



THE GOVERNMENT OF KENYA

THE NATIONAL TREASURY

**INFRASTRUCTURE FINANCE AND PUBLIC, PRIVATE PARTNERSHIP (IFPPP)
PROJECT**

UPDATED VERSION

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

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GLOSSARY OF TERMS

Cumulative impacts/effects: The total effects on the same aspect of the environment resulting from a number of activities or projects.

Developer/Proponent/Sponsor: the entity – person/ company/agency – proposing to develop/implement/install a new project/sub- project or expand an existing project under the IFPPP-AF

Direct impacts: An effect on the environment brought about directly by the IFPPP-AF

Disclosure: Information availability to all stakeholders at all stages of the development of projects.

Environment: physical, biological and social components and processes that define our surroundings.

Environmental and Social Impact Assessment (ESIA): A comprehensive analysis of the project and its effects (positive and negative) on the environment and a description of the mitigative actions that will be carried out in order to avoid or minimize these effects.

Environmental Monitoring: The process of examining a project on a regular basis to ensure that it is in compliance with an Environmental Management Plan (EMP), or the Government of Kenya (GoK) Environmental Impact Assessment (EIA) certification of approval conditions and / or environmental prescriptions.

Impact: A positive or negative effect that a project has on an aspect of the environment.

Indirect impact: A positive or negative effect that a project indirectly has on an aspect of the environment.

Involuntary resettlement: The forceful loss of land resources that requires individuals, families and / or groups to move and resettle elsewhere.

Lead Agency: The agency with primary responsibility for the protection of the environment. For instance, the lead agency for environment matters in Kenya is the National Environment Management Authority (NEMA).

Mitigation measures: The actions identified in an EIA to negate or minimize the negative environmental impact that a project may have on the environment.

Project and sub-project: a set of planned activities designed to achieve specific objectives within a given area and time frame.

Project Brief: The initial submitted document to NEMA to initiate the process that will lead to the issuance of the EIA certificate of approval.

Scoping: The initial stage in an environmental assessment that determines the likely major environmental parameters that will be affected and the aspects of the project that will bring upon these effects

Screening: An initial step when a project is being considered for environmental assessment. The screening is the determination of the level of assessment that will be conducted. In the case of GoK, screening will place project into one of three environmental categories (I, II or III).

Significant effect: An important impact on an aspect of the environment

Potential environmental and social impacts are defined as follows:-

- **Positive Impact:** A change which improves the quality of the environment (for example by increasing species diversity; or improving the reproductive capacity of an ecosystem; or removing nuisances; or improving amenities)
- **Neutral Impact:** A change which does not affect the quality of the environment
- **Negative Impact:** A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property or by causing nuisance). The potential adverse impacts of the project fall under two broad categories of bio-physical (natural) and socio-economic environments

Stakeholder: Any person or group that has an interest in the project, and the environmental effects that the project may bring about

ACRONYMS & ABBREVIATIONS

AF	Additional Financing
APL	Adaptable Program Lending
ASALS	Arid and semi-arid lands
CAJ	Commission on Administrative Justice
CBK	Central Bank of Kenya
CBOK	Consolidated Bank of Kenya
CBO's	Community based organizations
CLMB	County Land Management Boards
CMA	Capital Markets Authority
CMS	Convention on the Conservation of Migratory Species
CPS	Relationship to Country Partnership Strategy
CRA	Commission on Revenue Allocation
CSOs	Civil Society Organizations
DBK	Development Bank of Kenya
DHS	Demographic Health Survey
DOHS	Directorate of Occupational Health and Safety
EA	Environmental Assessment
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
ELC	Environmental and Land Court
EMCA	Environment Management and Coordination Act
EPD	Environmental Permitting Decision
EPD	Environmental Permitting Decision
ERC	Energy Regulatory Commission
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
FAO	Food Agricultural Organization
FCCL	Fiscal Commitment and Contingent Liability
GDC	Geothermal Development Company
GDP	Gross Domestic Product
GOK	Government of Kenya
GRC	Grievance Redress Committee
GRS	Grievance Redress Service
HIV/AIDS	Human Immuno-Deficiency Virus
ICDC	Industrial and Commercial Development Corporation
ICT	Information Communication and Technology
IFC	International Finance Corporation
IFPPP	Infrastructure Finance and Public, Private Partnership Project
IPMP	Integrated Pest Management Plan
KAA	Kenya Airports Authority
KCAA	Kenya Civil Aviation Authority
KenGen	Kenya Electricity Generating Company
KeNHA	Kenya National Highways Authority
KeRRA	Kenya Rural Roads Authority

KETRACO	Kenya Electricity Transmission Company
KFS	Kenya Forestry Service
KIHBS	Kenya Integrated Household Budget Survey
KMA	Kenya Maritime Authority
KNCHR	Kenya National Commission on Human Rights
KNSL	Kenya National Shipping Line
KPA	Kenya Ports Authority
KPC	Kenya Pipeline Company
KPLC	Kenya Power and Lighting Company Limited
KPRL	Kenya Petroleum Refineries Ltd
KRC	Kenya Railways Corporation
KURA	Kenya Urban Roads Authority
KWS	Kenya Wildlife Service
M&E	Monitoring and Evaluation
MENR	Ministry of Environment and Natural Resources
MoF	Ministry of Finance
MOWI	Ministry of Water and Irrigation
MSDS	Materials Safety Data Sheets
NBK	National Bank of Kenya
NEMA	National Environment Management Authority
NET	National Environmental Tribunal
NGEC	National Gender Equality Commission
NGO's	Non-Governmental Organizations
NLC	National Land Commission
NMK	National Museums of Kenya
NSE	Nairobi Stocks Exchange
NT	National Treasury
OAF	Officer Administering the Fund
OSHA	Occupational Safety and Health Act
PAD	Project Appraisal Document
PCC	Public Complaints Committee
PCRPP	Physical Cultural Resources Plan
PDO	Project Development Objective
PESIAs	Project reports or Preliminary ESIA's
PFF	Project Facilitation Fund
PIC	Public Information Center
PPE	Personal Protective Equipment
P-P-P	Public-Private-Partnership
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
SAGAs	Semi-Autonomous Government Agencies
SERC	Standards and Enforcement Review Committee
SSA	Sub-Saharan Africa
STDs	Sexually Transmitted Diseases
TAC	Technical Review Committee
TOR	Terms of Reference

VMGF	Vulnerable and Marginalized Groups Framework
VMGP	Vulnerable and Marginalised Groups Plan
VOC	Volatile Organic Compounds
WASREB	Water Services Regulatory Board
WB	World Bank
WRMA	Water Resources Management Authority
WSB	Water Services Boards
WSPs	Water Services Providers
WSTF	Water Services Trust Fund

EXECUTIVE SUMMARY

The Government of Kenya (GOK) through the National Treasury (NT) is seeking additional financing from the World Bank for the Infrastructure Finance and Public-Private Partnership Program (IFPPP) Additional Financing (AF) to support improvement in the legislative, institutional, financial, fiduciary and technical framework in order to continue in the generation of pipeline of bankable Public-Private-Partnership (P-P-P) projects.

1.1 IFPPP-Phase I

The primary objective of the first phase of the project was to strengthen the country's PPP framework using the IFPPP APL project which would put in place the necessary foundation for Kenya to realize the benefits of PPPs, including increased private investments in infrastructure, increased employment opportunities, improved service delivery to enterprises and the population in general, and an improved fiscal impact on government from better project preparation, better risk allocation, increased transparency, wider quality control, and greater efficiency.

Environmental and Social Performance Under IFPPP-Phase I

The Environmental and Social (E&S) Performance under the IFPPP-Phase I is considered satisfactory. It must be noted that there has been no implementation with respect to construction activities under IFPPP-Phase I to date and hence evaluating E&S performance with respect to implementation and monitoring was not possible. However, to the extent that E&S performance is considered with respect to safeguards preparatory activities, the IFPPP-Phase I has ensured that the following are undertaken for all 10 pipeline investments project that have been prepared thus far:-

- Screening to determine environmental categorisation
- Preliminary Environmental and Social Impact Assessment report preparation as part of feasibility studies
- Preliminary Resettlement Action Plan report preparation as part of feasibility studies

Justification for ESMF Update

The current ESMF has been an effective instrument in ensuring satisfactory E&S performance during the IFPPP-Phase I. As a result of the requirements by the ESMF for Phase I, screening was undertaken for all of the 6 investments prepared thus far and safeguards instruments prepared (preliminary ESIA and RAP) for the same. The PPP unit has also recruited a safeguards advisor which was a key requirement of the ESMF who has conducted training to the PPP Unit and select Contracting Agencies on WB safeguards requirements as well as international best practise requirements because of the private sector approach and nature of the project.

The reason for updating the ESMF is because of the fact that the Government of Kenya is requesting for additional financing under the same project. There are no significant changes on the Phase I ESMF other than the stakeholder consultation and reference to the new Community Land Act.

IFPPP-Additional Financing (Phase 2) Program Description

Kenya’s economic growth remains robust and resilient in recent years amid weakness in the global economy. The country’s GDP was estimated at US\$ 63.4 billion as of Oct 2016 (up from US\$ 61.4 billion in 2014), with GDP per capita standing at US\$ 1,377 (up from US\$1,368 in 2014). The growth is projected at 5.9 percent in 2016 from 5.6 in 2015 and strengthening to 6.1 percent by 2018. This is against the backdrop of the significant improvement in external and internal balances, such as falling oil prices; and public investment, mainly in infrastructure (energy and the standard gauge railway).¹

Project Development Objectives

The overall development objective of this project is to increase private investment in the Kenya infrastructure market across sectors and to sustain this participation over an extended period of time. The potential sub projects under various sectors in this IFPPP-AF are numerous and include “first mover” PPP transactions, which may include construction and rehabilitation projects in the sectors like: Transport (Roads, Airports, Ports, Rail lines), Energy (Geo-thermal energy, Liquefied Natural Gas), Solid Waste (including medical waste), Water and Sanitation (bulk water supply including sanitation, sewerage systems), Health, Education and Housing.

Project Components

The additional financing will consist of three components: 1) Upstream support to PPP Institutions and capacity building; 2) Support to Project Preparation and Procurement; and 3) Support to Project Management

Component I: Support to Institutional Strengthening

The budget for this component is US\$10 million. This allocation was established based on lessons learned from prior technical assistance projects including the IFPPP project and PPIAF supported activities, an assessment of the remaining institutional strengthening activities following the activities undertaken under the IFPPP and the need for institutional strengthening based on future expected project activities. Current known parallel coordinated support from other donors such as PPIAF and DFID has been taken into account while establishing the allocation. These donors are likely to continue supporting parallel activities through the life of the project.

Component II: Support to Project Preparation and Procurement

The budget for this component is US\$39.5 million. This component will assist the Government of Kenya, at national as well as county level, to prepare well-structured and

¹ The World Bank Group, Kenya Economic Update: Beyond Resilience – *Increasing Productivity of Public Investments* 2016, Edition No. 14

bankable PPP projects with optimal risk allocation building on the experience in the development of the first mover PPPs under IFPPP.

While transport, education, health and energy will continue to be sectors of focus for the national government, sectors of interest at county level appear to be housing, solid and medical waste management, health services, bulk water supply and distribution, county roads, agriculture, county markets, etc. Funds under this component will be used for engaging consultants for undertaking feasibility assessments, preparation of bid documents and hand-holding during bid-negotiations and other processes leading to commercial and financial close.

This will include the financing of safeguards assessments. The demand for funds under this component has been gauged based on the following: experience of the project preparation component under IFPPP, an examination of the current and potential pipelines at county and national levels in various sectors, and detailed discussions with government counterparts and coordination within the WBG GPs, including with IFC and MIGA.

Component III: Support For Program Management

The budget for this component is US\$ 0.5 million. This component will be used to support the Project Implementation Unit that is currently functioning under IFPPP. The PIU will continue to provide the fiduciary, safeguards, and Monitoring and Evaluation (M&E) expertise required for the implementation of the project in accordance with Bank policies and requirements. This component may include equipment, operating costs, organization and systems development, training, capacity building and technical assistance.

Component **II** will involve civil works in the development of the infrastructure and thus trigger the environmental assessment policy (OP.4.01). The potential adverse impacts will range from medium scale and site specific to larger infrastructure investments associated with environmental *Category A or B* projects of the World Bank.

Objective of ESMF

Since the pipeline of PPP projects to be supported by the IFPPP program is evolving, the appropriate instrument at this stage is an Environmental and Social Management Framework (ESMF). ESMF is an instrument used by the World Bank to ensure safeguards at the initial project concept phase when the exact locations, scope and nature of proposed projects remain unknown.

The overall objective of this ESMF is to ensure that the implementing institutions of the IFPPP-AF use this document in order to ensure that the World Bank environmental safeguard policies, with emphasis on Operational Policy OP 4.01 (Environmental Assessment) are adequately addressed.

An Environmental and Social Management Framework (ESMF) remains the key instrument to ensure initial project safeguards at this stage principally because the exact locations, scope, designs and nature of sub project investments remains unknown.

This ESMF is aimed at ensuring that implementing institutions in this project use it in order to ensure that the Bank's environmental safeguard policies as outlined in Operational Policy OP 4.01 (Environmental Assessment) are adequately complied with.

This ESMF is expected to ensure that environmental and social management is integrated into the development and operation of investments to be financed under the IFPPP-AF to ensure effective mitigation of potentially adverse impacts while enhancing accruing benefits.

The ESMF has been prepared in line with the relevant World Bank (WB) safeguard policies on social and environmental management and further taken into account the appropriate Government of Kenyan (GOK) policies, legal and institutional framework related to environmental and social assessment.

The ESMF seeks to establish a process of environmental and social screening which will permit the institutions in charge of the implementation of the projects to identify, assess and mitigate the environmental and social impacts of sub project investments. The ESMF also determines the institutional measures to be taken during the program implementation, including capacity building activities.

The purpose of the ESMF is:

- (i) *To provide as much information as possible about environmental and social impacts (including possible land acquisition and resettlement) at the project's current state of preparation;*
- (ii) *To inform project planning and design process by comparing potential impacts of alternative locations, configurations, and construction techniques that are under consideration; and*
- (iii) *To describe procedures for subsequent assessment of impacts and development of appropriate impact management instruments when the details of the sub project investments become available.*

The process of preparing this ESMF entailed detailed desk top literature review coupled with broad strategic consultation and engagement of appropriate stakeholders.

Policy, Legal and Institutional Issues

The following legal instruments among others were reviewed in view of the fact that they provide guidance and regulations when implementing water related programs or projects. These are principally the GoK legislations that apply to this project and a comparative analysis has been made between some certain relevant regulations of the GoK and the bank safeguards.

- *Constitution of Kenya (2010)*
- *Environmental Management and Coordination Act (1999) and amendment 2015*

- *Water Act*
- *Energy Act*
- *Land Act*
- *Community Land Act*
- *Occupational Health and Safety Act*
- *Public Health Act*
- *Wildlife Act*
- *Forest Act*

GOK has through the Ministry of Finance prepared this ESMF as the instrument which all the IFPPP investments environmental and social impacts will be identified, assessed, evaluated and appropriate mitigation, management and monitoring measures, designed and incorporated within the proposed investment itself.

There are 2 other safeguards instrument that will complement this ESMF se the Resettlement Policy Framework (RPF) already prepared and provides standards and procedures for compensation for any land acquisition, assets, or restriction of access to resources that this project and associated investment may require, in accordance with World Bank OP 4.12 – Involuntary Resettlement and Vulnerable and Marginalised Groups Framework (VMGF) in accordance with OP. 4.10.

Environmental and Social Requirements

In order to reduce, minimise and mitigate adverse impacts and undue harm of its development projects to the environment, all bank-financed projects are guided by environmental and social policies and procedures commonly referred to as safeguards instruments. A number of Banks' policies² have been triggered as a result of this project and they include:

1. OP 4.01 (Environmental Assessment)
2. OP 4.04 (Natural Habitats)
3. OP 4.09 (Pest Management)
4. OP 4.11 (Physical Cultural Resources)
5. OP 4.10 (Indigenous Peoples)
6. OP 4.12 (Involuntary Resettlement);
7. OP 4. 37 (Safety of Dams)

All safeguards policies of the World Bank require that, before a project is appraised, an Environmental and Social Impact Assessment (ESIA) containing an Environmental Management Plan (ESMP), and if the project requires it, a Resettlement Action Plan (RAP), Vulnerable and Marginalised Groups Plan (VMGP) and Physical and Cultural Resources Plan (PCRP) will be made available for public review at a place accessible to

² The World Bank Safeguard Operational Policies (OPs) are OP4.01 – Environmental Assessment; OP4.04 – Natural Habitats; OP4.09 – Pest Management; OP4.10 Indigenous Peoples; OP4.11 – Physical Cultural Resources; OP4.12 – Involuntary Resettlement; OP4.36 – Forests; OP4.37 Safety of Dams; OP7.50 – Projects on International Waterways; and OP7.60 – Projects in Disputed Areas. See www.worldbank.org/safeguards for more information.

local people (e.g. at a County offices, Ministry or nodes the project site, etc.) in a form, manner, and language they can understand. The public display of the documents should be advertised in a common local or regional newspaper.

All necessary safeguard documents that will be locally disclosed will also be forwarded to the Bank for disclosure at its Public Information Center (PIC) of the country, if there is one, and at the Bank's InfoShop.

Environmental and Social Impacts

Beneficial Impacts

The IFPPP-AF subprojects are aimed at targeting PPP infrastructure across several sectors of Kenya's economy and include among others; Energy/Power (including geothermal); Transport (roads, bridges, sea/lake port, railway); Water and Sanitation (solid waste management, bulk water); Information Communication and Technology (ICT); Housing; Health and Education. The expected positive impacts include among others;

Improved legal, institutional and technical PPP growth environment

The primary objective of the first phase of this Adaptable Program Lending (APL) program is to improve the legislative, institutional, financial, fiduciary and technical framework to generate a pipeline of bankable PPP projects. This is a definite positive impact that will result in improved legal, institutional, financial, fiduciary and technical framework supportive of pipeline bankable PPP projects.

Increased Private Sector Investment

By strengthening this PPP framework, the IFPPP-AF project will put in place the necessary foundation for Kenya to realize the benefits of PPPs, including increased private investments in infrastructure. This framework will allow increasing the availability and quality of infrastructure in different sectors to boost enterprise growth and productivity and improve the wellbeing of Kenyans.

Employment and Improved Service Delivery

Increased employment opportunities, improved service delivery to enterprises and the population across the stated sectors in general remains one of the positive benefits that will arise from the IFPPP-AF sub projects.

Government Fiscal Efficiency and Transparency

Improved fiscal impact on government from better project preparation, better risk allocation, increased transparency, wider quality control, and greater efficiency are other positive impacts expected as a result of implementing this project.

Modernization

The private sector is often ahead in deploying modern day technology and business tools for improved efficiency. Through PPP therefore, the public can benefit from more modern technology in infrastructure and associated services.

Reducing risk for the public sector

PPP can help the public sector reduce financial risk by passing the burden of economic performance of infrastructure projects to the private sector

Providing alternative funding/freeing government funds

PPP arrangements attract investors and financial institutions and this helps to mobilize alternative funding for projects that may have been financed by scarce government resources

Provide funding to maintain infrastructure overtime

As PPPs are run as revenue generating enterprises, often with loan repayment obligations, there is an underlying driver to maintain the income generating facilities. Indeed, lack of maintenance has been one major reason for Kenya's poor state of infrastructure.

Improved economic growth

Poor infrastructure has been identified as one of the primary causes of poor economic and employment growth in Kenya. If the PPP succeeds therefore, the program will translate to overall measurable economic growth for the country.

Potential Adverse Impacts

This ESMF has been designed to anticipate and address potential impacts at the planning stage of existing and new investments and related activities. **Table 1** and **2** below summarises the potential negative impacts that the investments may have on the environment and proposed mitigation measures that should be considered during preparation of sub project ESIA's.

Environmental Impacts

Loss of vegetation

There will be vegetation loss during the construction phase (for project investments) either to pave way for access roads, actual project construction among others. The vegetation will be cleared so that the area where the construction work is to take place is clear for the construction work to be performed. The construction works will involve direct land take of productive pasture land and agricultural lands, bush clearing, removal of top soil, excavation and mass haulage. These activities will expose the land to elements of erosion such as wind and water and thus will trigger the process of land degradation.

Change in Hydrology

Abstraction of water for bulk water storage, hydropower, multipurpose will have impact of the hydrological flow of the riverine system. The impact will affect the general hydrological flows including current existence of water bodies.

Loss of Fauna

Potential investments may generally fragment ecosystems, isolating species population and cutting off migrations and other movement. For example, dams will block the upstream and downstream passage of migrating aquatic animals. This will isolate them from vital spawning and feeding areas. Many fish and invertebrates will decline due to depletion of riverbed gravels. Destruction of wild fauna habitat due to construction (on site and along road rehabilitation profile/borrow pit sites).

Soil Erosion

Soil erosion could occur during the construction phase when loose soil is swept by waters and during the construction. This will be as a result of the intensive activities that will be going on in the construction areas especially land clearing. The heavy equipment and machines that shall be used in the construction process will interfere with the soil structure making it loose hence liable to erosion.

Decreased Water Quality

Increase in suspended particles due to construction works; risk of human contamination from construction camps; and competition for water will affect the water quality especially where investment projects are close to natural water bodies.

Downstream Impacts of Dams, Weirs and Dykes

Changes to the low flow regime may have significant negative impacts on downstream users, whether they abstract water (drinking supplies) or use the river for transportation or hydropower. Minimum demands from both existing and potential future users need to be clearly identified and assessed in relation to current and future low flows. The quality of low flows is also important. Return flows are likely to have significant quantities of pollutants. A reduction in the natural river flow together with a discharge of lower quality drainage water can have severe negative impacts on downstream users.

Habitats both within and alongside rivers are particularly rich, often supporting a high diversity of species. Large changes to low flows ($\pm 20\%$) will alter micro-habitats of which wetlands are a special case. It is particularly important to identify any endangered species and determine the impact of any changes on their survival. Such species are often endangered because of their restrictive ecological requirements.

As a result, in the cumulative impact analysis which would be done for each investment the impact of a given project on those people should be considered. The most important mitigation measures are the release of good quality Reserve Flows capable of maintaining important environmental services, and satisfying downstream water requirements. In addition, the measures taken in the catchment areas in order to improve the longevity as well as the operation of the multipurpose dams could affect the livelihoods means of the people living upstream.

Borrow Pits and Quarry Sites

Borrow pits and quarry are sites where stone, sand, gravel, till, clay, or other granular soils are extracted for construction of the various investments within IFPPP-AF. The term 'pit' is used when granular material is extracted. The term 'quarry' is used where consolidated rock is removed. Environmental impacts of pit and quarry development can include the loss, reduction or disturbance to wildlife and habitat, erosion, dust, soil/groundwater contamination, damage to historic resources, waste disposal, noise, and aesthetics.

Impacts on Ecosystems

Potential environmental impacts will result from the creation of the diversion sites and structures themselves, and from operational management of diversion sites and the impacts on downstream riverine ecosystems, including maintenance of in stream and riparian habitats. Downstream impacts on riverine ecosystems are considered above under downstream environmental flows and these are considered to be the primary environmental impacts associated with the development of these water supply abstraction sites. Off-take of water will result in reduced stream flows especially during the dry season. In mitigating the impacts related to environmental flows when projects on riverine ecosystems are developed, the project will refer to recognised international guidelines on ensuring flows including among others the WB guidelines on how to assess and mitigate such potential impacts, such as WB's Environmental Flows in Water Resources Policies, Plans, and Projects.

Decreased Air Quality

Airborne dust will be caused by excavation, vehicle movement hence engine combustion and materials handling, particularly downwind from the construction sites during the construction phase of the identified investments. Uncovered stock piles and asphalt mixing plant operations are another source of dust. Air pollution will be further caused by emissions from vehicles and construction machinery. There will be decreased air quality due to dust, suspended particles, hydrocarbon vapours, oxides of nitrogen and sulphur (NO_x and SO_x) and Volatile Organic Compounds (VOC) among other emissions.

Changes in downstream morphology of the riverbed and banks

The impact of the proposed water projects like bulk water supply dams on downstream habitats will be through changes in the sediments load of the rivers. All rivers carry some sediment as they erode their watershed. When the river is held behind a dam in the reservoir for a period of time, most of the sediment is trapped in the reservoir and settle to the bottom. Clear water below the dam will recapture its sediments load by eroding the downstream bed and banks. Eventually all the erodible material on the riverbed below the dam will be eroded away, leaving a rocky streambed, and a poorer habitat for aquatic fauna. However, this is a phenomenon that will be experienced up until the river reaches new sediment load equilibrium.

Proposed investments may affect and change downstream water quality and will manifest in change in river temperature, nutrient load, and turbidity; dissolve gases, concentration of heavy metals and minerals. For example, for dam projects, when river water is held in a reservoir for a period of time, the quality of the water is affected. When a reservoir is first formed, submerged vegetation and soil decomposes. As it does so it will deplete oxygen in the reservoir water. Deoxygenated water can be lethal to both plant and animal lives.

Dam safety related impacts and Flooding

Poor dam design and maintenance may lead to dam breakage and therefore flooding that may lead to deaths and destruction of property. In case of dam break, it can have far

reaching impacts on the downstream communities. Emergency plans and procedures will have to be developed to handle such an incidence. Although its occurrence may have far reaching consequences, the impact is mitigable and the probability of its occurrence will be minimized through dam safety plans, inspection procedures and disaster management procedures and thus the magnitude of this impact is expected to be medium negative.

Noise and Vibration Impacts

Construction activities could result in significant noise impacts so as to impact on general well-being, health and functioning. Large scale infrastructure developments involve the use of heavy equipment (graders, drilling equipment, trucks, blasting equipment, tractors, and excavators) for among others rock blasting, excavation, asphalt mixing plant operations and vehicular movement that emit incessant noise usually harmful to the environment. Introduction of new sources of noise is an issue in areas where ambient noise levels have been low.

Health and Safety of Construction Workers

Occupation health and safety of the workers during the construction phase (and in certain cases operation phase) is likely to be a concern due to the accidents that normally occur in construction sites that could cause loss of life, limbs among others.

Solid and Effluent Waste Hazards Generation and Pollution

Solid waste issue is a potential adverse impact that will be as a result of abandonment of litter/construction materials on site, use of plastic container/bags by road users and the construction crew and use of polythene sheet for curing by the contractor. Construction camps may be a further source of both solid and liquid wastes.

Visual Intrusion

Unsightly earthworks and borrow pits during construction may be a source of visual related impacts especially through scarring of landscapes. During operations, visual intrusion of equipment on site may be seen as a negative impact at the local level.

Social Impacts

Diseases Spread-Public Health

Improve access to water will have positive benefits on the lives of the communities such improved in yield and better access to drinking water. However, it also could have some negative impacts. Dams and diversion weirs could impact the health situation of those living close to them due to increase in the number of mosquitoes as one example.

There is a potential risk that the construction process for most of the investment projects could increase HIV/AIDS prevalence in the project areas especially through interactions of the locals with the labour forces. Increase in risk of sexually transmitted diseases, such as HIV/AIDS etc. due to influx of migrant workers; solid waste and effluent discharge from construction camps; risk of increase in vectors of *schistosomiasis*, *river blindness*, *Lymphatic filariasis (elephantiasis)* and malaria due to stagnant water associated with construction works/borrow pits etc. (targeting bulk water supply schemes, flood management, dams).

Incessant Traffic including accidents

Traffic congestion from construction and operation phases of the investments and which could potentially cause disruption, health and safety impacts, as well as economic impacts. The use of heavy moving construction vehicles and machineries in project sites is generally known to cause traffic reducing movement and flow of vehicles. It is also further envisaged that with the improvement of the transport sector (i.e. construction, expansion or of new roads, highways and bridges) the traffic volumes and speeds will increase, and composition will change. This is likely to cause increased frequency and severity of accidents.

Loss of Land

There will be loss of farmland, grazing land, business and structures among others by the local communities owning the land. The construction of dams, bulk water supply systems, among others. The existing land use of the project area will be affected by the construction of access roads, construction camps, opening up of material sites and quarry sites among others. These will scar the land, cause vegetation loss leading to soil erosion. The construction activities in almost all the sectors will involve a relatively high degree of land take bearing in mind that most of the projects are linear in nature thus requiring adequate land and space.

There are populations who may lose their land, assets and means of livelihood due to infrastructures and programs needed for the investment under IFPPP-AF especially when investments such as multipurpose dams, surface and underground water development, and catchment management, among others are considered.

Impact on social fabric and community relations

Some of the infrastructure as well as loss of land can cause communities to be separated and some of the social and economic relations and reliance disturbed. For example, dams are likely to segment the communities and in certain instances deny them access to land and to one another.

Resource Use Conflicts

Flood control investments could limit the access of those who use the flood plain for cultivation. The investments that are forming users' associations should make sure they are inclusive of all users and groups, including women, pastoralists, agriculturists, businesses in the area, fishermen, among others. The project can cause some changes in social processes such as demographic change and resource-use conflicts. The vulnerable and marginalised groups could lose access to some of their sacred sites and ancestral lands. To address the issues related to the latter group, the Vulnerable and Marginalized Groups Framework is prepared under the IFPPP-AF.

Gender Issues and Impacts

As noted above, women have different needs and use of water including for domestic household use, small households plots for agriculture, for animals among other things.

Construction of dams, bulk water storage facilities can limit women access to water for such needs. As a result, different needs of women with respect to land and water use should be taken into consideration when designing the investments under IFPPP-AF to avoid their potential discrimination from access to land and water as a result of the IFPPP-AF investments.

Increased crime and in-migration

The increase in the number of people in a specific project area or site especially during construction has the potential to lead to a number of negative socio-economic impacts, including increased insecurity and community conflicts, increased incidences of diseases; increased risk of accidents and occupational hazards; and immigration of construction workers and labour force management challenges.

Employment Issues

The construction activities of sub project investments may require recruitment of “foreign” skilled and unskilled labour that could trigger conflict, resentment and tension by the local communities over perceived inequities in distribution of job opportunities by the local communities.

Risk of drowning

There is a risk of drowning by both children and adults in the reservoirs. Furthermore, domestic animals may also drown in the reservoir while trying to drink from it. Although this risk leads to loss of lives, it can be avoided and mitigated thus the magnitude of the impact is considered to be medium negative and can be mitigated by planting trees and other vegetation to reduce accessibility, carry out surveillance and off the dam area and sensitization of the community of emergency plans of action in case of disasters.

Labor Influx Impacts

The influx of workers and followers can lead to adverse social and environmental impacts on local communities, especially if the communities are rural, remote or small. Such adverse impacts may include increased demand and competition for local social and health services, as well as for goods and services, which can lead to price hikes and crowding out of local consumers, increased volume of traffic and higher risk of accidents, increased demands on the ecosystem and natural resources, social conflicts within and between communities, increased risk of spread of communicable diseases, and increased rates of illicit behavior and crime. Such adverse impacts are usually amplified by local-level low capacity to manage and absorb the incoming labor force, and specifically when civil works are carried out in, or near, vulnerable communities and in other high-risk situations.

The increase in the number of people in a specific project area or site especially during construction has the potential to lead to a number of negative socio-economic impacts, including increased insecurity and community conflicts, increased incidences of diseases; increased risk of accidents and occupational hazards; and immigration of construction workers and labour force management challenges.

The construction activities of sub project investments may require recruitment of “foreign” skilled and unskilled labour that could trigger conflict, resentment and tension by the local communities over perceived inequities in distribution of job opportunities by the local communities.

Workers Camp

Construction activities for identified sub projects may require establishment of construction camps for workers. Labour camps could lead to environmental impacts on biophysical and socio-economic environment including construction related impacts on the biophysical environment as highlighted above as well as social impacts related to labour influx, public health concerns among others as discussed.

Table 1: Summary of Adverse Impacts and Mitigation Measures

Impacts	Description of mitigation measures
Physical Environment	
Waste disposal	<p><u>Solid nontoxic waste</u> Adequate waste receptacles and facilities should be provided at project sites/camp sites</p> <p>Training and awareness on Safe Waste Disposal in construction camps for all workers</p> <p>Final disposal should be at dumpsites approved by the NEMA</p> <p><u>Waste oil /fuel</u> Spent or waste oil from vehicles and equipment should be collected and temporarily stored in drums or containers at site Waste oil should be disposed of by oil marketing companies or agents approved or recognized and have the capacity to undertake oil disposal</p>
Air pollution	<p>Proposed investments should require that construction contractors operate only well maintained engines, vehicles, trucks and equipment. A routine maintenance program for all equipment, vehicles, trucks and power generating engines should be in place.</p> <p>The project should ensure the use of good quality fuel and lubricants only</p> <p>If dust generation at the project/construction site becomes a problem, limited wetting of sites and or unloading and reloading points should be done to reduce dust raising</p> <p>Construction traffic speed control measures should be enforced on unpaved roads (speed limits through communities should be ≤ 50km/hr on unpaved roads and near or at project site should be ≤ 30 km/hr).</p> <p>Engines of vehicles/trucks and earth-moving equipment should be switched off when not in use.</p>
Noise and vibration	<p>Proposed investments should require contractors to use equipment and vehicles that are in good working order, well maintained, and that have some noise suppression equipment (e.g. mufflers, noise baffles) intact and in working order.</p> <p>This will be achieved by making it a component of contractual agreements with the construction contractors.</p> <p>Contractors will be required to implement best driving practices when approaching and leaving the site (speed limit of ≤ 30 km/hr) to minimize noise generation created through activities such as unnecessary acceleration and breaking squeal.</p>

	Engines of vehicles/trucks and earth-moving equipment should be switched off when not in use.
Impacts on landscape and visual receptors	Landscaping of facilities after construction and restoration of disturbed areas e.g. borrow pits
Impact on traffic and public safety	Only road worthy vehicles and trucks should be used to avoid frequent breakdowns on the roads Only experienced drivers should be employed Contractors must provide training for drivers; Establish speed limits; Enforce safe driving and take disciplinary action against repeat offenders
Water use	Obtain water abstraction permits from the Water Resources Management Authority (WRMA)
Water pollution	No garbage/refuse, oily wastes, fuels/waste oils should be discharged into drains or onto site grounds Fuel storage tanks/sites should be properly secured to contain any spillage Maintenance and cleaning of vehicles, trucks and equipment should take place offsite especially where project sites are close to water bodies. Toilet facilities should be provided for construction workers to avoid indiscriminate defecation in nearby bush or local water bodies
Soil and land degradation	Minimize land clearing areas as much as possible to avoid unnecessary exposure of bare ground to the elements of the weather Re-vegetate cleared areas as early as possible using native plant species As much as possible, avoid construction work in the rainy season
Impact on fauna and habitat	Avoid unnecessary exposure and access to sensitive habitat areas For identified or suspected sensitive habitats (swamps/ wetlands), regular inspection or monitoring should be carried out in the area prior to start and during work. If sensitive habitats are encountered, Project activities should cease and the Project should consult KWS to determine the appropriate course of action. If the project site is discovered as a sensitive habitat area, the Project should engage the KWS to develop a suitable plan. Prohibition on hunting and consumption of bush meat by workforces
Impacts on inland water bodies/ fauna/habitat	Proposed investments should require that contractors implement a hazardous materials management plan that includes specification for proper storage and handling of fuels, oil, wastes, and other potentially hazardous materials as well as a plan for containment and clean-up of accidental spills into the aquatic environment. During pre-installation and installation of project facilities, spotting of sensitive aquatic mammals should form part of the project activities. Should these species be observed in the vicinity of the work area, the project should execute measures to avoid destruction or disturbance. Ensure provision for water flow reserves and appropriate reservoir filling schedules Project staff must report sightings of any injured or dead aquatic life (fishes)/ mammals immediately, regardless of whether the injury or death is caused by a

	<p>Project activity. The report should include the date and location of the animal/strike, and the species identification or a description of the animal. The report should be made to the NEMA or KWS.</p> <p>The Project workforce and local communities should be educated to ensure that the importance of environmental protection and nature conservation are effectively communicated and that wider appreciation of environmental issues and construction best practice are fostered.</p>
Social Environment	
Physical displacement	<p>All affected persons to be given relocation assistance (cash or kind) by the Project to enable them move their properties to new locations, i.e. in accordance with the Resettlement Policy Framework (RPF)</p> <p>Resettlement Plans will be required. If a site is acquired, the State may relocate persons and their families as well as community facilities to be affected. The affected families should not be made to incur any cost during the relocation period. A resettlement plan should be prepared for this area with the RPF as a guide.</p>
Loss of employment and livelihoods	<p>Those whose livelihood is affected should be assisted to ensure they will not be worse off as a result of the project. This can include livelihood assistance, provision of new jobs immediately without any loss of income. The social assessments and socio-economic surveys, which will be undertaken for the preparation of individual investments/subprojects as well as the resettlement action plans, should assess these issues and provide measures in accordance with the Resettlement Policy Framework (RPF).</p> <p>Contractors should use local labor as much as possible and where available. As much as possible, all unskilled labor should be contracted or obtained from the local community.</p>
Loss of land and other assets	<p>Due process should be followed to establish the true owner of any land, be it family or communal land. Once established, the project should acquire the site by paying appropriate compensation in accordance with the resettlement policy framework (RPF), which would be the replacement cost of the assets lost.</p>
Loss of structures/properties	<p>For a project site to be used, irrespective of the land ownership, appropriate compensation should be paid for any structures/ properties which are permanent structures at the site as well as investment made for any development on the land.</p> <p>Depreciation should not be factored during valuation of these properties. The compensation process should satisfy the RPF developed for the project.</p> <p>Appropriate compensation should be paid for any damaged or destroyed property that belongs to affected persons. No depreciation during valuation of these properties.</p>
Impact on access among communities living in the project areas	<p>Measures will be considered in the projects' design to ensure that communities are not divided and if they are as a result of a project appropriate measures are taken to mitigate this impact.</p>
Impacts on recreation and public areas	<p>Appropriate notices and warning signs will be erected around working areas and public areas to warn prospective trespassers of any danger or risk</p>
Impacts on human health/ traffic safety and sanitation	<p>Trucks carrying construction materials such as sand, quarry dust, laterite etc. will have the buckets covered with tarpaulin or appropriate polythene material from or to project site</p> <p>Only road worthy vehicles/trucks should be used</p> <p>Only experienced drivers/operators should be employed</p> <p>Except for areas secured by fencing, all active construction areas will be marked with high-visibility tape to reduce the risk accidents involving pedestrians and vehicles.</p>

	<p>All open trenches and excavated areas will be backfilled as soon as possible after construction has been completed. Access to open trenches and excavated areas will be secured to prevent pedestrians or vehicles from falling in.</p> <p>Adequate sanitary facilities will be available for workers and open range defecation will not be countenanced.</p> <p>Construction workers will be provided with and educated to wear suitable Personal Protective Equipment (PPE) including hard hats, overalls, high-visibility vests, safety boots, earplugs, gloves etc.</p> <p>Enforce use of PPEs at all times for all staff and labourers and ensure supervision of the same to minimise accidents</p> <p>Construction workers should be educated to adhere to basic rules with regard to protection of public health, including most importantly hygiene and disease (HIV/AIDS) prevention.</p>
Impacts on cultural heritage / archaeological interest / existing ecologically sensitive areas	<p>The pre-construction surveys should identify cultural heritage resources and existing ecologically sensitive areas that the project should avoid and by-pass these resources.</p> <p>The Project should implement a chance find procedure and reporting system to be used by contractors in the event that a cultural heritage feature or ecologically sensitive item/issue is encountered.</p>
Impacts on human health and public safety	<p>The Project will require all contractors to implement an Environmental, Health and Safety (EHS) plan which will outline procedures for avoiding health and safety incidents and for emergency medical treatment. This will be achieved by making it a component of contractual agreement.</p> <p>Contractors will be required to wear suitable Personal Protective Equipment (PPE) including hard hats, high-visibility vests, safety boots and gloves and life vests as appropriate in accordance with the EHS plan.</p> <p>Enforce use of PPEs at all times for all staff and labourers and ensure supervision of the same to minimise accidents</p> <p>All construction and other workers will be sufficiently trained in the safe methods pertaining to their area of work to avoid injuries.</p>
Labor related issues	<p>The project to prepare redundancy plans and packages to be discussed with affected workers which will include re- training and re- tooling of affected workers and aim to avoid labor strife.</p>
Waste pollution from construction camps	<p>Prepare Waste Disposal Plan for every construction site</p> <p>Install waste disposal receptacles and signs in strategic places within the construction camps</p> <p>Provide training and awareness on need to avoid littering</p> <p>Ensure the construction camps have toilets and connected to the sewer system</p>
Impact on gender access to water for household use and household plots as well as impact on pastoralists and fisheries.	<p>The project will take into consideration the different needs for water and types of access which will be affected for each of these groups and provide relevant mitigation measures which will be decided with those affected. Some mitigation measures could include water points for household use and livestock; livelihood assistance to those whose whole or partial livelihood will be affected as a result of some of the possible investments such as dams. Specific impact and relevant measures will be covered by project specific social assessment.</p>
HIV/AIDS Spread and other related public health diseases – Water borne diseases etc.	<p>Design HIV/AIDS awareness, sensitisation and prevention program for each project that extends to the communities as a whole;</p> <p>Design programs for reducing the spread of water borne diseases like malaria, bilharzia etc. in collaboration with the Ministry of Health</p>
Labour and employment related impacts	<p>Ensure that the local communities are given priority in relation to employment</p>

and provided with training (skilled) to provide future labour in the project e.g. operation and maintenance

Safeguard Screening Procedures

The IFPPP-AF has been rated Category A under the World Bank Operational Policy on Environmental Assessment (OP4.01) however, the sub project investments within the overall IFPPP-AF may necessarily not be rated Category A and may in fact vary between Category B and even C. This ESMF has been designed to include tools that will be used to screen each proposed sub project investment prior to implementation and contains recommendation on the mitigation measures that need to be adhered to in order to reduce the adverse impacts.

Through the screening process a determination on the safeguards policies triggered by a particular proposed investment will be made and the mitigation measures to put in place outlined. Further the screening and review process will also ensure that sub project investments are adequately categorized as **A, B or C** and in effect those that are categorized as **A** be subjected to a full scale ESIA, those categorized as **B** subjected to stand alone ESMP or an environmental analysis more limited than a full ESIA and those categorized as **C** subjected to no environmental evaluation/study.

If identified as a requirement of the sub project through the screening process, a Resettlement Action Plan (RAP), a Vulnerable and Marginalised Groups Plan (VMGP) and/or a Physical Cultural Resources Management Plan, Dam Safety measures or a combination of these, is prepared alongside or as an integrated part of the ESMP or ESIA.

Procedure for Screening and Development of ESIA's

Using this ESMF which is in essence a guide, the development of sub project investment specific Environmental and Social Impact Assessment (ESIAs) will be required for each proposed sub project investment once the nature, scope and location among others of the investments are known in order to ensure compliance with the World Bank safeguards policies. All sub project investments will be screened using the screening forms (*See section 7.1*) and a determination will be made using the forms whether an ESIA report is required or otherwise by the Bank. The screening for all sub project investments will be undertaken by the IFPPP-AF /PIU based environmental and social safeguards advisor.

In order to ensure compliance with the Government of Kenya (GoK) environmental regulatory requirements during the feasibility study stage of each investment, project reports will be prepared for each sub project investment by the contracting authorities with the support of the IFPPP-AF /PIU and submitted to NEMA for determination as to whether an ESIA is required or not. If National Environment Management Authority (NEMA) makes a determination that an ESIA is required based on the project report submitted, then NEMA will assist in the development of Terms of References (ToRs) for follow-up ESIA and Resettlement Action Plan (RAP) which will have to be prepared and submitted to NEMA and World Bank for approval before construction works commence.

All the ESIA's or ESMP's will be reviewed and approved by IFPPP/PIU and submitted to NEMA and the World Bank for further review and approval.

Reporting and Performance Review Requirements

A Project Implementation Unit (PIU) for the IFPPP exists and will continue to exist during the IFPPP-AF phase. The PIU will prepare project specific quarterly environmental and social progress reports for submission to the Bank. The contracting authorities will prepare project (through consultants) specific ESIA and RAPs and Physical Cultural Resources Management Plan for identified investments during the feasibility study phase of the project following detailed screening. Environmental and social safeguards technical assistance to the IFPPP-AF contracting authorities will be provided by the IFPPP-PIU's safeguards advisor who has been recruited for this purpose. These reports will be submitted to the World Bank's implementation support and review missions.

Capacity Building and Training

Capacity development and strengthening remains a crucial component in this ESMF and will be integrated all through the project implementation phase. Capacity building will be in the form of training seminars/ workshops and short courses for project implementing partner staff from the implementing agencies to be able to successfully implement environmental and social aspects of the IFPPP-AF. The proposed training modules will cover among others:

- a) *World Bank safeguards policies and NEMA Environmental regulations, specifically covering including the ESMF/ RPF/IPPF;*
- b) *Subproject Screening Checklist;*
- c) *Environmental Monitoring*
- d) *Development of Terms of Reference for ESIA's;*
- e) *Environmental and Social Clauses in Contractors' contract and bidding documents.*

Public Consultations

Stakeholders were identified and consulted as part of the preparation of the ESMF. A stakeholder consultation was held on the **16th December 2016** in Nairobi at Intercontinental Hotel. Annex **A** and **B** shows the institutions and stakeholders consulted thus far and the issues and responses from the consultation process.

Project Implementation

The Ministry of Finance (MoF) will be the overall implementation agency for the IFPPP project. The Project Facilitation Fund (PFF), established under section 68 of the PPP Act, 2013, will manage day-to-day activities for the IFPPP additional financing project. PFF is as a multi-purpose fund to provide financial support for the implementation of PPP projects under the Act, which may be provided in the form of grants, loans, equity, guarantees and other financial instruments approved by the CS from time to time. PFF will have four windows: i) contracting authorities in the preparation, appraisal and tendering phase of their PPP projects; ii) the activities of the PPP Unit in its delivery of its mandate; iii) extend viability gap finance to PPP projects; and iv) provide a source of liquidity to meet any contingent liabilities arising from a PPP project. PFF will be operationalized during the project implementation phase.

The PPP committee will act as the oversight body of the PFF. An Officer Administering the Fund (OAF) will be designated to manage and administer the Fund. The OAF reports to the Auditor General and has responsibilities of: i) Review and assess requests for Government support in relation to a project and advise the Committee on the support that should be accorded in relation to the project; ii) Put in place measures to eliminate constraints limiting the realization of benefits expected from a PPP; and iii) Monitor contingent liabilities and accounting and budgetary issues related to PPPs with the relevant offices within the State department responsible for finance. The OAF be supported by a Secretariat who shall provide technical and administrative support to the OAF. The PPP Unit and PIU supporting the IFPPP Project will be the Secretariat to the Fund/OAF.

The PPP Unit and PIU combined currently have 27 staffs, the majority of which are support and non-technical staff. The unit is planning to recruit additional staffs to have a total staffing number of close to 50, including 29 technical officers. The additional staffing plan aims to enhance the technical capacity in core areas of PPP project development and implementation, such as finance, legal, technical, and procurement; and accelerate program implementation and disbursement. **Figure 1 illustrates** the governance structure of the PFF.

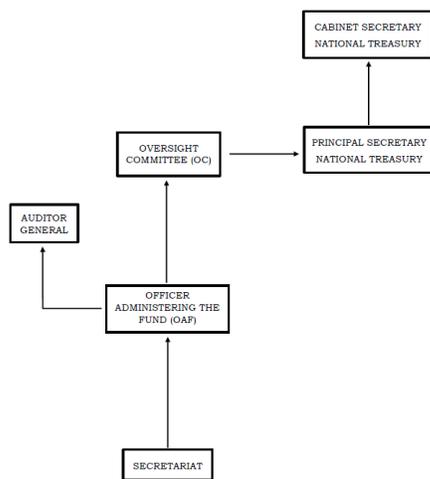


Figure 1: PFF Governance Structure

Role of PPP Institutions in the PPP Process

Implementation of PPPs Based on the National Policy on PPP: The PPP Policy outlines the roles of the various Ministries and Agencies for the successful processing and implementation of a PPP program. In general, the various institutions will be supporting the following broad functions: (a) PPP awareness building and communication campaign; (b) Individual project sponsorship, design, preparation and execution; (c) Financial management of funded and contingent obligations; (d) Gate-keeping and approval functions, and (e) PPP project advice, support and promotion. Below are the specific roles of the various institutions.

Ministry of Finance (MoF): Is spearheading the development of PPP and is responsible for developing the legal, institutional, and regulatory framework for the PPP program. MoF is also responsible for the issuing of standardized PPP provisions and PPP manual/guidelines for effective management of PPP Projects.

The PPP Steering Committee (PPPSC): This Inter-Ministerial Committee will be responsible, inter alia, for PPP policy guideline formulation, project approvals and monitoring and evaluation oversight. It will be chaired by the Ministry of Finance Principal Secretary and includes, as members, the Principal Secretaries responsible for Government Coordination, National Planning, Lands, Local, and County Government and representative from the Attorney General's office as well as four representatives from outside of Government as appointed by the Cabinet Secretary.

The PPP Unit (PPPU): Currently the PPPU is staffed with a Director and support staff. The proposed organization structure, including an initial scoping of job descriptions and candidates' profiles (taking into account the potential for overlap in the various fundamental roles to be played by the PPPU) has been drafted for consideration by the GoK and is included in **Figure 2 below**.

The key role of the PPPU will be coordination of Policy implementation across the participating Ministries and Departments of Government. The PPPU will also manage donor relations in respect of the Policy, serve as the Secretariat to the PPPSC and provide a range of advisory and oversight functions that will be detailed more comprehensively in the detailed organigram currently being prepared by the PPPU (see summary below). In light of the start-up status of the Policy, it is to be expected that these roles and responsibilities will be subject to some fluidity and evolve over time in response to operational effectiveness and efficiency considerations and other lessons learned.

PPP Nodes/Contracting Authority: The PPP Nodes are satellite PPP units present in contracting authorities with a pipeline of projects which will be functionally reporting to the PPPS and administratively reporting to the Contracting Authorities. Their function is to support the development and ensure procurement and contract management of PPPs within the national policy guidelines and implementation of the draft PPP bill, soon to be approved.

MoF- Debt Management Office: The Debt Management Division will ensure fiscal sustainability for PPP projects, considering both direct and contingent liabilities on government's finances including guarantees, arising from each PPP project. Specifically, the DMD will be responsible for: (a) Fiscal impact: assessing and managing the long-term fiscal risks and impact of the PPP project (direct or contingent, explicit or implicit) and determining whether it is acceptable, given other priority national needs; and (b) Government support: confirming the appropriateness of the project for sovereign guarantees (debt or specific-event) or other kinds of government support.

MoF- Budget Division: The Budget Division shall establish processes to incorporate PPP project development into the annual budgeting exercise, and fund direct as well as

contingent (unanticipated) calls on the budget. The Division shall therefore ensure that any payments to be made by Ministries and Agencies under the PPP contract are consistent with the national budget.

Cabinet shall be the approving authority for PPPs subject to the provisions of the Approval Schedule to this Policy and detailed regulations to be promulgated.

Parliament shall be the final approving authority for PPP projects where PPP Projects require the approval of Parliament subject to the provisions of the Schedule to this Policy and detailed regulations to be promulgated. This is to ensure the protection of public interest.

Attorney-General's Department with the assistance and advice of PPPS Legal Expert shall ensure the conformity of all project agreements with Kenyan law.

Regulatory Authorities shall ensure that the PPP contract, insofar as it will have an impact on customer tariffs is consistent with and furthers good regulatory principles.

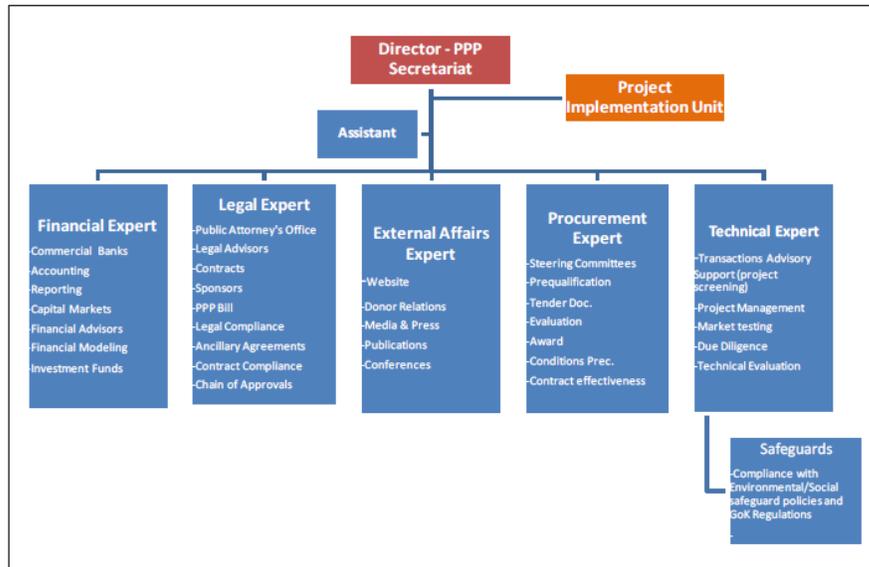


Figure 2: PPPU Organisational Chart

The ESMF report is organized as follows:

- *Acronyms and abbreviations*
- *Executive summary*
- *Chapter 1-Introduction Chapter and description of the proposed project*
- *Chapter 2-Study Methodology*
- *Chapter 3-Baseline information*
- *Chapter 4-Description of National and International Regulatory Framework*
- *Chapter 5-World Bank Environmental and Social Safeguards Policies*
- *Chapter 6- Determination of Potential Environmental Impacts*
- *Chapter 7- Project Coordination and Implementation Arrangements*
- *Chapter 8 - Capacity building and training requirements*
- *Chapter 9- Public Consultations and Disclosure*
- *Chapter 10 - Reference*

2 INTRODUCTION

The Government of Kenya (GOK) through the National Treasury (NT) is seeking additional financing from the World Bank for the Infrastructure Finance and Public-Private Partnership Program (IFPPP) Additional Financing (AF) to support improvement in the legislative, institutional, financial, fiduciary and technical framework in order to continue in the generation of pipeline of bankable Public-Private-Partnership (P-P-P) projects.

2.1 IFPPP-Phase I

The primary objective of the first phase of the project was to strengthen the country's PPP framework using the IFPPP APL project which would put in place the necessary foundation for Kenya to realize the benefits of PPPs, including increased private investments in infrastructure, increased employment opportunities, improved service delivery to enterprises and the population in general, and an improved fiscal impact on government from better project preparation, better risk allocation, increased transparency, wider quality control, and greater efficiency.

2.2 Environmental and Social Performance Under IFPPP-Phase I

The Environmental and Social (E&S) Performance under the IFPPP-Phase I is considered satisfactory. It must be noted that there has been no implementation with respect to construction activities under IFPPP-Phase I to date and hence evaluating E&S performance with respect to implementation and monitoring was not possible. However, to the extent that E&S performance is considered with respect to safeguards preparatory activities, the IFPPP-Phase I has ensured that the following is undertaken for all 10 pipeline investments project that have been prepared thus far:-

- Screening to determine environmental categorisation
- Preliminary Environmental and Social Impact Assessment report preparation as part of feasibility studies
- Preliminary Resettlement Action Plan report preparation as part of feasibility studies

2.3 Justification for ESMF Update

The current ESMF has been an effective instrument in ensuring satisfactory E&S performance during the IFPPP-Phase I. As a result of the requirements by the ESMF for Phase I, screening was undertaken for all of the 6 investments prepared thus far and safeguards instruments prepared (preliminary ESIA and RAP) for the same. The PPP unit has also recruited a safeguards advisor which was a key requirement of the ESMF who has conducted training to the PPP Unit and select Contracting Agencies on WB safeguards requirements as well as international best practise requirements because of the private sector approach and nature of the project.

The reason for updating the ESMF is because of the fact that the Government of Kenya is requesting for additional financing under the same project. There are no significant changes on the Phase I ESMF other than the stakeholder consultation and reference to the new Community Land Act.

2.4 Purpose and Rationale of the ESMF

This ESMF seeks to establish a process of environmental and social screening which will permit the institutions in charge of the implementation of the sub projects to identify, assess and mitigate the environmental and social impacts of sub project investments. The ESMF also determines the institutional measures to be taken during the program implementation, including those relating to capacity building.

As many specific project investments in the IFPPP-AF have not been clearly identified at this stage, hence an ESMF provides a general impact identification framework to assist project implementers to screen the projects and institute measures to address adverse environmental and social impacts. This ESMF thus applies to all sub projects to be financed under phase 1, 2 and future phases of the IFPPP-AF. There exists a pipeline of potential sub projects, all which will have to satisfy safeguards requirements during project implementation, as the corresponding technical (hence environmental and social safeguards aspects), of these sub projects have not yet been finalised or appraised. Specific information on country- wide project locations, land requirements, bio- physical features etc. when known at a later stage will trigger the preparation of Environmental and Social Impact Assessment (ESIA) reports.

2.5 Approach for the preparation of ESMF

The ESMF has been prepared in accordance with applicable World Bank safeguard policies (OP. 4.01), which involved the following activities, among others:

- *Literature/ data gathering and review;*
- *Public consultations and discussions with relevant sector institutions;*
- *Determination of potential impacts; Identification of impact mitigation measures; Preparation of an Environmental and Social Management Plan; and Preparation of sub-project guidelines.*

2.6 Project Description (IFPPP-AF)

2.6.1 Country and sector context/ Project Concept

Kenya's economic growth remains robust and resilient in recent years amid weakness in the global economy. The country's GDP was estimated at US\$ 63.4 billion as of Oct 2016 (up from US\$ 61.4 billion in 2014), with GDP per capita standing at US\$ 1,377 (up from US\$1,368 in 2014). The growth is projected at 5.9 percent in 2016 from 5.6 in 2015 and strengthening to 6.1 percent by 2018. This is against the backdrop of the

significant improvement in external and internal balances, such as falling oil prices; and public investment, mainly in infrastructure (energy and the standard gauge railway).³

Despite the positive growth outlook, poverty levels remain high and income distribution is uneven. The World Bank Country Partnership Strategy 2014-18 for Kenya recognizes that 4 out of 10 Kenyans live in poverty, and the richest 10 percent of the population receive 40 percent of the nation’s income. Poverty in Kenya continues to be closely associated with poor infrastructure.

Infrastructure and logistics are the backbone of Kenya’s long term growth. The Government’s second Medium-Term Plan calls for huge investments in infrastructure. In an effort to close the infrastructure deficit, Kenya has quadrupled spending in the infrastructure sector. About half of its capital budget is allocated for infrastructure. This budget increased from about 4.5 percent of GDP to 7 percent of GDP in 2014/2015. However, the gap still remains and more effort is needed to further close the gap.

Private domestic investment remains constrained by high cost of credit (notwithstanding the decline in interest rates) and a challenging business regulatory environment (Kenya ranks 92 in the World Bank’s Doing Business rankings). Nonetheless, there has been an increasing investor confidence of prospects in the Kenyan economy, which is reflected in a surged foreign direct investment (FDI) in the recent years (the FDI increased by 52 percent in 2015).

The Kenya Country Partnership Strategy 2014-2018 identifies a key opportunity to address this by leveraging private sector resources through innovative public-private partnerships (PPPs), which is currently being implemented through the World Bank Kenya Infrastructure Finance and Public Private Partnership Project (IFPPP), in partnership with the PPP Unit of the National Treasury.

2.7 Sectoral and Institutional Context

The IFPPP Additional Financing Project supports Kenya’s Vision 2030 and Second Medium Term Plan 2010-2017 (MTP2). Vision 2030 aims to transform Kenya into a newly industrializing, middle-income country whilst making the country globally competitive.⁴ The vision aspires to “strengthen the framework for infrastructure development and enhance private sector participation in the provision of infrastructure facilities and services strategically complemented by government interventions.” The MTP 2 also addresses the challenges of an inclusive growth model with high cost of infrastructure and calls for infrastructure investments and leveraging of private sector resources.

³ The World Bank Group, Kenya Economic Update: Beyond Resilience – *Increasing Productivity of Public Investments* 2016, Edition No. 14

⁴ Kenya Vision 2030 Progress Report

Unlocking infrastructure gap is the key to increase international competitiveness of Kenya's national economy, facilitate domestic and international trade, and enhancing the country's integration into the global economy. One of the top constraints identified by Kenyan businesses are infrastructure services, especially in affordable and reliable power supply, as well as dilapidated transportation infrastructure. Close to 80 percent of firms in Kenya experience losses because of power interruptions. As a consequence, almost 70% of firms have generators, which are costly to obtain and to operate. Similarly, Kenyan companies lose 2.6 percent of their sales because of spoilage and theft during transportation⁵.

The country's current infrastructure funding gap stands at about US\$ 4 billion per annum⁶. Addressing the funding gap in the infrastructure is one of the key enablers to help eliminate inefficiencies and allow the sector to adopt the appropriate financing strategies and technologies. Kenya's infrastructure budget allocation amounted to KSH 244 billion (or US\$ 2.4 billion) in 2013/14, equivalent to 4.9 percent of GDP⁷. Since public resource alone is not sufficient to cover the infrastructure funding gap, the ability to bring in private sector investment would be crucial to tap on the gap.

The Kenyan financial sector is the third largest in sub-Saharan Africa (SSA) and has been relatively stable through recent slowdowns and shocks, both domestic and global. It is comprised of (i) a large banking sector that has leveraged its gains in resilience and growth to establish a notable sub-regional presence; (ii) a relatively large securities market (third in terms of capitalization in SSA and degree of sophistication), and; (iii) a relatively large pensions and growing insurance sector.

The financial system continues to be dominated by a growing banking sector. Total assets of the banking sector amounts to KSH 3.4 trillion (USD 35 billion) in 2015, which accounts for 53 percent of GDP. Credit extended to the private sector amounted to almost 34.8 percent of GDP in 2015. The banking sector is comprised 43 commercial banks, 1 mortgage finance company, 9 deposit taking microfinance institutions (DTMs), 7 representative offices of foreign banks, 105 foreign exchange bureaus, and 2 credit reference bureaus.

The Kenyan capital market is the largest in East Africa and third in terms of capitalization in Sub-Saharan Africa after South Africa and Nigeria. Capital markets are dominated by equities and government bonds, with an incipient, yet fast growing, non-government bond market. A total of 64 companies are listed on the Nairobi Stocks Exchange (NSE) with a total market capitalization of over Ksh 2.3 trillion in the fourth quarter of 2014. The ten largest listed companies, the majority of which are commercial banks, account for over 70 percent of market capitalization and almost 80 percent of traded values. A total of 97 institutions are licensed to operate by the Capital Markets

⁵ Investment Climate Assessments (ICA 2008)

⁶ Bloomberg, 2014

⁷ Kenya Public Expenditure Review Report 2014, Volume 1, the World Bank

Authority (CMA), including the NSE, a central depository, 12 investment banks, and 10 stockbrokers.

The Government bond market is relatively developed by sub-Saharan Africa Standards. The outstanding government bond market represents about 26 percent of GDP, although volumes remain shallow at around 53 percent of outstanding debt in 2014. There has been considerable improvement in its debt structure, including ongoing efforts to develop an incipient benchmark strategy and a greater and longer-term variety of instruments. Between 2000 and 2014, the debt structure shifted from 78 percent in T-bills and 22 percent in T-bonds to the reverse, 77 percent in T-bonds and 23 percent in T-bills. Significant work is still required to build benchmark bond programs, strengthen associated liability management processes, and develop the secondary markets in order to establish more credible yield curves that can be used as a pricing reference for non-government issues. The secondary bond market liquidity is low, partly as a result of an inefficient market structure, infrastructure and fragmentation in the primary market.

The non-government bond market in Kenya is still in the early stage of development. Outstanding public offers of non-government bonds stood at Ksh.64 billion in 2014, representing only 1% of GDP. There are only a handful of issuers and non-government bonds represent an insignificant holding in institutional investor portfolios, which, in large part is understandably due to the small supply of corporate paper. There is a relatively large variety of issuers represented amongst the issuers but with a general bias towards financial institutions. The longest tenor is 10 years, but most have tenors of between 5 and 7 years. There are gaps in systemically important infrastructure particularly the post-trade infrastructure, which is misaligned with current market needs (processes and institutional arrangements), as well as not being fully in line with international best practice. This makes the trading and settlement processes a stumbling block for further development of the capital markets, in addition to being less attractive to international investors.

Government intervention in the financial sector in Kenya is relatively low. Among the 44 Commercial banks and Mortgage Finance Institution, 5 have certain level of government participation, and 3 are defined by the Central Bank of Kenya (CBK) as public financial institutions with the majority shareholding owned by Government of Kenya (GoK) and state corporations.⁸ These include Consolidated Bank of Kenya (CBOK), Development Bank of Kenya (DBK) and National Bank of Kenya (NBK). The ownership structure of these three commercial banks varies from one to another: While the DBK is 100 percent owned by GoK through the Industrial and Commercial Development Corporation (ICDC, 89.3 percent) and TransCentury Investments, CBOK and NBK are 100 percent by GoK through 11 state-owned financial institutions, which include Deposit Protection Fund (owns 50 percent of CBOK) and National Social Security Fund (owns 48 percent of NBK). Together, these banks have total assets of \$14 billion USD as at December 2013, representing 0.5 percent of total banking sector assets.

⁸ In addition to the 3 banks that are defined as public financial institutions by the CBK, Kenya Commercial Bank (KCB) also has 17.74% of shareholding by the Kenyan Government.

In order to support GoK to address the infrastructure financing gap and develop a robust market for private sector financing, the WB launched the IFPPP project, a US\$ 40 million IDA credit that became effective in February 2013 and is currently scheduled to close on December 31, 2017. The IFPPP project was conceived as the first stage of a two-phase Adaptable Lending Program (APL), a lending instrument that no longer exists. The Project Development Objective (PDO) was to increase private investment in the Kenya infrastructure market across sectors and to sustain this participation over an extended period of time. The specific development objective of the first phase of the Project is to improve the enabling environment to generate a pipeline of bankable PPP projects. The components of the Project are: *Component 1:* Institutional Development and Regulatory Reform. *Component 2:* Preparation of a pipeline of PPP transactions. *Component 3:* Improvement of Fiscal Commitment and Contingent Liability (FCCL) framework associated with PPP projects (especially infrastructure); and *Component 4:* Program Implementation Support.

The IFPPP project has successfully improved the enabling environment and generating a pipeline of bankable PPP projects. Following the enactment of the PPP law in 2013, the project has established well-functioning PPP institutions including a PPP unit and 53 PPP nodes. The project has also built capacity and awareness among key stakeholders, as well as developed 66 PPP pipeline projects. In addition, over 13 large-scale transactions at national level, in the transport, energy, education and health sectors, with an estimated compound capex of USD 4-5 billion are currently under preparation with IFPPP financing.

Preparation entails development of feasibility studies reports (including preliminary ESIA and RAP) and procurement of private investor using IFPPP financing but only on projects investments that have been determined as viable during feasibility study stage. Viable PPP projects proceed to procurement of private investors upon approval by the PPP Committee.

The 11 projects have been subjected to preliminary feasibility detailed designs and preliminary environmental and social impact assessments as well as resettlement action plans to inform the potential private investors who express interest in the investments. It worth noting that private investors will be expected to prepare detailed designs and update of the preliminary safeguards instruments. Preliminary ESIA and RAP documents have been prepared for the following 11 project thus far:-

1. Nairobi-Mombasa Highway Project
2. Nairobi-Nakuru Highway Project
3. Second Nyali Bridge Project
4. Nairobi Southern Bypass
5. Nairobi-Thika Highway Project
6. Embu University Hostel
7. Moi University Hostel
8. Egerton University Hostel

9. South Eastern Kenya University Hostel
10. Kenya Technical Training College Hostel
11. Kisumu Port Project

At the time of preparation of detailed designs of approved projects from the list above, detailed supplementary safeguards instruments (e.g. ESIA/ESMP/RAP, VMGP, IPMP, PCR, etc.) will be prepared.

The implementation for IFPPP is largely on track. The project has now reached a stage of maturity in creating enabling environment, made reasonable progress towards actual transactions, as well as embarked on the next stage of PPPs at subnational and county level.

As mentioned in the earlier section, the IFPPP was initially designed as a two-phase APL project. The overall APL was expected to be a US\$130 million program, comprising US\$40 million for APL1 and US\$90 million for APL2. Given that the APL instrument no longer exists, the proposed additional financing of US\$50 million is intended to scale up the existing PPP program in Kenya. It will benefit from the sound legal and regulatory framework and well-established institutional capacity that is accomplished under its parent project, help foster private sector investment in a more efficient and sustainable manner, and bridge the country's infrastructure gap in the long run.

The additional financing is anticipated to be used for the following activities:

- Upstream support for PPP Institutions and Capacity Building
- Support for PPP Project Preparation and Procurement
- Support for Project Management

2.7.1 Proposed Development Objectives (PDOs)

The overall development objective of this project is to increase private investment in the Kenya infrastructure market across sectors and to sustain this participation over an extended period of time.

IFPPP-AF Components

The additional financing will consist of three components: 1) Upstream support to PPP Institutions and capacity building; 2) Support to Project Preparation and Procurement; and 3) Support to Project Management.

Component I: Support to Institutional Strengthening

The budget for this component is US\$10 million. This allocation was established based on lessons learned from prior technical assistance projects including the IFPPP project and PPIAF supported activities, an assessment of the remaining institutional strengthening activities following the activities undertaken under the IFPPP and the need for institutional strengthening based on future expected project activities. Current known parallel coordinated support from other donors such as PPIAF and DFID has been taken

into account while establishing the allocation. These donors are likely to continue supporting parallel activities through the life of the project.

Sub-Component I.A: Upstream Support to PPP Institutions

This sub-component will provide support for the sustainable functioning of the Project Facilitation Fund, the PPPU, the Contracting Authorities and selected county governments. It will specifically support activities focusing on:

- Further policy dialogue and design of strategies and policies relating to specific sectors. This will also include the preparation of standard procurement documentation for sectors where there is a strong potential pipeline such as in the energy, transport, education and health sectors.
- Enhancing the ability of these entities to support project preparation, procurement and implementation, including policy, planning and analysis through embedded advisory (including through resident advisors) and consultancy services. Staffing of the PPPU is still inadequate and needs to be supplemented by embedded advisory services given the increasing number of projects in the pipeline. The PFF in its newly established state would need hand-holding, at least in the initial years, in order to become a sustainable funding source for project preparation, contingent payments and viability gap funding. The competence of the current county team is limited to finance and legal. Creation of the complete spectrum of PPP expertise at county level would require additional support from individuals with technical, sectoral and social and environmental background.
- Review of national law, regulations and policy to support drafting of practice notes and guidelines on application and process at county level. This will include review of policies and related applicable law and regulations vis-à-vis counties to ensure suitability of current frameworks and tools to county PPPs which face unique challenges in their implementation – for example, county PPPs are smaller in scale, have high transaction costs proportionate to total project cost, and face financing constraints due to the risk profile of projects, lower creditworthiness of the entities sponsoring these projects, and overall limited capacity and experience of local investors. Some of the areas that would require review/reform for a customized county-level solution include:
 - Draft County PPP Regulations
 - Draft FCCL Management Framework
 - Draft PPP PFF Regulations
 - Draft PPP Manual

Sub-Component I.B: Support to Capacity Building Activities

This sub-component will provide support for;-

- Specific hands-on skill-based and specific project based training to teams within national ministries and county governments to enhance the ability of project

teams to support project related activities, including preparation, procurement and implementation. Sector ministries with projects in the pipeline or where there is potential for PPPs and a majority of the 47 counties will be involved in the program which will consist of a structured learning program geared towards creating a moderate level of awareness and understanding of principles, concepts and processes of PPPs. This will also include benchmarking visits to successful projects.

- Preparation of a PPP curriculum and study material for national and county governments.
- Activities relating to PPP certification of government officials at national and county levels
- Public awareness campaigns, workshops and investment conferences to inform external stakeholders on evolving and new policy as well as pipeline status and projects being brought to market. This will also include bidders' conferences for projects already brought to market.

Component II: Support to Project Preparation and Procurement

The budget for this component is US\$39.5 million. This component will assist the Government of Kenya, at national as well as county level, to prepare well-structured and bankable PPP projects with optimal risk allocation building on the experience in the development of the first mover PPPs under IFPPP. While transport, education, health and energy will continue to be sectors of focus for the national government, sectors of interest at county level appear to be housing, solid and medical waste management, health services, bulk water supply and distribution, county roads, agriculture, county markets, etc. Funds under this component will be used for engaging consultants for undertaking feasibility assessments, preparation of bid documents and hand-holding during bid-negotiations and other processes leading to commercial and financial close. This will include the financing of safeguards assessments. The demand for funds under this component has been gauged based on the following: experience of the project preparation component under IFPPP, an examination of the current and potential pipelines at county and national levels in various sectors, and detailed discussions with government counterparts and coordination within the WBG GPs, including with IFC and MIGA.

Component III: Support for Program Management

The budget for this component is US\$ 0.5 million. This component will be used to support the Project Implementation Unit that is currently functioning under IFPPP. The PIU will continue to provide the fiduciary, safeguards, and Monitoring and Evaluation (M&E) expertise required for the implementation of the project in accordance with Bank policies and requirements. This component may include equipment, operating costs, organization and systems development, training, capacity building and technical assistance.

2.8 Project Institutional and Implementation Arrangements

The Ministry of Finance (MoF) will be the overall implementation agency for the IFPPP project. The Project Facilitation Fund (PFF), established under section 68 of the

PPP Act, 2013, will manage day-to-day activities for the IFPPP additional financing project. PFF is as a multi-purpose fund to provide financial support for the implementation of PPP projects under the Act, which may be provided in the form of grants, loans, equity, guarantees and other financial instruments approved by the CS from time to time. PFF will have four windows: i) contracting authorities in the preparation, appraisal and tendering phase of their PPP projects; ii) the activities of the PPP Unit in its delivery of its mandate; iii) extend viability gap finance to PPP projects; and iv) provide a source of liquidity to meet any contingent liabilities arising from a PPP project. PFF will be operationalized during the project implementation phase.

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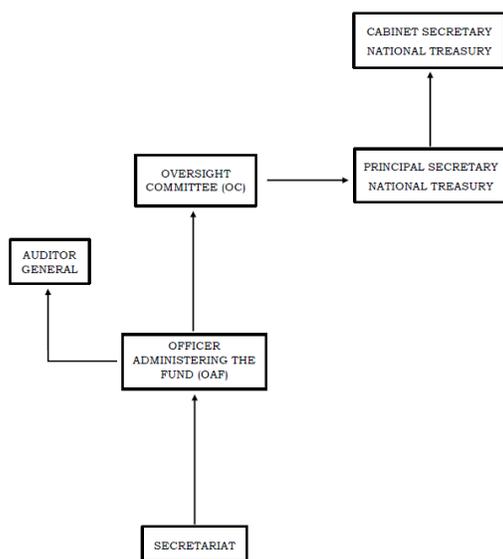


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The PPP Unit (PPU): Currently the PPU is staffed with a Director and support staff. The proposed organization structure, including an initial scoping of job descriptions and candidates' profiles (taking into account the potential for overlap in the various fundamental roles to be played by the PPU) has been drafted for consideration by the GoK and is included in **Figure 4 below**. The key role of the PPU will be coordination of Policy implementation across the participating Ministries and Departments of Government. The PPU will also manage donor relations in respect of the Policy, serve as the Secretariat to the PPS and provide a range of advisory and oversight functions that will be detailed more comprehensively in the detailed organigram currently being prepared by the PPU. In light of the start-up status of the Policy, it is to be expected that these roles and responsibilities will be subject to some fluidity and evolve over time in response to operational effectiveness and efficiency considerations and other lessons learned.

PPP Nodes/Contracting Authority: The PPP Nodes are satellite PPP units present in contracting authorities with a pipeline of projects which will be functionally reporting to the PPS and administratively reporting to the Contracting Authorities. Their function is to support the development and ensure procurement and contract management of PPPs within the national policy guidelines and implementation of the draft PPP bill, soon to be approved.

MoF- Debt Management Office: The Debt Management Division will ensure fiscal sustainability for PPP projects, considering both direct and contingent liabilities on government’s finances including guarantees, arising from each PPP project. Specifically, the DMD will be responsible for: (a) Fiscal impact: assessing and managing the long-term fiscal risks and impact of the PPP project (direct or contingent, explicit or implicit) and determining whether it is acceptable, given other priority national needs; and (b) Government support: confirming the appropriateness of the project for sovereign guarantees (debt or specific-event) or other kinds of government support.

MoF- Budget Division: The Budget Division shall establish processes to incorporate PPP project development into the annual budgeting exercise, and fund direct as well as contingent (unanticipated) calls on the budget. The Division shall therefore ensure that any payments to be made by Ministries and Agencies under the PPP contract are consistent with the national budget.

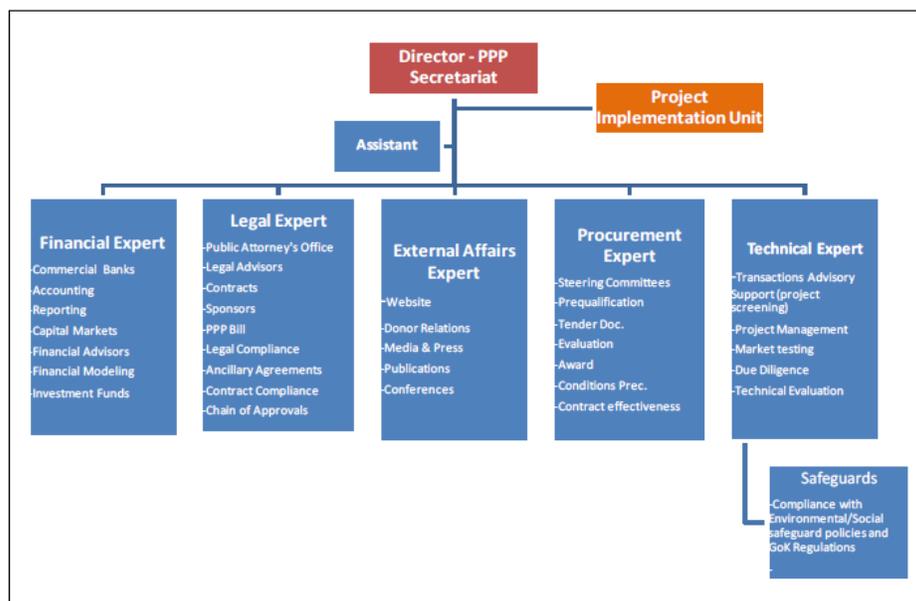
Cabinet shall be the approving authority for PPPs subject to the provisions of the Approval Schedule to this Policy and detailed regulations to be promulgated.

Parliament shall be the final approving authority for PPP projects where PPP Projects require the approval of Parliament subject to the provisions of the Schedule to this Policy and detailed regulations to be promulgated. This is to ensure the protection of public interest.

Attorney-General’s Department with the assistance and advice of PPS Legal Expert shall ensure the conformity of all project agreements with Kenyan law.

Regulatory Authorities shall ensure that the PPP contract, insofar as it will have an impact on customer tariffs is consistent with and furthers good regulatory principles.

Figure 4: PPPU Organization Chart



2.9 Alternative Considerations

2.9.1 No Project Scenario

Project Beneficiaries and Stakeholders

PPPs involve a range of stakeholders from public and private sectors, as well as the wider citizenship. More specifically:

- The Public Sector, covering central agencies, line ministries and at the sub-national level.
- The public sector will have contractual and fiduciary obligations to fulfill under concession agreements that can extend in excess of 20 years;
- The Private Sector, covering both concessionaires and their sub-contracted companies and financial partners;
- Citizens in five roles: (i) as end-users of PPP service providers; (ii) as taxpayers contributing through the government budget to the financing of the projects; (iii) as providers of labor and other services to the project; and (iv) as investors channeling long-term savings, such as pension funds, to the financing of the projects; (v) as members of communities for whom safeguards issues may arise in regard to specific PPP projects; Civil Society Organizations (CSOs) with different social, community, safeguards and other specific interests related to project development and implementation, which have an “oversight role” in the form of their “third party” role in monitoring and evaluating specific transactions.

The ultimate beneficiaries of the technical assistance component of the IFPPP will be the users (enterprises and the population in general) of the new/improved infrastructure services, provided under an enhanced governance framework. The no-project scenario means that the status-quo is maintained and the above benefits of IFPPP-AF will be unrealised.

3 METHODOLOGY AND CONSULTATION

3.1 Detailed & In-depth Literature Review

Review of the existing baseline information and literature material was undertaken and helped in gaining a further and deeper understanding of the proposed project. A desk review of the Kenyan legal framework and policies was also conducted in order to the relevant legislations and policy documents that should be considered during project implementation. Among the documents that were reviewed in order to familiarise and further understand the project included:

World Bank Related Documents

- *Aide Memoire for the IFPPP-AF*
- *Draft Project Appraisal Document (PAD)*
- *World Bank Safeguards Policies*
- *ESMF for IFPPP-Phase 1*

Kenyan Legislative Documents

- *Constitution of Kenya*
- *Environmental Management and Coordination Act (1999)*
- *Water Act*
- *Energy Act*
- *Land Act*
- *Public Health Act*
- *Wildlife Act*
- *Forest Act*

3.2 Interactive Discussions

The draft final ESMF was consulted upon on the **16th December 2016** and **Annex A** contains the list of persons consulted. The issues raised and concerns expressed including possible mechanisms of addressing these issues and concerns are appended as **Annex B** of this document. The stakeholder consultation was significant to the preparation of this ESMF and formed the basis for the determination of potential project impacts and design of viable mitigation measures.

3.3 Preparation of ESMF

Preparation of the ESMF included the following stages:

- *Collation of baseline data on the environmental conditions of the country in general;*
- *Identification of positive and negative environmental and social impacts of sub projects investments;*
- *Identification of environmental and social mitigation measures;*
- *Preparation of screening procedures to be for sub project proposals;*
- *Formulation of environmental and social monitoring plans.*

4 BASELINE DATA

This section describes the overall baseline condition of Kenya in terms of bio-physical environment, as well as the socio-economic. The baseline data of the country has been considered as a result of the fact that IFPPP-AF will implement investments that will be country wide in scope.

4.1 Location and Size

Kenya (*Figure 5*) is located in the eastern part of the African continent approximately between latitudes 4° 21' N and 4° 28' S and between longitudes 34° and 42° E. Kenya is bordered by Uganda to the west, Ethiopia and South Sudan to the north, Tanzania to the south and Somalia and the Indian Ocean to the east. Kenya covers an area of approx. 587,000 km², of which 11,000 km² consists of water bodies. Kenya's landscape is grouped into geographical zones including; the Savannah Lands covering most of the arid and semi- arid areas, the Coastal Margin, the Rift Valley, the Highlands and the Lake Victoria Basin.

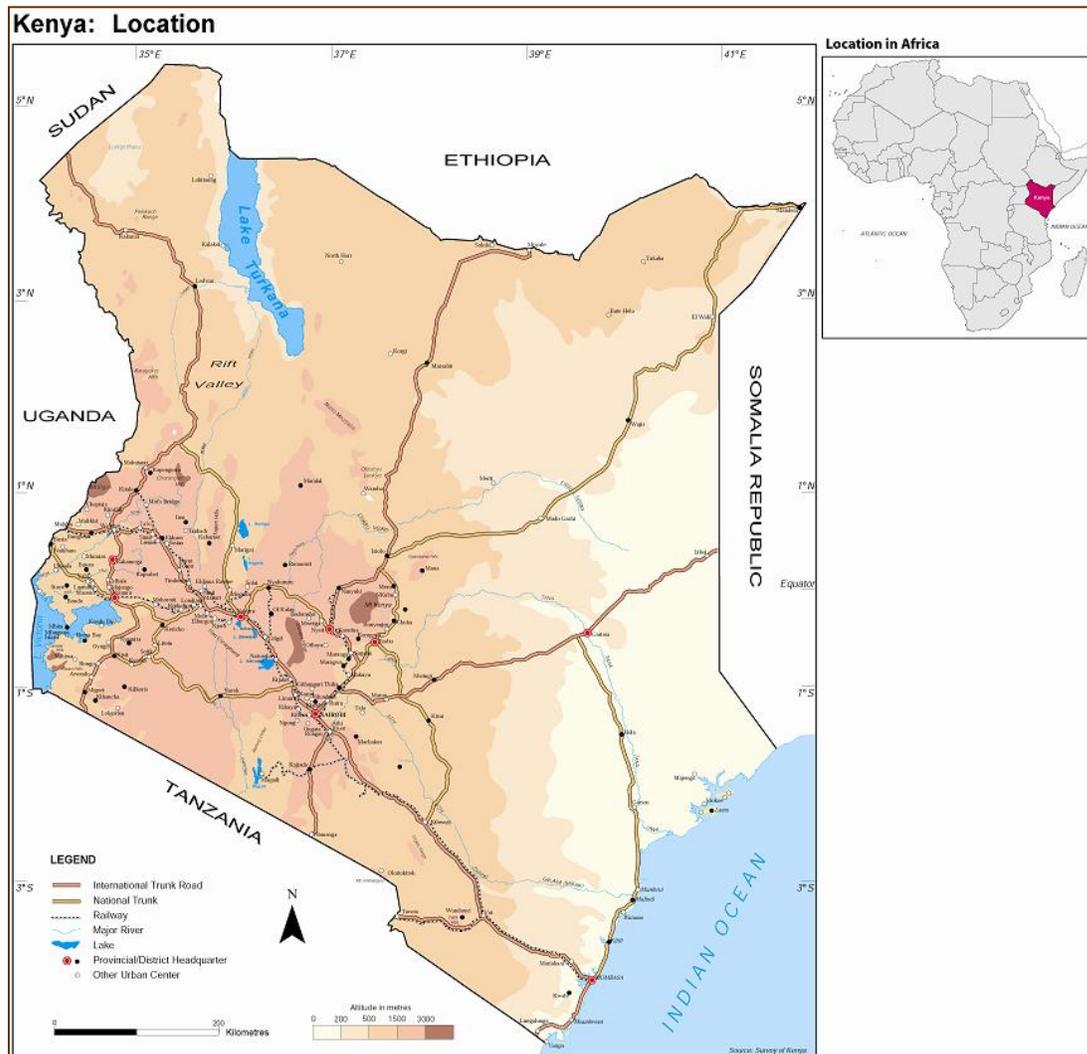


Figure 5: Map of Kenya

Kenya lies along the equator in East Africa. Most of the country consists of high plateau areas and mountain ranges that rise up to 3,000 m and more. The plateau area is dissected by the Eastern Rift Valley, which is 40-50 km wide and up to 1,000 m lower than the flanking plateaux. The narrow coastal strip along the Indian Ocean is backed by a zone of thorn bush-land. Some areas in central Kenya, at the flanks of the Rift Valley, and in western Kenya, close to Lake Victoria, are very densely populated.

The land stretches from the sea level (Indian Ocean) in the east through a diversity of landforms. From the coast, the altitude changes gradually through the coastal belt and plains (below 152 metres above sea level), the dry intermediate low belt to what is known as the Kenya Highlands (over 900 metres above sea level). The country is split by the Great Rift Valley into the Western part, which slopes into Lake Victoria from the Mau ranges and Mount Elgon (4,300m) and the Eastern part dominated by Mt. Kenya and the Aberdare Ranges which rise to 5,200m and 4,000m respectively.

4.2 Physical Environment

4.2.1 Climate

Kenya enjoys a tropical climate. It is hot and humid at the coast, temperate inland and very dry in the north and northeast parts of the country. The average annual temperature for the coastal town of Mombasa (altitude 17 metres) is 30.30 Celsius maximum and 22.40 Celsius minimum, the capital city, Nairobi (altitude 1,661 metres) 25.20 Celsius maximum and 13.60 Celsius minimum, Eldoret (altitude 3,085) 23.60 Celsius maximum and 9.50 Celsius minimum, Lodwar (altitude) 506 metres) and the drier north plain lands 34.80 Celsius maximum and 23.70 Celsius minimum.

The long rains occur from April to June and short rains from October to December. The rainfall is sometimes heavy and when it does come it often falls in the afternoons and evenings. The hottest period is from February to March and coldest in July to August.

4.3 Topography and Drainage

The Republic of Kenya has an area of approximately 582,646 sq. km. Only 20% of the land area can be classified as medium to high potential agricultural land and the rest of the land is mainly arid or semiarid. This water surface comprise of a number of small lakes with fluctuating limits as well as part of Lake Victoria and most of Lake Turkana. Only 3,831 km² of Lake Victoria is in Kenya while most of Lake Turkana lies in Kenya. Kenya's coastal line extends approximately 402 km along the Indian Ocean.

Topographically, the country may be divided into 4 distinct geographical and ecological regions or zones with different patterns of land use, namely; the coastal plain, the arid low plateau, the highlands, and the Lake Victoria basin. The rainfall patterns are extremely varied but generally follow those regions, with the Lake Victoria basin receiving the heaviest and most consistent rainfall.

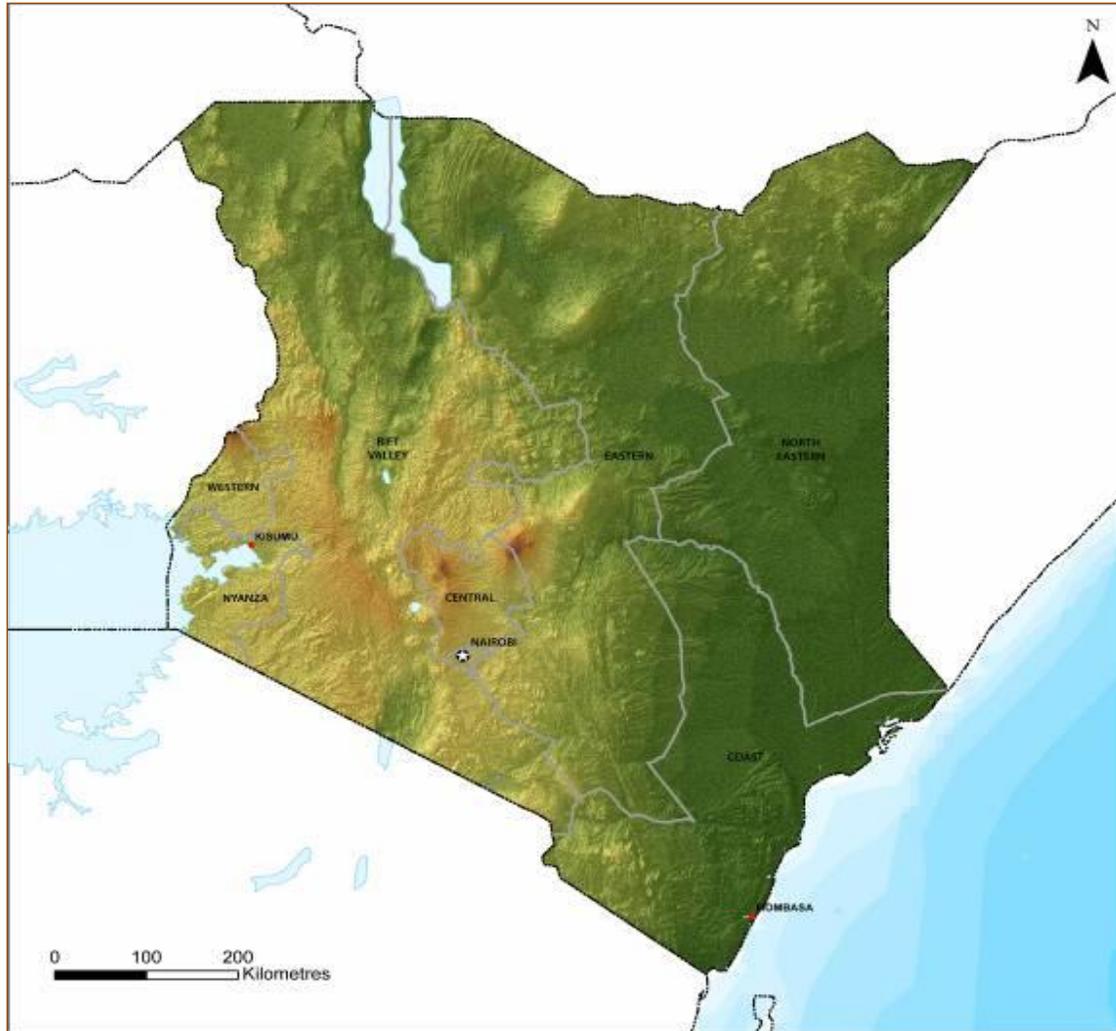


Figure 6. Relief Map of Kenya

Kenya's relief can be roughly divided into six major regions: the lowlands of the coastal belt and plains; the Buruma-Wajir lowland belt; the Foreland Plateau; the Highlands (East and West); the Nyanza Low Plateau (part of the Lake Victoria Basin); and the Northern Plainlands (Survey of Kenya 2003).

The drainage is determined primarily by the Rift Valley, which roughly bisects the highland zone from North to South. Within the Rift Valley, drainage is into a chain of lakes, which have no surface outlet. West of the Rift Valley rivers drain into Lake Victoria and to the East, rivers follow a southeasterly course into the Indian Ocean.

In some areas, topography and rainfall - runoff regime have created many semi-closed, poorly drained or overflow areas that retain a substantial amounts of runoff which originate on the upslope areas. On groundwater, the country is divided into three broad areas. These are volcanic rocks, pre-cambrian metamorphic basement rocks and pre-cambrian intrusive rocks and sedimentary rocks.

The volcanic rocks cover 26% of the country, more commonly in the western half of Kenya. Groundwater sources occur in old land surfaces, which are weathered zones between successive lava flows that signify periods of quiescence. Fractures, faults,

fissures and joints are also useful. Water is mainly of bicarbonate type with low total dissolved solids. Local pockets of high fluoride are believed to be of volcanic and fumarolic origin.

The pre-cambrian rocks cover an area which is approximately 17% of the country and are widely distributed in the central, western and north western parts of Kenya. Water in these areas occurs in deep horizons of faults, and fractures. Aquifers are generally unconfined and yields and water levels vary within rocks. The sedimentary rocks cover 55% of the country, predominantly in the eastern parts. These areas have loose and permeable sediments. The aquifers are shallow and unconfined and most of them are generally saline. The salinity results from accumulation of solute evaporite minerals within the sediments.

4.3.1 Hydrology

Kenya's four largest inland water bodies (Lake Victoria, Lake Turkana, Lake Naivasha, and Lake Baringo) account for about 1.9 per cent of the land area. The majority of Kenya's lakes, including both saline and freshwater, and closed and open basin systems, are located within the Great East African Rift Valley. Kenya's major permanent rivers originate in the highlands. The Nzoia, Yala, Sondu Miriu, and Migori Rivers drain into Lake Victoria. The Ewaso Ngiro River is found in the northeastern part of the country and the Tana and Athi rivers flow in the southeastern part. The rivers draining into Lake Victoria (covering over 8 per cent of Kenya's land area) provide about 65 per cent of Kenya's internal renewable surface water supply. The Athi River drainage area (11 per cent of Kenya's land area) provides 7 per cent, the lowest share among Kenya's major drainage areas (Survey of Kenya 2008 and MOWI.).

4.3.2 Soils and Geology

The geology of Kenya is characterized by Archean granite/greenstone terrain in western Kenya along Lake Victoria, the Neoproterozoic 'Pan-African' Mozambique Belt, which underlies the central part of the country and Mesozoic to Recent sediments underlying the eastern coastal areas. The Eastern Rift Valley crosses Kenya from north to south and the volcanics associated with rift formation largely obliterate the generally north-south striking Neoproterozoic Mozambique Belt (Schlueter 1997). Rift Valley volcanogenic sediments and lacustrine and alluvial sediments cover large parts of the Eastern Rift.

About 59 per cent of Kenya's soils have moderate to high fertility, meaning they are theoretically suitable for growing crops. Fertility levels, however, depend on the amount of rainfall. Given the distribution and variability of rainfall in Kenya, only about 17 per cent of the land area has medium to high potential for crops, while the remaining 83 per cent is classified as arid and semi-arid and so of low crop growing potential (Survey of Kenya 2003). Drylands, however, provide essential habitat for about half the country's livestock and 70 per cent of Kenya's wildlife (UNCCD 2002).

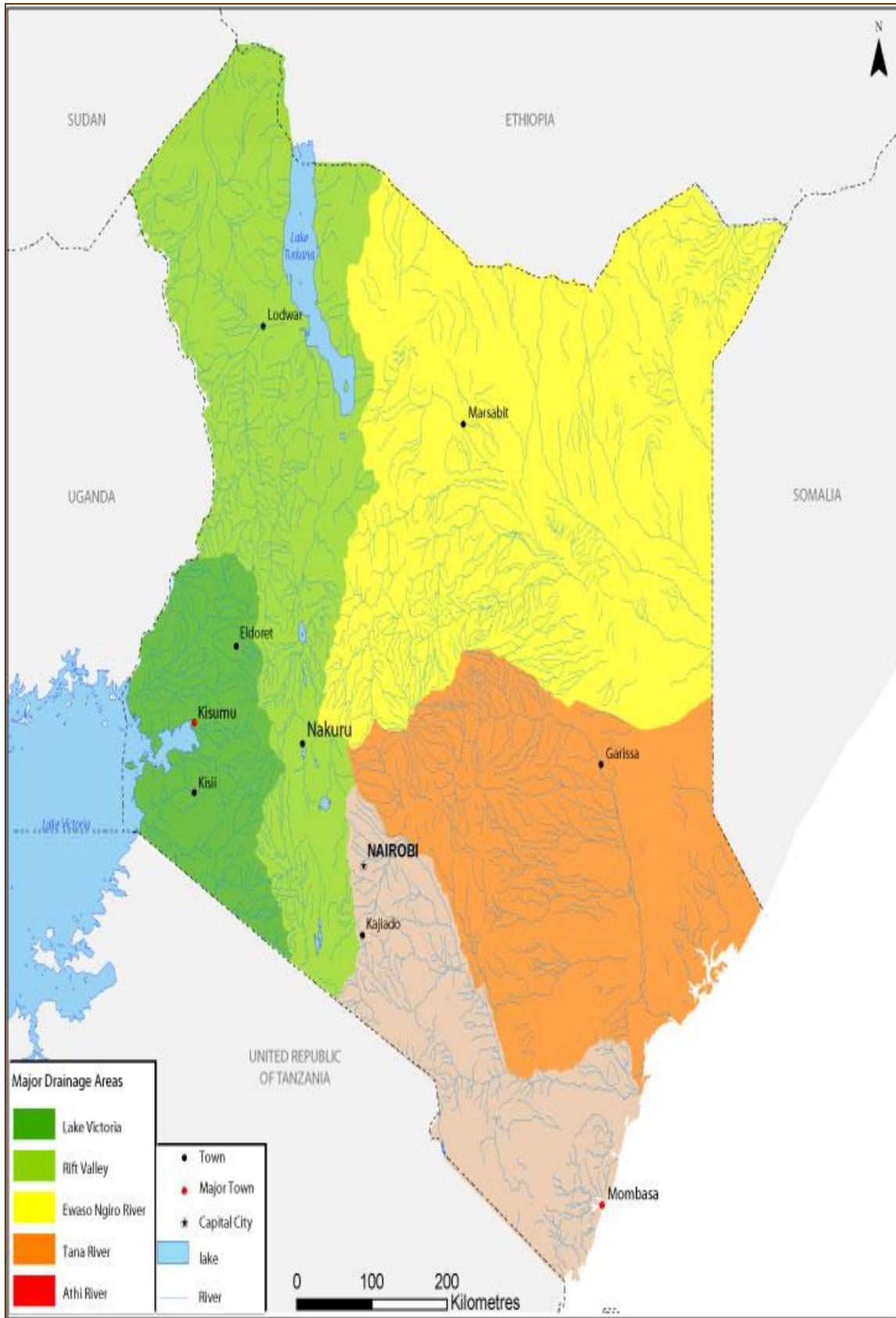


Figure 7: Drainage systems; Source: [WRI et al. 2007](#).

4.4 Land Use

Approximately seventy five per cent (75%) of the country's population lives within the medium to high potential (20% of land area) and the rest in the vast Arid and Semi-Arid Lands (ASALs). One consequence of this is that size and distribution of land varies quite widely as does population density which ranges from as low as 2 persons per sq. km. in the ASALs to a high of over 2000 in high potential areas.

4.5 Biological Environment-Ecosystems

Kenya's land is covered by different types of vegetation according to the climate, topography, and other bio-physical factors. The major categories are grassland, forests, semi-deserts, and mountains. Human impacts on the land continue to alter the distribution, amount, and health of these ecosystems (Survey of Kenya 2003).

4.5.1 Grasslands

Grasslands dominate Kenya's land cover and include what is known as 'savanna' vegetation. Permanent meadows and pastures occupy about 21.3 million ha, in Kenya, which represent 2.4 per cent of Africa's total meadows and pastures (FAO 2008).

4.5.2 Forests

Forests cover 2.9 per cent of Kenya's land area (KFMP 1995). The main forest types are moist highland forest, dry forest, tropical rain forest, coastal forest, and riverine and mangrove forests (Survey of Kenya 2003). Although they are not extensive land cover, Kenya's forests provide significant goods and services, including numerous non-timber forest products that provide local people with food, fibres, medicines, and shelter. The closed canopy forests are habitat for a disproportionately large percentage of the country's wildlife and other biodiversity. It is estimated that they harbor 40 per cent of large mammals, 30 per cent of birds and 35 per cent of the nation's butterflies. About half of Kenya's threatened mammals and birds are found in its forests (Survey of Kenya 2003).

4.5.3 Arid and semi-arid lands (ASALS)

Over 80 per cent of Kenya is arid or semi-arid lands (ASAL). These lands are home to over 10 million people. The ASAL has over 70 per cent of the livestock population and 90 per cent of the wild game, which attract tourism to the area. The ASAL also contains much of Kenya's commercial mineral wealth (WRI et al. 2007 and MSDNKAL 2008).

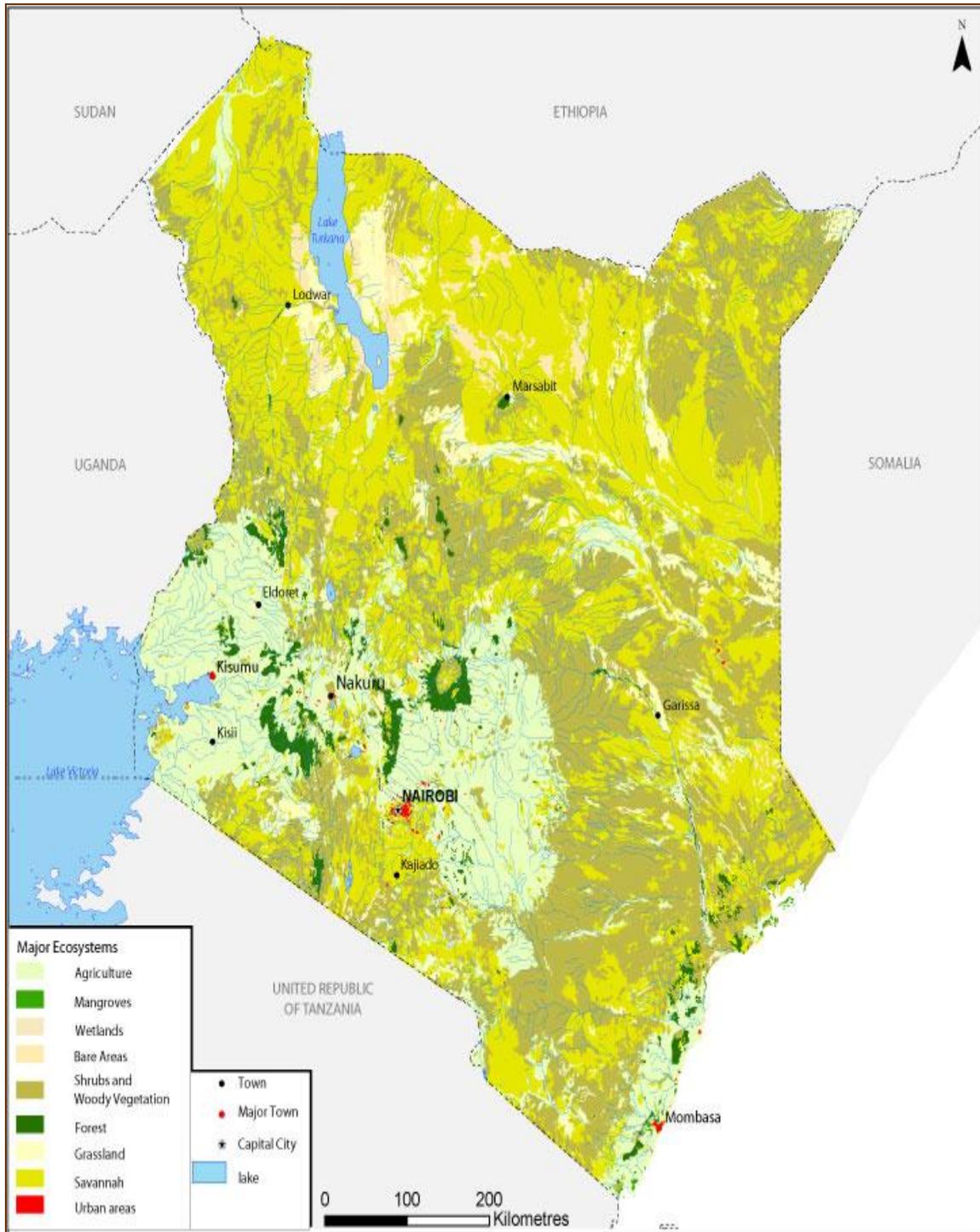


Figure 8: Major ecosystems in Kenya

4.5.4 Mountain vegetation

Kenya's five major mountainous regions (Mount Kenya, Mount Elgon, Aberdare Range, Mau Escarpment, and Cherangani Hills) are surrounded by foothills and high-elevation plateaus. Mountainous regions harbor unique types of vegetation due to the micro-

climates that occur on their slopes. Different altitudes, aspects, and moisture availability create a large variety of ecosystems over relatively small areas.

4.5.5 Freshwaters and wetlands

Kenya's wetlands occur in both fresh and salt waters. They include coral reefs, marine inshore waters, mangroves, deltas, creeks, lake shores, rivers, marshes, ponds, impoundments, and mountain bogs. They are a source of water, provide numerous ecosystem services, and have a high diversity of characteristic biota or living organisms (Ramsar Convention 2001).

Kenya's wetlands cover about 14 000 km² (2-3 per cent of the country's surface area) and are found along the major rivers. In addition, many seasonal and temporary wetlands occur all over the country, including rock pools and springs in the southern part of Nairobi, west of Ngong Hills, and at Limuru. Wetlands have also been created by damming water for hydroelectricity and water supplies, and some wetlands have been built to treat wastewater (Macharia 2004).

Wetlands are a source of social-cultural and economic potential providing people with food, medicinal products, firewood, and materials for building and handicrafts. Rapid population growth, agricultural operations, and encroachment of development pose a serious threat to wetlands. Expanding industries and urban centers discharge their waste water into them and the polluted waters are unhealthy for human and livestock use, destroy aquatic life, and restrict recreation opportunities (Ramsar Convention 2001).

4.5.6 Marine and coastal areas

Kenya's marine and coastal environments include the Indian Ocean's territorial waters and the immediate areas that border the ocean. The Kenyan coast stretches 550 kilometers from the Somalian border in the north in a south-westerly direction to the border with Tanzania. The fringing coral reef (comprised of about 140 species of hard and soft corals) runs between 0.5.km and 2km off-shore with occasional gaps at the mouths of rivers and isolated areas facing creeks. Beaches, cliffs, or mangrove forests dominate the shoreline in most areas. The coral-reef system, mangrove swamps, and hinterland provide unique natural landscapes and a wide range of biodiversity resources of special conservation concern.

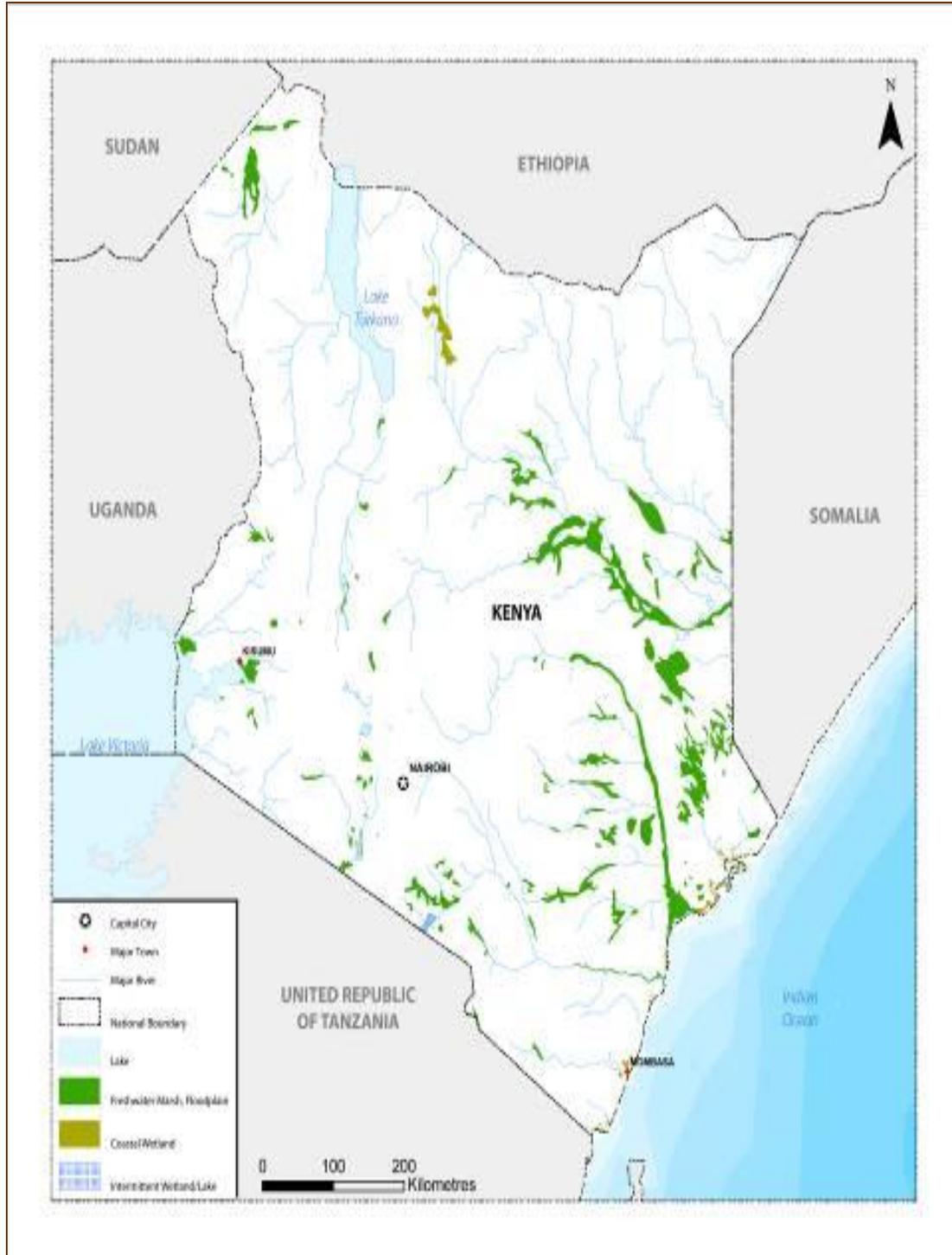


Figure 9: Kenya's Largest Wetlands

They include the shallow lakes Nakuru, Naivasha, Magadi, Kanyaboli, Jipe, Chala, Elmentaita, Baringo, Ol'Bolessat, Amboseli and Kamnarok; the edges of Lake Victoria and Lorian, Saiwa, Yala, Shompole swamps; Lotigipi swamp (Lotigipi) and Kano plains; Kisii valley bottoms and Tana Delta; and coastal wetlands (Source: WWF 2005).

3.5.7 Wildlife

Kenya's game parks and spectacular wildlife attract nearly two million tourists each year (UN-Water 2006) and generate important domestic revenues. Wildlife conservation is

thus a high priority. Formed in 1946, Nairobi National Park, just outside the city, was the country's first protected area. By 2008, about 75 237.9 km² (WCPA 2007) of the nation's land area had been set aside as national parks and game reserves.

Wildlife is also protected by bans on game hunting, killing animals even when they attack, and the trade in ivory and skins. Nevertheless, poaching is a significant threat to many species including leopards, cheetahs, lions, elephants, and rhinoceroses. Efforts are being made to restore populations of the endangered African elephant and black rhino, and an aggressive campaign is being waged against poachers. Moreover, increased pressure on marine resources has led the Kenyan government to establish a system of protected areas managed by the Kenya Wildlife Service (KWS) to conserve and manage the most important ecosystems along the coast. In total, Kenya has five Marine Protected Areas (MPA's).

Examples of endangered species include the Sokoke scops owl (*Otus ireneae*); Taita blue-banded papilio (*Papilio desmondi teita*); the highly endangered Tana River mangabey (*Cercocebus galeritus*) and the Tana River red colobus (*Piliocolobus rufomitratu*); the green sea turtle (*Chelonia mydas*) and the critically endangered hawksbill turtle (*Eretmochelys imbricata*).

In addition to threats to species biodiversity, a number of types of ecosystems are disappearing or are in dangerous decline due to human activities. These include the slopes of Mount Kenya and coastal forests as well as the Horn of Africa Acacia Savannas, a major centre of endemism for dry land plants.

Physical Regions of Kenya

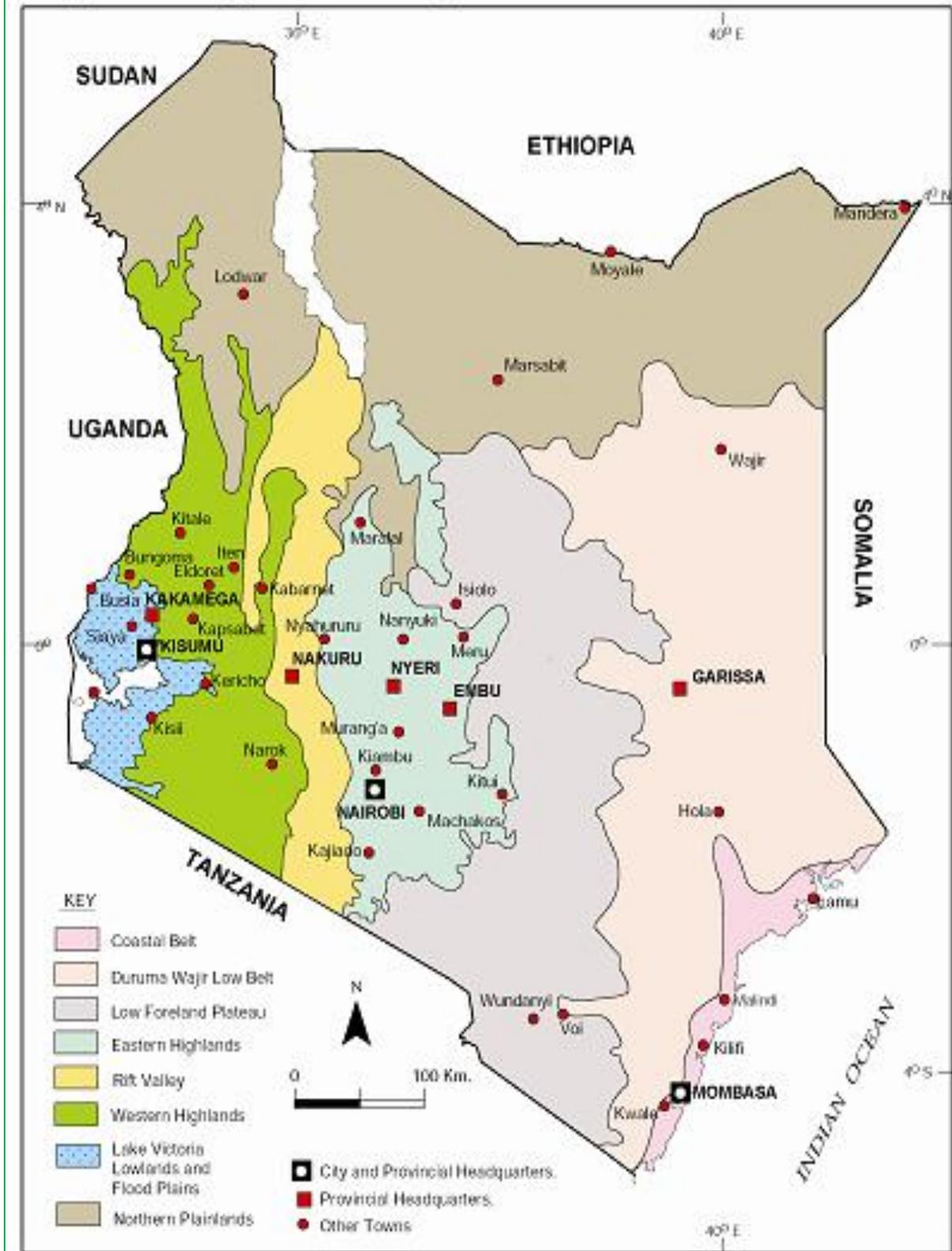


Figure 11: Physical Regions of Kenya

4.6 Socio-Economic Background

4.6.1 Population

Kenya's population was 10.9 million in 1969, and by 1999 it had almost tripled to 28.7 million (Central Bureau of Statistics, 1994, 2001a). Results of previous censuses indicate that the annual population growth rate was 2.9 percent per year during the 1989-1999 period, down from 3.4 percent reported for the 1979-1989 inter-censal period. Currently, growth is estimated to be about 2.8 percent. The decline in population growth is a realization of the efforts called for by the National Population Policy for Sustainable Development (National Council for Population and Development, 2000) and is a result of the decline in fertility rates over recent decades.

Kenya's population increases by an estimated one million a year. The government revised population based on the 2009 census is 39.8 million, an increase of over 35 percent in the past decade. The population report shows the distribution of the population across the country, with Rift Valley Province being the most populous with 10.1 million people. Nairobi, the capital, has 3.1 million people, according to the report released by the Ministry of Planning and National Development. Demographic trends show that more people are moving to urban areas and the Bank estimates that half of Kenya's population will live in cities by 2050. Better macro-economic conditions in the past decade helped improve the welfare of Kenyans, but the poor remain vulnerability to drought and other crises induced by climate change.

Recent analysis of the data from the 2005 to 2006 Kenya Integrated Household Budget Survey (KIHBS) indicates that national absolute poverty declined from 52.3 percent in 1997 to 46.1 percent in 2005 to 2006. While this decline in poverty compares well with other Sub Saharan African countries, it can still be considered high in comparison to neighbouring countries such as Tanzania (about 36 percent) and Uganda (about 31 percent). In rural areas, overall poverty declined from 52.9 percent to 49.1 percent, while in urban areas, poverty declined from 49.2 percent in 1997 to 38.8 percent over the same period.

The 2008-2009 Demographic Health Survey (DHS) show that fertility levels have declined from 8.1 births per woman in the late 1970s to the current level of 4.6 births per woman. The decline in fertility levels is expected to be manifested in the age distribution of the country's population. Mortality rates also have risen since the 1980s, presumably due to increased deaths from the HIV/AIDS epidemic, deterioration of health services, and widespread poverty (National Council for Population and Development, 2000). The crude birth rate increased from 50 births per 1,000 population in 1969 to 54 per 1,000 in 1979 but thereafter declined to 48 and 41 per 1,000 in 1989 and 1999, respectively. The crude death rate increased from 11 per 1,000 population in 1979-1989 to 12 per 1,000 for the 1989-1999 period. The infant mortality rate, which had steadily decreased from 119 deaths per 1,000 live births in 1969 to 88 deaths per 1,000 live births in 1979, and then to 66 deaths per 1,000 live births in 1989, increased briefly in 1999 to 77 per 1,000 but then resumed its decline in 2009.

The Kenyan poverty profile also reveals strong regional disparities in the distribution of poverty. According to the 2005 to 2006 survey, the lowest incidence of rural poverty was in Central province (30.3 percent), followed by Nyanza (47.9 percent), Rift Valley (49.7 percent), Eastern (51.1 percent), Western (53.2 percent), Coast (69.7 percent), and North Eastern province (74.0 percent). Inequality in Kenya remains high. The distribution of income, measured by the Gini coefficient (a measure of inequality of income distribution—the higher the percentage the higher the level of inequality) was estimated at 39 percent in rural areas and 49 percent for urban areas (pre-crisis). Income disparities in the rural areas have gone down since 1997, while the disparities in the urban areas have increased slightly. The Commission on Revenue Allocation is using the development and poverty data to develop a model for more equitable distribution of public resources.

There has been additional progress with respect to other dimensions of social development over the past years. For example, net primary education enrolment was only 80 percent in 2003, but has since increased to about 90 percent in 2008 (with an equal enrolment ratio between boys and girls). In 2004, only about 60 percent of primary students completed their education compared with about 80 percent in 2008. The transition from primary to secondary and later to tertiary and university education has also improved in recent years due to increased public and private investment in the education sector.

4.6.2 Economic Growth & Setting

The East African nation of Kenya has a population estimated at 46.1 million, which increases by an estimated one million a year. With support of the World Bank Group (WBG), International Monetary Fund (IMF) and other development partners, Kenya has made significant structural and economic reforms that have contributed to sustained economic growth in the past decade. Development challenges include poverty, inequality, and vulnerability of the economy to internal and external shocks.

Economy

The World Bank's most recent Kenya Economic Update (KEU) March 2016 projected a 5.9% growth in 2016, rising to 6% in 2017. The report attributed the positive outlook to low oil prices, good agriculture performance, supportive monetary policy, and ongoing infrastructure investments.

According to the latest Kenya National Bureau of Statistics (KNBS) quarterly report, Kenya's economy expanded by 6.2% in the second quarter compared to 5.9% in the same period in 2015. This growth was mainly supported by agriculture, forestry and fishing; transportation and storage; real estate; and wholesale and retail trade. Manufacturing, construction, financial and insurance sectors slowed down during this quarter while accommodation and food services, mining and quarrying; electricity and water supply; and information and communication sectors recorded improvements.

In August of 2016, the President of Kenya signed into law, an amendment to the 2015 Banking Bill which capped lending interest rates. The law caps the maximum lending interest rate at 4% above the base rate set by the Central Bank of Kenya. Interest rate spreads in Kenya in the past have been considered to be generally higher than that of its peers. The

effects of the rate regulation remains to be seen and could vary from the intended affordable loans to the low income households and small businesses, to reduced profitability for the banking sector and increased charges on commercial bank products.

Inflation in 2016 has remained within the government target rate, largely driven by food inflation. Kenya continues to benefit from low fuel prices and good rains, a stable macroeconomic environment, and good monetary policy action, which has ensured inflation remained contained in the first half of 2016.

Social Developments

Kenya has met a few of the Millennium Development Goals (MDGs) targets, including reduced child mortality, near universal primary school enrolment and narrower gender gaps in education. Interventions and increased spending on health and education are paying dividends. Devolved health care and free maternal health care at all public health facilities will improve health care outcomes and develop a more equitable health care system.

Development Challenges

Kenya has the potential to be one of Africa's great success stories from its growing youthful population, a dynamic private sector, a new constitution, and its pivotal role in East Africa. Addressing challenges of poverty, inequality, governance, low investment and low firm productivity to achieve rapid, sustained growth rates that will transform lives of ordinary citizens, will be a major goal for Kenya.

5 DESCRIPTION OF THE ADMINISTRATIVE, POLICY AND REGULATORY FRAMEWORK

This chapter outlines and highlights the relevant institutional and legal as well as policy framework in Kenya which has a direct bearing on the IFPPP-AF. The chapter further highlights the World Bank Safeguard Operational Policies applicable to the project including a comparative analysis and gaps existing between the Bank's policies and host country regulations and suggestions on bridging the gaps. Finally, a section on international laws and conventions that bear relevance to the implementation of this project have also been highlighted in this chapter.

5.1 The Legal, Regulatory and Policy Framework

5.1.1 Constitutional provisions

Kenya now has a new Supreme law in form of the New Constitution which was promulgated on the 27th of August 2010 and which takes supremacy over all aspects of life and activity in the New Republic. With regard to environment, Section 42 of the Constitution states as follows:-

Every person has the right to a clean and healthy environment which includes the right -

- a) *To have the environment protected for the benefit of present and future generations through legislative and other measures, particularly those contemplated in Article 69; and*
- b) *To have obligations relating to the environment fulfilled under Article 70*

In Sections 69 and 70, the Constitution has inter alia identified National Obligations in respect of the environment and Enforcement of Environmental Rights respectively as follows:-

Section 69 (1): The State shall—

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

Section 69 (2) States that;-Every person has a duty to cooperate with State organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources.

Section 70 provides for enforcement of environmental rights thus:

(1) If a person alleges that a right to a clean and healthy environment recognized and protected under Article 42 has been, is being or is likely to be, denied, violated, infringed or threatened, the person may apply to a court for redress in addition to any other legal remedies that are available in respect to the same matter.

(2) On application under clause (1), the court may make any order, or give any directions, it considers appropriate—

- a) To prevent, stop or discontinue any act or omission that is harmful to the environment;*
- b) To compel any public officer to take measures to prevent or discontinue any act or omission that is harmful to the environment; or*
- c) To provide compensation for any victim of a violation of the right to a clean and healthy environment.*

(3) For the purposes of this Article, an applicant does not have to demonstrate that any person has incurred loss or suffered injury.

Essentially, the new Constitution has embraced and provided further anchorage to the spirit and letter of EMCA 1999 and EMCA (amendment) Act, 2015 whose requirements for environmental protection and management have largely informed Sections 69 through to 71 of this document. In Section 72 however, the new constitution allows for enactment of laws towards enforcement of any new provisions of the Supreme Law.

5.1.2 Vision 2030

The economic, social and political pillars of Kenya Vision 2030 are anchored on macroeconomic stability; continuity in governance reforms; enhanced equity and wealth creation opportunities for the poor; infrastructure; energy; science, technology and innovation (STI); land reform; human resources development; security as well as public sector reforms. The 2030 Vision aspires for a country firmly interconnected through a network of roads, railways, ports, airports, water and sanitation facilities, and telecommunications.

5.1.3 Environment Management and Coordination Act (No. 8 of 1999), EMCA (amendment) Act 2015, Cap 387.

This is an Act of Parliament providing for the establishment of an appropriate legal and institutional framework for the management of the environment and for matters connected therewith and incidental thereto. This Act is divided into 13 Parts, covering main areas of environmental concern as follows: Preliminary (I); General principles (II); Administration (III); Environmental planning (IV); Protection and Conservation of the Environment (V), Environmental impact assessments (EIA), audits and monitoring (VI); Environmental audit and monitoring (VII); Environmental quality standards (VIII); Environmental Restoration orders, Environmental Easements (IX); Inspection, analysis and records (IX); Inspection Analysis and Records (X); International Treaties,

Conventions and Agreements (XI) National Environment Tribunal (XII); Environmental Offences (XIII). The Act provides for the setting up of the various ESIA Regulations and Guidelines which are discussed below:

Environmental (Impact Assessment and Audit) Regulations 2003

The Environmental (Impact Assessment and Audit) Regulations 2003 state in Regulation 3 that “the Regulations should apply to all policies, plans, programmes, projects and activities specified in Part III and V of the Regulations” basically lists the guidelines of undertaking, submission and approval of the ESIA Reports a key requirement outlined in this ESMF.

Environmental Management and Co-ordination (Waste Management) Regulations 2006

These are described in Legal Notice No. 121 of the Kenya Gazette Supplement No. 69 of September 2006. These Regulations apply to all categories of waste as provided in the Regulations. These include:

- *Industrial wastes;*
- *Hazardous and toxic wastes;*
- *Pesticides and toxic substances;*
- *Biomedical wastes;*
- *Radio-active substances.*

The proposed Project will have to abide by these regulations in dealing with waste management especially the provisions of wastes which may be generated during their construction and operation phases of the sub project investments.

Environmental Management and Coordination, (Water Quality) Regulations 2006

These are described in Legal Notice No. 120 of the Kenya Gazette Supplement No. 68 of September 2006. These Regulations apply to drinking water, water used for agricultural purposes, water used for recreational purposes, water used for fisheries and wildlife and water used for any other purposes. This includes the following:

- *Protection of sources of water for domestic use;*
- *Water for industrial use and effluent discharge;*
- *Water for agricultural use.*

These Regulations outline:

- a) *Quality standards for sources of domestic water;*
- b) *Quality monitoring for sources of domestic water;*
- c) *Standards for effluent discharge into the environment;*
- d) *Monitoring guide for discharge into the environment;*
- e) *Standards for effluent discharge into public sewers;*
- f) *Monitoring for discharge of treated effluent into the environment.*

In fulfilling the requirements of the regulations the project proponent will have to undertake monitoring of both domestic water and wastewater and ensure compliance with the acceptable discharge standards.

Environmental Management and Coordination, Conservation of Biological Diversity (BD) Regulations 2006

These regulations are described in Legal Notice No. 160 of the Kenya Gazette Supplement No. 84 of December 2006. These Regulations apply to conservation of biodiversity which includes Conservation of threatened species, Inventory and monitoring of BD and protection of environmentally significant areas, access to genetic resources, benefit sharing and offences and penalties.

Environmental Management and Coordination (Wetlands, Riverbanks, Lake Shores and Sea Shore Management) Regulations 2009

These regulations provide for the protection and management of wetlands, riverbanks, lakeshores and sea shore management and detail guidelines on the same.

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

These regulations prohibit making or causing any loud, unreasonable, unnecessary or unusual noise which annoys, disturbs, injures or endangers the comfort, repose, health or safety of others and the environment. It also prohibits the Contractor from excessive vibrations which annoy, disturb, injure or endanger the comfort, repose, health or safety of others and the environment or excessive vibrations which exceed 0.5 centimetres per second beyond any source property boundary or 30 metres from any moving source. Under the regulation the Contractor will be required to undertake daily monitoring of the noise levels within the Project area during construction period to maintain compliance.

5.1.4 Occupational Health and Safety Act, 2007

This is an Act of Parliament to provide for the safety, health and welfare of workers and all persons lawfully present at workplaces, to provide for the establishment of the National Council for Occupational Safety and Health and for connected purposes. The Act has the following functions among others:

- *Secures safety and health for people legally in all workplaces by minimization of exposure of workers to hazards (gases, fumes & vapours, energies, dangerous machinery/equipment, temperatures, and biological agents) at their workplaces.*
- *Prevents employment of children in workplaces where their safety and health is at risk.*
- *Encourages entrepreneurs to set achievable safety targets for their enterprises.*
- *Promotes reporting of work-place accidents, dangerous occurrences and ill health with a view to finding out their causes and preventing of similar occurrences in future.*
- *Promotes creation of a safety culture at workplaces through education and training in occupational safety and health.*

Failure to comply with the OSHA, 2007 attracts penalties of up to KES 300,000 or 3 months jail term or both or penalties of KES 1,000,000 or 12 months jail term or both for cases where death occurs and is in consequence of the employer. The Occupational Safety and Health Act (OSHA) 2007 repealed the Factories and Other Places of Work Act. Anything done under the provisions of the Factories and Other Places of Work Act including subsidiary legislation issued before the commencement of the OSHA 2007 shall be deemed to have been done under the provisions of this Act.

The Factories and Other Places of Work Act had over the years passed several subsidiary rules and regulations for effective implementation of the Act. All shall, as long as it is not inconsistent with OSHA 2007 remain in force until repealed or revoked by subsidiary legislation under the provisions of OSHA 2007 and shall for all purposes be deemed to have been made under this Act.

These regulations include:

- *The Factories (Cellulose Solutions) Rules 1957;*
- *The Factories (Wood Working Machinery) Rules 1959;*
- *The Factories (Dock) Rules 1962;*
- *The Factories (Eye Protection) Rules 1978;*
- *The Factories (Electric Power) (Special) Rules 1978;*
- *The Factories (Building Operations and Works of Engineering Construction) Rules 1984;*
- *The Factories and Other Places of Work (Health & Safety Committees) Rules 2004;*
- *The Factories and Other Places of Work (Medical Examination) Rules 2005;*
- *The Factories and Other Places of Work (Noise Prevention and Control) Rules 2005;*
- *The Factories and Other Places of Work (Fire Risk Reduction) Rules 2007;*
- *The Factories and Other Places of Work (Hazardous Substances) Rules 2007.*

The scope of OSHA 2007 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 (DOHS) for practical guidance of the various provisions of the Act.

Other parameters within the Act relevant to the project include:

1. *Duties of employers, owners or occupiers of workplace;*
2. *Establishment of safety and health committees;*
3. *Annual safety and health audit of workplaces;*
4. *Safety and Health obligations for persons who may come to premises for work and are not employees of that particular workplace;*
5. *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 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;*
6. *The duties of manufactures, 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 environment;*
7. *Duties of self-employed persons;*
8. *Duties of employed persons;*
9. *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);*
10. *The administration of the Act is the responsibility of a Director and other appointed and gazetted officials (Occupational Health and Safety Officers);*
11. *The registration of all workplaces by the Director Directorate of Occupational Health and Safety (DOHS) forming the basis of his work statistics;*
12. *Machinery safety to include:*
 - *Safe use of machinery, plant and equipment;*

- *Prime makers and transmission machines;*
- *The maintenance, construction of fencing safeguards;*
- *The statutory requirements of various machines, plants and equipment (hoists and lifts, chains and ropes, cranes, steam receivers and containers, air receivers, cylinders for compressed liquefied and dissolved gases and refrigeration plants).*

13. Chemical safety including:

- (i) *Handling, transportation and disposal of chemicals and other hazardous substances;*
- (ii) *Importance of Materials Safety Data Sheets (MSDS);*
- (iii) *Labelling and marking of chemical substances;*
- (iv) *Classification of hazardous chemicals and substances;*
- (v) *Establishment and adoption of exposure limits on hazardous substances in a workplace;*
- (vi) *Control of air pollution, noise and vibrations;*
- (vii) *Redeployment on medical advice.*

5.1.5 The Water Act 2016

Water in Kenya is owned by the Government, subject to any right of the user, legally acquired. The control and right to use water is exercised by the Minister administering the Act, and such use can only be acquired under the provisions of the Act. The Minister is also vested with the duty to promote investigations, conserve and properly use water throughout Kenya. Water permits may be acquired for a range of purposes, including the provision and employment of water for the development of power and other uses. The following are the regulations developed under Water Act 2002 relevant to the Project. These regulations will relate to abstraction and use of water from rivers.

The Water Resources Management Rules (2007)

These Rules are described in Legal Notice Number 171 of the Kenya Gazette Supplementary Number 52 of 2007. They apply to all water resources and water bodies in Kenya, including all lakes, water courses, streams and rivers, whether perennial or seasonal, aquifers, and shall include coastal channels leading to territorial waters.

The Water Resources Management Rules empower Water Resources Management Authority (WRMA) to impose management controls on land use falling under riparian land. It also enables any person with a complaint related to any matter covered by these rules to the appropriate office in WRMA as per the Tenth Schedule which provides a format for report on complaints. WRMA is to reply to the complainant with “copies to all other relevant parties within 21 days of receiving the complaint, starting with what action is being taken, the position of the Authority on the matter and any recommendation to the complainant.”

The rules also elaborate on the following:

- *Mechanisms for appeal;*
- *Public notification;*
- *Public consultation;*
- *Orders on compliance;*
- *Protection of the integrity of the water resources monitoring network;*
- *Water Resource User Associations;*

- *Water Resource Database;*
- *Approval of activities listed in the fifth schedule of Water Act 2002;*
- *Authorization and permitting;*
- *Wetlands;*
- *Allocation of water for irrigation;*
- *Prior right to water for storage;*
- *Dams;*
- *Groundwater development and its regulation;*
- *Control of water pollution and effluent discharge;*
- *Water works;*
- *Water use charges on permitted water use;*
- *Conservation of riparian land and catchment areas;*
- *Catchment management strategies;*
- *Protected areas and ground water conservation areas;*
- *Establishment and protection of reserve water;*
- *Miscellaneous provisions which include provisions on:*
 - (i) *Qualifications to practice as a water resource professional;*
 - (ii) *Qualifications for a registered contractor;*
 - (iii) *Recognized water quality laboratories;*
 - (iv) *Emergency orders;*
 - (v) *Penalties for offences;*
 - (vi) *Revocation of rules under Cap 372.*

Part IX: Conservation of Riparian and Catchment Areas of the Rules, Section 116(5) states “Unless otherwise determined by a water resources inspector, the riparian land adjacent to the ocean is defined as a minimum of two metres vertical height or thirty metres horizontal distance from the high watermark, whichever is less”.

Section 118 (1) of the Rules state “No person shall undertake the activities listed in the Sixth Schedule on riparian land unless authorised by the Authority in consultation with other relevant stakeholders”.

Part A of the Sixth Schedule: Protection and Conservation of Riparian and Catchment Areas of the Rules provide activities proscribed on riparian land as:

- 1) *Tillage or cultivation;*
- 2) *Clearing of indigenous trees or vegetation;*
- 3) *Building of permanent structures;*
- 4) *Disposal of any form of waste within the riparian land;*
- 5) *Excavation of soil or development of quarries;*
- 6) *Planting of exotic species that may have adverse effect to the water resource;*
- 7) *Or any other activity that in the opinion of the Authority and other relevant stakeholders may degrade the watercourse.*

5.1.6 *The Wildlife Conservation and Management Act, 2013*

The Wildlife (Conservation and Management) Act 2013, covers matters relating to wildlife in Kenya including protected areas, activities within protected areas, control of hunting, import and export of wildlife, enforcement and administrative functions of wildlife authorities.

The Act specifically provides for the protection and regulation of protected animals, game animals and game birds as defined in three schedules. The first schedule includes game animals mostly mammals, although the list also includes crocodile and ostrich. The second schedule lists game birds, and the third schedule lists protected animals, which comprise primarily mammals, although it also includes two species of marine turtles, while in 1981 it was amended to include several species of reptiles, amphibians and butterflies. Apart from the protection provided to plants within National Parks and National Reserves, plants receive no further protection under this Act outside the protected areas.

Specific provisions of the Act allow for the establishment of National Parks (Section 6), National Reserves (Section 18), and local sanctuaries (Section 19). The National Parks are managed by KWS. Strict regulations prohibit various activities within National Parks, unless they are subject to the written consent of the Minister or, in other cases, the Director of KWS. No such prohibitions are specified for National Reserves or for local sanctuaries. Areas that were formerly game reserves but are declared as National Reserves continue to be administered by the local authorities, unless otherwise directed by the Minister by notice in the Kenya Gazette

5.1.7 Public Health Act

The Public Health Act provides for the protection of human health through prevention and guarding against introduction of infectious diseases into Kenya from outside, to promote public health and the prevention, limitation or suppression of infectious, communicable or preventable diseases within Kenya, to advice and direct local authorities in regard to matters affecting the public health to promote or carry out researches and investigations in connection with the prevention or treatment of human diseases. This Act provides the impetus for a healthy environment and gives regulations to waste management, pollution and human health.

The Public Health Act regulates activities detrimental to human health. The owner(s) of the premises responsible for environmental nuisances such as noise and emissions, at levels that can affect human health, are liable to prosecution under this act. An environmental nuisance is defined in the act as one that causes danger, discomfort or annoyance to the local inhabitants or which is hazardous to human health. This Act controls the activities of the project with regard to human health and ensures that the health of the surrounding community is not jeopardized by the activities of the project such as water development.

5.1.8 Physical Planning Act

This Act provides for the preparation and implementation of physical development plans for connected purposes. It establishes the responsibility for the physical planning at various levels of Government in order to remove uncertainty regarding the responsibility for regional planning. A key provision of the Act is the requirement for Environmental Impact Assessment (ESIA). This legislation is relevant to the implementation and siting of sewerage plants in pilot urban centres as identified in the project document.

It provides for a hierarchy of plans in which guidelines are laid down for the future physical development of areas referred to in a specific plan. The intention is that the three-tier order plans, the national development plan, regional development plan, and the local physical development plan should concentrate on broad policy issues.

The Act calls for public participation in the preparation of plans and requires that in preparation of plans proper consideration be given to the potential for socio-economic development needs of the population, the existing planning and future transport needs, the physical factors which may influence orderly development in general and urbanization in particular, and the possible influence of future development upon natural environment.

5.1.9 The Forest Act No 7, 2005

The Forest Act, Cap 385 of 1962 (revised 1982, 1992 and 2005) addresses the reservation, protection, management, enforcement and utilisation of forests and forest resources on Government land. The Forest Act is applicable to gazetted forest areas (Forest Reserves) and specifically covers:

- *Gazettement, alteration of boundaries and de-gazettement of Forest Reserves (Section 4);*
- *Declaration of Nature Reserves within Forest Reserves and regulation of activities within Nature Reserves (Section 5);*
- *Issuance of licenses for activities within Forest Reserves (Section 7);*
- *Prohibition of activities in Forest Reserves (removal of forest produce, grazing, cultivation, hunting, etc.) and on un-alienated Government land (removal of trees, collection of honey, lighting of fires) except under license from the Director of Forest Services (Section 8);*
- *Enforcement of the provisions of the Act, penalties and powers afforded to enforcing officers (Sections 9-14);*
- *Power of the Minister to make rules with respect to sale and disposal of forest products, use and occupation of land, licensing and entry into forests (Section 15). This prerogative has been taken with the Forests (General) Rules, which sets forth rules for sale of forest produce and specifies royalty rates for these products.*

Section 4 of the Forest Act relates to excision and addition to the Government forest estate. Section 4 (2) states that declaration or alteration of forest boundaries, or cessation of a forest area may not take place unless twenty-eight days' notice of the intention to make the declaration is published by the Minister in the Kenya Gazette. Implementation of changes in forest areas can be affected by Legal Notices (published in the Kenya Gazette Supplement) once the formalities of 28 days' notice are complete.

5.1.10 The Land Act 2012)

It is very explicit in the Land Act, 2012, Section 107, that whenever the national or county government is satisfied that it may be necessary to acquire some particular land under section 110 of Land Act 2012, the possession of the land must be necessary for public purpose or public interest, such as, in the interests of public defence, public safety, public order, public morality, public health, urban and planning, or the development or utilization of any property in such manner as to promote the public benefit; and the necessity therefore is such as to afford reasonable justification for the causing of any

hardship that may result to any person having right over the property, and so certifies in writing, possession of such land may be taken.

5.1.11 The Trust Land Act (CAP 288)

The constitution vests all land which is not registered under any act of parliament under the ownership of local authorities as trust land. Section 117 of the Constitution of Kenya provides that the Trust Lands Act may empower a county council to set apart an area of trust land vested in that county council for use and occupation by a public body or authority for public purposes, or by any person for a purpose likely to benefit the persons. The Act state that while giving due considerations to the rights and obligations of landowners, there shall be compensation whenever a materials site, diversion or realignment results into relocation of settlement or any change of user whatsoever of privately owned land parcels;

5.1.12 Antiquities and Monuments Act, Cap 215 of 1983

This Act aims to preserve Kenya's national heritage. Section-2 defines an antiquity as any moveable object other than a book or document made or imported into Kenya before 1895. Human, faunal or floral remains in Kenya dating to before the benchmark date of 1895 are also deemed to be antiquities. Both the National Museums of Kenya and the Kenya Cultural Centre have been established in part to discharge this Act.

5.1.13 The Lakes and Rivers Act Chapter 409 Laws of Kenya

This Act provides for protection of river, lakes and associated flora and fauna. The provisions of this Act may be applied in the management of the project.

5.1.14 The Employment Act, 2007

This Act declares and defines the fundamental rights of employees; minimum terms and conditions of employment; to provide basic conditions of employment of employees; and to regulate the employment of children, among other rights. Key sections of the Act elaborate on the employment relationship; protection of wages; rights and duties in employment; termination and dismissal and protection of children, among others. This Act will guide the management of workers, especially during the construction period.

While the EMCA supersedes all other environmental legislation, numerous other laws and regulations in addition to those described above influence the various aspects and activities of the Project, which include the following among others:

- i) Trade Licence Act, Cap 497;*
- ii) Penal Code Cap 63 (rev. 1985);*
- iii) Standards Act, Chapter 496 (1974);*
- iv) Building Code (1968);*
- v) Work Injury and Benefits Act (2007);*
- vi) Food, Drugs and Chemical Substances Act, Cap 254 (rev 1992);*
- vii) Use of Poisonous Substances Act, Cap 247(rev. 1983);*
- viii)Transport Licensing Board Act (Cap. 404).*

5.1.15 HIV and AIDS Prevention and Control Act 2011

The object and purpose of this Act is to (a) promote public awareness about the causes, modes of transmission, consequences, means of prevention and control of HIV and

AIDS; (b) extend to every person suspected or known to be infected with HIV and AIDS full protection of his human rights and civil liberties by (i) prohibiting compulsory HIV testing save as provided in this Act; (ii) guaranteeing the right to privacy of the individual; (iii) outlawing discrimination in all its forms and subtleties against persons with or persons perceived or suspected of having HIV and AIDS; (iv) ensuring the provision of basic health care and social services for persons infected with HIV and AIDS; (c) promote utmost safety and universal precautions in practices and procedures that carry the risk of HIV transmission; and (d) positively address and seek to eradicate conditions that aggravate the spread of HIV infection.

Section 7 of the Act focuses on HIV and AIDS education in the workplace and states that (1) The Government shall ensure the provision of basic information and instruction on HIV and AIDS prevention and control to (a) employees of all Government Ministries, Departments, authorities and other agencies; and (b) employees of private and informal sectors. (2) The information provided under this section shall cover issues such as confidentiality in the work-place and attitudes towards infected employees and workers.

5.1.16 Sexual Offences Act 2006

An Act of Parliament that makes provision about sexual offences, aims at prevention and the protection of all persons from harm from unlawful sexual acts, and for connected purposes. Section 15, 17 and 18 below are mainly focused on sexual offenses on minor (children).

Under Section 15 it is an offence for Any person who -

- (a) knowingly permits any child to remain in any premises, for the purposes of causing such child to be sexually abused or to participate in any form of sexual activity or in any obscene or indecent exhibition or show;
- (b) acts as a procurer of a child for the purposes of sexual intercourse or for any form of sexual abuse or indecent exhibition or show;
- (c) induces a person to be a client of a child for sexual intercourse or for any form of sexual abuse or indecent exhibition or show, by means of print or other media, oral advertisements or other similar means;
- (d) takes advantage of his influence over, or his relationship to a child, to procure the child for sexual intercourse or any form of sexual abuse or indecent exhibition or show;
- (e) threatens or uses violence towards a child to procure the child for sexual intercourse or any form of sexual abuse or indecent exhibition or show;
- (f) intentionally or knowingly owns, leases, rents, manages, occupies or has control of any movable or immovable property used for purposes of the commission of any offence under this law

Under Section 17 it is an offence for Any person who -

- (a) intentionally causes or incites another person to become a prostitute; and
- (b) intentionally controls any of the activities of another person relating to that persons prostitution; and does so for or in expectation of gain for him or herself or a third person, is guilty of an offence and is liable upon conviction to imprisonment for a term of not less than five years or to a fine of five hundred thousand shillings or to both.

Under Section 18 it is an offence for Any person who -

(1) Any person who intentionally or knowingly arranges or facilitates travel within or across the borders of Kenya by another person and either -

(a) intends to do anything to or in respect of the person during or after the journey in any part of the world, which if done will involve the commission of an offence under this Act; or

(b) believes that another person is likely to do something to or in respect of the other person during or after the journey in any part of the world, which if done will involve the commission of an offence under this Act, is guilty of an offence of trafficking for sexual exploitation.

(2) A person guilty of an offence under this section is liable upon conviction, to imprisonment for a term of not less than fifteen years or to a fine of not less than two million shillings or to both.

5.1.17 Child Rights Act

This Act of Parliament makes provision for parental responsibility, fostering, adoption, custody, maintenance, guardianship, care and protection of children. It also makes provision for the administration of children's institutions, gives effect to the principles of the Convention on the Rights of the Child and the African Charter on the Rights and Welfare of the Child.

Section 15 states that a child shall be protected from sexual exploitation and use in prostitution, inducement or coercion to engage in any sexual activity, and exposure to obscene materials.

5.1.18 Labour Relations Act 2012

An Act of Parliament to consolidate the law relating to trade unions and trade disputes, to provide for the registration, regulation, management and democratisation of trade unions and employers organisations or federations, to promote sound labour relations through the protection and promotion of freedom of association, the encouragement of effective collective bargaining and promotion of orderly and expeditious dispute settlement, conducive to social justice and economic development and for connected purposes. This Act in Section II Part 6 provides for freedom of employees to associate; section 7 provides for protection of rights of employees; Part 9 provides for adjudication of disputes and Part 10 provides for protection of the employees to hold strikes and lock outs.

5.1.19 National Gender and Equality Commission Act 2011

The over-arching goal for NGEN is to contribute to the reduction of gender inequalities and the discrimination against all; women, men, persons with disabilities, the youth, children, the elderly, minorities and marginalized communities.

5.2 Relevant Sector Policies

5.2.1 National Policy on Environment and Development Sessional Paper No. 6 of 1999

Currently, a far-reaching initiative towards an elaborate national environmental policy is contained in the Sessional Paper No. 6 of 1999 on Environment and Development. It advocates for the integration of environmental concerns into the national planning and management processes and provides guidelines for environmental sustainable

development. The challenge of the document and guidelines is to critically link the implementation framework with statutory bodies namely, the National Environmental Management Authority (NEMA), Kenya Wildlife Service (KWS), Kenya Forestry Service (KFS); the Public Complaints Committee (PCC) and the National Environmental Tribunal (NET).

5.2.2 The National Environmental Sanitation and Hygiene Policy-July 2007

The National Environmental Sanitation and Hygiene Policy is devoted to environmental sanitation and hygiene in Kenya as a major contribution to the dignity, health, welfare, social well-being and prosperity of all Kenyan residents. The policy recognizes that healthy and hygienic behaviour and practices begin with the individual. The implementation of the policy will greatly increase the demand for sanitation, hygiene, food safety, improved housing, use of safe drinking water, waste management, and vector control at the household level, and encourage communities to take responsibility for improving the sanitary conditions of their immediate environment.

5.2.3 Forest Policy 2005

The goal of this Policy is to: enhance the contribution of the forest sector in the provision of economic, social and environmental goods and services. The specific objectives of this policy are to:

- *Contribute to poverty reduction, employment creation and improvement of livelihoods through sustainable use, conservation and management of forests and trees.*
- *Contribute to sustainable land use through soil, water and biodiversity conservation, and tree planting through the sustainable management of forests and trees.*
- *Promote the participation of the private sector, communities and other stakeholders in forest management to conserve water catchment areas, create employment, reduce poverty and ensure the sustainability of the forest sector.*
- *Promote farm forestry to produce timber, wood fuel and other forest products.*
- *Promote dry land forestry to produce wood fuel and to supply wood and non-wood forest products.*
- *Promote forest extension to enable farmers and other forest stakeholders to benefit from forest management approaches and technologies.*
- *Promote forest research, training and education to ensure a vibrant forest sector.*

5.2.4 Wildlife Policy 2007

The goal of this Policy is to provide a framework for conserving, in perpetuity, Kenya's rich diversity of species, habitats and ecosystems for the wellbeing of its people and the global community. The objectives and priorities are to:

- *Conserve Kenya's wildlife resources as a national heritage.*
- *Provide legal and institutional framework for wildlife conservation and management throughout the country.*
- *Conserve and maintain viable and representative wildlife populations in Kenya.*
- *Develop protocols methodologies and tools for effective assessment and monitoring of wildlife conservation and management throughout the country.*
- *Promote partnerships, incentives and benefit sharing to enhance wildlife conservation and management.*
- *Promote positive attitudes towards wildlife and wildlife conservation and management.*

5.2.5 *Housing Policy*

The overall goal of this Housing Policy is to facilitate the provision of adequate shelter and a healthy living environment at an affordable cost to all socio economic groups in Kenya in order to foster sustainable human settlements • This will minimise the number of citizens living in shelters that are below the habitable living conditions it will also curtail the mushrooming of slums and informal settlements especially in the major towns.

5.2.6 *Eviction Guidelines (2010)*

According to the Eviction Guidelines section 4.9.1 drafted by Ministry of Lands (2010), the Government shall ensure that evictions only occur in exceptional circumstances. Evictions require full justification given their potential extremely negative impact on a wide range of international recognised human rights. Any eviction must be warranted by law, reasonable in the circumstances, proportionate and can only be carried out in accordance with the Guidelines and international human rights and humanitarian law.

The Government shall ensure that exceptions to the prohibition on forced evictions such as the ‘interest of society’ or ‘public interest’ should be read restrictively, so as to again ensure that evictions only occur in exceptional circumstances.

Where eviction is considered to be justified it should be carried out in strict compliance with the following procedures:-

- (a) Appropriate notice given to the affected individual or groups clearly stating the modalities, day and time of the eviction.
- (b) Consultations with the affected individual or group on the proposed eviction modalities and resettlement plans.
- (c) Holding of public hearing with affected persons and other stakeholders to provide an opportunity to discuss alternative proposals for resettlement.
- (d) Provide opportunity for the parties to seek legal redress where there is a stalemate or dispute.
- (e) The eviction notice should contain a detailed justification for the decision, among others:-
 - (i) Be a language that is understood by all individuals concerned
 - (ii) The full details of the proposed alternative
 - (iii) Where no alternatives exist, all measures taken and foreseen to minimize the adverse effects of evictions

Section 4.95 on Alternative land and housing states that the Government shall ensure that evictions do not result in individuals being rendered homeless or vulnerable to the

violation of other human rights. The Government shall, where those affected are unable to provide for themselves, take all appropriate measures, to the maximum of its available resources, to ensure that adequate alternative housing, resettlement or access to productive land, as the case may be, is available.

5.3 Relevant Institutions-Environmental

5.3.1 Environmental Assessment Administrative/Institutional framework

There are over 20 institutions and departments, which deal with environmental issues in Kenya. Some of the key institutions include the Ministry of Environment and Mineral Resources (MEMR), Kenya Forest Services (KFS), Kenya Wildlife Service (KWS), National Museums of Kenya (NMK), National Environment Management Authority (NEMA), Ministry of Environment Natural Resources (MEWNR), Ministry of Water and Irrigation (MoWI), Water Resources Management Authority (WRMA) and the public universities, among other organisations. There are also local and international NGOs involved in environmental issues in Kenya. In 2001, the Government established specific administrative structures to implement the EMCA. The main administrative structures are described in the following sections.

The National Environment Management Authority

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

In addition to NEMA, the Act provides for the establishment and enforcement of environmental quality standards to be set by a technical committee of NEMA known as the Standards and Enforcement Review Committee (SERC) which will govern the discharge limits to the environment by the proposed project.

County Environmental Committees

The County Environmental Committees also contribute to decentralised environmental management and enable the participation of local communities. These environmental committees consist of the following:

- i) Representatives from all the ministries;*
- ii) Representatives from local authorities within the province/district;*
- iii) Two farmers / pastoral representatives;*
- iv) Two representatives from NGOs involved in environmental management in the province/district;*
- v) A representative of each regional development authority in the province/district.*

Public Complaints Committee on Environment

The Public Complaints Committee is established under Section 31 of EMCA. The PCC is concerned with the investigation of complaints relating to environmental damage and degradation generally. The PCC has powers to investigate complaints against any person or even against NEMA or on its own motion investigate any suspected case of environmental degradation. The PCC is required by law to submit reports of its findings and recommendations to NEC. The law however is weak in that it does not provide PCC

with the mandate to see its recommendations carried through. Further, NEC is not specifically required to do anything with regard to the reports submitted by the PCC and will often note and adopt the same without any further follow up action. So far the PCC has experienced challenges such as failure to honour summons, hostility between parties, hostility directed at PCC investigators, lack of understanding of EMCA and abdication of duty by Lead Agencies.

Standards and Enforcement Review Committee

The Standards and Enforcement Review Committee (SERC) is a committee of NEMA and is established under Section 70 of EMCA. This is a technical Committee responsible for formulation of environmental standards, methods of analysis, inspection, monitoring and technical advice on necessary mitigation measures. The Permanent Secretary under the Minister is the Chairman of the Standard and Enforcement Review Committee.

The members of the SERC are set out in the third schedule to EMCA. They consist of representatives of various relevant government ministries and parastatals that are Lead Agencies as well as those responsible for matters such as economic planning and national development, finance, labour, public works, law and law enforcement, etc. Other members are drawn from public universities, and other government institutions.

National Environmental Tribunal (NET)

The NET is established under Section 125 of EMCA for the purpose of hearing appeals from administrative decisions by organs responsible for enforcement of environmental standards. An appeal may be lodged by a project proponent upon denial of an EIA licence or by a local community upon the grant of an EIA licence to a project proponent. NEMA may also refer any matter that involves a point of law or is of unusual importance or complexity to NET for direction. The proceedings of NET are not as stringent as those in a court of law and NET shall not be bound by the rules of evidence as set out in the Evidence Act. Upon the making of an award, NET's mandate ends there as it does not have the power to enforce its awards. EMCA provides that any person aggrieved by a decision or award of NET may within 30 days appeal to the High Court.

5.3.2 Environment and Land Court

The Kenya Constitution establishes Environment and Land Court⁹. Article 162 of the constitution provides for the creation of specialized courts to handle all matters on land and the environment. Such a court will have the status and powers of a High Court in every respect. Article 159 on the principles of judicial authority, indicates that courts will endeavour to encourage application of alternative dispute resolution mechanisms, including traditional ones, so long as they are consistent with the constitution. Section 20, of the Environment and Land Court Act, 2011 empowers the Environment and Land Court, on its own motion, or on application of the parties to a dispute, to direct the application of including traditional dispute resolution mechanisms.

⁹ Land Act 2012, Section 128

Any person whose land has been compulsorily acquired may petition the Environment and Land Court for redress with respect to:

- The determination of such person's right over the land;
- The amount offered in compensation; and
- The amount offered in compensation for damages for temporary dispossession in the case of the Government's withdrawal of its acquisition of the land.¹⁰

Parties will pay fees as determined by Land and Environment or the court may choose to waive them completely or in part on grounds of financial hardship.¹¹

5.4 Institutional Responsibilities with respect to Social Issues

The constitution provides for a number of institutions to address issues of vulnerable and marginalised groups including grievance redress mechanisms. Key constitutional mechanisms for redress of issues related to marginalization include the (a) Commission on Administrative Justice - Office of the Ombudsman; (b) National Land Commission; and (c) Committee on Revenue Allocation.

The Commission on Administrative Justice (CAJ) – Office of the Ombudsman

Kenya has a formal Feedback and Complaints Handling Mechanism. The Commission is the national/constitutional stakeholder instrument for grievance redress. Its mandate is to receive and address complaints against public officers and public institutions to improve service delivery. Three types of complaints can be made to the office of the Ombudsman including: (i) Citizen against State/public officers and institutions; (ii) Public officers against fellow public officers; and, (iii) Public institutions against other public institutions. **Table 2** below provides the steps and process for feedback and complaints redress by the Ombudsman. The Ombudsman has a three step and time bound mechanism for feedback and grievance redress, as shown below.

Table 2: Feedback and Complaints Redress by the CAJ (the Ombudsman)

Step 1	<p>Complainant fills in a Complaint Form</p> <ul style="list-style-type: none"> • Complaint is assessed for compliance with CAJ Mandate; • If within mandate, CAJ commences inquiries and complainant is issued with copy of communication – CAJ 2 [Sec. 43]; • If NOT within CAJ mandate, Complainant is advised accordingly and/or referred to appropriate government agencies; • If a response is not received from the respondent after 14 working days, CAJ sends a first reminder giving the respondent 7 days to comply; • If no response is received after this, a final reminder of 7 days is sent; • If there is still no response after 28 days, summonses are issued to the respondent in line with [Sec. 27(a)].
Step 2	<p>If after the summonses the respondent still fails to comply, the Ombudsman proceeds to:</p> <ul style="list-style-type: none"> • Determines the complaint in the absence of the respondent; • Institutes legal proceedings against the respondent [according to Sec. 52];

¹⁰ Land Acquisition Act. at article 29(7).

¹¹ Land Acquisition Act at article 43.

	<ul style="list-style-type: none"> • Cites the respondent as an unresponsive State or Public Office or Officer, and/or declares such State or Public Officer to be unfit to serve in the Public Service;
Step 3	<p><i>How the Ombudsman undertakes grievance redress action:</i> In resolving a complaint, the Ombudsman may:</p> <ul style="list-style-type: none"> • Conduct investigations according to articles [A.59 (2)(i)] [Sec 8 b)] [A.252(1)(g)] [Sec. 53 (1)]; • Demand and obtain information or documents [S.26 (d)]; • Conduct an inquiry [A.252(1)(g)] • Undertake mediation, negotiation and conciliation [A.252 (1) (b)]; • Constitute a hearing panel; • Invite or summon any person or persons to attend to the Commission [S.26 (f)]; • Obtain orders from the Court authorizing Searches or Seizures [Sec.26 (e)]. • Obtain warrants of arrest for breach of any summons or orders of the Commission.

The National Land Commission

The National Land Commission (NLC) is an independent commission tasked with registering land transfers, resolving land disputes and addressing historical land injustices. NLC is tasked with facilitating and increasing access to fair and equitable mechanisms for resolving land and natural resource based disputes and conflicts¹².

National Land Commission Act, 2012 specifies the role of NLC as:

- To identify public land, prepare and keep a database of all public land, which shall be geo-referenced and authenticated by the statutory body responsible for survey;
- Evaluate all parcels of public land based on land capability classification, land resources mapping consideration, overall potential for use, and resource evaluation data for land use planning; and
- Acquire land for public purposes
- Solve land disputes and deal with historical land injustices
- Share data with the public and relevant institutions in order to discharge their respective functions and powers under this Act; or
- May require the land to be used for specified purposes and subject to such conditions, covenants, encumbrances or reservations as are specified in the relevant order or other instrument.

County Land Management Boards (CLMB)

County Land Management Boards are established by the NLC in consultation and cooperation with the national and county governments. Among the 3 and not more than seven members of the CLMB appointed by the NLC there shall be a physical planner or a surveyor who shall be nominated by the county executive member and appointed by the county governor. The Boards' mandates cover the processing of applications for allocation of land, change and extension of user, subdivision of public land and renewal of leases. They may also perform any other functions assigned by the NLC.

¹²National Land Commission Act 2012, Land Act 2012, Land registration Act 2012 applicable laws and Sessional paper No. 3 (209) on the National Land Policy.

Environmental and Land Court (ELC) Article 162 (2) (b) of the Constitution established the ELC, a superior court with jurisdiction throughout Kenya to hear and determine disputes relating to the environment and the use of and occupation of, and title to, land.

The Commission on Revenue Allocation (CRA)

CRA is the CoK, 2010's mechanism for bringing the marginalized communities and regions of Kenya into the country's mainstream development agenda. The mandate of CRA¹³ includes to: (i) Recommend on equitable sharing of revenues between National and County Governments and among Counties;(ii) Recommend on financing and financial management of County Governments; and to (iii) Determine, publish and regularly review a policy which sets out the criteria by which to identify the marginalized areas. The constitution has further established the Equalization Fund as the instrument with which CRA it to achieve its mandate. The objective of the equalization fund is to eradicate marginalization and other forms of economic inequalities in Kenya and to bring all groups into mainstream development within 20 years from the date of promulgation of the CoK, 2010. There is clear overlap between the counties designated as marginalized by the CRA and the location of marginalized groups.

Box 1: The Role of the Equalization Fund in Reducing Exclusion and Marginalization

According to article 204 (2) "The National Government shall use the Equalization Fund only to provide basic services including water roads, health facilities and electricity to marginalized areas to the extent necessary to bring the quality of those services in those areas to the level generally enjoyed by the rest of the nation". The GoK 2010 establishes an Equalization Fund which is one half percent (0.5%) of all the revenue collected by the national government each year.

National Gender Equality Commission

National Gender Equality Commission is a constitutional Commission established by an Act of Parliament in August 2011, as a successor commission to the Kenya National Human Rights and Equality Commission pursuant to Article 59 of the Constitution. NGENC derives its mandate from Articles 27, 43, and Chapter Fifteen of the Constitution; and section 8 of NGENC Act (Cap. 15) of 2011, with the objectives of promoting gender equality and freedom from discrimination. The over-arching goal for NGENC is to contribute to the reduction of gender inequalities and the discrimination against all; women, men, persons with disabilities, the youth, children, the elderly, minorities and marginalized communities

Kenya National Commission on Human Rights

The Kenya National Commission on Human Rights (KNCHR) is an autonomous national Human rights institution established under article 59 of the Constitution of Kenya 2010 with the core mandate of furthering the promotion and protection of human rights in Kenya. The Commission plays two key broad mandates;

- It acts as a watch-dog over the Government in the area of human rights.

¹³The mandate of CRA as spelt out in the Constitution include: (i) *Recommend on equitable sharing of revenues between National and County Governments; and among Counties, Article 216 (1)(b)); (ii) Recommend on financing and financial management of County Governments (Article 216 (2)); (iii) Define and enhance revenue sources of National Government and County Governments (Art. 216 (3) (b)); (iv) Encourage fiscal responsibility by National and County Governments (Article 216 (3) (c)); and (v) Determine, publish and regularly review a policy in which it sets out the criteria by which to identify the marginalized areas for the purposes of Article 204 (2) (Article 216 (4)).*

- Provides key leadership in moving the country towards a human rights state.

The main goal of KNCHR is to investigate and provide redress for human rights violations, to research and monitor the compliance of human rights norms and standards, to conduct human rights education, to facilitate training, campaigns and advocacy on human rights as well as collaborate with other stakeholders in Kenya.

5.5 Autonomous and Semi-Autonomous Government Agencies Related to the IFPPP-AF

5.5.1 Roads Sub-Sector

Between 2006 and 2008 through the Roads Act 2006 and Energy Act 2007, six SAGAs were created as part of the reform agenda for the sector.

- *The Kenya National Highways Authority (KeNHA): is responsible for the development and maintenance of class A, B and C roads. KeNHA will also advise the Minister responsible for Roads on technical issues such as standards, axle load and research development. KeNHA will also create regions of operations countrywide;*
- *The Kenya Rural Roads Authority (KeRRA): is responsible for all rural and small town roads of Class D and below including Forest Roads, Special Purpose Roads and Unclassified Roads currently under county councils and town councils. KeRRA will also manage funds allocated to Constituencies;*
- *Kenya Urban Roads Authority (KURA): is responsible for management and maintenance of all roads within cities and major municipalities. Local Authorities will remain major stakeholders in prioritizing road works to be implemented by KURA;*
- *The Kenya Wildlife Service (KWS) is a roads agency responsible for roads in National Parks and Game Reserves as well as access roads allocated to KWS by Ministry of Roads;*
- *The Kenya Roads Board established by Kenya Roads Board Act 1999: is responsible for funding maintenance of all roads including approval of maintenance work programmes, technical and financial audits of works funded by the Board.*

5.5.2 Transport Sub-Sector

- *Kenya Civil Aviation Authority (KCAA) is responsible for regulation of the aviation industry and ensuring air safety navigation in the country;*
- *Kenya Airports Authority (KAA) manages the most important and fastest transport link to the outside world. The Authority ensures that there are adequate efficient and safe airports in Kenya.*
- *Kenya Ports Authority (KPA) manages the ports, along the coastline that provides the expansive hinterland of mainland Kenya, Rwanda, Burundi, Sudan and Uganda with cheap transport link to the outside world.*
- *Kenya Ferry Services (KFS) provides free ferry services to the public across the Likoni and Mtongwé channels on the Indian Ocean.*
- *Kenya National Shipping Line (KNSL) was established with the objective of transportation of bulky cargo as a recommendation adopted at an international forum on shipping development*
- *Kenya Railways Corporation (KRC) provides rail services that are essential for transportation of commodities to and from the port of Mombasa in addition to providing commuter and passenger services.*

- *Kenya Maritime Authority (KMA) responsible to regulate and co-ordinate activities in the Maritime industry*

5.5.3 Energy Sub-Sector

- *Kenya Power and Lighting Company Limited (KPLC) – is responsible for electricity transmission and distribution;*
- *Energy Regulatory Commission (ERC) regulates the entire energy sector and protects interest of stakeholders; Rural Electrification Authority (REA) is responsible for accelerating rural electrification at a pace consistent with government policy.*
- *Energy Tribunal arbitrates disputes between ERC and aggrieved stakeholders in the energy sub-sector.*
- *Kenya Pipeline Company (KPC): operates the oil pipeline system for the transportation and storage of petroleum products;*
- *National Oil Corporation of Kenya (National Oil): is responsible for petroleum exploration and fuel marketing;*
- *Kenya Electricity Generating Company (KenGen) is the main electricity generating company, accounting for 87% of the total installed capacity;*
- *Kenya Petroleum Refineries Ltd (KPRL) is responsible for crude oil refining in the country.*
- *Geothermal Development Company (GDC) is responsible for development of geothermal resources.*
- *Kenya Electricity Transmission Company (KETRACO) is responsible for construction and operation of power transmission lines.*

5.5.4 Water Sub-Sector

Water Resources Management Authority (WRMA)

The Water Resources Management Authority (WRMA) was formed as one of the water sector bodies under the water sector reforms; the body was established under the Water Act 2002. The overall mandate of WRMA is to protect and conserve water resources. Water resources for purposes of the Water Act include lakes, ponds, swamps, streams, marshes, watercourses or anybody of flowing or standing water both below and above the ground.

The functions of the WRMA include planning, management, protection and conservation of water resources. The WRMA is also authorized to receive and determine applications for water permits and monitor their compliance. There are currently six established regional offices in Kenya these are Athi catchment area in Machakos, Tana catchment area in Embu, Rift Valley catchment area in Nakuru, Lake Victoria South catchment area in Kisumu, Lake Victoria North catchment area in Kakamega and Ewaso Nyiro North catchment area in Nanyuki. The WRMA responsibilities extend to the management of water catchments. The Water Act establishes the Catchment Area Advisory Committees whose principal functions are to advise the WRMA on water resources conservation, use and apportionment at the catchment levels.

Water Services Regulatory Board (WASREB)

The Water Services Regulatory Board is established under the Water Act and was operationalised in March 2003. The functions of the WASREB include the issuance of licences to Water Service Boards and to approve service provision agreements concluded between Water Service Boards and Water Service Providers. The Water Service

Providers are the agencies that directly provide water and sanitation services to consumers. The WASREB is responsible for ensuring that water services and supply are efficient and meet expectations of consumers through regulation and monitoring of Water Service Boards and Water Service Providers. To standardize service provision, the Board has the responsibility of developing among others, tariff guidelines.

The Board is therefore supposed to oversee the implementation of policies and strategies relating to provision of water and sanitation services, these policies include the National Water Services Strategy (2007 -2015), Pro-Poor Implementation Plan for Water Supply and Sanitation (refer to the popular versions of these documents prepared by COHRE & Hakijamii Trust), the specific functions of the WASREB include:

- Providing information about water and sanitation services.
- Regulating the provision of water and sanitation services; this is done through such methods as setting standards for the provision of water services, monitor compliance of facilities for water supply with the set standards.
- Licensing Water Service Boards such as the Athi Water Services Board and other regional water service boards and approving their appointed Water Service Providers through service provision agreements.
- Setting the rules, establishing standards guidelines and monitoring the performance of Water Service Boards and Water Service Providers and enforcing regulations.
- Establishing technical, water quality and effluent disposal standards.

Water Services Trust Fund (WSTF)

The Government of Kenya, through the Ministry of Water and Irrigation established the Water Services Trust Fund (WSTF) under the Water Act 2002 to channel funding for its long-term objectives of developing water and sanitation services in areas of Kenya without adequate water. The main objective of the WSTF is to assist in financing capital costs of providing services to communities without adequate water and sanitation services. The WSTF focuses on reaching those areas that are underserved or not served at all such as informal settlements, the priority being given to poor and disadvantaged groups. The projects are funded through direct allocation by the Government and donations and grants that may be received from bilateral and multilateral development partners, organisations and individuals.

Water Appeals Board (WASREB)

The Water Appeals Board is established under the Water Act to adjudicate disputes within the water sector. The Appeals Board is made up of three persons, one appointed by the President on advice of the Chief Justice and two others appointed by the Minister for Water and Irrigation. The Water Appeals Board can hear and determine appeals arising from the decision of the Minister of Water and Irrigation, the WASREB and the Water Resources Management Authority (WRMA) with respect to the issuance of permits or licenses under the Water Act.

Water Services Boards (WSB)

Water Services Boards (WSBs) are constituted under the Water Act 2002. The WSBs are responsible for the provision of water and sewerage services within their areas of coverage and are licensed by the WASREB. The WSBs are also responsible for contracting Water Services Providers (WSPs) for the provision of water services. WSB and WSP enter into service provision agreements that include but not limited to the supply area, development, rehabilitation and maintenance of water and sewerage facilities of the WSBs. The WSBs are responsible for the review of the water services tariffs proposals from WSP before submission to WASREB for consideration. There are currently eight (8) established WSBs namely: Athi Water Services Board, Tana Water Services Board, Coast Water Services Board, Lake Victoria South Water Services Board, Lake Victoria North Water Services Board, Northern Water Services Board, Rift Valley Water Services Board and Tanathi Water Services Board.

5.6 World Bank Group EHS Guidelines

The Environmental Health and Safety (EHS) Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). The EHS Guidelines contain the performance levels and measures that are normally acceptable to the WB Group, and that are generally considered to be achievable in new facilities at reasonable costs by existing technology. All sub projects under IFPPP-AF requiring ESIA will as a mandatory requirement make reference to the applicable guideline(s) based on the sub project. www.ifc.org/ehsguidelines

5.7 International Environmental and Social Management Requirements

Kenya is a signatory to several international treaties and conventions that are relevant to the sectors that the proposed sub projects under the IFPPP-AF. The conventions include among others;-

- 1. United Nations Framework Convention on Climate Change*
- 2. United Nations Convention on Biological Diversity*
- 3. United Nations Convention on Combating Desertification*
- 4. Convention on the Conservation of Migratory Species (CMS)*
- 5. Africa Convention on Conservation of Nature and Natural Resources*
- 6. International Convention for the Prevention of Pollution from Ships*
- 7. Convention on International Trade in Endangered Species of Wild Fauna and Flora*

6 DESCRIPTION OF WORLD BANK ENVIRONMENTAL & SOCIAL SAFEGUARDS POLICIES AND TRIGGERS

Table 3 below shows the Banks safeguards policies in general and **table 4** highlights the specific safeguards that are triggered as a result of the proposed IFPPP-AF sub project investments.

Table 3: Summary of World Bank’s Safeguards Policies objectives including when they are triggered

Policy	Objective	Trigger for the Policy
OP/BP 4.01 Environmental Assessment	The objective of this policy is to ensure that Bank-financed projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and of their likely environmental impacts. This policy is triggered if a project is likely to have potential (adverse) environmental risks and impacts on its area of influence. OP 4.01 covers impacts on the natural environment (air, water and land); human health and safety; physical cultural resources; and transboundary and global environment concerns.	Depending on the project, and nature of impacts a range of instruments can be used: EIA, environmental audit, hazard or risk assessment and environmental management plan (EMP). When a project is likely to have sectoral or regional impacts, sectoral or regional EA is required. The Borrower is responsible for carrying out the ESIA.
OP/BP 4.04 Natural Habitats	<p>This policy recognizes that the conservation of natural habitats is essential to safeguard their unique biodiversity and to maintain environmental services and products for human society and for long-term sustainable development. The Bank therefore supports the protection, management, and restoration of natural habitats in its project financing, as well as policy dialogue and economic and sector work. The Bank supports, and expects borrowers to apply, a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development. Natural habitats are land and water areas where most of the original native plant and animal species are still present. Natural habitats comprise many types of terrestrial, freshwater, coastal, and marine ecosystems. They include areas lightly modified by human activities, but retaining their ecological functions and most native species.</p> <p>This bank policy prohibits financing for developments that would significantly convert or degrade critical natural habitats, and preference is on siting projects on already converted land.</p>	This policy is triggered by any project (including any sub-project under a sector investment or financial intermediary) with the potential to cause significant conversion (loss) or degradation of natural habitats, whether directly (through construction) or indirectly (through human activities induced by the project).
OP/BP 4.36 Forests	The objective of this policy is to assist borrowers to harness the potential of forests to reduce poverty in a sustainable manner, integrate forests effectively into sustainable economic development and protect the vital local and global environmental services and values of forests. Where forest restoration and plantation development are necessary to meet these objectives, the Bank assists borrowers with forest restoration activities that maintain or enhance biodiversity and ecosystem functionality. The Bank assists borrowers with the establishment of environmentally appropriate, socially beneficial and economically viable forest plantations to	This policy is triggered whenever any Bank-financed investment project (i) has the potential to have impacts on the health and quality of forests or the rights and welfare of people and their level of dependence upon or interaction with forests; or (ii) aims to bring about changes in the management, protection or utilization of natural forests or plantations.

Policy	Objective	Trigger for the Policy
OP 4.09 Pest Management	<p>help meet growing demands for forest goods and services.</p> <p>The objective of this policy is to (i) promote the use of biological or environmental control and reduce reliance on synthetic chemical pesticides; and (ii) strengthen the capacity of the country's regulatory framework and institutions to promote and support safe, effective and environmentally sound pest management. More specifically, the policy aims to (a) Ascertain that pest management activities in Bank-financed operations are based on integrated approaches and seek to reduce reliance on synthetic chemical pesticides (Integrated Pest Management (IPM) in agricultural projects and Integrated Vector Management (IVM) in public health projects. (b) Ensure that health and environmental hazards associated with pest management, especially the use of pesticides are minimized and can be properly managed by the user. (c) As necessary, support policy reform and institutional capacity development to (i) enhance implementation of IPM-based pest management and (ii) regulate and monitor the distribution and use of pesticides.</p> <p>Pesticides in WHO Classes IA and IB may not be procured for Bank supported projects.</p>	<p>The policy is triggered if : (i) procurement of pesticides or pesticide application equipment is envisaged (either directly through the project, or indirectly through on-lending, co-financing, or government counterpart funding); (ii) the project may affect pest management in a way that harm could be done, even though the project is not envisaged to procure pesticides. This includes projects that may (i) lead to substantially increased pesticide use and subsequent increase in health and environmental risk; (ii) maintain or expand present pest management practices that are unsustainable, not based on an IPM approach, and/or pose significant health or environmental risks.</p>
OP/BP 4.11 Physical Cultural Resources	<p>The objective of this policy is to assist countries to avoid or mitigate adverse impacts of development projects on physical cultural resources. For purposes of this policy, "physical cultural resources" are defined as movable or immovable objects, sites, structures, groups of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above ground, underground, or underwater. The cultural interest may be at the local, provincial or national level, or within the international community.</p>	<p>This policy applies to all projects requiring a Category A or B Environmental Assessment under OP 4.01, project located in, or in the vicinity of, recognized cultural heritage sites, and projects designed to support the management or conservation of physical cultural resources.</p>
OP/BP 4.10 Indigenous Peoples	<p>The objective of this policy is to (i) ensure that the development process fosters full respect for the dignity, human rights, and cultural uniqueness of indigenous peoples; (ii) ensure that adverse effects during the development process are avoided, or if not feasible, ensure that these are minimized, mitigated or compensated; and (iii) ensure that indigenous peoples receive culturally appropriate and gender and inter-generationally inclusive social and economic benefits.</p> <p>The policy requires free, prior and informed consultation with indigenous peoples.</p>	<p>The policy is triggered when the project affects the indigenous peoples (with characteristics described in OP 4.10 para 4) in the project area.</p>
OP/BP 4.12 Involuntary Resettlement	<p>The objective of this policy is to (i) avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs; (ii) assist displaced persons in improving their former living standards, income earning capacity, and production levels, or at least in restoring them; (iii) encourage community participation in planning and implementing resettlement; and (iv) provide assistance to affected people regardless of the legality of land tenure.</p>	<p>This policy covers not only physical relocation, but any loss of land or other assets resulting in: (i) relocation or loss of shelter; (ii) loss of assets or access to assets; (iii) loss of income sources or means of livelihood, whether or not the affected people must move to another location.</p>

Policy	Objective	Trigger for the Policy
		This policy also applies to the involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.
OP/BP 4.37 Safety of Dams	The objectives of this policy are as follows: For new dams, to ensure that experienced and competent professionals design and supervise construction; the borrower adopts and implements dam safety measures for the dam and associated works. For existing dams, to ensure that any dam that can influence the performance of the project is identified, a dam safety assessment is carried out, and necessary additional dam safety measures and remedial work are implemented.	This policy is triggered when the Bank finances: (i) a project involving construction of a large dam (15 m or higher) or a high hazard dam; and (ii) a project which is dependent on an existing dam. For small dams, generic dam safety measures designed by qualified engineers are usually adequate. Dams with ≥ 15 m in height review by an independent dam safety panel is required.
OP 7.50 Projects in International Waters	The objective of this policy is to ensure that Bank-financed projects affecting international waterways would not affect: (i) relations between the Bank and its borrowers and between states (whether members of the Bank or not); and (ii) the efficient utilization and protection of international waterways. The policy applies to the following types of projects: (a) Hydroelectric, flood control, navigation, drainage, water and sewerage, industrial and similar projects that involve the use or potential pollution of international waterways; and (b) Detailed design and engineering studies of projects under (a) above, include those carried out by the Bank as executing agency or in any other capacity.	This policy is triggered if (a) any river, canal, lake or similar body of water that forms a boundary between, or any river or body of surface water that flows through two or more states, whether Bank members or not; (b) any tributary or other body of surface water that is a component of any waterway described under (a); and (c) any bay, gulf strait, or channel bounded by two or more states, or if within one state recognized as a necessary channel of communication between the open sea and other states, and any river flowing into such waters.
OP 7.60 Projects in Disputed Areas	The objective of this policy is to ensure that projects in disputed areas are dealt with at the earliest possible stage: (a) so as not to affect relations between the Bank and its member countries; (b) so as not to affect relations between the borrower and neighboring countries; and (c) so as not to prejudice the position of either the Bank or the countries concerned.	This policy is triggered if the proposed project will be in a "disputed area". Questions to be answered include: Is the borrower involved in any disputes over an area with any of its neighbors. Is the project situated in a disputed area? Could any component financed or likely to be financed as part of the project be situated in a disputed area?
The WB Group Environment, Health and Safety Guidelines.	The General EHS Guidelines contain information on cross-cutting environmental, health, and safety issues potentially applicable to all industry sectors. The guidelines include;- Environment <ul style="list-style-type: none"> • Air Emissions and Ambient Air Quality • Energy Conservation • Wastewater and Ambient Water Quality • Water Conservation • Hazardous Materials Management • Waste Management • Noise 	These guidelines will be followed during the preparation of mitigation measures. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, a full and detailed justification for any proposed alternatives is needed as part of the site-specific

Policy	Objective	Trigger for the Policy
	<ul style="list-style-type: none"> Contaminated Land <u>Occupational Health and Safety Guidelines</u> <u>Community Health and Safety</u> <u>Construction and Decommissioning</u>	environmental assessment. This justification should demonstrate that the choice for any alternate performance levels is protective of human health and the environment.

6.1 World Bank’s Safeguards Likely to be Triggered by IFPPP-AF

The IFPPP-AF is a countrywide program and expected to have project investments in the entire country for as long as the selected sites are feasible. However, the likely or potential locations of many of the proposed investments are unknown at this point in time. The safeguards instruments prepared for any sub project investment will address the requirements of any applicable policies.

Table 4: Safeguard policies likely to be triggered under IFPPP-AF

Safeguard Policies Triggered by the Project(For the Moment)	Yes	Reasons For Triggers	No
Environmental Assessment (OP/BP 4.01)	X	OP 4.01 is triggered on the assumption that IFPPP-AF funds may support preparation of feasibility studies for future investment/sub-project pipeline investments that will include civil works, including the rehabilitation and refurbishment of existing infrastructure, as well as the construction of new infrastructure. The exact locations and impacts of the sub-projects have not yet been identified, though the potential project pipeline could include possible first mover projects. In this regard, the Borrower prepared safeguard instruments using the framework approach. These instruments are Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) were prepared in April 20, 2012. Consultations for updating the 2012 safeguard instruments prepared under the parent project were held with relevant key institutions such as KFS, KeNHA, KETRACO, MoWI, KWS, MoEP, MoTIHUD, NEMA, academia and research, Kenya Land Alliance, and County government. These documents will be submitted to the RSA for review and clearance after which they will be disclosed in-country and at the bank’s InfoShop.	
Natural Habitats (OP/BP 4.04)	X	The AF will not support any project that is anticipated to have any adverse impacts on critical natural habitats (forests, wetlands, mangroves, etc.) or environmentally sensitive areas. However, if there are no feasible alternatives for the project and its siting, and comprehensive analysis demonstrates that overall benefits from the project substantially outweigh the environmental costs, the project will include mitigation measures acceptable to the Bank. Such mitigation measures will meet conditions under OP/BP 4.04 (Natural habitats) para 5-8.	
Pest Management (OP 4.09)	X	The policy on Pest Management has been triggered under the AF because World Bank funds are expected to be used to prepare feasibility studies on agricultural projects at county	

		level, which may cover agricultural expansion, productivity intensification and diversification. Thus, the EA will have to evaluate the country and the proponent's capacity to manage the procurement, handling, application, and disposal of pest control products, to monitor the precision of pest control and the impact of pesticide use, and to develop and implement ecologically based pest management programs or integrated pest management plans (IPMP).
Physical Cultural Resources (OP/BP 4.11)	X	The AF triggers OP/BP 4.11 (Physical Cultural Resources), based on the assumption that implementation of any of the pipeline projects proposed in annex G could impact on physical cultural resources since projects (e.g. bulk water, hospital construction, affordable houses, students' hostels, etc.) will involve significant excavations, demolition, movement of earth, flooding or other environmental changes. The EA that will be prepared for such projects will include a physical cultural resources management plan that includes (a) measures to avoid or mitigate adverse impacts on physical cultural resources; (b) provisions for managing chance finds; (c) any necessary measures for strengthening institutional capacity for the management of PCP; and (d) a monitoring system to track progress of these activities..
Involuntary Resettlement (OP/BP 4.12)	X	<p>The specific sites or locations of individual IFPPP projects/transactions financed under the second component are not fully determined by project appraisal, but the likelihood of land acquisition and relocation remains a possibility to be confirmed as the project pipeline is fully identified. A Resettlement Policy Framework (RPF) was prepared to specify the process for preparing, reviewing, approving and implementing subsequent Resettlement Action Plans (RAPs) under AF for sub-projects before the relevant civil works are initiated. RPF was publicly disclosed in Bank InfoShop and in Kenya. RPF preparation included consultations with potential PAPs.</p> <p>For the AF, the RPF has been strengthened and enhanced to include procedures for voluntary land donations, in accordance with the 2016 Community Land Act (No 27). It also includes provision for entitlements and eligibility criteria for compensation. The updated reports will have to be meaningfully consulted upon be disclosed both in the country and in the World Bank's infoShop. A project level grievance mechanism acceptable to all stakeholders will be put in place.</p>
Indigenous Peoples (OP/BP 4.10)	X	Under the parent project, OP 4.10 was not triggered because the sub-projects were not anticipated to be implemented in areas where people meeting the definition of IPs under OP 4.10 would be present. The selection of sub-projects followed this anticipated planned pipeline until recently. The addition of Olkaria VI geothermal as a selected sub-project has necessitated a review into the need of triggering OP 4.10 since all proposed sub-projects may not be in urban or peri-urban areas. In addition

		to Olkaria VI, the other sub-projects with likely impacts on IPs are the Mombasa-Nairobi Road and the Nairobi-Nakuru Road. Since these three sub-projects are highly likely to have impacts on IPs, there is need to include screening for the presence of IPs in the sub-projects areas within the feasibility study of the Transaction Advisors, and if they are found to be present, to prepare the necessary safeguard instruments. For this reason, OP 4.10 is now triggered for the parent project as well as the Additional Financing project.	
Forests (OP/BP 4.36)		The PPP will not finance any project which involves conservation or degradation of any forest area and any plantation activities.	X
Safety of Dams (OP/BP 4.37) ¹⁴	X	The AF is expected to finance feasibility studies on the construction/rehabilitation of bulk water supply and multi-purpose dams. These may involve new dam construction or the rehabilitation and expansion of an existing dam or the water treatment facility and water distribution network may rely on the performance (storage and operation) of a Dam under Construction (DUC).	
Projects in Disputed Areas (OP/BP 7.60) [*]		This policy is not triggered because the AF/PPP will not finance any pipeline sub-projects in disputed areas	X
Projects on International Waterways (OP/BP 7.50)		The policy is not triggered for the project. In the case of the water projects that may be funded by IFPPP may rely on water resources from other countries, World Bank's OP for projects on International Waterways will be triggered. In this case, appropriate actions will be taken with respect to Riparian notification in line with policy guidelines.	X

6.1.1 Environmental Assessment (OP4.01)

This policy requires Environmental Assessment (EA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision-making. The EA is a process whose breadth, depth, and type of analysis will depend on the nature, scale, and potential environmental impact of the proposed investments under the IFPPP-AF. The EA process takes into account the natural environment (air, water, and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples, and cultural property) and transboundary and global environmental aspects.

The adverse environmental and social impacts under IFPPP-AF will come from the proposed investments and associated activities. However, since the exact location of these investments will not be identified before bank appraisal of the project, the Banks' EA policy calls for the GoK to prepare an Environmental and Social Management Framework (ESMF) in accordance with its' procedures.

¹⁴

^{*} By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas

OP4.01 is triggered because the IFPPP-AF will finance preparatory activities of projects (feasibility studies) that would later lead to civil works including the rehabilitation and refurbishment of existing infrastructure, as well as the construction of new infrastructures across different sectors. This ESMF establishes a mechanism to determine and assess future potential environmental and social impacts during implementation of IFPPP-AF activities, and sets out mitigation, monitoring and institutional measures to be taken during operations of these activities, to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels.

In regard to disclosure of the ESMF report, World Bank requires that the report be disclosed as a separate document as a condition for Bank appraisal. This report will be disclosed to the general public to meet this requirement as well as the InfoShop of the World Bank and the date of disclosure will precede the date for appraisal of the program. The World Bank system assigns a project to one of three project categories, as defined below:

The extent and type of environmental and social assessment required by the World Bank is a function of the project's environmental impact and hence, its environmental screening category. The World Bank undertakes environmental and social screening of each proposed subproject to determine the appropriate extent and type of environmental and social assessment. The World Bank classifies projects into one of three categories (A, B and C), depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts.

Table 5. World Bank EA Screening Categories

Category “A”	An EIA is always required for projects that are in this category. Impacts are expected to be ‘adverse, sensitive, irreversible and diverse with attributes such as pollutant discharges large enough to cause degradation of air, water, or soil; large-scale physical disturbance of the site or surroundings; extraction, consumption or conversion of substantial amounts of forests and other natural resources; measurable modification of hydrological cycles; use of hazardous materials in more than incidental quantities; and involuntary displacement of people and other significant social disturbances.
Category B	When the subproject’s adverse environmental impacts on human populations or environmentally important areas (including wetlands, forests, grasslands, and other natural habitats) are less adverse than those of Category A subprojects. Impacts are site – specific; few, if any, of the impacts are irreversible; and in most cases, mitigation measures can be designed more readily than for Category A subprojects. The scope of environmental assessment for a Category B subproject may vary from sub-project to sub-project, but it is narrower than that of a Category A sub-project. It examines the subproject’s potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.
Category C	If the subproject is likely to have minimal or no adverse environmental impacts. Beyond screening, no further environmental assessment action is required for a Category C sub-project.

The IFPPP-AF is rated as Category A. “Category A” project is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works. The EA for a Category A project examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the "without project" scenario), and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

For a Category A project, the borrower is responsible for preparing a report, normally an Environmental and Social Impact Assessment (or a suitably comprehensive regional or sectoral EA).

However, sub project investments within the overall IFPPP-AF may be categorised and rated as A or B and not necessarily A. All investments in this IFPPP-AF will be subjected to mandatory screening to determine whether they require further environmental analysis or otherwise.

6.1.2 *Involuntary Resettlement (OP 4.12)*

The objective of this policy to avoid where feasible, or minimize, exploring all viable alternative project designs, to avoid resettlement. This policy is triggered in situations involving involuntary taking of land and involuntary restrictions of access to legally designated parks and protected areas. The policy aims to avoid involuntary resettlement to the extent feasible, or to minimize and mitigate its adverse social and economic impacts.

This policy covers direct economic and social impacts that both result from Bank-assisted investment projects, and are caused by (a) the involuntary taking of land resulting in (i) relocation or loss of shelter; (ii) loss of assets or access to assets, or (iii) loss of income sources or means of livelihood, whether or not the affected persons must move to another location; or (b) the involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.

The policy prescribes compensation and other resettlement measures to achieve its objectives and requires that borrowers prepare adequate resettlement planning instruments prior to project appraisal of proposed projects. The main objective of this policy is to (i) avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs; and (ii) assist displaced persons in improving their former living standards, income earning capacity, and production levels, or at least in restoring them; and (iv) provide assistance to affected people regardless of the legality of land tenure..

The policy requires the displaced persons and their communities, and any host communities receiving them, are provided timely and relevant information, consulted on resettlement options, and offered opportunities to participate in planning, implementing, and monitoring resettlement; and appropriate and accessible grievance mechanisms are established for these groups. In new resettlement sites or host communities, infrastructure and public services are provided as necessary to improve, restore, or maintain accessibility and levels of service for the displaced persons and host communities.

A Resettlement Policy Framework (RPF) has been prepared that establishes standards and procedures for the preparation of Resettlement Action Plans (RAPs), as required. The RAPs would be prepared by IFPPP-AF Contracting Authorities. For individual investments/subproject the RAP will be prepared when a project activity, in the cases mentioned above, for example, causes the involuntary taking of land and other assets resulting in:

- 1) *Relocation or loss of shelter,*
- 2) *Loss of assets or access to assets,*
- 3) *Loss of income sources or means of livelihood, whether or not the affected persons must move to another location,*
- 4) *Loss of land,*

A Resettlement Policy Framework has been prepared for the IFPPP-AF principally because the envisaged investments may involve land acquisition and or restriction of access to existing infrastructure. The RPF will guide preparation of Resettlement Action Plans (RAPs), where required.

6.2 Alignment of WB and GOK Polices relevant to this ESMF

Both the World Bank safeguards policies and GoK laws are generally aligned in principle and objective:

- *Both require screening of sub project investments in order to determine if further environmental analysis (ESIAs) is needed.*
- *Both require ESIA before project design and implementation (which also includes an assessment of social impacts).*
- *Both require public disclosure of ESIA reports.*
- *EMCA recognizes other sectoral laws while WB has safeguards for specific interests.*
- *The Bank requires that stakeholder consultations be undertaken during planning, implementation and operation phases of the project which is equivalent to the EMCA requirements.*
- *Additionally, statutory annual environmental audits are required by EMCA.*
- *The national provisions for the management of resettlement related issues are not as fully developed and therefore not at par with the World Bank safeguard policy requirements. Thus, it is expected that the WB OP 4.12 will be mostly applied under the IFPPP-AF Programme and a separate document to guide the process, i.e. a Resettlement Policy Framework (RPF) document will be prepared as a standalone report to support the social management and acceptability of the projects.*

In Kenya, it is a mandatory requirement under EMCA 1999, EMCA (amendment) Act 2015, for all proposed development projects to be preceded by an ESIA study. However, prior to developing an ESIA, a project proponent is required to prepare a project report to aid NEMA in making a determination whether a full scale ESIA is necessary or not. Thus, under the laws of Kenya, environmental assessment is fully mainstreamed in all development process and starts with a screening process which is consistent with World Bank safeguard policies on EA that calls for mandatory screening as well to determine the rating category.

Project reports or Preliminary ESIAs (PESIAs) will be prepared for all the sub project investments under the IFPPP-AF to determine if they require a full scale ESIA. Further, in order to fully insure against triggers to WB safeguard policies, individual investments will be screened against each policy as part of the EA process.

6.3 Requirements for Public Disclosure

Prior to appraisal of the IFPPP-AF, this draft ESMF will be disclosed in country through posting on the National Treasury website www.treasury.go.ke, PPP Unit website

www.pppunit.go.ke, as well as in the Bank's infoshop. If there are any changes, a final version will be disclosed in the same manner and places described later.

7 DETERMINATION OF POTENTIAL ENVIRONMENT AND SOCIAL IMPACTS

This chapter analyses the potential positive (beneficial) and negative (adverse) environmental consequences of the sub project investments envisioned under the IFPPP-AF.

7.1 Positive Impacts

The infrastructure development investments supported under the Program could include infrastructure for:-

- Roads and Bridges
- Multipurpose Dams
- Hospitals
- Housing infrastructure for academic institutions and public servants
- Ports
- Convention and conference centres
- Marinas
- Export quarantine stations and livestock export zones
- Special economic zones
- Multi-level car parks
- Shopping centres
- Energy plants (co-generation facilities)
- Solid waste management infrastructures (landfills)
- Coal plants
- Geothermal projects
- Wind power plants
- Solar power plants
- LPG power plants
- Commuter rails systems and infrastructure
- Integrated Marine Transport Systems
- Berths and Container Terminals

7.1.1 *Government Fiscal Efficiency and Transparency*

Improved fiscal impact on government from better project preparation, better risk allocation, increased transparency, wider quality control, and greater efficiency are other positive impacts expected as a result of implementing this project.

7.1.2 *Modernization*

The private sector is often ahead in deploying modern day technology and business tools for improved efficiency. Through PPP therefore, the public can benefit from more modern technology in infrastructure and associated services.

7.1.3 Reducing risk for the public sector

PPP can help the public sector reduce financial risk by passing the burden of economic performance of infrastructure projects to the private sector

7.1.4 Providing alternative funding/freeing government funds

PPP arrangements attract investors and financial institutions and this helps to mobilize alternative funding for projects that may have been financed by scarce government resources

7.1.5 Improved legal, institutional and technical PPP growth environment

The primary objective of the program is to improve the legislative, institutional, financial, fiduciary and technical framework to generate a pipeline of bankable PPP projects. This is a definite positive impact that will result in improved legal, institutional, financial, fiduciary and technical framework supportive of pipeline bankable PPP projects.

7.1.6 Increased Private Sector Investment

By strengthening this PPP framework, the IFPPP project will put in place the necessary foundation for Kenya to realize the benefits of PPPs, including increased private investments in infrastructure. This framework will allow increasing the availability and quality of infrastructure in different sectors to boost enterprise growth and productivity and improve the wellbeing of Kenyans.

7.1.7 Employment and Improved Service Delivery

Increased employment opportunities, improved service delivery to enterprises and the population across the stated sectors in general remains one of the positive benefits that will arise from the IFPPP sub projects.

7.1.8 Provide funding to maintain infrastructure overtime

As PPPs are run as revenue generating enterprises, often with loan repayment obligations, there is an underlying driver to maintain the income generating facilities. Indeed, lack of maintenance has been one major reason for Kenya's poor state of infrastructure.

7.1.9 Improved economic growth

Poor infrastructure has been identified as one of the primary causes of poor economic and employment growth in Kenya. If the PPP succeeds therefore, the program will translate to overall measurable economic growth for the country.

7.1.10 Employment and Improved Service Delivery

Increased employment opportunities, improved service delivery to enterprises and the population across the water sector in general remains one of the positive benefits that will arise from the IFPPP-AF sub project investments. Under the Kenya Economic Stimulus Programme, emphasis has been placed on applying human labour in projects in order to provide significant employment opportunities. This project is no different and will therefore provide substantive employment opportunities to local populations. It is anticipated that the project will provide direct employment during the construction phase and another operational stage. Indirect employment through aspects such as transportation, infrastructure maintenance, markets, research and marketing will be far much greater and over a longer period of time.

7.1.11 Increase Water Supply

Bulk water supply systems under this program will ensure that the general public in the targeted areas have access to clean water supply a pre-requisite for health and sanitation and a basic right as per the constitution of Kenya including part of the MDGs.

7.1.12 Improved economic growth

Poor infrastructure has been identified as one of the primary causes of poor economic and employment growth in Kenya. If the IFPPP-AF succeeds, the program will translate to overall measurable economic growth for the country.

7.1.13 Flood Control and Water Resources Conservation

Flood control sub project activities will have a direct impact on reducing effects of flood disasters like water and sanitation, displacement etc. Flood control effects of the project will free more land for farming as well as prevent destruction of food crops for those farmers who cultivate floodplains during the dry season. This indirect impact will help achieve food security especially for rain depended crops. This is an immediate impact that will be realized during wet season when floods occur. The IFPPP-AF will invest in infrastructures that will be used by local communities' water harnessing and storage.

7.2 Potential Adverse Impacts

The potential adverse environmental and social impacts of the IFPPP-AF are numerous and this ESMF highlights these impacts which are broad and cross cutting across most of the envisaged investments projects. However, the specific adverse impacts for each investment will be distinguished during the preparation of the specific ESIA or ESMP based on the sub project investment environmental category once the screening process is complete.

7.3 Adverse Environmental Impacts

7.3.1 Loss of vegetation

There will be vegetation loss during the construction phase (for project investments) either to pave way for access roads, actual project construction among others. The vegetation will be cleared so that the area where the construction work is to take place is clear for the construction work to be performed. The construction works will involve direct land take of productive pasture land and agricultural lands, bush clearing, removal of top soil, excavation and mass haulage. These activities will expose the land to elements of erosion such as wind and water and thus will trigger the process of land degradation.

7.3.2 Change in Hydrology

Abstraction of water for bulk water storage, hydropower, multipurpose will have impact of the hydrological flow of the riverine system. The impact will affect the general hydrological flows including current existence of water bodies.

7.3.3 Loss of Fauna

Potential investments may generally fragment ecosystems, isolating species population and cutting off migrations and other movement. For example, dams will block the

upstream and downstream passage of migrating aquatic animals. This will isolate them from vital spawning and feeding areas. Many fish and invertebrates inhabit the river bottom, but these habitats will decline due to depletion of riverbed gravels. Destruction of wild fauna habitat due to construction (on site and along road rehabilitation profile/borrow pit sites).

7.3.4 Soil Erosion

Soil erosion could occur during the construction phase when loose soil is swept by waters. This will be as a result of the intensive activities that will be going on in the construction areas especially land clearing. The heavy equipment and machines that shall be used in the construction process will interfere with the soil structure making it loose hence liable to erosion.

7.3.5 Decreased Water Quality

Increase in suspended particles due to construction works; risk of human contamination from construction camps; and competition for water will affect the water quality especially where investment projects are close to natural water bodies. Suspended particles including soil from the neighbouring catchment area will contribute to this.

Blasting is used to loosen or break up rocks for removal. It is used during excavation of bedrock. Potential environmental impacts include dust (air quality), contaminant spills, sedimentation, safety (workers, storage), fly rock and debris, noise and explosive detonation effects on people and structures.

7.3.6 Downstream Impacts of Dams, Dykes and Weirs

Changes to the low flow regime may have significant negative impacts on downstream users, whether they abstract water (drinking supplies) or use the river for transportation or hydropower. Minimum demands from both existing and potential future users need to be clearly identified and assessed in relation to current and future low flows. The quality of low flows is also important. Return flows are likely to have significant quantities of pollutants.

Habitats both within and alongside rivers are particularly rich, often supporting a high diversity of species. Large changes to low flows ($\pm 20\%$) will alter micro-habitats of which wetlands are a special case. It is particularly important to identify any endangered species and determine the impact of any changes on their survival. Such species are often endangered because of their restrictive ecological requirements.

The ecology of estuaries is sensitive to the salinity of the water which may be determined by the low flows. Saline intrusion into the estuary will also affect drinking water supplies and fish catches. It may also create breeding places for anopheline vectors of malaria that breed in brackish water.

As a result, in the cumulative impact analysis which would be done for each investment the impact of a given project on those people should be considered. The most important mitigation measures are the release of good quality Reserve Flows capable of maintaining important environmental services, and satisfying downstream water requirements. In

addition, the measures taken in the catchment areas in order to improve the longevity as well as the operation of the multipurpose dams could affect the livelihoods means of the people living upstream.

7.3.7 Borrow Pits and Quarry Sites

Borrow pits and quarry are sites where stone, sand, gravel, till, clay, or other granular soils are extracted for construction of the various investments within IFPPP-AF. The term ‘pit’ is used when granular material is extracted. The term ‘quarry’ is used where consolidated rock is removed. Environmental impacts of pit and quarry development can include the loss, reduction or disturbance to wildlife and habitat, erosion, dust, soil/groundwater contamination, damage to historic resources, waste disposal, noise, and aesthetics.

7.3.8 Impacts on Ecosystems

Potential environmental impacts will result from the creation of the diversion sites and structures themselves, and from operational management of diversion sites and the impacts on downstream riverine ecosystems, including maintenance of in stream and riparian habitats. Downstream impacts on riverine ecosystems are considered above under downstream environmental flows and these are considered to be the primary environmental impacts associated with the development of these water supply abstraction sites. Off-take of water will result in reduced stream flows especially during the dry season. For sub projects likely to affect environmental flows in river basins, the use of internationally recognised guidelines on mitigating such impacts will be required for instance the recommendations by WB on Environmental Flows in Water Resources Policies, Plans, and Projects among other international guidelines.

7.3.9 Decreased Air Quality

Airborne dust will be caused by excavation, vehicle movement hence engine combustion and materials handling, particularly downwind from the construction sites during the construction phase of the identified investments. Uncovered stock piles and asphalt mixing plant operations are another source of dust. Air pollution will be further caused by emissions from vehicles and construction machinery. There will be decreased air quality due to dust, suspended particles, hydrocarbon vapours, oxides of nitrogen and sulphur (NO_x and SO_x) and Volatile Organic Compounds (VOC) among other emissions.

7.3.10 Changes in downstream morphology of the riverbed and banks

The impact of the proposed water projects like bulk water supply dams on downstream habitats will be through changes in the sediments load of the rivers. All rivers carry some sediment as they erode their watershed. When the river is held behind a dam in the reservoir for a period of time, most of the sediment is trapped in the reservoir and settle to the bottom. Clear water below the dam will recapture its sediments load by eroding the downstream bed and banks. Eventually all the erodible material on the riverbed below the dam will be eroded away, leaving a rocky streambed, and a poorer habitat for aquatic fauna. However, this is a phenomenon that will be experienced up until the river reaches new sediment load equilibrium.

Proposed investments may affect and change downstream water quality and will manifest in change in river temperature, nutrient load, and turbidity; dissolve gases, concentration of heavy metals and minerals. For example, for dam projects, when river water is held in a reservoir for a period of time, the quality of the water is affected. When a reservoir is first formed, submerged vegetation and soil decomposes. As it does so it will deplete oxygen in the reservoir water. Deoxygenated water can be lethal to both plant and animal lives.

7.3.11 Dam safety related impacts and Flooding

Poor dam design and maintenance may lead to dam breakage and therefore flooding that may lead to deaths and destruction of property. In case of dam break, it can have far reaching impacts on the downstream communities. Emergency plans and procedures will have to be developed to handle such an incidence. Although its occurrence may have far reaching consequences, the impact is mitigable and the probability of its occurrence will be minimized through dam safety plans, inspection procedures and disaster management procedures and thus the magnitude of this impact is expected to be medium negative.

7.3.12 Noise and Vibration Impacts

Construction activities could result in significant noise impacts so as to impact on general well-being, health and functioning. Large scale infrastructure developments involve the use of heavy equipment (graders, drilling equipment, trucks, blasting equipment, tractors, and excavators) for among others rock blasting, excavation, asphalt mixing plant operations and vehicular movement that emit incessant noise usually harmful to the environment. Introduction of new sources of noise is an issue in areas where ambient noise levels have been low.

7.3.13 Air Quality Impacts

Construction and operation activities of investments e.g. coal plants, could result in significant air quality impacts so as to impact on general well-being, health and functioning. Large scale infrastructure developments involve the use of heavy equipment (graders, drilling equipment, trucks, blasting equipment, tractors, and excavators) for among others rock blasting, excavation, asphalt mixing plant operations and vehicular movement that emit gaseous usually harmful to the environment and human health.

7.3.14 Health and Safety of Construction Workers

Occupation health and safety of the workers during the construction phase (and in certain cases operation phase) is likely to be a concern due to the accidents that normally occur in construction sites that could cause loss of life, limbs among others.

7.3.15 Solid and Effluent Waste Hazards Generation and Pollution

Solid waste issue is a potential adverse impact that will be as a result of abandonment of litter/construction materials on site, use of plastic container/bags by road users and the construction crew and use of polythene sheet for curing by the contractor. Construction camps may be a further source of both solid and liquid wastes.

7.3.16 Visual Intrusion:

Unsightly earthworks and borrow pits during construction may be a source of visual related impacts especially through scarring of landscapes. During operations, visual intrusion of equipment on site may be seen as a negative impact at the local level.

7.4 Social Impacts

7.4.1 Diseases Spread-Public Health

Dams and diversion weirs could impact the health situation of those living close to them due to increase in the number of mosquitoes as one example.

There is a potential risk that the construction process for most of the investment projects could increase HIV/AIDS prevalence in the project areas especially through interactions of the locals with the labour forces. Increase in risk of sexually transmitted diseases, such as HIV/AIDS etc. due to influx of migrant workers; solid waste and effluent discharge from construction camps; risk of increase in vectors of *schistosomiasis*, *river blindness*, *Lymphatic filariasis (elephantiasis)* and malaria due to stagnant water associated with construction works/borrow pits etc. (targeting bulk water supply schemes, flood management, dams, roads, ports, bridges, housing etc.).

7.4.2 Incessant Traffic including accidents

Traffic congestion from construction and operation phases of the investments and which could potentially cause disruption, health and safety impacts, as well as economic impacts. The use of heavy moving construction vehicles and machineries in project sites is generally known to cause traffic reducing movement and flow of vehicles. It is also further envisaged that with the improvement of the transport sector (i.e. construction, expansion or of new roads, highways and bridges) the traffic volumes and speeds will increase, and composition will change. This is likely to cause increased frequency and severity of accidents.

7.4.3 Loss of Land

There will be loss of farm land, grazing land, business and structures among others by the local communities owning the land. The construction of dams, bulk water supply systems, among others. The existing land use of the project area will be affected by the construction of access roads, construction camps, opening up of material sites and quarry sites among others. These will scar the land, cause vegetation loss leading to soil erosion. The construction activities in almost all the sectors will involve a relatively high degree of land take bearing in mind that most of the projects are linear in nature thus requiring adequate land and space.

There are populations who may lose their land, assets and means of livelihood due to infrastructures and programs needed for the investment under IFPPP-AF especially when investments such as roads and bridges, ports, housing, railways, multipurpose dams, surface and underground water development, and catchment management, among others are considered.

7.4.4 Impact on social fabric and community relations

Some of the infrastructure as well as loss of land can cause communities to be separated and some of the social and economic relations and reliance disturbed. For example, bridges, ports, roads or dams are likely to segment the communities and in certain instances deny them access to land and to one another.

7.4.5 Resource Use Conflicts

Increasing dam construction investments and as a result in the increase in the amount of land for infrastructure and could cause conflict between those with different water needs such as agriculturists and pastoralist, fishery, household use, to name some.

Flood control investments could limit the access of those who use the flood plain for cultivation. The investments that are forming users' associations should make sure they are inclusive of all users and groups, including women, pastoralists, agriculturists, businesses in the area, fishermen, among others. The project can cause some changes in social processes such as demographic change and resource-use conflicts.

7.4.6 Gender Issues and Impacts

Women have different needs and use of water including for domestic household use, small households plots for agriculture, for animals among other things. Construction of dams, bulk water storage facilities can limit women access to water for such needs. As a result, different needs of women with respect to land and water use should be taken into consideration when designing the investments under IFPPP-AF to avoid their potential discrimination from access to land and water as a result of the IFPPP-AF.

7.4.7 Impacts on Vulnerable and Marginalised Groups

Vulnerable groups include special marginalised groups, poor orphans, and child headed households, the sick or are poor, poor elderly and female headed households among others and who may be adversely affected by the proposed investments especially in the event that their status as vulnerable or marginalised groups is not considered in the preparation of the specific investments. In order to ensure that vulnerable groups are given special attention, a Vulnerable and Marginalised Groups Framework (VMGF) has been prepared for the IFPPP-AF which will include the preparation of specific Vulnerable and Marginalised Groups' Plans (VMGPs).a vulnerability assessment will be undertaken as part of the RAP and a plan for target support and or livelihoods restoration prepared to address the needs of the vulnerable persons.

7.4.8 Increased Crime and In-Migration

The increase in the number of people in a specific project area or site especially during construction has the potential to lead to a number of negative socio-economic impacts, including increased insecurity and community conflicts, increased incidences of diseases; increased risk of accidents and occupational hazards; and immigration of construction workers and labour force management challenges.

7.4.9 Employment Issues

The construction activities of sub project investments may require recruitment of "foreign" skilled and unskilled labour that could trigger conflict, resentment and tension

by the local communities over perceived inequities in distribution of job opportunities by the local communities.

7.4.10 Labor Influx Impacts

The influx of workers and followers can lead to adverse social and environmental impacts on local communities, especially if the communities are rural, remote or small. Such adverse impacts may include increased demand and competition for local social and health services, as well as for goods and services, which can lead to price hikes and crowding out of local consumers, increased volume of traffic and higher risk of accidents, increased demands on the ecosystem and natural resources, social conflicts within and between communities, increased risk of spread of communicable diseases, and increased rates of illicit behavior and crime. Such adverse impacts are usually amplified by local-level low capacity to manage and absorb the incoming labor force, and specifically when civil works are carried out in, or near, vulnerable communities and in other high-risk situations.

The increase in the number of people in a specific project area or site especially during construction has the potential to lead to a number of negative socio-economic impacts, including increased insecurity and community conflicts, increased incidences of diseases; increased risk of accidents and occupational hazards; and immigration of construction workers and labour force management challenges.

The construction activities of sub project investments may require recruitment of “foreign” skilled and unskilled labour that could trigger conflict, resentment and tension by the local communities over perceived inequities in distribution of job opportunities by the local communities.

7.4.11 Workers Camp

Construction activities for identified sub projects may require establishment of construction camps for workers. Labour camps could lead to environmental impacts on biophysical and socio-economic environment including construction related impacts on the biophysical environment as highlighted above as well as social impacts related to labour influx, public health concerns among others as discussed.

7.5 POTENTIAL CUMULATIVE IMPACTS

Cumulative Impact Assessment (CIA) has been defined, and is applied in this Section, as the analysis of all the effects on an area from one or more activities as they accumulate over time and space (IPENZ, 2000). Cumulative effects can be different in nature (e.g. additive, synergistic or interactive), larger in magnitude, greater in significance, more long-lasting, and/or greater in spatial extent than is the case with individual effects (IPENZ, 2000). Additionally, the individual impacts from a single development may not be singularly significant on their own, but when combined with other impacts, those effects could become significant (Cooper, 2004).

IFPPP-AF investment projects may individually have insignificant adverse environmental impacts. However, several water investments in combination, or in combination with

other government or private sector activities within the water sector, could have a larger, more significant cumulative impact.

7.6 Environmental and Social Management Process

This ESMF contains potential mitigation measures and monitoring indicators (*see tables 6 and 7*) through which the adverse impacts for specific sub project investments may be managed. However, each sub project investment will have to prepare ESIA/ESMP. The ESIA/ESMP for each sub project should at a very minimum contains among others;-

- *Description of the possible adverse effects that the ESMP is intended to address;*
- *Identification of project design alternatives that would meet similar objectives, and a description of why these projects are not viable, especially if they have a lesser environmental or social impact;*
- *Description of planned mitigation measures, and how and when they will be implemented*
- *Program for monitoring the environmental and social impacts of the project, both positive and negative;*
- *Description of who will be responsible for implementing the ESMP; and*
- *Cost estimate and source of funds.*

7.6.1 Mitigation considerations and options

All moderate to major adverse impacts are considered for mitigation. Specific measures have been suggested in this regard where practicable. With regard to negligible and minor impacts where the project activity is not expected to cause any significant impact in such cases, best practice measures and mitigation have also been recommended where appropriate to improve the environmental and social performance of the Project. The mitigation options considered may include project modification, provision of alternatives, project timing, pollution control, compensations and relocation assistance. In cases where the effectiveness of the mitigation is uncertain, monitoring programs are introduced.

7.6.2 Recommended mitigation measures

The mitigation measures or guidelines have been designed in order to avoid, minimize and reduce negative environmental and social impacts at the project level. The mitigation measures are presented in the following tables in a descriptive format.

Table 6: Proposed mitigation measures

Impacts	Description of mitigation measures
Physical Environment	
Waste disposal	<p><u>Solid nontoxic waste</u> Adequate waste receptacles and facilities should be provided at project sites/camp sites</p> <p>Training and awareness on Safe Waste Disposal in construction camps for all workers</p> <p>Final disposal should be at dumpsites approved by the NEMA</p> <p><u>Waste oil /fuel</u> Spent or waste oil from vehicles and equipment should be collected and temporarily stored in drums or containers at site</p>

	<p>Waste oil should be disposed of by oil marketing companies or agents approved or recognized and have the capacity to undertake oil disposal</p>
Air pollution	<p>Proposed investments should require that construction contractors operate only well maintained engines, vehicles, trucks and equipment. A routine maintenance program for all equipment, vehicles, trucks and power generating engines should be in place.</p> <p>The project should ensure the use of good quality fuel and lubricants only</p> <p>If dust generation at the project/construction site becomes a problem, limited wetting of sites and or unloading and reloading points should be done to reduce dust raising</p> <p>Construction traffic speed control measures should be enforced on unpaved roads (speed limits through communities should be ≤ 50km/hr on unpaved roads and near or at project site should be ≤ 30 km/hr).</p> <p>Engines of vehicles/trucks and earth-moving equipment should be switched off when not in use.</p>
Noise and vibration	<p>Proposed investments should require contractors to use equipment and vehicles that are in good working order, well maintained, and that have some noise suppression equipment (e.g. mufflers, noise baffles) intact and in working order. This will be achieved by making it a component of contractual agreements with the construction contractors.</p> <p>Contractors will be required to implement best driving practices when approaching and leaving the site (speed limit of ≤ 30 km/hr) to minimize noise generation created through activities such as unnecessary acceleration and breaking squeal.</p> <p>Engines of vehicles/trucks and earth-moving equipment should be switched off when not in use.</p>
Impacts on Landscape and Visual Receptors	<p>Landscaping of facilities after construction and restoration of disturbed areas e.g. borrow pits</p>
Impact on traffic and Public safety	<p>Only road worthy vehicles and trucks should be used to avoid frequent breakdowns on the roads</p> <p>Only experienced drivers should be employed</p> <p>Contractors must provide training for drivers; Establish speed limits; Enforce safe driving and take disciplinary action against repeat offenders</p>
Water use	<p>Obtain water abstraction permits from the Water Resources Management Authority (WRMA)</p>
Water pollution	<p>No garbage/refuse, oily wastes, fuels/waste oils should be discharged into drains or onto site grounds</p> <p>Fuel storage tanks/sites should be properly secured to contain any spillage</p> <p>Maintenance and cleaning of vehicles, trucks and equipment should take place offsite especially where project sites are close to water bodies.</p> <p>Toilet facilities should be provided for construction workers to avoid indiscriminate defecation in nearby bush or local water bodies</p>
Soil and Land degradation	<p>Minimize land clearing areas as much as possible to avoid unnecessary exposure of bare ground to the elements of the weather</p> <p>Re-vegetate cleared areas as early as possible using native plant species</p> <p>As much as possible, avoid construction work in the rainy season</p>
Impact on fauna and habitat	<p>Avoid unnecessary exposure and access to sensitive habitat areas</p>

	<p>For identified or suspected sensitive habitats (swamps/ wetlands), regular inspection or monitoring should be carried out in the area prior to start and during work.</p> <p>If sensitive habitats are encountered, Project activities should cease and the Project should consult KWS to determine the appropriate course of action.</p> <p>If the project site is discovered as a sensitive habitat area, the Project should engage the KWS to develop a suitable plan.</p> <p>Prohibition on hunting and consumption of bush meat by workforces</p>
Impacts on inland water bodies/ Fauna/habitat	<p>Proposed investments should require that contractors implement a hazardous materials management plan that includes specification for proper storage and handling of fuels, oil, wastes, and other potentially hazardous materials as well as a plan for containment and clean-up of accidental spills into the aquatic environment.</p> <p>During pre-installation and installation of project facilities, spotting of sensitive aquatic mammals should form part of the project activities. Should these species be observed in the vicinity of the work area, the project should execute measures to avoid destruction or disturbance.</p> <p>Ensure provision for water flow reserves and appropriate reservoir filling schedules</p> <p>Project staff must report sightings of any injured or dead aquatic life (fishes)/ mammals immediately, regardless of whether the injury or death is caused by a Project activity. The report should include the date and location of the animal/strike, and the species identification or a description of the animal. The report should be made to the NEMA or KWS.</p> <p>The Project workforce and local communities should be educated to ensure that the importance of environmental protection and nature conservation are effectively communicated and that wider appreciation of environmental issues and construction best practice are fostered.</p>
Social Environment	
Physical displacement	<p>All affected persons to be given relocation assistance (cash or kind) by the Project to enable them move their properties to new locations, i.e. in accordance with the Resettlement Policy Framework (RPF)</p> <p>Resettlement Plans will be required. If a site is acquired, the State may relocate persons and their families as well as community facilities to be affected. The affected families should not be made to incur any cost during the relocation period. A resettlement plan should be prepared for this area with the RPF as a guide.</p>
Loss of Employment and livelihoods	<p>Those whose livelihood is affected should be assisted to ensure they will not be worse off as a result of the project. This can include livelihood assistance, provision of new jobs immediately without any loss of income. The social assessments and socio-economic surveys, which will be undertaken for the preparation of individual investments/subprojects as well as the resettlement action plans, should assess these issues and provide measures in accordance with the Resettlement Policy Framework (RPF).</p> <p>Contractors should use local labor as much as possible and where available. As much as possible, all unskilled labor should be contracted or obtained from the local community.</p>
Loss of land and other assets	<p>Due process should be followed to establish the true owner of any land, be it family or communal land. Once established, the project should acquire the site by paying appropriate compensation in accordance with the resettlement policy framework (RPF), which would be the replacement cost of the assets lost.</p>

Loss of structures/properties	<p>For a project site to be used, irrespective of the land ownership, appropriate compensation should be paid for any structures/ properties which are permanent structures at the site as well as investment made for any development on the land.</p> <p>Depreciation should not be factored during valuation of these properties. The compensation process should satisfy the RPF developed for the project.</p> <p>Appropriate compensation should be paid for any damaged or destroyed propriety that belongs to affected persons. No depreciation during valuation of these properties.</p>
Impact on access among communities living in the project areas	<p>Measures will be considered in the projects' design to ensure that communities are not divided and if they are as a result of a project appropriate measures are taken to mitigate this impact.</p>
Impacts on recreation and public areas	<p>Appropriate notices and warning signs will be erected around working areas and public areas to warn prospective trespassers of any danger or risk</p>
Impacts on Human Health/ Traffic Safety and sanitation	<p>Trucks carrying construction materials such as sand, quarry dust, laterite etc. will have the buckets covered with tarpaulin or appropriate polythene material from or to project site</p> <p>Only road worthy vehicles/trucks should be used</p> <p>Only experienced drivers/operators should be employed</p> <p>Except for areas secured by fencing, all active construction areas will be marked with high-visibility tape to reduce the risk accidents involving pedestrians and vehicles.</p> <p>All open trenches and excavated areas will be backfilled as soon as possible after construction has been completed. Access to open trenches and excavated areas will be secured to prevent pedestrians or vehicles from falling in.</p> <p>Adequate sanitary facilities will be available for workers and open range defecation will not be countenanced.</p> <p>Construction workers will be provided with and educated to wear suitable Personal Protective Equipment (PPE) including hard hats, overalls, high-visibility vests, safety boots, earplugs, gloves etc. Enforce use of PPEs at all times for all staff and labourers and ensure supervision of the same to minimise accidents</p> <p>Construction workers should be educated to adhere to basic rules with regard to protection of public health, including most importantly hygiene and disease (HIV/AIDS) prevention.</p>
Impacts on cultural heritage / archaeological interest / existing ecologically sensitive areas	<p>The pre-construction surveys should identify cultural heritage resources and existing ecologically sensitive areas that the project should avoid and by-pass these resources.</p> <p>The Project should implement a chance find procedure and reporting system to be used by contractors in the event that a cultural heritage feature or ecologically sensitive item/issue is encountered.</p>
Impacts on Human Health and Public Safety	<p>The Project will require all contractors to implement an Environmental, Health and Safety (EHS) plan which will outline procedures for avoiding health and safety incidents and for emergency medical treatment. This will be achieved by making it a component of contractual agreement.</p> <p>Contractors will be required to wear suitable Personal Protective Equipment (PPE) including hard hats, high-visibility vests, safety boots and gloves and life vests as appropriate in accordance with the EHS plan.</p>

	<p>Enforce use of PPEs at all times for all staff and labourers and ensure supervision of the same to minimise accidents</p> <p>All construction and other workers will be sufficiently trained in the safe methods pertaining to their area of work to avoid injuries.</p>
Labor related issues	The project to prepare redundancy plans and packages to be discussed with affected workers which will include re- training and re- tooling of affected workers and aim to avoid labor strife.
Waste Pollution from construction camps	<p>Prepare Waste Disposal Plan for every construction site</p> <p>Install waste disposal receptacles and signs in strategic places within the construction camps</p> <p>Provide training and awareness on need to avoid littering</p> <p>Ensure the construction camps have toilets and connected to the sewer system</p>
Impact on gender access to water for household use and household plots as well as impact on pastoralists and fisheries.	The project will take into consideration the different needs for water and types of access which will be affected for each of these groups and provide relevant mitigation measures which will be decided with those affected. Some mitigation measures could include water points for household use and livestock; livelihood assistance to those whose whole or partial livelihood will be affected as a result of some of the possible investments such as dams. Specific impact and relevant measures will be covered by project specific social assessment.
Impacts on vulnerable and marginalized groups (orphans, child and women headed households, the sick, elderly etc.)	The project will ensure that all the vulnerable and marginalised groups are identified and profiled and specific plans are designed for each investment to consider the wellbeing of the vulnerable and marginalised groups identified.
HIV/AIDS Spread and other related Public Health Diseases – Water borne diseases etc.	<p>Design HIV/AIDS awareness, sensitisation and prevention program for each project that extends to the communities as a whole;</p> <p>Design programs for reducing the spread of water borne diseases like Malaria, Bilharzia etc. in collaboration with the Ministry of Health</p>
Downstream Impacts of Dams and other water infrastructure e.g. bulk water supply,	Maintain environmental flow reserves for the river, Do into retain water in reservoir during drought, ensure that water retention in dam is controlled to ensure that adequate reserve is left to flow downstream for users
Dam Safety Impacts	Ensure dam is designed by specialists; Institute a dam safety panel and develop a dam safety plan for all dams
Construction Camp Impacts	Where appropriate, additional measures should be developed to address any additional environmental and social issues (e.g. cumulative and induced impacts) that may arise during construction.
Labour and Employment Related Impacts	Ensure that the local communities are given priority in relation to employment and provided with training (skilled) to provide future labour in the project e.g. operation and maintenance

7.7 Monitoring Plans and Indicators

7.7.1 Monitoring of Environmental and Social Indicators

The goal of monitoring is to measure the success rate of the project, determine whether interventions have resulted in dealing with negative impacts, whether further interventions are needed or monitoring is to be extended in some areas. Monitoring indicators will be very much dependent on specific project contexts.

Monitoring Levels-Overall Project Level

The National Treasury will be responsible for monitoring and reporting on compliance with the ESMF. The National Treasury will ensure that sub projects investments are screened, their safeguard instruments prepared, cleared and disclosed prior to sub project approval. Even though the IFPPP-AF funds by the World Bank will not be used for construction (Private sectors and public funds expected to fund construction activities), due to the principle of association, the Bank will be provided with all safeguard

instruments prepared for review and archiving. Further, National Treasury will ensure that Contracting Authorities implement or cause their contractors to implement the specific sub project ESMP, and submit reports on ESMP implementation as required.

Within the National Treasury, monitoring and surveillance of all the sub project investments will be undertaken by the IFPPP/PIU/PFF that has been established for the project. The National Treasury/ IFPPP/PFF will report results of this monitoring to the Bank. There are plans to establish a PFF which may eventually take on the overall management of the project and the PFF will have technical experts including safeguards.

Bank’s Monitoring Support

The Bank will provide the second line of monitoring compliance and commitments made in the ESMP through supervision albeit in a less frequent manner and detail as compared to the first line of monitoring that will be undertaken by the PIU/PFF. The bank will further undertake monitoring during its scheduled project supervision missions.

Specifically, for each year that the agreement is in effect, sub project Contracting Authorities within the IFPPP-AF will be required to submit to the PIU all the monitoring reports and the PIU will consolidate and summarise these reports and submit to the Bank as part of its reporting to the Bank and the Bank supervision missions will review these reports and provide feedback.

Sub Project Level Monitoring

The second level of monitoring will be at the sub project level where the safeguard instruments for the investments will and must include a monitoring plan for which the Contracting Authority and private partner will be responsible for ensuring that monitoring is carried out. Each sub project investment will set up an implementation unit solely responsible for executing the investment and which will include responsibility for monitoring and reporting all the elements in the ESMP on day to day or periodically as specified in the monitoring plan. The sub project level monitoring reports will be submitted to the environmental safeguards specialist at the IFPPP/PIU for review and analysis.

All sub project investments will be subject to mandatory annual environmental audit /supervision to ensure that they comply with national requirements by EMCA.

Table 7: Monitoring indicator

Monitoring Level	Monitoring Issue	Verifiable Indicators	Responsibility
ESMF Level	Adequate dissemination of ESMF and RPF to stakeholders	Record of consultations and meetings;	NT, Consultants
	Capacity building and training programs	Workshop reports.	NT, Consultants
Project Investment Level	Preparation of environmental and social impact assessment report	Independent consultants hired to prepare ESIA and/ RAP documents	Contracting Authorities/ Consultants
	Environmental permitting	Environmental Permits for sub projects	Investor, Contracting Authorities/Consultants and

	Monitoring and evaluation	Environmental Management Plans, Monitoring Reports, Annual Reports Environmental	NEMA Investor, Authorities/ and NEMA	Contracting Consultants
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Table 8: Project monitoring indicators and responsibilities

Impact issue	Proposed Action/ Measures	Implementation tool/criteria	Monitoring indicators (Inputs)	Monitoring Indicators (Outcomes)	Verification	Project stage	Responsibility
Solid waste disposal	Provide adequate waste reception facilities at construction camp sites Dispose of waste at approved waste collection sites	Waste management plan/Construction site management plan	Number of waste bins at site bins Availability of waste disposal plan Final disposal records	Percentage of workers who follow the solid waste disposal plan including use of receptacles Number of workers familiar and aware of the waste disposal plan at the construction sites	Weekly checks by project engineer	Construction Operation	Contractor Project engineer
Waste oil/fuel disposal	Provide drums/containers for temporary storage on site of waste oil from equipment and vehicles. Dispose of waste oil through an approved agent	Waste management plan/Construction site management plan	Waste oil drums/containers on site Availability of waste disposal plan (waste oil)	Number of workers familiar and aware of the waste disposal plan Percentage of workers who follow the waste disposal plan including use of receptacles	Monthly checks by project engineer	Construction Operation	Contractor Project engineer

Air pollution	<p>Purchase sound equipment/machinery for project</p> <p>Operate well maintained vehicles, trucks and other equipment</p> <p>Use good quality fuel and lubricants</p> <p>Suppress dust generation at project sites</p> <p>Switch off engines when not in use</p>	<p>Part of contract agreement</p> <p>Routine maintenance plan for machinery</p> <p>Purchase of fuel at recognized stations</p> <p>Schedule of works is to limit</p> <p>Water surfaces several times a day to reduce dust at the site.</p>	<p>Number of sound machinery and equipment purchased</p> <p>Availability of equipment and machinery maintenance plan</p> <p>Frequency of watering of surfaces to reduce dust related impacts</p>	<p>Percentage of workers following the good practices for equipment and machinery maintenance</p>	<p>Independent check by project engineers</p> <p>Verification of maintenance record by project engineers</p> <p>Self-check by contractor</p>	Construction	Contractor/Project engineer
Noise pollution	<p>Schedule of works is to be limited to daylight hours</p> <p>Compliance with the noise emission levels/standard of NEMA</p> <p>Provision of PPE for workers for noise pollution</p> <p>Train workers on the use of PPEs for noise mitigation and reprimand those not complying</p>	Part of contract agreement for the contractors	<p>Recorded grievances</p> <p>Number of PPE procured for noise mitigation</p>	<p>Number of workers correctly and frequently using PPEs</p> <p>Number of workers aware of the emissions standards of NEMA and complying with the same</p>	Self-check by contractor	Construction	Contractor /Project engineer

Impacts on landscape	Landscaping of facilities after construction, and restoration of disturbed areas	Construction site maintenance and restoration plan.	Implementation of the plan	Quality of restored landscapes Number of disturbed sites successfully restored	Self-check by contractor	Construction	Contractor /Project engineer
Traffic impacts	Use only road worthy vehicles and trucks Use experienced drivers Contractors must provide driver training Establish speed limits, Enforce safe driving and take disciplinary action against repeat offenders.	Purchase sound vehicles and trucks /machinery for project Driver qualification recorded Traffic Safety Plan	Traffic incidence records Grievances Recorded	Number of drivers aware and familiar with the traffic safety plan Percentage of drivers who have not committed a traffic offence for the last 6 months Number of compliance (traffic) inspection and checks conducted by traffic department found to be satisfactory	Project engineers to verify	Construction	Contractor /Project engineer

Water pollution	<p>No garbage/refuse, oily wastes, fuels/waste oils should be discharged into drains or water bodies</p> <p>Fuel storage tanks/sites should be properly secured</p> <p>Maintenance and cleaning of vehicles, trucks and equipment should take place offsite.</p> <p>Provide toilet facilities for construction workers</p> <p>Construction activities, including camps to include measures to control runoff</p>	<p>Waste management plan Spill prevention and control plan</p> <p>Water Quality Plan to measure the quality of water including physical, chemical and biological.</p>	<p>Visibility of oil on water bodies</p> <p>Procurement and installation of water monitoring and measuring gauges</p> <p>On site erosion observed</p> <p>Proposed actions implemented</p> <p>Quality of water following periodic measurements</p> <p>No of pollution incidences recorded</p> <p>Number of complaints on pollution of water</p>	<p>Increased water quality upstream and downstream shown by periodic measurements</p> <p>Water samples collected showing compliance to water pollution standards</p>	<p>Daily self-checks by contractors</p> <p>Periodic reports on performance by contractor to project engineers</p> <p>Spot checks/audits by project engineers</p>	<p>Construction</p> <p>Operation</p>	<p>Contractors /Project engineers</p> <p>Project engineers</p>
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Impact on fauna and flora	<p>Avoid unnecessary exposure or access to sensitive habitat.</p> <p>Avoid protected areas, critical habitats or areas with significant biodiversity (wetlands)</p> <p>Regular inspection or monitoring should be carried out in sensitive areas e.g. swamps/ wetlands the area prior to start of work.</p> <p>Ensure proper storage and handling of potentially hazardous materials (including oil).</p>	<p>If a sensitive habitat is discovered in the work area or vicinity, Project activities should cease.</p> <p>The contractor should notify project engineers who will consult KWS to determine the appropriate course of action.</p> <p>Hazardous material management plan/accident management plan.</p> <p>Awareness raising among contractor personnel</p>	Wildlife incidents recorded and reported to KWS/KFS/NEMA	<p>Number or percentage of terrestrial flora and fauna unaffected by the sub projects</p> <p>Number of workers aware and sensitized on the need to conserve the flora and fauna</p> <p>Impact on terrestrial flora and fauna</p>	<p>Regular self-checks by contractor</p> <p>Spot checks and audit by contractor to the client</p>	<p>Construction</p> <p>Operation</p> <p>Maintenance</p>	Contractors /Project engineers/KWS/NEMA
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Table 9: Project monitoring indicators and responsibilities-Social Impacts

Impact issue	Proposed Action/ Measures	Implementation tool/criteria	Monitoring indicators (Input)	Monitoring indicators (Output)	Verification	Project stage	Responsibility
Impacts on downstream water users	Maintain Environmental Flows for river basins Ensure that abstraction of water complies with the WRMA permits	Environmental Flows Plan	Presence of an Environmental Flows Plan calculated and approved by WRMA Installation of Water Monitoring Stations Procurement of water measuring and monitoring equipment Availability of Water Abstraction Permit from WRMA	Impacts on water uses and livelihoods downstream	Regular spot checks by WRMA Periodic checks of the flows by environmental team	Construction Operation	Private Sector Investor Contractor Contracting Agency NEMA WRMA
Impacts on recreation and public areas	Place notices and warning signs at working areas	ESMP	Grievance records	Recreational Facilities and areas restored/protected	Warning signs/notices in place	Construction	Private Sector Investor Contractors/Project engineers

Impacts on Human Health/Safety and Sanitation	<p>Cover buckets of trucks carrying construction materials such as sand, quarry dust, etc.</p> <p>Use road worthy vehicles/trucks and experienced drivers/operators</p> <p>Active construction areas to be marked with high-visibility tape</p> <p>Backfill and or secure open trenches and excavated areas.</p> <p>Provide adequate sanitary facilities</p> <p>Provide PPEs for construction workers.</p> <p>Educate construction workers on site rules/regulation and hygiene and disease (HIV/AIDS) prevention.</p>	<p>ESMP</p> <p>Vehicle maintenance programme/plan in place</p> <p>Construction site management plan</p> <p>ESMP</p> <p>ESMP</p> <p>ESMP</p> <p>ESMP</p>	<p>Health and safety incident register</p> <p>Grievance records</p>	<p>Reduced accidents and hazards in construction sites</p> <p>Reduced incidence of diseases spread e.g. HIV/AIDS, and other STDs</p> <p>Increased understanding of workers on measures to reduce STDs/HIV/AIDS etc.</p>	<p>Health and safety plan under implementation</p> <p>Daily self-checks and verification by contractor</p> <p>Spot checks by project engineers</p> <p>Periodic reports by contractor to project engineers</p>	<p>Construction</p>	<p>Private Sector Investor</p> <p>Contractors</p>
Impacts on cultural heritage/archaeological interest /existing aquatic infrastructure and services	<p>Identify cultural heritage resources and existing ecologically sensitive areas.</p>	<p>Pre-construction surveys / Chance finds procedure</p> <p>Plan for accidental Cultural Finds</p>	<p>Cultural/archaeological resources/ existing infrastructure encounter incidence register</p>	<p>Number of workers familiar with the chance find procedures</p>	<p>Chance finds procedure under implementation</p> <p>Daily self-checks and verification by contractor</p> <p>Periodic reports by contractor to project engineers</p>	<p>Preconstruction and construction and repairs/recovery</p>	<p>Private Sector Investor</p> <p>Contractors/NMK</p>
Impacts on Human Health and Safety	<p>Use suitable Personal Protective Equipment (PPE).</p> <p>Provide Training on use of PPE</p>	<p>ESMP</p>	<p>Health and safety incident register</p> <p>Grievance records</p>	<p>Reduction in or increase in accidents due to use of or lack of use of PPEs</p>	<p>ESMP under implementation</p> <p>Spot checks and observations by project engineers</p> <p>Periodic reports on performance by contractor to project engineers</p>	<p>Pre-construction and construction, and repairs/recovery</p>	<p>Private Sector Investor</p> <p>Contractors</p>

Labour related impacts (Employment)	Ensure that the local communities are given priority in relation to employment and provided with training (skilled) to provide future labour in the project e.g. operation and maintenance	Human Resource Management Plan	Number of local residents employed in sub projects	Number of local residents employed in sub projects	Employment Records	Pre-construction and construction, and repairs/recovery	Private Sector Investor Contractors/EA
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7.8 Issues Related to Resettlement, Physical Cultural Resources,

The IFPPP-AF triggers other safeguard policies alongside this ESMF and thus the other related safeguard instruments have been prepared for the program. During the screening process of sub projects if identified as a requirement, Resettlement Action Plans, Physical Cultural Resources Management Plans or a combination of these, will be prepared alongside the Environmental and Social Management Plan (ESMP) as an integrated part of the overall investment management plan for the specific project.

7.8.1 Resettlement Action Plan

Resettlement Action Plans will be needed for investment that may result in the loss of access to resources. The RPF outlines the relevant steps required in order to ensure that appropriate measures are put in place to safeguard the rights of affected persons and communities.

7.8.2 Physical Cultural Resources Management

A plan for the management of physical cultural resources shall form part of the ESIA for each investment since the IFPPP-AF triggers the OP 4.11, it is important that the ESIA also include identify the process for addressing impacts on cultural property. Measures will need to be integrated into the ESMP to address the following areas:

- Avoidance or mitigation of identified adverse impacts;
- Provisions for chance finds;
- Preparation, as appropriate, of a physical cultural resources management plan consistent with the overall policy framework and national legislation, taking into account institutional capabilities; Measures for strengthening institutional capacity; and
- Monitoring systems to track progress of these activities.

7.8.3 Protected Areas, Natural Habitats and Forests

OP 4.04 is triggered due to the fact that investments may be situated in or around sensitive ecological areas of Kenya like the wetlands, forest etc. Compliance will be handled through the ESMF and site specific ESIA's.

7.8.4 Dam Safety

Dams for bulk water supply or hydropower are some of the investments included in the IFPPP-AF, and in effect triggering the OP 4.37. When the World Bank finances a project that includes the construction of a new dam, it requires that the dam be designed and its construction supervised by experienced and competent professionals. It also requires that the Borrower adopt and implement certain dam safety measures for the design, bid tendering, construction, operation, and maintenance of the dam and associated works.

The World Bank distinguishes between small and large dams:

- a) Small dams are normally less than 15 meters in height. This category includes, for example, farm ponds, local silt retention dams, and low embankment tanks.

- b) Large dams are 15 meters or more in height. Dams that are between 10 and 15 meters in height are treated as large dams if they present special design complexities--for example, an unusually large flood-handling requirement, location in a zone of high seismicity, foundations that are complex and difficult to prepare, or retention of toxic materials. Dams under 10 meters in height are treated as large dams if they are expected to become large dams during the operation of the facility.

For small dams, generic dam safety measures designed by qualified engineers are usually adequate however for large dams competent experienced engineers, preferably with international experience and familiarity with World Bank, FERC and CDA requirements, should carry out dam designs. The designs must be reviewed by a dam safety panel which must be instituted for this purpose. Construction supervision should be comprehensive and carried out by competent site staff familiar with construction of dam projects.

Key issues to consider include:

- Users should restrict themselves to the construction of earth dams no higher than 5 m from streambed to finished crest level.
- Dams on catchment areas exceeding 25 km² or with reservoir areas storing more than 50,000 m³ may require the advice of a hydrologist to assist in the design of spillways and other outlets and for the estimation of freeboard.
- No spillway should be less than 10 m wide and 1 m deep for catchments up to 5 km² and should be at least 15 m wide and 1.5 m deep for catchments exceeding this area.
- Any dam that involves out of the ordinary topography (i.e. steep slopes upstream, risks of landslips), hydrology (i.e. flash floods, droughts, snowmelt) or soils (i.e. poor quality soils, sodic soils, permeable layers in the soil, bare earth surfaces in the catchment) should only be designed and constructed under the supervision of a qualified engineer.

7.9 Monitoring Roles and Responsibilities

7.9.1 IFPPP-AF Contracting Authorities/Private Partners

The specific ministries or Contracting Authorities and Private Partners implementing the specific investment (once identified) under the IFPPP-AF will be solely responsible for ensuring the implementation of environmental and social requirements including monitoring of the activities/investments that they are responsible for implementing. The private partners will be required to prepare periodic (monthly, quarterly and annual) monitoring reports for submission to the Bank for archiving purposes.

The responsibility of the private partners with respect to environmental and social requirements during project implementation will be reflected in contract documents which will articulate the consequences of non-compliance which will include among other provision of remedy period (corrective action plan), penalties and or contract termination.

7.9.2 National Environment Management Authority (NEMA)

The EMCA 1999 and (amendment) Act 2015, places the responsibility of environmental protection on NEMA as the coordinating agency. NEMA is charged with the overall role of providing oversight in regard to monitoring for all project activities that have potential impacts on the environment in Kenya. NEMA will undertake periodic monitoring of the investment projects by making regular site inspection visits to determine compliance with the investment projects ESIA's approved and will further rely on the submitted annual audit reports submitted for each investment project annually as required by EMCA as a way of monitoring. NEMA will provide approvals and ESIA licence to all the investments based on the ESIA reports submitted, without NEMA's approval implementation of the investment project will not move forward. All monitoring reports as well as annual environmental audit report will be submitted to NEMA as specified by the environmental assessment and audit regulations.

7.9.3 IFPPP/PPPU-Environmental and Social Safeguards Advisor

The IFPPP/PPPU has recruited environmental and social safeguard consultant who will provide oversight, screening of sub projects, preparation of ToRs for ESIA's, facilitation, coordination, review of ESIA's, monitoring and evaluation of all the sub projects. The safeguards consultant will work with the executing agencies to ensure that monitoring of investments are undertaken and findings are reported to them periodically so that needed technical assistance to ensure compliance is provided.

The safeguard consultant will submit quarterly monitoring reports of all active investments under implementation to the IFPPP/PIU Coordinator who will then submit these reports to the World Bank.

8 PROJECT REVIEW, COORDINATION & IMPLEMENTATION ARRANGEMENTS

8.1 Sub Project Investment Review

The Environmental Management and Coordination Act (EMCA) 1999 and EMCA (amendment) 2015, require that all projects be subjected to a review and screening process in order to determine whether a full scale ESIA is necessary or otherwise. This is done through preparation of a project report which will be prepared by the Contracting Authority /TA of the specific sub project investment. Each investment will need to be reviewed independently for potential environmental and social impacts. This will ensure that environmental sound design including proposed mitigation measures as well as alternatives are incorporated in the feasibility reports at the design stage hence avoiding design change at an advanced stage.

The IFPPP-AF has been rated as category A this requires a full scale ESIA which must be conducted parallel to the feasibility studies to ensure that the findings of the ESIA are incorporated in the feasibility study at the design stage. The EMCA 1999, (amendment) 2015 require that all projects be subjected to a review and screening process in order to determine whether a full scale ESIA is necessary or otherwise. Project investments will each need to be reviewed independently for potential environmental and social impacts.

Consultation and Disclosure Requirements: In addition to the environmental documentation requirements described above, World Bank Operational Policy 4.01 (paragraphs 15 and 16), and the WB Policy on disclosure stipulates that the following consultation and disclosure requirements be utilized for all Category A sub projects:

Consultation should occur at least twice, once near the beginning of the EA process and once when a draft final report has been disclosed. During the EA process, the applicant shall consult groups affected by the subproject and local NGOs about the subproject's environmental aspects and take their views into account. The applicant shall initiate such consultations as early as possible. Consultations with stakeholders should take place only ones after a draft EA report is prepared. In addition, the applicant shall consult with such groups throughout project implementation as necessary to address EA-related issues that affect them.

For meaningful consultations, the applicant shall apply the following disclosure requirements:

- The applicant shall provide relevant material in English and/or the local language (as appropriate) in a timely manner prior to consultation;
- The applicant shall make the draft ESIA report including a detailed summary of the ESIA's conclusions available at a public place accessible to groups affected by the subproject and local NGOs.

Location [type here]
 Estimated cost (USD) [type here]

TYPE OF PROJECT OR ACTIVITY

Sub Project Type

- Construction of Bulk Water Supply Systems
- Construction of Multi-Purpose Dams
- Construction of Water Supply Pipelines
- Construction of Hydropower Dams
- Construction of Flood Control and Mitigation Canals/Dykes
- Construction of Bridges
- Construction of Ports
- Construction of Roads and Railways
- Construction of Housing infrastructure

Please give more details: [type here]

For all projects, an Environmental and Social Management Plan (ESMP) will be required. In addition, the following studies may be required:		
Will this project affect vulnerable and marginalised groups? If yes, a Vulnerable and Marginalised Groups' Plan will be required	<input type="checkbox"/>	<input type="checkbox"/>
Will the project require land for its development, and therefore displace individuals, families or businesses from land that is currently occupied, or restrict people's access to crops, pasture, fisheries or forests, even, whether on a permanent or temporary basis. If yes, a Resettlement Action Plan will be required	<input type="checkbox"/>	<input type="checkbox"/>
Will the investment project involve the construction of dams?	<input type="checkbox"/>	<input type="checkbox"/>
Will the Project:	Yes	No
Adversely affect natural habitats nearby, including forests, rivers or wetlands?	<input type="checkbox"/>	<input type="checkbox"/>
Require large volumes of construction materials (e.g. gravel, stone, water, timber, firewood)?	<input type="checkbox"/>	<input type="checkbox"/>
Use water during or after construction, which will reduce the local availability of groundwater and surface water?	<input type="checkbox"/>	<input type="checkbox"/>
Affect the quantity or quality of surface waters (e.g. rivers, streams, wetlands), or groundwater (e.g. wells, reservoirs)?	<input type="checkbox"/>	<input type="checkbox"/>
Be located within or nearby environmentally sensitive areas (e.g. intact natural forests, mangroves, wetlands) or threatened species?	<input type="checkbox"/>	<input type="checkbox"/>
Lead to soil degradation, soil erosion in the area?	<input type="checkbox"/>	<input type="checkbox"/>
Create waste that could adversely affect local soils, vegetation, rivers and streams or groundwater	<input type="checkbox"/>	<input type="checkbox"/>
Create pools of water that provide breeding grounds for disease vectors (for example malaria or bilharzia)?	<input type="checkbox"/>	<input type="checkbox"/>
Involve significant excavations, demolition, and movement of earth, flooding, or other environmental changes?	<input type="checkbox"/>	<input type="checkbox"/>
Affect historically-important or culturally-important site nearby?	<input type="checkbox"/>	<input type="checkbox"/>
Require land for its development, and therefore displace individuals, families or businesses from land that is currently occupied, or restrict people's access to crops, pasture, fisheries, forests or cultural resources, whether on a permanent or temporary basis?	<input type="checkbox"/>	<input type="checkbox"/>
Result in human health or safety risks during construction or later?	<input type="checkbox"/>	<input type="checkbox"/>
Involve inward migration of people from outside the area for employment or other purposes?	<input type="checkbox"/>	<input type="checkbox"/>
Will the Project:	Yes	No
Result in conflict or disputes among communities?	<input type="checkbox"/>	<input type="checkbox"/>
Affect indigenous people, or be located in an area occupied by indigenous people?	<input type="checkbox"/>	<input type="checkbox"/>
Be located in or near an area where there is an important historical, archaeological or cultural heritage site?	<input type="checkbox"/>	<input type="checkbox"/>
Result in a significant change/loss in livelihood of individuals?	<input type="checkbox"/>	<input type="checkbox"/>

Adversely affect the livelihoods and /or the rights of women?

If you have answered Yes to any of the above, please describe the measures that the project will take to avoid or mitigate environmental and social impacts

[type here]

What measures will the project take to ensure that it is technically and financially sustainable?

[type here]

If the answer to any of questions “Yes”, please use the indicated Annexes C to G or sections(s) of the ESMF for guidance on how to avoid or minimize typical impacts and risks.

When considering the location of an investment, rate the sensitivity of the proposed site in the following table 10 according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They do indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate or manage potential effects.

Table 10: Site Sensitivity Rating

Issues	Site Sensitivity			Rating (L,M,H)
	Low (L)	Medium (M)	High (H)	
Natural habitats	No natural habitats present of any kind	No critical natural habitats; other natural habitats occur	Critical natural habitats present	
Water quality and water resource availability and use	Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues	Medium intensity of water use; multiple water users; water quality issues are important	Intensive water use; multiple water users; potential for conflicts is high; water quality issues are important	
Natural hazards vulnerability, floods, soil stability/ erosion	Flat terrain; no potential stability/erosion problems; no known volcanic/seismic/ flood risks	Medium slopes; some erosion potential; medium risks from volcanic/seismic/ flood/ hurricanes	Mountainous terrain; steep slopes; unstable soils; high erosion potential; volcanic, seismic or flood risks	
Cultural property	No known or suspected cultural heritage sites	Suspected cultural heritage sites; known heritage sites in broader area of influence	Known heritage sites in project area	
Involuntary resettlement	Low population density; dispersed population; legal tenure is well-defined; well-defined rights	Medium population density; mixed ownership and land tenure; well-defined rights	High population density; major towns and villages; low-income families and/or illegal ownership of land; communal properties; unclear rights	
Indigenous peoples	No indigenous population	Dispersed and mixed indigenous populations; highly acculturated indigenous populations	Indigenous territories, reserves and/or lands; vulnerable indigenous populations	

CONCLUSION

Which course of action do you recommend?

FULL ESIA ESMP RAP/RPF is the reference document with reference to resettlement issues

VMGP OTHER ENVIRONMENTAL/SOCIAL PLANS

There are no environmental or social risks

[Type here]

If a RAP is required, will the project Displace or restrict access for less than 200 individuals, or if over 200, are losses for all individuals less than 10% of their assets?

If Yes, Prepare an abbreviated RAP

If No, Prepare a full RAP

Full details of resettlement requirements are provided in the accompanying Resettlement policy Framework.

Completed by: [type here]

Name: [type here]

Position: [type here]

Date: [type here]

Format 2.0: SCREENING CHECKLIST REVIEW FORM (Prepared by Environment and Social Specialists from IFPPP-AF/PIU)

	Yes	No
Based on the location and the type of investment, please explain whether the Proponent’s responses are satisfactory.	<input type="checkbox"/>	<input type="checkbox"/>
Their description of the compliance of the investment with relevant planning Documents	<input type="checkbox"/>	<input type="checkbox"/>
If ‘No’, please explain: [type here]		
Their responses to the questions on environmental and social impacts	<input type="checkbox"/>	<input type="checkbox"/>
If ‘No’, please explain: [type here]		
Their proposed mitigation measures	<input type="checkbox"/>	<input type="checkbox"/>
If ‘No’, please explain: [type here]		
Their proposed measures to ensure sustainability	<input type="checkbox"/>	<input type="checkbox"/>
If ‘No’, please explain: [type here]		

REVIEWER’S CONCLUSION

Which course of action do you recommend?

FULL ESIA ESMP; RAP-RPF is the reference document with reference to resettlement issues

There are no environmental or social risks

[Type here]

If a RAP is required, will the investment displace or restrict access for less than 200 Individuals, or if over 200, are losses for all individuals less than 10% of their assets?

If Yes, Prepare an abbreviated RAP

If No, Prepare a full RAP

Full details of resettlement requirements are provided in the accompanying Resettlement Policy Framework. If this differs from the Proponent’s recommended course of action, please explain:

[Type here]

Preparation of a project Report, based on field appraisal by NEMA District Officer, is required to investigate further, specifically to investigate:

[Type here]

Reject

Review form completed by: [type here]
Name: [type here]
Position / Community: [type here]

Completion of this screening form will facilitate the identification of potential environmental and social impacts, determination of their significance, assignment of the appropriate environmental category, proposal of appropriate environmental mitigation measures, or recommend the execution of an Environmental and Social Impact Assessment (ESIA), if necessary.

Development of project reports follows systematic process as follows;

- *Review of TORs with the implementing partners for adequacy*
- *Familiarization with project design*
- *Familiarization with projects area of influence*
- *Identification of the relevant statutes and WB safeguard policies*
- *Determination/ Identification of all stakeholders to project*
- *On-the-ground investigations of the bio-physical baseline*
- *Consultations with stakeholders*
- *Impact prediction and interpretation*
- *Identification of mitigation measures*
- *Development of an environmental management plan complete with budget and identification of responsibilities*
- *Finalization of project report*

8.1.3 Statutory content of Project Reports:

Regulation 7(1) of Legal Notice 101 stipulates content of Project Reports to include the following:-

- *The nature of the project;*
- *The location of the project including the physical area that may be affected by the project's activities;*
- *The activities that shall be undertaken during the project construction, operation, and decommissioning phases;*
- *The design of the project;*
- *The materials to be used, products, by-products, including waste to be generated by the project and the methods of disposal;*
- *The potential environmental impacts of the project and the mitigation measures to be taken during and after implementation;*
- *An action plan for the prevention and management of possible accidents during the project cycle;*
- *A plan to ensure the health and safety of the workers and neighbouring communities;*
- *The economic and socio-cultural impacts to the local community and the nation in general;*
- *The project budget;*
- *Any other information that the Authority may require.*

Once a project report is submitted to NEMA, a decision is made by NEMA and in the event that NEMA, based on the project report submitted makes a decision that an ESIA report must be prepared, the executing agency for that specific sub project will be

required to identify independent NEMA registered expert(s) to prepare an ESIA report in accordance with the EMCA.

Project Reports are normally prepared as a means of informing NEMA of the proposed development such that after review of the report, NEMA advises on the need or otherwise for a full ESIA. The ESIA regulations allow for approval of proposed projects at the Project Report Stage and have been effectively used by NEMA to grant Environmental Licenses to small projects without requiring a full ESIA.

Table 11: The NEMA Process for Approving Investment Project Reports

Steps	Action	Actor	Time requirement
One	Submission of PR to NEMA. NEMA receives PR, issues a receipt and acknowledgement.	IFPPP/PIU and Implementing partners	To be undertaken by IFPPP/PIU and Implementing partners environmental and social specialists with input from the Safeguards Advisor
Two	NEMA mails PR to Lead Agencies	NEMA	7 days assuming all requirements are fulfilled
Three	Lead agencies review PR and issue comments	Lead Agencies	21 days (minimum) after receipt of PR from NEMA.
Four	Review of PR by NEMA	NEMA	30 days after receipt of PR.
Five	Communication of findings from NEMA review	NEMA	45 days after receipt of PR.

Typical outcomes of review of Project Reports from NEMA are likely to be as shown in **Table 12** below. These are as follows:

Project investment is approved. Where NEMA and lead agencies ascertain that a project report has disclosed adequate mitigation for identified impacts, the project is approved by NEMA upon which, conditions attached to grant of an Environmental License are issued. Once these are fulfilled, an Environmental License is also issued subject to conditions which will be specific to the sub project in question. Among these is the requirement that the scheme design should not be altered without approval by NEMA. As well, an audit report is required of each project after the first year of completion.

Project Report discloses potential for major irreversible adverse impacts. In this case, NEMA may not approve the project.

Table 12: Possible Outcomes of NEMA Review of Project Reports

Outcome	Recommendation	Important precautions
Project found to have no significant Social and Environmental Impacts or Project report discloses sufficient mitigation measures	An Environmental License will be issued by NEMA	Project report must disclose adequate mitigation measures and show proof of comprehensive consultations within the area of influence.
Significant adverse social and environmental impacts found or Project Report fails to disclose adequate mitigation measures.	A full cycle EIA will be required by NEMA	As above
A proponent is dissatisfied with the outcome of the NEMA review.	An Appeal is provided for	

In the eventuality that a Project cannot be approved by NEMA on the basis of a Project Report, the proponent will be advised to undertake full cycle ESIA leading to development of a fully-fledged Environmental and Social Impact Assessment Study Report. **Figure 11** below outlines the ESIA process and review to be followed in an event that a determination for a full scale ESIA is arrived at by NEMA.

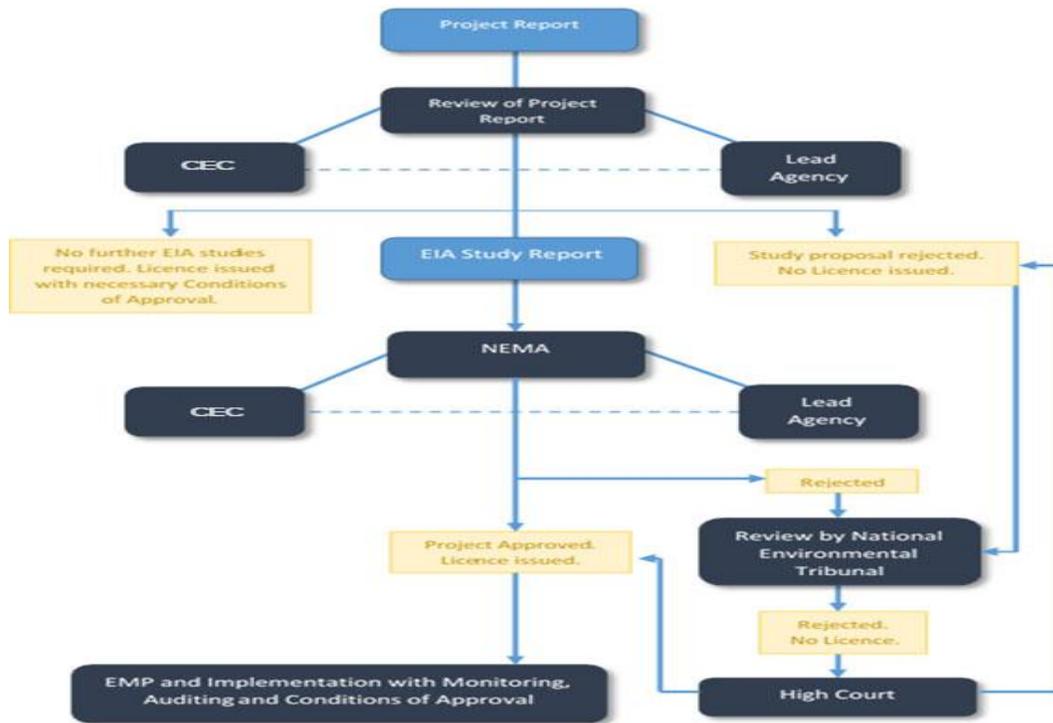


Figure 11: EIA process

8.1.4 Scoping Report

Firstly, on advice from NEMA, the proponent will prepare a Scoping/Project Report specifying the project’s area of influence, the thematic scope and depth of assessments required, the composition of the required ESIA team, and the probable budget required to prepare the ESIA Study.

8.1.5 ESIA Study Report and Other Supplementary Safeguard Reports

Upon review and approval of the Scoping/Project Report (see annex C for contents of Project Report), NEMA will advise that an ESIA Study be undertaken. The ESIA Study will entail a systematic investigation of all impact areas as identified in the scoping report, taking care to document the current baseline environment, resource exploitation patterns and ecological pressure points. Annex D shows the contents of ESIA study report.

The implementing agency will prepare the Terms of Reference for the ESIA which will be reviewed by the IFPPP/PPPU Environmental and Social Specialist in collaboration with the and follow procurement rules for the recruitment of consultants for the ESIA. In certain instances, where there are no specialists within the implementing agency to

prepare the ToR, then the PPPU environmental and social specialist will prepare this ToR. Annex E contains a sample ToR for ESIA study preparation.

Also, the impact mitigation measures provided in this ESMF may provide some basis for the design of the ToR. In the case of existing operations, the outline for Environmental and Social Management Plans (ESMPs) is also given.

The ESIA will identify and evaluate potential environmental impacts for the proposed investments, evaluate alternatives, and design mitigation measures. The preparation of the ESIA will be done in consultation with stakeholders, including people who may be affected. It is mandatory for the ESIA study to undertake public consultation with all stakeholders in the project's area of influence. Public consultations are critical in preparing a proposal for the activities of the IFPPP/AF likely to have impacts on the environment and population. The public consultations should identify key issues and determine how the concerns of all parties will be addressed in the ESIA. When an ESIA is necessary, the administrative process enacted by the NEMA will be followed and executed. The ESIA Team should note and understand all stakeholder interests so as to cater for them in the ESMP. All accruing information will be written into a Draft ESIA Report prepared in the same format as the project Report and submitted to NEMA for review. Upon review of this report, it will be subjected to public review.

Depending on the nature of the sub projects and associated potential impacts, Integrated Pest Management Plans (IPMPs) and Physical Cultural Resources Plans (PCRP) may be prepared as additional standalone safeguards instruments complementing the ESIA/ESMP which will have to be consulted upon and disclosed.

8.1.6 Social Impact Assessment Process

The breadth, depth, and type of analysis required for the social assessment will be proportional to the nature and scale of the proposed project investment's potential and effects on the affected persons.

The social assessment will be conducted by socio-economic experts and will ensure that through primary and secondary literature search critical information including (i) ethnic composition and demographic characteristics; (ii) land use; (iii) water use; (iv) non-agricultural activities such as livestock/itinerant pastoralism, fishing and other income generating activities; (v) socio-cultural issues regarding decision making within communities; (vi) gender division of labor and rights/responsibilities; (vii) use of land, land and resource tenure, access to and control over resources, resource rights including those related to water; (viii) access to different services and inclusion in the producer organizations based on gender; and (ix) baseline health situation with a focus on water borne and sexually transmitted diseases (STDs) among others are collected and documented

8.1.7 Public Review of the ESIA Report

EMCA provides for public consultation and review of all ESIA reports prepared and dictates that all ESIA documents be disclosed at certain points for the public to provide comment. Copies of ESIA are placed at vantage points including the NEMA Library and

NEMA website, NEMA County Offices and the sector Ministry responsible for a particular undertaking. NEMA serves a 21-day public notice in the national and local newspapers about the ESIA publication and its availability for public comments. When the public review period elapses, the comments and issues raised by the public are consolidated and addressed and the report re-submitted as final.

8.1.8 ESIA Review Process

The Implementing Agency will submit the draft ESIA to NEMA. The report will be reviewed by a cross-sectoral National Environmental and Social Impact Assessment Technical Review Committee (ESIA/TAC) made up of representatives of various Ministries, Departments and Agencies. The review committee is expected to:

- *Assist the Agency in screening/reviewing all Environmental Assessment Applications and Reports (Environmental Impact Statements, Annual Environmental Reports, Environmental Management Plans and other related reports)*
- *Make recommendations to the Director General of the NEMA for final decision-making*
- *Provide technical advice on conduct of assessments and related studies on undertakings and the reports submitted on them;*
- *Make recommendations on the adequacy of the assessment and any observed gap;*
- *Advice on the seriousness of such gaps and the risks or otherwise to decisions required to be made recommend whether the undertakings as proposed must be accepted and under what conditions, or not to be accepted and the reasons, as well provide guidance on how any outstanding issue/areas may be satisfactorily addressed.*

8.1.9 Environmental Permitting Decision (EPD)

In cases where the draft ESIA is found acceptable, the implementing agencies of the specific investment and IFPPP/PIU will be notified to finalized the reports and submit 10 hard copies and an electronic copy. Following submission to NEMA, the implementing agency shall be issued an Environmental License.

8.1.10 Annual Environmental Audit

An independently commissioned environmental and social audit will be carried out on an annual basis. The audit team will report to NEMA, NT/IFPPP/PIU, Contracting Authority and Private Investor. NEMA and NT/IFPPP/PIU, will lead the implementation of any corrective measures that are required. However, such corrective action plans will be shared with the Bank for review purpose. An audit is necessary to ensure (i) that the ESMF process is being implemented appropriately, and (ii) that mitigation measures are being identified and implemented. The audit will be able to identify any amendments in the ESMF approach that are required to improve its effectiveness.

The annual audit also provides a strong incentive for the NT to ensure that the ESMF will be implemented, and the individual ESMPs will be developed and implemented.

8.2 Overall Project Compliance and Reporting

The ESMF will be implemented by the IFPPP-AF executing agencies. The implementing agency will collaborate with the safeguards specialist within the PIU and the World Bank to ensure effective execution. **Table 13** provides a summary of the stages and

institutional responsibilities for the screening, preparation, assessment, approval and implementation of the IFPPP-AF project activities.

Table 13: Screening Responsibilities.

No.	Stage	Institutional responsibility	Implementation responsibility
1.	Screening of Environmental and Social Infrastructure Project to assist in project formulation using checklist	Contracting Authority, NT	Environmental Officer (EO) /Safeguard specialists in the Contracting Authority and PPPU
	Statutory Environmental Registration of WSCR investments	Contracting Authority/ NT	Environmental Officer Contracting Authority and PPPU
2.	Determination of appropriate environmental assessment level/ category	NEMA / Implementing agency	-
2.1	Selection validation	World Bank	-
3.	Implementation of environmental assessment	Contracting Authority	Environmental Officer for Contracting Authority and PIU
	If ESIA is necessary		
3.1	Preparation of Terms of Reference	Contracting Authority	Environmental Officer for Contracting Authority and PPPU
3.2	Validation of ESIA/ESMP TOR	NEMA/ World Bank	PIU Safeguard Specialist
3.3	Selection of Consultant	Contracting Authority/MOF/ Procurement Office	EO/ Procurement Officer/ PPPU Safeguard Specialist
3.4	Realization of the EIA, Public Consultation Integration of environmental and social management plan issues in the tendering and project implementation	Contracting Authority/Procurement Office/Consultancy firm/Contractor	Safeguards Consultant/ Environmental Officer/ Procurement Officer/ PPPU Safeguard Specialist
4.	Review and Approval	NEMA/ World Bank/ Contracting Authority	
4.1	ESIA Approval (Category A, high-risk B)	NEMA/ World Bank	
4.2	Simple ESIA/ESMP Approval (Category B)	Contracting Authority	Contracting Authority Environmental and Social Officer
5.	Public Consultation and disclosure	Contracting Authority/ NEMA	Contracting Authority/Contractor/PPPU Safeguard Specialist
6.	Surveillance and monitoring	Contracting Authority/NEMA/ World Bank/ NT/PPP Unit	Environmental Officer/ PPPU Safeguard Specialist/Contracting Authority/Private Investor
7.	Development of monitoring indicators	Contracting Authority/PPP Unit	Environmental Officer / PPPU Safeguard Specialist/Contracting Authority/Private Investor

9 CAPACITY BUILDING, TRAINING AND TECHNICAL ASSISTANCE

9.1 Institutional Capacity for ESMF Implementation

The principal institution that will provide overall coordination including administration of the IFPPP-AF is the National Treasury (NT) in order to ensure environmentally sound design and management of proposed project investments.

NT is the principal implementing institution for this project and a senior official in the Ministry is overall Project Coordinator. NT will also be responsible for day-to-day implementation (project management, financial management, procurement, disbursement, monitoring, including environmental and social aspects of the project etc.) for all components.

The Project will be managed by a IFPPP/PIU. A safeguards advisor has been recruited. The functions of the specialist include working with Contracting Authorities and consultants and reviewing reports as well as ensuring that safeguard decisions are adequately mainstreamed.

9.1.1 Contracting Authorities

The technical capacity and capability of the institutions that will be implementing the ESMF for the IFPPP-AF will require bolstering in order to ensure effective implementation of the Environmental and Social Management Framework (ESMF). At present, several key executing agencies expected to implement certain sub projects within the IFPPP-AF do not have to a great extent in-house capacity and specialist in environment and social safeguards.

A capacity needs assessment of the implementing partner institutions on social and environmental evaluation, screening, mitigation and monitoring will be necessary as part of the capacity strengthening program. This ESMF proposes capacity building by way of awareness creation and sensitization, actual training through workshops and seminars as well as short courses as described below for different stakeholder and implementing partners within the IFPPP-AF.

9.2 Identification of Capacity Needs

The first step in pursuing capacity building will be to identify the capacity needs of the various stakeholders. Capacity building should be viewed as more than training. It is human resource development and includes the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively. It also involves organizational development, the elaboration of relevant management structures, processes and procedures, not only within organizations but also the management of relationships between the different organizations and sectors

(public, private and community). The capacity building requirements will mostly be in the form of training workshops and seminars.

9.2.1 Technical Capacity Enhancement

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

- *National Environment Management Authority*
- *Environmental and Social officers from implementing partner ministries and agencies*
- *Local Engineering Contractors who will be contracted or sub contracted to undertake the construction works*
- *Transactional Advisors*
- *Local Governments Authorities*
- *County Environment Officers*

9.2.2 Training will focus on:

- *Stakeholder engagement, consultation and partnerships;*
- *ESIA law, relevant environmental policies;*
- *Water Quality Monitoring*
- *Development of mitigation measures and Environmental Management Plans*
- *Thorough review of Country ESIA procedures, Environmental Management Policies & Guidelines and WB safeguards as well as their implementation and enforcement.*
- *The group will also be trained on use and application of ESMF tools (Screening checklists, ESIA), their review, implementation and enforcement.*
- *Participants will be trained on environmental reporting, monitoring and follow-up of ESMF*
- *Community Consultation/Participatory Planning*
- *Significant emphasis will be placed on understanding ESIA procedures, Environmental Management policies & guidelines, WB safeguards, implementation and enforcement*
- *Reporting, monitoring and follow-up of ESMF*

Table 14: Trainings and Target groups

Training Aspect	Target group
EIA law, relevant Environment policies and World Bank Safeguard Policy and guidelines	Government agency representatives including district-level officials, NGOs, CBOs.
Relevant social laws and policies	Government agency representatives including district-level officials, Local Government, Private Sector, NGOs, CBOs and community members.

Table 15: Training directly linked to implementation ESMF

	PIU and National Govt	County Government	Private Sector	NGO & CBO	Community
Role of ESMF in IFPPP-AF	A	S	S	S	S
Identification of Indicators and data collection		TS	TS	TS	TS
Identification of environmental and social Impacts		T	T	T	T
Determination of negative and positive impact of project investments	T	T	T	T	A
Development of mitigation measures and Environmental Management Plan including Institutional Responsibility Framework and		T	T	T	T

Budget.					
EIA procedures, Environmental Management policies & guidelines, WB safeguards, implementation and enforcement	T	S	S	S	S
Use and application of ESMF tools (Screening checklists, ESIA, EA)	T	T	T	T	T
Review of ESMF tools, implementation and enforcement	T	T	S	T	S
Reporting, monitoring and follow-up of ESMF	S	T	T	T	S
Training of Consultants on Public Consultation Process	T	T	T	T	S

* *A=Awareness-T=Training-S=Sensitization*

Contractors and supervision consultants as part of best practice, and in order to comply with international standards for Occupational, Health and Safety (OHS), will be provided with awareness raising and environmental and OHS training on site. These should focus not only on the construction phase but also operational phase of the Project. A proposed format for 1, day training is provided in the following **Table 16** below.

Table 16: Awareness raising and training for civil work contractors and supervision consultants

Topic	Input
Awareness raising <ul style="list-style-type: none"> • Environmental awareness and the importance of effective mitigation • Practice mitigation measures and environmentally sound construction techniques • Compliance with local legislation on OHS, EIA and ESMP requirements 	0.5 day
Technical training <ul style="list-style-type: none"> • Implementation of the ESMP (contract clauses) • Monitoring of ESMPs (and RAPs) • Preparation of budgets 	0.5 day
Total	1 day

The training and capacity building exercises will take into consideration during their development, the integration and fulfilment of the requirements of World Bank social and environmental policies and guidelines, as well as those on Environmental Protection (including relevant policies, regulations and guidelines). Where institutional capacity in terms of availability of human resource is inadequate, the project will engrain support for this through hiring of qualified staff to provide necessary expertise.

Training directly linked to the implementation of the ESMF should be undertaken first and subsequently followed with regular interval training on aspects influencing success of ESMF. The training program/agenda below provides a sample training outline and course content. The training programmes have been clustered into appropriate groups to facilitate for various target groups. Target groups for training, awareness and sensitization will be as follows.

9.3 ESMF Implementation Budget

The estimated total cost for ESMF implementation cannot be estimated because of variation from project to project. The table below however, highlights the key indicative aspects that would require a cost budget.

Table 17: Overall costs for implementation of ESMF in IFPPP-AF

Activity	Description	Unit cost, US\$	No	Total Cost, US\$
Preparation and implementation of ESIA's, and related safeguard management plans for investments funded from the investment pool	Recruitment of Consultants and experts to prepare and review the ESIA's			
Monitoring of ESIA's and related safeguard management plans for investments funded from the investment pool	Recruitment of Consultants and experts to monitor the ESIA's			
Awareness creation and Capacity building	Training workshop/seminars on Programme for project staff			
Study tours	Selected environmental champions participating in IFPPP-AF drawn from NEMA, Implementing Agencies to visit related or similar project sites			
Capacity building/improvement for Line Ministries	Training workshops			
Awareness creation for general public	Radio, TV discussions, Newspaper adverts on issues relating to ESMF			

10 PUBLIC CONSULTATION AND DISCLOSURE

10.1.1 ESMF Disclosure

The World Bank disclosure policies require that ESIA reports for sub projects are made available to project affected groups, local NGOs, and the public at large. Public disclosure of ESIA documents is also a requirement of the Kenya environmental procedures. NT in collaboration with Contracting Authorities will make available copies of the ESMF and ESIA on the respective websites and offices of the ministries. Public notice in the media should be used to serve as information source to the public. However, the ESIA will have to be advertised in the local newspaper, website of NEMA, that of the executing agency and NT.

10.1.2 Public Consultation

The implementation of each specific sub project investment under the IFPPP-AF will require that public consultation and stakeholder engagement is carried out as a means of gathering information on public concerns, issues, perception, fears and suggestions on proposed investment. Public consultation will be conducted in line with the requirements of Environmental Management and Coordination Act (EMCA) which calls for utilisation of all forms of consultation and stakeholder engagement and the Bank's requirements for public consultation. The consultations will be conducted through among others:-

- *Key Informant Interviews*
- *Direct Interviews with Project Affected Persons*
- *Workshops and Meetings*
- *Public Hearings (Barazas)*
- *Advertisements' in the print and electronic media*
- *Focus Group Discussions*
- *Internet and telephone interviews*

10.1.3 Grievance Mechanism

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

The World Bank standards outline requirements for grievance mechanisms for some projects. Grievance mechanisms should receive and facilitate resolution of the affected institutional or communities' concerns and grievances. The World Bank states the concerns should be addressed promptly using an understandable and transparent process that is culturally appropriate and readily acceptable to all segments of affected communities, at no cost and without retribution. Mechanisms should be appropriate to the scale of impacts and risks presented by a project.

Grievances can be an indication of growing stakeholder concerns (real and perceived) and can escalate if not identified and resolved. The management of grievances is therefore a vital component of stakeholder management and an important aspect of risk management for a project. Projects may have a range of potential adverse impacts to people and the environment in general, identifying grievances and ensuring timely resolution is therefore very necessary.

10.1.4 Establishment of Grievance Redress Committee

Each sub project investment will have a Grievance Redress Committee (GRC) established for the purpose of handling grievances related to environmental and social concerns. The GRCs will be ad hoc institutions established primarily for the sub project investment and will have no legal mandate. The GRC will be established under the guidance of NEMA County and comprise of:

1. Project Affected Persons representative
2. Environmental and Social Specialists from the IFPPP-AF from Contracting Agency
3. NEMA County representative
4. Representatives from relevant line ministries
5. Contractor/Engineers
6. Women and Youth Representatives
7. Representation of active NGOs or CBOs in project area

Table 18. Grievance Redress Process

Process	Description	Time frame	Other information
Identification of grievance	Face to face; phone; letter, e-mail; recorded during public/community interaction; others	1 Day	Email address; hotline number
Grievance assessed and logged	Significance assessed and grievance recorded or logged (i.e. in a log book)	4-7 Days	Significance criteria: Level 1 –one off event; Level 2 – complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law or policy or this ESMF provisions
Grievance is acknowledged	Acknowledgement of grievance through appropriate medium	7-14 Days	
Development of response	Grievance assigned to appropriate party for resolution Response development with input from management/ relevant stakeholders	4-7 Days 7-14 Days	
Response signed off	Redress action approved at appropriate levels	4-7 Days	Project staff to sign off
Implementation and communication of response	Redress action implemented and update of progress on resolution communicated to complainant	10-14 Days	

Complaints Response	Redress action recorded in grievance log book Confirm with complainant that grievance can be closed or determine what follow up is necessary	4-7 Days	
Close grievance	Record final sign off of grievance If grievance cannot be closed, return to step 2 or refer to sector minister or recommend third-party arbitration or resort to court of law.	4-7 Days	Final sign off on by IFPPP/PIU Coordinator

10.1.5 Public Complaints Committee

The Public Complaints Committee on Environment is an organ established by the EMCA whose role is to address complaints by the public on projects and investments that the public oppose due to environmental and social impacts. In an event that the public is dissatisfied with the proposed projects the PCC will serve as the first stop for getting redress and if this fails then the National Environmental Tribunal (NET) another organ set up by NET to resolve environmental and social disputes on investments will form the next avenue for redress.

10.1.6 Environment and Land Court

The Constitution of Kenya (CoK) has further provided for specific courts to deal with land and environment (Land and Environment Court) that are charged with playing a vital role in reconciling environmental related disputes and these courts will serve as the ultimate stop in the event of disputes or complaints that cannot be resolved through other alternative means.

10.1.7 World Bank's Grievance Redress

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond.

For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org. It is however recommended that a project level grievance mechanism that has been agreed upon by all stakeholders is put in place early, to avoid small matters snowballing into conflicts that may lead to delayed disbursement and implementation.

II REFERENCE

1. Government of Kenya Environmental Management and Coordination Act 1999
2. Government of Kenya Land Control Act
3. Government of Kenya Local Government Act
4. Government of Kenya Physical Planning Act
5. Government of Kenya Public Health Act
6. Government of Kenya Forest Act
7. Government of Kenya Vision 2030
8. Government of Kenya Water Act 2002
9. Government of Kenya Occupational Health and Safety Act
10. Government of Kenya The Land Acquisition Act
11. Government of Kenya The Trust Land Act
12. Government of Kenya Antiquities and Monuments Act, Cap
13. Government of Kenya The Lakes and Rivers Act Chapter 409 Laws of
14. Government of Kenya The Employment Act
15. Government of Kenya National Policy on Environment and Development
Sessional Paper No. 6 of 1999
16. Government of Kenya National Environmental Sanitation and Hygiene Policy-
July 2007
17. Government of Kenya Fisheries Policy
18. Government of Kenya Forest Policy 2005
19. Government of Kenya Draft Wildlife Policy 2007-Draft
20. Government of Kenya Wildlife Conservation and Management Act
21. Project Documentation for IFPPP-AF
22. Survey of Kenya 2003
23. World Bank Aide Memoire for IFPPP-AF
24. World Bank Draft Project Appraisal Document (PAD), IFPPP-AF

Annex A. Stakeholders Consulted

-See separate attachment document-

Annex B. Stakeholders Issues and Concerns Summary During Consultations

Institution	Issue	Response
Kenya Forest Service	I am aware that the Bank has been reviewing its safeguards policies and procedures. What is the status of this review and did the preparation of the safeguards instruments use the new policies?	It is correct that the safeguards policies of the Bank have been undergoing review over the last 4 years. The review is complete and now the new policies are referred to an Environmental and Social Frameworks (ESF). The Bank is yet to give guidance on when the new frameworks commence and hence these instruments prepared for IFPPP-AF have used the existing/old policies.
Pamoja Trust	It appears that the safeguards instruments prepared for IFPPP-AF are to ensure due diligence prior to disbursement of the loan. How will due diligence be assured during the sub project implementation?	During the sub project implementation, after the loan award, the safeguard instruments or frameworks require the preparations of ESIA/RAPs/VMGPs to ensure due diligence.
Pamoja Trust	Is the IFPPP-AF considering recruitment of social specialist as part of the team of experts to advise the project? In your presentation, I did not see this position.	The IFPPP-AF has already recruited the Environmental and Social Safeguards Consultant under the PPPU, who is responsible for environmental and social safeguards.
Kenya National Highways Authority	What are the sub projects likely to be funded under the IFPPP-AF?	Actual sub projects are not yet known but will include infrastructure projects across sectors including, water, roads, ports, housing, waste management, railways, marinas etc.
Kenya Electricity Transmission Company	Is there a criteria or characteristics for determining who are Vulnerable and Marginalized Groups (VMGPs) in Kenya and by the World Bank?	The World Bank policy on VMGs has 4 characteristics that it uses to determine if a group qualifies to be vulnerable. The Constitution of Kenya (COK) has a clearly

		defined characteristic of vulnerable and marginalized groups. The IFPPP-AF has used these characteristics in preparation of the Vulnerable and Marginalized Groups Framework.
Ministry of Water and Irrigation.	You have indicated that in the application of the Bank policies and host country regulations, the principle is to review both and apply the more stringent of the two. Who makes this determination? Is it the borrower or the Bank?	Frameworks and other safeguard instruments are prepared by the borrower. The borrower undertakes a detailed comparative analysis of its regulations and the Bank policies and identifies gaps and areas of weaknesses. Therefore, the borrower determines if its laws are stronger or otherwise. The instruments are also reviewed by the Bank and during the review, the findings of the borrower on strengths and weaknesses are also subject to review by the Bank.
Kenya Wildlife Service	After preparations of the frameworks, when does the application of the instruments commence? Does the frameworks indicate at what point in sub project implementation should the instruments be applied?	The frameworks clearly indicate when to commence application of the proposed instruments once a policy is triggered during the screening process. Instruments as a matter of fact are prepared after screening and used during project implementation. Instruments must be prepared before project construction activities commence and must be reviewed and approved by the Bank and other legislative institutions.
Ministry of Energy and Petroleum	Is there a definition of and scope of consultations and stakeholder engagement? Is there a threshold of adequate stakeholder consultation and disclosure?	The Constitution of Kenya has provided for public participation in all activities. Further, the Office of Attorney General has developed guidelines for public participation in Kenya.

		The World Bank also has principles and guidelines for adequate stakeholder consultations.
Egerton University	Political interference in the public consultation process is a concern and derails the ESIA/RAP processes and hinders expedited project implementation. Does these frameworks give guidance on how to handle politics in stakeholder engagement and consultations?	<p>The frameworks prepared for the IFPPP-AF provide for stakeholder identification and mapping including recognizing the role of politics and politicians as key stakeholders.</p> <p>The Office of Attorney General has developed guidelines for public participation in Kenya including how to engage with different stakeholder.</p> <p>The World Bank has principles and guidelines for adequate stakeholder consultations including political class.</p>
Ministry of Energy and Petroleum	I would like to see the use of the new ESF in these frameworks	Guidance on when to use the new frameworks await directive from the Bank.
National Environment Management Authority	Is it possible for NEMA to be engaged in the review of ESMF, RPF and VMGFs?	This is possible and best practice.
Ministry of Transport, Infrastructure, Housing and Urban Development	The Involuntary Resettlement Policy encourages encroachers to seek for undeserved compensation and is a Pandoras box to institutions implementing projects where encroachment is common. I would prefer facilitation of this category of PAPs rather than compensation.	The Involuntary Resettlement Policy objective is to ensure that all displaced persons are treated with dignity and entitled to some form of compensation.

Kenya Land Alliance	How do we ensure that women are assured of compensation when displacement occurs? In most cases, men get away with all the compensation funds.	There is a Marital Property Act which protects women in such cases. The RPF has also included the need to ensure that in the event that during the RAP preparation, a determination is made that men could get away with the fund, then joint accounts should be operated. The RPF also includes training and capacity building of PAPs in money management.
Pamoja Trust	Are there guidelines on Grievance Redress Mechanism? What or when is a GRM considered adequate?	The Bank has principles and characteristics of an adequate GRM.
Ministry of Energy and Petroleum	What is the scope of this RPF? There is a policy being prepared by the NLC and MOEP how will these instruments interact with one another?	This RPF is only for the IFPPP-AF it is not sector specific but project specific.
Taita Taveta County Government	How does the RPF handle historical land injustices which is a concern in our county?	The RPF has highlighted all the legal frameworks and laws in Kenya including historical land injustices. The RPF has cited the Land Act and NLC Act which has mandate to handle all historical land injustices in Kenya.
Kenya National Highways Authority	Are there specific indicators for determining during preparation of RAPs of vulnerable groups?	Yes, the RPF has highlighted indicators of PAPs who may be considered vulnerable.

Annex C. Format of Project Report As Required by NEMA

Environmental Impact Assessment and Audit Regulations (EIA/EA) - Legal Notice No.121 of 2003.

PART II - THE PROJECT REPORT

7. (1) A proponent shall prepare a project report stating -

- a) The nature of the project;*
- b) The location of the project including the physical area that may be affected by the project's activities;*
- c) The activities that shall be undertaken during the project construction, operation and decommissioning phases;*
- d) The design of the project;*
- e) The materials to be used, products and by-products, including waste to be generated by the project and the methods of their disposal;*
- f) The potential environmental impacts of the project and the mitigation measures to be taken during and after implementation of the project;*
- g) An action plan for the prevention and management of possible accidents during the project cycle;*
- h) A plan to ensure the health and safety of the workers and neighbouring communities;*
- i) The economic and socio-cultural impacts to the local community and the nation in general;*
- j) The project budget; and*
- k) Any other information the authority may require.*

(2) In preparing a project report under this regulation, the proponent shall pay particular attention to the issues specified in the Second Schedule to these Regulations.

(3) A project report shall be prepared by an environmental impact assessment expert registered as such under these Regulations.

8. A proponent shall submit at least ten copies of the project report to the Authority or the Authority's appointed agent in the prescribed form accompanied by the prescribed fees.

Annex D. Format of ESIA Study Report

Environmental Impact Assessment and Audit Regulations (EIA/EA) - Legal Notice No.121 of 2003.

PART IV - THE ENVIRONMENTAL IMPACT ASSESSMENT STUDY REPORT

18. (1) A proponent shall submit to the Authority, an environmental contents of impact assessment study report incorporating but not limited to the environmental following information -

- a) *The proposed location of the project;*
- b) *A concise description of the national environmental legislative and regulatory framework,*
- c) *A concise description of baseline information,*
- d) *And any other relevant information related to the project; the objectives of the project;*
- e) *The technology, procedures and processes to be used, in the implementation of the project;*
- f) *The materials to be used in the construction and implementation of the project;*
- g) *The products, by-products and waste generated project;*
- h) *A description of the potentially affected environment;*
- i) *The environmental effects of the project including the social and cultural effects and the direct, indirect, cumulative, irreversible, short term and long-term effects anticipated;*
- j) *Alternative technologies and processes available and reasons for preferring the chosen technology and processes;*
- k) *Analysis of alternatives including project site, design and technologies and reasons for preferring the proposed site, design and technologies.*
- l) *An environmental management plan proposing the measures for eliminating, minimizing or mitigating adverse impacts on the environment; including the cost, time frame and responsibility to implement the measures;*
- m) *Provision of an action plan for the prevention and management of foreseeable accidents and hazardous activities in the cause of carrying out activities or major industrial and other development projects;*
- n) *The measures to prevent health hazards and to ensure security in the working environment for the employees and for the management of emergencies;*
- o) *An identification of gaps in knowledge and uncertainties which were encountered in compiling the information;*
- p) *An economic and social analysis of the project;*
- q) *An indication of whether the environment of any other state is likely to be affected and the available alternatives and mitigating measures; and*
- r) *Such other matters as the authority may require.*

Added components of the ESIA report to ensure World Bank (O P 4.01 Annex B) format is adhered to include;-

1. *Section on institutional capacity*
2. *Section on capacity building*
3. *Section on consultation*

(2) The environmental impact assessment study report shall be accompanied by a non-technical summary outlining the key findings, conclusions and recommendations of the study

and shall be signed by the proponent and environmental impact assessment experts involved in its preparation.

19. A proponent shall submit ten copies and an electronic copy of an environmental impact assessment study report to the Authority in Form 1B set out in the First Schedule to these Regulations accompanied by the prescribed fees.

Annex E. Sample Terms Of Reference (Tor) For An Environmental & Social Impact Assessment For Projects

1. Objectives of the ToR

This section should state the scope of the ESIA in relation to the screening category, and identify the geothermal project the ESIA will apply to. It should prescribe the process and its timing of project preparation, design, and implementation stages in order to adequately address Bank safeguards issues. Further, it should identify constraints (adequacy of existing baseline data and need for additional data) and provide an exact development schedule.

2. Background Information

The ToR should provide pertinent background for preparing the ESIA. This would include a brief description of:

- Statement of the project objectives,
- Implementing agency/sponsor and their requirements for conducting an ESIA,
- Project components, especially those that will finance subprojects;
- Anticipated types of subprojects/components, and what types will not be financed by the project;
- Areas of influence to be assessed (description plus good map)
- Summary of environmental/social setting
- Applicable Bank safeguards policies, and consequent Project preparation requirements, as specified in the approved ISDS.

The ToR should also include a brief history of the project, including alternatives considered, its current status and timetable, and the identities of any associated projects. Also include a description of other project preparation activities underway (e.g., legal analysis, institutional analysis, economic analysis, social assessment, baseline study) since the consultant preparing the ESIA will need to coordinate with other teams to ensure an effective and efficient information exchange.

3. EA Requirements/Regulations

This paragraph should identify any regulations and guidelines which will govern the conduct of the assessment or specify the content of its report. They may include any or all of the following:

- National laws and/or regulations on environmental assessments;
- Regional, provincial or communal environmental assessment regulations;
- Environmental assessment regulations of any other financing organizations involved in the project.
- Relevant international environmental agreements/conventions to which the country is party
- World Bank Operational Policies 4.01 "Environmental Assessment," 4.04 "Natural Habitats", 4.11 "Cultural Property", 4.12 "Involuntary Resettlement", 4.10 "Indigenous People" and other pertinent operational policies and Guidelines.

4. Study Area and Likely Major Impacts

Specify the area involved and the boundaries of the study area for the assessment (e.g., water catchment). Where appropriate specify the right-of-way (ROW)-width and alignment for pipelines. Similarly, specify locations for transmission substations, pumps.

Identify adjacent or remote areas which should be considered with respect to impacts of particular aspects of the project.

5. Scope of Work

In some cases, the tasks to be carried out by a consultant will be known with sufficient certainty to be specified completely in the terms of reference. In other cases, information deficiencies need to be alleviated or specialized field studies or modelling activities performed to assess impacts, and the consultant will be asked to define particular tasks in more detail for contracting agency review and approval.

Task 1. Description of the Proposed Project. Provide a brief description of the relevant parts of the project, using maps (at appropriate scale) and including the following information: location of all project related development sites and ROW's, including offsite investments; general layout; flow diagrams/drawings of facilities/operation design basis, size, capacity, flow-through of unit operations, including pollution control technology; pre-construction activities; construction activities; schedule; staffing and support; facilities and services; commissioning, operation and maintenance activities; required offsite investments; and life expectancy for major components. [Note: there may be particular types of information appropriate in the description of the project category you are concerned with. Please specify them here.]

Include the need for any resettlement plan or indigenous people development plan.

Provide maps at appropriate scales to illustrate the general setting of project-related development sites and ROW's, as well as surrounding areas likely to be impacted. These maps should include topographic contours, as available, as well as locations of major surface waters, roads, railways, town centers, parks and reserves, and political boundaries. Also provide, as available, maps to illustrate land use, including industrial, residential, commercial and institutional development, agriculture, etc.

Task 2. Description of the Environment (baseline condition). Assemble, evaluate and present baseline data on the relevant physical, biological, and socio-economic characteristics of the development area and area of influence. Include information on any changes anticipated before the project commences. [Annotate or modify the lists below to show the critical information for this project category, or that which is irrelevant to it. You should particularly avoid compiling irrelevant data.]

- a.) Physical environment: geology (e.g., stratigraphy and seismic history of development areas, integrity of geological layers protecting portable groundwater supplies); topography (e.g., drainage patterns around construction areas); soils (e.g., agricultural value); climate and meteorology; ambient air quality; existing sources of air emissions; surface and ground-water hydrology (e.g., soil erosion and sedimentation potential, flood hazard potential); water resources (e.g., adequacy of water supply) coastal and oceanic parameters; existing water pollution discharges, and receiving water quality (e.g., ability to assimilate effluent discharges and maintain water quality standards for desired uses).
- b.) Biological environment: flora (e.g., types and diversity); fauna (e.g., resident and migratory); rare or endangered species within or in areas adjacent to project related development sites or ROW's; sensitive habitats, including parks or preserves, significant natural sites, etc.; species of commercial importance; and species with potential to become nuisances, vectors or dangerous.

- c.) Socio-cultural environment (include both present and projected where appropriate): population; land use (e.g., year-round and seasonal); planned development activities; community structure; employment; distribution of income, goods and services; recreation; public health; cultural properties (e.g., archeological and historically significant sites); indigenous peoples and traditional tribal land; and customs, aspirations and attitudes.

Task 3. Legislative and Regulatory Considerations. Describe the pertinent regulations and standards governing environmental quality, health and safety, protection of sensitive areas, protection of endangered species, siting, land use control, etc., at international, national, regional and local levels (The TOR should specify those that are known and require the consultant to investigate for others.) If transboundary impacts are likely, relevant international conventions should be described.

Task 4. Determination of the Potential Impacts of the Proposed Project. Predict and assess all significant impacts that the project is likely to generate, in quantitative terms as far as possible. Assess the impacts from changes brought about by the project on baseline environmental conditions as described under Task 2.

In this analysis, distinguish between significant positive and negative impacts, direct, indirect, and cumulative impacts, and immediate and long-term impacts. Identify impacts that may occur due to accidental events. Identify impacts which are unavoidable or irreversible. Wherever possible, describe impacts quantitatively, in terms of environmental costs and benefits. Assign economic values when feasible. Impact analyses for sub projects should be divided between construction impacts and operational impacts.

Characterize the extent and quality of available data, explaining significant information deficiencies and any uncertainties associated with predictions of impact. If possible, give the TOR for studies to obtain the missing information. [Identify the types of special studies likely to be needed for this project category.] For information not be obtainable until after execution, provide TOR for studies to monitor operations over a given time period and to modify designs and/or operational parameters based upon updated impact analysis.

Task 5. Analysis of Alternatives to the Proposed Project. Describe alternatives that were examined in the course of developing the proposed project and identify other alternatives which would achieve the same objectives. The concept of alternatives extends to siting, design, technology selection, construction techniques and phasing, and operating and maintenance procedures. Compare alternatives in terms of potential environmental impacts; capital and operating costs; suitability under local conditions; and institutional, training, and monitoring requirements. When describing the impacts, indicate which are irreversible or unavoidable and which can be mitigated. To the extent possible, quantify the costs and benefits of each alternative, incorporating the estimated costs of any associated mitigating measures.

Include the alternative of not constructing the project to demonstrate environmental conditions without it. Alternatives should include the following: the “no action” alternative (as mentioned above); alternative means of meeting the energy requirements; the alternative of upgrading existing facilities; alternative routes and sites; alternative design; and alternative methods of construction, including costs and reliability.

Task 6. Development of an Environmental Management Plan (EMP). Recommend feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels. Include measures to address emergency response requirements for accidental events.

Estimate the impacts and costs of those measures, and of the institutional and training requirements to implement them. Consider compensation to affected parties for impacts which cannot be mitigated. Prepare a management plan including proposed work programs, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the mitigating measures. Provide environmental protection clauses for application by contractors and consultants.

The ToR should state that the concerned and affected parties should agree mitigating measures before they are submitted as recommendations in the EMP

Task 7. Identification of Institutional Needs to Implement Environmental Assessment Recommendations. Review the authority and capability of institutions at local, provincial/regional, and national levels and recommend steps to strengthen or expand them so that the management and monitoring plans in the environmental assessment can be implemented. The recommendations may extend to new laws and regulations, new agencies or agency functions, intersectoral arrangements, management procedures and training, staffing, operation and maintenance training, budgeting, and financial support.

Task 8. Development of a Monitoring Plan. Prepare a detailed plan to monitor the implementation of mitigating measures and the impacts of the project during construction and operation. Include in the plan an estimate of capital and operating costs and a description of other inputs (such as training and institutional strengthening) needed to implement the plan.

Depending upon local conditions and predicted impacts upon communities/individuals, there may be a need for a Resettlement Action Plan.

Task 9. Assist in Inter-Agency Coordination and Public/NGO Participation. Assist in coordinating the environmental assessment with other government agencies, in obtaining the views of local NGO's and affected groups, and in keeping records of meetings and other activities, communications, and comments and their disposition. (The Terms of Reference [TOR] should specify the types of activities; e.g., interagency scoping session environmental briefings for project staff and interagency committees, support to environmental advisory panels, public forum.). Review the authority and capability of institutions at local, provincial/regional, and national levels and recommend steps to strengthen or expand them so that the management or monitoring plans in the environmental assessment are likely to be implemented. The recommendations may extend to new laws and regulations, new agencies or agency functions, inter-sectoral arrangements, management procedures and training, staffing, operation and maintenance training, budgeting, and financial support.

Relevant material will be provided to affected groups in a timely manner prior to consultation and in a form and language that is understandable and accessible to the groups being consulted. The consultant should maintain a record of the public consultation and the record should indicate: means other than consultations (e.g., surveys) used to seek the views of affected stakeholders; the date and location of the consultation meetings, a list of the attendees and their affiliation and contact address: and summary minutes.

6. Report.

The environmental assessment report should be concise and limited to significant environmental issues. The main text should focus on findings, conclusions and recommended actions, supported by summaries of the data collected and citations for any references used in interpreting those data. Detailed or un-interpreted data are not appropriate in the main text and should be presented in appendices or a separate volume. Unpublished documents used in the assessment may not be readily available and should also be assembled in an appendix. Organize the environmental assessment report according to the outline below. *(This is the format suggested in OP4.01; the ToR may specify a different one to satisfy national agency requirements as long as the topics required in the Bank's OP are covered)*

- Executive Summary
- Policy, Legal and Administrative Framework
- Description of the Proposed Project
- Baseline Data (Description of the Environment)
- Significant Environmental Impacts
- Analysis of Alternatives
- Environmental Management Plan
- Environmental Management and Training
- Environmental Monitoring Plan
- Inter-Agency Coordination and Public/NGO Participation
- Appendices: List of Environmental Assessment Preparers References Record of Interagency/Forum/Consultation Meetings (This is the format suggested in OD 4.01; the TOR may specify a different one to satisfy national agency requirements as long as the topics required in the Bank's directive are covered.)

7. Consulting Team

Environmental assessment requires interdisciplinary analysis. The general skills required of an environmental assessment team are: environmental management planning, ecology, hydrology/hydrogeology, and water quality analysis.

(Identify in this paragraph which specializations ought to be included on the team for the particular project category.) Note: The team will be required to work closely with specialists undertaking the social analysis and to define arrangements for the final report, especially if the EA and social analysis are to be combined in one report.

8. Services, Facilities and Materials to be provided by the Client

The ToR should specify what services, facilities and materials will be provided to the Consultant by the World Bank and the Borrower, for example:

- The Project ISDS and draft PAD;
- Relevant background documentation and studies;
- Example ESMFs that demonstrate best practice, especially from the region or country;
- Making all necessary arrangements for facilitating the work of the Consultant and to provide access to government authorities, other Project stakeholders, and Project sites.

10. Schedule and Deliverables

Specify dates for the consultancy deliverables (e.g. detailed work plan within 2 weeks, interim report within 7 weeks, and final draft report within 10 weeks of contract signature), and the overall duration of the consultancy (e.g. 15 weeks from contract signature).

11. Technical Proposal Contents

The ToR should require a technical proposal that at least:

- Demonstrates that the Consultant understands the overall scope and nature of the ESIA preparation work, and what will be required to respond satisfactorily to each component of the ToR;
- Demonstrates that the Consultant and his proposed team have relevant and appropriate experience to carry out all components of the ToR. Detailed curriculum vitae for each team member must be included;
- Describes the overall methodology for carrying out each component of the ToR, including desk and field studies, and data collection and analysis methods; and
- Provides an initial plan of work, outputs, and staff assignments with levels of effort by task.

12. Budget and Payments

The ToR should indicate if there is a budget ceiling for the consultancy. The ToR should specify the payment schedule (e.g. 10% on contract signature, 10% on delivery of detailed work plan, 40% on delivery of interim report, 30% on delivery of final draft ESIA, and 10% on delivery of final ESIA).

8. Other Information

Include here lists of data sources, project background reports and studies, relevant publications, and other items to which the consultant's attention should be directed.

Annex F. Guidelines For Preparation Of Integrated Pest Management Plan

Integrated Pest Management (IPM) approaches involve control of pest populations through biological control or cultural practices. IPM refers to a mix of ecologically based pest control practices that seek to reduce reliance on synthetic chemical pesticides. It involves:

- Managing pest populations (keeping them below economically damaging levels) rather than seeking to eradicate them;
- Relying on nonchemical measures to keep pest populations low; and
- Selecting and applying pesticides, when they have to be used, in a way that minimizes adverse effects on beneficial organisms, humans, and the environment. The following options are available as part of IPM for tsetse fly control:

Use of Approved Pesticides

The Bank may finance the purchase of pesticides when their use is justified under an IPM approach. The lists of pesticide products authorized for procurement in Kenya as well as the list of banned products and restricted ones are found in the website of the pest control agency, Pest Control Products Board, www.pcpb.or.ke.

Procedures for Safe Use of Pesticides

Most pesticides will cause adverse effects if intentionally or accidentally ingested or if they are in contact with the skin for a long time. Pesticide particles may be inhaled with the air while they are being sprayed. An additional risk is the contamination of drinking-water, food or soil. Special precautions must be taken during transport, storage and handling

Safe use of pesticides involves use of methods that are ecologically effective and pose lowest risk to the human health and the environment. The following approaches are proposed:

Personnel Safety

- Avoid contact with the pesticide by wearing all designated personal equipment. Designated PPE for chemicals include long sleeved shirt and long pants of tightly woven material, Waterproofed boots, goggles, hard hats and unlined nitrile gloves
- Promptly clear all drips and spills
- Keep hands away from eyes and mouth
- Carefully wash hands before eating drinking smoking or visiting toilet
- People who handle pesticides should receive proper training in their safe use.

In case of accidental contact:

- Clean the body parts contacted Immediately, and thoroughly
- Change clothes if necessary
- Apply First-Aid, if necessary
- If pesticide was swallowed, if it has gotten into the eyes, or if the person contacted is
- showing any symptoms resulting from the contact – get him or her to a doctor immediately

Transportation of Pesticides

- Do not carry pesticides in the passenger compartment of a vehicle;
- Do not carry mixed loads - herbicides need to be carried separately from insecticides from fungicides, etc.
- Tie containers down to avoid bouncing them around.

Storage

- Store pesticides in a separate room from that occupied by people;
- Spray equipment should be regularly cleaned and maintained to prevent leaks;
- Storage area should be locked and access should be strictly limited;
- Pesticides should be stacked separately and, ideally be separated by product type;
- A current inventory should be available at the dispatcher’s desk informing of stock levels;
- Hazard warning signage should be accurate.

Environmental Concerns

Where the Bank may decide to fund use of pesticides under the IPM approach, supervision by relevant qualified personnel such from Ministry of Agriculture must be included in the use of such substances. The Material Safety Data Sheets (MSDS) for the applied pesticide should be available to guide the process to ensure environmental safety. The following should also be part of the emergency response plan

- Have in place a spill response plan with contacts of local doctors and emergency response team phone numbers and locations;
- Spill response plan has to be typed, legible and updated, and always available at dispatcher’s desk for ready access in the event of an emergency;
- The plan should contain telephone numbers of people to notify and people or organizations who can provide assistance;
- In the event of a spill the three step emergency action is:
 - take care of injured personnel first!
 - Contain the spill;
 - Get appropriate help.
- Update the plan for each ongoing project to include details such as labels & MSDSs of the product in use

- Caution must be taken to avoid drift, leaching, runoff, and other forms of off-site movement
- Spill kit to be on board trucks transporting pesticides.

Annex G. Chance Find Procedures

The national agency responsible for cultural matters in Kenya is the National Museums of Kenya (NMK).

Prior to commencement of projects in culturally sensitive areas the proponent would contact NMK who would send representatives to review the site and prepare a report. The report would entail advice on professional approach to the proposed works to ensure minimal damage to the encountered items. In the event that chance finds are encountered the following procedure shall apply:

Role of the contractor

- Reporting of chance finds: The contractor or officer supervising the project would report the finds to the local administration such as the local chief or the Assistant County Commissioner;
- The local administration would then report the find to NMK.
- The contractor would report back to client who would notify NMK in the event that further artifacts are encountered

Role of NMK

- NMK would temporarily stop the works to conduct an assessment and prepare a report. The period of stoppage is from 10 days to 21 days depending on the complexity of the project; Retrieve movable artifacts and preserve immovable ones;
- NMK would also map out the area to be preserved during the investigation period and arbitrate between the community and developers in the event of dispute;
- Circulate the cultural impact assessment report to the developer, NEMA, relevant lead agencies and the community.

Measures for Care of Chance Finds

Upon retrieval of movable artifacts and conservation of immovable ones, NMK would proceed with segregation and dating of the artifacts and determination of their significance; Segregated artifacts would be stored in the NMK archeological stores according to their size and dates, and labelled with the geographical area where found; The artifacts may be displayed in an exhibition when required or published to enrich the cultural heritage.

Annex H. Proposed National Pipeline Projects To Be Supported Under IFPPP-AF

S/NO	Project	Project preparation phase to be supported	Estimated Cost (US\$ '000)
National Government			
1	Energy Auction projects	FS + Procurement	3,500
2	300 Bed Private Hospital	Procurement	1,500
3	Nairobi Commuter Rail	FS + Procurement	2,500
4	JKIA Greenfield Terminal	FS + Procurement	3,000
5	Tourism Information Center	FS + Procurement	2,100
	TA for 2 nd Wave Tollroads:		
6	Thika -Nanyuki - Lewa	FS + Procurement	7,500@1,500ea
7	Mau Summit - Eldoret - Malaba		
8	Mau Summit - Kisumu		
9	Mombasa - Malindi		
10	Ring Roads -Nairobi		
11	2 nd Umbrella Student Hostels Program		4,000
	Sub-total		24,100
County Government			
1	Nairobi Bulk Water Supply	Procurement	1,500
2	Murangá Water Supply	Procurement	1,500
3	Nakuru Solid Waste Management	Procurement	2,000
4	Potential Affordable Housing projects within the counties- Other counties to be considered other than Nakuru	FS + Procurement	2,400
5	SWM, Health Services, Water Supply, County Roads, Agriculture, County markets	FS + Procurement	3,000
	Sub-total		10,400
	Contingency		4,500
	Total		39,000

Annex I: Format of an Annual Environmental Report

Environmental Authority:							
Reporting dates:							
District/County:							
Sub projects approved:							
Project Investment Title	Activities	Project phase ⁽¹⁾	Environmental Category	ESIA / ESMP completed?	Environmental Permit granted?	Effectiveness of ESMP	Issues ⁽²⁾
(name, location, title or reference)	(new construction, rehabilitation, maintenance)	See note below	(A, B or C)	Yes, No or N/A	Yes, No or N/A	Good, poor, or needs improvement	See note below
1							
2							
3							
etc.							
Sub projects rejected:							
Subproject title	Activities	Reasons for rejection			Remarks ⁽³⁾		
1							
2							
etc.							