and rail sectors complained about lack of clear guidelines on PWDs, expectant mothers and the elderly. The public was also concerned about accidents on major roads occasioned by stalled old vehicles whose licenses were still new. There is need for proper follow up on enforcement on vehicles to be imported, rules of disposal of old vehicles, rules on licensing of *boda bodas* plying all routes and proper coordination mechanisms with local government authorities in the transport sector.

Stakeholders generally agreed that with increased transport infrastructure constructions and implementation of policies on such projects, employment opportunities for men, women and youth have increased in all six areas. It was also established that movement from one area to the other

has improved and the cost for such journeys has been reduced. There was also general agreement that together with improved communication and information dispatch, business opportunities and commerce have been experienced. This has engendered unforeseen cultural exchanges where people move from one region to the other. In Mombasa, Lamu, and Isiolo, road network infrastructure development has led to the opening up of the local economy, and investors continue to flock into these areas. In Isiolo and Lamu, cases of insecurity have reduced tremendously as Al Shabab networks that were operating in remote areas retreat to Mogadishu. The increased air and road traffic continues and is envisaged further to open up insecure forested areas in Lamu and Mombasa, thus creating opportunities for tourism in the two locations. Locals in Eldoret and Kisumu, on their part, reported and envisaged improved service delivery with the implementation of the proposed reviewed INTP. At Kisumu International Airport, travellers revealed that the implementation of the reviewed INTP which has proposals on new modes of transports will contribute to reduced travel time and costs of transporting goods. The opening of the Lake Victoria shipyard and subsequent activities will greatly open up the region for sub-regional business opportunities with Uganda, the Democratic Republic of Congo (DRC), Rwanda and Burundi.

Consultations with men, women, government workers and representatives of civil society organisations revealed that Kenya has a comprehensive climate change strategy and Act (2016) which provides a framework for an enhanced response to climate change and provides mechanisms and measures to improve resilience to climate change risks and promote low carbon development there exists minimal evidence showing the integration of climate financing priorities in the development of transport infrastructure. In addition, transport sub-sectors appear not to have clear guidelines of capacity-building needs for specific climate change experts. Departments and directorates have individuals with exposure but no requisite comprehensive training on environmental governance, climate financing and the use of transformative approaches to build and strengthen communities affected by transport sector infrastructure. The reviewed INTP clearly appreciates the impacts of climate change on the transport sector. Provisions for in-depth training, recruitment of experts in climate change and capacity building are, however, not clear. Mainstreaming climate change and sustainability in all subsectors and training staff on the same is imperative. This will help mitigate the negative impacts associated with climate change occasioned

by transport sector development projects in the future. The conclusions from public and stakeholder deliberations indicated that;

**a. Assessment and Management of Environmental and Social Risks and Impacts**

Respondents in Mombasa, Nairobi, Eldoret, Nairobi, Kisumu and Bula Pesa in Isiolo noted that due to increased population, rapid urbanization, and related developments, transportation activities have correspondingly increased to move people, goods, and services. Positive impacts revolved around the rapidity of movements and access to goods and services. Risks notable in the transportation sector resulted mainly from carbon emissions and oil pollution from vehicles, shipping, and aero- planes. In addition, respondents noted that there is inadequate provision of public sanitary facilities, especially toilets along major roads. This has both environmental and social implications due to the risk posed by open defecation and other improper disposals of human waste as well as the social risks associated with the lack of privacy for travellers. The reviewed INTP has partly dealt with these issues.

**b. Assessment of Labour and Working Conditions**

As a positive impact, respondents from all the six sites acknowledged that the transport sector in Kenya has greatly contributed to the employment of both skilled and unskilled youth. Local communities along the LAPSSET corridor in Isiolo and Mombasa hailed the government and construction firms for reduced criminality due to growth in urban centres, which come with electricity and improved security agencies. Income-generating activities such as small-scale businesses have also sprouted along construction corridors. Road construction workers, however, lamented the lack of clear terms and conditions of employment. It was, in particular, noted that the number of foreign workers in KeNHA relative to the local labour force is high. In Mombasa, locals sought for a clear definition of ‘local workers’ in the reviewed INTP. In addition, they underlined the need for clear guidelines on terms and conditions regarding numbers, provisions, and qualifications of both local and foreign workers in the reviewed INTP.

**c. Assessment of Resource Efficiency and Pollution Prevention and Management**

Respondents were in agreement that transport activities and related developments generate pollution to air, water, and land and that effective waste management is imperative. Discussions, however, revealed that differing and overlapping mandates of concerned sectors in government hamper pollution prevention and management. As an example, a respondent from the County Government of Mombasa noted that despite seeking finances to develop some infrastructure for managing waste in areas such as Mwakirunge dumpsite in Mombasa, Kenya Airports Authority has been opposed to such developments insisting that is not possible because the land is on a flight path. This is despite the fact that sanitary landfills are known to be better than open dumpsites. Further, materials that go to landfills are those left after rigorous recycling of wastes has taken place. There is, therefore, a great need for reviewing the reviewed INTP to allow for combined multi-sectoral and inter-institutional efforts in waste management that would equally be responsive to the needs and concerns of people of all genders in the affected communities. In addition, an elaborate waste management plan is recommended in at all stages. This should be clearly spelled out in the reviewed INTP as follows;

**Figure 8: Hazardous Waste Management Considerations**



Source: Slideserve<sup>11</sup>

#### **d. Perceptions on Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement**

The respondents noted that active free prior informed consent in public participation is crucial, especially in the identification of local inhabitants who have lived for long in the areas to be annexed and/or affected to appropriately guide compensations. Interviews with locals in Mavueni in the Coast revealed that proper land inventories, for instance, for minerals, biological resources, and human-constructed physical structures, need to be carried out. Other resources, such as climate and water, should also be considered. All these would guide not only the determination of land value and compensation levels but also make sure that in case of need for resettlement, the affected people would be resettled in areas that closely resemble and prices commensurate to where they would be coming from. For instance, locals living along the Standard Gauge Railway (SGR) pathways complained that they were resettled in very dry lands. In Lamu locals complained that they were forcibly relocated during the construction of the incomplete LAPPSET. Along Kenol-Marua and the Mau Mau roads residents say that while they were compensated, the amount given did not reflect their desires. Some have purchased land in areas that are less productive than their original a boards. Thus, resettlement programs should reflect the economic livelihoods of communities.

#### **e. Views on Community Health and Safety**

In Mombasa, it was noted that some transport activities continue to affect community health and safety adversely. An example an interviewed aviation experts gave was fuel jettison (fuel dumping) when planes are overloaded or in an emergency. Other respondents noted that adequate friendly, clear and precise signage on road construction sites was lacking in many construction sites. Other occupational health and safety concerns raised include the lack of clear guidelines regarding sanitary provision along highways. Sensitization on meanings of road signs was also suggested. This is because transport infrastructural developments majorly follow areas with high illiteracy levels, yet signage is usually in non-local languages.

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<sup>11</sup> <https://image.slideserve.com/773691/hazardous-waste-management-system-l.jpg>

**Figure 9: Road Signage**



Source: Wallpapercave<sup>12</sup>

**f. Assessment of Biodiversity Conservation and Sustainable Management of Living Natural Resources**

Transport though important has led to the physical fragmentation of landscape and the destruction of existing flora and fauna. It was noted that the destruction of forests in particular, contributed to a decrease in ground water resources along areas where major highway construction is underway. This also contributes to the loss of important green spaces required for environmental cooling effects. On whether issues related to landscapes were adequately covered in the reviewed INTP,

<sup>12</sup> Wallpapercave. Available at: <https://wallpapercave.com/wp/wp4238147.jpg> (Accessed on 22/12/2022)

informants generally agreed that major issues were tackled. In some areas like Isiolo, however, informants lamented high temperatures and little if any, water in areas hitherto known as water reservoirs for animals. In Mombasa, respondents noted that the construction of LAPSET and associated roads by KURA involved removing plant species and displacing of fauna. Port and shipping activities, in particular, were noted to affect marine flora and fauna, yet mitigation efforts were noted to be minimal. For example, areas around the port of Mombasa and Makupa had a complete absence of mangrove forests. Respondents noted that Mombasa has about ten ferries and many ships frequented the port. Car washing yards and garages were noted to release oils and heavy metals (such as lead), which greatly affected biodiversity. Airplane flights around the now expanded Moi International Airport, Mombasa, had noise levels that impacted negatively on faunal diversity. In addition to dangers posed by large faunal species on flight paths near the airport, informants lamented that in other instances, access to biodiversity resources to local people had un-negotiated restrictions, thus lowering interest in biodiversity conservation by local people. There is, therefore, a great need to revisit the reviewed INTP to allow for provisions that encourage biodiversity conservation and sustainable utilization, with a high level of stakeholder involvement, especially in the local communities.

It was also observed that there is a need for vegetation to be planted, especially after the transport infrastructure has been constructed. However, there is a need to be context-specific because different areas require different types of vegetation. They also noted that huge trees should not be planted close to highways as they may pose a risk in terms of obscuring the vision of drivers and may cause accidents in case they fall on the highways. In addition, owing to this inadequate guideline on the type of vegetation to be planted, there was the risk of introducing invasive alien species when rehabilitating the environment.

In addition, respondents noted that areas around airfields should not have large trees planted to avoid attracting birds and other animals that may obscure the airfield and cause accidents to aircraft.

#### **g. Views on Transboundary Projects**

Respondents noted that the national government and neighbouring states had undertaken long-term development projects, programs, and policies that seek to transform their countries into newly industrializing, middle-income countries to provide a high quality of life to all their citizens. The projects have transformative potential for the neglected North Eastern region of Kenya and the whole of marginalized regions of East Africa. A major challenge mentioned in FGDs held in Isiolo was environmental safeguards and the rights and livelihoods of those whose lands the project would cross. Each element of the project carries a high economic and social cost, therefore requiring the creation of a joint coordinating commission.

#### **h. Perceptions on impacts on Gender, Social Inclusion (GESI), and Stakeholder Engagement**

Meetings and focus group discussions on stakeholder engagement brought forth potential and anticipated environmental and social impacts and possible mitigations required. In particular, residents of Wabera, Burat, and Bulla Pesa, after a brief presentation of the reviewed INTP, complained that they were not consulted during the stakeholder engagement exercise that was done in the initial stages. The locals added that land surveyors who recommended land prices for those to be compensated did not discuss cultural sensitivities that accompany land allocations in the area. A group of men also lamented the non-disclosure of important information regarding considerations for valuations of land around Isiolo airstrip and its environs. However, this was countered by government officers in Isiolo and Mombasa, including chiefs, assistant county commissioners, and other officers who provided lists of people who participated in stakeholder engagement meetings in the two places. However, while they insisted that local communities were adequately engaged, 64% of participants in these two locations were of a different opinion. Of the 64%, women respondents were emphatic that their views were hardly considered and do not, therefore, feel that the reviewed INTP document reflects their views. It was agreed that through all stages of the exercise, communities from the areas identified for the project should be included during the dissemination and validation exercises. It was also suggested that rather than have women's issues stand alone, the reviewed INTP should mainstream issues related to gender and social inclusion. On information disclosure, it was agreed that the importance of open and transparent engagement between the transport project proponents and project stakeholders be

emphasized as comprehensively as possible. This would enhance project acceptance and significantly contribute to successful project design, operation, and sustainability.

**i. Assessment of Cultural heritage and preservation of indigenous people perceptions**

In Mombasa, the question of cultural heritage conservation and biodiversity was in particularly contentious. Of those interviewed, 42% were of the opinion that the construction of LAPSSET completely ignored the value of marginalized cultures. As traditional custodians of indigenous cultural values of local endangered communities, 95% of the informants suggested that the reviewed INTP be modified to include a nationalized heritage code that recognizes the contribution and place of marginalized communities and cultures.

**j. Views on Financial Intermediaries**

The role of local businesses, community, and Financial Institutions, including local banks, Saccos, and financial consultants, emerged as an important issue for discussion. In Isiolo and Mombasa, key players in the transport sector and other government establishments stressed the need for public-private sector partnerships. In addition, while the informants from the two sectors praised the amiable consultations and community empowerment initiatives, including financing of a small, medium, and large investors in the transport sector, it was noted that the potential of financial intermediaries had not been fully utilized by both the Government and local communities. This is largely due to inadequate capacity building and low awareness levels. Transport policy initiatives must include as a central role in awareness creation, sensitization, and capacity building on domestic capital and financial markets access, which will drive sustainable investments and growth. The role of financial Intermediaries in promoting good environmental and social management practices, including sound human resources capacity and management in transport project were noted.

The following environmental, socio-economic and health and safety issues were identified from the PPP and stakeholder analysis and they require to be prioritized by SDoT and partner ministries and agencies;

1. Establishment of clear guidelines to avoid risks associated with risks of pollution by transport sector due to unclear guidelines on old vehicles, old poorly serviced trains, old and un-serviced ferries and boats
2. To avoid loss of biodiversity where new projects are envisioned there is need to map out existing flora and fauna and develop plans for management of the same
3. Occupational health and safety problems e.g narrow recovery lanes on highways, existence of many exit points on highways, lack of clear pedestrian lines on highways, few provisions and guidelines for PWDs in major transport modes.
4. Public participation and stakeholder engagement plan in transport sector e.g internal and external
5. Development of a clearly time-bound master plan for the transport sector
6. Provision of clear guidelines on roles of agencies, regulatory and enforcement bodies

The environmental, socio and health and safety issues raised by stakeholders and not catered for in the reviewed INTP are;

1. Plans for protection of vulnerable groups
2. Levels and extent of public and stakeholder engagement
3. Plans for dealing with narrow recovery lanes on highways
4. Management of all transport sector modes including taxis and motor cycles
5. Need to have offices in the county level to follow up on guidelines and regulation on environment, socio, health and safety issues in the transport sector

#### **k. Capacity Building and Knowledge Transfer**

In order to build capacity regarding environmental and social safeguards issues in the SESA report, the consultants have continuously built capacity among transport sector stakeholders, especially key transport policy, programs, and plans implementers through; Involvement of the Ministry of Roads and Transport during data collection abroad and dissemination/information materials and outcome reports.

**Objectives of Building capacity has been to;**

- a. To familiarize the transport sector participants and other relevant stakeholders with the outcomes of the “Strategic Environment and Social Assessment of the reviewed INTP.
- b. To explain the role of the SESA Framework as an appropriate instrument for identifying environmental and social issues and potential impacts (positive and negative) associated with transport sector management policies, programs, and plans.
- c. To Present the World Bank Environmental and social standards and applicable EMCA regulations relevant to SESA, including other relevant standards in place.
- d. To highlight ways of Mainstreaming/ Implementation SESA in Policy, Programs, and Plans, including Public consultation and disclosure procedures,
- e. To present Case Studies –From Benchmarked countries/International and also on local experiences.

## **CHAPTER EIGHT**

### **RECOMMENDATIONS AND SESA ACTION PLAN**

#### **8.1 CONCLUSIONS AND RECOMMENDATIONS**

The conclusions and recommendations for this exercise are presented for action in two levels thus; the reviewed INTP document and SESA for the reviewed INTP. While the first level action deals with issues related to the document itself and are not part of the TORs, it is important that the recommendations be considered when revising content for the reviewed INTP as follows;

##### **8.3.1 CONCLUSIONS ON REVIEWED INTP**

- a) The aspect of integration of all transport modes while well thought-out and justification for integration given this is not clearly reflected in the document. Integration implies the seamless, mainstreaming of all aspects of the policy into one broad piece. As it stands, the reviewed policy still consists of stand-alone aspects from all sectors, and this defeats the spirit and letter of integrating.
- b) The transport sector opportunities and prospects have also been drawn and provisions for growth of the sector provided.
- c) The reviewed INTP document has identified strategic directions for the transport sector with clear strategic goals and principles
- d) The reviewed INTP has provision for the development of a National Transport Master Plan to take care of effective integration of all transport modes
- e) Clear guidelines on monitoring, evaluation and review of projects, programs and policies are not be indicated in the reviewed INTP.

##### **8.3.2 RECOMENDATIONS ON REVIEWED INTP;**

- f) The aspect of integration of all transport modes should reflect a generalized policy, mainstreaming all modes of transport as one broad piece. Stand-alone aspects on sub-sectors should be subsumed in the whole policy document and technical heads obligated to develop clear and timely guidelines for the integration process.

- g) Fast-tracking for the development of a National Transport Master Plan to take care of effective integration of all transport modes should be immediate.
- h) Clear guidelines on timeline for monitoring, evaluation and review of projects, programs and policies should be indicated in the reviewed INTP.

### **8.3.3 CONCLUSIONS ON SESA FOR REVIEWED INTP;**

The PPP analysis for the transport sector is adequate in the way it has integrated environmental sustainability, socio-economic aspects and health and security issues. The integration of majority of the main environmental, socio-economic and occupational health and safety showed a clear understanding of the policy, legislative and regulatory frameworks of the transport sector at both national and international levels. But, while the reviewed INTP has identified, fully utilized and/or provided guidelines on how to deal with environmental, social, health and safety in conformity with various national and international institutions such as World Bank, AfDB, UNFCC, ICAO among others there still exists a gap in integrating some provisions as indicated below. Majority of these are concerned with socio-economic considerations;

- a. On environment thus; **The Environment and Land Court Act 2011 and National Oceans and Fisheries Policies**
- b. On land thus; **The Land Act, 2012, The National Land Commission Act, 2012 (No. 5 of 2012), Community Land Act 2016 and The Environment and Land Court Act, 2011.**
- c. On employment and labour thus; **The Employment Act, 2007, Labour Relations Act No. 14 Of 2007, Labour Institutions Act No. 12 Of 2007, Work Injury Benefits Act Chapter 236, Industrial Court Act, 2011, Sessional paper No 1 of 2015 on the national Policy on Elimination of Child Labour (SP) and The Sessional paper no 3 of 2014 on national policy and action plan on Human Rights**
- d. On protection of marginalize and vulnerable groups thus; **The Children Act No. 29 f 2022 and The prevention and Protection and Assistance to Internally Displacement Persons and affected communities Act, IDP ACT 2012**
- e. On information disclosure thus; **Access to information Act 2016**
- ❖ On governance thus; **Commission of administrative Act No 23 of 2011 and National Cohesion and Integration Act 2011 (Amendment 2012)**

❖ On occupational health and safety thus; **County Governments Disaster Management Bill**

With regards to international conventions, protocols and agreements, the reviewed INTP only picked and integrated a few. Relevant missing international instruments include;

**1. On environment;**

- Natural Resources (Amendment 206) (IC/A/P)
- Convention on Biological Diversity (IC/A/P)
- Ramsar Convention (IC/A/P)
- Convention on Migratory Species- Bonn Convention (IC/A/P)
- Bamako Convention on the Ban of the Import into
- Africa and the Control of Transboundary Movement and Management of Hazardous Waste within Africa (1997) (IC/A/P)
- United Nations Conventions to Combat Desertification (UNCCD) (IC/A/P)
- African Convention on the Conservation of Nature and Natural Resources (ACCNNR) (IC/A/P)
- Rio Declaration on Environment and Development (RDED),
- Earth Summit on Sustainable Development Agenda 21 (ESSDA21), (IC/A/P)

**2. On Social-economic issues;**

- ILO Declaration on Fundamental Principles and Rights At Work (IC/A/P)
- International Covenant on Economic, Social, and Cultural Rights (IC/A/P)
- African Charter of Human and People's Rights (IC/A/P)
- World Heritage Convention (IC/A/P)
- The Declaration on the Rights of Indigenous Peoples (UNDRIP), 2007
- Universal Declaration of Human Rights (IC/A/P)
- Convention on the Rights of the Child (CRC), (IC/A/P)
- Convention on the Elimination of All forms of Discrimination Against Women (CEDAW) (IC/A/P)

The PPP analysis indicated that the occupational health and safety framework is well integrated in the reviewed INTP and can lead to the following benefits;

- ✓ Reduction of accidents and injuries
- ✓ Decrease in diseases and epidemics
- ✓ Reduction in gender-based violence and sexual harassment
- ✓ General public safety and health

The analysis established that failure to sensitize, comply, adhere, and conform to relevant transport sector policy, legislative and regulatory frameworks, and International instruments and conventions, as is evident in the reviewed INTP, has potentially negative consequences as follows;

### **1. On environment;**

- ❖ Environmental pollution and degradation
- ❖ Introduction of alien invasive species
- ❖ Risks of hazardous waste pillage
- ❖ Oil spills
- ❖ Wetland loss and degradation
- ❖ Deforestation
- ❖ Deterioration of water quality
- ❖ Climate change-related disasters
- ❖ Destruction of critical ecosystems

### **2. On socio-economic;**

- ❖ The proliferation of conflicts related to the transport sector
- ❖ Inadequate Corporate Social Responsibility interventions
- ❖ Loss of land
- ❖ Increased crime rates
- ❖ Labor influx
- ❖ Erosion of cultural norms, values, and systems
- ❖ Destruction of heritage sites
- ❖ Displacement of the Indigenous population
- ❖ Closure of access routes
- ❖ Child labour and exploitation of children
- ❖ Gender and sexual exploitation and harassment.

In addition, while the capacity of the institutional agencies to address environmental, occupational health and safety and social issues was appreciated, underfunding, dilapidated equipmentation, inadequate motivation and incentive and human capacity needs in some agencies was noted. It was also concluded that unique challenges exist at the county level where transport sector operations exist. Addressing current and potential risks at both levels is also subject to capacity challenges such as sub-sector infrastructure, availability of appropriate equipment and materials, levels of synergies and linkages between institutions and availability of relevant staff to address environmental, occupational health and safety and social issues at the county levels. Collaborations and continuous training of specialized county staff is thus needed. In particular, staff to handle specialized data measuring equipment and materials, for instance, those dealing with energy and petroleum are needed. Institutions with overarching mandates such as KEBs require specialized staff to handle very sensitive data. Retooling of such staff to handle new equipment's and to deal with emerging issues should be adequately addressed by the reviewed INTP for implementation. An important challenge is the availability of expert personnel and capacity to identify specific risk factors of environmental, occupational health and safety and social attributes of the reviewed INTP.

#### **8.3.4 RECOMMENDATIONS FROM PPP ANALYSIS**

1. Review the transport sector framework to ensure the integration of all modes of transport.
2. Develop transport sector guidelines for the complete integration of all modes of transport.
3. Implementing the Transport Act should be done in close/ effective, and productive conjunction with county governments.
4. Establish a protocol for working with NEMA on government's policy, plans and projects – and “walk together” in PPPs processes in order to minimize delays in projects' execution and avoid misalignments associated with economic and social costs.
5. Establish and designate transport sector casualty investment to deal with accidents and injuries.
6. To strengthen the SESA framework, there is a need to integrate the missing environmental, socio-economic, and occupational health and safety national policy, regulatory and legislative frameworks, and international instruments as shown below;

**Table 16: Environmental, socio-economic, and occupational health and safety national policy, regulatory and legislative frameworks, and international instruments**

ENVIRONMENTAL ISSUES	
Issue	Recommended Intervention
1. Pollution (Air, water, noise)	✓ Review guidelines on the transport sector action plan
2. Hazardous waste	✓ Review guidelines on waste management
3. Wetland loss and degradation	✓ Strengthen guidelines on water catchment management.
4. Continued destruction of flora and fauna	✓ Review guidelines on the management of flora and fauna.
5. Introduction of invasive species	✓ Review guidelines for the prevention of and introduction of alien invasive species in the transport sector.
6. Inadequate consideration of deforestation guidelines	✓ Draw guidelines on the requirement of environmental rehabilitation plan (ERP)
7. Climate Change impacts (drought, floods and landslides)	✓ Review guidelines on adequate integration of climate change mitigation and mitigation in transport sector project EIA Report
8. Oil spills	✓ Re-assess the guidelines on for the ecosystem protection plan.
SOCIAL ISSUES	
Issue	Recommended Intervention
9. Increased crime rates	✓ Draft guidelines on mainstreaming and engagement of enforcement agencies
10. Inadequate consideration of labour opportunities	• Re-assess guidelines on labour management plan
11. Minimal consideration of erosion of cultural norms, values, and systems issues	✓ Re-assess guidelines on the protection of cultural norms, systems, and values
12. Inadequate consideration of cultural and heritage sites and displacement of Indigenous people	✓ Review rules on the protection of heritage and protection/participation and inclusion of indigenous peoples.
13. Increased loss of land, and its entities, including property.	✓ In conjunction with NLC and Environment and Land Court, review guidelines of compensation/ relocation and resettlement action plans.
14. Resource-based conflict-related issues	✓ Review grievance redress mechanisms in conjunction with law enforcement agencies.

	<ul style="list-style-type: none"> <li>✓ Rethink the Bill of Rights as enshrined in the COK (2010)</li> <li>✓ Draw guidelines on the African Charter on Human Rights</li> </ul>
15. Child labour and exploitation of children	✓ Review guidelines of enforcement laws on child labour and exploitation
16. Inadequate consideration of issues related to increased road accidents	✓ Review guidelines on an enforcement management plan
<b>OCCUPATIONAL SAFETY, HEALTH, AND SECURITY</b>	
<b>Issue</b>	<b>Recommended Intervention</b>
1. Limited address of death and injuries	✓ Review guidelines on work injury and benefits
2. Increased gender-based violence and sexual harassment (GBSH)	✓ Re-assess guidelines on GBSH engagement and protection management plan
3. Inadequate consideration of increased STIs, HIV, and AIDS	✓ Review guidelines on disease sensitization management plan
4. Sanitation and hygiene	✓ Draw guidelines on health impact assessment.

### 8.3.5 Other recommendations for the transport sector;

#### On environment;

- ❖ The INTP document should replace the term SESIA with strategic environmental and social assessment (SESA).
- ❖ Fast-track development of integrated national transport masterplan to ensure that the SDoT operates all modes of transport
- ❖ The reviewed INTP should have provisions for annual environmental and Social Audits as required by NEMA.
- ❖ Recruit/ capacity build/retool and strengthen capacity on environmental issues.
- ❖ Mitigate negative impacts associated with transport sector growth, a transport sector performance review board anchored in law, comprising of all ministries, NEMA, and county-level leadership that interface with the SDoT in ensuring environmental, socio-economic, and health and security issues are appropriately handled be established with immediate effect. This will assist in reviewing the health and security pillar, innovation in the transport sector, stakeholder and public engagement, and sustainability of projects.

- ❖ NEMA should tighten rules on consideration and approval of EIAs for transport sector projects with the aim of ensuring compliance to all established standards and guidelines.
- ❖ Continuous updating of policy and plans (short-term, medium- and long-term) is recommended as environmental, social, and occupational health, safety and security are dynamic and subject to emergent changes.
- ❖ Continuous and constant gathering of data on environmental and social impacts/risks as it is critical in determining existing and pertinent environmental issues and prioritizing interventions accordingly.
- ❖ Constant monitoring of environmental and social-specific impacts/risks and trends in the transport sector allows for planning and scaling up of the positive ones and mitigating negative consequences.

#### **On socio-economic issues;**

- ❖ Strengthen institutional/agency/ departmental and finance capacity for effective deliverable of transport sector mandate.
- ❖ Establish and/or Empower county-level transport sector leadership committees and forums on SESA issues.
- ❖ Development of an efficient and integrated Data Management System (IDMS) - in conjunction with the Ministry of Interior and National Administration, ICT, and the SDoR.
- ❖ The FPIC requirement should be included in the reviewed INTP document to allow PAPs to engage effectively during projects, plans, and policy implementation of transport sector processes.

#### **On occupational health and safety issues;**

- ❖ Reduction of exit points on highways to reduce accidents
- ❖ Expansion/ extension of recovery lanes on modes of transport
- ❖ Mainstream security personnel in the transport sector for enforcement of policies, laws, and regulations
- ❖ Draw specific guidelines on motorcycle capacities operated at both county and national roads

- ❖ Installation of solar lighting systems on all transport modes and means
- ❖ Draw guidelines on requirements for taxis on a display of individual information regarding the driver/rider.

The table below gives the action Plan for implementation by various actors in the transport sector and related relevant institutions;

**Table 17: SESA Action Plan**

EMERGING OVERARCHING ISSUES							
ENVIRONMENTAL ISSUES							
No.	Issues	Recommendations	Action Plan				Agency responsible
			Immediate	Short-term (1-2 years)	Medium (3-5 years)	Cost estimate 000,000	
	<b>9. Pollution (Air, water, noise)</b>	✓ Review guidelines on the transport sector action plan		✓		5	SDoT in collaboration with NEMA
	<b>10. Hazardous waste</b>	✓ Review guidelines on waste management		✓		3	SDoT in collaboration with NEMA
	<b>11. Wet land loss and degradation</b>	✓ Strengthen guidelines on water catchment management.		✓		4	SDoT in collaboration with NEMA, and Water Resources Authority (WRA)
	<b>12. Destruction of flora and fauna</b>	✓ Review guidelines on the management of flora and fauna.		✓		5	SDoT in collaboration with NEMA, and Water Resources Authority (WRA), Kenya Wildlife Service, Kenya Forest Service

	<b>13. Introduction of invasive species</b>	✓ Review guidelines for the prevention of and introduction of alien invasive species in the transport sector.		✓		<b>2</b>	SDoT in collaboration with Kenya Plant Health Inspectorate Service (KEPHIS)
	<b>14. Deforestation</b>	✓ Draw guidelines on the requirement of environmental rehabilitation plan (ERP)			✓	<b>5</b>	SDoT in collaboration with Kenya Wildlife Service and NEMA, Kenya Forest Service
	<b>15. Climate Change impacts (drought, floods and landslides)</b>	✓ Review guidelines on adequate integration of climate change mitigation and mitigation in transport sector project EIA Report	✓			<b>7</b>	SDoT in collaboration with Kenya Wildlife Service, KMA and NEMA, Kenya Forest Service
	<b>16. Oil spills</b>	✓ Re-assess the guidelines on for the ecosystem protection plan.		✓		<b>2</b>	SDoT in collaboration with Kenya Pipeline, KMA, KPA
<b>SOCIAL ISSUES</b>							
<b>Sub-Sector</b>	<b>Issues</b>	<b>Recommendations</b>	<b>Action Plan</b>				<b>Responsibility</b>
			<b>Immediate</b>	<b>Short-term (1-2 years)</b>	<b>Medium (3-5 years)</b>	<b>Cost estimate</b>	
	17. Increased crime rates	✓ Draft guidelines on mainstreaming and engagement of enforcement agencies	✓			<b>1</b>	SDoT in collaboration with Kenya Police Service,

							Directorate of Crime Investigation
	18. Labour opportunities	<ul style="list-style-type: none"> <li>Re-assess guidelines on labour management plan</li> </ul>		•		4	SDoT in collaboration with Ministry of Labour and Skills Development
	19. Erosion of cultural norms, values, and systems	✓ Re-assess guidelines on the protection of cultural norms, systems, and values		✓		2	SDoT in collaboration with Ministry of Sports, Culture and Heritage and National Museums of Kenya
	20. Destruction of cultural and heritage sites and displacement of indigenous people	✓ Review rules on the protection of heritage and protection/participation and inclusion of indigenous peoples.			✓	4	SDoT in collaboration with Ministry of Sports, Culture and Heritage and National Museums of Kenya
	21. Loss of land, and its entities including property.	✓ In conjunction with NLC and Environment and Land Court, review guidelines of compensation/relocation and resettlement plans.	✓			7	SDoT in collaboration with National Land Commission, Kenya Institute of Surveying & Mapping and Ministry of Lands, Public Works,

							Housing and Urban Development
	22. Closure of access routes	<ul style="list-style-type: none"> <li>✓ Review grievance redress mechanisms in conjunction with law enforcement agencies.</li> <li>✓ Rethink the Bill of Rights as enshrined in the COK (2010)</li> <li>✓ Draw guidelines on the African Charter on Human Rights</li> </ul>	✓			1	SDoT in collaboration with County Government, KERRA, KenHA, KURA and KRB
	23. Child labour and exploitation of children	✓ Review guidelines of enforcement laws on child labour and exploitation	✓			1	SDoT in collaboration with
	24. Increased road accidents	✓ Review guidelines on an enforcement management plan	✓			4	SDoT in collaboration with County Government, National Police Service, KERRA, KenHA, KURA and KRB
<b>OCCUPATION SAFETY, HEALTH, AND SECURITY ISSUES</b>							
	Issues	Recommendation	Action Plan				Responsibility
			Immediate	Short-term (1-2 years)	Medium (3-5 years)	Cost estimates	

5. Death and injuries	✓ Review guidelines on work injury and benefits	✓				5	SDoT in collaboration with, National Police Service
6. Gender based violence and sexual harassment	✓ Re-assess guidelines on GBSH engagement and protection management plan	✓				2	SDoT in collaboration with, National Police Service and Ministry of Public Service, Gender and Affirmative Action
7. Violation of Rights of Children (VRC)	✓ Review guidelines on disease sensitization management plan			✓		1	SDoT in collaboration with, National Police Service
8. STIs, HIV, and AIDS	✓ Draw guidelines on health impact assessment.	✓				3	SDoT in collaboration with Kenya National AIDS and STI Control Programme (NASCOP)
9. Sanitation and hygiene	✓ Review guidelines on work injury and benefits	✓				2	SDoT in collaboration with Ministry of Health, and NEMA

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World Heritage Convention

World Ports Climate Initiative

## **APPENDICES**

### **Appendix 1: Terms of Reference**



**REPUBLIC OF KENYA**

**MINISTRY OF TRANSPORT, INFRASTRUCTURE, HOUSING, URBAN  
DEVELOPMENT AND PUBLIC WORKS**

**STATE DEPARTMENT FOR TRANSPORT**

**TERMS OF REFERENCE**

**FOR**

**STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA)**

**ON**

**THE REVIEWED INTEGRATED NATIONAL TRANSPORT POLICY**

Reference No.: KE-SDOT-279573-CS-CQS

**March 2022**

## **2.0 Scope of Assignment**

The Consultant will conduct a comprehensive SESA for the policy and obtain the necessary approvals required for the implementation of the policy taking into account the national regulations and guidelines as well as the World Bank's environmental and social policies. The SESA is substantially dependent on available information and data on the transport sector and performance as well as other environmental and social linkages. The reviewed INTP policy and other relevant documents will comprise the main references. Considerable time, therefore, will be spent in collection of baseline data and information across the study areas and associated linkages.

The preparation of the SESA will cover the following:

- (a) Scoping;
- (b) Description of the regulatory and institutional framework and assessment of the Ministry of Roads, SDoT and other transport agencies capacity for environmental, social, and occupational health and safety assessment and management, including opportunities to introduce good global practices;
- (c) Identification of the general, strategic environmental and social risks and impacts resulting from implementation of programs and activities proposed in the reviewed INTP;
- (c) Formulation of recommendations and a SESA Action Plan; and
- (d) Final consultations (Stakeholders' Validation), review and approval.

Specific activities and general conduct of the SESA will be directly informed by the National SESA Guidelines and the World Bank Operational Policies on environmental and social safeguards, including OP 4.01; 4.10; 4.11; and 4.12; World Bank environmental, health, and safety guidelines and associated guidance notes:

### **Stage 1: Inception Activities and PPP brief**

Following mobilization and commencement of works, the consultant will prepare an Inception Report, which among others. As part of the inception activities, the SESA consultant will assist the SDoT to prepare a Policy, Plan and Program (PPP) brief for submission to NEMA as part of registering the commencement of the SESA process with the authority, in line with the National SESA Guidelines.

### **Stage 2: SESA Scoping**

The objective of the Scoping exercise is to frame the content and methodology of the SESA, with substantial stakeholder inputs. As part of the scoping phase the Consultant will prepare SESA Scoping report upon completion of the scoping process. The Draft SESA Scoping Report must be presented in a stakeholders' meeting before a finalized version is submitted to NEMA for review and approval.

### **Stage 3: Review of the regulatory and institutional framework and assessment of the institutional capacity for environmental, social, and occupational health and safety assessment and management.**

In addition, the SESA may also identify the existing environmental, social, occupational health and safety requirements in the transport sector, and assess if additional environmental, social, and occupational health and safety interventions need to be incorporated in the policy implementation.

**Stage 4: Identification of the general, strategic environmental and social consequences resulting from forecasted future development of the transport sector in Kenya.**

**Stage 5: Proposed strategic mitigation and monitoring measures**

**Stage 6: Formulation of recommendations and a SESA Action Plan**

Based on the analysis conducted, and the recommendations developed, an Action Plan will be developed by the Consultant to facilitate their implementation. Priorities will be structured into immediate, short term (1-2 years) and medium term (3-5 years), including the Action Plan Cost Estimate. At the end of this stage, the Consultants will prepare the Draft SESA Report, for submission to NEMA and consultation with stakeholders.

**Stage 7: Final consultations, review and approval**

Following submission of the Draft SESA report to NEMA, the consultant will assist the Client in organizing and facilitation of a stakeholder's validation workshop. The validation workshop will be moderated by NEMA. After the workshop, The Consultant will incorporate any final feedback from the stakeholders' validation workshop in the Final SESA report. In addition, the Consultant will be available on request to make any clarifications as may be requested by the approving authority prior to approval of the final SESA report.

**Capacity Building Program**

The consultants will include as a separate item in its proposal provision of advisory services to SDoT in assessing the potential environmental and social impacts, occupational health and safety risks and helping implement potential of policy, legislative, or regulatory changes that may be under consideration as part of the Project. This includes recommendations of technical assistance support that environmental and social risk and impacts risk management and representative groups in particular of indigenous communities can use to contribute to the management of environmental and social impacts of future transport sector developments.

## **ANNEXES**

### **Annex 1: A Guide to Benchmarking Study Visits**

#### **A GUIDE TO BENCHMARKING STUDY VISIT FOR THE STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA) IN UAE, DUBAI AND JOHANNESBURG, SOUTH AFRICA**

##### **1.1 Purpose of this benchmarking**

Kenya's transport sector is working to improve the delivery of transport services and giving users higher quality and more efficient services. As such, it has been reviewing the Integrated National Transport policy to ensure that all sub sectors are guided by a common policy document with more pragmatic, comprehensive and effective plans of actions. While this is an important step towards attaining sustainable development and in line with regional and global demands, subjecting the INTP to a SESA will go a long way in not only ensuring an environmentally friendly transport system but also help improve strategic actions as well as help explore available alternative for improvement of the document. As per the TOR, benchmarking with countries offering similar albeit improved modes of transport is important as it offers a valuable opportunity to gain insights into the practices of others. Benchmarking is practical and an efficient way of gathering widespread data which have a great element of observations and especially in areas of environmental and social entities essential in guiding policy.

##### **1.2 Some specific benefits of transport benchmarking.**

- i. Provides learning opportunities for good practices.
- ii. Help locate strengths and build upon; motivate change and improvement.
- iii. Identifies and helps eliminate weaknesses.
- iv. Measure performance against transport sectors of other countries;
- v. Helps identify weak links and explore possibilities of improvement
- vi. Improve relationships, networks and partnerships
- vii. Bench-marking contributes much in building consensus or solutions to some particular policy issues.

##### **1.3 The goal of bench-marking**

The goal of this exercise is to use the data gathered in helping identify areas for improvements of the reviewed Integrated National Transport Policy.

##### **1.4 Objectives of the Bench-marking visit with regard to SESA**

- i. To establish the optimal type of operating and regulatory environment best suited to improve and enhance the effectiveness of the reviewed INTP in handling environmental and social issues in Kenya's transport sector.
- ii. To establish how UAE and South Africa, handle, operate, and synergize to deliver an efficient and effective transport system. This which will help us to identify best practices to Improve SESA on the reviewed INTP.
- iii. To establish how and where other entities in foreign countries are achieving higher performance levels in their National Transport Sectors
- iv. Examine elements in foreign transport policies that that can be borrowed to positively enhance Kenya's reviewed INTP
- v. Compare foreign transport policies processes and strategies against our own.
- vi. Establish and observe new and emerging transport modes currently in use in foreign countries and plan early for future use
- vii. Document and make observations of foreign infrastructure systems and modes including those involving new technology applications.

Information obtained from the bench-marking visit will be analyzed to help determine best practices for improving the Reviewed INTP.

### 1.5 Methodology for the benchmarking Exercise

The methodology of the benchmarking will comprise of:

1. **Interviews:** These will be conducted with cherry-picked individuals selected for their knowledge of, though not necessarily formal expertise on, the topic. They will be asked to offer their view on the topic.
2. **Observation:** This is the main method for collecting data especially from UAE. It will focus on particular issues, which can reveal useful information and will be conducted in a structured and formalized way. This might include, e.g. observation of how transport systems operate and are used, noise, pollution, establishments/constructions near airways and ports, tree and pavement plantations etc.
3. **Desktop review:** This will entail collecting secondary information from documents provided during the visits, websites, reports, marketing materials, and news articles.

### 1.7 Benchmarking team:

There are two teams for this exercise; South Africa and Dubai, each of which will consist of; 1. Process owners (SdoT)- who will be responsible for implementing the INTP and therefore require capacity building and hands-on experience.

2. Consultant (s)- who will help review and suggest possible ways of improving the reviewed INTP for implementation.

The two teams are in every stage engaged in co-creation and co-design of a comprehensive INTP for use in the transport sector.

### **SAMPLE GUIDING QUESTIONS FOR KEY INFORMANTS INTERVIEWS (KII)**

1. What is your ministry/organization's structure in relation to transport?
2. What are the transport sub-sectors in your country?
3. What transport modes are there in this country (including new transport technologies)?  
What are the main challenges in each?
4. Is your organization involved in transport policy development?
5. To what extent do you involve stakeholders?
6. Do you have an Integrated National Transport policy for all transportation modes?
7. To what extent are the following issues represented/addressed in your transportation policy documents and in strategic plans of respective subsectors?
  - (a) Environmental issues
  - (b) Occupational Safety and Health issues
  - (c) Social issues (open question- gender, resettlement, compensation and grievances, cultural heritage etc.)
8. In your country's transport sector, what are the main impacts on:
  - (i) Environmental issues
  - (ii) Occupational Safety and Health issues
  - (iii) Social issues
8. Explain to us how your transport sector manages these challenges.
9. Does your policy incorporate/mainstream international environmental and social standards such as those of the World Bank?
10. What is your strategy to ensure your staff have capacity to handle Environmental, and Occupational Safety and Health; and social impacts in the transport sector?
11. How do you organize capacity building and training for your staff?
12. What are your transport policy strategies in light of climate change?
13. How do you plan for future transport infrastructure?

### **Tentative Daily Programme (to be guided by host(s)).**

	9 – 12 noon	2 - 4	4 -6
	Interviews in institutions	Observation of transport systems/modes Site visits	Debriefing meeting to consolidate day findings

### Observation Sheet

S/no.	Entity to be observed	Specific issues	Indicators and comments
1	Transport infrastructure e.g road types, railway type, water transport types, air transport infrastructure.	e.g road types, railway type, water transport types, air transport infrastructure. -Check any unique features of the infrastructure	
2	Transport modes	Differences between Kenya and foreign transport modes and movement patterns and controls.	
3	Emerging transport modes/technologies	For instance electric vehicles, drones; and other innovations.	
5	Environmental	Biodiversity Pollution Hazardous materials	
6	Occupation Safety and health	Traffic controls, signage, wastes disposal and other health and safety issues	
7	Social	Movement of people, workers in the various transport modes etc.	

**Registration form: Project: Review of the INTP by SDoT**

Affiliation: \_\_\_\_\_

Email Address \_\_\_\_\_

1. What is the scope of transport sectors and modes covered by the INTP document, and what are the missing gaps?
2. What is the current environmental and social issues status in the reviewed INTP document?
3. What are the transport sector's environmental and social challenges/impacts in Kenya, and are they adequately covered in the INTP?
4. What environmental and social safeguard gaps exist in the reviewed INTP document?
5. What are the best practices in other countries that contribute towards enriching Kenya's INTP?
6. What is the SESA data needed to fill the gaps; and give a nationally and internationally acceptable policy document that adequately addresses social and environmental safeguards, addresses all stakeholder needs and aspirations in planning and programming; and ensures gender equitability and sustainability in the transport sector?
7. How can the SESA findings be effectively mainstreamed in the INTP document and be disseminated to the transport sector stakeholders?

**Annex 3: Tentative Daily Programme (to be guided by host(s)).**

	9 – 12 noon	2 - 4	4 -6
	Interviews in institutions	Observation of transport systems/modes Site visits	Debriefing meeting to consolidate day findings

**Observation Sheet**

S/no.	Entity to be observed	Specific issues	Indicators and comments
1	Transport infrastructure e.g road types, railway type, water transport types, air transport infrastructure.	e.g road types, railway type, water transport types, air transport infrastructure. -Check any unique features of the infrastructure	
2	Transport modes	Differences between Kenya and foreign transport modes and movement patterns and controls.	
3	Emerging transport modes/technologies	For instance electric vehicles, drones; and other innovations.	
5	Environmental	Biodiversity Pollution Hazardous materials	
6	Occupation Safety and health	Traffic controls, signage, wastes disposal and other health and safety issues	
7	Social	Movement of people, workers in the various transport modes etc.	