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SPECIAL ECONOMIC ZONES AUTHORITY

STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) STUDY FREPORT FOR THE NAIVASHA SPECIAL ECONOMIC ZONE MASTER PLAN ON LR No. 8396/56 IN NAKURU COUNTY KENYA

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DECLARATION

Special Economic Zones Authority (SEZA), developed a Master Plan for the Naivasha SEZ that has been subjected to Strategic Environmental Assessment (SEA) study as a prerequisite to its implementation in line with requirements of the Environmental Management and Coordination Act (EMCA) of 1999 amended 2019.

This SEA study report is as a result of the assignment given to the consulting team by the Special Economic Zones Authority to carry out the SEA study on the Master Plan for Naivasha Special Economic Zone (SEZ).

Assignment:

Strategic Environmental Assessment Study for the Master Plan of Naivasha SEZ on LR No. 8396/56 Naivashs Sub County in Nakuru County Kenya.

Parties to the Contract for SEA Study:

PROPONENT	SEA - CONSULTANT
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Table of Contents

List of Tables

List of Figures

List of Annexes

Acronyms and Abbreviations

AA:	Appropriate Assessment
ACC:	Assistant County Commissioner
CC:	County Commissioner
CIDP:	County Integrated Development Plan
CEMMP:	Construction Environmental Management and Monitoring Plans
DECLG:	Department of the Environment, Community and Local Government
DO:	District Officer
EA:	Environmental Audit
EIA:	Environmental Impact Assessment
EHS:	Environment, Health and Safety
EMCA:	Environmental Management and Coordination Act
EPZA:	Export Processing Zone Authority
ESIA:	Environmental and Social Impact Assessment
ESMP:	Environmental and Social Management and Monitoring Plan
FRA:	Flood Risk Assessment
GDC:	Geothermal Development Company
GESIP:	Green Economy Strategy and Implementation Plan
GI:	Green Infrastructure
GIS:	Geographical Information System

GoK: Government of Kenya

IBA: International Bar Association

ICD: Inland Container Deport

ICDC: Industrial and Commercial Development Corporation

INTP: Integrated National Transport Policy

IWRAP: Integrated Water Resource Allocation Plan

KeNHA: Kenya National Highways Authority

KENINVEST: Kenya Investment Authority

KETRACO: Kenya Electricity Transmission Company

KIP: Kenya Institute of Planners

KIPPRA: Kenya Institute for Public Policy Research and Analysis

KPLC: Kenya Power and lighting company

KWS: Kenya Wildlife Service

LAC: Limits of Acceptable Change

MCA: Member of County Assembly

MEAs: Multilateral Environmental Agreements

MOIED: Ministry of Industrialization and Enterprise Development

MP: Master Plan

MPs: Member of Parliament

NEMA: National Environment Management Authority

NGO: Non-Governmental Organisation

NWMP: National Water Master Plan

OSHA: Occupational Safety and Health Act

PES: Payment of Ecosystem Services

PLUPA: Physical and Land-Use Planning Act

PPE: Personal Protective Equipment

PPP: Policy, Plan and Programme

SEA: Strategic Environmental Assessment

SEZ: Special Economic Zone

SEZA: Special Economic Zones Authority

SFRA: Strategic Flood Risk Assessment

SGR: Standard Gauge Railway

SMEs: Small and medium-sized enterprises

ToR: Terms of Reference

WRA: Water Resources Authority

NON-TECHNICAL SUMMARY

BACKGROUND

Special Economic Zones Authority (SEZA), a Government of Kenya (GOK) implementing agency, is developing Naivasha Special Economic Zone (SEZ) in Nakuru County. SEZA has a Master Plan for the Naivasha SEZ and in line with requirements of the Environmental Management and Coordination Act (EMCA) of 1999 amended 2019, the proposed Master Plan has been subjected to Strategic Environmental Assessment (SEA) Study conducted as per Legal Notice No. 101 of June 2003 and the Guidelines for Strategic Environmental Assessment issued by National Environmental Management Authority (NEMA).

The SEA study process has been carried out by DMG Holdings Limited (NEMA registered Firm of Experts No. 6717), a Nairobi based consultancy firm.

The implementation of this Master Plan will undoubtedly result in major positive impacts locally, nationally and regionally. However, the Proponent also envisions that the proposed Master Plan has the potential, if unmitigated, to result in some significant negative environmental effects on the environment and socioeconomic sphere.

The SEA team investigated likely economic, social and environmental impacts associated with the Master Plan and identified mitigation measures that need to be put in place to ensure that the development and implementation of the Master Plan will be carried out in a sustainable manner. The SEA study also identified options to enhance, the technical sustainability, economic viability, and social acceptability in the implementation of the Master Plan while guiding and feeding it into any subsequent programs and projects within the Naivasha Special Economic Zone in Naivasha (Nakuru County).

THE NAIVASHA SPECIAL ECONOMIC ZONE (SEZ) MASTER PLAN

The Master Plan for the Naivasha SEZ has been conceived by SEZA, a lead agency in the Ministry of Industrialization and Enterprise Development (MOIED) that is mandated to implement development activities under SEZ programs on behalf of the Government of Kenya.

Under the manufacturing sector of Vision 2030, Special Economic Zones (SEZs) are among ambitious flagship projects that are structured to provide a firm foundation for Kenya's industrial transformation. Naivasha Special Economic Zone is being developed on one thousand (1,000) acres located within

Naivasha Sub-County in Nakuru County. The land is located about 14 Km from Mai-Mahiu along Mai-Mahiu – Narok Road on the left-hand side and adjacent to Pipeline Road. The land touches the Standard Gauge Railway (SGR) on the lower boundary. The land is divided into two with 150 acres allocated for Internal Container Deport (ICD) and 850 Acres allocated to the development of the Special Economic Zone.

Proposals for development as per the Master Plan include establishment of Administration offices, One Stop Centre, Fire station, Police station, Health centre, Trade/ commercial centre, Parks and Recreation facilities, Food courts (Restaurants and cafes),Other services (banking, insurance, training centres etc.), Marshalling yards for trucks, Warehouses, Residential, Internal infrastructure (roads, water and sewer reticulation, street lighting, power substation, boreholes for water supply, storm water drainage, culverts and a common effluent treatment plant, Integrated Solid Waste Management Facility), and development of green belts.

Most prioritized industrial sectors to be located in this zone includes; Cotton, textile and apparel, Footwear and leather, Motor Vehicle Assembly, Steel Industries, Agro-processing (Grain and milling, Dairy products, Meat processing, Horticulture and Floriculture), Construction materials, ICT and electronics, Pharmaceuticals and chemical products, and Bulk storage facilities.

The Naivasha SEZ is legally anchored under the SEZ Act 2015 and will adhere to all laws and policies relevant in Kenya during the Master Plan implementation.

RATIONALE FOR UNDERTAKING STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE NAIVASHA SPECIAL ECONOMIC ZONE (SEZ) MASTER PLAN

The general aim of Strategic Environmental Assessment (SEA) is to scrutinize the Master Plan and ensure that it's environmentally sustainable and compliant to the existing environmental obligations in policies, legal frameworks, and strategic plans among others.

Therefore an Ex Ante assessment of the Naivasha Special Economic Zone (SEZ) Master Plan was undertaken through this study and the purpose was to identify, describe and assess at a strategic level the environmental and socio-economic opportunities and constraints of implementing the Master plan. In addition develop practical mitigation measures for addressing the identified limitations as well as the enhancement of opportunities. The SEA study is

intended to ensure that apart from economic considerations, the environmental and social considerations are included in the planning, implementation and operation of the Naivasha SEZ Master plan.

Objectives of the Strategic Environmental Assessment (SEA)

The objectives of this SEA are to identify, describe, and assess;

- The likely significant sustainability effects of implementing the Special Economic Zones (SEZ) Master plan for Naivasha.
- The key issues and constraints regarding implementation of the Master Plan in question.
- The opportunities for enhancing positive impacts, avoiding and or mitigating negative ones (including synergistic and cumulative ones) resulting from the implementation of the Master Plan.
- Promote public participation prior to the Master Plan implementation.
- Compensate for the loss of valuable features and benefits that may occur from actualizing the Master Plan.
- Protection and conservation of natural surroundings of scenic beauty at and around the Master Plan site.
- Identify the best options for implementing activities or actions derived from the Master Plan.
- Ensure that the Master Plan implementation does not exceed limits which irreversible damage from impacts may occur (Limits of Acceptable Change -LAC).

SEA STUDY APPROACH AND METHODOLOGY

The Naivasha SEZ Master Plan SEA study process is in tandem with the broad objectives for SEA Studies as stipulated in the NEMA National Guidelines for SEA where the overriding goal is to ensure that the Master Plan is compatible with sustainable environmental planning and management. This SEA study process was guided by the Legal Framework for environmental management in Kenya as provided for by in the Kenya Constitution 2010 and the Environmental Management and Coordination Act (EMCA) 1999 (amended 2019) and its regulations including other relevant legal requirements.

The following systematic chain of broad activity clusters were adopted in the SEA process:-

a) The SEA Consulting Team's orientation and consultations with the SEZA.
b) Screening and scoping of issues to be considered in the Master Plan SEA study.
c) Documentary analysis for the preparation of a comprehensive PPP framework for the SEA.

d) Preparation of a PPP Brief and submission of the same to NEMA for approval.
e) Field reconnaissance and stakeholders' identification.
f) Preparation of screening and scoping report and ToR for submission to NEMA.
g) Policy, plan and programme (PPP) analysis.
h) Field missions for baseline situation analysis.
i) Stakeholders' consultations and public participation.
j) Plan environmental impact analysis.
k) Impact mitigation planning.
l) Identification of gaps and alternatives actions.
m) Preparation of an Environmental Management and Monitoring Plan (ESMP).
n) Presentation of findings and stakeholder dialogue.
o) Compilation, validation and submission of final SEA report.

The SEA process has undergone the 10 steps outlined below culminating in a report (which includes a monitoring and implementation plan) and a revision of the strategic action.

No	ACTIVITIES	OUTPUT
1	Report to assess whether SEA is needed	**Screening report**
2	Identify sustainability issues; identify SEA objectives and indicators	**Scoping report**
3	Describe environmental baselines/ environmental issues	
4	Identify links to other relevant strategic actions, existing PPP's and other relevant legal frameworks	
5	Identify (more sustainable) alternatives for dealing with issues and implementing the strategic action	
6	Predict and evaluate impacts of alternative statements; compare alternatives; mitigate impacts of chosen alternatives	
7	Undertake stakeholder mapping (Identify key stakeholders, their concerns, interests and how to engage them during the SEA process and after)	
8	In-depth analysis and assessment of the issues identified at the SEA scoping stage	**Draft SEA report**
9	Presentation of the findings of the draft SEA study to the stakeholders	**Validation workshop report**
10	Incorporating the stakeholders comments at all stakeholders engagement stages including validation workshop	**Final SEA report**
11	Monitor the sustainability of the strategic action (Master Plan)	**Monitoring Report**

Table 1: 10 Steps SEA process has undergone including the 11 step to follow

Methods and techniques used for data collection

A variety of methods were employed including but not limited to:-

1. Qualitative/participatory; this was guided as a result of a detailed stakeholders' analysis exercise. Based on the same, certain critical stakeholders institutions/individuals were identified as key in either providing technical input to the SEA, or for political and social ownership of the exercise. These included the following;
    - Expert judgment; from specialist government institutions, NGOs and the public. This was undertaken through face-to- face interviews, questionnaires, and website feedback.
    - Public participation; a number of approaches were employed including Focus Group Discussions undertaken within Nakuru County; public meetings; and website feedback.
2. Mapping and simple spatial analysis including;
    - A GIS map
    - A geological and geophysical survey that was undertaken by the Directorate of Geological Surveys
    - Hydrological survey
    - Wildlife survey in Kedong area
    - Spatial maps
    - Modelling
3. Desktop Review of relevant documents i.e. past SEA studies, statutory and legal frameworks, research documents, PPPs among others

Engagement of Stakeholders

Stakeholder engagement entailed the employment of various methods of communication such as interviews, use of structured questionnaires, stakeholder workshops, print media and radio advertisement. The Consultants are grateful for the excellent support, ideas and directions given during the consultations by the various key stakeholders mentioned in this study report.

PPP FRAMEWORK

There are various policies, plans, programmes (PPP) and other legislations that set the context for developments of the Naivasha SEZ, some directly and others indirectly. These instruments will influence how the Master Plan is oriented and implemented. The Naivasha Special Economic Zone (SEZ) Master Plan was subjected to a comprehensive PPP analysis based on the environmental obligations using a PPP framework, which was developed for the SEA. The PPP framework for the SEA comprised the following instruments: -

a) National policies,
b) Legal frameworks,
c) National and regional strategic plans, and
d) International environmental framework/Multilateral environmental agreements (MEAs) relating to obligations.

PPPs which were identified as relevant for the SEA included 11policies and 7 legal frameworks, 8 strategic plans and 4 MEAs.

Environmental Impacts, Mitigation Strategies and Alternative Options of the Master Plan

The report has provided a detailed section on the environmental impacts expected from each of the development clusters in the Naivasha Special Economic Zone (SEZ). The strategies and alternative options for the negative impacts and unsustainable development interventions are also provided.

Proposed Environmental and Social Management and Monitoring Plan

An elaborate Environmental and Social management and Monitoring Plan (ESMMP) is provided in the SEA report for the use in the implementation of the Naivasha Special Economic Zone (SEZ) Master Plan. The ESMMP contains the following:

a) Specific management and monitoring actions to address the recommended alternative options from the PPP analysis and mitigation measures emanating from the Master Plan environmental impact analysis,
b) Recommendations on the monitoring frequency and indicators for each management action,
c) The environmental management and monitoring standards,
d) Roles and responsibilities,
e) Relevant implementation guidelines and
f) Budgetary provision

ACKNOWLEDGEMENT

We, the DMG SEA Team express our sincere gratitude to the SEZA management led by the CEO Dr. Meshack Kimeu, the Technical Manager Mr. Lewel Njehia and the Naivasha SEZ SEA Project Manager Mr. Francis Gitau and his team for all the information and support provided.

Special appreciations go to various senior staff in several ministries and parastatals including lead agencies in the National and Nakuru County Governments, several non-governmental organizations and higher learning institutions for the invaluable feedback received without which this exercise would have been incomplete.

Finally, we can't forget the invaluable input from the County Government of Nakuru administration for coordination. Special thanks go to Naivasha Sub County Deputy County Commissioner Mr. Mbogo and Nakuru County Chief Officer ICT Mr. Peter Mwaura for their sacrifice and commitment.

CHAPTER 1

INTRODUCTION

1.0 BACKGROUND

1.1 Brief on special economic zones and policy-legal foundation in Kenya

The Special Economic Zones are anchored within the Policy of the **Special Economic Zones of 2015**.[1] The said policy document defines a special economic zone (SEZ) as;

'A designated geographical area that includes a Customs Controlled Area, with liberal economic laws and on-site administrative regulations, management and services, where the benefits to licensed firms apply; and wherein goods introduced into the SEZ Customs Controlled Area are exempted from customs duties and taxes'.

It has gone further to outline the benefits of SEZs in Kenya as follows;

a) Foreign Direct Investment
b) Industrialization of the country
c) Increased value addition to local resources
d) Economic development through integrated sector value chains
e) Spatial concentration of infrastructure development activities within each SEZ
f) Promotion of cluster development
g) Optimal use of local infrastructure such as ports, airports, broadband telecommunications, roads and rail
h) Development of new enterprises through increased investment in productive assets
i) Creation of direct and indirect employment
j) Increased foreign exchange earnings
k) Expanded linkages with local and regional economy which also promotes the growth of SMEs
l) Expansion of export market and diversification of export goods and services
m) Increased technology adoption, transfer and diffusion
n) Technological, managerial and entrepreneurial skills development

The said policy further addresses other pertinent issues including institutional framework; access to land; an incentive framework; eligibility guidelines that includes environmental sustainability, among others.

[1] Republic of Kenya; 2015; Policy on the Special Economic Zones

1.2 Strategic Environmental Assessment (SEA) in the Kenyan context

SEA is a systematic process for evaluating the environmental consequences of proposed policy, plan, or programme initiatives in order to ensure they are fully included and appropriately addressed at the earliest stage of decision-making in tandem with economic and social considerations[2]. In the current global consideration, SEA is expected to assist in the attainment of the UN Agenda 2030 Sustainable Development Goals[3]

1.3 SEA principles

The SEA principles include the following;

1. Sustainable use of natural resources
2. Enhanced protection and conservation of biodiversity
3. Inter-linkages of human settlements and cultural issues
4. Integration of socio-economic and environmental factors
5. Protection and conservation of natural physical surroundings of scenic beauty as well as protection and conservation of built environment of historic or cultural significance
6. Public and stakeholder engagement.

1.4 Objectives of Strategic Environmental Assessment

I. To improve the strategic action
ii. To promote stakeholders participation
iii. Review the relationship between the PPP and other relevant strategic actions
iv. To incorporate synergistic and cumulative impacts
v. Focus on key environmental/ sustainability considerations
vi. Support decision-making
vii. Identify the best option for the strategic action
viii. Minimize negative impacts, optimize positive ones, and compensate for the loss of valuable features and benefits
ix. Ensure that the strategic action does not exceed limits beyond which irreversible damage from impacts may occur (Limits of Acceptable Change -LAC)

DMG Holdings Ltd was competitively selected by Special Economic Zones Authority to carry out a Strategic Environmental Assessment (SEA) of the proposed Master Plan for the Naivasha Special Economic Zone (SEZ). The assignment entailed carrying out the study in accordance with the set regulations and guidelines, submission of draft and final SEA Reports to NEMA for review, and follow up to provide any additional information to enable SEA

[2] Sadler, B and Vareem, R (1996) SEA; Status, challenges and Future Directions, Report 53, Ministry of Housing, Spatial Planning and the Environment, The Hague, Netherlands
[3] SDGs available at https://www.un.org>envision2030

approval of the Master Plan. This Final SEA Report provides information on the Naivasha Special Economic Zone (SEZ) Master Plan as conceived by the proponent (SEZA) and a description of the SEA process including the assessment's outcomes and recommendations.

1.5 Strategic Environmental Assessment Requirement

Sustainable environmental management has been viewed as being a challenge. To be able to ensure that we have sustainable environment it's important to ensure that all new projects or programs are aligned to the environmental management plans at all levels namely; local, county, national, regional and global levels. So as to effectively integrate the various instruments of sustainable environmental management such as; policies, legal frameworks, strategic plans, regional frameworks and international multilateral environmental agreements (MEAs). It is also necessary to ensure that any development activities in a management plan does not cause any negative environmental impacts.

The aim of this Strategic Environmental Assessment (SEA) is to analyse any new management plans with special reference to the Naivasha SEZ Master Plan and ensure that they are environmentally sustainable and compliant to the existing environmental obligations in policies, legal frameworks, strategic plans and MEAs.

The Kenya Environmental Management and Coordination Act (EMCA, 1999) is the central legislation which serves as the bedrock for environmental protection taking precedence over other sectoral environmental legislation. EMCA 1999 provides the National Environment Management Authority (NEMA) with powers to approve or disapprove major developments based on proper planning and assessment of environmental impacts.

This assessment considers the effect of implementation of the Naivash SEZ Master Plan taking into consideration the use of natural resources; the protection and conservation of biodiversity; human settlement and cultural issues; socio-economic factors; and the protection, conservation of natural physical surroundings of scenic beauty as well as protection and conservation of built environment of historic or cultural significance.

1.6 Study Limitations

1.6.1 Difficulties in data collection and limitations

Ambient air quality data was obtained from previous studies done in the area by various scholars' work to bench mark the site as the Master Plan will result in heavy and light industrial activity with the potential to impact the air quality. The Special Economic Zones Authority in close consultation with NEMA and the Kenya Meteorological Department should establish a comprehensive ambient air quality data at the site.

Water quality and availability is a challenge that must be surmounted to implement the Mast Plan as the Naivasha SEZ is envisaged to be a heavy consumer of water. The current baseline studies on water indicate there is scarcity of quality water. Naivasha Water and Sewerage Company is currently involved in the supply of water to the Site. Hence the water company in liaison with SEZA and the County Government of Nakuru need to establish and develop a comprehensive plan to supply water for the Naivasha SEZ and environs.

The Master Plan is located in an area enclosed by a main road to Narok on the North, fenced Kendong ranch on the West, the Standard Gauge Railway line including its station on the South and the development of Inland Container Deport infrastructure on the East including the road accessing SGR and ICD. This shows that there is already high probability of interference on the wildlife corridor from the existing developments that are to sandwich the Naivasha SEZ Master Plan implementation site. SEZA will have to mainstream the impacts that already exist in the current status into its Master Plan.

Data on the greenhouse gas emissions, vehicular traffic, and human-wildlife conflict was scanty however most of it was obtained from the research studies of the area on the same.

One of the factors that was to affect the data collection exercise included current COVID -19 pandemic and the attendant restrictions to movements and curfew. However the data collection continued by having several meetings with the public, local and national government officials at numerous sites and offices in an increased frequency to achieve the acceptable threshold of stakeholders engagement one on one while adhering to COVID -19 prevention protocols as prescribed by the Ministry of Health.

1.7 Recommendations

SEZA is to ensure that it's committed to effective implementation of the Environmental and Social Management Plan in order to realize acceptable minimum negative environmental impacts resulting in environmental sustainability. In addition the Naivasha SEZ management site office will be in place with a full-fledged competent environmental management department to manage, guide, coordinate and implement environmental aspects, issues and concerns within and outside the zone that influence directly or indirectly the implementation of the Master Plan.

The collaboration plan between SEZA, KWS and other entities involved in monitoring wildlife and birds' migratory routes or corridor around the Naivasha SEZ site and generally in Kedong should be put in place to efficiently and effectively curb negative impacts on the migratory corridor.

The investment and operation departments at the SEZA in liaison with its established environmental management department shall ensure that formulated SEZA guidelines and criteria on the investment, plots acquisition, operations and maintenance must be adhered to ensure environmental sustainability throughout the Master Plan implementation cycle.

1.8 SEA Study Team

The SEA study team was comprised of the following:

Name	**Position assigned**	**Tasks Assigned**
Peter Maina Muriuki	Project Director/ Team Leader	• Guide and manage the work and coordinate the work plan with the client and expert teams. • To be in charge of Quality control of all deliverables • Design and develop SEA procedures and a standard methodology for SEA implementation activities in the field. Identify capacity building requirements for stakeholders implementing the SEA.

Eng. William Kamau	Civil Engineer	• Interrogate the master plan and highlight areas of adjustment/ improvement needed • Review the designs and assess if it meets all environmental requirements • Advise if the designs meet all construction and safety standards • Review and make recommendations on the different project alternatives
Matthew O. Were	Environmentalist	• Manage the identification, description and assessment of the likely significant effects on the environment in implementing the Naivasha SEZ Master Plan • Ensuring the assessments are taken into account in the preparation, review and implementation of the SEA in providing SEZA and other relevant decision-makers with relevant information to assess the environmental challenges and opportunities (including climate-related ones) with regard to the Naivasha SEZ Master Plan • Ensuring that environmental concerns are appropriately integrated in the decision-making and implementation processes on the Naivasha SEZ Master Plan.
Juliet Rita	Urban Planner	• Review the master plan and assess its adequacy in addressing environmental, social and economic challenges affecting the people • Assess if both industrial and residential areas provide for adequate spaces conducive for living and working • Recommend amendments to the master plan necessary to make it conform to

		various national and international guidelines and requirements
Sarah Kingori	Sociologist	• Undertake the social studies including description of baseline socio-economic and cultural conditions; • Determine social and cultural effects anticipated on the communities; • Determine a possible correlation of the project with increased inter-communal tension; • Carry out public consultation with communities and other stakeholders around the project site In addition, he/she will provide inputs for report writing • Will also give a description of the social, economic and cultural status of the project area.

Table 2: The SEA Team Composition

CHAPTER 2

NAIVASHA SEZ MASTER PLAN

2.0 DESCRIPTION OF THE NAIVASHA SEZ MASTER PLAN

2.1 Naivasha SEZ Master Plan

In Gazette Notice No. 6881 dated 11th July 2019, the Cabinet Secretary for Industry, Trade and Cooperatives, on recommendation of the Special Economic Zones Authority, declared 1000 acres in the title No. L.R. No. 8396/56 in Mai-Mahiu area within Nakuru County a Special Economic Zone. The piece of land is specifically located about 14 Km from Mai-Mahiu along Mai-Mahiu – Narok Road on the left-hand side and adjacent to Pipeline Road. The land touches Standard Gauge Railway (SGR) on the lower boundary. The land is divided into two; 150 Acres allocated for Inland Container Deport (ICD) and 850 Acres allocated to the development of Special Economic Zone. The SEZ Master Plan envisages the setting up of a mixed-use industrial park on this particular site.

2.2 Objective of the Master Plan

The objectives of the PPP are to;

1. Attract both local and foreign investments
2. Expand and diversify production of goods and services for domestic and export markets
3. Promote value addition
4. Preserve aesthetics
5. Provide decent wages and livelihoods
6. Reduce reliance on fossil fuels/ enhance uptake of renewable sources of energy
7. Promote growth of local enterprises
8. Enhance innovation and technology development
9. Promote sustainable, climate-smart, industrial development

2.3 The Master Plan Description

Figure 1: Master Plan for Naivasha SEZ

This master plan is a blueprint for the intended utilization and management of the land area of Naivasha SEZ. It includes measures on how the area's environmental and natural resources will be utilized and managed within phases of the master plan implementation and maintenance. The plan serves as a critical point of reference that will clearly indicate the progress made on proposed development activities. It is also a vital tool in monitoring and evaluation of subsequent development activities and future environmental change. The Master Plan describes the utilisation of the site land as follows;

2.3.1Key considerations for implementing the Master Plan

The Master and land-use planning of the SEZ is guided by:-

- Site planning and zoning regulations
- Plot sizes and scale of operations of industries
- Communication network systems
- Transportation networks
- Environmental considerations (Topography, Geology and hydrology)
- Wind direction

2.3.2 Key Features of the Site

The site has been subject to detailed site appraisal in order to identify the existing key features of the site. These have helped to inform the development of the Master Plan strategy and are summarized below:

- Landscape :- The site is largely undeveloped at present and as such the site is well defined by landscape and natural features including;
- Topography: - The regional physiography comprises of four topographic zones, namely; the lacustrine beds, The Rift Valley Floor, Rift Plateaus and The Rift Escarpments.
- Existing Uses: - The site has no activities going on at the moment
- Environment: - Large parts of the site are dry savannah or open grass plains with scattered acacia bushes

1. Location and Spatial Requirements

The location of industrial development areas has considered the following:-

a. Ability to support heavy industry/manufacturing, and noxious industries with huge volumes of waste; large scales of operation and users industrial plants;
b. Linkage to national/ international communication and transport networks (SGR, Suswa-Narok Road, Nairobi -Nakuru Highway and Fibre optic back bone among others). Fibre connection is in progress.
c. Proximity of the industries to other firms e.g. those firms which produce component parts for the same product or those involved in separate stages of the same industrial process.
d. Accessibility to labour, communication routes, and ample supplies of power, water and sewage disposal facilities.
e. Essential separation from residential areas through buffer zones (Earth berms, vegetation and water catchments or major arterial roads).

2. Land Requirements

An industrial area requires allocation of enough land to avoid congestion that inhibits location of major industries. The land should also provide for other support facilities such as energy, water and sanitation, logistics and circulation.

3. Land Allocation

A ratio of 1:3 should be maintained for light and heavy industry. In addition, land should be provided for other support facilities which include transportation, utilities, services and recreation.

4. Anticipated population

The projected industrial development will attract human population through provision of labour and supply of goods and services. Given that 60 % of the 1,000 Acres will be allocated to industrial use and applying the average population density of 40 persons per acre, a total of 24,000 persons will be accommodated, possibly as residents. In addition, an approximate of 6,000 persons comprising of suppliers, clients and service providers will be attracted by the development, possibly as non-residents. A total of 30,000 persons will therefore require to be provided with services.

5. Land use

Environmental Planning has different levels of decision-making as depicted in Figure 4 above which identifies the relevant planning documents at each level of this hierarchical system. Figure 2 indicates where SEA, AA, FRA and Environmental Impact Assessment (EIA), equivalent to best environmental practice in Europe's, National, Regional and local levels. Relevant land use plans are the Regional Planning Guidelines, Development Plans and Local Area Plans as they are subject to SEA, AA and FRA procedures. The 'likely significant environmental effects' of a plan are determined through SEA while at the project level they are determined through the EIA process which is briefly discussed below.

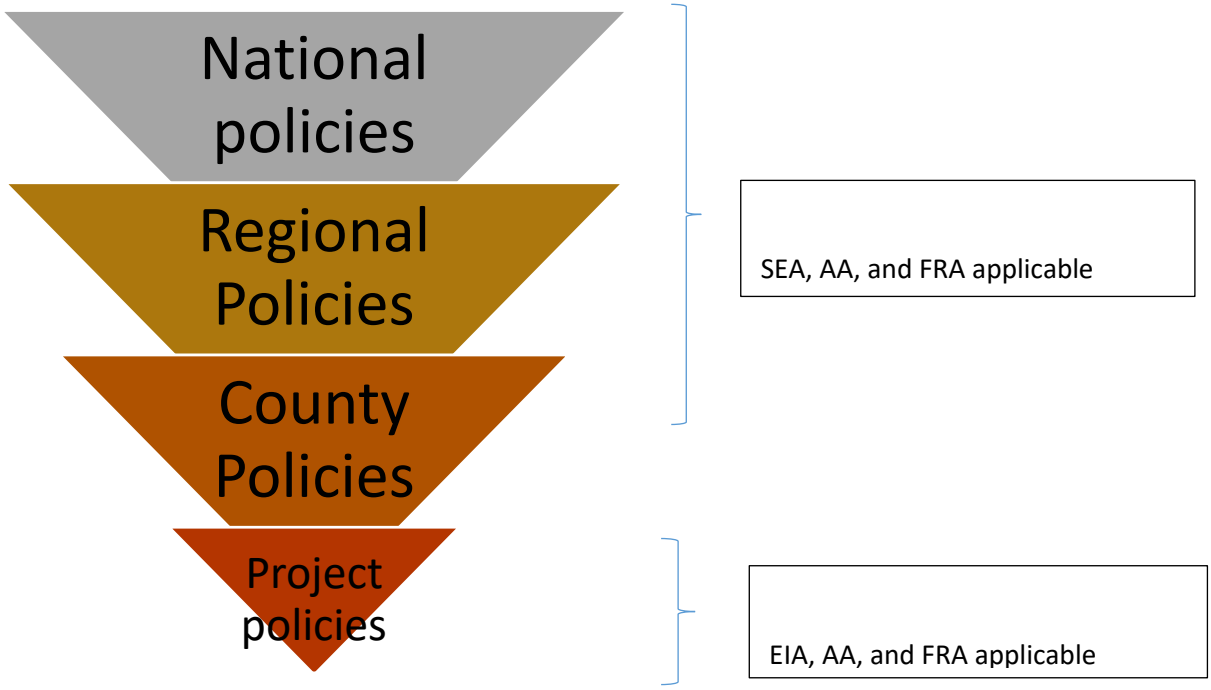


Figure 2: EIA process

The local planning system has two levels of decision-making: the Central Government and the County Government. The national government provides broad spatial or physical planning policies and plans. Kenya has the National Spatial Plan (2015-2045) which was prepared to lay down the Vision 2030 spatially. The Cabinet Secretary, Ministry of Lands and Physical Planning is mandated to approve SEZ Plans and Development therein as projects of strategic importance under Section 69 (3) of the Physical and Land-Use Planning Act of 2019. The County Government on the other hand will play a key role in development control around the area surrounding the SEZ. The Ministry of Transport, Housing and Urban Development, and that of trade will equally play a key role in the development of the SEZ. The two levels of planning will be instrumental in ensuring the fully implementation of the SEA for the Special Economic Zone in Naivasha.

The Master plan is comprised of various proposed land uses as follows:-

- Regional Dry Ports (200 Acres)
    - Burundi
    - Rwanda
    - DRC
    - Uganda
    - South Sudan

- Phase I (300 Acres)
    - Logistics Hub
    - Administration Offices
    - Health Facility
    - Fire Station
    - Security Offices
    - Industries Heavy and Medium Industries
    - SMEs

- Phase II (300 Acres)
  Other uses
    - Green Buffer Zone
    - Plot Boundary
    - Railway Siding(Length = 2.4 Km)
    - Road Network
    - Standard Gauge Railway Line
    - Proposed Service Lane(To Extend 1 Km For Acceleration and Deceleration Lanes)
    - Ketraco (Right Of Way)

- Road And Railway Siding

2.4 Analysis of the Naivasha SEZ Master Plan

The Master Plan presents a blueprint of the planned land-use planning and management of the proposed Naivasha SEZ. The site is on a green field and is located in uninhabited part of the County of Nakuru. The nearest town is Naivasha town and the Mai Mahiu trading centre. The master plan for the Special Economic Zone proposes a comprehensive mixed used development model that comprises of the following land-uses;

- ICD and Logistics Hub – 120 Acres
- Dry Ports for Partner States – 50 Acres
- Land Bank for future partner states – 45 Acres
- Land Bank for Government of Kenya Future Development – 90 Acres
- Business Centre, Services and Logistic Offices – 26 Acres
- Marshalling Yard and Auxiliary Services – 8 Acres
- Heavy Industrial Zone- 154 Acres
- Light Industrial Zone – 88 Acres
- Residential zone and Supportive amenities – 63 Acres
- Green Buffer Zone with jogging and surveillance track – 92 Acres
- Waste Water Treatment Plant; and
- Power Substation

The site covers a total of 1,000 acres and the Master Plan presented in Figure 1 is for the first phase of the project that is anticipated to occupy approximately 300 acres in total. The site is located approximately 14km from the Mai Mahiu trading centre. See satellite maps and photos below:

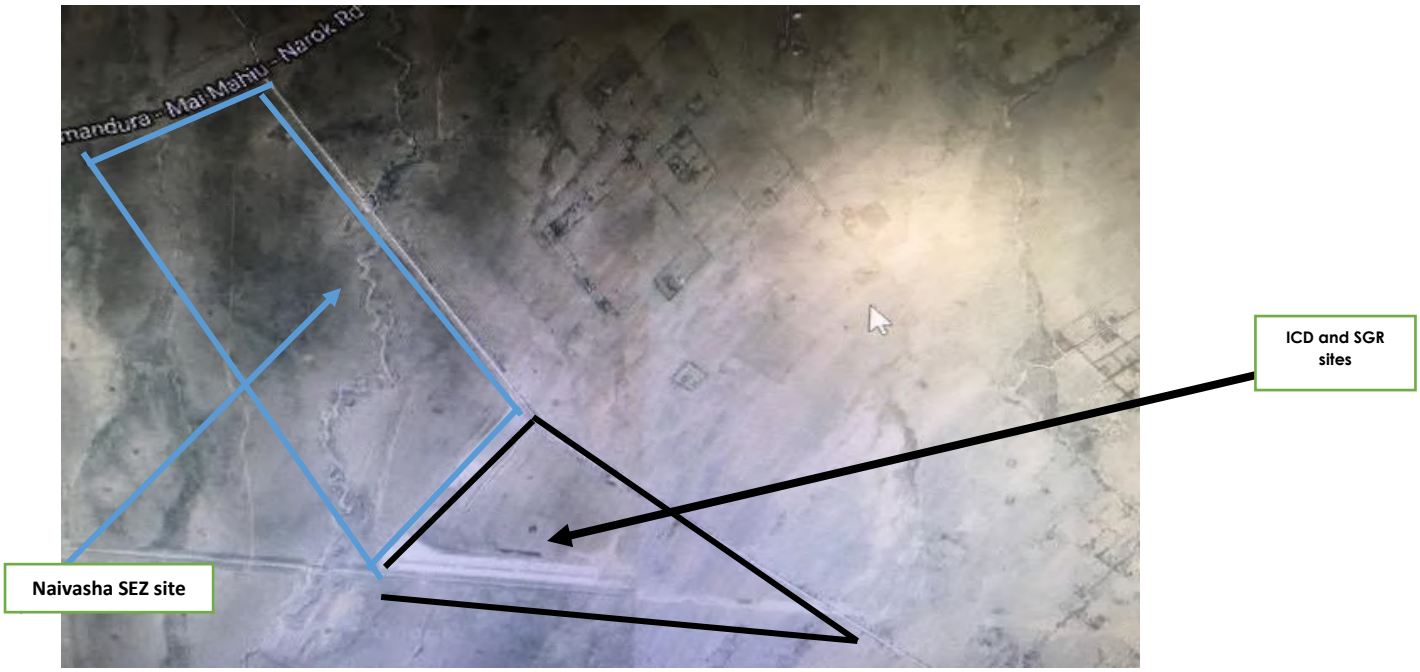


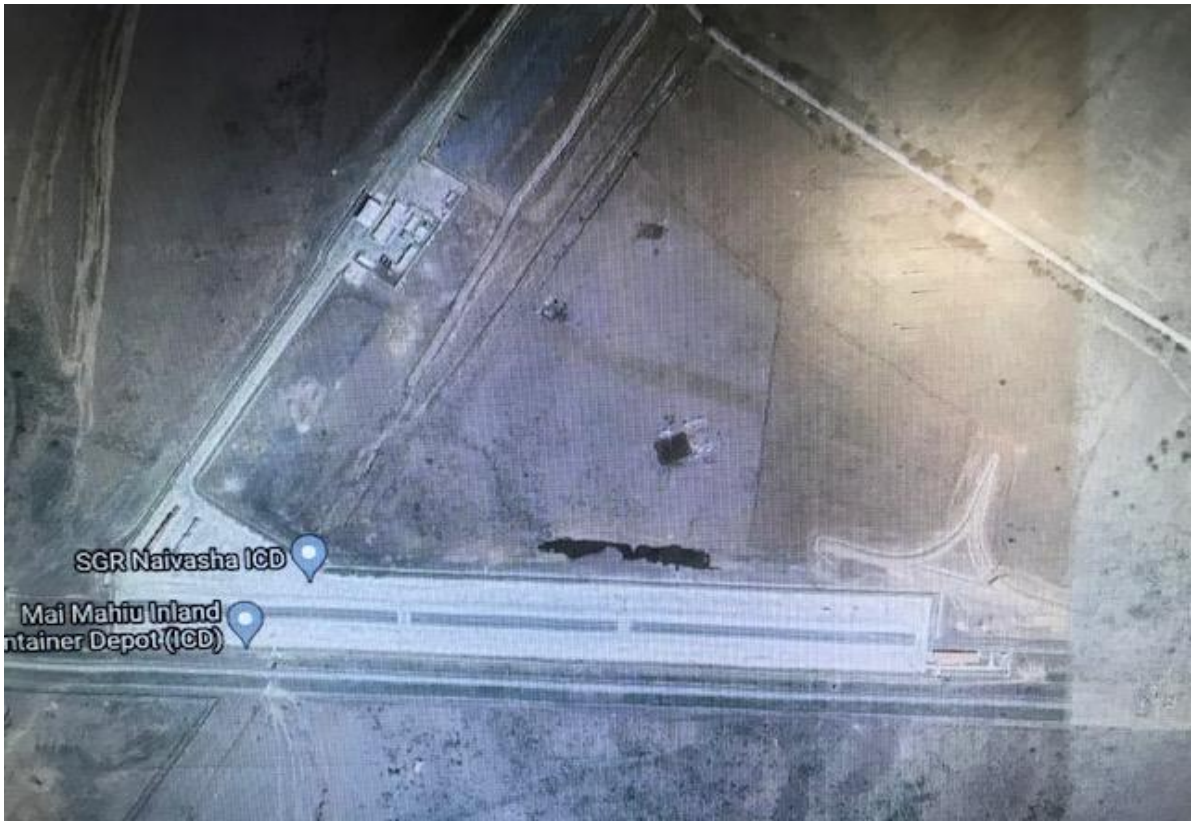
Figure 3: Spatial satellite photos of the Naivasha SEZ, ICD and SGR sites

Figure 4: Main road to the Naivasha ICD, SGR and SEZ site

Figure 5: The Naivasha SEZ site fenced along the road to ICD and SGR

Figure 6: The seasonal river passes through the Naivasha SEZ site crossing the constructed bridge on the road entering the ICD and SGR Naivasha sites

Figure 7: Water tank erected at ICD and new two water tanks are being erected at Naivasha SEZ site




The main road to Narok on the left of the road is Kedong ranch fence adjacent Naivasha SEZ site, beyond the fenced area about 2 KM from the entry to Naivasha ICD and SGR is large open unfenced tracks of land that animals are grazed.


The master plan is comprehensive and has made provisions for mixed land-uses. There is a seasonal stream cutting across the site and a canal has been proposed in the area passing through the heavy industrial area. This is ideal to ensure that the natural water body is not polluted by the heavy industries in the site. We note that one waste water facility has been proposed on the site

and further propose that all heavy industries in the site to have onsite treatment before releasing waste water into the main plant. Water from the treatment works can be pumped into a storage tank, site to be provided during implementation and the treated water used for maintaining the green buffer zone.

Whereas there is clear provision for wastewater treatment the master plan is not explicit on solid waste management. With the new approach on circular economy the Government of Kenya through SEZA should consider setting up a solid waste management facility that caters for recycling, compositing of biodegradable waste, incineration or landfill facility. This will ensure that the development is self-reliant and is not burdening the County Government with waste management. The planned dedicated power supply from KENGEN Geothermal power production sites in Olkaria will ensure the SEZ operates efficiently and effectively.

It is anticipated that a total of 30,000 persons will be accommodated in the site when fully developed. The site is located in proximity with Naivasha town which offers high level services such as medical, financial, commercial and hospitality. The master plan provides for low, middle and high level housing to cater for the various workers on the site. For visitors requiring accommodation they can easily access facilities in Naivasha town, however there is need to factor in low cost accommodation facilities for drivers who may need temporary accommodation or washroom facilities while using the facilities at the SEZ. This could be provided in the truck park or in the commercial centre. There is need to factor in small commercial facilities such as retail shops, grocery stores and small service such as barber shops within the residential establishments to ensure they are formally developed and residents have convenience. Higher order goods and services can be located in the commercial and logistics centre.

The buffer zone provided is idea to provide a natural buffer of the SEZ and surrounding areas. During the project implementation it will be necessary to extend the buffer or green zone around the residential area to create a buffer between the industrial and residential zone. The trees, shrubs and other plant in the green zone should include the natural flora of the site prior to development in order to conserve the existing biodiversity or gene pool.

Whereas a hospital is provided the master plan negates the need for mortuary and cemetery services. This can be provided in liaison with the County Government while planning for the larger area around the SEZ.

2.5 Key Issues from the review of Strategic Actions

Plans	Issues identified											
	Excess water abstraction	Pollution	Loss of biodiversity	Human-wildlife conflict	Poor waste management	Population pressure	Unplanned settlements	Value addition	Gender issues	Climate change	Flood risk	traffic
Naivasha SEZ Master Plan	✓	✓	✓	✓	✓	✓	✓	✓	o	o	✓	✓
Nakuru County Integrated plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lake Naivasha Basin integrated plan	✓	✓	✓	✓	✓	✓	✓	o	✓	o	o	o
Hell's Gate Mgt Plan	✓		✓	✓	o	o	o	o	o	o	o	o
Olkaria Power Project	✓	✓	✓	✓	o	o	o	o	o	o	o	o
EAC development Strategy	o	✓	✓	o	o	o	✓	✓	✓	✓	o	o
Agenda 2063; AU	✓	✓	✓	o	✓	o	✓	o	✓	✓	o	o
Kenya Spatial Plan	✓	✓	✓	o	✓	o	✓	o	o	o	✓	o

Table 3: Core Issues from the review of Strategic Actions

Key:

Core Issues Present:- √

Core Issues Not present: - o

Core issues identified from review of the various Plans can be summarized into three key broad areas namely; Economic, Environmental and Social to ensure sustainability in the implementation of the Master Plan. The negative impacts of the three areas need to be mitigated to ensure that the cumulative impacts are addressed and the positive impacts enhanced for sustainability. The negative impacts of the three areas to be mitigated are highlighted below;

2.5.1 Social aspects

The significant negative social impacts may occur due to influx of people migrating to the site for economic gains. The new population settling within the site vicinity and those that will be involved directly or indirectly with the Naivasha SEZ Master Plan implementation activities may result in gender violence, prostitution, creation of vulnerable groups such as urchins among others from unplanned settlements and casual business e.g. slums and filthy alcoholic drinking dens and eateries. SEZA is aware of such possible occurrences that have happened in many new sites being developed within the country. SEZA has put in place planned development criteria in liaison with the local and national government to curb unwarranted negative social impacts to realize;

1. Reduced gender based violence; prostitution and family break ups
2. Reduce drug and substance abuse
3. Support vulnerable groups
4. Training for sustainable development
5. Safe work environment
6. Cohesive society
7. Safe communities

2.5.2 Environmental aspects

The significant negative Environmental impacts will be from infrastructural development, operations of enterprises investing in the zone. Naivasha SEZ Master Plan has initiatives to address the likeliness of depletion of natural resources; interference with adequate availability of water quality and access; pollution of ambient air, water and land including loss of biodiversity. The SEA for Naivasha Master Plan has an environmental management and monitoring plan to mitigate significant negative environmental impacts focusing on;

1. Sustainable management of natural resources
2. Improve water quality and access
3. Ensure climate resilient development
4. Conserve wetlands
5. Sustainable exploitation of natural resources
6. Ensure green buildings
7. Improve air quality
8. Promote clean, sustainable, affordable energy at least cost
9. Minimization of waste
10. Reduce climate change and its effects
11. To maintain and enhance biodiversity/ flora and fauna

2.5.3 Economic aspects

Negative aspects emanating from economic activities during the Master Plan implementation may be due to unfair employment opportunities, lack of sustained economic growth, discrimination of indigenous investment and lack of economic diversification. SEZA investment program is anchored on good investment practices that mitigate its investment program against negative social impacts. The Master Plan encourages;

1. Sustained economic growth
2. Sustainable livelihoods
3. Indigenous investment
4. Economic diversification
5. Equitable and satisfying employment

CHAPTER 3
RELEVANT LEGISLATIVE FRAMEWORK

3.0 POLICY, PLAN AND PROGRAMME (PPP) ANALYSIS

3.1 Introduction

There are various policies, plans, programmes and legislation that set the context for developments of the proposed nature, some directly and others indirectly. These instruments influenced how the Master Plan was developed and will be implemented.

The Naivasha SEZ was subjected to a comprehensive PPP analysis based on the environmental obligations using a PPP framework, which was developed for the SEA. The PPP framework for the SEA comprised the following instruments: -

a) National environmental policies,
b) Legal frameworks,
c) National strategic plans, and
d) International Environmental Frameworks (MEAs) for the global obligations.

National environmental policies

- The Constitution of Kenya, 2010 (GoK,2010)
- Sessional Paper No. 6 of 1999 on Environment and Development (GoK,1999)
- Draft Environment Policy, 2012 (GoK,2012)
- National Land Policy, 2009 (GoK,2009)
- National Water Policy, 2012 (Draft) (GoK,2012)
- Draft National Policy on Wetlands Conservation and Management, 2013 (GoK,2013)
- Draft Wildlife Policy, 2011(GoK,2011)
- National Policy for Disaster Management, 2009 (GoK,2009)
- National HIV Policy, 1997 (GoK,1997)
- National Environmental Sanitation and Hygiene Policy, 2007(GoK,2007)
- Draft National Tourism Policy, 2007(GoK,2007)

Legal frameworks

- Environmental Management and Coordination Act (EMCA) No. 8 of 1999 amended in 2015 (GoK,2015)
- EMCA (Wetlands, river banks, lake shores and sea shore management) Regulations, 2009 (GoK,2009)
- Physical and Land Use Planning Act No. 13 of 2019Water Act, Cap 372 of 2002 (GoK,2002)

- Water Act, Cap 372 of 2002 (GoK,2002)
- Wildlife (Conservation and Management) Act Cap 376 of 2013 (GoK,2013)
- Public Health Act, Cap 242 1986 (Revised Edition 2012)
- Energy Act No 12 of 2006 (Revised Edition 2012)
- Special Economic Zones Act 2015

National Strategic plans

- Vision 2030 (GoK,2008)
- National Environment Action Plan, 2016-2022 (GoK,2016)
- National Biodiversity Strategy and Action Plan, 2019-2030 (GoK,2019)
- National Master Plan for the Conservation and Sustainable Management of Water Catchment Areas in Kenya, 2012 (GoK,2012)
- Agricultural sector Development Strategy 2010-2020 (GoK,2010)
- National Climate Change Response Strategy, 2018-2022 (GoK,2018)
- National Tourism Master Plan, 2018-2022 (GoK,2018)
- National Water Master Plan 2030(GoK,2013)

MEAs

- Convention on Biological Diversity (CBD Secretariat, 1992)
- United Nations Framework on Combating Climate Change (UN, 1992)
- United Nations Convention to Combat Desertification (UN, 1994)
- African Convention on the Conservation of Nature and Natural Resources (AU, 1968)

The analysis involved a comprehensive analysis of the Naivasha SEZ against the environmental obligations in the obligatory PPPs identified for the SEA process. The results of the comprehensive PPP analysis are shown below

Legal and Legislative Frameworks	**Environmental Requirements**	**Linkages with the Naivasha SEZ Master Plan**
INTERNATIONAL FRAMEWORKS (MEAS)		
Convention on Biological Diversity (United Nations, 1992)	Article 8 - In-situ conservation (d) Promoting protection of ecosystems, natural habitats and maintenance of viable populations of species in natural surroundings	- The Naivasha SEZ Master proposes the establishment of industrial investments whose operations will have direct implications on the natural plant biodiversity through the utilization of raw materials and industrial processing. This SEA report and the proponent of the development have identified measures to improve

		biodiversity for example - Establishment of additional greenbelts in addition to the existing ones -Sustainable riparian zone management especially the seasonal river on site
United Nations Framework Convention on Climate Change (United Nations, 1992)	Article 6: Education, training and public awareness, (i) Development and implementation of educational and public awareness programmes on climate change and its effects	This SEA report has determined and put in place measures to minimize the emissions of GHGs through appropriate technologies like gaseous emissions neutralization and ample green cover to act as carbon sequestration mechanism.
African Convention on the Conservation of Nature and Natural Resources (Africa Union , 1968) Article II - Fundamental Principle	2 (ii) Setting aside areas for the propagation, protection, conservation and management of vegetation and wild animals as well as for the protection of sites, land-spaces or geological formations of particular scientific or aesthetic value, for the benefit and enjoyment of the general public	This SEA report has determined and recommends measures for the protection, conservation and management of vegetation and wild animals as well as for the protection of sites, land-spaces or geological such as ,establishment of additional greenbelts in addition to the existing ones, working closely with KWS to develop a plan in the control of wildlife , minimize interference of the natural habitants by only clearing of vegetation in areas that are to be developed only and ensure compensation by replanting in other un developed sites. SEZA is committed to liaise with the public and other stakeholders to play a role in biodiversity conservations ensuring enhanced improved aesthetics.
NATIONAL POLICIES		
The Constitution of Kenya, 2010	Article 42 – Supporting public involvement in ensuring the rights to a clean and healthy environment.	The principles of the developed (Naivasha SEZ) is aligned to the ideals of Vision

(GoK, 2010)	Article 43 – Supporting public involvement in ensuring the need for every person to have access to clean and safe water in adequate quantities,	2030 as it meets objectives of the economic and environmental pillars through offering economic opportunities and protection of the environment. The positive impacts of the development on employment, income generation and sustained social and health of the people and the area is covered in this SEA report. The Naivasha SEZ Zone shall play a key role in increasing area for industrial setup, commercial developments, port area and this will result in the increased development of the area. The country in general will earn from such development through taxes and foreign exchange earnings. Moreover, Vision 2030 strategy puts forward proposals in with promotion of ICT, gender balance and catering for persons with disabilities. All these aspects will be observed in this development.
	Article 69 - Environment and natural resources (1) (a) Ensuring sustainable exploitation, utilization, management and conservation of the environment and natural resources establishment b) Working towards the achievement and maintaining a tree cover of at least 10% of the land area of Kenya by the year 2030 (g) Eliminating processes and activities that are likely to endanger the environment;	
	Article 185: 22 - Protection of the environment and natural resources with a view to establishing a durable and sustainable system of development	
	Sessional Paper Number 10 of 2012 on Kenya Vision 2030 Sessional Paper Number 10 of 2012 on Kenya Vision 2030 is the National Policy Economic Blueprint that entrenches Kenya Vision 2030 as the long term development strategy for Kenya. The proposed Naivasha SEZ is a Project under the Economic Pillar of Kenya Vision 2030, the country's development blueprint which aims to transform Kenya into a newly industrializing, "middle-income country providing a high quality life to all its citizens by the year 2030". The Vision is anchored on three key pillars: Economic; Social and Political;	
Kenya Environmental Policy 2013	Objectives of the policy call for, inter alia, ensuring sustainable management of environment and natural resources, such as unique terrestrial and aquatic resources, for national economic growth and improved livelihoods	This SEA report is geared towards showing how the proposed Naivasha SEZ Master plan fulfils and complies with the provisions of the Environmental Policy. This has been documented and this

	Environmental monitoring and assessment calls for the Government to; 1. Develop and implement standardised indicators that will form the basis of monitoring the status of the environment. 2. Develop and implement a National Environmental Monitoring and Assessment Programme to monitor the state of the environment. 3. Encourage reporting environmental status on a balance sheet. 4. Ensure periodic reporting on county and national status of environment.	includes details of all the possible impacts of the implementation of the plan and how the negative impacts will be mitigated.
Sessional Paper No. 6 of 1999 on Environment and Development (GoK,1999)	Adopting measures, incentives and disincentives to promote the re-use, recycling and reclamation of re-usable packaging material and combat the pollution of the environment Developing an integrated, improved early warning and response systems for climate change and disaster risks	In the implementation of the Naivasha SEZ Master plan the following will be implemented and include development of Public Health management plan, Wastewater management , Integrated Solid Waste management programs and pollution controls .
National Environmental Sanitation and Hygiene Policy, 2007(GoK,2007)	4.3: Sanitation and the environment - Protection of the environment from pollution and its negative effect on human health - Ensuring use of technologies that uphold the right of present and future generations to a healthy and pollution-free environment. Ensuring the use of sanitation systems that are environmentally sound Preventing environmental pollution from liquid and solid waste	In the implementation of the Naivasha SEZ Master plan the following will be implemented and include development of Public Health management plan, Wastewater management , Integrated Solid Waste management programs and pollution controls .
National Land Policy, 2009 (GoK,2009)	Ecosystem management and conservation principles - Surveying of all critical ecosystems to determine their sustainable land use	The main objective of the SEZ is enhanced economic development but has incorporated environmental

	Other policy goals: -Ensuring sustainable utilization and management of land and its resource -Supporting the implementation of environmental assessments and audits	sustainability considerations in allocation of the land to the various industrial and commercial land uses. Specific and detailed impacts, mitigation and strategies to enhance acceptability and appropriateness of the SEZ activities are contained in this report.
National Water Policy, 2012 (Draft) (GoK,2012)	d) Enhancing storm water management and rainwater harvesting f) Enhancing pollution control	In regard to the Naivasha SEZ Master Plan development, provisions are incorporated to ensure protection of the affected water resources, supply and efficient utilization of water resources as well as the safe disposal of wastewater.
Wildlife Policy	Has objectives to; ▪ develop a coordinated framework for wildlife management taking into account other sectoral policies and the roles of various agencies; ▪ conserve wildlife resources in national parks, national reserves and national sanctuaries in an effective and equitable manner; ▪ ensure maintenance and enhancement of ecological integrity of wildlife and their habitats through the integration of private and community lands into protected area systems; ▪ harness the contribution of wildlife resources into the national economy and enhance the benefits to all; and ▪ Enhance policy implementation through participatory planning, research, knowledge management and capacity building.	In regard to the Naivasha SEZ Master Plan development, provisions are incorporated to ensure protection of the Wildlife while working with organizations such as the KWS, KENGEN, Nature Kenya and Lake Naivasha Riparian Association.
Forest Policy, 2014	It calls for an ecosystems approach to the management of forests, recognition of customary and user	The Naivasha SEZ Master Plan has made provision of plan to ensure that there are trees

	rights to support sustainable forest management and conservation.	planted in the development area and participate in other tree planting activities in the surrounding area and countrywide to help the Kenya Government achieve 10% minimum forest cover nationally. In addition, the plan has provided for all roads, pedestrian walkways and parking spaces in the park to be lined with trees. Unutilized spaces in individual plots will also be greened. This will significantly increase the proportion of trees in the Zone.
Kenya Industrialization Policy	This policy has a vision for the country to be the leading industrial nation in Africa with a robust, diversified, and globally competitive manufacturing sector. Its specific objectives include; (a) Strengthening local production capacity to increase domestically- manufactured goods by focusing on improving the sector's productivity and value addition by 20% (b) Raising the share of Kenyan manufactured products in the regional market from 7 to 15 % (c) Developing niche products through which Kenya can achieve a globally competitive advantage (d) Increasing the share of Foreign Direct Investment in the industrial sector by 10% (e) Increasing by 25%, the share of locally-produced industrial components, spare parts, and machine tools (f) Developing at least 2 Special Economic zones and 5 SME industrial parks (g) Establishing an industrial development funds with a minimum of Kshs 10 billion for	Recognition and mitigation of possible negative impacts on the environment are contained in this SEA report.

	long term financing of manufacturing enterprises (h) Increasing by 20% the share of manufacturing in total MSME output (i) Increase the local content of locally-manufactured goods for export to at least 60% (j) Increasing the share of industries located outside major urban centres to at least 50%	
National Policy for Disaster Management, 2009 (GoK,2009)	2.1: Promoting the mainstreaming of disaster management and climate change into development planning and management for sustainability Other policy goals: Supporting climate change disaster risk reduction initiatives	SEA identifies and recommends ESIA and EA to be carried out for all activities or developments to be established in the Naivasha SEZ as a tool to minimize occurrence of extreme environmental events and curb some environmental disasters.
Energy Policy, 2012	The broad objective of the national energy policy is to ensure adequate, quality, cost effective, and affordable supply of energy to meet development needs while protecting and conserving the environment. The specific objectives are to: • Provide sustainable quality energy services for development • Utilize energy as a tool to accelerate economic empowerment for urban and rural development • Improve access to affordable energy services • Provide an enabling environment for the provision of energy services • Enhance security of energy supply • Promote development of indigenous energy resources, and • Promote energy efficiency and conservation as well as prudent environmental, health and safety practices	The Naivasha SEZ Master plan has incorporated use of renewable energy, designed green buildings that will optimize use of solar energy, has included generation of energy from solid waste hence contributing to conservation of conventional energy forms. SEZA is open to work in liaison organizations such as Kenya Cleaner Production to promote industrial symbiosis in relation to energy conservation.

Integrated National Transport Policy, 2010	The Integrated National Transport Policy (INTP) was prepared in support of the Vision 2030 and sought among other issues to address the following: • Poor quality of transport services • Inappropriate Modal Split • Transport System Not Fully Integrated • Urban Environmental Pollution • Lack of an Urban/Rural Transport Policy • Institutional Deficiencies	The SEZ master plan proposes an integrated rail and road transport. While it is quite comprehensive it is important during implementation to ensure that all modes are adequately provided for including: freight, private cars, Non-Motorized Transport users, rail and possibility of air transport in the region.
Kenya's Green Economy Strategy and Implementation Plan (GESIP 2016- 2030)	The vision is for a low-carbon, resource efficient, equitable, and inclusive socio-economic transformation	In regard to the Naivasha SEZ Master Plan development, provisions are incorporated to have the developments in the zone to operate in a manner that does not adversely affect the environment but carried in an economical way.
Agenda 2063; the Africa We Want	The African Union has developed the 2063 Agenda[4] that seeks to: • Galvanize and unite in action all Africans and the Diaspora around the common vision of a peaceful, integrated and prosperous Africa. • Harness the continental endowments embodied in its people, history, cultures and natural resources, geo-political position to effect equitable and people-centered growth and development. • Build on and accelerate implementation of continental frameworks, and other similar initiatives. • Provide internal coherence and coordination to continental, regional and national frameworks and plans adopted by the AU, RECs and Members states plans and strategies.	The Naivasha SEZ Master Plan development is seen as an avenue for the implementation of the Agenda 2063 for the Africa We Want; through the provision of an area that has been specifically designed to carry out industrial and commercial activities. The master plan has been set in a way that it has to ensure inclusivity of all persons in the development.

[4] African Union Commission 2015; Agenda 2063; *the Africa We Want.* ISBN 978-92-95104-23-5

	• Offer policy space for individual, sectoral and collective actions to realize the continental vision. **Aspirations of the Agenda 2063** • Aspiration 1: A prosperous Africa based on inclusive growth and sustainable development. Africa will by 2063 be a continent of shared prosperity, which finances and manages its own growth and transformation. • Aspiration 2: An integrated continent politically united based on the ideals of Pan Africanism and the vision of Africa's Renaissance. By 2063 Africa will have emerged as a united, strong, sovereign, independent and self-reliant continent that realizes full economic and political integration. • Aspiration 3: An Africa of good governance, democracy, respect for human rights, justice and the rule of law. By 2063, Africa will have undergone a deepening of the culture of good governance, democratic values, gender equality, and respect for human rights, justice and the rule of law. • Aspiration 4: A peaceful and secure Africa by 2063. Africa will emerge as a peaceful and secure continent, a conflict-free continent with harmony and understanding among communities at the grassroots level. • Aspiration 5: An Africa with a strong cultural identity, common heritage, values and ethics. Africa, as the cradle of human civilization, is custodian of a cultural patrimony that has contributed enormously to human	

	progress. African cultural identity, values and ethics as a critical factor in Africa's re-emergence on the global stage in the decade of the 2010s, will be promoted and strengthened by 2063. • Aspiration 6: An Africa whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children. By 2063, Africa will be a continent where all citizens will be actively involved in decision-making in all aspects of development, including social, economic, political and environmental. Africa will be a continent where no child, woman or man will be left behind. • Aspiration 7: Africa as a strong, united, resilient and influential global player and partner. Africa will emerge as a strong, united, resilient and influential global player and partner with a bigger role in world affairs	
The East Africa Community (EAC) Development Strategy 2016/17-2020/21	The overall goal of the 5th EAC Development Strategy[5] is to build a firm foundation for transforming the East African Community into a stable, competitive and sustainable lower-middle income region by 2021. To realize this goal, the Community shall focus on seven (7) key priority areas, namely a) Consolidation of the Single Customs Territory (SCT); b) Development of regional infrastructure; c) Enhancement of free movement of all factors of	The implementation of the Naivasha SEZ Master Plan is geared towards achieving the agenda of The East Africa Community (EAC) Development Strategy 2016/17- 2020/21 that is to mainstream the country's development goal to realize middle income country status.

[5] The EAC Development Strategy 2016/17- 2020/21; Accelerating a People- Centered and Market Driven Integration

	production as envisaged under the Common Market and Monetary Union Protocols; d) Enhancement of regional industrial development; e) Improvement of agricultural productivity; f) Promotion of regional peace, security and good governance; and g) Institutional transformation at the regional and Partner State levels. The Community shall therefore devote to the pursuit of programs, projects and other interventions aimed at accelerating a people-centered and market-driven integration that will also facilitate faster and more sustainable socio-economic development and transformation of the EAC region. **The strategic development objectives of the EAC** I. Accelerating and consolidating sustainable production, productivity, value addition, trade and marketing in key regional growth and productive sectors with emphasis on rural development; agriculture; fisheries; livestock; food and nutrition security; and high value industrialization II. Investing in enhancement of the stock and quality of multi-dimensional strategic infrastructure and related services, to support and accelerate sustainable regional integration and competitiveness. III. Strengthening the social dimensions of the regional integration process to deliver	

	quality, effective and efficient socioeconomic services –with emphasis on enhancing human capital development; gainful employment and decent work; health status; as well overall welfare of the people of East Africa. IV. Strengthening mechanisms and strategies for ensuring enhanced investment in clean and sustainable energy production and access, as a driver and enabler of economic competitiveness and sustainable regional development. V. Increasing investment in science, technology and innovation (STI), as key drivers and enablers of sustainable regional development and socioeconomic transformation, as well as creating an enabling environment for their application. VI. Enhancing regional mechanisms and strategies for ensuring sustainable natural resource utilization and conservation, environmental sustainability and climate change management. a) Attaining a fully functioning Customs Union. b) Accelerating the full implementation of the Common Market Protocol, including protection of fair competition. c) Accelerating the full implementation of the EAC Monetary Union. VII. Accelerating strategies and mechanisms for establishment	

	of the Political Federation, with emphasis on ensuring sustained stability, political commitment, good governance and accountability. VIII. Developing and strengthening the capacity of all EAC Organs and Institutions to effectively execute their mandates. IX. Enhancing knowledge management, information sharing, awareness creation and participation of the East African people in the integration process. X. **Key concerns** were in the areas of gender equality and women empowerment; health/HIV; social security; labour/ employment; culture; energy; pollution; value addition; poverty; skills upgrade	
The Kenya National Spatial Plan 2015-2045	The National Spatial Plan supports the implementation of strategic national projects specifically the flagship projects spelt out under Kenya Vision 2030 by indicating their spatial locations and providing a framework for absorbing the spatial impacts of these projects. It provides a coordinating framework for sectorial planning which has been lacking in the country and it aims to address the dis-connect that has existed for a long time between physical and economic planning. The specific objectives of the National Spatial Plan are:- • To create a spatial planning context that enhances economic efficiency and strengthens Kenya's global competitiveness. • To promote balanced regional development for national integration and cohesion.	The Naivasha SEZ Master Plan development has incorporated The Kenya National Spatial Plan 2015-2045 in its implementation strategy and the project is seen as an avenue that will result in :- opening markets for goods and services; allow movement of capital in the region and national level ; the environment will also create an area that will increase reliance on knowledge workers to drive the economy ; the area will also attract foreign direct investment; there will be emergence of knowledge, technology, and innovation driven economies in the area .

	• To optimize utilization of land and natural resources for sustainable development. • To create livable and functional Human Settlements in both urban and rural areas. • To secure the natural environment for high quality of life. • To establish an integrated national transportation network and infrastructure system It proposes the following approaches be adopted • Open markets for goods and services • Open movement of capital • Increased reliance on knowledge workers to drive the economy • Economic integration and specialization • Attract foreign direct investment • Emergence of knowledge, technology, and innovation driven economies Finding of assessment This analysis depicts that there is no land in Kenya that can be regarded as useless or low potential. This means that all land must be put into economic use. In addition it calls for balanced regional development through establishment of economic zones in order to address skewed spatial distribution of urban areas. The other key concerns in the spatial plan include water scarcity; informal settlements; energy constraints; solid waste management; flood mitigation; deforestation; climate change; poor infrastructure and pollution.	
The Nakuru County	The CIDP envisioned an SEZ but did not zone the area. There is an	Individuals and institutions directly or indirectly affected

Integrated Development Plan 2018-2022	opportunity to scale down the plan and prepare local area land-use regulations to guide development control around the SEZ. The SEZ and the Dry Port will attract developments around the area and if not properly planned the developments could compromise the functionality and safety of the SEZ.	by implementation of the Naivasha SEZ Master Plan have been accorded the right to express their interests and their respective considerations have been included in the developments implementation plan.
LEGAL FRAMEWORKS		
Environmental Management and Coordination Act (EMCA) No. 8 of 1999 , amended in 2015 (GoK,1999)	Section 57 A of the **Environmental Management and Coordination Act** provides for the undertaking of SEA as follows; 1. All Policies, Plans and Programmes for implementation shall be subjected to Strategic Environmental Assessment. 2. For the avoidance of doubt, the plans, programmes and policies are those that are; (a) subject to preparation or adoption by an authority at regional, national, county or local level, or which are prepared by an authority for adoption through a legislative procedure by Parliament, Government or if regional, by agreements between the governments or regional authorities, as the case may be; (b) Determined by the Authority as likely to have significant effects on the environment. 3. All entities shall undertake or cause to be undertaken the preparation of strategic environmental assessments at their own expense and shall submit such assessments to the Authority for approval. 4. The Authority shall, in consultation with lead agencies and relevant stakeholders, prescribe rules and guidelines in respect of Strategic Environmental Assessments.	This SEA report has incorporated the Environmental and Social Management Plan and Environmental Monitoring Plan to ensure that requirements stipulated in EMCA are adhered to.

	Section 50 – Supporting the conservation of biological diversity Specific integration obligations -Controlling and prevention of environmental pollution -Carrying out EIA for all proposed projects with a potential for adverse impacts -Carrying out environmental audit and monitoring of all activities that are likely to have significant effect on the environment -Ensuring integration with all other relevant EMCA (1999) Regulations	
Special Economic Zones Act of 2015	Part V, section 27 (3): In evaluating applications for special economic zone developer, operator and enterprise licences, the Authority shall assess the specific engineering and financial plans, financial viability, and environmental and social impact of the applicant's proposed special economic zone project, as appropriate.	The Special Economic Zones Authority is the owner of the Naivasha SEZ. The authority has made provisions to ensure that it will adhere to all laws and policies relevant in Kenya during the Master Plan implementation.
Physical and Land-Use Planning Act No. 13 of 2019	The Physical and Land-Use Planning Act (PLUPA), makes provision for the planning, use, regulation and development of land and connected purposes. Section 69 (3) of this Act gave the Cabinet Secretary for Lands and Physical Planning to make regulations for classification of strategic and inter-county projects. This were formulated and gazetted in 2019, and classified Special Economic Zones (SEZ) as one of the Projects of Strategic National Importance. Section 56 mandates the County Government to prepare local physical and land-use development plans that can be prepared for zoning, regulating the land-use and land development among others. This will be instrumental in preparation of a plan to guide development in the surrounding areas to ensure they are	SEZ Master Plan and development therein is approved by the Cabinet Secretary responsible for Physical Planning (Ministry of Lands and Physical Planning and the County Government of Nakuru to undertake development control around the SEZ and prepare a Plan.

	in conformity with the SEZ Master Plan. In addition, Part IV mandates the County Government to undertake development control within its area of jurisdiction. This will be instrumental in ensuring that all developments surrounding the SEZ are built in accordance with the zoning plan herein proposed to be formulated.	
EMCA (Wetlands, river banks, lake shores and sea shore management) Regulations, 2009 (GoK, 2009)	Ensuring that no person shall carry out any of the activities stipulated in Section 42 of the Act without a Wetland Resource Use Permit by the relevant lead agency and an Environmental Impact Assessment License issued by the Authority where applicable	The Master Plan has made provisions for sustainable riparian zone management for rivers in the zoned area
Water Act, Cap 372 of 2002 (GoK,2002)	Article 20. (1) Ensuring that state schemes shall take precedence over all other schemes for the use of water or the drainage of land WRA has prepared a National Water Master plan (NWMP) 2030 to link water management to national aspirations for sustainable economic development **Environmental Protection, Water and Natural Resources Sector Goal** To improve environment, natural resource management, water and sewerage services and enhance energy within the county.	The Master Plan has made provisions for conservation of the water sources. This SEA report contains an Environmental and Social Management Plan to ensure efficient utilization of the water resource and this is to be achieved by harmonizing the Master plan for the Naivasha SEZ with the National water Master plan
Occupational Health and Safety Act (OSHA), 2007	This is an Act of Parliament, which provides for the safety, health and welfare of all workers and all persons lawfully present at workplaces. The act further provides for the establishment of the National Council for Occupational Safety and Health and for connected purposes. The act repealed the Factories and Other Places of Work Act. It applies to all workplaces where any person is at work, whether temporarily or permanently and therefore will apply	The master plan and the SEA study has recommended the establishment of a department mandated with the development and enforcement of a health and safety policy framework to promote occupational health and safety as well as community health and safety mechanisms. This mandate should be accompanied with the requisite capacity building

	to the project both during construction and operation phases. The purpose of this Act is to: □ Secure the safety, health and welfare of persons at work; and □ Protect persons other than persons at work against safety and health arising out of, or in connection with the activities of persons at work. The scope of OSHA has been expanded to cover all workplaces including offices, schools, academic institutions and plantations. It establishes codes of practices to be approved and issued by the Director, Directorate of Occupational Health and Safety Services (DOHSS) for practical guidance of the various provisions of the Act. Other parameters within the act relevant to the project include: □ Duties of employers, owners or occupiers of workplace; □ Establishment of safety and health committees; □ Annual safety and health audit of workplaces; □ Safety and Health obligations for persons who may come to premises for work and are not employees of that particular workplace; □ Reporting of any accident, dangerous occurrence or occupational poisoning caused in the workplace to the area Occupational Health and Safety Office. These incidents should be entered in the General Register. In case of a fatal accident information to the area Safety and Health Office should be within 24 hrs. and a written notice to the same within 7 days; □ The duties of manufacturers, designers, importers and suppliers to ensure that all articles and substances for use at workplace are safe and will not cause injury to health and the	interventions, which may include specialized training for staff as well as targeted recruitment to enhance the existing expertise. The SEA report has identified the various potential negative impacts of the development/construction and operational stages and has proposed possible mitigation measures.

	environment; □ Prohibition of interference or misuse of any appliance, convenience or any other facility provided to secure Safety, Health and Welfare at work by any person (occupier, self-employed person or employed); □ The administration of the act is the responsibility of a Director and other appointed and gazetted officials (Occupational Health and Safety Officers);	
Lake Naivasha Basin Integrated Management Plan (draft 2012-2022)	Objectives 1. To enhance public participation in natural resource management 2. To promote sustainable land use practices to secure biodiversity hotspots 3. To promote alternative livelihood options to reduce pressure on natural resources 4. To promote water use efficiency by promoting appropriate technology 5. To promote sustainable management of fisheries production within the basin 6. To strengthen institutional synergy in the management of natural resources in the basin Key constraints 1. Excess water abstraction 2. Pollution 3. Loss of biodiversity 4. Alteration of drainage patterns 5. Water use conflicts 6. Deforestation 7. Lack of alternative sources of energy 8. Human-wildlife conflict 9. Pollution (air, water, noise, odour) 10. Excessive use of biomass 11. Low adoption of renewable energy 12. Poor waste management 13. Poor infrastructure for social and	The Master Plan has made provisions for conservation of the water source and the development is to ensure that they incorporate the Lake Naivasha Basin Integrated Management Plan (draft 2012-2022)

	economic development (housing and roads) 14, increased water demand 15. Increased human population 16. Unplanned settlements	
The Hell's Gate-Mt Longonot Ecosystem Management Plan	The Hell's Gate-Mt Longonot Ecosystem Management Plan[6] has set out to protect and conserve outstanding scenic volcanic geomorphological features and their associated wildlife species and habitats for the benefit of present and future generations. It has the following supportive purposes 1. To enable collaboration between stakeholders in the conservation and sustainable use of HG/LE natural resources 2. To preserve all sites of aesthetic and geomorphological significance in the HG/LE 3. To promote scientific research and education in order to guide sustainable management of natural resources in and around the HG/LE 4. To promote eco-tourism in the HG/LE; this should be low-impact based on the unique wildlife and scenic geomorphological features that offer diverse tourism opportunities The Key issues of concern in the report include • Protection of exceptional resource values • Limited water supply • Wildfires • Wildlife dispersal areas and minimization of human- wildlife conflicts	The Master Plan has made provisions for conservation of the ecosystem and the development has been made in a way that it will incorporate the Hell's Gate-Mt Longonot Ecosystem Management Plan.

[6] KWS; Hell's Gate- Mt Longonot Ecosystem Management Plan 2010 - 2015

	• Mitigating the negative impacts of geothermal power exploration The management plan goes on to stress the following objectives, among others; • Wildlife species are protected, restored and monitored; • Habitats are protected, conserved and restored; • Ecosystem connectivity is established to increase resilience; and • Ecosystem functioning is understood. • Communities benefit from natural resources in the area	
Strategic Environmental Assessment (SEA) and Preparatory Survey for the Olkaria Geothermal Power Project	SEA was undertaken for the 2nd Olkaria Power Project in 2015 by the Kenya Electricity Generation Company (KENGEN). The objectives of the Power Project were to; 1. Diversify sources of energy in order to minimize the over reliance on hydro and thermal sources of energy. 2. Mitigate against climate change via reduction of greenhouse gas emissions. 3. Reduce import bill in the long term by saving on money used to import expensive fossil fuels. 4. Earn revenue for the company and the government. 5. Create employment opportunities. 6. Promote direct uses of geothermal heat and 7. Generate least cost power that will make Kenyan economy competitive.	The Naivasha Master Plan has taken into consideration the KENGEN SEA findings with an aim of incorporating the aspect of use of the green geothermal generated electricity.
The KENGEN Industrial Park	KenGen has completed plans to set up a 453ha Industrial Park at its geothermal power generation hub at Olkaria-Naivasha, Nakuru County in order to take advantage of the	The Naivasha Master Plan has a component of an administrative office at site, these will be ideal for managing various industrial

	competitively priced geothermal steam and electricity as key economic drivers of production. The park will provide industrial, commercial and recreational facilities and will be developed in two phases, the completion of the first phase planned by 2022. The park is strategically located along regional transport routes with access by road and rail. The park will provide quality and reliable utilities and energy supply (Electricity, high pressure Steam and Brine at 130°C) which will be managed through an appointed developer who will develop infrastructure for a plug and play environment. Under the lease, the manufacturing/processing firms (locators) will be supplied with utilities such as geothermal steam and brine (hot water) as well as raw water. The project will comprise of; • Construction of manufacturing units • Construction of warehouses • Construction of an administrative space • Construction of parking and related infrastructure	parks within the region that may be interested running them under SEZ Programme.
National Biodiversity Strategy and Action Plan, 2000(GoK,2000)	The management plan is expected to support the following national environmental strategic actions:- Other Activities -Adopting best practices in conservation and management of natural resources	This SEA report and the proponent (SEZA) have identified measures to improve biodiversity in the area through measures such as conserving the riparian reserve, wildlife and landscaping.

Table 4: The results of the comprehensive PPP analysis

CHAPTER 4

ENVIRONMENTAL ANALYSIS

4.0 BASELINE

4.1 Socio-Economic Baseline

4.1.1 Infrastructure Services and Utilities

For the SEZ to function effectively and as planned it will require adequate infrastructure services and amenities. The site is prone to floods and this is properly captured in the master plan. There is need to consider having measures beyond the site to ensure that storm water from the site does not cause more erosion outside the SEZ boundaries. Circulation of water and reuse of treated water for maintaining green areas should be integrated in the design and implementation of the project.

A project being implemented by Naivasha Water & Sewerage Co. Ltd targets to supply 9,000 cubic meters of water per day to SEZ. Five boreholes have already been sunk in Naivasha town and the water supply pipeline is being laid from Naivasha to Mai Mahiu. The project plans to also supply water to communities along the supply line.

There is need to explore more water sources to safeguard L. Naivasha from over abstraction. Proper studies need to be commissioned to determine the total domestic, ecological and commercial water demands in this area. Proper planning needs to go into guarding against pollution and overexploitation of its natural resources from the lake.

There is provision for a power sub-station in the site and the master plans mentions plans to integrate green energy into the development. Recommendations in this SEA are to integrate suitable green energy such as solar into the designs of the buildings during construction.

The site is well connected to transport and communication networks. It is connected to the Suswa-Narok Road, Nairobi-Nakuru Highway, the Standard Gauge Railway (SGR) and the Inland Port. In addition, railway connection to Longonot meter gauge railway is ongoing. There are plans underway to widen the Mai Mahiu-Narok highway, the dualling of the pipeline road and construction of a connector road from the site to the SGR. This will ensure the project doesn't disrupt the local traffic. The proposal is to provide for Non-Motorized facilities- bicycle lanes and pedestrian lanes as well as bicycle parking facilities within the establishment to promote sustainable transportation in the facility and extend the same to the connector roads outside the SEZ.

Fibre optic connection is in process.

4.1.2 Plan Issues and Alternatives

Based on the planned set-up and operations of the SEZ the key environmental/ sustainability issues have been identified from various sources including a feasibility study, the SEZ Master Plan, A hydrological survey, The Nakuru County Integrated Development Plan, a reconnaissance survey that looked at physical planning matters, a wildlife survey report , and a GIS survey;

4.1.3 Infrastructural Development;

It is expected that the planned SEZ will comprise of different types of infrastructure that will be constructed and operated including warehouses, intermodal terminal, restaurants, residential estate, marshalling yards for trucks, schools, health center, heavy-manufacturing industries, motor-vehicle assembly facility; power substation, sewerage/wastewater treatment plants, and solid waste management plants.

Key negative issues from the construction side include

- Extraction of natural resources;
- Vegetation and habitat loss;
- Increased demand for energy;
- Increased demand for water;
- Increased generation of solid and liquid waste;
- Heightened risk of accidents;
- Increased noise and air pollution;
- Attraction of human population pressure;
- Spread of informal settlements.

4.1.4 Workplace Related

Various cadres industries will be engaged during construction, operation, and decommissioning of these facilities.

Key negative workplace related issues include

- Animosity between imported and local labour
- General unfair labour practices including unfair pay practices
- Employment of minors
- Importation of labour
- Forced labour
- Labour trafficking
- Influx of population seeking employment

4.1.5 Social issues

The Naivasha SEZ is expected to be a mixed-use development with facilities ranging from industries, schools, recreational areas etc. It is envisaged that 24,000 persons will be accommodated at the site, with an additional 6,000 suppliers, clients and service providers. With rapid urbanization and additional income the following key issues may arise;

- Insecurity
- Informal settlements
- Drug and substance abuse
- Rapid rise in population
- Family break-ups
- Rise in cost of goods and services
- School drop-outs
- Risk of accidents and fires
- Under-age pregnancies
- Erosion of culture
- prostitution
- Spread of covid 19

4.2 Baseline Environmental Assessment and Situation Analysis

A baseline environmental assessment and situation analysis was undertaken through a comprehensive ground inspection conducted in the plan area.
The assessment mainly focused on the following:-

4.2.1 A geological and geophysical survey that was undertaken

1. **Transport network**

The project road is in South Rift Region, Nakuru and Narok Counties under corridor Management B. The Project road commences at Mai Mahiu and runs in a southerly direction to end at Duka Moja near the SGR Bridge. The total length of the road is approximately 45Km

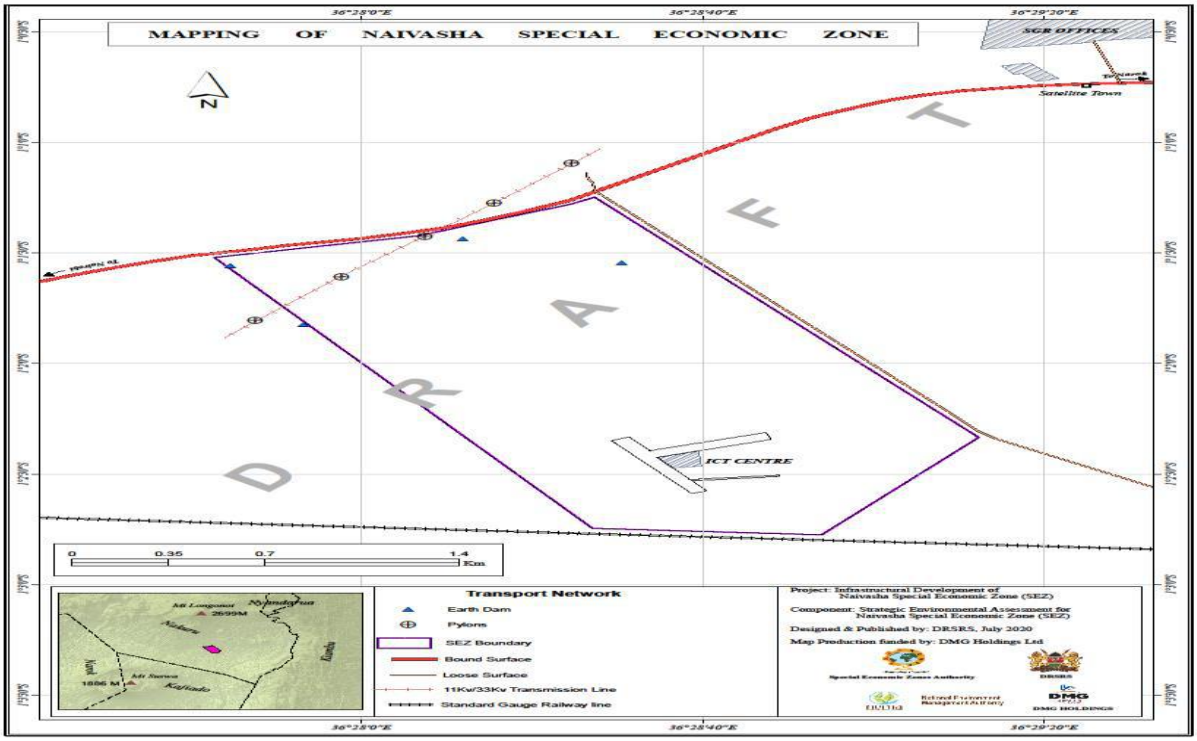


Figure 8: Transport Network adjacent to Naivasha SEZ

1a. Risk Analysis transport network

Geology: - The concept of risk can have a different interpretation according to the context in which it is considered (e.g. economic, environmental, and social). This report considers "Geological risk" as the product of the probability of road cut-offs occasioned by geological factors and the attendant consequences. The findings from the Geophysical Study conducted by Moti Consultants Ltd confirmed that there are numerous. Permanent subsurface drainage tunnels (Pyro ducts) passing water under the road at different levels during rainy Seasons.

Figure 9: Geological risks analysis along transport network

Pyroduct observed at Km5+500 after the collapse of the embankment on 5th May 2020. Sinkholes e.g.Figure1, and surface cuttings observed on the surface in this area are as a result of subsurface erosion of these tunnels which when they collapse form continuous depressions on the ground including where these crosses the road. These tunnels are formed within ash beds and pyroclastic layers, which are prone to subterranean erosion. Depending on the depth of these tunnels, when the roof collapses, a long trail of huge cracks/caves are left on the ground surface.

Flood risk: - The area is prone to flooding, along the stretch between Mai Mahiu and Duka Moja, specifically at Km4, Km14, Km17, Km23, and Km28, debris dominated by detrital (gravel and silt) are a nuisance, blocking flood flow reaching any drainage structure. Flash floods typically carry with it floating as well as submerged debris which blocks existing drainage structures and overtops the carriageway, thus blocking the passage of traffic completely during these episodes. Furthermore, the mudflow has had a detrimental effect on protection works done to protect the roads embankment. A case example is Km16 where after the erosion of the embankment and subsequent protection with gabions, the recent rains have not only washed away the gabions but have worsened the embankment of the road.

Land use management and spatial planning is a key tool in flood risk management and this is in order to integrate the assessment and management of flood risk into the planning system. The Guidelines indicate that Flood Risk Assessment (FRA) should be integrated with the SEA process. FRA should be undertaken as early as possible in the process so that the SEA is fully informed of the flood risk and impacts of a proposed development, zoning, etc. Regional Authorities and Local Authorities must now undertake FRA in the preparation or amendment of land use plans. At Development Plan stage it is necessary to conduct Strategic Flood Risk Assessment (SFRA). The information contained in the SFRA will ensure that specific catchment information can be integrated into Local Area Plans, where flood risk associated with existing land use zoning and proposed zoning must be examined. SFRAs identify five zones with flood top zone having the highest probability of flooding and therefore posing the greatest risk to life and property, etc.

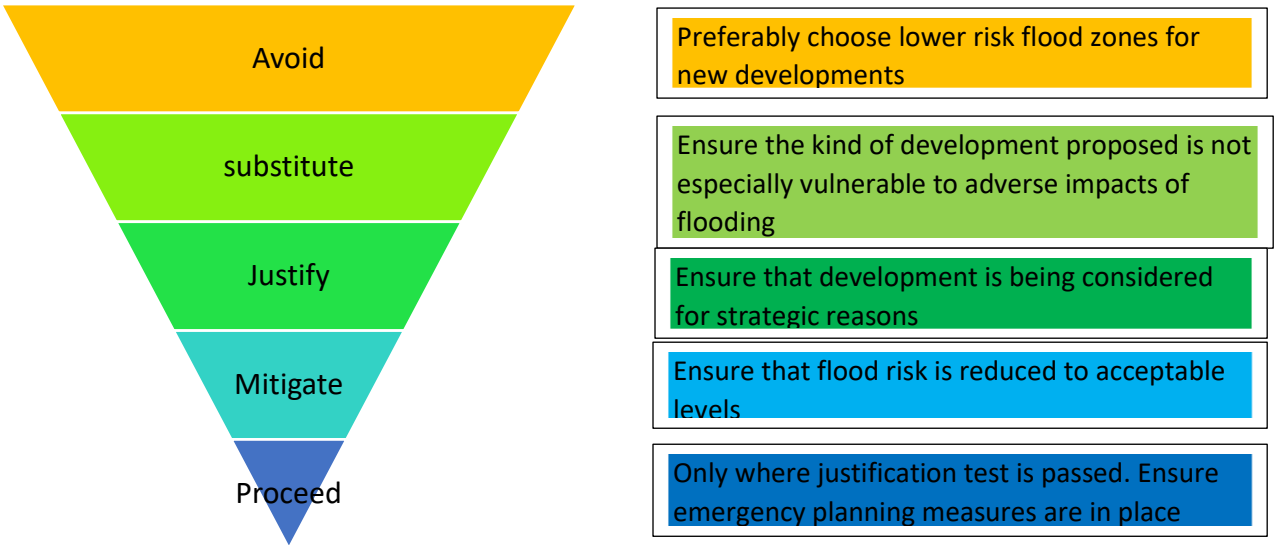


Figure 10: Assessment and management of flood risk into the planning system

Figure 11: Previous Impacts from floods in the adjacent areas

4.2.2 Environmental Baseline [7]

The Lake Naivasha Basin area is approximately 3, 400 km ^{2} lying in the Eastern Rift and extending into the Mau escarpment to the West and the Aberdare Ranges to the East. The Eburru hills to the North East. The Lake basin has immense socio- economic and conservational benefits which support over five hundred thousand people. Proceed

Ecological Principles: - Ecological principles are of particular importance when conducting environmental assessments and considering biological diversity, flora and fauna in SEA, EIA and AA. While biodiversity, flora and fauna are individual topics to be addressed in SEA, they are numerous interrelationships

[7] Lake Naivasha Basin Integrated Management Plan 2012-2022

with other topics such as water, human health, landscape, soils, air and climate. The following offers an overview of some of these important concepts.

Precautionary Principle: The 'precautionary principle' in essence is about determining risk and taking preventative action, in order to protect the environment. It is fundamental to SEA and other environmental protection legislation and must be considered if potentially adverse environmental effects are identified through an evaluation of available scientific data or if there is sufficient scientific uncertainty.

Ecosystems: Ecosystems develop through the interaction of abiotic (non-living) and biotic (living) elements in the environment, where climate, geology, soil and hydrology (abiotic factors) both support and limit biotic communities (flora and fauna including plants, animals and microorganisms). There is a wide variety in the types of ecosystems on earth and ecotones are the transitional areas between ecosystems, exhibiting characteristics of both ecosystems (e.g. an area between a woodland and grassland);

Biodiversity: Bio (logical) diversity is the variability among living organisms. It includes diversity within and among species and diversity within and among ecosystems. Biodiversity is the source of many ecosystem goods, such as food and genetic resources, and changes in biodiversity can influence the supply of ecosystem services.

Ecosystems Services: Ecosystem services are the benefits people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as flood and disease control; cultural services such as spiritual, recreational, and cultural benefits; and supporting services, such as nutrient cycling, that maintain the conditions for life on Earth. However, this is based on a few key examples and omits the cost of waste assimilation, aquatic biodiversity and benefits to human health

Ecosystems Approach: The Ecosystem Approach is the primary framework for action under the Convention on Biological Diversity and is defined as a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. It is based on the application of appropriate scientific methodologies focused on levels of biological organization which encompass the essential processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of ecosystems. This approach will be implemented over time in management practices in relation to key ecosystems.

Green Infrastructure (GI): is a relatively new term which seeks to increase the tangibility of 'ecosystems services' and refers to an interconnected network of green space that conserves natural ecosystem values and functions and provides associated benefits to human populations. It can assist in halting the loss of biodiversity and decline in ecosystem services.

Biome: A biome is a grouping of all terrestrial ecosystems and landscapes of a similar type (which are largely determined by climate and geography).

Biosphere: The biosphere contains all biotic and abiotic elements on the earth which function as one unified ecosystem. Figure 14 outlines key components of the biosphere.

Landscape and Landscape Management: In ecological terms, a landscape is a group of ecosystems interacting together. Recognized ecological approaches have the potential to facilitate long term management of our landscapes. Landscape ecology is a discipline which 'links natural sciences with related human sciences and human activity with landscape pattern, process and change and its impacts.

Much like the way people move around in a network of roads and pathways, there must be linking routes between habitats to allow species to move around and continue their normal activities and functions. If habitats become isolated, fragmented or reduced to a very small size the habitat and species associated with it can disappear. The more linkages between habitats and the bigger and less fragmented they are, the greater the likelihood that a species will survive and movement of species occurs, ensuring the genetic wellbeing of species. Different species require different sizes and extents of habitat (e.g. a butterfly might need a small area of a particular habitat but a fox may need many miles of varying habitats).

Landscape ecologists describe landscape in terms of its three main components, which are 'matrix', 'patches' and 'corridors'

Policies in land use plans can be used to improve the ecological coherence. This can be achieved by encouraging the management of features of the landscape such as linear rivers, river banks, field boundaries, or stepping stones such as ponds or woods which are of major importance for wild flora and fauna and essential for migration, dispersal and genetic exchange of wild species.

'Stepping stones' refer to areas of suitable habitat which are located close to similar areas of suitable habitat. So in between the 'suitable' habitat areas is 'unsuitable' habitat such as built ground, etc. The closer the stepping stones are to each other, (i.e. the shorter the distance between areas of suitable habitat) and the larger the size of suitable habitat, the greater the likelihood

that species richness will be maintained and localized extinctions will be prevented.

'Patches' or 'stepping stones' should be as big as possible to ensure that inner habitat remains unaffected by the edge of the area (that is, a bigger inner area to outside edge ratio is preferable). The size of area needed will depend on the type of species resident there but they need to be able to move around freely to encourage good species diversity. Species within patches that are smaller and have extensive 'edge' areas face encroachment by predators and invasive alien species. In fact the shape of patches is also important as round shapes have less external edge than other shapes such as rectangles.

Continuous interactions occur in landscapes with many species depending on a variety of habitats for their life cycle functions (for example, food, shelter and breeding). As there are many different species, they 'travel at different scale levels constructing their own pathways and their own. For example the movement of a fox will be at a very different scale to that of a butterfly.

Habitat 'insularisation' is a major concern for biodiversity conservation. The term refers to the combined effects of 'habitat reduction, fragmentation and isolation. It refers to the disturbance (usually by humans) of large areas of previously untouched habitat. The effects of fragmentation should be considered in terms of what is being fragmented, the scale, extent and pattern of fragmentation and the mechanism for fragmentation. While Figure 24 could represent a landscape, e.g. a managed agricultural landscape common in Ireland, but it may result in limited resources for certain species, lower occupancy (fewer numbers of a species) and will affect reproduction and survival. Fragmented habitats are common in landscapes and connectivity between fragmented patches is critical to Ecological Networks,

Landscape Ecological Applications in Man-Influenced Areas: Linking Man and Nature Systems.

The Guidelines place an emphasis is on 'where development can be facilitated' and the 'visual impacts' of development on landscapes. There is an opportunity to apply enhanced ecological considerations to LCA in terms of maintaining ecosystem services and green infrastructure.

Biodiversity and Climate Change: Importance of maintaining robust ecosystems and biodiversity in order to mitigate the effects of climate change.

4.2.2.1 Physiography

The physiography of Lake Naivasha basin is characterized by steep slopes in the Aberdare Ranges and Mau escarpment and gently undulating land in the

Kinagop Plateau. The regional physiography comprises of four topographic zones, namely;

1. The lacustrine beds
2. The Rift Valley Floor
3. Rift Plateaus
4. The Rift Escarpments

4.2.2.2 Climate

The basin is dominated by a semi-arid environment in the lower catchment and has only a narrow semi- humid zone in the upper catchment. The rainfall is bi-modal and is distributed between the two rainy seasons in April- June (long rains) and October- November (short rains). The rainfall is of considerable variation with between 1000- 1500mm/year in the upper catchment and less than 800mm/year in the Rift floor.

The mean annual temperature in the basin varies with altitude ranging from 25^0C on the shores of the lake, to 16^0C in the Aberdare Mountains

4.2.2.3 Soils

The soils in the basin are configured by the geo-pedologic and landscape profile. The rift floor is characterized by lacustrine sediments that accumulated during the ancient Gamblian lakes in the Pleistocene period. These soils are mainly composed of re- worked volcanic ash and pyroclastic deposits. They are deep loams of greyish to brown colour which are either slightly saline or sodic and non- calcareous. . At the edge of the lake the soil is less alkaline and more liable to cracking during the dry season and characterized by high levels of exchangeable sodium and potassium ions. The Kinangop plateau is characterized by an assortment of humic planosols, verticals, andosols and phaeozens while steeper areas towards Ol Kalou are dominated by lithic leptosols with nitosols and luvisols in a few pockets.

4.2.2.4 Vegetation

The upper catchment areas of the Naivasha basin have several upland forests which include the Aberdares, Kipipiri, and part of the Mau East. These forests form very special areas providing water that supports diverse habitats, livelihoods, and economic sectors.

The Aberdare forest is tropical montane forest and hosts a rich diversity of over 778 plant species including the Meru Oak. The dominant Species are cedar,

stinkwood, rosewood, podo, and camphor. The vegetation descends from the area below the Aberdares National Park consisting of afro- alpine forest, down to the afro- montane forest composed of indigenous bamboo and cedar. The vegetation declines sharply in the densely populated areas.

The Uburru and Ol Turoto forests host indigenous hardwood forests. The vegetation consists of a wide variety of species such as acacia, dombeya, podo, and bamboo. On the Northern side the vegetation is characterized by open scrubland dominated by *Crotalaria agatifolia, Abutilon mauritianum, Tarconanthus camphoratus, Nuxia congesta,* and *Dombeya torrida*. The vegetation is strongly influenced by altitudinal gradient from the hilltops to the valley bottoms, with bamboo and *Podocarpus* at higher elevations, *Prunus Africana* and *Lobelia gibberoa* in exposed sites.

The natural vegetation around the lake is dominated by the 'yellow fever' tree (*Acacia xanthophloea*), *Euphorbia candelabrum*, and the fire-resistant *acocantheri schimperi*. Several other acacia species are common in the lower catchment including *A. drepanolobium*, *A. seyal* and *A. nilotica*. Which are often inter-mixed with the leleshwa bush. The common grasses are *Themeda triandra* and *Cynodon plectostachys*. The lake edges have a complex vegetation of terrestrial and water tolerant wetland plants due to frequent changes in water levels. The littoral zone is characterized by papyrus swamps.

4.2.2.5 Population

Naivasha has an area of 1685km^2 with a population of 355, 383 with a population density of 181[13].

The Limits of Acceptable Change will be defined by Kenya National Legislation and standards such as those under the Environmental management and Coordination Act; the Occupational Safety and Health Act among others

4.2.2.6 Land Use

The proposed site is a green field and is located in uninhabited part of the country, save for the upcoming Dry Port. The nearest town is Naivasha town and the Mai Mahiu trading centre. The master plan for the Special Economic Zone proposes a comprehensive mixed used development model that comprises of the following land-uses:

- ICD and Logistics Hub – 120 Acres
- Dry Ports for Partner States – 50 Acres
- Land Bank for future partner states – 45 Acres
- Land Bank for Government of Kenya Future Development – 90 Acres
- Business Centre, Services and Logistic Offices – 26 Acres
- Marshalling Yard and Auxiliary Services – 8 Acres
- Heavy Industrial Zone- 154 Acres

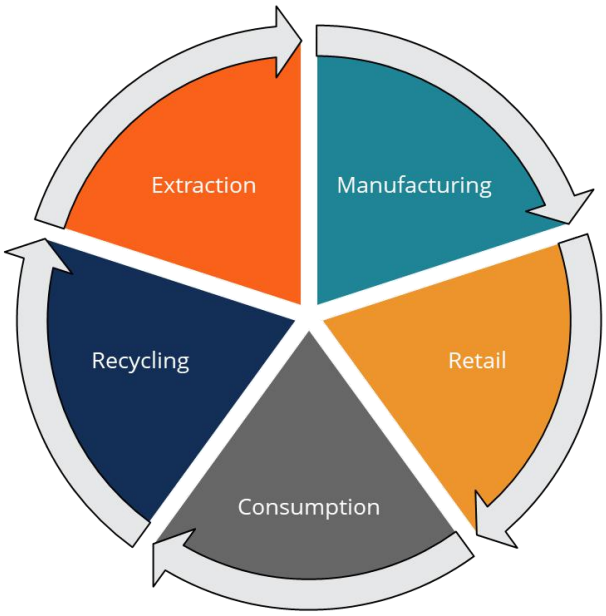
- Light Industrial Zone – 88 Acres
- Residential zone and Supportive amenities – 63 Acres
- Green Buffer Zone with jogging and surveillance track – 92 Acres
- Waste Water Treatment Plant
- Power Substation

The master plan is comprehensive and has made provisions for mixed land-uses. There is a seasonal stream cutting across the site and a canal has been proposed in the area passing through the heavy industrial area.

The idea is to ensure that the natural water body is not polluted by the heavy industries to be set up. We note that one waste water facility has been proposed on the site and a further proposal that all heavy industries in the site to have onsite treatment before releasing waste water into the main plant. Water from the treatment works can be pumped into a storage tank. A site for this will be provided during implementation and the treated water used for maintaining the green buffer zone. SEZA should look into tapping from the expertise and experience of institutions such as Egerton University among others in establishing the buffer zone.

Whereas there is clear provision for waste water treatment, the master plan is not explicit on solid waste management. With the new approach on circular economy, the Government of Kenya should consider setting up a solid waste management facility that caters for recycling, composting of biodegradable waste, incineration or landfill facility. This will ensure that the development is self-reliant and is not burdening the County Government of Nakuru with waste management issues.

A circular economy is an economic model designed to minimize resource input, as well as waste and emission production. Circular economy aims to reach the maximum efficiency in the use of finite resources, the gradual transition to renewable resources, and recovery of the materials and products at the end of their useful life. Moreover, it targets to rebuild all available types of capital, including financial, human, social, and natural. Essentially, a circular economy describes a regenerative economic system



A circular economy is an alternative to a linear economy which is based on a take-make-dispose model. The proponents of this economic model believe that it is a viable option to achieve high levels of sustainability without diminishing the profitability of the business or reducing the number of available products and services.

The site is located in close proximity to Naivasha town which offers high level services such as medical, financial, commercial and hospitality. The Master Plan provides for low, middle and high level housing to cater for the various workers on the site. For visitors requiring accommodation they can easily access facilities in Naivasha town. However, there is need to factor in low cost accommodation facilities for drivers who may need temporary accommodation or washroom facilities while using the facilities at the SEZ. This could be provided in the truck park or in the commercial centre. There is need to factor in small commercial facilities such as retail shops, grocery stores and small service such as barber shops within the residential establishments to ensure they are formally developed and residents have convenience. Higher order goods and services can be located in the commercial and logistics centre.

The buffer zone provided is ideal to provide a natural buffer of the SEZ and surrounding areas. During the project implementation it will be necessary to extend the buffer or green zone around the residential area to create a buffer between the industrial and residential zone.

There is need to see if the size of this buffer zone can be increased. Plot owners will be advised to green their land to ensure green area coverage is increased.

Whereas a hospital is provided for, the Master Plan negates the need for mortuary and cemetery services. This can be provided in liaison with the County Government while planning for the area around the SEZ.

Overall, there is urgent need to plan and formulate land-use zoning guidelines for the immediate area surrounding the proposed SEZ and the Naivasha Dry Inland Port. The SEZ and the Port will attract developments around the area and if not properly planned the developments could compromise the functionality and safety of the SEZ.

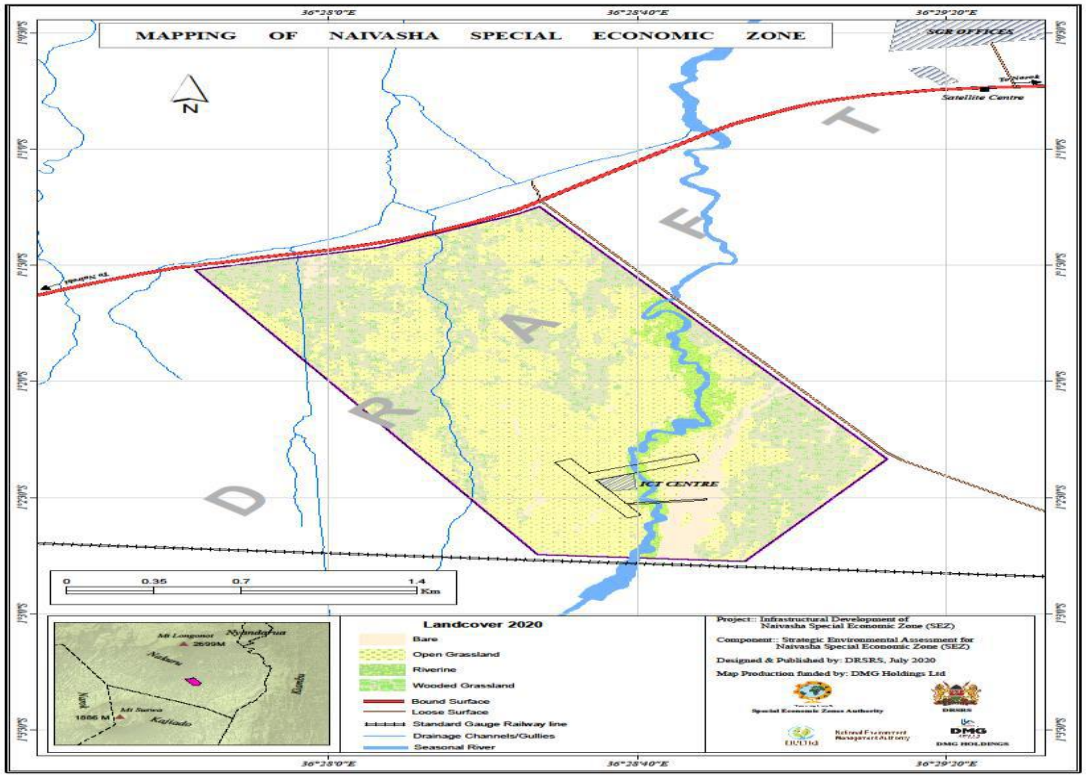


Figure 12: Land cover 2020 of Naivasha SEZ

4.2.2.7 Land Degradation

The area lies on a low open area prone to wind abrasions; heavy flooding; and sun scotches due to the dry season occasionally experienced. Degradation renders the land incapable of having the potential for better economic production activities. Naivasha has been categorised to surfer from Medium, High and Very High degradation levels.

This has been attributed to lack of proper land use management, human economic activities, animal interferences and lack of adequate land conservation measures to mitigate the situation.

Types of degradation in the area include:

a) Biological/Vegetation degradation (loss of biodiversity/vegetation) – Is the reduction of the vegetation cover, loss of vegetation species and habitats, and a decline of biomass. It is typified by assessments of land use/land cover changes.
b) Soil erosion by water - The loss of top soil due to runoff or overland flows. It is identified from loss of topsoil by water, gully erosion, landslides in highland areas, and riverbank erosion. Water erosion is the most common type of erosion in Kenya,
c) Wind erosion - commonly associated with denuded lands which are prone to strong winds and light soils.
d) Water resources degradation - includes processes such as change in quantity and quality of surface water, acidification and drop in ground water level. It also includes systematic decline in soil moisture content.
e) Chemical degradation - the negative change of the chemical properties of soil. It is manifested in soil fertility decline & reduced organic matter content, leaching, nutrient mining, acidification /lowering of the soil pH, soil pollution by pesticides, industrial effluents and soil contamination with toxic material, salinization/ alkalinisation which causes a net increase of salt content of (top) soil leading to a productivity decline.
f) Physical degradation – includes loss of natural or aesthetic physical conditions of the land e.g. from quarrying, mining, scarification, soil compaction, sealing and crusting: clogging of pores with fine soil material and creation of an impervious soil surface layer obstructing rainwater infiltration.

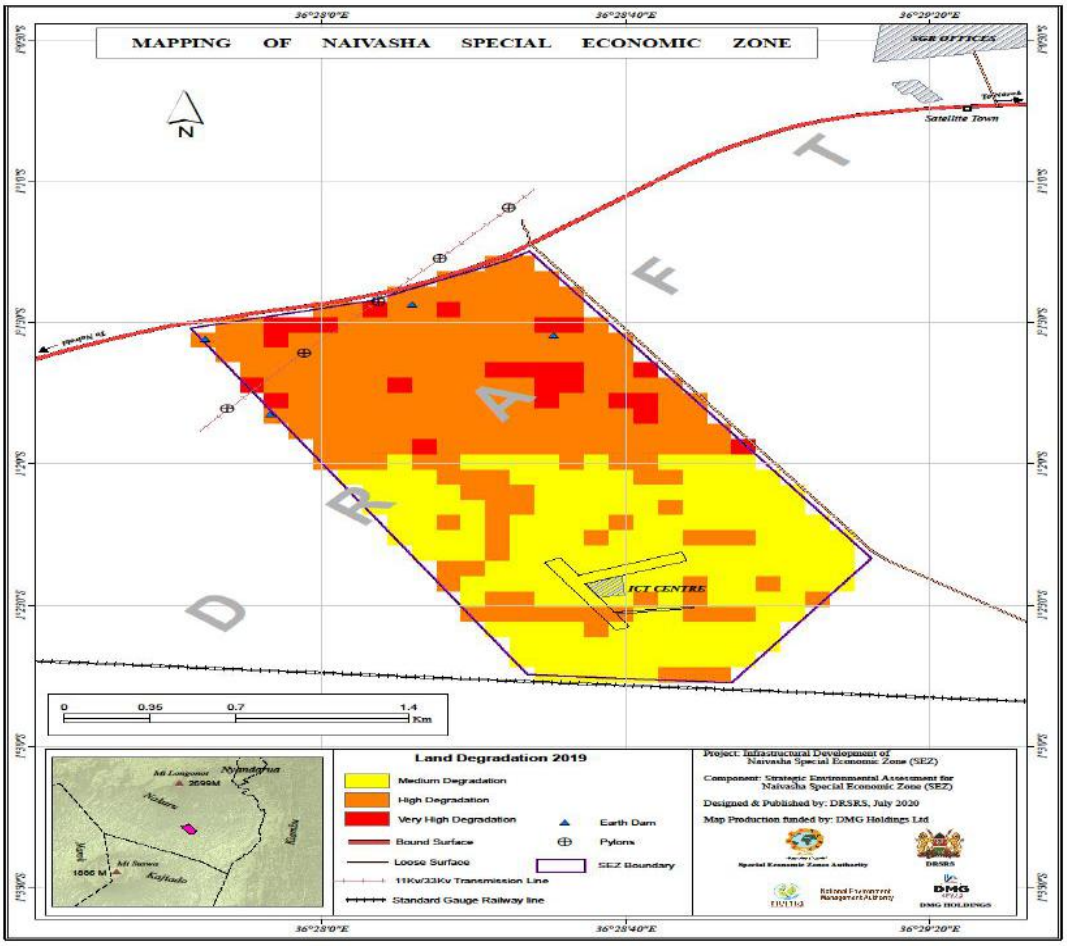


Figure 13: Land degradation 2019 of Naivasha SEZ

4.2.2.8 Hydrological Survey

The area comprises of man-made dams, drilled boreholes, seasonal rivers and storm drains whenever it rains and Lake Naivasha as the sources of water supply. Lake Naivasha basin is situated in the Kenyan Rift Valley at a latitude of 0°09′ to 0°55′S and a longitude of 36°09′ to 36°24′E. The maximum altitude is about 3990 m above mean sea level (a.m.s.l.) on the eastern side of the Aberdare Mountains, and the minimum altitude is about 1980 m a.m.s.l. data from three major sub-catchments of the Naivasha basin were obtained from the Water Resources Management Authority (WRA) of Kenya.

Most of the gauging stations started recording the flow levels consistently from around 1960 onwards. Water level readings were converted into discharges (m 3 s À1) using rating curves based on high flow and low flow measurements performed by the WRA and its predecessors between 1958 and 2010 data were obtained from the Kenya Meteorological Department.

Ten key rainfall stations within the basin that had data from 1957 to 2010 were chosen for this study Gilgil River, the third largest contributor to the lake, showed a nearly doubling of the annual discharge recorded at station 2GA03 between 1987 and 2010. Abrupt shifts (top) and posterior probability distribution (bottom) of the mean, maximum and minimum annual precipitation, as well as for the months March/April/May/June and the months October/November/December, respectively, at station 9036272 located at the Turasha sub-catchment Abrupt shifts (top) and posterior probability distribution (bottom) of the mean, maximum and minimum annual runoff, as well as the annual runoff in the months March/April/May/June and the months October/November/December, respectively, for the Gilgil River sub-catchment (at station 2GA03) ... TRENDS AND VARIABILITY OF LAKE NAIVASHA abrupt change was due to sudden periodic increases in the minimum and seasonal flows an Integrated Water Resource Allocation Plan (IWRAP), for catchment-wide use of surface and ground waters.

On smaller scales, successful case studies have demonstrated practical ways forward – a Payment of Ecosystem Services (PES) programme in one sub-catchment has reduced upper catchment erosion; restoration of small dams in another has provided more reliable and cleaner rural water, flood retention and enhanced biodiversity; around the lake, promotion of artificial wetlands that now treat effluent waters from about half the horticultural enterprises.

Recently, proposed new "mega-projects" by both the National, and the Nakuru County Governments have brought uncertainty upon the future state of the lake and its catchment.

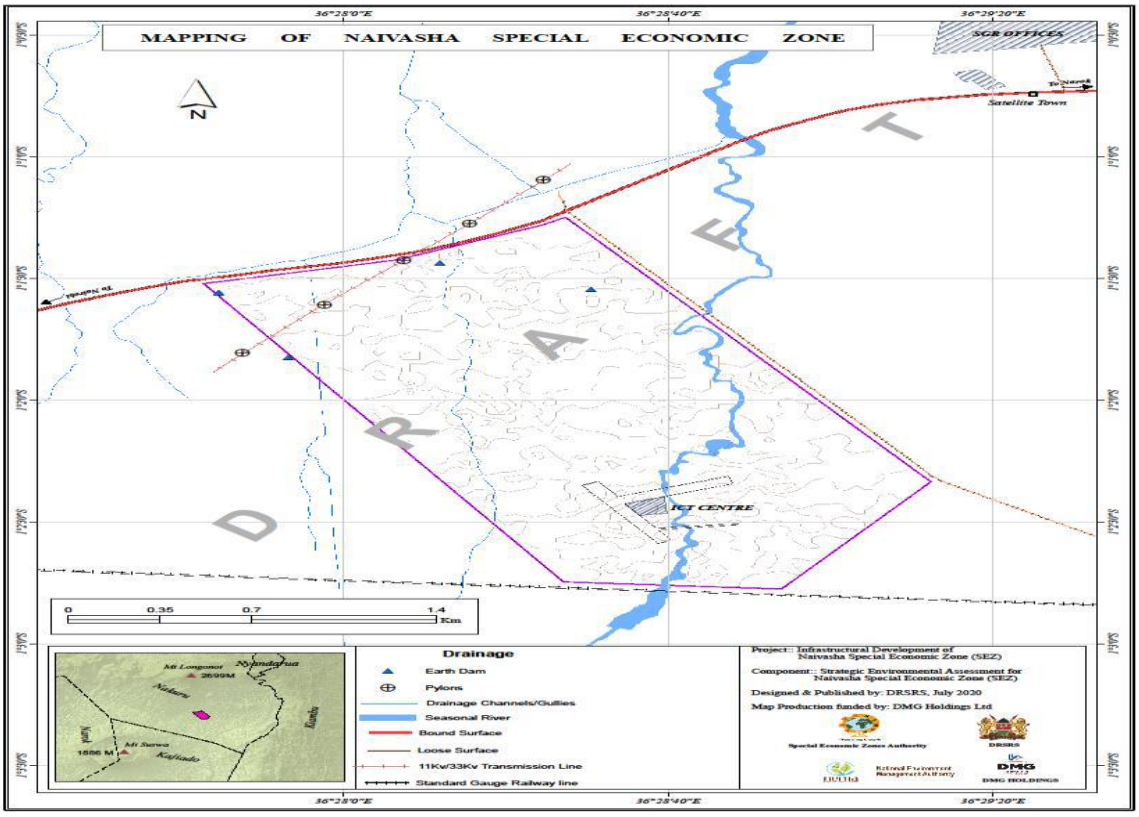


Figure 14: Drainage system in Naivasha SEZ

4.2.2.9 Wildlife Survey

The basin has quite a rich and diverse mammalian fauna. The Aberdares National Park has the richest biodiversity base. Some of the animals in the park include elephant, black rhino, mountain bongo, the giant forest hog, red duiker, and various rodent species. Some carnivorous animals in the area include leopard, civet cat, genet cat, hyena and side- striped jackal. In addition the forest has abundant bushbuck, mountain reedbuck, waterbuck, Cape buffalo, and eland. The park has abundant primates including black and white *colobus* whose ranges extend all the way from Aberdares to Lake Naivasha, especially along river courses like Malewa.

The Aberdare is also an IBA with over 250 species of both endemic and migratory bird species. These include alpine chat, crowned eagle, the rufous-breasted sparrow- hawk, African black duck, gold- winged sunbird, silver-cheeked hornbill, and white-eyed slaty flycatcher with some endangered species like the sparry hawk, Jackson's Francolin, eagles, goshawks, plovers and sunbirds among others.

Some of the threatened species include African green ibis, crowned eagle, and long- tailed widowbird. The forest has a number of reptile species and insect life, as well as amphibians and fishes in the aquatic environment. The middle

catchment is in form of a plateau known as Kinangop that was once rich in plains game but land-use changes have led to a decline in wildlife numbers. However the plateau is still rich in birdlife and has been identified as an IBA

The lake basin has a wide variety of bird species, both resident and migratory and currently holds over 150 species. Various wildlife species are found within and around the lakeshore and its riverine entries. Hippos are the largest fauna in the riparian zone, followed by ungulates such as antelopes, buffalos, waterbucks, zebras, giraffes, and elands.

Lake Naivasha originally contained only one endemic fish species, over 10 fish introductions have been made since1925. Lake Naivasha is a unique Ramsar site which is entirely surrounded by private land.

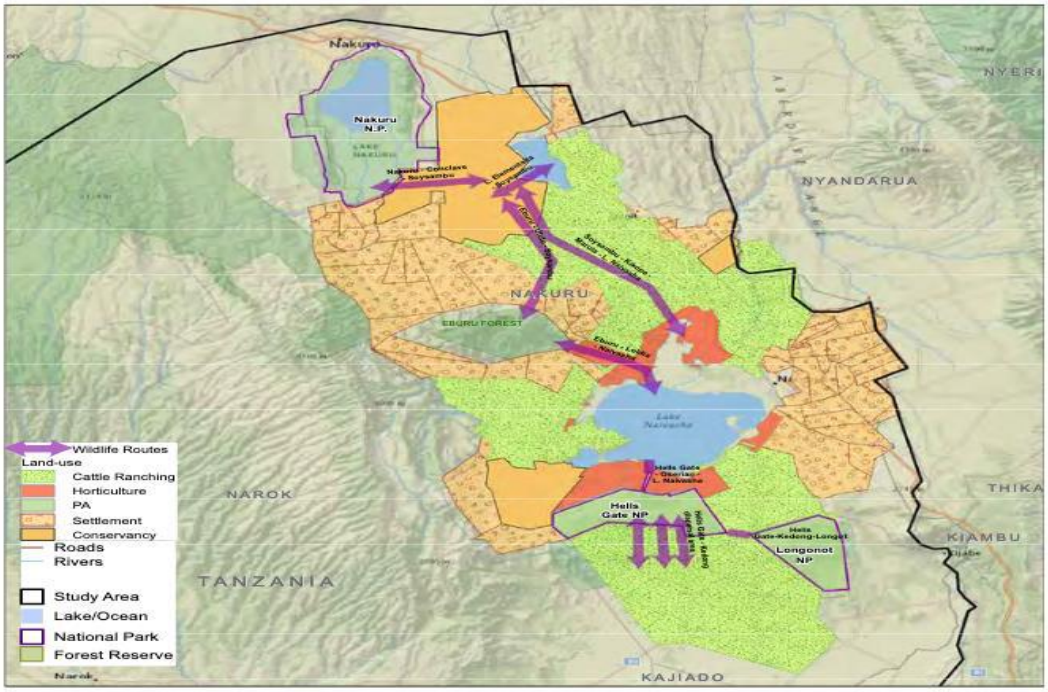


Figure 15: Wildlife corridor in areas adjacent the Naivasha SEZ

a). Wildlife survey in Kedong area

Kedong Ranch is a (semi)operational ranch which serves as a critical wildlife linkage between Hells Gate and Mt. Longonot National Parks, and thus the greater Lake Naivasha ecosystem. Without Kedong Ranch the wildlife in the area would not be viable, and neither the two National Parks (Hells Gate and Longonot) as wildlife refuges. Kedong Ranch extends from the base of Mt. Suswa in the south to the Moi South Lake Road skirting Lake Naivasha. The Mt. Longonot and Hell's Gate National Parks form its eastern and western boundaries respectively. The ranch is not fenced (since 1989) and has long served as a vital dispersal area for wildlife inside and outside the National Parks. Thus critical in sustaining wildlife population both inside and outside the park.

Hells Gate relies heavily on Kedong Ranch especially during drought as a wildlife refuge and transition zone.

b). Wildlife Species on Kedong Ranch

Previous survey on the ranch have encountered the following critical species for conservation:

Animals found on the ranch

African hare	Crocodile	Hyrax	Oryx	Spring hare
Baboon	Dick-dick	Impala	Ostrich	Steinbuck
Bat eared fox	Duiker	Jackal	Porcupine	Thompson's Gazelle
Buffalo	Eland	Klipspringer	Python	Warthog
Bushback	Giraffe	Kongoni	Reedbuck	Waterbuck
Bush pig	Giant Gazelle	Lori Bustard	Secretary bird	Wildbeest
Colobus	Guinea fowl	Leopard	Serval cat	Common Zebra
Crocodile	Hyena	Maasai Ostrich	Side-stripped Jackal	

Table 5: Wildlife Species in Kedong Ranch

Birds too usually use the Ranch though not often and include:

Ruppels Vultures
Steppe eagle
Augur buzzard
Common fiscal
Superb startling

Table 6: Bird Species in Kedong Ranch

c). Past Wildlife Concerns in the Area

- The continuing expansion of agriculture threatens many wildlife corridors, particularly Kedong ranch between the Mt. Longonot and Hell's Gate NPs.
- An increasing human population, urbanization, industrialization (thermal energy generation, rain-fed crop cultivation, irrigated horticulture, and fences.

- Over the past two decades, rapid land-use changes have resulted in agricultural encroachment on natural habitats, deforestation, over-grazing, logging, and the burning of charcoal.
- Sub-division and selling small parcels of land to individual title holders. Infrastructure expansion (power lines, roads, railway lines etc.)

4.2.2.10 The Rift Valley Fault line

It is important to note, as was pointed out in the geological survey that the site is still on a geological fault line within the Rift Valley. There is no conceivable way to mitigate for this kind of factor but relevant agencies need to continue monitoring seismic activities in this location

	Issue											
Strategic action	Excess water abstraction	Pollution	Loss of biodiversity	Human-wildlife conflict	Poor waste management	Population pressure	Unplanned settlements	Value addition	Gender issues	Climate change	Flood risk	traffic
Naivasha SEZ	✓	✓	✓	✓	✓	✓	✓	✓	o	o	✓	✓
Nakuru County Integrated plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lake Naivasha Basin integrated plan	✓	✓	✓	✓	✓	✓	✓	o	✓	o	o	o
The Hell's Gate- Mt Longonot Ecosystem Management Plan	✓		✓	✓	o	o	o					
Olkaria Geothermal Power Project	✓	✓		✓	✓	o	o			✓		
*The (proposed) KENGEN Industrial Park												

Table 7: Summary linkage of Strategic Actions

Table summarizing linkages of strategic actions

- ✓ Explicitly mentioned
    - o Not mentioned

**- project document was not available*
In addition to the foregoing both the Olkaria Power project and the Hell's Gate Management plans stressed the importance of conserving cultural and aesthetic sites

CHAPTER 5

STAKEHOLDERS' ENGAGEMENT

5.0 STAKEHOLDERS' ENGAGEMENT

5.1 Purpose of the Stakeholder Consultation and Participation

The stakeholder engagement process sought to achieve the following:

1. Inform the stakeholders about the proposed master plan and provide opportunities for influencing/amending the plans;
2. Collect stakeholders' views on the proposed master plan including potential positive/negative impacts associated with the proposed plan and stakeholders' preferred development;
3. Get local knowledge on any sensitive areas within the master plan scope (physical/environmental, cultural or proposed facilities); and
4. Get expert advice on land use/ area zoning, water availability and supply, power and road infrastructure in the area.

5.2 Methodology for identifying stakeholders

Stakeholder analysis: - was the technique used to identify and assess the importance of key people, groups of people, or institutions that may significantly influence the success of the Naivasha SEZ Master Plan.

For the purpose of this SEA study, stakeholders' engagement and the analysis of the outcome from their inputs during the engagement sessions were analysed and their concerns captured in the Master Plan. This was carried out with the intention to allow for the planning of the necessary interventions to reduce negative and enhance positive impacts.

Figure 16: Stakeholder Assessment Steps

Step I.

To begin the stakeholder analysis, a sound understanding of the activities linked with the Naivasha SEZ Master Plan was undertaken. This was done by reviewing SEZ documents, updated log frame and meeting reports;

Step II.

Through analysis of existing institutional framework on national, local and regional levels and communications with SEZA and NEMA, a map of stakeholders was developed. They were classified based on their power, role and interest in the SEA process related issues. For this purpose, the Influence /Interest Grid tool (Figure 1Figure 17) was used.

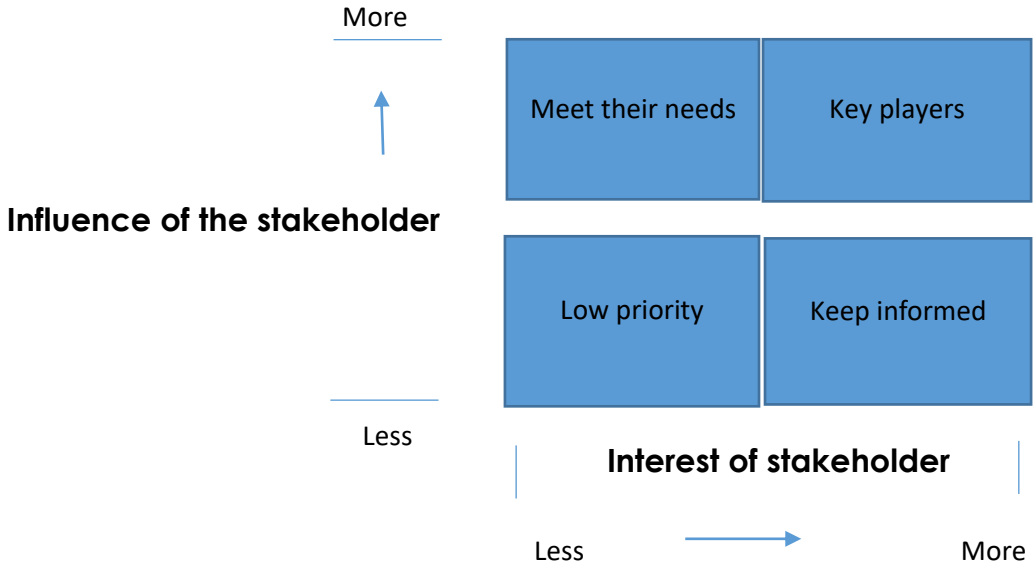


Figure 17: Influence /Interest Grid

Step III.

For the purpose of gathering data, the Stakeholders Meetings were organized in various locations on separate dates appropriate for targeted categories and the groups or entities therein. Representatives of stakeholders identified during Step II were approached to identify:

i) the priority sectors for the SEA study coverage,
ii) relevant sectoral agencies and potential partner agencies;
iii) Challenges and opportunities for the proposed SEA study on the proposed Naivasha SEZ Master Plan.

Step IV.

For the analysis, all project stakeholders were classified within five broad categories and specific issues identified. The findings are reported in the Results section of the Master Plan.

Step V.

The results of the analysis was presented in a comprehensive final SEA Study Report which examines all the aspects related to the identification of the stakeholders' benefits due to positive impacts, raised concerns on negative impacts and the required interventions to be incorporated in the plans and policies of the proposed Naivasha SEZ Master Plan.

Interviews were used particularly in engaging the technical stakeholders on specific issues such as water, power and transportation.

A standard public consultation and participation form was administered to the internal stakeholders, and the neighbouring households and institutions to obtain their views, comments and concerns. The filled-in questionnaires are attached as Appendix (A2) of this Report.

A stakeholder meeting was held on 30th July 2020 and 1st August 2020 to discuss the Proposed Plan in detail. The meeting involved both the master plan affected and interested persons including but not limited to technical stakeholders and representatives of the neighbouring communities. Minutes of the stakeholders meeting are attached in Appendix (A5) of this Report.

5.3 Outcomes of stakeholder engagement

The results of general stakeholders' views on the proposed development covering potential positive and/or negative impacts anticipated from the project were derived from the feedback of the interviews contacted and the questionnaires which overly include the following responses:

- Increase in business and employment opportunities as a result of implementation of proposed developments;
- Improved county economy as more industries, goods and services are created from the proposed developments;
- Improvement in Health, Safety and Security as hospitals, schools, shopping malls and security organs come closer to the people;
- Socio-economic development as improved infrastructure and services unlock the socio-economic potential of the area;

- Increased traffic resulting in traffic jams, noise, dust, air pollution and accidents;
- Strain on available water resources from many competing uses;
- Potential increase in air pollution from vehicular traffic, industries and residential developments;
- Changes in land quality and aesthetics as the landscape changes from natural vegetation to urban developed areas;
- Potential rise in insecurity with influx of people into the area;

5.4 Stakeholders Comments, Issues and Concerns

Notably, this is a sample of the responses that were given

Stakeholders	Comments/Issues /Concerns
Asst. County Commissioner	• There is going to be growth of industries around the area which is bound to result into noise pollution, air pollution and increased movement from other areas notably rural to the site. • There is bound to be resistance to the implementation of the program from local communities especially the Maasai who may lay claim to their grazing land. • Likelihood of disruption of the local people's lifestyle due to influx of new people seeking job opportunities hence introduction of new cultural values and norms. • Energy resources could be strained due to increased consumption. • There is need for construction of a garbage dumpsite • Increase in industrial activities will increase employment opportunities • The increase in population will also contribute to increase in insecurity issues. • Increase in household waste disposal due to increase in population • There are few skilled laborers in the area. • There will be a conflict of interest with wild animals living in the area due to encroachment on their habitat. • Land prices will go up due to the high demand that the industrialization will create. • Creation of a micro climate as a result of industrialization

A local resident (Mr. Steven Muiru-MaiMahiu)	• There is need for increased public sensitization • Need for good system to manage drainage, chemical, gas emissions to mitigate pollution. • More schools, hospitals and general infrastructure are required. • Need to prioritize employment of people from the local communities. • Growth of informal settlement
A local resident (Mr.Patrick Mathenge-Satelite)	• Lack of adequate information among the youth on the program • The program will occupy large areas of land, • Pollution from the industries
A local resident (Mr. Saruni Ntete-Maimahiu)	• Un availability of the master plan • Lose of cultural sites • Lose of community cultural rights
A local Resident (Mr. Joel Nkuruna – MaiMahiu)	• Lack of awareness • Loss of land by locals to the industries/new buyers • Wildlife habitats encroachment • It will cause a strain on the natural resources such as water • Increased pollution • Soil erosion
Mr. Joshua Were (KENGEN)	• The Master Plan should consider the coexistence of KIP, SEZA Industrial Park and ICDC. • Factor KIP in the Naivasha SEZ Master Plan • Consider joint infrastructural development including common sanitary landfill for solid waste disposal and sewerage wastewater treatment. • Consider alternative to construct/operate SEZ, noting surface water from Lake Naivasha is not adequate and due to water scarcity in the area it is highly recommended that used water should be recycled.
Nature Kenya	• **Clarification on water sources** – Sorely depending on borehole water to supply the SEZ is a risky affair. There is need to clarify on water sources for the incremental water demand for the special economic zone still remains a major issue which needs to be addressed. The Naivasha ecosystem is generally a water scarce area and a delicate ecosystem where caution needs to be considered in efforts to supply water for the Special Economic Zone. Recommendations are therefore as follows:

	a. Assess the cumulative impacts of various development projects within the SEZ ecosystem and environs on water demand and supply from both underground and surface sources. b. Undertake in-depth hydrological studies to ascertain the real amount of water available. • **Define SEA area of study/Special Economic Zone Impact area** – There is need to define the SEA area of study being the Naivasha Special Economic Zones ecosystem where the cumulative impacts of the project are likely to reach. The area needs to include nearby protected areas of Mount Longonot, Lake Naivasha, Hell's Gate, Mau Forest and Aberdare forest. Note that: a. Water from the Aberdares Range is needed to supply Naivasha town and environs and to maintain Lake Naivasha and its horticultural and tourism industries. b. Water from the Mau Escarpment is critical to maintain the level of Lake Natron, the only breeding ground of the main population of the Lesser Flamingo – considered globally Near-Threatened, and key to Nakuru County's tourism appeal. • **Secure wildlife corridors and Bird migratory Flyways** – The Special Economic Zone ecosystem is within a connected wildlife-rich area. There is need to secure wildlife corridors from blockage due to developments and human settlements. Also considering the project sits within the Rift Valley migratory flyway (from Europe and Asia) with nearby Important Bird Areas there is great risk of collision and electrocution of birds occasioned by increase in powerlines due to increase in power demand. SEA recommendations need to include: a. Adopt avian safety measures in the powerline projects design. All powerline projects need to embrace avian safety measures in their engineering works as per international best practices to minimize impacts of

	powerlines on birds. b. Develop an avian monitoring and reporting system – There is need to develop a continuous monitoring system for powerlines within the ecosystem to identify areas of concern by tracking the specific locations where mortalities are occurring. All data should be regularly entered into a searchable database compatible for use in additional analysis. c. Stakeholders' consultation – It is helpful to work closely with stakeholders in avian conservation to benefit from data and information important for decision-making during project design, avoiding costly retrofitting. Key stakeholders include National Museums of Kenya's Ornithology section, Kenya Wildlife Service and Nature Kenya (the Birdlife International partner in Kenya). • **Investors to mainstream conservation in their work** – Investors in Special Economic Zones need to embrace clean and green production/marketing techniques and support conservation efforts locally and nationally through Corporate Social Responsibility, Payment for Ecosystem Service and other approaches. This will benefit the investors' reputation and ensure our common future.
Lake Naivasha Riparian Association	• Scope of Risk Assessment: It's important to estimate how far the SEZ Master Plan ecological/ environmental Impacts might spread beyond the planning area • There is a higher risk of precipitation of acid rains in years to come, that will come with accumulation of emissions in the atmosphere. Naivasha experiences strong winds every afternoon that blows northwards. The SEZ planning area is located south of the lake and thus it is expected that emissions into the atmosphere will be pushed by these winds northwards and likely pollute the lake ecosystem by means of precipitation. • There is need to use catchment-wide and holistic approaches that consider balancing existing, planned and projected ecological, domestic and commercial water needs and supply options. • The slopes of Mount Longonot are already being decimated by charcoal burning. An increase of 30k population will lead to a need for fuel. There is need to consider alternative forms of fuel than charcoal for

	housing options within and around the industrial park. • A proper Ecological Risk Assessment that covers areas beyond the SEZ planning area be undertaken to help guide the formation of a Biodiversity Action Plan that will clearly state all required Biodiversity protection interventions. This should include assessing wildlife movement in the area of the SEZ, to ensure wildlife crossings on the road etc., is taken into consideration and allow for free movement of wildlife presumably from Ngong/Magadi side to Longonot side etc. • As a mitigation aimed at conserving Biodiversity, the SEA proponents establish a 5km radius 'green belt' buffer in between the SEZ planning area and the two adjacent National Parks (Hell's Gate NP and Mt Longonot NP). Possibly, the land use choice for this belt be zoned for and restricted to ecotourism use. • A Surface water, Groundwater and Aquifer Management and Monitoring Program be set up to ensure sustainable allocation and extraction of water resources within the basin. A proper water balance study be carried out and be used to put up an up to date Water Allocation Plan for the available Surface and Ground Water.

Table 8: Stakeholders Comments, Issues and Concern

5.4.1 Questionnaire score sheet

A random sample of 25 out of the total number of filled questionnaires was taken to analyse respondents' answers on the questions drawn regarding the effects of the Master Plan below

Community and Public participation feedback on the implementation of the Master Plan

	Questionnaire Question	SCORE RATINGS										
		5	%	4	%	3	%	2	%	1	%	Total Score
1	Community and Public Awareness	11	44	9	36	2	8	2	8	1	4	25
2	Possibility of community Involvement in the Master Plan	16	64	7	28	0	0	2	8	0	0	25
3	Benefits of implementing the Master Plan to the community and public	6	13	8	39	8	26	1	13	2	8	25

4	Significant negative impact of the Master Plan	9	36	8	32	5	20	2	8	1	4	25
5	Impairment effects of the Master Plan to cultural heritage sites	8	32	7	28	6	24	3	12	1	4	25
6	Social and economic issues recommended or suggested for the Master Plan	12	48	8	32	2	8	0	0	3	12	25
7	Social economic impacts of the Master Plan implementation	14	56	5	20	1	4	4	16	1	4	25
8	Anticipated concerns on the structural construction in the implementation of the Master Plan	3	12	12	48	5	20	2	8	3	12	25
9	Impact on the natural water resources	15	60	9	36	0	0	0	0	1	4	25
10	Impact on Energy resource	11	44	8	32	5	20	1	4	0	0	25
11	Effects of the Master Plan on increase solid and liquid waste generation, gaseous and noise emission and general pollution.	12	48	6	24	4	16	2	8	1	4	25
12	Increase in employment opportunities	11	44	7	28	7	28	0	0	0	0	25
13	Level of insecurity issues	8	32	3	12	7	28	6	24	1	4	25
14	Effects of the Master Plan in dealing with dangerous social abnormalities	11	44	7	28	4	16	1	4	2	8	25
15	Increase in electronic waste generation	13	52	7	28	2	8	2	8	1	4	25
16	Level of importation of labour and population to the site	17	68	8	32	0	0	0	0	0	0	25
17	Level of human and wildlife conflicts	7	28	7	28	5	20	2	8	4	16	25
18	Level of improved income earning to the local community as a result of	13	52	8	32	1	4	3	12	0	0	25

	the services therein											
19	Effects of the Master Plan on Land Value	16	64	9	36	0	0	0	0	0	0	25
20	Level of risks involved	10	40	8	32	3	12	4	16	0	0	25
21	Loss in aesthetic value of wildlife and biodiversity	11	44	8	32	2	8	3	12	1	4	25
22	Negative environmental impact aspects and concerns	15	60	5	20	3	12	0	0	2	8	25
23	Positive environmental impact aspects and concerns	14	56	3	12	5	20	2	8	1	4	25
24	Anticipated climate change and challenges	17	68	6	24	0	0	0	0	2	8	25
25	Level of the Master Plan address on any possible pandemic including Covid 19	12	48	2	8	7	28	2	8	2	8	25

Table 9: Community and Public participation feedback on the implementation of the Master Plan

Key:

5	**Strongly Agree**
4	**Agree**
3	**Not Sure**
2	**Disagree**
1	**Strongly Disagree**
%	**% of number of responses in favour/against**

5.4.2 Analysis and Conclusion of the effects on the Master Plan implementation during public participation drawn from stake holders' responses (from sampled questionnaires)

5.4.2.1 Analysis

Question No.	Highest % score	Results	Remarks
1	44%	The respondents Strongly Agree that they are aware of the Master Plan.	The Master Plan is a public document and SEZA has put in place mechanisms to enhance awareness by availing the Master Plan information to all stakeholders on its website and at its office including the liaison offices within the National and County governments' department concern with Special Economic investment and activities.
2	64%	The respondents Strongly Agree that the community will play a key role in the implementation of Master Plan.	There is a window to incorporate and open up space for the community to get more involved in the implementation of the Master Plan, via allowing feedbacks including complaints, as well as drawing services that can be offered by the local and countrywide communities through employment and supplies of materials.
3	39%	Agree that the community will benefit from the Master Plan	Master Plan creates opportunities targeting inclusivity in local supply of labour and materials.
		Strongly agree that there is	Negative significant social

4	36%	going to be negative impacts from the Master Plan.	and impacts of the Master Plan are identified and mitigation mechanism is in place. There will be projects' environmental impact assessment done to manage emerging negative impacts during the implementation of the Master Plan.
5	32%	Strongly Agree that there will be a threat to cultural heritage sites by the Master Plan.	The Master Plan considered cultural heritage sites and these will be less interfered with. The site being located for the Naivasha Master Plan is sandwiched between other developments, Maai Mahui - Narok Road, SGR, ICD and fenced Kedong ranch.
6	48%	Strongly Agree that there are social economic and cultural issues that they would wish to recommend for consideration in the implementation of the Master Plan(e.g. interferences with pastoralism, shrines and cultural sites)	The Master Plan is open to any deliberations and ensures that a considerable degree of social economic and cultural issues raised during stakeholders at the SEA process and during the Master Plan implementation are addressed objectively, satisfactorily and ethically.
7	56%	Strongly Agree that there will be social economic impacts from the Master Plan (e.g. cultural assimilation and adoption of new life style due to cross culture interactions)	The Master Plan has in place the good investment practices mechanism to mitigate against the adoption of negative cultural practices and enhance positive socio-cultural impacts imported by implementing the Master Plan. There are also

			positive aspects in the Master Plan that are meant to enhance realization of economic growth on the community.
8	48%	Agree that there are concerns to be tackled in regards to structural construction (e.g. need functional drainage system and water conservation)	The Master Plan shows development of infrastructure will have to ensure water drainage from runoff water is appropriately managed since the geological and hydrological study reveals disturbance of the land or soil at the site is rampant if not well addressed.
9	60%	Strongly Agree that there will be an impact on natural resource water availability from the Master Plan	The Master Plan informs on the scarcity of clean quality water to the site and the surrounding community. To this the Master Plan is integrated with the National and County governments' entities mandated with the water provision to the site, thus Kenya Water Pipeline and the Naivasha Water and Sewerage Company.
10	44%	Strongly Agree that there will be an impact on the energy resource in the Master Plan implementation.	The Master Plan indicates available options on use of hydroelectricity, geothermal and solar. The area is potentially located where it can benefit with ease from these sources of clean energy.
11	48%	Strongly Agree that there will be an increased in volume of solid and liquid waste generated, gaseous and	The master plan has developed mechanisms that will be utilized to manage and monitor the

		noise emissions and general environmental pollution.	increased volumes of solid and liquid waste, gaseous and noise emissions and general environmental pollution. The strategies to be implemented include :- • Monitoring of the volume of waste generated, noise, water and air pollution. • Analysis of water and air quality before release to the environment to ensure adherence to the standards. • Implementation of noise pollution control i.e. enclosing of machineries with elevated noise , ensure that mostly noisy activities are carried out during the day
12	44%	Strongly Agree that there will be an increase in employment opportunities.	The Master Plan has shown that its implementation will result to increase in employment opportunity and this will result to the economic growth of the area and the implementation will be carried in a way that employment opportunity will also be given to the local community in the area.
13	32%	Strongly agree that the Master Plan will cause	The Master Plan has developed mitigation

		insecurity issues in the area.	measures to address the issues of insecurity that may arise due to the development, for example by employing security staff at the development site, by developing programs in liaison with the areas security officials and community elders on how to handle and curb insecurity issues that way arise.
14	44%	Strongly Agree that the Master Plan addresses the common dangerous social abnormalities such as gender violence, drug use, prostitution, rape etc.	The Master Plan has strategies developed to address common dangerous social abnormalities by having educational programs and facilities against gender violence, drug use, prostitution, rape etc.
15	52%	Strongly Agree that there will be an increase in electronic waste generation if the Master Plan is implemented.	The Master Plan has developed waste handling mechanism that also include the electronic waste that may be generated due to the establishment of the development. Mechanisms adapted include: - waste segregation, recycle of waste where applicable, proper disposal of waste by use of NEMA Licensed waste handlers.
16	68%	Strongly Agree that there will be extensive importation of labour leading population surge if the Master Plan is implemented.	During the implementation of the Master Plan, it is true that there is possibility of importation of labour from various parts of the country

			and worldwide that could lead to population surge. The master plan implementation will be carried out in a manner that will control such occurrence by only ensuring that labours as first sourced from within before consideration of importation of labourers to the area. Labourers will only be imported if the locals are not able to carry out the duties that are required for the implementation and the numbers of labourers' importation shall be controlled while working closely with the County Government.
17	28% Strongly Agree & 28% Agree	Two groups equally Agree that there is going to be human wildlife conflicts if the Master Plan is Implemented.	The Master Plan has included strategies on how they are going to manage possible human and wildlife conflicts.
18	52%	Strongly Agree that there will be increase of income earnings from existing services and commercial businesses if the Master Plan is implemented.	The Master Plan has demonstrated that there will be a degree of increased income earnings in the community when implemented.
19	64%	Strongly Agree that the implementation of the Master Plan will increase the cost of land.	The Master Plan implementation will result in the increment of land value in the area and this will be advantageous to the community in the area.
20	40%	Strongly Agree that there will be accidents and	The Master Plan has developed programs that

		emergency risks if the Master Plan is implemented	will handle and manage accidents and emergency risks that may occur as a result of its implementation for example by implementing the occupation health and safety rules and regulations while working together with the county government , the Kenya police, fire fighters etc.
21	44%	Strongly Agree that there will be loss of aesthetic value, wildlife and biodiversity if the Master Plan is implemented.	The Master Plan has mechanisms that will control and manage the areas biodiversity, wildlife and the aesthetic value and such strategies include: - setting up of green buffer zones , work together with KWS to prevent loss of wildlife etc.
22	60%	Strongly Agree that there are negative environmental impacts aspects and concerns. Deforestation, global warming, soil profile interferences and air pollution.	The Master Plan implementation will be carryout following the environmental management plan that has been developed to manage impacts associated with the environment such as deforestation, global warming, soil profile interferences and air pollution.
23	56%	Strongly Agree that there will be positive environmental impacts if the Master Plan is implemented (e.g. new technology)	The Master Plan implementation will result to positive environmental impact that highly welcomed in the region.
		Strongly Agree that there is	The Master Plan has come

24	68%	bound climatic and other challenges therein as a result of the Master Plan.	up with a program or facility that will manage and mitigate climatic challenges/changes due to its implementation. Programs to be implemented include: - increase of vegetation cover in the area, waste management programs, water conservation programs, air and land pollution control and monitoring programs etc.
25	48%	Strongly Agree that the Master Plan has mechanism to mitigate against pandemics including COVID 19.	The Master Plan developed programs that mange and mitigate issues of pandemics.

Table 10: Analysis and Conclusion of the effects on the Master Plan implementation during public participation drawn from stake holders' responses (from sampled questionnaires)

5.5 Consultation and Grievance Redress Mechanisms

Overview

Stakeholder consultations and grievance redress are important actions that ensure acceptance, support and the successful implementation of any PPP. Effective and strategically aligned stakeholder engagement can have impacts such as:

- Lead to more equitable and sustainable social development by giving those who have a right to be heard the opportunity to be considered in decision-making processes;
- Enable better management of risk and reputation;
- Allow for the pooling of resources (knowledge, people, money and technology) to solve problems and reach objectives that cannot be reached by single organizations;
- Enable understanding of the complex business environment, including market developments and identification of new strategic opportunities;
- Enable corporations to learn from stakeholders, resulting in product and process improvements;
- Inform, educate and influence stakeholders and the business environment to improve their decision making and actions that impact on the developer(s) and on society;
- Build trust between developer(s) and stakeholders;

During implementation of the Master Plan, the Proponent will establish a management entity which will be responsible for management of the development and shall be the interface between the developer and stakeholders.

5.5.1 Mechanisms for engagement

The stakeholder consultation process was based on the overarching principle of inclusivity. This entailed a commitment by the established management entity, to reflect at all stages of the process, the views and needs of all Stakeholders' groups. Stakeholder views were obtained through an engagement process that allowed them to express their concerns without fear or restriction.

Inclusivity was achieved after adhering to the following three principles:

- Materiality: this requires knowledge of what concerns are important to the Proponent, the management entity and to the stakeholders;
- Completeness: requires understanding of the development's impact and the perceptions/expectations of the stakeholders; and
- Responsiveness: requires coherently responding to stakeholders' and the organization's material issues.

Various approaches were used in stakeholder engagement. The approach depended on factors such as:

- The master plan strategic engagement objectives;
- The current approach to and level of engagement with the stakeholders;
- Management entity and the stakeholders' expectations regarding the outcomes of the engagement;
- Available resources to undertake engagements; and
- The magnitude of change that the management entity is seeking and the margins of movement.

Therefore, the overall engagement and communication strategy included:-

- Information: this is where the goal was to inform or educate the stakeholders and took the form of continuous issuance of questionnaires, emails and briefs, speeches, and public presentations.
- Consultation: where the goal was to gain information and feedback from key stakeholders and share decisions made internally. This entailed surveys, focus groups, one-to-one meetings, public meetings and workshops. Consultation of these types offered stakeholders opportunities to reflect on issues, mobilize and respond more critically than when brought directly to workshops. These lines of communication also helped keep dialogue on the master plan alive and thus generated discourses in everyday life that better informed decisions.
- Involvement: where the goal was to work directly with stakeholders to ensure that their concerns are fully understood and considered in decision making. This was achieved through multi-stakeholder forums, advisory panels, consensus building processes and participatory decision- making processes. These avenues of engagement were meant to provide opportunities for stakeholders to participate and thus freely interrogate the master plan.

5.5.2 Grievance Redress Mechanisms

- A key element in the success of the engagement process is the development and implementation of a grievance mechanism. The grievance mechanism was scaled to fit the level of risks and impacts of the Master Plan and was meant to flow from the SEZA management entity's broader process of stakeholder engagement and business integrity principles, and integrate the various approaches of engagement.
- Grievance procedures were established by the management entity and agreed with the stakeholders. These will be published and explained to the relevant stakeholder groups. The procedures will be to enable the stakeholders and (especially the community) to lodge complaints or

concerns, without cost, and with the assurance of a timely and satisfactory resolution of the issue(s). The procedures will be in place from the beginning of the social and environmental assessment process and exist throughout construction and operations through to the end of project life.

- With the broader process of stakeholder engagement, the management was to be continually informed and involved so that decisive action could be taken when needed to avoid escalation of disputes. A resource with community liaison skills was employed by the management entity and were to be the contact person in order to personalize the relationship between the master plan and the community. This created an informal atmosphere in which grievances could be aired and sorted out, or referred up the chain of command.
- The Grievance procedures will not replace the existing legal process but will seek to resolve issues quickly without resulting to expensive and time-consuming legal actions.
- The grievance redress mechanism will have established timeframes within which to respond to all recorded complaints. The response time will be enforced to allay frustration by letting people know when they can expect to receive a response to their complaint. This shall be combined with a transparent process by which stakeholders can understand how decisions are reached in order to inspire confidence in the system.
- Records of all complaints shall be kept in a log or database. The record shall contain the name of the individual or organization; the date and nature of the complaint; any follow-up actions taken; the final result; and how and when this decision was communicated to the complainant. To prevent any perceived intimidation of complainants and therefore marginal success of the mechanism, any complainant uncomfortable with diverging overly personal data will be allowed to lodge their complaint.

5.5.3 Summary of Stakeholders' Engagement Meeting Report on the S.E.A of the Proposed Master Plan of the Proposed Special Economic Zone in Naivasha

This is report compiled on the stakeholders' engagement conducted for the Naivasha Special Economic Zone's Master Plan on 30th July 2020 and 1st August 2020. The first session was held on the 30th July 2020 at the Nyakima market, off the Naivasha dry port road; where 32 community leaders and representatives were in attendance. 54 participants attended the second session which was held at the Zambezi Cabin resort on the 1st August 2020.

5.5.3.1 Challenges

There were no notable challenges during public participation, except for a slight delay by the participants on the 1st August due to a mix in communication

on who were to participate. It was also noted that in the first session of the public participation, there were no women in attendance.

The following were pertinent issues that came up in the a focus group discussion with a section of the stakeholders;

a) **Cultural issues**: - The Maasai community representative was concerned about the project interfering with their practices of conducting cultural ceremonies between the mountains Longonot and Suswa. The mountain Suswa was identified to be a site that the Maasai used as shrine. Additionally, there was a concern of the pastoralist culture of the Maasai being lost as the vast land meant for this, is being replaced by physical development. It was suggested that the graves at the project site be given cultural rites such as ritual performance before relocating them. The project area is a migratory corridor for the Maasai people to move during ceremonies. A resettlement plan was suggested.
b) **Fear of complete loss of biodiversity:** - The group pointed out that there are unique herbs that they have used as medicine for both human and animal treatment of which will be lost.
c) **Natural resource strain**: - It came up in the discussions the possibility of there being ethnic conflict due to resource constraint. Once the grazing land of the Maasai has been replaced by physical development, the remaining natural resources will be strained to be shared amongst all the communities in the area, possibly causing tension amongst them.
d) **Human - wildlife conflict: -** The wildlife occupying the proposed project area will be displaced exposing the communities and their farms to a possible conflict with the wild animals.
e) **Insecurity: -** It was discussed that with the influx of an alien population to the project site, there is likely to be not only a population increase but security threat to the area residents.
f) **Pollution and environmental degradation: -** The water runoff is anticipated to affect the community downstream. The chemicals and toxic by-products from industries was a concern for being washed downstream possibly causing birth defects, disorders and diseases.
   Possible Air pollution from industries was also a concern to the participants.
g) **Employment and other Benefits: -** The communities expressed that they would like the locals to primarily be the beneficiaries of the project as the host communities, in both employing its youth and giving business opportunities. The community also hopes to benefits from infrastructure such as piped water, which is currently scarce in the area; electricity and good roads.

Conclusion: - The communities welcomes the project recognizing that the benefits override the drawbacks. Drawing from their past experience with the standard gauge railway project, the community suggested a better resettlement plan for those that shall be affected by the proposed project. A transparent and quick process of compensation of the affected persons was suggested. More photos attached in Annex A6.

Figure 18: Photos of evidence of the public participation

Questionnaire Survey regarding the Strategic Environmental Assessment Study (SEA on the proposed Naivasha Special Economic Zone (SEZ) Master Plan

1. Introduction

The government of Kenya through Special Economic Zones Authority under the Ministry of Industrialization and Enterprise Development and other development partners is establishing a special economic zone (SEZ) in Naivasha, Nakuru County. The SEZ will occupy a 1000 acre parcel and is located 14Km from Mai Mahiu township en-route to Narok, a major hauling truck stop over. The Standard gauge railway passes along the southern border of the site.

The Strategic Environmental Assessment (SEA) study on the proposed Naivasha SEZ Master Plan on LR no. 8396/56 in Naivasha, Nakuru County-Kenya is underway. SEA is a systematic process for evaluating the environmental consequences of proposed land use policy and plan initiatives in order to ensure they are fully included and appropriately addressed at the earliest appropriate stage of decision-making on par with economic, social and environmental considerations

You have been identified as an important stakeholder to participate in the questionnaire survey. Participation in this survey is completely voluntary and you are at liberty to withdraw at any time without prejudice or negative consequences. Any information shared is for survey purposes only and shall be held in strict confidence and no personal data will be passed on to other parties. This survey will last approximately 30 minutes

2. Details of the respondent

Filling in your personal details is optional hence if you find it not necessary you are allowed to proceed to the next sections of the questionnaire

1. Name.....Sign.....Date.....
2. Location..... ID NO.....
3. County.....Contact: Mobile.....
4. Physical Address:.....
5. Highest level of education attained:
   ☐Primary☐Secondary ☐Diploma ☐Graduate ☑Postgraduate
6. Occupation:
   ☐Student ☐Unemployed ☐Self-Employed ☑Employed ☐Pensioner

Any other additional information:

Figure 19: Sampled filled Questionnaire

CHAPTER 6
IMPACT IDENTIFICATION, ANALYSIS, PREDICTION AND MITIGATION

6.0 IMPACT PREDICTION

The Naivasha SEZ was subjected to a systematic environmental impact analysis following a pre-determined evaluation methodology and using indicators and targets identified mostly from the information and realities on the ground as gathered during the baseline situation assessment.

6.1 Impact identification and evaluation methodologies used in the SEA study

The table below summarizes the impact identification and evaluation methodologies that were used in the SEA study.

Theme	Aspects	Impact Identification Methods	Evaluation
Biological Environment	• Habitats • Biodiversity	• Document Review • On-site observation • Stakeholder working sessions	• Matrix and Multi-criteria analysis including compliance with the relevant environmental protection regulations • Stakeholder working sessions
Physical Environment	• Soil • Land quality • Water • Waste generation and management • Energy • Traffic and transport	• Document review • On-site observation • Questionnaire responses • Interviews • Stakeholder working sessions	• Analysis including compliance with the relevant laws and regulations on each aspect • Stakeholder working sessions
Social Cultural/economic environment	• Food security and Nutrition • Health • Gender & Children • Governance • Poverty and	• Document review • On-site observation • Questionnaire responses • Stakeholder working sessions	• Matrix • Stakeholder working Sessions

	income • Livelihoods • Transport and infrastructure • Major development activities that are currently proposed • Potential forms of development including those that are compatible with the County's development plans for the area		
Institutional component	• Planning, Capacity and enforcement	• Questionnaire responses • Interviews • Stakeholder working sessions • Checklists	• Matrix • Stakeholder working Sessions

Table 11: *Table: Impact identification and evaluation methodology*

Impact characterization was undertaken by considering the following attributes:-

- Level of impact (Countywide, Nakuru County or proposed PPP site only),
- Probability and risk of occurrence,
- Duration of impact,
- Magnitude,
- Impact reversibility, and
- Level of importance.

Major and minor impacts were determined on the following basis:

Major Impact	Minor Impact
Extensive	Localized
Will affect many people	Will not affect many people
Large change in environmental conditions	Small change in environmental conditions
Effect will be unusual or particularly complete	Effect will be ordinary or simple
Will affect valuable or scarce features or resource	Will not affect valuable or scarce resources
High risk that environmental standards will be breached	Lower risk that environmental standards will be breached
High likelihood that protected sites, areas or features will be affected	Lower likelihood that protected sites, areas or features will be affected
High probability of effect occurring	Lower probability of effect occurring
Long term / permanent	Short term / temporary
Irreversible	Reversible
Mitigation difficult	Mitigation easier

Table 12: Determination of major and minor impacts

The environmental impact analysis was undertaken by considering the strategic environmental impacts in each of the proposed development as follows:-

- Industries
- Infrastructure (water reticulation , roads construction and any other necessary infrastructure)
- Waste management (solid waste management, waste water treatment plant)
- Green buffer zones
- Infrastructure (water reticulation, roads construction)

Indicators and Targets for Environmental Impact Analysis

Impact Category	SEA Objective	Potential Outputs(S)	Indicators
Biological Impacts			
Biodiversity, flora and fauna	• Ensure the conservation, and where possible enhancement of important habitats and species • Ensure Protection and where possible enhancement of local biodiversity, flora and fauna	• A practical biodiversity enhancement plan that enhances indigenous vegetation to the site • Conservation of threatened species in the property • Establishment of sanctuaries for the sustenance of traditional wildlife habitats • Restoration of degraded areas in the property into a high quality environments	• Area of green space safeguarded as part of environmental enhancement • Measures for protection of threatened species • Sustenance of valued wildlife habitats • Measures in place to ensure environmental rehabilitation
Physical Impacts			
Development and land –use planning	• Ensure that land-uses are sustainable and compatible with local development plans • Reduce the level of negative visual impact through the use of green infrastructure	• A land use plan that is compatible with local development plans • Modern and green infrastructure that blends with the surrounding	• Conformity to land-use plans for the area • Green infrastructure developed on the property

Energy use and supply	• Ensure the conservative use of *available* energy resources • Ensure that renewable energy opportunities are identified and harnessed	• Practical energy management and conservation options	• Energy conservation measures put in place • Renewable energy opportunities harnessed
Climate Change	• Mitigation of climate change impacts	• Discourage destructive land use and improper non-green infrastructure whose impacts could eventually amplify the effects of climate change	• GHG emissions • N2O • CH4 • Black Carbon • CO2
Air quality	• Curb ambient air pollution.	• Ensure air emissions are scrubbed to ensure discharge compliance	• PM2.5; PM10; ground level ozone
Water quality	• Protect surface and ground water quality against pollution.	• Ensure wastewater and solid waste finding itself to natural water sources does not pollute these sources of natural water.	Temperature; dissolved oxygen; nutrients (Phosphates; nitrates) ; PH; metals
Water supply and Sanitation	• Ensure the protection and improvement of the surface and groundwater environment, in terms of water quality and quantity, for	• Have Sustainable water resource protection, conservation and exploitation programs	• Periodic analysis results for surface and ground water quality • Ground water yields from continuous monitoring • Quantities of water Recycled

	the benefit of the human and/or natural environment • Ensure the conservative use of water resources • Ensure the disposal of effluent in an environmentally friendly manner		and/or harvested
Solid waste management	• Ensure the reduction in solid waste generation • Ensure the proper handling and disposal of generated waste	• Practical and sustainable waste management options / plans	• Number of transfer stations established in the development • Methods of collection and disposal of generated wastes
Traffic and Transport	• Mitigation of negative impacts from increase in vehicular traffic	• A practical and effective Traffic Management Plan for Northlands	• Seamless flow of traffic, few traffic incidences and accidents
Economic Impacts			
Micro/Macro scale economy	• Ensure the enhancement/ protection of important new and existing material assets and infrastructure in the area • Ensure the enhancement	• Tangible socio-economic benefits to the community • Safeguards for important community/national assets	• Number of new infrastructure projects implemented/or existing infrastructure enhancements and attributable to the plan • Number of employment or

	of economic benefits of the plan to the surrounding community		business opportunities created as a result of the plan
Social Impacts			
Human health and safety	• Ensure the improvement/ enhancement of the health and wellbeing of the surrounding communities	• Practical safeguards for community health and safety	• Number of injuries / illnesses attributable to development activities i.e. construction phase and operation phase activities
Community integration	• Ensure integration of the in-coming community with the host community	• Community integration initiatives through information sharing, joint activities/ programmes and sharing of resources/facilities	• Activities done jointly with surrounding community, information sharing, facilities open to other members of surrounding communities
Livelihood	• Ensure sustainable broad livelihood quality	• Socioeconomic aspects that enhance sustainable quality livelihood are integrated.	• Natural capital (land, water, biological resources) • Financial capital (stocks of money or assets in liquid form) • Social capital (rights or claims derived from group membership) • Physical capital (infrastructure) • Human capital

			(quantity and quality of labour available) • Poverty index

Table 13: Indicators and Targets for Environmental Impact Analysis

6.2 Impact Characterization for the Potential Negative Impacts

6.2.1 General environmental social and economic impacts

Potential negative impact	Principal Receptor (areas)	Probability & risk of occurrence (high, moderate or lower)	Duration of impact (long-term or short - term)	Magnitude (large scale or medium scale or small scale)	Reversibility (irreversible or reversible)	Importance (high, moderate or lower)
Industries and residential						
Negative visual impact due to loss of visual amenity from dense structures	Naivasha SEZ area and the neighbourhood	High	Long-Term	Large Scale	Irreversible	High
Loss of wildlife species habitats diversity	Naivasha SEZ area and the neighbourhood	High	Long-Term	Large Scale	Irreversible	High
High water demand to be used in the industries and residential areas	Naivasha SEZ area and the neighbourhood	High	Long-Term	Small Scale	Reversible	Moderate
High electricity demand to be used for industrial operations and the residence	Naivasha SEZ area and the neighbourhood	High	Long-Term	Small Scale	Reversible	High
Increased traffic activities and traffic interruptions and traffic incidences	Naivasha SEZ area and the neighbourhood	High	Long-Term	Small Scale	Reversible	Moderate

especially heading to the industries for delivery of goods and to staff residence						
Increase in storm water generation resulting in flooding and soil erosion	Naivasha SEZ area and the neighbourhood	High	Short - Term	Small Scale	Reversible	Moderate
Clearance/modification of the vegetation	Naivasha SEZ area	High	Long-Term	Large Scale	Irreversible	High
Increased solid and sewerage waste generation	Naivasha SEZ area and the neighbourhood	High	Long-Term	Large Scale	Reversible	High
Increased potential of air pollution, noise pollution, water pollution and soil pollution from industries	Naivasha SEZ area and the neighbourhood	High	Long-Term	Large Scale	Reversible	High
Negative Human health (Spread/Transmission of HIV/AIDS and other STIs) and safety issues	Naivasha SEZ area and the neighbourhood	High	Long-Term	Small Scale	Irreversible	High
Increase of human population	Naivasha SEZ area and the neighbourhood	High	Long-Term	Large Scale	Reversible	High
Infrastructure (water reticulation, roads construction)						
Negative visual	Naivasha	High	Long-	Large	Irreversibl	High

impact due to introduction of new infrastructures i.e. roads and water reticulation systems	SEZ area		Term	Scale	e	
Loss of natural vegetation and wildlife habitats	Naivasha SEZ area	High	Long-Term	Large Scale	Irreversible	High
Increased potential of air pollution, noise pollution, water pollution and soil pollution	Naivasha SEZ area and the neighbourhood	High	Long-Term	Large Scale	Irreversible	High
Waste management (solid waste management, waste water treatment plant)						
Clearance/modification of the vegetation	Naivasha SEZ area	High	Long-Term	Large Scale	Irreversible	High
Negative Human health and safety issues as a result of poor waste management operations	Naivasha SEZ area and the neighbourhood	High	Long-Term	Small Scale	Reversible	High
Increased potential of air pollution, water pollution and soil pollution from waste not being properly managed	Naivasha SEZ area and the neighbourhood	High	Long-Term	Large Scale	Reversible	High
Green buffer zones						
Effects of new plants species introduction	Naivasha SEZ area	High	Long-Term	Large Scale	Irreversible	High

Risk of long term loss of natural plant species due to environmental change	Naivasha SEZ area	High	Long-Term	Large Scale	Irreversible	High
Wildlife habitat deterioration due to low carrying capacity	Naivasha SEZ area	High	Long-Term	Large Scale	Irreversible	High

Table 14: General environmental social and economic impacts

6.3 Risk Assessment

6.3.1 Overview

Risk assessment for the Naivasha Master Plan is based on the details provided on the Master Plan components, and the prevailing/foreseeable environmental, social, political and economic conditions as judged by the SEA team.

6.3.2 Risk of incompatibility with surrounding land uses or inappropriate land Use.

Conflicting land uses either within the Naivasha SEZ Master Plan or the surrounding land uses can cause economic, physical, and social stresses on the communities where the conflicts occur. Land use incompatibility can create barriers to new investment and discourage existing land owners from investing in their properties, thereby creating a drain on the vitality of the community as a whole.

On the other hand, proposed land uses in Naivasha SEZ can be inappropriate meaning that opportunities or potential for beneficial relationships may not materialize because the full potential was not recognized and/or not established as an attainable goal before development of the land.

The Naivasha SEZ Master plan has established the various forms of land use. There's potential risk that a proposed land use may not adequately s its own undesirable characteristics from adversely affecting adjacent land uses thus creating conflicts. Such undesirable characteristics could include increased traffic, air pollution, odours, excessive noise, water pollution, excessive lighting, vibrations, increased storm runoff, or unattractive building appearances. These would be especially pronounced where residential, industrial, commercial and recreation uses are involved.

To mitigate these risks, the Plan Proponent engaged a team of land use planners to investigate and identify land uses that attain the highest and best use of land and avoid wasteful and inefficient spatial arrangements.

During the Master Plan implementation, strict enforcement of these plans will be required to prevent intrusion of one land use by another. Detailed site planning will also require a careful choice of facilities in order to maintain the envisaged land use goal.

Adequately sized buffer zones and technologies will be established/installed where potential conflicts in land uses can arise. Such potential conflict areas include location of industrial zones near residential and recreational areas.

The Government has planned to gazette and establish a 10 km radius around the SEZ as a special planning zone. This is to ensure that whatever happens within the 10 km radius is in tandem with the development in the SEZ.

Development of Naivasha SEZ should reflect the characteristics of the area in which it is located and should enhance, rather than detract from, these qualities. Natural features such as wetlands, grasslands, woodlands and other cultural or man-made elements of the landscape should be considered in the Master Plan.

6.3.3 Sustainability Risks/Environmental degradation

The extent, and type of land use directly affects wildlife habitat and thereby impacts local and global biodiversity. Human alteration of landscapes from natural vegetation (e.g. wilderness) to any other use typically results in habitat loss, degradation, and fragmentation, all of which can have devastating effects on biodiversity. These alterations also include erection of powerlines that disrupt bird flyways. Land conversion is the single greatest cause of extinction of terrestrial species therefore the Master Plan implementation has to put into account the mitigation factors that will seek to overrun such risk elements.

The proposed site is within the Larger Hell's Gate Mt. Longonot National Park ecosystem with presence of diverse biodiversity *flora* and *fauna* especially the herbivore species. This is a wildlife dispersal area used during the wet and the dry season for foliage, water, salt lick, breeding, shelter among other needs. Proper mitigation measures against loss of use need to be thoroughly formulated.

The anticipated Naivasha Special Economic Zone proposed site to achieve vision 2030 will result in fragmentation of wildlife habitats further increasing the already dire Human Wildlife Conflict within the adjacent settlements. Negative environmental impacts and other emerging challenges therefore needs to be urgently addressed to ensure that as the country's economic needs are being developed, the fragile and unique habitats at the proposed site (ranch) are also conserved for posterity or proper mitigation measures developed to offset the negative impacts.

The assessment should incorporate information from the recent report on wildlife corridors within Naivasha areas and propose a suitable easement.

Wildlife carrying capacity study should be conducted at the site to determine the amount of pasture lost to inform mitigation.

6.3.4 Planning risks

This Refers to the risk that the pre-development studies (technical, legal, financial and others) conducted are inadequate or not robust enough resulting in possible deviations from the outcomes that were planned or expected in the Naivasha SEZ Master Plan implementation. It may include incorrect forecasts and assumptions on demographics, demand, and limited understanding of market dynamics. Planners and project sponsors may tend to adopt assumptions which favor a development, which might be gaming (also known as 'strategic misrepresentation'), or might be genuine optimism. Therefore in its implementation the Master Plan must address any possible indicators that would attempt to become a recipe for such limitations.

6.3.5 Risk of Proliferation of slums in the area

A slum is a contiguous settlement where the inhabitants are characterized as having inadequate housing and basic services. Slums in this context also include squatter settlements/informal settlements which are residential districts created by the illegal occupation of land and largely in contravention of official building regulations.

To avert the possibility of new slums sprouting, the Naivasha SEZ planning team will adopt concerted efforts towards monitoring and evaluating performance of the local authorities, i.e. Nakuru County Government, in managing future urban growth by use of effective land use planning programs and mobilization of local resources as a result, by formulating relevant strategies that would spearhead property rights, which among others entails the regularization of insecure tenure in informal settlements where these exist in the vicinity of Naivasha SEZ.

There will be need to gazette 10km radius special planning zone around the SEZ to control and guide development in the neighbourhood. This will mitigate against getting into the pitfalls that bedevils some known such magnitude industrial parks zone like Export Processing Zone in Athi River town and its surroundings. For example, the migratory corridors were occupied by people. In fact, a study is being done on possibility of constructing an underground tunnel from Nairobi N. Park to Swara Conservancy. Water supply is very poor and sewer connection is non-existent.

The measures will involve but not limited to;

- ✓ Avoid mushrooming of unplanned towns/ developments by defining, mapping, planning and guiding activities in the special planning zone.
- ✓ Ensure Internal zoning are very clearly done
- ✓ Should have a dedicated water pipeline for the zone
- ✓ Waste disposal facilities for both solid and liquid to be properly done

6.3.6 Financing Risks

Refers to the risk that sufficient finance will not be available for the Master Plan at reasonable cost (e.g. because of changes in market conditions or credit availability) resulting in delays in the financial closure for the development. Key stake holders and players in the implementation of the Master Plan will need to put in place relevant policy and regulations designed to insulate the Master Plan from becoming vulnerable to such short comings.

6.3.7 Design Risks/ Technology Risks

Design Risk: Refers to the risk that proposed designs will be unable to meet the performance and service requirements in the output specification and can result in additional costs for modification and redesign. This is especially so for the infrastructure services (access roads, junctions, water supply, power, sewerage network etc.) to be established in the Naivasha Master Plan. There is the risk that the designs of these infrastructural services may not adequately cater for the requirements of the population generated by Naivasha. Technology risks also arise whereby there is potential that the technology used in design of the infrastructure will unexpectedly become out of date during the life of the Master Plan and will not be able to satisfy the requirements in the output specifications. It would result in increased costs of a replacement technology.

The Master Plan will provide proper guidelines and references with a professional way of addressing the criteria and standards for engaging the right players in its implementation.

6.3.8 Risks during the planning/design/construction phases

Risk concerning environmental and other permits. Naivasha SEZ will have complex permit requirements with multiple agencies or branches of government, occasioning approval risks. This refers to the risk that delays in approvals to be obtained during the construction phase will result in a delays in implementation of the Master Plan as per the implementation schedule. Such

delays in obtaining approvals may lead to cost overruns. Construction permit delays can have a severe impact on a project's profitability, as cash flows start later than anticipated. Such delays can be from the unexpected outcomes of environmental and social-impact studies. Even permits issued promptly can contain unforeseen and costly conditions, such as compensation requirements or usage restrictions e.g on ground water resource use.

Risk of community stakeholders' opposition. The Local communities can affect the Naivasha SEZ Master Plan in ways that do not just influence permit procedures. The Constitution of Kenya gives the local populations formal and informal veto rights over projects which have potential to cause adverse impacts within their territories. Action groups can organize protests that prompt politicians and regulators to withdraw or suspend permission, and so on. A lack of an institutionalized process to manage stakeholders can result in inadequate stakeholder involvement, misunderstandings, and lack of cooperation which can affect approval and/or implementation of the Master Plan. Very highly informed and guided principles in the Master Plan should be employed in all engagements at all levels with the various stake holders and players during its implementation.

6.3.9 Climatic risks

Land-use change can be a factor in CO_2 (carbon dioxide) atmospheric concentration, and is thus a contributor to climate change. Conversion of large expanses of savannah grassland to urban developed areas will cause changes in carbon stocks by releasing significant amounts of CO_2 into the atmosphere.
Any change in land use results in a change in these inputs and outputs of carbon such that a new equilibrium is reached. A move from a land use with higher soil carbon stocks to one with lower carbon stocks will result in the loss of carbon, much of which will be to the atmosphere in the form of CO_2 produced by microbial respiration.

In order to mitigate climatic risks of implementing the Naivasha SEZ Master Plan, the planning team will develop a biogeochemical model that takes into account several factors, including existing carbon stocks, soil type and weather conditions to account for the carbon lost when grasslands are converted into settlements or other development. It can be used both on a property-level scale and to measure the carbon lost on a regional scale.

6.4 Direct and indirect Drivers of Change Resulting from the Implementation of the Master Plan

The PPP implementation is likely to have certain implications for the existing society around the Naivasha SEZ area. These implications may be clustered under the following.

6.4.1 Demographic

As soon as implementation of the PPP commences there is likely to be an influx of people from other parts of the country including neighbouring counties in the hope getting jobs at the Naivasha SEZ sites and emerging enterprises. This implies that during the construction phase, there will be pressure on neighboring facilities including housing estates, water supply systems, health facilities and security structures. As the various phases of the Master Plan are completed, the resident and working population will also grow significantly. A systematic way of handling matter related to labour issues must be adopted.

6.4.2 Economic

The PPP implementation offers economic opportunities for the local people in a variety of ways including business and employment opportunities both during construction and on commissioning. It also promises to grow the Nakuru County economy in significant ways from an increase in trade and commerce, and Government revenue from a wider tax base of new industries and enterprises. Proper measures and guidelines will be incorporated to mitigate against any issues that may derail such gains that may want to render the Master Plan ineffective.

6.4.3 Social

As implementation commences and the local population increases, the new complex urban environment will disrupt local social networks and organization, creating new social problems including possible rise in crime and cultural shocks for migrant workers. The unskilled/semi-skilled labour force necessary for successful implementation of the Master Plan requires affordable housing and this may lead to growth of informal settlements in the neighbourhood. It is from such informal settlements that many antisocial behaviours including crime emanate. The Master Plan implementers shall need to work with Nakuru County Government to ensure proper planning not only of the PPP but also in the neighbourhood and ensure that proper infrastructures and social amenities are adequately catered for so as to reduce the impact on the surrounding community.

6.4.4 Science and Technology

The implementation of the PPP embodies changes in local understandings and workings of science and technology. Green development concepts in construction, rain-water harvesting technologies as well as water re-cycling technologies may take time to before the community fully embraces them. However the diffusion of new scientific and technological ideas and practices from the Naivasha SEZ to the periphery may be disruptive initially but will nonetheless change local values and valuations.

Overall, the PPP promises to change the social, political and economic landscape of the region and its environs and this calls for more efficient governance structures that will be readily responsive to emerging challenges by facilitating harnessing of new opportunities and resources for the benefit of all residents.

6.4.5 Subsequent EIAs and monitoring indicators

It is envisaged that the following will be constructed and EIAs required for the following projects;

- Logistics hub
- Warehouses
- Intermodal terminal (rail / road interchange)
- Customs, Railways and Ports offices
- Areas for parking, loading & unloading operations
- Food courts (Restaurants and cafes)
- Other services (banking, insurance etc.)
- Marshalling yards for trucks
- Administration offices
- Fire station
- Police station
- Health centre
- Trade/ commercial centre
- Schools
- Parks and Recreation facilities

During the impact assessments for the foregoing it is important that the following factors be taken into consideration

- ✓ Protection and management of important bird areas (IBAs) and wildlife/ biodiversity; special attention should be paid to the performance of the wildlife corridor
- ✓ Congestion; bearing in mind this SEZ will form a confluence with the Naivasha ICD and to some extent the proposed Olkaria Industrial Park

- ✓ Dust
- ✓ Climate change related issues
- ✓ Important historical/ cultural sites that dot this locality including war graves; Mt Suswa cultural site etc.
- ✓ Noise and vibrations

6.5 Cumulative impacts for the proposed Naivasha SEZ

6.5.1 Introduction

The effect of the implementation of Naivasha SEZ Master Plan on the environment may not be fully represented by the individual interactions of plan specific to the Master Plan activities within the SEZ site. Individually as a plan it may indicate negative effects that are not significant. However, when combined with the effects of other existing implemented Master Plans and projects' components or other projects and activities, these small effects may become a concern, as they may cause a cumulative effect.

6.5.2 Methodology for cumulative environmental effects

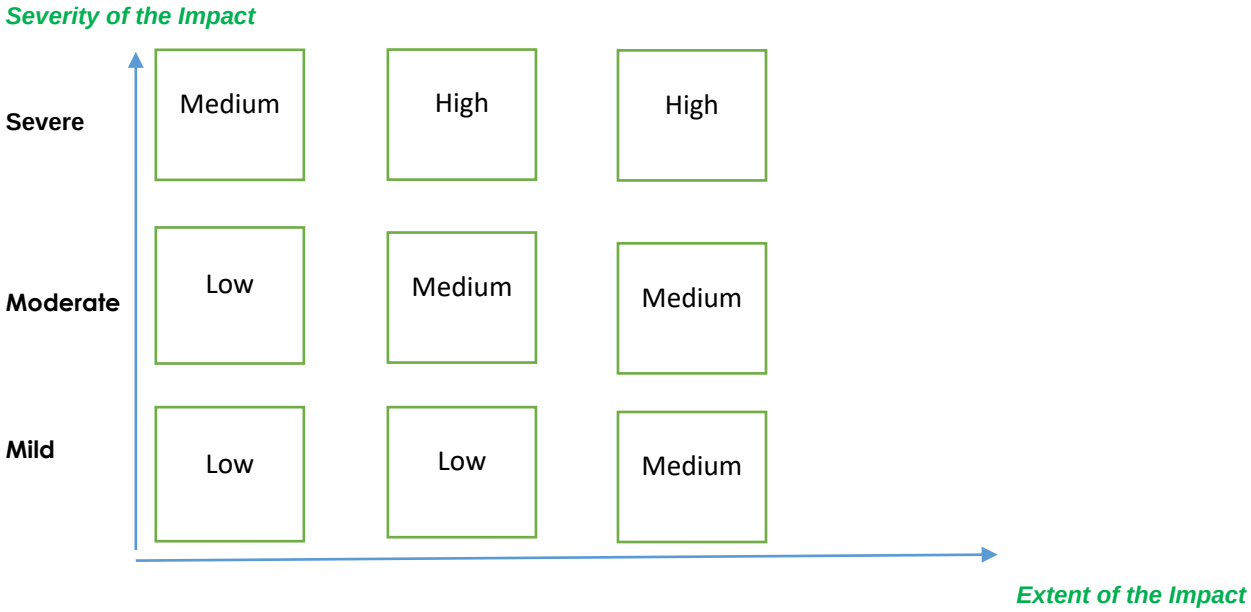
These Cumulative Effects Assessment (CEA) incorporated the five key steps:-

- Scoping: identification of regional issues of concern, spatial and temporal boundaries, other unrelated projects, and potential effects of unrelated projects;
- Analysis of Effects: analysis of effects of Naivasha SEZ Master Plan identified during scoping;
- Mitigation: recommend mitigation for effects identified;
- Evaluation of significance: determine residual effects and their significance with consideration of land use thresholds and land use objectives and trends; and
- Follow-up: identify appropriate monitoring.

6.5.3 Scoping

The objective of scoping is to identify the key environmental areas of concern that should be considered in the analysis of effects for the CEA.

Evaluation Matrix Used for



The major activities and impacts of the projects will be identified for the construction and operation phases. Each impact is rated "severe," "moderate," or "mild" with respect to severity, and "wide," "medium," or "restricted" with respect to the extent of the impact. While the severity indicates the importance and magnitude of the impact, the extent indicates the geographical size of the impact area. The result of the assessment, which is either "high," "medium," or "low," presents the overall significance. It should be noted that the geographical extent of an impact does not necessarily indicate the likelihood of cumulative impacts.

Scenarios for Naivasha SEZ on Naivasha region

Scenario A	Scenario B	Scenario C
• Project under assessment	• Project under assessment • Other existing project	• Project under assessment • Other existing project • Planned / foreseen project

Cumulative environmental impact

Environmental aspect	Cumulative Project – Environment Interaction	Mitigating Factor	Scenarios	Impact	Severity	Geographic Extent	Duration/ Frequency	Reversibility	Likelihood of Significant Cumulative Occurrence
Freshwater Quality/Quantity	Operational storm-water discharges in combination with other discharges from other projects in fresh-watershed	Storm-water discharges within the watershed from other Project components are designed to meet regulatory limits. Circulation of water and reuse of treated water for maintaining green areas should be integrated in the design and implementation of the project.	**A** **B** **C**	Moderate High High	Moderate High High	Lake Naivasha watershed	Storm events	Reversible	**Less likely** **Likely** **Most likely**
Groundwater Quality/Quantity	Project affects on local wells or surface water/wetlands	Wells are typically Down-gradient and will be monitored during construction A project being implemented by Naivasha Water & Sewerage Co. Ltd targets to	**A** **B** **C**	Moderate High High	Moderate High High	Local ground watershed	Project Cycle	Reversible	**Less likely** **Likely** **Most likely**

		supply 9,000 cubic meters of water per do to SEZ. Five boreholes have already been sunk in Naivasha town and the water supply pipeline is being laid from Naivasha to Mai Mahiu.							
Freshwater life	Operational storm and process water discharges in combination with similar discharges from other projects to same general fresh water area	All process and storm-water discharges from the Naivasha SEZ Project components to the Naivasha fresh watershed are designed to meet regulatory limits. Low concentrations of contaminants in existing environment; not bioaccumulating substances in either.	**A** **B** **C**	Low Moderate Moderate	Low Moderate Moderate	Lake Naivasha	Storm	Reversible	**Less likely** **Likely** **Most likely**
Air Quality	Operational air emissions in combination with other projects with similar emissions to same air shed	All projects emissions within the Naivasha SEZ Project site will be designed to meet regulatory limits.	**A** **B** **C**	High High High	High High High	Very Local	Frequent	Reversible	**Less likely** **Likely** **Most likely**

		Contribution to regional emissions of ozone neglible.							
Climate Conditions (Greenhouses gases**)**	Operational air emissions of GHG in combination with other SEZ Naivasha Project components and other future projects with similar emissions regionally / nationally	Energy-efficient measure minimizing GHG. Contribution to total of regional GHG neglible.	**A** **B** **C**	Moderate High High	Moderate High High	National	Frequent	Irreversible	**Most likely** **Most likely** **Most likely**
Species at Risk	Loss of habitat or species	Additional field surveys. Potential for at risk species low. Development of mitigation and compliance with recovery plans.	**A** **B** **C**	Moderate High High	Moderate High High	Depending on species regional to national	Variable	Reversible or Not depending on species	**Most likely** **Most likely** **Most likely**
	Effects of new plants species introduction	Additional field surveys before introduction of new species	**A** **B** **C**	High High High	High High High	Depending on species regional to national	Variable	Reversible or Not depending on species	**Most likely** **Most likely** **Most likely**
Migratory Birds	Construction habitat loss / disturbance within the local area	Habitat loss and migratory route loss small portion of overall available area and not identified as critical for species present.	**A** **B** **C**	Moderate High High	Moderate High High	Terrestrial Study Area	One time	Irreversible	**Most likely** **Most likely** **Most likely**

	Collision mortality from future infrastructure in the general area	Mitigation/ Monitoring to be undertaking in cooperation with KWS	**A** **B** **C**	Moderate High High	Moderate High High	Local terminal area	Constant	Irreversible	**Most likely** **Most likely** **Most likely**
Current Use of Lands and Resources for Traditional Purposes by Maasai Community	Loss of grazing land and cultural site, loss of grave sites	Activities to be monitored by the local government and community council Graves at the project site be given cultural rites such as ritual performance before relocating them. Set up of a resettlement plan for the Maasai people using the site as a migratory corridor	**A** **B** **C**	Moderate High High	Moderate High High	Terrestrial Study Area	One time	Reversible	**Less likely** **Likely** **Most likely**
Health and Safety	Traffic and infrastructure requirements in the general area	Traffic impact study as part of project design phase.	**A** **B** **C**	Low Moderate Moderate	Low Moderate Moderate	Local	Frequent	Reversible	**Less likely** **Likely** **Most likely**

	Noise level	All the recommendations for sound and vibrations levels should be complied with by contractors and the industries. Monitoring should be done on regular basis to ensure adherence to the sound level standards.	**A** **B** **C**	High High High	High High High	Local	Frequent	Reversible	**Less likely** **Likely** **Likely**
Lighting	Local increase in light in the general area from all development	Consistent with industrial development for the area as identified in the regional plan.	**A** **B** **C**	High High High	Moderate Moderate High	Local	Frequent	Reversible	**Likely** **Most likely** **Most likely**
Waste	Increase of solid waste generation due to the development and operation of the development Increased potential of air pollution, water pollution and soil pollution from waste not being properly managed.	All the recommendations for waste management should be complied with by contractors and the industries. Monitoring should be done on regular basis to ensure adherence to	**A** **B** **C**	High High High	High High High	Local	Frequent	Reversible	**Less likely** **Likely** **Most likely**

	Negative Human health and safety issues as a result of poor waste management operations	the waste management standards							
Population influx	As soon as implementation of the PPP commences there is likely to be an influx of people from other parts of the country including neighbouring counties in the hope getting jobs at the Naivasha SEZ sites and emerging enterprises. This implies that during the construction phase, there will be pressure on neighboring facilities including housing estates, water supply systems, health facilities and security structures. As the various phases of the Master Plan are completed, the resident and working population will	A systematic way of handling matter related to labour issues will be adopted.	**A** **B** **C**	High High High	High High High	Local	Frequent	Reversible	**Likely** **Most likely** **Most likely**

	also grow significantly.								
Land Degradation	- Biological/Vegetation degradation (loss of biodiversity/vegetation) – Is the reduction of the vegetation cover, loss of vegetation species and habitats, and a decline of biomass. It is typified by assessments of land use/land cover changes.	Additional field surveys. Potential for at risk species and biodiversity loss. Development of mitigation and compliance with recovery plans on Biological/Vegetation degradation.	**A** **B** **C**	Moderate High High	Moderate High High	Depending on species regional to national	Variable	Reversible or Not depending on species	**Likely** **Most likely** **Most likely**
	-Soil erosion by water - The loss of top soil due to runoff or overland flows. It is identified from loss of topsoil by water, gully erosion, landslides in highland areas, and riverbank erosion. -Wind erosion - commonly associated with denuded lands which are prone to strong winds	Development of mitigation and compliance with recovery plans on Soil erosion by water and wind, Water resources degradation, Chemical degradation. Additional field surveys.	**A** **B** **C**	Moderate High High	Moderate High High	Regional	Variable	Reversible	**Less likely** **Likely** **Most likely**

	and light soils. -Water resources degradation - includes processes such as change in quantity and quality of surface water, acidification and drop in ground water level. It also includes systematic decline in soil moisture content. - Chemical degradation - the negative change of the chemical properties of soil. It is manifested in soil fertility decline & reduced organic matter content, leaching, nutrient mining, acidification /lowering of the soil pH, soil pollution by pesticides, industrial effluents and soil contamination with toxic material, salinization/ alkalinisation which causes a net increase of salt								

	content of (top) soil leading to a productivity decline. -Physical degradation – includes loss of natural or aesthetic physical conditions of the land e.g. from quarrying, mining, scarification, soil compaction, sealing and crusting: clogging of pores with fine soil material and creation of an impervious soil surface layer obstructing rainwater infiltration.								
Transport network	Increased traffic activities and traffic interruptions and traffic incidences especially heading to the industries for delivery of goods and to staff residence	The site is well connected to transport and communication networks. It is connected to the Suswa-Narok Road, Nairobi-Nakuru Highway, the Standard Gauge Railway (SGR) and the Inland Port. In addition, railway connection to Longonot meter	**A** **B** **C**	High High High	High High High	Local	Frequent	Reversible	**Less likely** **Likely** **Likely**

		gauge railway is ongoing. There are plans underway to widen the Mai Mahiu-Narok highway, the dualling of the pipeline road and construction of a connector road from the site to the SGR. This will ensure the project doesn't disrupt the local traffic. The proposal is to provide for Non-Motorized facilities- bicycle lanes and pedestrian lanes as well as bicycle parking facilities within the establishment to promote sustainable transportation in the facility and extend the same to the connector roads outside the SEZ.							
Electricity	High electricity demand to be used for industrial operations and the residence	Monitoring should be done on regular basis to manage the consumption of	**A** **B**	High High	High High	Local , regional to national	Frequent	Reversible	**Less likely** **Likely**

		energy ; Implementation of alternative electricity sources especially renewal , environmental friendly such as use of solar energy	**C**	High	High				**Most likely**
Land scape	There is a negative impact on population which arises from the visual impact, where dwellings are located in close proximity to the proposed development with no intervening vegetation or topography. The tourism industry often relies on the character of landscape and new development can affect landscape character. Therefore, the proposed development could potentially affect a visitor experience if: • a particular tourist destination	Monitoring should be done on regular basis to manage the project development and work closely with the county government of Nakuru to ensure the development is in line with the county development plans	**A** **B** **C**	High High High	High High High	Local	Variable	Reversible or not depending on the magnitude for developments	**Less likely** **Likely** **Most likely**

	is affected to a degree that a sensitive aspect of the landscape character is significantly changed, • if the general landscape character is changed in such a way as to alter characteristics that are promoted by the tourist industry, • if the proposed development adversely affects an appreciation of the landscape's time depth.								

CHAPTER 7

ALTERNATIVES

7.0 ALTERNATIVES

Alternatives are fundamental to Strategic Environmental Assessment (SEA). Consideration of alternatives in SEA provides the opportunity to identify and explore different ways to deliver a plan's or programme's objectives while addressing environmental issues. The timely consideration of alternatives in SEA and the planning process pro-vides an opportunity to identify and explore ways of accommodating the future development needs of an area or sector, taking into account the intrinsic environmental conditions. An effective SEA process should include early consideration of realistic, reasonable, viable and implementable alternatives that promote environmental benefits while fulfilling the plan's/programme's objectives.

7.1 Comparison of Alternatives

7.1.1 No Plan Alternative;

Kenya special economic zones pre-feasibility studies and market demand analytics[8] undertook a country-wide survey of potential sites. This covered issues such as competitive analysis of SEZ proposition; investor survey; demand forecast, country level forecasting; country-level Strength, Weaknesses, Opportunity and Threat(SWOT); and comparative benchmarking at site level. All these determinants made Naivasha a feasible location for a SEZ.

The evaluation covered aspects such as land access and use; topography for development; off-site infrastructure; offsite utilities; on- site infrastructure and utilities; general environmental conditions; biological environment; and human environment

A follow-up pre- feasibility report for the SEZ was subsequently prepared by the World Bank & Pricewaterhouse Coopers[9]. The detailed assessment of the site reveals that the site is on a fairly even grassland which is suitable for development of an industrial park/SEZ. Further, it was also observed that the site is very well connected to main trunk roads of Trans-African Highway network

[8] KENYA SPECIAL ECONOMIC ZONES PRE-FEASIBILITY STUDIES AND MARKET DEMAND ANALYTICS; World Bank Group

[9] Pre-feasibility Studies for Naivasha Special Economic Zone, Kisumu Special Economic Zone and Lord Egerton Agro-city; Ministry of Industrialization and Enterprise Development; Prepared by World Bank Group, PricewaterhouseCoopers.

and great north road A104 and Standard Gauge Railway (SGR) from Mombasa. This provides the site with direct access to East African Community and also to other international markets connected to the Mombasa Port. However, there are minor challenges such as being a flood prone area and the soil type. Hence, the site has been considered for further development of an industrial park/SEZ and the necessary interventions to mitigate challenges related to flood prone area and soil type have been addressed in development framework analysis for the site.

Issue		
Construction (Cluster a)	alternative	number
	Cheapest and available materials	1
	Local sourcing	2
	Eco- certified/ lowest footprint	3
	Wildlife offsets	4
Water (Cluster b)	Connect to water pipeline	5
	Connect to pipeline and enhance efficiency	6
	Combine efficiency with local collection and storage	7
Energy (Cluster c)	Connect to grid	8
	Solar heating & lighting	9
Solid and liquid waste (Cluster d)	Connect to sewerage system	10
	Minimal on-site waste treatment before discharge into sewer system	11
	Localized waste treatment & recycling	12
Workplace Issues (Cluster e)	Individual enterprises to set up policies	13
	An overarching policy for the SEZ	14
	An overarching emergency response plan	15
Security (Cluster f)	Business as usual	16
	Use vigilantes	17
	Use community policing	18
	Integrated security strategy	19
Drug and substance abuse (Cluster g)	Arrests	20
	Guidance and counselling	21
	Skills development	22

Table 15: Additional surveys including a hydrological survey, a GIS map have found the site to be ideal for future development of SEZ

7.1.2 Alternatives

7.1.2.1Comparison of Alternatives

	ALTERNATIVES																					
	Cluster a				Cluster b			Cluster c		Cluster d			Cluster e			Cluster f				Cluster g		
Sustainability objective	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Support vulnerable groups	-	+	+	?	+	+	+	+	+	+	+	+	+/-	+	+	-	-	+	+	-	+	+
To reduce anti-social activities; gender violence; prostitution and family break ups	-	+	+	?	?	?	?	?	?	?	?	?	+/-	+	?	-	-	+	+	-	+	+
Training for sustainable development	-	+	+	+	?	+	+	-	+	-	+	+	+/-	+	+	?	?	?	?	?	?	?
Safe work environment	-	?	+	+	+	+	+	+	+	+	+	+	+/-	+	+	-	-	+	+	-	+	+
Safe communities	-	+	+	+	?	?	?	?	?	+	+	+	+/-	+	+	-	?	+	+	-	+	+
Social cohesion	-	+	+	+	?	?	?	?	?	?	?	?	+/-	+	?	-	-	+	+	-	+	+
To encourage sustained economic growth	-	+	+	+	-	+	+	+	+	+	+	+	+/-	+	+	-	-	+/-	+	-	+	+
To promote sustainable livelihoods	-	+	+	+	-	+	+	+	+	+	+	+	+/-	+	+	-	-	+	+	-	+	+
To encourage	+	+	+	?	?	?	+	-	+	-	+	+	+/-	+	?	-	-	+	+	-	+	+

indigenous investment																						
Affordable Housing	+	+	+	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Minimize congestion	+/-	+	?	_	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
To offer everybody the opportunity for rewarding and satisfying employment	+	+	+	?	+	+	+	+	+	+	+	+/-	+/-	+	+	-	?	+	+	-	+	+
Encourage economic diversification	+	-	?	?	-	+/-	+	+	+	?	+	?	?	?	?	-	?	?	+	?	?	?
To promote value addition	-	+	+	?	?	?	?	+	+	?	?	?	?	?	?	?	?	?	?	?	?	?
Sustainably managed natural resources	+	+	+	+	-	+/-	+	-	+	?	+	?	?	?	?	-	-	+	+	?	?	?

Table 16: Comparison of Alternatives

	Cluster a				Cluster b			Cluster c		Cluster d			Cluster e			Cluster f				Cluster g		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
To improve water quality and access	-	+	+	?	+	+	+	?	?	-/+	-/+	+	?	?	?	?	?	?	?	?	?	?

Climate resilient development	-	-	+	+	-	+	+	-	+	-	+	+	+/-	+	+	?	?	?	?	-	+	+
Conserve wetlands	-	?	+	+	-	-	+	?	?	-	-	+	?	?	?	?	?	?	?	?	?	?
Sustainable exploitation of natural resources	-	+	+	+	-	+	+	-	+	-	-	+	?	?	?	?	?	?	?	?	?	?
Building	-/+	+	+	?	?	?	?	-	+	?	?	?	?	?	?	?	?	?	?	?	?	?
To improve air quality	-	?	+	?	?	?	?	-	+	?	?	?	?	?	?	?	?	?	?	?	?	?
Promote clean, sustainable, affordable energy at least cost	-	+	+	?	?	?	?	-	+	?	?	?	?	?	?	?	?	?	?	?	?	?
To minimize waste	-/+	+	+	?	?	?	?	-	+	-	-/+	+				?	?	?	?	?	?	?
To maintain and enhance biodiversity/ flora and fauna	-	+	+	+	-	-	+	-	+	?	?	?	?	?	?	?	?	?	?	?	?	?

Table 17: Comparison of Alternatives

Key

+ Positive impact

- Negative impact

+/-impact could be positive or negative

? No impact/ impact unknown

7.1.3 Trade offs

The process of ensuring sustainability requires positive steps to meet all of the interdependent core requirements for sustainability which will include; biophysical system integrity and basic human well-being. Where these essentials are involved trade-offs should be avoided, unless all other options are worse. In environmental assessments, it is important to identify major trade-offs and minimize them through selection of less bad alternatives or addition of mitigations or offsets. In this particular Naivasha SEZ Master Plan any development of such magnitude can result in climate changes of an area, result to loss of biodiversity for the flora and fauna of the region among other issues. The development of this master plan will be carried out in a way that it will:-

- Maximum net gains
- Burden of argument on trade-offs on the proponent
- Avoidance of significant adverse effects
- Protection of the future
- Open process with effective involvement of all stakeholders

Rule	Description
Maximum Net gains	An acceptable trade-off or set of trade-offs must deliver net progress towards meeting the requirement for sustainability. Trade-offs must seek mutually re-enforcing, cumulative and lasting contributions and must favour achievement of the positive feasible overall result, while avoiding the significant adverse effects.
Burden of argument	Trade-off compromises that involve acceptance of adverse effects in sustainability-related areas are undesirable unless proven (or reasonably established) otherwise; the burden of justification falls on the proponent for the trade-off.
Avoidance of significant adverse effects	No trade-off that involves a significant adverse effect on any sustainability requirements areas (for example, any effect that might undermine the integrity of a viable socio-ecological system) can be justified unless the alternative is acceptable of an even more significant adverse effect. • Generally then, no compromise or trade-off is acceptable if it entails further decline or risk of decline in a major area of concern, or if it endangers prospects for resolving problems identified as global, national and/or local priorities; • Similarly, no trade-off is acceptable if it deepens problems in

	an area (integrity, equity etc); and • No enhancement can be permitted as an acceptable trade-off against incomplete mitigation of significant adverse effects if stronger mitigations efforts are feasible.
Protection of the future	No displacement of a significant adverse effect from the present to the future can be justified unless the alternative is displacement of an even more significant negative effect from the present to the future.
Explicit justification	All trade-offs must be accompanied by an explicit justification based on openly identified , context specific priorities as well as the sustainability decision criteria and the general trade-offs rules • Justifications will assisted by the presence of clarifying guides (policies, priority statements, guides to the evaluation of significance. etc) that have been developed in processes as open and participative as those expected for SEAs.
Open process	Proposed compromises and trade-offs must be addressed and justified through processes that include open and effective involvement of all stakeholders.

Table 18 trade off guide lines

Strategic Environment Assessments address complex problems, have diverse and sometimes conflicting objectives, affect multiple stakeholder groups and are often developed under conditions of uncertainty. But a compromise can always be muted, a more common scenario involving both 'winners' and 'losers' necessitating ''trade-offs' . A trade-off usually refers to losing one quality or aspect of something in return for gaining another quality or aspect. It implies a decision to be made with full comprehension of both the upside and downside of a particular choice.

Trade-offs appear in two types: compensation or substitutions, and net gain and loss calculations:

- Compensation and substitutions are fairly straight forward where one option can be substituted for another e.g. to eliminate a natural wetland and replace it with a constructed wetland of comparable ecological value elsewhere in the watershed or an option can be provided to compensate for a particular risk or loss.
- Net gain and loss calculations are not always done explicitly or openly, and the measurement and comparisons are often difficult and sometimes objectionable e.g. the jeopardized interests of a local community displaced by a new dam balanced against more

material water supply security for a larger number of downstream rural communities.

While trade-offs may not always be acceptable, it is important that a justification is always provided and that the process is as transparent as possible. Gibson (2005) defined a basic working list of rules to guide trade-off deliberations (see table 6 below). These rules can be used as a checklist when dealing with trade-offs within SEA.

There are a number of tools that have been designed specifically for dealing with trade-offs, for example cost-benefit analysis and consideration of opportunity costs, matrix-based appraisal methodologies, multi-criteria assessment scenario comparisons, life cycle assessment, etc.
SEA that has the steps and practices as provided for above has a basic level of process quality. However, specific measure of quality control assurance might be warranted, e.g. to ensure the credibility of the assessment in the eyes of a stakeholders. These measures will depend on the nature, context, needs and timeframe of the specific strategic initiative. For further guidance.

The SEA process has incorporated the following quality control checks: -

- An independent review of SEA by TAC for programmes and plans;
- Inter-ministerial Committee on Environment (IMCE) to evaluate the draft SEA report on policy;
- A reality check by the NEC on the SEA report;
- An independent expert commission (applicable for transboundary shared resources)

The role of the Authority will be to constitute the TAC and IMCE. For trans-boundary PPP the nomination of experts to the independent expert commission to represent the country on transboundary issues, the respective notification protocols and procedures shall apply without change in concept.

Alternatives

Area	Specific Focus	Alternatives	Other Considerations	Preferred Alternatives
Development (infrastructures i.e. roads , water reticulation facilities , industries zones buildings)	Building and construction	• Cheapest and available materials • Local sourcing • Eco- certified/ lowest footprint • Wildlife offsets	• Cost • Technology • PWD access	• Eco-certified & local sourcing (lowest footprint) • PWD access as part of design • Retain aesthetics • Reduce congestion • Wildlife offsets
	Water	• Connect to pipeline • Connect to pipeline and enhance efficiency • Combine efficiency with local collection and storage	• Cost • Technology • availability of expertise	• 50% local generation (rain water harvesting) and 50 % pipeline
	Energy	• Connect to grid • Solar heating • Solar lighting	• Cost • Technology availability	Use and energy mix; • 100% solar heating • 100% solar lighting • 30% energy from main grid
	Solid waste	• Collection by a NEMA licensed waste management company	• National standards for waste • Technology • Cost	• Waste separation and recycling at source; engage local youth enterprises

			• Expertise NB; normal household waste to be subject to the waste hierarchy	
	Liquid waste	• Connect to sewerage system • Integrate local technology and connect to sewerage system • Minimal on- site treatment before discharge into sewer system • Localized treatment	• National standards for waste • Technology • Cost • Expertise NB: considerations to be given to minimization and recyclability	• 100% treatment at site followed by subsequent re-use
	Noise	• Zonation • Timings • Technology • local SEZ guidelines	• National and county policies/ regulations/ standards • Availability of technology • Cost • Availability of expertise	• Best available technology • Zoning • Timing of activities
	Air Quality	• Technology	• National and	• Best available technology

		• Local SEZ guidelines	county policies/ regulations/ standards • Availability of technology • Cost • Availability of expertise	• Zoning
Workplace Issues	Employment and labour issues Workplace safety Emergency response	• Individual enterprises to set up policies • An overarching policy for the SEZ • An overarching emergency response plan	• DOSH specifications	• An overall emergency response plan needs to be prepared • An overall policy on PWD considerations needed
	Zoning	• A general zoning plan to be developed to cater for special places including quite places like school and dispensaries	• County zoning guidelines	• Cluster development according to their impacts on the environment for ease of installing mitigating infrastructure to curb pollution.
	Demand for land	• Implement as a planned • Smart construction including storeyed		Optimize land use
Social Issues	Security risk	• Allow scenario to evolve without any		• Work with the National Police Service to develop a

		intervention • Local youth groups (vigilantes) to be in charge of security • Promote community policing • Generate a security strategy		security policy/ strategy for the SEZ • Promote community policing
	Cultural dilution			Organize cultural days
	Prostitution	• Arrests • Guidance and counselling • Skills development	• Training • Sporting • Social Work	• Integrate correctional centres in the master plan in liaison with the Ministry concern with culture and social services.
	Drug and substance abuse	• Arrests • Guidance and counselling • Skills development	• Training • Sporting • Social Work	• Integrate correctional centres in the master plan in liaison with the Ministry concern with culture and social services.

Table 19: Alternatives

7.1.4Positive Impacts"

Improved infrastructure; the improved road network will facilitate other sectors such as

- Agriculture in aspects such as access to farm inputs; market access; reduced post-harvest losses
- Access to health facilities
- Attract other investors to the region due to the competitive advantage
- Will lead to easy access to international markets like EAC, COMESA, American market (AGOA), UK and European Union among others.

Enhanced incomes are expected to improve livelihoods and lead to higher standards of living and reduced vulnerability as it's expected to spur savings in SACCOs and other establishments that members can subsequently draw upon for subsequent investment leading to additional employment creation.

Technical and vocational skills upgrade; the demand created for technical and vocational skills in the SEZ will be a bonus for Naivasha which can export the same to other needy areas in the country and beyond.

Reduced un- employment rates; Unemployment plays a role in anti- social behavior such as insecurity and drug/substance abuse.

Promotion of diversified economic growth in the county

CHAPTER 8
ENVIRONMENTAL AND SOCIAL MANAGEMENT AND MONITORING PLANS

8.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT AND MONITORING PLANS

8.1 Introduction

The aim of the Environmental and Social Management and Monitoring Plan (ESMP) is to provide information on the actions required to effectively implement the mitigation measures and alternative options for the environmental aspects identified and recommended in the SEA. These actions are necessary in order to: -

- Minimize the negative impacts which might originate from the plan implementation and instead enhance the positive impacts of the Naivasha SEZ; and
- Support the long term management and monitoring of the environmental issues during plan implementation.

8.2 Management and monitoring action

The SEA has prescribed applicable mitigation measures for each of the plan activities with a potential for negative environmental impact and also recommended suitable alternative options to deal with the environmental aspects which were identified in the PPP analysis.

The SEA has recommended simple, straight-forward and tangible management actions which are specific to each of the mitigation measures and alternative options. The various actions should be implemented to ensure that the environmental weaknesses are addressed. Monitoring has also been include in the report in order to assess the accuracy of the predictions and to monitor the effectiveness of mitigation measures.

The monitoring frequency and indicators have been recommended for each management action. Regular monitoring using the recommended indicators will indicate the level of progress with regard to ensuring environmental sustainability in Naivasha SEZ.

8.3 Environmental management and monitoring standards and guidelines

Specific standards and guidelines have been identified for each management action. These were identified mostly from the PPP framework against which the Naivasha SEZ was evaluated in the SEA. This will be used during the environmental management and monitoring of the Naivasha SEZ.

8.4 Roles and responsibilities

It is the responsibility of the SEZA Management to implement the Environmental Sustainability Management Program (ESMP) and to make sure that all the actions are carried out in partnership with stakeholders as outlined in the ESMP. The successful implementation of the ESMP is however dependent on clearly defined roles and responsibilities for each of the management actions given as clearly indicated in the ESMP.

	Key responsibility
Institution	
Special Economic Zones Authority (SEZA)	• SEZA to participate in the entire Naivasha SEZ master plan implementation process as conducted by contractors/ investors from construction, reviewing and verifying the implementation
Nakuru County Government and Narok county government (All relevant departments and ministries)	• Provide oversight and advisory services during the implementation by volunteering information if need be.
National Government	
Ministry of Industrialization and Enterprise Development	• Policy direction on industries and trade • Provide funding • Facilitate in coordination of trade and associated matters
Ministry Of Land and Physical Planning	• Land and land tenure Issues • Approval of land use plans for industries • Approval or architectural drawings
Implementing Agencies	
Learning institutions in the region	• Facilitate capacity building of young entrepreneurs. • Facilitate incubation of innovations.
Kenya Association of Manufacturers (KAM)	• Energy use audits to monitor energy efficiency. • Water use audits to monitor water efficiency. • Ensure welfare of the Industrialists.
Kenya National Highway Authority (KENHA)	• Overseeing construction of the roads, foot paths, storm water drainage in the Naivasha SEZ Zone.
Kenya Power	• Supply of electricity
National Construction Authority	• Monitoring construction works for quality

	control
Water Resources Management Authority	• Monitoring of water abstraction rates. • Monitoring of water quality - pollution of water sources – rivers and boreholes.
National Environmental Management Authority	• Review Environmental Impact Assessment (EIA) reports for the different investors/projects • Review environmental audit (EA) reports. • Approve EIA and EA reports. • Deal with cases of non-compliance.
Kenya Industrial Research and Development Institute (KIRDI)	• Facilitating technology development and transfer.
Kenya Bureau of Standards	• Monitor product standards
Investors	• Construct and invest according to the laid down development and environmental guidelines and regulations • Comply with county, national and international quality standards.

Table 20: Institutional Arrangements of Implementing Environmental Components of the Master Plan

8.5 ESMMP schedule

The schedule serves to give the list of environmental action to be undertaken. The ESMP schedule is given in the table below.

Aspect	Potential adverse impact	Objective	Management strategy	Recommended management and monitoring action	Performance indicator	Monitoring requirement	Reporting	Interface	Responsibility	Budget / costs (KSh. M)
Environmental and Landscape Changes	- Negative visual impact due to loss of visual amenity from dense industrial and other urban structures - Increased risk of flooding due to increase in storm water generated on site -Poor ambient	Ensuring positive landscape changes and enhancement of environmental quality	Protection of endangered/ threatened/vulnerable species and habitats , enhancement of biodiversity on site	-Ensure adequate tree cover and flower gardens within developed areas to provide shade and cooling effect -Ensure adequate drainage of the site through drainage works. Plenty of gardens and green areas within developed areas will enable percolation of rainfall and reduce runoff - Ensure plenty of vegetation cover (trees and shrubs) as buffers	- Percentage green spaces vis a vis developed spaces - Size of buffer zones -Background noise and ambient air quality	Periodical surveys and measurements	Audit Report	Physical Planning Handbook	SEZA	100

	air quality and increase in backgro und noise levels - Increase d noise levels generate d on site			between land-uses to reduce noise effects -Enforcement of pollution control measures for air pollution sources in the Naivasha SEZ -Tarmacking all major roads to enhance movement in all-weather and to avoid dust generation						
Waste Manag ement	High generati on of solid and effluent waste from commer cial ,industrial and residenti al areas	Eliminate impact on public health due to the poor waste managem ent on location	Removal of agents of environment al pollution and proper disposal of wastes	-Adoption of an integrated solid waste management plan that includes reduction, reuse, recycling, incineration, composting and land filling -Pursue waste minimization at source principles e.g. zero generation, reduction, re-use and/or	Housekeepin g, littering, and status of solid waste management in project site , functional waste management facilities	Periodical inspection of waste manageme nt operations	Environme ntal Audits and other Statutory and non-statutory reports	Comply with the provisions of the Waste manage ment Regulatio ns on Waste manage ment	SEZA, develope rs and investors in the zone	500

				recycling; -segregation of domestic and industrial waste to be done and managed separately -Provide mechanisms to segregate wastes at source to enable recycling -Provision of transfer stations from where waste will be disposed in designated areas and ensure that all wastes are stored temporarily at the designated transfer stations, and that they are regularly carried away for disposal in designated areas;						
Biodiversity and Nature	- Modification of	Conservation of biodiversity	Protection of endangered/ threatened/v	Management and Monitoring Action		Periodical ecological surveys	Ecological Survey Report	-Wildlife Management	SEZA in consultation with	30

Conservation	vegetation -Loss of wildlife habitats	on site	ulnerable species and habitats , enhancement of biodiversity on site	-Protection of the environment and establishment reserve management plan -Establishment of a wildlife management plan in collaboration with KWS -EIAs to be undertaken for all development activities				Plan -The Water Act 2002, -Water Resource Management Regulations 2007,	KWS	
Energy Resources	-High energy demand in industrial zones , administrative zone , commercial center and residential areas	Minimize impact on available energy resources and ensure their conservation	Conservation of energy resources through lowering of consumption levels	-Energy conservation through installation/use of energy efficient appliances/fittings; -Adoption of green energy sources e.g. solar energy, waste to energy projects etc -Use of green building designs	Energy use levels against benchmarks	Metering, Energy use monitoring and evaluation schedule	Energy Audit reports	The Energy Act 2006, - Subsidiary legislation under the Energy Act - International Best Practices	SEZA in liaison with KENGEN, GDC and Kenya Power	200

				that allow for passive heating and cooling, and maximum utilization of natural light in buildings -Creating of energy conservation awareness programmes; -Continually seek avenues for energy conservation as international best practices evolve						
Water Resources	-High water demand in industrial areas, commercial and residential areas -Decline in groundwater levels	Minimize impact on available water resources and ensure their conservation	Conservation of water resources through sustainable utilization	-Rain water harvesting -Conservative water use in low volume fixtures in buildings -Use of recycled and harvested storm water in cleaning and watering of plants -Incorporate	-Water use levels - Borehole yields	A water use monitoring and evaluation schedule	Logs of inspections	The Water Act 2002, -Water Resource Management Rules 2007	SEZA, developers and investors	3,000

				water accounting systems and metering for all areas -Continually seek new avenues for water conservation as international best practices evolve -Undertake a hydrogeological study in collaboration with WRA to determine the sustainable ground water abstraction levels						
Social Aspect (Increased insecurity, cultural dilutions)	Community and developer disputes	Minimize/ avoid social dispute	Conservation of the area social and cultural practises / activities of the area	-Inclusion of the community in activities associated with the development of the Naivasha SEZ -Work with the National Police Service to develop a security policy/	Signed MOU between the community and the management of the Naivasha SEZ	-	-	Comply with laws that provide provisions of Social aspects	SEZA	100

				strategy for the SEZ -Promote community policing Organize cultural days						
Workplace issues (employment , workplace safety , emergency response)	Injuries at workplace and employment injustices	Minimize/ avoid injuries at work and employment dispute	Ensure the work environment is conducive	-Provision of PPEs for employees -Develop a local content framework -Undertake a skills demand analysis Work with local TIVET institutions to proactively train potential workforce	-Recorded number of injuries	Employment contract review and evaluation; Inspection	OSHA Audits	OSHA Act 2007	SEZA	50

Table 21: ESMP schedule

8.6 Project specific Environmental Management and Monitoring Plans

Implementation of specific projects within the Naivasha SEZ Master Plan will be preceded by project-specific Environmental Impact Assessments. Environmental Management and Monitoring Plans developed in these EIAs shall be in line with the ESMP developed for the Naivasha SEZ. As a minimum; the Construction Environmental Management and Monitoring Plans (CEMMP) to be developed shall address the following issues identified as key in Naivasha SEZ:

- Physical setting, flora and fauna;
- Noise and vibrations;
- Water resources;
- Energy resources;
- Air quality;
- Traffic Management;
- Waste management; and
- Occupational health and safety.

The contractors who shall be appointed for construction of the various developments shall develop their own EMPs to ensure actions and mitigation necessary to protect the environment are incorporated into all site procedures. At a minimum, a contractor's EMP must address the following:-

- Policy
- Planning
- Implementation and Operation

8.6.1 Policy

The contractor will develop an environmental policy that includes, as a minimum, the following:

- A commitment to comply with applicable regulations and other requirements that the company subscribes to;
- A commitment to provide a safe work environment;
- A commitment to provide the training and equipment necessary to for employees to conduct their work safely;
- A commitment to continuously improve performance and to prevent pollution;
- A commitment to communicate the policy to all persons working for and/ or on behalf of the company.

8.6.2 Planning

Environmental issues, the legal and other requirements for the development have been identified in the SEA. The Contractor must demonstrate within his plan that he has read and understood the SEA and EIA Reports and their provisions for environmental management and monitoring.

8.6.3 Implementation and Operation

Roles, responsibilities and authorities will be defined, documented and communicated to ensure that there is effective environmental and social management. A specific management representative will be assigned with the duty of ensuring that the EMP is developed, implemented and maintained. The identified or assigned individual will ensure that the responsibility of the Management, Supervisor, and Employee with regard to developed EMP is communicated to them. This shall be done through trainings, provision of the information in their job descriptions etc. Awareness training shall also be provided that will include information on the importance of conforming to the policy and procedures, the significant environmental, and the roles and responsibilities of management and staff.

The contractor will establish, implement and maintain procedures to identify potential emergency situations and potential accidents that can have an impact on the environment, surrounding communities, the employees, and / or the public.

8.7 Environmental Monitors

Independent Environmental Monitors will be identified and contracted to perform the following:

- Verify that all project approvals and permits are in place prior to the start of construction;
- Evaluate contractor plans (e.g., EMP, Spill Response and Waste Management) and monitor implementation;
- Develop inspection checklists to ensure site inspections are focused and useful
- Conduct environmental monitoring of construction works; the environmental monitor will ensure the protection of the environment, that mitigation measures are appropriately implemented and to facilitate communication between the Contractor, the Project Team and NEMA; and
- Prepare regular written reports to the Project Team, Contractor and, where need be, NEMA on an agreed to schedule.

8.8 SEA Monitoring and Implementation Plan

Indicator	Baseline	2030 Target	Frequency of data collection	Responsible authority
Level of river water abstraction	0	5% river water abstraction	Annually	SEZA in consultation with Water Resources Authority
Level of rain water harvesting	0	50% rainwater harvesting	Annually	SEZA in consultation with NEMA/ CGoN
Level of water loss within the SEZ water systems	0	5%	Two years	SEZA in consultation with CGoN
Water use efficiency	0	90%	Two years	SEZA
Gray-Water recycling	0	75%	Annually	SEZA in consultation with NEMA and CGoN
Ground water pollution	0	5%	Annually	NEMA
Human-wildlife conflict	0	0	Annually	SEZA in consultation with Kenya Wildlife Service
Poaching incidents	0	0	Annually	SEZA in consultation with Kenya Wildlife Service
Vehicular congestion	0	0	Annually	SEZA in liaison with Kenya National Highways Authority
Level of Waste electric and electronic equipment (WEEE) recycling	0	50%	2 years	SEZA in liaison with NEMA
Incidence of insecurity	0	0	Annually	SEZA supported by the County Security Committee
SGBV incidents	0	0	Annually	SEZA in consultation County Security Committee
Drug and Substance abuse	0	0	Annually	SEZA in liaison with NACADA

Local content framework for the SEZ	0	40%	3 years	SEZA supported by Ministry of Labour and Social Protection
Efficiency of Emergency response	0	95%	Annual reports	SEZA supported by County Emergency team
GHG emissions	0	10%	Annual reports	SEZA in consultation with NEMA and Ministry of Energy

Table 22: SEA Monitoring and Implementation Plan

CHAPTER 9
CONCLUSION AND RECOMMENDATIONS

9.0 CONCLUSION AND RECOMMENDATIONS

9.1 Conclusion

From the SEA study, both positive and negative environmental and social-economic impacts were identified from implementation of the Naivasha SEZ Master Plan. However, overall, the positive impacts outweigh the negative. Additionally, measures to enhance positive impacts have been listed while adequate mitigation measures for the negative ones have been proposed hence the possible negative effects will be minimized.

Views from consultations with stakeholders were incorporated in the master plan and hence used to enrich it. However, it's important that, as subsequent programmes and projects are implemented, rigorous public engagement exercises are made a permanent feature.

9.2 Recommendations

For the Naivasha SEZ Master Plan to achieve its intended strategic objectives and the proposed environmental strategies, the consultancy team has recommended the following;

9.2.1 Water

9.2.1.1 Sponge City Approach

SEZA needs to embrace this approach in implementing the Naivasha SEZ. This is a new urban construction model for flood management strengthening ecological infrastructure and drainage systems. It can alleviate the SEZ's waterlogging, water resources shortage and urban heat island effect and improve the ecological environment and biodiversity by absorbing and capturing rain water and utilizing it to reduce floods. Rain water harvested can be repurposed for irrigating the green buffer zone and for home use.

Roof catchment (water harvesting) is another alternative for supply of water to the facility. This technology will assist in;

- Flood management
- Strengthening ecological infrastructure
- Water harvesting - especially surface runoff
- Alleviate water shortage
- Enhance green spaces and blue spaces e.g. ponds

- Enhance underground recharge and water recycling.

9.2.1.2 Research on water resources

Proper studies need to be commissioned to determine total supply as well as the total domestic, ecological and commercial water demands in this area. This can be done by;

a) Assessing the cumulative impacts of various development projects within the SEZ ecosystem and environs on water demand and supply from both underground and surface sources.
b) Undertake in-depth hydrological studies to ascertain the real amount of water available.

9.2.2 Integrated Solid Waste Management

SEZA needs to adopt this approach which is a strategic approach to sustainable management of solid wastes covering all sources and all aspects, covering generation, segregation, transfer, sorting, treatment, recovery and disposal in an integrated manner, with an emphasis on maximizing resource use efficiency.

9.2.3 Incorporate circular economy with integrated waste management and other designs

The circular economy is a model of production and consumption, which involves sharing, leasing, repairing, refurbishing and recycling existing materials and products as long as possible . In this way, the life cycle of products is extended.

Moving towards a more circular economy will deliver benefits such as reducing pressure on the environment, improving the security of raw materials, increasing competitiveness, stimulating innovation, boosting economic growth.

9.2.4 Climate Change Actions Mainstreaming in Development Planning

SEZA will have to make deliberate efforts in creating carbon sinks by ensuring a larger percentage is utilized as greeneries/carbon sequesters.

9.2.5 Green Building Technologies/Green Infrastructure

Green Building Technology also known as eco-friendly construction, entails the creation of structures that have low environmental impact throughout their life cycle: from design, construction, operation, maintenance, renovation and demolition stages. These will generally include structural design, energy efficiency, materials efficiency, water efficiency, operation and maintenance optimization and waste and toxic reduction.

Environmentally friendly construction calls for the following (among other) interventions:

1.) Orientation: Long facades of a building should face south or north where solar radiation is less.

2.) Sun-shading: Fins, balconies as well as deep recesses should be used to control the amount of sunlight entering a building.

3.) Construction Materials: The wall of a building should be thick to absorb heat and conduct it slowly, thus preventing overheating on the inside of the building. The exteriors should be light coloured to reflect solar radiation hence reducing heat absorption.

4.) Natural Lighting: Full – height windows should be used to ensure natural light reaches every space.

5.) Natural Ventilation: This is achieved through the use of permanent ventilation louvres. In addition to that, thermal chimneys fitted with cowls assist in expelling hot air at the top.

9.2.6 Wildlife

There is need to secure wildlife corridors and Bird migratory Flyways

a) There is urgent need to identify, map and gazette the critical wildlife migration and dispersal areas and corridors including birds' flyways in this area to ensure they are safeguarded.
b) Wildlife carrying capacity study should be conducted at the site to determine the amount of pasture lost to inform mitigation.

9.2.7 Data gaps

The absence of data was a major obstacle during this undertaking. Data collection on various sustainability factors needs to be an on- going effort by SEZA supported by different entities based on their mandates. These include, but are not limited to, the KWS, The Kenya Meteorological Department, NEMA, WRA, the County Government of Nakuru, and the Kenya National Bureau of Statistics. The data is with regard to environmental and natural resource aspects such as air quality, biodiversity etc.

Baseline information on ambient air quality, water and soil conditions needs to be availed. Implementation of the Master Plan will result in heavy and light industrial activity with the potential to impact the air, soil and water quality. It is important therefore to establish baseline conditions before implementation of the master plan commences.

9.2.8 ESMMP

The proposed Environmental and Social Management and Monitoring Plan should be implemented effectively ensuring that all the recommended mitigation measures are implemented.

9.2.9EMMCU

SEZA should establish an Environmental Management, Monitoring and Coordination Unit to oversee all the environmental aspects of the SEZ.

ANNEXES

ANNEX A1: A SAMPLE LIST OF STAKEHOLDERS CONSULTED

ANNEX A2: PUBLIC PARTICIPATION GUIDELINES DURING COVID_19

ANNEX A3: QUESTIONNAIRE SURVEY ON THE PROPOSED NAIVASHA SPECIAL ECONOMIC ZONE.

ANNEX A4:- STAKEHOLDERS' COMMUNICATION PLAN

ANNEX A5:-STAKEHOLDERS' IDENTIFICATION PROCESS AND ANALYSIS FRAMEWORK

ANNEX A6:- MINUTES OF STAKEHOLDER MEETING HELD ON 30TH JULY 2020 & 01ST AUGUST 2020

ANNEX A7:- ANNEX A7:- PHOTO GALLERY FOR VARIOUS CONSULTATION MEETINGS WITH PUBLIC INSITITUTIONS AND SEA VALIDATION WORKSHOP HELD ON THE 26TH MARCH 2021

ANNEX A1: A SAMPLE LIST OF STAKEHOLDERS CONSULTED DURING THE SEA PROCESS

- SEZA
- NEMA
- Directorate of Climate Change
- Directorate of Forestry Conservation
- Ewaso Nyiro North Development Authority
- Geothermal Development Company (GDC)
- Kenya Electricity Transmission Company (KETRACO)
- Kenya Forestry Research Institute
- Kenya Revenue Authority (KRA)
- Kenya Forest Service
- Kenya National Highways Authority
- Kenya Pipeline Company Limited
- Kenya Ports Authority
- Kenya Railways Corporation
- The Directorate of Occupational Safety and Health services
- State Department For Housing And Urban Development
- State Department For Infrastructure
- State Department For transport
- The Kenya Electricity Generating Company (KenGen)
- The Kenya Power and Lighting Company (KPLC)
- The Kenya Wildlife Service (KWS)
- The State Department of Tourism
- The State Department of Wildlife
- EPZA
- KENINVEST
- University Education and Research
- Water Resources Authority
- Kenya Industrial Research and Development Institute
- National Water Conservation and Pipeline Corporation
- Rift Valley Water Services
- Local community
- Business community
- Area's chiefs, ACCs, CCs, MCAs, MPs, Senator and Governor.
- Ministry of Industry and Enterprise Development
- Ministry of Interior and Coordination of National Government
- Ministry of Devolution
- County Government of Nakuru
- Ministry of Lands and physical planning

- National Land Commission
- Ministry of transport, infrastructure, Housing, Urban development and Public Works
- Ministry of Labour and Social Protection
- Ministry of Energy
- Ministry of Environment and Forestry
- The National Treasury and Planning
- Ministry of Water and Sanitation
- Lake Naivasha Riparian Association
- Nature Kenya
- Egerton University
- University of Nairobi
- Kenyatta University
- Jomo Kenyatta University of Agriculture and Technology
- Lake Naivasha Riparian Association
- Nature Kenya
- Naivasha Water and Sewage Company Ltd
-

ANNEX A2:-PUBLIC PARTICIPATION GUIDELINES DURING COVID_19

OFFICE OF THE DIRECTOR GENERAL

GUIDELINES ON CONDUCT OF PUBLIC CONSULTATION FOR EIA, EA AND SEA DURING THE PERIOD OF THE CORONA VIRUS (COVID-19) PANDEMIC

1. Preamble

Public participation is a process to involve those who are directly and indirectly affected by a project in the decision-making process, promoting sustainable decisions by providing the public with the information they need to be involved in a timely and meaningful way, and communicating to the public how their input affects the decision. (Source: International Association for Public Participation).

Public participation is an integral part of the Environmental Assessment (EA) as provided for in the Constitution of Kenya, 2010, the Environmental Management and Coordination Act, EMCA, 1999 and the Environmental (Impact Assessment and Audit) Regulations 2003. It provides an open, accountable and structured platform where stakeholders and/or affected persons interact, exchange views and influence decision making in development projects, plans, programs and policies.

The Guidelines present a common approach which can strengthen the implementation of public participation and access to information arrangements within existing National Strategic Environmental Assessment (SEA), Environmental Impact Assessment (EIA) and Environmental Audit (EA) frameworks.

2. Purpose of the Guidance

The purpose of the Guidelines is to provide practical guidance for implementing meaningful public participation in the Environmental Assessment processes (SEA, EIA & EA) during the Covid - 19 pandemic period.

3. Target Audience

The audience for the guidelines include Environmental Assessment (EA) experts, project proponents, Lead Agencies, project affected people (PAP), Civil society organizations (NGOs/CSOs), and other affected and interested stakeholders in the EA processes and implementation of investment projects.

4. Scope of the Guidance

The scope of the Guidelines covers proposed Policies, Plans, programmes and projects that are required to be subjected to SEA, EIA and EA processes in Kenya. Summary Projects Reports, comprehensive Project Reports and EIA Study Reports are considered as part of EIA. The Guidelines are also applicable to low, medium and high projects as classified under legal

notice 31, the Environmental Management and coordination Act, 1999, Amendment of the second Schedule of 2019.

5. The guidance

In recognition of the ban on all public events and the requirement for social distancing by the Government to minimize factors that may exacerbate the spread of COVID-19 disease the Authority guides the conduct of EIA, EA and SEA public consultation requirement as follows.

i. **ICT Innovations;** The Environmental Assessment experts are advised to leverage on ICT innovations such as online questionnaires/ survey techniques and audio-visual and teleconferencing to undertake comprehensive public consultations during this pandemic period. It will be incumbent upon the proponent in consultation with the EIA expert(s) to choose the most practical technique for various target stakeholder groups and provide reliable evidence of the consultation to the Authority for consideration.

ii. **Comprehensive Questionnaires;**

- The questionnaires should indicate the name, plot No., distance from site, a telephone contact and/ or official Stamp (where applicable)
- The questionnaire should include a clear description of the proposed project together with a copy of the architectural drawings
- The questionnaire should have open ended questions about the project so as not to narrow the views of the project affected persons

iii. **Public Consultation and Disclosure Plan;** For sensitive and complex projects where ICT technology is limited in applicability, the Authority shall advise on case by case basis on submission of comprehensive public consultation and disclosure plan.

iv. **Submission of Reports;** Submission and processing of all EIA, EA and SEA reports shall be done through the online licensing portal accessible through the NEMA website, www.nema.go.ke and the E-Citizen platform. Hard copies of the same should be submitted to the Authority as per the requirements of the Environmental (Impact Assessment and Audit) Regulations, 2003 for processing.

v. **Professionalism**; The code of practice and professional ethics for Environmental Assessment Experts shall apply to all experts undertaking the Environmental Assessments

MAMO B. MAMO

AG. DIRECTOR GENERAL

ANNEX A3:-QUESTIONNAIRE SURVEY ON THE PROPOSED NAIVASHA SPECIAL ECONOMIC ZONE

"Powering Growth"

Questionnaire Survey on the proposed Naivasha Special Economic Zone (SEZ) Master Plan that is subjected to Strategic Environmental Assessment Study (SEA).

1. Introduction

The Strategic Environmental Assessment (SEA) study on the proposed Naivasha SEZ Master Plan on LR no. 8396/56 in Naivasha, Nakuru County-Kenya underway. You have been identified as an important stakeholder to participate in the questionnaire survey and we seek your consent to participate objectively truthfully. Your answers and information you will provide shall be treated confidentially and will be used for this purpose only.

The government of Kenya through Special Economic Zones Authority under the Ministry of Industrialization and Enterprise Development and other development partners is establishing a special economic zone (SEZ) in Naivasha, Nakuru County. The SEZ will occupy a 1000 acre parcel and is located 14Km from Mai Mahiu township en-route to Narok, a major hauling truck stop over. The Standard gauge railway passes along the southern border of the site.

SEA is a systematic process for evaluating the environmental consequences of proposed land use policy and plan initiatives in order to ensure they are fully included and appropriately addressed at the earliest appropriate stage of decision-making on par with economic, social and environmental considerations. Your input is highly important and appreciated in this study.

2. Details of the respondent

Filling in your personal details is optional hence if you find it not necessary you are allowed to proceed to the next sections of the questionnaire.

Name:

Physical Address: P.O. Box:

Email:

Phone No:

Level of Education:

Occupation:

Any other additional information:

QUESTION	These questions are in reference to the proposed Naivasha SEZ Master Plan that has to undergo a SEA study.					
	SCORE					Remark/Comments on the answer by the respondent
	N/A	Low	Moderate	High	Very High	
1. Do you and/or the community know about the Plan?						
2. Does the community or group you represent have expectations during the implementation and operation of the master plan in question?						
3. Do you think the general population, local community or the group or entity you represented will benefit from the master plan?						
4. Do you anticipate any significant negative impact(s) from the master plan on the community and the county as a whole?						
5. Do you know of any locally important cultural heritage sites or assets near and/or surrounding the site that can be threatened by the implementation of the master						

6. Are there social-economic and cultural issues that you would you recommend or suggest to be considered in the master plan SEZ?						
7. Are there potential socio- economic impacts to result from the implementation of the master plan?						
8. If implemented are there concerns you need to suggest or raise regarding structural constructions?						
9. Is the master plan implementation going to have an impact on natural water resource availability?						
10. Will the master plan implementation have an impact on energy resource?						
11. Will the master plan implementation increase solid and liquid waste generation, gaseous and noise emissions and general pollution of the environmental elements such as ground water, ambient air and land?						
12. Has the master plan considered adequately the workplace issues on its implementation?						
13. Will the master plan cause insecurity, theft, vandalism in the locality						

14. Does the master plan address common Dangerous social abnormalities like Increased g e n d e r-based violence, drug use, prostitution, sexually transmitted diseases, rape and marauding gangs or social misfits, street achiness among others?						
15. Will there be Increased electronic waste generation from offices, houses, enterprises and solar panels when the master plan is affected.						
16. Will there be extensive importation of skilled and semi-skilled labour causing population migration to the site?						
17. Do you anticipate increased human-wildlife conflict as a result						
18. Will there be an Increased incomes for the local arising from the existing services and commercial business?						
19. Does the implementation of the master plan going to increase in the cost of land?						
20. Do you anticipate accident and emergency risks						

21. Will there be loss of aesthetic value, wildlife and biodiversity once the master plan is implemented?						
22. Are there Negative Environmental Impacts, Aspects and Concerns?						
23. Are there Positive Environmental Impacts, Aspects and Concerns						
24. Do you anticipate climate change and challenges there in as a result of this master plan?						
25. Has the master plan considered how to manage the current COVID-19 pandemic and any future pandemic or communicable disease outbreak?						

Note:-

1. **You can add more information, suggestions, issues raised in the space provided below and in case the space is not enough you shall be provided with extra scribbling paper(s).**

2. **You can also forward you views to the following emails**

    1. **muriuki@dmgholdings.co.ke**
    2. **wereomat@yahoo.com**

ANNEX A4:-STAKEHOLDERS' COMMUNICATION PLAN

STAKEHOLDER COMMUNICATION PLAN

This is a 6-week communication plan to move the SEA scoping report to the level of a full report through stakeholder input. The stakeholders have already been identified through a rigorous process of stakeholders' identification and analysis framework. The approach is one of strategic communication that;

a. Is planned and accomplishes a purpose

b. Is targeted to a particular audience/ audiences

c. Is designed and delivered to produce the desired outcomes

d. Aims to achieve results with the best possible use of time and resources

The aim is to assess and clarify the alternatives, in addition to helping improve the strategic action

We shall deploy interactive communication since the aim is to establish active dialogue with interest groups and fully involve them in the SEA process

Rigorous communication and public engagement is also a requirement under the Constitution of Kenya

Note: the above Communication Methodology is adopted from the CEPA toolkit.

ANNEX A5:-STAKEHOLDERS' IDENTIFICATION PROCESS AND ANALYSIS FRAMEWORK STAKEHOLDERS' IDENTIFICATION PROCESS AND ANALYSIS FRAMEWORK

1. There will be several stakeholders' engagements undertaken for the SEA on the Naivasha SEZ Master plan and thereafter analysed. The engagements will be held in boardrooms, social halls and via internet (emails, zooming meetings, radio transmissions among other feasible engagement channels). These will be done at different dates and time at various levels of the SEA process that includes; screening, scoping, draft and final draft stages.

2. The main objective of these stakeholders engagements and analysis is to identify key stakeholders as a mechanism to facilitate the SEA study on Naivasha SEZ master plan in ensuring all their concerns are addressed and their full participation in the SEA process meets the threshold of SEA study as prescribed in the EMC Act 1999 amended 2015 and the EIA and EA regulations of 2003 including the National Guidelines for Strategic Environmental Assessment.

3. The methodology to be adopted for the engagement and the analysis will include reviewing existing SEA process documents at all stages of the SEA study process, forming the preliminary list of stakeholders and undertaking national consultations, individual meetings and working group discussions. These meetings and discussions will be used to identify the stakeholders' roles, interests in the Naivasha SEZ Master Plan as well as identification of challenges and opportunities for SEZA, National Government, Local Government, Public, Regional and International Community on the aspects of this master plan in relation to sustainable environment.

4. For the purpose of these stakeholders engagement and analysis, stakeholders will be classified within five broad categories they will be identified and the appropriate discussions will be organized during consultations and stakeholders' meetings, these will be held in offices, boardrooms, workshops, social halls and via emails, zoom meetings, local chief baraza's and on via the local/national radios' programs.

5. The broad categories will include but not limited to these stakeholders;
    a. National Government through the relevant Ministries' state departments that directly have a role in the Naivasha SEZ Master Plan including County Administration Officer under the Ministry that concerns with Internal Security and general administration. SEZA project representative in liaison with SEZA team, Consulting (DMG Holding Ltd) team and the mother Ministry team will have the

responsibility of identifying exhaustively stakeholders in this category.

b. Government statutory bodies (lead agencies) or parastatals will be identified similarly as above. Among stakeholders in this category will include;
    i. Special Economic Zones Authority (SEZA)
    ii. National Environment Management Authority (NEMA)
    iii. Directorate of Climate Change
    iv. Directorate of Forestry Conservation
    v. Energy Regulatory Commission
    vi. Ewaso Nyiro North Development Authority
    vii. Geothermal Development Company (GDC)
    viii. Independent Power Producers (IPPs)
    ix. Kenya Forestry Research Institute (KEFRI)
    x. Kenya Electricity Transmission Company (KETRACO)
    xi. Kenya Forests Service
    xii. Kenya National Highways Authority
    xiii. Kenya Pipeline Company Limited
    xiv. Kenya Railways Corporation
    xv. Kenya Wildlife Service
    xvi. Kerio Valley Development Authority
    xvii. Occupational safety and health services
    xviii. The Kenya Electricity Generating Company (KenGen)
    xix. The Kenya Power and Lighting Company (KPLC)
    xx. Universities, Education Institutions and Research Institutions
    xxi. Water Resources Authority
    xxii. Kenya Investment Authority (KENINVEST)
    xxiii. Export Processing Zones Authority (EPZA)
    xxiv. Kenya Bureau of Standards (KEBS)
    xxv. Others relevant but not included in this list
c. County Government of Nakuru and Narok through the relevant County Departments that directly have a role in the Naivasha SEZ Master Plan.
d. The current and potential Investors under the SEZ program, NGO's, International Organizations including foreign financiers and environmental conservers or lobbyist who will have direct roles, concerns or influence on the Naivasha SEZ Master Plan will be handled in this category.
e. The affected local communities, businesses, public, institutions, and any other emerging stakeholders during the SEA process will be identified as main stakeholders under this category.

Objectives of the stakeholders' forum

The objective of these stakeholders' forums, meetings, engagements and consultations are to prepare a comprehensive engagements of stakeholders

and analyse the concerns, aspects or issues concerning the environment in relation to sustainable development that encompasses pollution prevention, precautionary principle, and sustainable use of natural resources and alleviation of negative climate change effects. These concerns, aspects and impacts raised on the proposed master plan will be incorporated in the final SEA Draft document.

For the purpose of this SEA study, stakeholders will be defined as those organizations, entities, agencies, sectors or groups of individuals which either benefit from or have significant positive or negative environmental impacts upon the setup of the Naivasha SEZ Master Plan.

The stakeholder analysis will be designed to provide detailed and comprehensive information as follows:

- Stakeholder type and specific;
- Needs for the proposed Naivasha SEZ Master Plan

The Stakeholders' Assessment Reports will be used to prepare comprehensive reports of the SEA process phases (Screening, Scoping, Draft SEA report and Final SEA report) which will be published as separate reports. However, the Stakeholders Assessment Repots will be considered as working documents and updated as the SEA Study process progresses if required.

Methodology

Stakeholder analysis is a technique used to identify and assess the importance of key people, groups of people, or institutions that may significantly influence the success of an activity or implementation in this case of the Naivasha SEZ Master Plan.

For the purpose of this SEA study, stakeholders engagement and the analysis of their outcome from their inputs on the concerns and aspects raised on the proposed Master Plan will carried out with the view to plan for the necessary interventions to reduce negative impacts and enhance positive impacts.

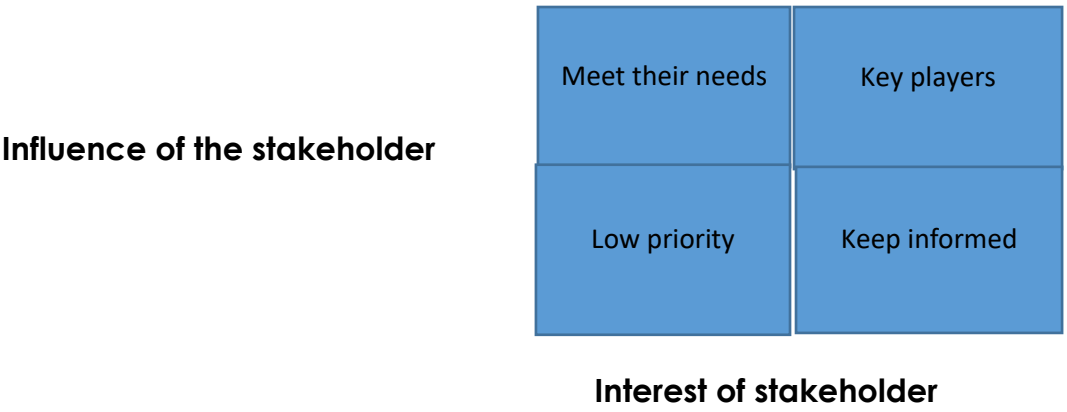
Figure 1: Stakeholder assessment steps

Step I.
To begin the stakeholder analysis, a sound understanding of the activities linked with the Naivasha SEZ Master Plan should be undertaken. This will be done by reviewing SEZ documents, updated log frame and meeting reports;

Step II.

Through analysis of existing institutional framework on national, local and regional levels and communications with SEZA and NEMA, map of stakeholders and classify them by their power, role and interest in the SEA process related issues has to be developed. For this purpose, the Influence /Interest Grid tool (Figure 2) will be used.

Figure 2: Influence /Interest Grid



Step III.

For the purpose of gathering data, the Stakeholders Meetings will be organized in separate locations and separate dates appropriate for targeted categories and the groups or entities therein. Representatives of stakeholders identified during Stage II will be approached to identify:

iv) the priority sectors for the SEA study coverage,
v) relevant sectorial agencies and potential partner agencies;
vi) Challenges and opportunities for the proposed SEA study on the prosed Naivasha SEZ Master Plan.

Step IV.

For the analysis, all project stakeholders will be classified within five broad categories and specific issues identified. The findings will be reported in the Results section;

Step V.

The results of the analysis will be presented in a comprehensive final SEA Study Report which examines all the aspects related to the identification of the stakeholders' benefits due to positive impacts, raised concerns on negative impacts and the required interventions to be incorporated in the pans and policies of the proposed Naivasha SEZ Master Paln.

Most Probable Stakeholders' inventory or list to be used (but not limited to these)

Activities	**Screening**	**Scoping**	**Sea draft and final report**
Stakeholders	• SEZA • DMG	• SEZA • DMG Limited	• SEZA • DMG Limited

	Limited • NEMA	• NEMA • Directorate of Climate Change • Directorate of Forestry Conservation • Energy Regulatory Commission • Ewaso Nyiro North Development Authority • Ewaso Nyiro South Development Authority • Geothermal Development Company (GDC) • Kenya Electricity Transmission Company (KETRACO) • Kenya Forestry Research Institute • Kenya Forests Service • Kenya National Highways Authority • Kenya Pipeline Company Limited • Kenya Ports Authority • Kenya Railways Corporation • Kenya Wildlife Service • Kerio Valley Development Authority • KIPPRA • Occupational safety and health services • State Department	• NEMA • Directorate of Climate Change • Directorate of Forestry Conservation • Energy Regulatory Commission • Ewaso Nyiro North Development Authority • Ewaso Nyiro South Development Authority • Geothermal Development Company (GDC) • Kenya Electricity Transmission Company (KETRACO) • Kenya Forestry Research Institute • Kenya Forests Service • Kenya National Highways Authority • Kenya Pipeline Company Limited • Kenya Ports Authority • Kenya Railways Corporation • Kenya Wildlife Service • Kerio Valley Development Authority • KIPPRA • Occupational safety and health services • State Department For Housing And Urban Development • State Department For Infrastructure • State Department For transport • The Kenya Electricity Generating Company (KenGen) • The Kenya Power and Lighting Company (KPLC) • The Kenya Wildlife Service (KWS) • The State Department of Tourism

		For Housing And Urban Development • State Department For Infrastructure • State Department For transport • The Kenya Electricity Generating Company (KenGen) • The Kenya Power and Lighting Company (KPLC) • The Kenya Wildlife Service (KWS) • The State Department of Tourism • The State Department of Wildlife • EPZA • KENINVEST • University Education and Research • Water Resources Authority • Water Services Trust Fund	• The State Department of Wildlife • EPZA • KENINVEST • University Education and Research • Water Resources Authority • Water Services Trust Fund • Agricultural Development Corporation • Industrial and Commercial Development Corporation • Industrial Development Bank • Kenya Industrial Research and Development Institute • Kenya Trade Network Agency Board • Micro and Small Enterprises Authority • National Council for Population and Development • National Drought Management Authority • National Housing Corporation Board • National Oil Corporation of Kenya • National Transport and Safety Authority • National Water Conservation and Pipeline Corporation • Numerical Machining Complex Limited • Rift Valley Water Services • Local community • Business community • Area's chiefs, DCs, DOs, MCAs, MPs, Senator and Governor.

ANNEX A6:-MINUTES OF STAKEHOLDER MEETING HELD ON 30TH JULY 2020 & 01ST AUGUST 2020

"Powering Growth"	**SPECIAL ECONOMIC ZONES AUTHORITY**	UAP Old Mutual Tower, 14th Floor, Upper Hill Road P.O Box 30418-00100, GPO Nairobi, Kenya Tel: +254 20 7863971 Email: info@sezauthority.go.ke Website: www.sezauthority.go.ke

MINUTES OF DRAFT REPORT PRESENTATION ON STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) FOR NAIVASHA SPECIAL ECONOMIC ZONE MASTER PLAN

Date: MONDAY 31ST AUGUST 2020
Time: 11.30 AM- 12.45 PM
Venue: SEZA HEADQUARTERS BOARDROOM AT UAP BUILDING 14TH FLOOR

Attendance

No.	Name	Organization
1.	Francis Gitau	SEZA
2.	Brian Muli	SEZA
3.	Joseph Okoche	SEZA
4.	Peter Muriuki	DMG Holdings Ltd
5.	Joseph Anzetse	DMG Holdings Ltd
6.	Mathew O. Were	DMG Holdings Ltd
7.	Juliet Rita	DMG Holdings Ltd
8.	Angeline Mwangi	DMG Holdings Ltd

Agenda

1. Presentation of the Draft SEA Report
2. Feedback from the client
3. Way forward
4. Adjournment

Minute No.	Agenda Item	Action
1.0	**Presentation of Draft SEA Report** The meeting started with a word of prayer at 11.30hrs The Project Manager welcomed all and gave his opening remarks. He thanked the team for the progress made so far and invited DMG team leader to make the presentation 1/1 The Draft SEA report was presented following the format; • Context of the SEA • SEA Principles • Objectives of the SEA • Methodology • Linkages to other Strategic actions/Plans • Sustainability objectives • Economic objectives • Key Plan issues • Key stakeholder concerns • Alternatives considered including Trade offs • Mitigation for preferred alternatives • Monitoring and implementation Plan • Way forward After the presentation, the members were invited to give their inputs and comments	DMG
2.0	**Feedback from client** 2/1 The PM indicated that the timelines need to be adhered to and ensure the assignment is completed by 23rd September 2020 2/2 It was noted that the Draft Report was not shared with the client in good time thus SEZA did not have enough time to review and make comprehensive comments. They requested to be granted a few days to give comprehensive comments 2/3 In general, it was noted that the report needs to be	DMG SEZA DMG

	more comprehensive and include all details so as to serve as a reference document in future for anyone who would like to refer to the SEA. Client preference is more to less	
	2/4 In terms of the Plan linkages, it should be wider than the local setting to include National and regional linkages as well as improving chapter on Legal Framework	DMG
	2/5 The baseline information needs to be narrowed down to the project area. Water data should also be captured and narrowed to project area.	DMG
	2/6 Stakeholder consultations should be captured in the report with specific analysis of stakeholder issues as well as how they will be managed or catered for in the plan. The methodology and filled questionnaire should be annexed to the report	DMG
	2/7The SEZA team asked for inputs regarding the Master Plan from DMG including guiding principles on Sustainable land use among other aspects as well as connections to the Spatial plans of Nakuru and Narok Counties.	DMG
	2/8 The PM asked DMG team leader to clarify the next steps in the process in relation to NEMA requirements	DMG
	2/9 DMG team indicated they have noted the issues raised and will capture them in the report.	DMG/NEMA
	The next step in relation to NEMA requirements is Validation meetings where stakeholders will be invited to validate the report.	
	DNG team leader explained that stakeholder consultation is an ongoing process and more responses are still expected. DMG is in continuous consultation with NEMA to guide the process accordingly.	
3.0	**Way forward** It was agreed that the remaining time be scheduled well to determine if it is adequate	DMG/SEZA

	It was agreed to bring in more members for future meetings to ensure comprehensive engagement	
4.0	**Adjournment** There being no other business, the meeting was adjourned at 12.45 hrs with a vote of thanks from the SEA Project Manager.	

Confirmed and Signed by:

SEZA Representative:

Francis Gitau ……..Date……..…

DMG Holdings Ltd Representative:

Peter Muriuki …… Date …….

ANNEX A7:- VARIOUS CONSULTATION MEETINGS WITH PUBLIC INSITITUTIONS

SEA VALIDATION WORKSHOP HELD ON THE 26TH MARCH 2021