

NAMIBIA WATER SECTOR SUPPORT PROGRAM (NWSSP): STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA) / ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)



ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF) REPORT

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GOVERNMENT OF THE REPUBLIC OF
NAMIBIA: MINISTRY OF AGRICULTURE,
WATER AND FORESTRY (MAWF)

AFRICAN DEVELOPMENT BANK
(AfDB)



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ACRONYMS

AfDB	African Development Bank
AIDS	Acquired Immunodeficiency Syndrome
BEE	Black Economic Empowerment
BMCs	Basin Management Committees
BOT	Built Operate and Transfer
CBM	Community Based Management
CLTS	Community-Led Total Sanitation
CoW	City of Windhoek
CSP	Country Strategy Papers
DEA	Directorate of Environmental Affairs
DPR	Direct Potable Reclamation
DWAF	Department of Water Affairs and Forestry
DWAF	Directorate of Water end Forestry
DWSSC	Directorate of Water Supply and Sanitation Coordination
EA	Environmental Assessment
ECC	Environmental Clearance Certificates
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
ES	Environmental Scoping
ESA	Environmental Social Assessment
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GRM	Grievance Redress Mechanism
GRP	Grievance Redress Panel
Ha	Hectare
HIV	Human Immunodeficiency Viruses
HRDC	Human Resources Development Centre
IPAs	Important Plant Areas
IRM	Independent Review Mechanism
ISS	Integrated Safeguards System
IWRM	Integrated Water Resources Management
KIP	Key Performance Indicator
LNOB	Leave No-one Behind
LSU	Large Stock Unit
M&E	Monitoring & Evaluation
MAWF	Ministry of Agriculture, Water and Forestry
MET	Ministry of Environment and Tourism
NamWater	Namibia Water Corporation Ltd
NEMA	Namibia Environment Management Act
NGO	Non-governmental organization
NHCN	National Heritage Council of Namibia
NUST	Namibia University of Science and Technology
NWSSP	Namibia Water Sector Support Program
OS	Operational Safeguard

OSPs	Operational Safeguard Policies
PAPs	Project Affected Persons
PBO	Program-Based Operations
PIR	Project Implementation Reports
PM	Project Manager
PPE	Personal Protective Equipment
PRO	Public Relation Officer
R&R	Rehabilitation and resettlement
RAP	Resettlement Action Plan
RISP	Regional Integration Strategy Papers
SABS	South African Bureau of Standards
SANS	South African National Standard
SEA	Strategic Environmental Assessment
SESA	Strategic Environmental and Social Assessment
SHE	Safety, Health and Environment
STDs	Sexual Transmitted Diseases
TA	Technical Assistant
ToR	Terms of References
UNAM	University of Namibia
WASH	Water, Sanitation and Hygiene
WSS	Water Supply Scheme

DEFINITION OF TERMS

The **'Bank'** – this refers to the African Development Bank (AfDB) that is providing both the technical and financial assistance for the implementation of NWSSP.

The **'Consultant'** – this refers to the team that is conducting the SESA and the preparation of the ESMF of the Program

The **'Government of Namibia'** – this refers to the host government that will oversee the implementation of the NWSSP through Ministry of Agriculture, Water and Forestry (MAWF).

The **'Implementing Agencies'** – this refers to the institutions/departments that are directly involved in the implementation of the NWSSP, these are City of Windhoek (CoW), Namibia Water Corporation Ltd (NamWater) and MAWF.

The **'Stakeholders'** – this refers to the people, organisations, NGOs that are directly or indirectly affected and interested by the project.

The **'Environment'** – this refers to the ecology, economy, society and politics.

EXECUTIVE SUMMARY

The Government of the Republic of Namibia through the Ministry of Agriculture, Water and Forestry (MAWF) is implementing Namibia Water Sector Support Program (NWSSP) in a bid to address the water supply and sanitation challenges that is affecting the country. The project is supported by African Development Bank (AfDB). The aim of the program is to increase access, quality, security and sustainability of water supply and sanitation services in Namibia. The program implementation is split into two phases; the phase 1 that will be implemented in the next 5 years and phase 2 after completion of phase 1. Phase 1 is addressing short term, immediate water solutions whilst phase 2 will focus on long term solutions to the water sector. Twenty-five sub-projects are proposed under NWSSP and AfDB will support the programs.

To comply with the Bank's requirements and for sustainable development, the implementing agencies of the program (MAWF, Namibia Water Corporation and City of Windhoek) are required to address the downstream impacts of the program. This report presents the Environmental and Social Management Framework (ESMF) that was prepared to manage, mitigate adverse downstream impacts result from the implementation of the program. The overall objective of this ESMF was to ensure that the implementation of the NWSSP will be carried out in an environmentally and socially sustainable manner. The ESMF provide a framework to enable the Government to screen sub-projects and institution measures to address adverse environmental and social impacts associated with NWSSP. The ESMF outline remedial measures and preventative and control strategies for potential negative environmental and social impacts due to proposed program activities; measures to address the AfDB Operational Safeguard (OS) on Environmental and Social Assessment (The Bank's OS 1); and actions to improve positive impacts of the program.

The NWSSP program implementation comprise of four main components: i) Climate-resilient bulk water infrastructure implemented by NamWater, ii) Wastewater treatment and reclamation implemented by the City of Windhoek, and iii) Rural water supply and sanitation implemented by MAWF and the cross-cutting soft component iv) Institutional capacity building and program management aimed at improving the implementation of NWSSP.

Sub-projects owners; the implementing agencies have been field-checked by AfDB's Environmental and Social Safeguard Specialists, and a preliminary assessment is included in this ESMF to describe the environmental and social impacts of the project on a program-wide level. As many of the specific details of the investment works are not yet fully defined, this ESMF also includes general guidelines to screen possible future sub-projects, identify potential impacts, develop mitigation plans, and include them into project environmental management activities. Finally, this ESMF includes generic mitigation measures to guide the implementation of relatively simple works for which no additional assessment would be required, as well as identification criteria to identify sub-projects which require further assessment due to complex or sensitive conditions, or which would require the development of a comprehensive Environmental and Social Management Plan (ESMP).

A separate Strategic Environmental and Social Assessment report was prepared that identified several impacts and their significance to the development of the twenty-five sub-projects to which this ESMF

provide a framework to manage these impacts in order to improve the implementation of NWSSP. This ESMF sets out a mechanism for the assessment of the environmental and social impacts of all sub-projects; identifies the generic impacts; and proposes mitigation, and monitoring and institutional measures to be taken during implementation and operation of the project to avoid, minimize or offset adverse environmental and social impacts. It also defines the procedures for conducting Environmental and Social Impact Assessments (ESIAs) and preparing Environmental and Social Management Plans (ESMPs)

Environmental and social screening will be undertaken for sub-project to ensure further environmental assessments. The aims of the screening are 1) to determine the nature and the extent of the anticipated adverse environmental and social impacts; 2) to define and develop the most appropriate safeguard instrument, depending on the nature and extent of these impacts; and 3) to establish and implement appropriate mitigation measures.

The Ministry of Agriculture, Water and Forestry will serve as the main implementation agency to ensure that the program achieves expected results. However, other implementing agencies have key role to play for their sub-projects to ensure successful implementation of the program. Technical Assistant from the implementing agencies will be appointed. Implementing agencies have a responsibility to make sure that the ESMF and other supporting management plans are implemented by contracted firms.

The Grievance Redress Mechanism (GRM) will provide a way to ensure that an effective avenue for expressing concerns and achieving remedies for communities. The goal is to promote a mutually constructive relationship and enhance the achievement of project development objectives. The GRM is to ensure that complaints are directed and expeditiously addressed by the relevant agencies which is to enhance responsiveness and accountability. The GRM will operate at several levels including at community/village level, constituency, regional and national level. At community, constituency and regional levels, the GRM will strive not develop parallel structures but make use of existing and locally recognized grievance redress systems. The project will also utilise AfDB's Independent Review Mechanism (IRM) which ensures individuals, peoples, and communities affected by sub-projects have access to appropriate grievance resolution procedures for hearing and addressing project-related complaints and disputes.

The ESMF monitoring system will ensure that identified mitigation measures are appropriately and effectively implemented for producing the anticipated results; any additional impacts not identified in the analysis of the potential environmental and social impacts of the rehabilitation and/ or construction of facilities are captured as early as possible and are modified, discontinued or replaced if they prove to be inadequate. It will include: (i) the elements to be monitored; (ii) monitoring methods and tools; (iii) the responsibilities for monitoring and reporting; and (iv) the periodicity of monitoring.

During the preparation of this ESMF, many of the specific details of the investment works were not yet fully defined, therefore costing the implementation was very difficult and the figures might vary considerably. The indicative cost for preparing regional ESMPs is N\$2 910 000 and each regional ESMP will give indicative budget to implement proposed measures and monitor implementation of the specific sub-projects. The indicative budget to implement this ESMF is estimated at N\$1 105 000.00.

1. CHAPTER ONE: INTRODUCTION

1.1. Introduction to NWSSP

This Environmental and Social Management Framework (ESMF) has been prepared for the Namibia Water Sector Support Program (NWSSP) funded by African Development Bank (AfDB), developed for the Government of the Republic of Namibia, Ministry of Agriculture Water and Forestry (MAWF). The NWSSP aims to increase access, quality, security and sustainability of water supply and sanitation services in Namibia.

The NWSSP is covering three physical components (bulk water infrastructure development, sanitation infrastructure development, rural water supply and sanitation) implemented through 25 sub-projects to which this ESMF applies. This ESMF is only restricted to the 25 sub-projects implemented by MAWF together with NamWater and City of Windhoek as implementing agencies. The following table shows the sub-projects that this ESMF applies:

Table 1: List of sub-projects under NWSSP and AfDB Commitment

Component	Implementing Agency	Sub-Projects	Location/Region	Cost (AfDB Commitment)		Total Commitment
				Phase 1	Phase 2	
Climate Resilient Bulk Water Infrastructure Development	NamWater	Ohangwena No. 2 Wellfield	Ohangwena	23,800		23,800
		Abenab Borehole Development	Otjozondjupa	429,000		429,000
		Oshakati Purification Plant Extension	Oshana		294,000	294,000
		Omdel-Wlotzkasbaken Pipeline Replacement	Erongo		240,000	240,000
		Rundu Scheme Extension	Kavango East	356,000		356,000
Climate Resilient Sanitation Infrastructure Development - Wastewater treatment and reclamation	City of Windhoek	Direct Potable Reclamation (DPR) Phase 2: New DPR Plant 2	Khomas	450,000		450,000
Rural Water Supply and Sanitation	MAWF	Rehabilitation of Katima Mulilo – Kongola Water Supply Project Phase 1 & 2	Zambezi	9,000		9,000
		Ruacana South Water Supply Project	Omusati	86,000		86,000
		King Kauluma – Omutsegonime Water Supply Scheme (WSS)	Oshikoto	50,000		50,000
		Construction of improved sanitation facilities	All the 14 Regions	100,000		100,000
		Otjombinde Water Supply Scheme	Omaheke	104,000		104,000
		Shamvura – Shamangorwa WSS	Kavango East	10,000		10,000
		Water Supply to the Salt Block	Hardap and //Karas		100,000	100,000

Component	Implementing Agency	Sub-Projects	Location/Region	Cost (AfDB Commitment)		Total Commitment
				Phase 1	Phase 2	
		litapa-Okeeholongo Rural Water Supply Project Phase 2	Omusati	37,000		37,000
		Katima Mulilo – Ngoma Water Supply Project Phase 3 and 4	Zambezi	144,000		144,000
		Katima Mulilo – Kongola Water Supply Project–Phase 3	Zambezi	90,000		90,000
		Etaka Raw Water Supply Scheme (source-Olushandja Dam)	Omusati		90,000	90,000
		Eenhana - Oshikunde Water Supply Scheme	Ohangwena		80,000	80,000
		Okankolo – Onkumbula Water Supply Scheme	Oshana and Oshikoto		80,000	80,000
		Epembe Water Supply Scheme	Ohangwena		43,000	43,000
		Rain and Flood Water Harvesting Infrastructure	Central Northern Regions		100,000	100,000
		Rundu – Mukwe Water Supply Scheme Covering 30km stretch	Kavango East		50,000	50,000
		Ohangwena East-Kavango West-Oshikoto Water Supply Scheme (Omundaungilo WSS)	Ohangwena, Kavango West and Oshikoto		300,000	300,000
		Rundu Mururani Water Supply Scheme	Kavango East		50,000	50,000
		Rehabilitation of Ogongo – Oshakati WSS in Omusati, Oshana and Ohangwena Regions	Omusati, Oshana and Ohangwena		30,000	30,000
		Rehabilitation of Katima Mulilo – Kongola Water Supply Project Phase 1 & 2	Zambezi	48,000		48,000

1.2. The Objective of ESMF

The overall objective of this ESMF was to ensure that the implementation of the NWSSP will be carried out in an environmentally and socially sustainable manner. The ESMF will provide a framework to enable the Government to screen sub-projects and institutional measures to address adverse environmental and social impacts associated with NWSSP. The ESMF outline remedial measures and preventative and control strategies for potential negative environmental and social impacts due to proposed program activities; measures to address the AfDB Operational Safeguard (OS) on Environmental and Social Assessment (The Bank's OS 1); and actions to improve positive impacts of the program.

Under the AfDB's Operational Safeguards Environmental and Social Assessment "The Bank's OS1", NWSSP activities are classified as Category 2 projects whose impacts are likely to have detrimental site-specific environmental and / or social impacts that can be minimized by applying appropriate management and mitigation measures or incorporating internationally recognized design criteria and standards, or compensated and environmental performance can be improved. In the Namibian Environmental Impact

Assessment (EIA) Regulations, it is anticipated that most of the sub-projects will at least reach the environmental screening stage. Only those with potential negative impacts will go to the environmental scoping stage with an environmental project management plan. The decision for detailed EIAs for the sub-projects would be determined by Ministry of Environment and Tourism (MET). If an EIA is inevitable then the Namibian EIA Regulations will be used.

This ESMF is presented in three sections. The first section is the NWSSP activities and project impacts; the second section is the measures to develop ESMP, the Environmental and Social Management Plan (ESMP) and the last section is the Monitoring and Capacity building. This report should be read along with the Strategic Environmental and Social Assessment (SESA) report. The ESMF identifies project activities, likely impacts; mitigation; monitoring and capacity building. The ESMF is summarizing institutional arrangements for the implementation of mitigation measures, the section monitoring of the implementation of mitigation measures, and capacity building needs as well as cost estimates and time horizons for such activities and monitoring indicators. Identified potential socio-economic impacts that need resettlement and compensation will be solved through the Resettlement Action Plan (RAP). A separate RAP will be prepared if the need arises.

The specific objectives of this ESMF are:

- Establishing clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of sub-projects to be financed under the program.
- Specifying appropriate roles and responsibilities and outlining the necessary reporting procedures for managing and monitoring environmental and social risks related to subprojects.
- Determining the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF.
- Establishing project funding required to implement the ESMF requirements.

1.3. Methodology used to prepare the ESMF

This ESMF was prepared based on existing general literature, among them: The Constitution of Namibia, National Policies and their supporting laws and regulations: Water, Environment, Climate Change, Decentralization, Land and Land Use, Poverty, Gender and the AfDB's Safeguard Policies. The process was supported by extensive consultations with the implementing agencies; MAWF, NamWater, CoW, Funding Agency (The AfDB), the key National Stakeholders (Government Institutions, Ministries, NGOs, civil societies, traditional authorities, and Municipalities/Town councils). List of people, institutions consulted is in the Annexes of the SESA Report (*Annex 2*).

1.3.1. Overview of the AfDB's Operational Safeguard Policies

Out of the five AfDB's Operational Safeguard policies designed to ensure that projects its finances are environmentally and socially sustainable, the main OS 1 triggered is:

- OS1 Environmental and Social Assessment.

Environmental and Social Assessment OS1

OS1 sets out the Bank's overarching requirements for borrowers or clients to identify, assess, and manage the potential environmental and social risks and impacts of a project, including climate change issues. The assessment covers all stages of the project, from construction and operation through to closure/decommissioning.

Objectives of OS1

The objective of this overarching Operational Safeguard (OS), along with the OSs that support it, is to mainstream environmental and social considerations including those related to climate change vulnerability into Bank operations and thereby contribute to sustainable development in the region.

The specific objectives are to:

- Mainstream environmental, climate change, and social considerations into Country Strategy Papers (CSPs) and Regional Integration Strategy Papers (RISPs);
- Identify and assess the environmental and social impacts and risks including those related to gender, climate change and vulnerability of Bank lending and grant-financed operations in their areas of influence;
- Avoid or, if avoidance is not possible, minimise, mitigate and compensate for adverse impacts on the environment and on affected communities;
- Provide for stakeholders’ participation during the consultation process so that affected communities and stakeholders have timely access to information in suitable forms about the Bank operations, and are consulted meaningfully about issues that may affect them; and
- Ensure the effective management of environmental and social risks in projects during and after implementation.

Trigger

This OS is triggered through the mandatory Environmental and Social Screening Process through which the project is assigned a Category based upon its potential environmental and social risks and impacts in its area of influence. These potential risks and impacts include physical, biological, socio-economic, health, safety, cultural property, transboundary impacts and global impacts including Greenhouse Gas (GHG) emissions and vulnerability to climate change effects

1.4. Structure of the Report

The report consists of nine chapters. The table below give a breakdown of the chapters and the content.

CHAPTER	CONTENT
SUMMARY	The section provides an overview of the ESMF and the purpose of the SESA.
ONE: INTRODUCTION	This chapter is determining the scope of the assessment (i.e. the environmental and social issues to consider), level of effort, and the tasks required to carry out the SESA and the ESMF. The section outlines the appropriateness of preparing an ESMF as an instrument for the management of the environmental and social safeguards issues.
TWO: PROGRAM ACTIVITIES DESCRIPTION	The section identified the key components of the program. The section lay out the main objectives of the program by identifying the anticipated economic, social or cultural changes as well as direct and indirect expected outcomes. The location and intended beneficiaries of the sub-projects are described in this section.
THREE: SCREENING OF SUB-PROJECTS	The Chapter explain the environmental and social screening process and the detailed screening step by step procedure until approval of sub-projects/awarding of environmental certificates.
FOUR: ASSESSMENT OF POTENTIAL ENVIRONMENTAL	The procedures that were used to assess the potential environmental and social impacts of the program by comparing the intended activities with the surrounding environmental and socio-cultural resources. Procedures used include information

CHAPTER	CONTENT
AND SOCIAL IMPACTS AND RISKS OF SUBPROJECTS	regarding the social, cultural, natural and coastal resources, etc., sourced from related literature and existing baseline conditions, visits to the sub-project site and consultation with relevant stakeholders. The potential positive and negative environmental and social impacts likely to arise are described as analyzed by the procedures mentioned above. The level of significance of the impacts is given in this section.
FIVE: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLANS FOR SUB-PROJECTS	The chapter is presenting the measures that will be used to develop appropriate ESMPs to ensure implementation of the ESMF at the sub-project. It highlights the strategy and ESMPs for the sub-projects.
SIX: MONITORING PLAN AND SUB-PROJECT SUPERVISION	<p>Outlining of arrangements for monitoring and sub-project supervision:</p> <p>The section is presenting the monitoring programmes that will be introduced to evaluate the effectiveness of mitigation measures administered at the sub-project level for the program. The monitoring programmes are addressing the following:</p> <ul style="list-style-type: none"> • An evaluation of the validity of the impact predictions and strategic assessment conclusions. • Whether the proposed measures to mitigate adverse effects and optimize benefits were carried out. • An evaluation of the effectiveness of the mitigation/optimization measures. • To what extent the PPP purpose has been achieved and to what extent the achievement is as a result of the program. • Whether the achievement is sustainable. • Whether the achievements extend to the poorest and most marginalized levels of society. • Identification of any further changes needed to improve environmental/social benefits of the program. • Identification of any additional strategic or project ESAs that may be needed as a result of the program; and • Lessons learned from the SESA and ESMF. <p>The monitoring program is clearly defining the roles and responsibilities for the coordination of the monitoring system, monitoring methods and indicators, procedures for regular adjustments of policy and external communication and capacity building.</p>
SEVEN: REPORTING AND RESPONSIBILITIES	The Chapter is outlining the reporting structure on the progress of the ESMF implementation including the responsibility, methods of communication, reasons for reporting, frequency of reporting results as well as the protocol to be followed when reporting.
EIGHT: PROPOSED MITIGATION AND ENHANCEMENT MEASURES	This Chapter is outlining the specific measures that will be considered to mitigate/minimize moderate and major adverse impacts. 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 are recommended. Where appropriate, measures to enhance and complement the environmental and social performance of the sub-projects can be presented. Mitigation options considered in this section include project modification, provision of alternatives, project timing, pollution control, compensations and relocation assistance.

CHAPTER	CONTENT
NINE: TRAINING AND CAPACITY BUILDING TO ENABLE ESMF IMPLEMENTATION	The Chapter assess the capacity of the institutions responsible for the implementation of NWSSP and the required appropriate and functional institutional arrangements within these institutions. Requirements for training and capacity building shall ensure appropriate environmental/social management upon implementation of the program. The section is describing the institutional strengthening plan basing it on the gaps in environmental and social management skills identified at the national, regional or local level during scoping, and the future needs for improved environmental and social management
TEN: ESMF IMPLEMENTATION COST	The section is giving a breakdown of the ESMF implementation costs.
CONCLUSION	The section is summarizing the main expected environmental and social impacts and mitigation and enhancement measures that will ensure that the program meets the Bank's safeguards requirements. Its specifying the environmental and/or social loan conditions or covenants that are part of the loan agreements.

2. CHAPTER TWO: PROGRAM (NWSSP) ACTIVITIES DESCRIPTION

The chapter outlines the key components of the NWSSP, the main objectives of the program, identifying the anticipated economic, social or cultural changes as well as direct and indirect expected outcomes. The full detailed of location and intended beneficiaries of the sub-projects are described in this section.

2.1. NWSSP Objective

The program is designed to enhance and ensure that water security for human consumption, agriculture (livestock) and industrial development in Namibia is achieved. The overarching aim of the program is to:

- Increase access, quality, security and sustainability of water supply and sanitation services in Namibia.

To achieve the above aim, the NWSSP’s intervention is focusing on four components as described below:

2.2. NWSSP Components

The program is intervening in four broad components with the aim to improve both the supply and management of water resources in Namibia. The four components are indicated in the table below:

Table 2: NWSSP Components

No.	Component name	Details
1	<i>Climate Resilient Bulk Water Infrastructure Development</i>	- Rehabilitation and expansion of critical and urgent major water bulk water infrastructure including, water treatment plants, conveyance systems, canals, and pipelines
2	<i>Climate Resilient Sanitation Infrastructure Development - Wastewater treatment and reclamation</i>	- Rehabilitation, upgrading and expansion of critical and major sewerage networks, wastewater treatment and reclamation systems in Windhoek city.
3	<i>Rural Water Supply and Sanitation</i>	- Construction of Water Supply Schemes, including upgrading of purification plants, construction of tanks, distribution lines with manifolds and water points. Strengthening WASH “water, sanitation and hygiene” service delivery through advocacy, sensitization, promotion of decentralised sanitation & hygiene education, - Development of gender responsive training and promotional material, - Construction of climate resilient inclusive sanitation facilities for vulnerable people who are not able to access or afford a sewerage connection., undertake WASH Friendly school campaign (hand washing and sanitation facilities, responsive to gender and disability), integration of the Leave No-one Behind” (LNOB)in the rural areas, Community Led Total Sanitation (CLTS) & Sanitation Marketing.
4	<i>Institutional Strengthening and Capacity Building and Program Management</i>	- Enhance the capacity of the sector institutions (MAWF, DWAF, NamWater and City of Windhoek); - Inter-sector coordination, especially between line sectors (environment, health, water supply and sanitation, nutrition, education, local economy and local governments authorities; - Support to Monitoring & Evaluation (M&E) and Information Systems and accountability frameworks to track progress; - Preparation of studies for Phase II projects.

No.	Component name	Details
		<ul style="list-style-type: none"> - Decentralization and strengthening local level management' - Community sensitization and mobilization including formation and training water committees, review and update of the Community Based Management (CBM), updating of the IWRM plan, development of the country wide water master plan, mainstreaming Gender, Environment, Climate Change & Cross Cuttings Issues. - Support to Environmental Department to enhance its capacity for monitoring environmental and social issues during and beyond project implementation, Operationalising Water Resources Monitoring Network. - Training of national, and municipal staff in sector investment framework, water resources, sanitation and environmental health operationalization of gender guidelines on Water sector. - Skills training and empowerment of women and youth. - Provision of technical assistance for design, supervision and program implementation in accordance with good project management practices, program auditing, project mid-term review; Program M&E and Reporting (including baseline and end-line), Program Implementation Manual.

2.3. Project Site, Land Use , Construction and Infrastructure

The proposed NWSSP sub-projects consist of rehabilitation work, construction of new water facilities and upgrading of existing infrastructure. That means the impacts of these sub-projects to both the environment and social depends on the phases of a specific sub-project development. The table below describe specific activities to be done for each sub-project alluding the sub-project areas, land use, affected environment and sub-project infrastructure.

Table 3: Summary of sub-project activities resulting in potential social and environmental impacts

Sub-project Name	Location	Beneficiaries	Potential social and environmental impacts; areas affected and extend of effects	Sub-project Activities Triggering Environmental Assessment	Readiness/Status
Ohangwena No. 2 Well field	Ohangwena Region in Eenhana, Omundaungilo Oshandi and Omafo.		<p>The drilling can potentially affect local communities, communal land area and Eenhana townlands.</p> <p>The pipelines construction can potentially cause population displacement; excavations can generate dust, remove vegetation and generate solid waste.</p>	<p>Construction and operation of new de-fluoridation plant.</p> <p>Construction of pipeline.</p>	Planning work currently underway (feasibility study, designs, EIAs)
Abenab Borehole Development & linking with Eastern National Water Carrier	Otjozondjupa Region affecting Abenab mine and farms, Grootfontein and Windhoek Water source: Boreholes		<p>The project area is already disturbed, since it's within a mine area, some of the boreholes existing already. Further activities can potentially increase environmental damage</p> <p>Excessive water abstraction for the project poses potential socio-economic impact in the future in terms of water availability if this area.</p>	<p>Drilling of boreholes</p> <p>Construction of a new scheme</p> <p>Groundwater quantity i.e. eastern water carrier vs. Abenab farming areas.</p>	<p>Planning work undertaken & capital cost estimate prepared</p> <p>There is need for:</p> <ul style="list-style-type: none"> ✓ EIA, ✓ Preliminary design ✓ Final design & procurement
Oshakati Purification Plant Extension	Oshana Region affecting Oshakati town. Water source: Olushandja Dam		<p>Potential impacts will be on Olushandja dam water quantity and quality as well as environmental consideration on the main</p> <p>Upgrading of the purification plant can result in excessive resource use (water), dust release and noise of equipment can be experienced during constructions.</p>	Construction of a new water purification plant	<p>Planning work undertaken & capital cost estimate prepared</p> <p>There is need for:</p> <ul style="list-style-type: none"> ✓ EIA, ✓ Preliminary design <p>Final design & procurement</p>
Omdel-Wlotzkasbaken Pipeline Replacement	Erongo Region with water source in Omaruru Delta dam.		The Omaruru Delta and the National Coast recreational area will potential affected by the	Construction of new water supply pipeline	Sizing of new line to be finalised

Sub-project Name	Location	Beneficiaries	Potential social and environmental impacts; areas affected and extend of effects	Sub-project Activities Triggering Environmental Assessment	Readiness/Status
	The pipeline will pass through Henties bay until Wlotzkasbaken		pipeline construction. This can displace wildlife in the area, land acquisition issues.		There is need for: ✓ EIA, ✓ Preliminary design Final design & procurement
Rundu Scheme Extension	Okavango East Region in Rundu. Water source: Okavango River		The project will have implications on the communal villages along the Okavango River banks as well as the townlands. Aquatic fauna and flora will also be affected by project development since the area is rich in flora and fauna.	Construction of new scheme	Demand study completed There is need for: ✓ EIA, ✓ Preliminary design Final design & procurement
Direct Potable Reclamation (DPR) Phase 2: New DPR Plant 2	Location: Khomas Region benefiting residents in Windhoek City Water source: Windhoek domestic wastewater	Over 325 000 beneficiaries in the City of Windhoek. The project is covering Windhoek townlands environs.	Potential impacts will be on groundwater quality in Windhoek. Aquatic water resources in the Goreangab dam will potentially be affected.	Construction of New DPR Plant 2 on a Built Operate Transfer (BOT) basis	To commence after completion of Phase 1

Sub-project Name	Location	Beneficiaries	Potential social and environmental impacts; areas affected and extend of effects	Sub-project Activities Triggering Environmental Assessment	Readiness/Status
Rehabilitation of Katima Mulilo – Kongola Water Supply Project Phase 1 & 2	Zambezi Region, being implemented in Kongola and Katima Mulilo Water source: Zambezi River	A total population of 40 000 people are expected to benefit in Kongola and Katima areas.	Communal areas between Kongola and Katima Mulilo will be affected. Several conservancies such as Salambala and Mayuni will be affected. Potential project implications on Mudumu and Siona-Ngwezi National Parks will be experienced. Construction activities will potentially threaten sensitive environments, threatening local fauna, flora and communities in terms of settlements and farming areas (mahangu fields).	Construction of Booster pump stations, Bulk pipelines from Kongola to Sibbinda, Treatment Plant at Kongola, Elevated reservoirs / tanks and distribution lines with manifolds and water points.	Completed feasibility study and infrastructure design Completed the Environmental and Social Impact Assessments
Ruacana South Water Supply Project	Omusati Region in Opuwo, Ruacana and Oshifo.	30 000 beneficiaries in various constituencies in these regions.	Communal areas in Opuwo, Ruacana and Oshifo will be affected by pipeline lying. Possible impacts on human settlements will be experienced during construction. Potential implications on the Etosha National park and conservancies around the National Park will also be experienced.	Construction of Booster pump stations, Bulk pipelines, Upgrading of the Olushandja Purification Plant, Elevated reservoirs / tanks and distribution lines with manifolds and water points.	Completed feasibility study and infrastructure design
King Kauluma – Omutsegonime Water Supply Scheme	Oshikoto Region Water source: Olushandja dam via Oshakati treatment plant	5 000 people are expected to benefit from the pipeline	Water from Oshakati purification plant will be channelled to Omutsegonime through a new pipeline. Potential effects will be on communal farmlands (mahangu fields) and Oshanas (wetlands/floodplains).	Construction of Booster pump stations, Bulk pipelines, Elevated reservoirs / tanks and distribution lines with manifolds and water points.	Feasibility study and preliminary studies are completed. Tender process completed but has been put on hold. No funds to start construction Works.

Sub-project Name	Location	Beneficiaries	Potential social and environmental impacts; areas affected and extend of effects	Sub-project Activities Triggering Environmental Assessment	Readiness/Status
Construction of improved sanitation facilities nation wide	All 14 Regions of 500 households per Region	More than 7000 households are benefiting from the sanitation facilities across the country	<p>The toilets will be constructed on existing homesteads, or central locations within communities. This can affect local groundwater resources to which these communities rely on.</p> <p>No major negative impacts are expected from this development except potential groundwater pollution.</p> <p>Women and children are expected to benefit from this development in terms of potable water supply and sustainable toilet infrastructure.</p>	Construction of 7000 improved sanitation facilities (500 each of the 14 regions)	<p>New Project</p> <p>The is need for:</p> <ul style="list-style-type: none"> ✓ Feasibility study ✓ Preliminary and final design, topographic surveying, ✓ Social Impact Assessment and EIA
Otjombinde Water Supply Scheme	Omaheke Region in Otjombinde settlement.	7000 beneficiaries are expected.	<p>Groundwater quantity will potentially be affected by water abstraction.</p> <p>Pipeline infrastructure will affect private owned farms and communal land facets in the Otjombinde area. Land acquisition can cause conflicts between the project and communities where this pipeline is passing, likely issues of vandalism and theft.</p>	<p>Drilling and installation of water supply boreholes (well field)</p> <p>Installations of Booster pump stations, Bulk pipelines, Elevated reservoirs / tanks and distribution lines with manifolds and water points.</p>	Feasibility study completed
Shamvhura – Shamangorwa Scheme	<p>-Kavango East Region in Shamvhura and Shamangorwa villages.</p> <p>Water source: Okavango River</p>		The villages are located on the banks on the Okavango river; hence negative impacts will be on aquatic water systems in the Kavango River and construction activities potentially disrupting communal leasehold farms.	<p>Construction of treatment plant and booster pumps to extract water from the Okavango River</p> <p>Construction of pipeline network</p>	Rehabilitation works (Rehabilitation of Borehole and treatment plant of water from the borehole)

Sub-project Name	Location	Beneficiaries	Potential social and environmental impacts; areas affected and extend of effects	Sub-project Activities Triggering Environmental Assessment	Readiness/Status
			Overall improvement in food security, sanitation and potable water is anticipated.		
Water Supply to the Salt Block (Hardap & //Karas regions)	Hardap & //Karas Regions affecting Mariental, Orab, Gibeon, Asab, Brukaros and Tses. Water sources: Boreholes	Approximately 10 000 – 15 000 people are expected to benefit from the construction of the link from Hardap to the Orab-Gibeon water supply pipeline.	The pipeline will be along existing servitudes. Potential effects on private farms in the Karas region are anticipated as well as conservancy area sections in! Khob! Naub Conservancy area. Some sections of the pipeline will be upgrading of existing pipelines, hence residual impacts are expected.	Drilling and installation of a well field Construction of pipeline distribution network which include: Booster pump stations, Bulk pipelines, Elevated reservoirs / tanks and distribution lines with manifolds and water points. Upgrade of existing pipeline scheme	Feasibility study for the water source completed The is need for: <ul style="list-style-type: none"> ✓ Feasibility study ✓ Preliminary and final design, topographic surveying, ✓ Social Impact Assessment and EIA
litapa-Okeeholongo Rural Water Supply Project Phase 2	Omusati Region covering Akutsima, Amarika, Okolumono, Olumpelengwa, Uutsathima and Amege villages.	10 000 expected beneficiaries and water coming from the Olushandja Dam	There are existing pipelines that will be affected, and new pipelines will affect the surrounding communal farmlands. Of importance these Villages are near the Etosha National park, hence the existed of sensitive ecosystems is expected. The development through construction activities of bilk pipeline can potentially affect wildlife in Etosha park	Construction of water supply infrastructure in Sub – Area (Okeeholongo – Amege –Amarika) - Phase 2D. Construction of pipeline distribution network which include: Booster pump stations, Bulk pipelines, Elevated reservoirs / tanks and distribution lines with manifolds and water points.	Phase: 1 & 2 A, B, C were completed including EIAs

Sub-project Name	Location	Beneficiaries	Potential social and environmental impacts; areas affected and extend of effects	Sub-project Activities Triggering Environmental Assessment	Readiness/Status
				Upgrading the supply network of Okahao Plant	
Katima Mulilo – Ngoma Water Supply Project Phase 3 and 4	Zambezi Region covering at Bukalo,Ngoma, Kabbe, Lusses & Ikumwe Settlements & Villages	Phase 1 & 2 completed, and 7298 people are connected to the water supply scheme through 1398 taps installed. The remainder of the project (Phases 3 & 4) is estimated that additional 12 000 people will benefit from the water supply scheme.	The project environment will be mostly communal owned farmlands, hence impacts on mahangu fields is expected. Continuous water supply to improve sanitation and security will be delivered, but there are potential disturbances on farms demarcation. Salambala conservancy is also going to be affected by the project, hence sensitive fauna and flora may be affected by project development.	Construction works which includes: Booster pump, water distribution lines and pipelines.	Phase 1 and 2 completed Feasibility study and design for phase 3 and 4 completed. ESIA Completed
Katima Mulilo – Kongola Water Supply Project–Phase 3	Location: Zambezi Region, being implemented in Kongola and Katima Mulilo Water source: Zambezi River	An estimated 12 500 people are expected to benefit	Communal areas between Kongola and Katima Mulilo will be affected. Several conservancies such as Salambala and Mayuni will be affected. Potential project implications on Mudumu and Siona-Ngwezi National Parks will be experienced. Construction activities will potentially threaten sensitive environments, threatening local fauna, flora and communities in terms of settlements and farming areas (mahangu fields).	Construction of Booster pump stations, Bulk pipelines from Kongola to Sibbinda, Treatment Plant at Kongola, Elevated reservoirs / tanks and distribution lines with manifolds and water points.	Phases 1 and 2 complete Detailed Design available

Sub-project Name	Location	Beneficiaries	Potential social and environmental impacts; areas affected and extend of effects	Sub-project Activities Triggering Environmental Assessment	Readiness/Status
Etaka Raw Water Supply Scheme (source-Olushandja Dam)	Omusati Region covering Tsandi, Eheke, Okahao, Etanda and Onesi.	The project is estimated to provide raw water to approximately 17 300 Large Stock Unit (LSU) along the 130km earth canal.	The project will follow mostly existing servitudes between Eheke and and Olushandja Dam. Mostly affected are communal farms (mahangu fields). Water supply to livestock, improving potable water supply and sanitation will also be experienced in the project locale.	130km Etaka Canal from Olushandja dam to Uuvudhiya earth dams Water pipeline distribution network Construction.	<i>Phase 1A:</i> Preliminary design and report in progress. (In-house) <i>Phase 1B:</i> The is need for: ✓ Feasibility study ✓ Topographic surveying Social Impact Assessment and EIA
Eenhana - Oshikunde Water Supply Scheme	-Ohangwena Region covering a distance between Ehnana and Oshikunde.	The project is estimated to benefit 22 977 people; 1 420 pensioners, 11 105 children and 11 916 women. A total of 42 514 LLSU and 42 672 SLSU are also estimated to benefit from the project	Affected settlements will be mostly Elunde Village and other communal farmlands in between. Development will mostly be along the existing servitude areas	Drilling and installation of water supply boreholes (well field). Construction of pipeline distribution network.	<i>Phase 1A:</i> Preliminary design and report done. (In-house) <i>Phase 1B:</i> The is need for: ✓ Feasibility study ✓ Topographic surveying ✓ Social Impact Assessment and EIA
Okankolo – Onkumbula Water Supply Scheme	Oshana and Oshikoto Regions covering Onankolo and Onkumbula Villages.	The project is expected to benefit directly nearly 58 336 people residing in the envisaged district/villages along	Affected settlements will be mostly Onankolo and Onkumbula communities which are communal farmlands. Groundwater quantity will be affected by the project.	Drilling and installation of water supply boreholes (well field). Construction of pipeline distribution network which includes:	<i>Phase 1A:</i> Feasibility report done. (not yet approved) <i>Phase 1B:</i> The is need for:

Sub-project Name	Location	Beneficiaries	Potential social and environmental impacts; areas affected and extend of effects	Sub-project Activities Triggering Environmental Assessment	Readiness/Status
		<p>the main route of the water supply pipelines.</p> <p>Large livestock units 42 869, small livestock unit 35 881.</p>	<p>Development will mostly be along the existing servitude areas</p>		<ul style="list-style-type: none"> ✓ Feasibility study ✓ Topographic surveying <p>Social Impact Assessment and EIA</p>
Epembe Water Supply Scheme	Ohangwena Region covering communities of Ohengghomo, Ohamikoka and Ohinda. Existing servitudes will be used.	<p>A total of 23 000 persons, 40 000 LLSU and 43 000 SLSU are expected to benefit from the construction of the pipeline extension in Epembe Constituency – principally Ohenghono - Ohamikoka and Ohinda communities</p>	<p>Pipelines will run through existing servitudes connecting the two settlements.</p> <p>However, more impacts on groundwater quantity on and around the well field are expected.</p> <p>Communal areas will be affected by project infrastructure and benefits.</p> <p>Construction activities generate waste, noise, pollution of surroundings.</p>	<p>Drilling and installation of deep boreholes,</p> <p>Construction of defluoridation plant and construction of pipeline network.</p>	<p>New Project</p> <p><i>Phase 1:</i></p> <p>There is need for:</p> <ul style="list-style-type: none"> ✓ Feasibility study ✓ Preliminary and final design, ✓ topographic surveying, <p>Social Impact Assessment and EIA</p>
Rain and Flood Water Harvesting Infrastructure	Central Northern Regions	An estimated 20 000 people will benefit from the project particularly in the Central Northern Regions.	<p>Rain harvesting projects will be done within communities to minimise water supply infrastructure from rain harvesting facilities. Hence impacts are to be within villages, settlements and townlands, however the rain harvesting projects will have implications on local ecosystems, river dynamics and groundwater. It can be source of vectors and mosquitos that can increase malaria incidences and other diseases.</p>	Construction of earth dams.	<p>New Project</p> <p><i>Phase 1:</i></p> <p>Need for:</p> <ul style="list-style-type: none"> ✓ Feasibility study ✓ Preliminary and final design, ✓ topographic surveying,

Sub-project Name	Location	Beneficiaries	Potential social and environmental impacts; areas affected and extend of effects	Sub-project Activities Triggering Environmental Assessment	Readiness/Status
					Social Impact Assessment and EIA
Rundu – Mukwe Water Supply Scheme Covering 30km stretch.	-Kavango East Region affecting mashare, kaisosi, Shitemo, Katere ,Mukwe, Uvhungu Vhungu, Mayana up to Ngone communities. -Water source: Okavango River	The project will benefit the following villages: Uvhungu vhungu, Mayana up to Ngone villages	Okavango River aquatic ecosystem and Khaudum National Park will be potentially affected by this project. The project is going to improve potable water supply in the communities. Existing servitudes can be used for the pipeline infrastructure. Flora and fauna will be affected where this pipeline is passing through.	Construction of Booster pump stations, Bulk pipelines, Elevated reservoirs / tanks and distribution lines with manifolds and water points.	New Project <i>Phase 1:</i> Need for: <ul style="list-style-type: none"> ✓ Feasibility study ✓ Preliminary and final design, ✓ topographic surveying, ✓ Social Impact Assessment and EIA
Ohangwena East-Kavango West-Oshikoto Water Supply Scheme (Omundaungilo WSS)	Ohangwena, Kavango West and Oshikoto Regions covering Mpungu, Okongo, Omlonga and Eenhana. Water source: Boreholes	Approximately 20 000 people are expected to benefit from the construction of the pipeline.	Pipelines will run through existing servitudes connecting the two settlements. However, more impacts on groundwater quantity on and around the wellfield is expected. Community Forest Conservancies such as Okongo Community forest may have sensitive environments affected; however, water supply for household use and wild animals will also be available.	Drilling and installation of Production boreholes (Well field) Construction of pipeline distribution network and auxiliary	New Project <i>Phase 1:</i> Need for: <ul style="list-style-type: none"> ✓ Feasibility study ✓ Preliminary and final design, ✓ topographic surveying, ✓ Social Impact Assessment and EIA
Rundu-Mururani Water Supply Scheme	Okavango East Region in communities between Rundu and Mururani.		Communal land, mahangu fields and some sensitive environs part of the Mangetti National Park. Positive Socio-Economic impacts are expected from availability of potable water.	Construction of pipeline distribution network.	New Project <i>Phase 1:</i> Need for: <ul style="list-style-type: none"> ✓ Feasibility study

Sub-project Name	Location	Beneficiaries	Potential social and environmental impacts; areas affected and extend of effects	Sub-project Activities Triggering Environmental Assessment	Readiness/Status
	Water source: Okavango River				<ul style="list-style-type: none"> ✓ Preliminary and final design, ✓ topographic surveying, Social Impact Assessment and EIA
Rehabilitation of Ogongo – Oshakati WSS in Omusati, Oshana and Ohangwena Regions	Omusati, Oshana and Ohangwena Regions Ogongongo, Oshikuku and Oshakati areas are to be affected. Water source: Olushandja Dam		The existing pipeline is running through an existing and registered servitude. However, rehabilitation works may have temporary construction impacts on roads, fields and ecological sensitive areas such as the Okongo community Forest and positive impacts on the availability of potable water to communities, conservation areas and the UNAM Campus.	Rehabilitate water supply pipelines and water points	At different development stages across the regions.
Capacity Development	Nationwide		-This will not have direct impacts on the physical environment, however strengthening institutional and community capacity to manage, maintain and rehabilitate water supply infrastructure will have long lasting positive impacts on the local environment and resilience to climate change overtime. This will also allow for monitoring and evaluation of the project implementation process on inception, mid-term and end of project.	There is no need for an Environmental Assessment for the Activity.	In-house technical assessment done

2.4. Institutional Capacity

Institutional capacity analysis of the implementing agencies; MAWF, NamWater and City of Windhoek to implement the program and adherence to the social and environmental requirements is addressed in the SESA report section 3.5, chapter 10 of the SESA report.

2.5. Benefits of the NWSSP

The implementation of the above NWSSP sub-projects has several positive socio-economic and environmental benefits to Namibia. The benefits should be maximised and enhanced whilst the negative impacts are avoided, if not, minimised or managed, if not then compensated.

2.5.1. Economic Benefits

Economic Productive Time Usage

The NWSSP water supply projects are linked not only to community health, but also to the consumption of productive time. In most cases, people particularly women, children and marginalized groups need to cover long distances to collect water. This consumes a significant part of their daily productive time. The easy access to safe reliable water means the time spent collecting water is reduced.

If a reliable supply of water provided closer to communities, the time previously used to travel long distances to collect water can be more productively spent on attending to household chores, attending livestock and mahangu fields (rural communities), or on other economic and income-generating activities, thereby raising the standard of living for the communities. For urban dwellers, improved supply of water means a boost on industrial production that increases the Gross Domestic Product (GDP) and economic growth of the country.

Community Labour Component

The input of the local people/communities would be in the form of labour for clearing ways for the pipelines, construction of treatment water purification plants, excavations, backfill and compaction of the pipeline trenches among various activities. It is the locals to provide all the unskilled labour in their respective areas. The payment they do receive provides a valuable cash injection into the community, particularly for women, who do not otherwise have much income generating alternatives open to them.

Construction Salaries

The contractors and sub-contractors appointed to carry out the construction work for NWSSP projects at various project development phases and sites must employ labourers from within the Project Area, and therefore from the local communities. On water supply projects, the labour component constitutes approximately 15% of the total costs, which given the high cost of such projects nowadays, translates into a significant amount of money paid to local people employed by the contractor. Since these community members will exclusively be from a previously disadvantaged background, this will contribute, at grass roots level, directly to the stated Black Economic Empowerment (BEE) aims of the Namibian Government.

2.5.2. Social Benefits

The NWSSP projects are expected to generate important benefits in bringing safe, hygienic potable water to the population throughout the year. When domestic water is hygienically safe, contamination and water-borne diseases can be excluded, and important resulting health benefits can be expected.

For people, who so far had no water in convenient proximity, there will be important changes in the day-to-day life. Time savings will accrue, mainly to children and women. In reducing the workload on women, it is expected that the projects can contribute to an increased sense of self-esteem and responsibility among the female population. Furthermore, improvements to the (hygienic) conditions in which infants are raised, is crucial to curbing infant mortality, which is still rather high in the in most regions of Namibia.

A generally healthier population is more economically active and productive, thereby contributing to poverty reduction and generally promoting social development.

Skills Development and Transfer

Construction Techniques and Skills

Using the labour-intensive approach to the NWSSP projects, the involvement of communities where these projects are implemented in construction of various water and related infrastructure supply community members with first-hand, hands-on exposure and experience of various construction methods and techniques. This help the communities with the maintenance and repair of their infrastructure, and since many community members are involved in various construction activities as various project development phases, this create a better awareness within the community at large of the layout and configuration of the various pipeline networks and other infrastructure. With several community members due to help with aspects of construction of the projects, this also helps create a greater sense of ownership of the infrastructures within the larger community. A further benefit is that after completion of the projects, community members can apply for work with civil engineering contractors, with some experience of various constructions to aid their applications.

Contractors will be required to locate their construction camps within the project area and employ people from within the project area. This means community members are taken into the employ of the contractors, gain experience on other aspects of civil engineering construction, such as water point construction, concrete works, the erection of elevated reservoirs etc. This represents a significant transfer of construction skills and experience to people in the all the 14 Regions of Namibia where NWSSP projects are implemented, and specifically to the community areas where these projects are developed, most of whom are previously disadvantaged, and into areas which are hitherto largely undeveloped. Following the completion of the projects, this experience will aid community members wishing to pursue employment with other civil engineering contractors on similar or other projects.

3. CHAPTER THREE: SCREENING OF SUB-PROJECTS

This ESMF has been developed as part of AfDB's due diligence process in the program cycle, following the screening of the five OS and the country's environmental management laws. The Ministry of Environment and Tourism (MET) established the criteria to identify the level of Environmental Assessment (EA) and the processes involved, their sequence to conduct the EA studies for various components/phases of the water development infrastructure, including their legal requirements and implications. Understanding the required level of EA will help MAWF and other implementing agencies in assessing the requirements related to needs of the external services to be engaged at planning and design stages.

3.1. Environmental and Social Screening Process

The stages below indicate the environmental and social screening process (the screening process) leading towards the review and environmental approval (by MET) of NWSSP sub-projects activities to be implemented. The purpose of this screening process is to determine which activities are likely to have negative environmental and social impacts; to determine appropriate mitigation measures for activities with adverse impacts; to incorporate mitigation measures into the project as appropriate; to review and approve the sub-project's proposals; and to monitor environmental parameters during the implementation of activities.

Despite the environmental setting of each sub-project, each one of them has to undergo screening, environmental impact review and if the need be scoping and detailed EIA as recommended in the Environmental Management Act No. 7 of 2007 section 27, EIA Regulations of 2012, SEA Guidelines of 2008 for Namibia and the AfDB's Environmental and Social Assessments safeguards, the OS1 (Initial Environmental and Social Screening Checklist), see Annex 1. The extent of this environmental work for each sub-project will depend on the outcome of the screening process described below.

3.1.1. The Screening Steps

The process of screening sub-projects will follow a step by step procedure as outlined below:

1. Step 1: Screening of NWSSP activities and sites

The initial screening for each sub-project will be carried out by an independent Environmental Consultant registered with MET. The consultant will be contracted by MAWF and other implementing agencies. The Environmental Consultant, together with MAWF national and regional offices, councilors/constituency leaders consulted will complete the Environmental and Social Screening Form (Annex 1).

Completion of these screening forms 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, and conduct of an Environmental Scoping

(ES) / Environmental Impact Assessment (EIA), if necessary for each sub-project. To ensure that the screening forms are completed correctly in the various project locations/regions, environmental and social training will be provided to the team responsible for that.

2. Step 2: Assigning the appropriate Environmental Categories

The assignment of the appropriate environmental category to a sub-project activity will be based on the information provided in the environmental and social screening form (Annex 1). The Environmental Consultant, will be responsible for categorizing a sub-project activity either as A, B, or C.

Category A: activities requiring an environmental approval from MET through environmental scoping and comprehensive Environmental and Social Management Plan (ESMP) or full environmental impact assessment with EMSP.

Category B: activities requiring an environmental impact statement submitted to MET or the implementation of simple mitigation measures compiled in environmental management plan and submitted to MET.

Category C: activities neither requiring an environmental impact statement nor an environmental impact assessment. A project background information document will be compiled and submitted to MET for approval.

The assignment of the appropriate environmental category will be based on the provisions of the Environmental Management Act No. 7 of 2007 and the EIA Regulations of 2012. Consistent with these EIA Regulations of 2012, most activities under NWSSP are likely to be categorized as “A” and majority of them will require environmental scoping and EMP, few are likely to require a full EIA, some are likely to require only the development of an EMP, meaning that their potential adverse environmental impacts on human populations or environmentally important areas – including wetlands, forests, grasslands, and other natural habitats – are site-specific, and some impacts can be reversible, mitigated, minimized and manageable.

Activities like: construction and rehabilitation of water purification plants, construction of wastewater treatment plant, installation of pipelines (main lines) and canals, drilling of well fields, construction of extensions of distribution mains, construction of water reservoirs might be categorized as “A” if the environmental and social screening results indicate that such activities will have significant environmental and social impacts and therefore require environmental scoping and EMP or full EIA with EMP.

Rehabilitation of existing pipelines might fall under category B and as such environmental statement can be submitted to MET for approval. Activities like construction of household sanitation facilities are likely to be categorized as “C” meaning they do not require additional environmental work. Thus, if the

screening form has only “No” impacts, the proposed activity will not require further environmental work. In this case a project brief will be submitted to MET for approval before the project can proceed.

3. Step 3: Carrying out Environmental Work

After analyzing the data contained in the environmental and social screening form and after having identified the correct environmental category and thus the scope of the environmental work required, the Environmental Consultant will make a recommendation to establish whether: (a) no environmental work will be required; (b) the implementation of simple mitigation measures will be enough; or (c) a separate environmental scope/environmental impact assessment EIA will be carried out. According to the results of the screening process, the following environmental work can be carried out:

(a) Use of the environmental and social check list (Annex 2)

The environmental and social check list (Annex 2) will be completed by the Environmental Consultant of the project. Activities categorized as simple Category B activities might benefit from the application of simple mitigation measures outlined in this checklist. In situations where the screening process identifies the need for land acquisition, qualified service providers would prepare a RPF, consistent with Bank’s OS2 of Involuntary resettlement land acquisition, population displacement and compensation.

(b) Carrying out Environmental impact assessment EIA (Annex 2):

In some cases, the results of the environmental and social screening process may indicate that the activities scheduled are more complex and they consequently require conducting a separate EIA. The EIA will be conducted in accordance with the Environment Management Act No. 7 of 2007, the EIA Regulations of 2012 Namibia summarized in Annex 2. The EIA will be conducted by the competent Environmental consultant contracted by MAWF and other implementing agencies in coordination with EMA and EIA regulations. The findings of the EIA should be having contents outlined in Annex 2.

The following will be the roles of each stakeholder:

- MAWF and other implementing agencies as the Developers will:
 - i. Prepare Terms of References (ToR) with the help of the environmental consultant and send them for approval to MET;
 - ii. Appoint the environmental consultant; and
 - iii. Submitted the consultancy report to MET and the AfDB.

The MAWF Technical Assistant (TA) as the project manager will:

- i. Supervise the Environmental Consultant,
- ii. Integrate the findings of the consultant into the design and project implementation and operation,
- iii. Support the implementation of the ESMF.

- MET will review the consultancy reports and send to MAWF for comments as the competent authority. However, since MAWF is already the implementing agency, MET can appoint an independent reviewer. MET will integrate comments from MAWF and the independent Reviewer and make recommendations for the consultant to consider in the final consultancy reports. Within four weeks of receipt of the final reports MET will give decision to accept or reject the final reports for sub-projects. The sub-project will be approved by MET by issuing Environmental Clearance Certificates (ECC).
- The Bank will review the EIAs using this ESMF and the safeguard policies on Environmental Assessment OS1. On a satisfactory final consultancy sub-projects reports the Bank will give a no objection and the sub-project will proceed.

The consultancy reports for sub-projects will identify and assess the potential environmental impacts for the planned activities, assess the alternative solutions and will design the mitigation, management and monitoring measures to be proposed. These measures will be quoted in the ESMP that will be prepared as part of the consultancy reports for each activity. The preparation of the consultancy reports and the ESMP will be done in collaboration with the concerned parties, including the people likely to be affected. The consultancy reports will follow the national procedures established in the Environment Management Act No. 7 of 2007 and the EIA Regulations of 2012.

4. Step 4: Review and Approval

Review:

The consultancy reports will be reviewed by MET at national level, TA, MAWF head office, and at Donor Level by the AfDB. Since MAWF is the implementing agency, an independent reviewer will be appointed by MET with the help of MAWF.

Approval/Disapproval:

Based on the results of the above review process, the onus is on MET for approval/disapproval of the review results and proposed mitigation measures. On approval MET will issue environmental clearance certificates for each sub-project with reports submitted.

5. Step 5: Public Consultations and Disclosure

Public consultations will also take place during the screening process, and the results will be incorporated into the draft consultancy reports. Further public consultation will be during the scoping period and the preparation of the EIA for sub-projects. The results of the public hearing should be considered when a decision is taken whether a certificate is to be issued. These consultations should allow for the identification of the main issues and determine how the concerns of all parties will be tackled in the terms of reference for the EIA. The results of the consultations will be included in the EIA reports and made

available to the public by the MAWF and other implementing agencies, through environmental consultant.

6. Step 6: Environmental Monitoring and Follow Up

Environmental monitoring aims at checking the effectiveness and relevance of the implementation of the proposed mitigation measures. The environmental consultant should be contracted by MAWF and other implementing agencies to perform site monitoring activities to the contractors.

7. Step 7: Monitoring Indicators

In order to assess the efficiency of NWSSP sub-project activities, we propose to use environmental and social monitoring indicators below:

- Water quality meets local standards
- Safe waste management related to construction works
- Reforestation and land restoration
- Compliance with the Environmental Guidelines for Contractors
- Best practice in the implementation of sub-project activities
- Ground Water levels and recharge rates
- Presence of and conditions of pit latrines
- Wastewater disposal facilities
- Gender participation
- Community awareness and education on environment, sanitation and hygiene matters.

3.2. Further Assessments and Way Forward

Engagement with the MET indicated that the sub-projects will not automatically be subjected to the process explained above but MET recommended that Regional Environmental and Social Management Plans (ESMP) be prepared and submitted for approvals. The regional ESMPs after review will be granted approvals subsequently approving the sub-projects in these regions. The conducting of ESMPs will constitute phase 2 of environmental and social assessments to satisfy the country's environmental requirements before the start of NWSSP implementation. Therefore, 14 ESMPs will be submitted to MET as indicated in the table below for approvals.

Table 4: Sub-projects screening for regional ESMPs.

Region	Sub-projects covered by Regional ESMP	Specialist studies required	Provisional Cost (N\$)
Erongo	1. Omdel-Wlotzkasbaken Pipeline Replacement 2. Construction of improved sanitation facilities	-Archeological and Heritage Study -Fauna and Flora desktop study	N\$ 180 000.00

Region	Sub-projects covered by Regional ESMP	Specialist studies required	Provisional Cost (N\$)
Hardap and Karas	1. Water Supply to the Salt Block 2. Construction of improved sanitation facilities	- Groundwater / hydrological study	N\$ 150 000.00
Kavango East	1. Construction of improved sanitation facilities 2. Rundu – Mukwe Water Supply Scheme Covering 30km stretch 3. Rundu Scheme Extension 4. Shamvhura – Shamangorwa WSS	- Fauna and Flora desktop study	N\$ 300 000.00
Kavango West	1. Construction of improved sanitation facilities 2. Ohangwena East-Kavango West-Oshikoto Water Supply Scheme (Omundaungilo WSS) 3. Rundu - Mururani Water Supply Scheme	-Fauna and Flora desktop study	N\$ 200 000.00
Khomas	1. Construction of improved sanitation facilities 2. Direct Potable Reclamation (DPR) Phase 2: New DPR Plant 2		N\$ 120 000.00
Kunene	1. Construction of improved sanitation facilities		-
Ohangwena	1 Construction of improved sanitation facilities 2 Eenhana - Oshikunde Water Supply Scheme 3 Epembe Water Supply Scheme 4 Ohangwena East-Kavango West-Oshikoto Water Supply Scheme (Omundaungilo WSS) 5 Ohangwena No. 2 Wellfield 6 Rain and Flood Water Harvesting Infrastructure 7 Rehabilitation of Ogongo – Oshakati WSS in Omusati, Oshana and Ohangwena Regions	- Groundwater/ hydrological study - Flora and Fauna/ Ecological study	N\$ 450 000.00
Omaheke	1. Abenab Borehole Development & linking with Eastern National Water Carrier 2. Construction of improved sanitation facilities 3. Otjombinde Water Supply Scheme	- Groundwater/ hydrological study	N\$ 250 000.00
Omusati	1. Construction of improved sanitation facilities 2. Etaka Raw Water Supply Scheme (source-Olushandja Dam) 3. Iitapa-Okeeholongo Rural Water Supply Project Phase 2 Oshana and Ohangwena Regions 4. Rain and Flood Water Harvesting Infrastructure 5. Rehabilitation of Ogongo – Oshakati WSS in Omusati 6. Ruacana South Water Supply Project		N\$ 350 000.00
Oshana	1. Construction of improved sanitation facilities 2. Okankolo – Onkumbula Water Supply Scheme 3. Oshakati Purification Plant Extension 4. Rain and Flood Water Harvesting Infrastructure 5. Rehabilitation of Ogongo – Oshakati WSS		N\$ 350 000.00
Oshikoto	1. Construction of improved sanitation facilities 2. King Kauluma – Omutsegonime Water Supply Scheme		

Region	Sub-projects covered by Regional ESMP	Specialist studies required	Provisional Cost (N\$)
	3. Ohangwena East-Kavango West-Oshikoto Water Supply Scheme (Omundaungilo WSS) 4. Okankolo – Onkumbula Water Supply Scheme 5. Rain and Flood Water Harvesting Infrastructure		N\$ 290 000.00
Otjozondjupa	1. Abenab Borehole Development & linking with Eastern National Water Carrier 2. Construction of improved sanitation facilities	- Groundwater / hydrological study - Ecological study	N\$ 200 000.00
Zambezi	1. Construction of improved sanitation facilities 2. Katima Mulilo – Kongola Water Supply Project–Phase 3 3. Katima Mulilo – Ngoma Water Supply Project Phase 3 and 4 4. Rehabilitation of Katima Mulilo – Kongola Water Supply Project Phase 1 & 2		N\$ 250 000.00
GRAND TOTAL			N\$2 910 000.00

4. CHAPTER FOUR: ASSESSMENT OF POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS OF SUB-PROJECTS

The NWSSP activities are associated with different potential environmental and social impacts (either positive or negative) on the immediate and surrounding receiving socio-economic and biophysical environment. The purpose of this chapter is to assess the potential impacts identified in the SESA in terms of their significance.

4.1. Potential Impacts Significance Assessment

Detailed impact significance rating and analysis has been conducted and submitted in a separate SESA report on **section 6.1.4** of that report. The proposed mitigation and management options in this report are based on the impact significance rating of that SESA section. These two reports cannot be separated but they complement each other. They cannot be used in parts but implemented as a whole. The significance impact rating process used the IFC 2012 significance impact rating method and the AfDB environmental and social operational safeguard policies.

4.2. Potential Identified Impacts

The following table shows the social, environmental and biological impacts both positive and negative as identified during the SESA study.

4.3. Approach to Environmental and Social Risk Assessment

The approach to Environmental and Social Risk Assessment will include the use of eligibility and exclusion list (as presented in Annex 3) during project preparation stages e.g. site selection and project screening. Mitigation measures involve avoiding of impact altogether, minimizing the impact, rectifying the impact and gradual elimination of impact over time. Mitigation measures are three: physical, socio-cultural and socio-economic.

Physical measures relate to issues of project sitting, re-vegetation and preventive measures like bush clearing, erosion, sedimentation and pollution control and good construction/farming practices, waste management, and application of Environmental Guidelines for Contractors. Socio-economic measures will include education and awareness, stakeholders' engagement platforms (establishment of special platforms of communication with local community, local Government Authorities, Community/ traditional and religious leaders). Adequate stakeholders' engagement will be a key to address critical socio-economic conflicts which may due to implementation of the programme in the project areas.

Table 5: Potential social, biological and environmental impacts identified during SESA study that are associated with program implementation.

Environmental Impacts	Social Impacts		Biological Impacts
	Negative	Positive	
<ul style="list-style-type: none"> - Vegetation loss - Vehicular Traffic Safety - Noise and vibrations - Dust impact (air quality) - Health and safety - Land disturbances, (pollution of soils and water) - Waste generation - Visual impact - Odour 	<ul style="list-style-type: none"> - Spread of HIV and STIs due to influx of out-of-area people into the project area - Pressure on Resources due to vast influx of out-of-area people into the project area - Loss of assets or access to assets including farmlands - Damage to or intruding of private or public properties - Land Use and land rights issues - Social Intrusion: (impact on the local young women and girls) - Occupational Safety and Health - Loss of assets or access to assets - Loss of income sources, and or means of livelihood - Conflict over limited freshwater resources - Lack of water supply security - Over-exploitation/abstraction of water resources - Involuntary resettlement of people to pave way for the project activities - Lack of capacity building among implmenting agencies to operate and manage project infrastructures - Lack of project coordination among stakeholders - Lack of communities involvement in decision making and mainstreaming of indigenous knowledge in the planning process through consultations 	<ul style="list-style-type: none"> - Economic Productive Time Usage - Community Labour Component - Improved community health - Empowerment of woman and children - Job opportunities - Skills transfer and employment (Construction phase) - Access to safe reliable water and basic sanitation - Permanent Employment and Skills Transfer (Operational and maintenance phase) 	<ul style="list-style-type: none"> - Biodiversity - (loss, fragmentation and degradation of habitat, and severance of animal migration routes and pathways) - Loss of plant species and habitats of conservation interest

5. CHAPTER FIVE: MEASURES TO DEVELOP APPROPRIATE ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR SUB-PROJECTS

The chapter is presenting the measures that will be used to develop appropriate ESMPs to ensure implementation of the ESMF at the sub-project. It highlights the strategy and ESMPs for the sub-projects.

5.1. Strategy

The NWSSP Environmental and Social Management Plan are based on the following principles:

- The NWSSP water supply and sanitation involves relatively small-scale public works projects (water treatment works, water purification works, water reservoirs, distribution mains, standpipes and drilling of boreholes) that can be designed, implemented and managed by MAWF, NamWater and CoW, and with the technical supervision of AfDB. It is anticipated that the technology used for water supply will be the very appropriate; however, the public works will be labour intensive and artisanal.
- Environmental management will be integrated in project planning and implementation.
- MAWF is the lead implementing agency together with other two implementing agencies, AfDB is the Funding Agency
- Implementing agencies will be responsible for the monitoring of environmental and social issues assisted by relevant government ministries and departments.
- The design of the water supply and sanitation works will be guided by the technical materials which will incorporate recommended measures designed to minimise adverse impacts and encourage positive environmental effects.
- Capacity building in ESMF and environmental issues will be provided principally to the implementing agencies at various levels from national to regional levels, contractors and local communities.

It is anticipated that the environmental and social impacts in the communities and regions cause less adverse environmental and social impacts, localised and readily manageable hence the projects are classified by the AfDB Environmental and Social Assessment OS1 as Category 2 i.e. projects that are likely to have detrimental site-specific environmental and / or social impacts and can be minimized by applying appropriate management and mitigation measures or incorporating internationally recognized design criteria and standards. Majority of the sub-projects will need an environmental assessment in the form of environmental scoping with ESMP after initial screening. This agrees and consistent with the Namibia Environment Management Act No. 7 of 2007 and EIA Regulations of 2012, sub-projects of this size and magnitude are listed in the Section 27 of the Environment Management Act schedule activity were Environmental Assessments (Environmental Scoping or full EIA) are mandatory.

5.2. Environmental and Social Management Plan

The Environmental and Social Management Plan (ESMP) is an instrument that allocates actions, measures and responsibility to be undertaken to eliminate or offset adverse environmental impacts of projects. An ESMP Matrix for NWSSP is given in Annex 4. The ESMP for NWSSP sub-projects should follow the Guidelines for Environmental Impact Assessment in Namibia and the Environmental and Social Assessment OS1 of the African Development Bank Annex 2.

The key players include Government of Namibia which provides an enabling environment, while the Ministries in charge of Environment and Water provide the policy function. MET will enforce the laws and regulations. MAWF, NamWater and CoW as project developers should give the ToR to MET who should carry out the environmental review and the developers should appoint environmental consultant. The local communities as key stakeholders and beneficiaries should be consulted and their views integrated in the final design and implementation of the sub-projects.

Initially each sub-project should be screened for environmental impacts. This can be done by using the checklist given in Annex 1. The purpose of the screening process is to:

- Determine whether future activities are likely to have potential negative environmental and social impacts;
- Give an indication of appropriate mitigation measures for activities with adverse impacts;
- Incorporate mitigation measures into project design; and
- Monitor environmental parameters during project implementation.

Since most of the sub-project activities involving public works will be mainly artisanal, it is anticipated that the environmental impacts will be localized and manageable. It is envisaged that for most sub-projects the further environmental assessments are required after the screening stage, requiring either environmental scoping or full EIA for MET approval. In the event some potential negative environmental impacts are identified this will go on the next stage of the full EIA process with specialist studies. Here the potential significant environmental impacts are identified and distinguished from insignificant ones.

The insignificant impacts are eliminated and a full ESIA is done on the significant potential environmental impacts. In the ESIA, the magnitude and extent of the potential significant negative environmental impacts should be quantified. Mitigations measures of the potential negative impacts will be assessment and recommended for each impact. Alternatives to the project including no objection will be reviewed and recommended. As check balance an ESMP will be made to ensure the project executants will protect the environment. The ESMP will include the following:

- A description of the possible adverse effects that the ESMP is intended to deal with;

- Any environmental and social analysis to be followed during implementation of the Program-Based Operations (PBO), such as environmental and social criteria for budget allocation;
- Any environmental and social management to be incorporated into PBO implementation arrangements;
- Any system for environmental and social management, such as an ESMF, to be applied to downstream activities or investments;
- A description of planned mitigation measures and how and when they will be implemented;
- Any requirements for environmental and social monitoring and reporting on downstream activities;
- A description of who will be responsible for implementing the ESMP;
- Institutional arrangements and capacity development needed to ensure effective environmental and social management during PBO implementation; and
- A cost estimate and source of funds.

6. CHAPTER SIX: MONITORING PLAN AND SUB-PROJECT SUPERVISION

The main objective of monitoring is to ensure that the identified negative impacts and their mitigation measures are implemented by responsible organisations. Monitoring will act as a check balance between environment and development i.e. to determine whether the mitigation measures have been successful in such a way that the pre- program environmental and social condition have been restored, improved upon or worse than before and to determine what further mitigation measures may be required. The responsibility for monitoring and evaluation of the mitigation measures is assigned at two different levels i.e. the local and national level.

6.1. Monitoring

The implementing agencies have a responsibility to implement this ESMF and participate in various monitoring programs making sure that the ESMF requirements are met to address specific adverse impacts of their projects. Other government departments and competent authorities will participate in monitoring to ensure that environmental and social issues are addressed properly. Supervision is important because it will allow the various contracted institutions to implement the ESMF.

This ESMF is recommending the monitoring of NWSSP activities to be done in two parts; **internal and external monitoring**.

Internal monitoring (conducted as part of NWSSP implementation) would be applied to various aspects of the ESMF including:

- i. The project screening process (to ensure it is working effectively and efficiently);
- ii. Environmental and social monitoring of NWSSP sub-projects implementation in terms of
 - changes to baseline conditions,
 - compliance with required protection and compensatory measures, and with recommendations made by environmental and social studies carried out for the project such as ES, ESIA, ESMP,
 - environmental or social impacts, particularly to ensure that they do not exceed expected limits;
- iii. Ensuring that necessary safeguard measures have been duly implemented and the efficacy of mitigation measures, and suggesting further mitigation measure to control impacts, where needed; and
- iv. Implementation of training and capacity building.

External monitoring should be undertaken as an independent process on a periodic basis (say every 5 years) as part of a periodic review of progress of the overall NWSSP in Namibia.

Monitoring is also required to enable Namibia to meet its international commitments. MAWF together with other implementing agencies will need to develop a detailed set of monitoring and reporting guidelines with the help of the appointed environmental consultant. The environmental and social performance of the NWSSP activities/ sub-projects arising from its implementation has to be monitored. The monitoring is proposed to be carried out at (a) National Level and (b) at regional level (c) sub-project level. Monitoring should cover:

- i. **Baseline monitoring** - needed to collect data on environmental resources and social setting of the project area prior to the implementation of the project;
- ii. **Compliance Monitoring** - to ensure that environment and social protection and compensatory measures are complied with;
- iii. **Impact Monitoring** - focusing on each predicted impact and the effectiveness of proposed mitigation measures

6.2. Monitoring Checklist and sub-project supervision checklist

6.2.1. Monitoring Indicators

Monitoring indicators are a very important part of the monitoring plan. The indicators should be:

- (i) Specific to avoid ambiguity of items being measured;
- (ii) Measurable to facilitate quantification; and
- (iii) Quantifiable to be easily translated into units of measurement and to facilitate verification.

Indicators should be measured in units of, for example, time (duration), frequency (how often), area or volume (size of land cleared), length (length of stream affected). In some cases, indicators may be qualitative. For example, when comparing the state of the environment before and after sub-project using the following:

Aspect	Condition	
	Before	After
Natural Resources		
Communal land		
Wildlife		
Stream Water		

Some of the main socio-economic indicators, by which to evaluate the successful implementation of the ESMPs are:

- (a) Affected individuals, households, and communities able to maintain their pre-subproject standard of living, and even improve on it; and
- (b) Number of farmers and community groups that have remained supportive of the subproject.

6.2.2. Monitoring Checklists

Reporting on progress and issues in the implementation of this ESMF will be documented in the project quarterly reports and annual project implementation reports (PIRs) using monitoring checklists. Checklists are important particularly as far as supervision of works is concerned.

Below are key monitoring indicators;

- Safe waste management related to construction works;
- Reforestation and land restoration
- Compliance with the Environmental Guidelines for Contractors; and
- Best practice in the implementation of project activities.

6.3. Areas to be monitored

Before monitoring, it is fundamental that areas to be monitored are clearly mapped. This assist on giving information on where to monitor, when to monitor, how, using what tools, the units of measurement and the responsible organ to enforce compliance and checks. The following areas will be considered for monitoring as indicated in table 5:

- Soils
- Vegetation
- Loss of natural and cultural heritage
- Wildlife
- Marginal lands/fragile ecosystems
- Chemical pollution
- Water resources
- Ambient air quality
- Socio-Cultural Issues
- Noise and Vibrations

Table 6: ESMF Areas that need Monitoring and the responsibilities

Parameter to be monitored	Where is the parameter to be measured	When is parameter to be monitored/ frequency of measurement or continuous?	How is parameter to be monitored/ type of Monitoring Equipment?	Unit of Measure	Project Phase	Responsibility
Vegetation loss	Area of vegetation cleared	Before commencement of works and after works	Survey area where vegetation is cleared due to construction	No. of trees cut, or sq. meters of grass removed.	Construction	MAWF (Directorate of Forestry), MET
Soil erosion	Construction site and surrounding areas	Before and after commencement works	The depth of topsoil removed	m ³	Construction	MAWF MET
Loss of farmland, property and crops	Communities where infrastructure is passing	Before and after commencement of civil works.	Area of land lost	Hectare (Ha)	Construction	Ministry of Land Reform, MAWF
Ground water pollution.	Well fields, surrounding communities, construction site	Monthly	Water quality testing	Faecal coliform counts,	Construction and Operation	MET, MAWF, Contractors, ESMF Environmental and Social Consultant
Construction site waste and drilling waste	Construction site, surrounding communities	Daily, Weekly and Monthly	Amount of debris	m ³	Construction	Contractor, MET, ESMF Environmental consultant
Accidents, health and safety of workers at both construction and operational phase	Construction site	Daily	Record of cases reported and treated	No. of accidents or near miss.	Construction and Operation	Ministry of Health and Social Services, Organisations like RED CROSS, Contractor
Increase of STD and HIV/AIDS due to the presence of construction workers	Local communities	Bi-annual	Record of the cases reported at a local clinic	No. of reported of STDs and HIV/AIDS cases.	Construction	MoHSS
Noise and dust made by vehicles and	Construction site and Settlements close to construction	During use of heavy machinery, monthly	Number of times working areas are watered.	bd, kg/m ³	Construction	MET Contractors

Parameter to be monitored	Where is the parameter to be measured	When is parameter to be monitored/ frequency of measurement or continuous?	How is parameter to be monitored/ type of Monitoring Equipment?	Unit of Measure	Project Phase	Responsibility
construction equipment.		During use of heavy machinery, monthly	Use of a noise measuring meter			
Groundwater over extraction and excessive river water abstraction	River system and Aquifer	Monthly	Reduction of water flows in a river or borehole discharge and recharge measurements	m ³ /day	Operation	NamWater and MAWF
Water treatment waste like aluminium sludge is toxic to the environmental.	Surrounding areas	Quarterly	Weigh the waste released	Kg	Operation	MET
Cross contamination of water in the distribution pipelines	Communities receiving water	Quarterly	pH, turbidity	Faecal coliform counts	Operation	NamWater and MAWF
Contamination of Reservoirs tanks and tanks at the clients' premises.	Surrounding communities	Annually		Faecal coliform counts	Operation	NamWater

6.4. Environmental and Social Monitoring Plan

At the local level the main actors will be the beneficiary communities. The contractor will use Environmental Check list developed by MAWF to monitor and comply with the environmental and social needs as stated in the ESMF, ESMP and other management plans. The appointed MAWF Environmental and Social Consultant will be responsible of reviewing and making comments on compliance. MET will oversee the compliance of the involved parties.

At the national level MET will be responsible of checking environmental compliance for all sub-project activities. Implementation of environmental and social mitigation measures will be guided by the guidelines provided in this monitoring plan. The objectives of these guidelines are to:

- i. Alert MAWF and other implementing agencies and regulating authorities through the provision of timely information about the success or otherwise of the sub-projects implementation process as outlined in the ESMP. This monitoring will ensure full compliance in the implementation of the sub-projects;
- ii. Determine whether the mitigation measures designed for the sub-projects have been successfully implemented; and
- iii. Ensure that the construction, operation and maintenance activities are being carried out in a manner that protects the environmental and social conditions, as well as the health and social wellbeing of the workers and the general public.

The main components of the monitoring plans include:

- Environmental issue to be monitored and the means of verification;
- Specific areas, locations and parameters to be monitored;
- Applicable standards and criteria;
- Monitoring of the procurement of materials (checks that valid permits are in place);
- Duration; and
- Institutional responsibilities for monitoring and supervision

The table 6 below shows the generic monitoring plan for NWSSP activities. The plan is showing the components listed above.

Table 7: Environmental and Social Monitoring Plan for NWSSP sub-projects

Impact	Parameter to be Monitored	Monitoring Objective	Key Performance Indicator (KPI)	Methods of Monitoring	Frequency	Responsible Party	Reporting structure	Threshold	Action if threshold is exceeded
Water and soil pollution									
Compromised water quality due to fuel and lubricant spills or wastewater	Complaints from communities /public within the project sites	To prevent contamination of surface water groundwater	No complaints from communities about visible oil spills	Inspection of complaints logbooks	Weekly	ECO	ECOs > Site/Project Managers	A logged complaint	Further consultations with the communities and tests
Wastewater generated by project workers living on-site.	Open defecation and urination. Littering	To prevent environmental pollution	Adequate toilet facilities on site. Complaints from the public about open defecation, urination and littering.	Visual observation. Inspection of complaints logbook.	Weekly	ECOs	ECOs> Project/Site Managers	A logged complaint	Clean-up of affected areas.
Soils									
Loss of topsoil	Increased loss of soil	To prevent loss of topsoil	No proliferation of informal vehicle tracks. No new erosion gullies	Visual observation	Weekly	ECOs	ECOs> Project/Site Managers	Proliferation of new vehicle tracks Formation of new gullies in work areas	Rehabilitation of affected areas
Air quality									
Increase in dust generation, which might negatively affect occupational and residential respiratory health.	Complaints from public about increased in dust generation.	To reduce public complaints and prevent negative changes in air quality due to project activities	No complaints from the public about increased dust generation.	Inspection of complaints logbook.	Weekly	ECOs	ECOs> Project/Site Managers	A logged complaint	Dust suppression around working areas to reduce fugitive dust

Hydrocarbon emissions from vehicles	Complaints from the public about increased vehicles fumes	Same as above.	No complaints from the public about increased vehicle emissions	Inspection of complaints logbook.	Weekly	ECOs	ECOs> Project/Site Managers	A logged complaint	Servicing of vehicles and machinery by certified service providers
Poaching									
Illegal hunting of wildlife	Reported poaching incidents by projects team	To prevent illegal hunting of wildlife	Incidents reports of illegal hunting of wildlife by project workers.	Consultation with the local Police Service and anti-poaching units for reported incidents of poaching.	Weekly	ECOs Wildlife and Game Parks Department	ECOs> Project/Site Managers> local police service/anti-poaching unit	An incidents report logged with the local Police Service	Appropriate action will be decided by the local Police Service
Habitat loss									
Localised loss of habitat and vegetation	Loss of habitat	To prevent loss of habitat outside areas of interest	No disturbance to unmarked areas within the project area	Visual observation	Weekly	MET MAWF	SHE Officers/ECOs> Project/Site Managers	Vegetation clearance outside of marked areas.	Rehabilitation of affected areas to the satisfaction of the SHE Officers /ECOs
Health and safety									
No health and safety plan for project activities.	Compiled health and safety plan for project activities.	To prevent health and safety impacts	No significant health and safety incidents (i.e. serious injuries or loss of life)	Visual observation Inspection of complaints logbooks	Daily/ weekly	ECO and Site Managers	ECOs> Project/Site Managers Manager	Health and safety incident	Remedy the consequences
Potential increase in outbreak of wildfires due to project activities	Occurrence of wildfires	To prevent environment damage caused by wildfires	No wildfires recorded (due to presence of project workers on sites)	Visual observation	Daily	ECO Wildlife and Game Parks Department	SHE Officers/ECOs> Project/Site Managers > local police service	Outbreak of wildfires caused by project workers	Rehabilitation of affected areas
Archaeology and cultural heritage									

Potential disturbance to archaeological and cultural heritage resources	Presence or unearthing of archaeological or cultural heritage resources	To prevent destruction of artefacts	Preservation of all artefacts that are discovered around project area	Inspection of records of findings	Daily	ECO	ECOs> Project Archaeologist>National Heritage Council (NHC)	Unearthing of archaeological or cultural heritage resources	Cease all activity on site and wait for NHC to inspect site
Employment creation									
Creation of employment	Creation of employment opportunities	To ensure that locals, especially youth and women benefit from the project To ensure that the number of outsiders employed on local projects is low to none, therefore preventing future social conflicts/crashes in terms of local norms, values and property invading or damage by outsiders.	Number of locals employed during construction and operational activities Records of conflicts and crashes caused by project related outsiders	Inspection of employment records Inspection of site social record books	Monthly	ECO	Project/Site Managers	Number of those employed Origin of employed people from the local/project communities)	None
Noise									

Potential increase in noise	Above ambient noise levels.	To ensure that generated noise does not disturb residents.	Complaints from residents about noise generated.	Inspection of complaints logbook	Weekly	ECOs	ECOs> Project/Site Managers	A logged complaint about above normal noise levels	Revision of site activities
Traffic									
Increase in traffic density on declared Roads Authority (RA) roads or damage to these.	Complaints from the public about increase in traffic on RA roads. Complaints about damage to RA roads caused by movement of project vehicles and machinery.	To ensure continued ease of access to RA roads by residents	No complaints from the public about increase off traffic due to project activities	Inspection of logbooks	Weekly	ECOs	ECOs> Project/Site Managers > Roads Authority	A logged complaint about traffic increase or damage to RA roads	Find alternative access roads for the team. Rehabilitation of affected roads
HIV and AIDS									
Potential increase in HIV and AIDS prevalence.	New HIV or STIs infections	To prevent new infections in the area	No new HIV or STIs infections recorded	Liaison with local health facilities	Monthly	MoHSS	Site Managers > Ministry of Health and Social Services	Recorded new HIV or STIs linked to the project workers	Continued sex education and provision of condoms
Littering									
Environmental pollution from solid waste throughout the project phases	Scattered litter	To prevent littering of the general project area	No visible litter around the project area	Visual observation	Daily	ECOs MET	Site/Project Managers	Visible littering around project sites	Clean-up of the affected areas and ensuring project workers utilise waste containers provided.

7. CHAPTER SEVEN: REPORTING AND RESPONSIBILITIES FOR PROGRAM ESMF IMPLEMENTATION

For effective implementation of the ESMF, it is very important to clearly state the roles and responsibilities of various key parties involved in the implementation of this ESMF. It is also important for auditing of activities and enforcing compliance. The following section captures the institutional arrangements for ESMF implementation by concerned implementing agencies, their consultants and working contractors. Institutional arrangements and responsibilities of the different institutions are outlined below.

7.1. Roles and responsibilities for implementing this ESMF

The roles and responsibilities of project staff and associated agencies in implementation of this ESMF are as follows. This ESMF does not cover the roles and responsibilities associated with implementation of the subsequent ESMPs and/or stand-alone management plans; those will be defined in each sub-project’s subsequent management plan that will be developed in Phase 2 of environmental and social assessments, as required per this ESMF.

7.2. Implementing Partners

Three implementing partners/agencies are involved. The details and extent of their involvement is given in the table below.

Table 8: Implementing partners/agencies and the number projects

MAWF	Implementing 19 rural water supply and sanitation in 14 regions
NamWater	Implementing 5 bulk water infrastructure projects in 5 regions
City of Windhoek	Implementing 1 wastewater treatment and reclamation project in Windhoek

Broad supervision responsibilities of implementing agencies (MAWF and NamWater National Office) include:

- Ensure that the required assessment (EIA or targeted assessment, as in the screening process) and assessment reports and the required management plan(s) (an ESMP and/or stand-alone management plan, as above) are developed, disclosed for public consultation and approved, and management measures are adopted and integrated during sub-projects implementation;
- Report, fairly and accurately, on sub-project progress against agreed work plans in accordance with the reporting schedule and required formats to the Bank;
- Maintain documentation and evidence that describes the proper and prudent use of program resources in conformity to the signed Project Document and in accordance with applicable regulations and procedures (e.g. OS and Integrated Safeguards System (ISS));

- Ensure all requirements of AfDB OS and national regulatory/policy frameworks and relevant international standards have been addressed; and
- Hold responsibility and accountability to AfDB for overall management of the program, including compliance with AfDB OS.

7.3. Regional MAWF Office and NamWater:

- Supervise and manage implementation of measures defined in this ESMF;
- Assign specific responsibilities for implementation of this ESMF, including monitoring, and community consultations on the draft management plans to a staff member(s) of the MAWF regional offices; the DRWSSC;
- Maintain relevant records associated with management of environmental and social risks, including updated OSPs, impact assessments, a log of grievances together with documentation of management measures implemented;
- Report to the National Office on the progress implementation of the ESMF;
- Ensure that all service providers/contractors are informed of their responsibilities for the day to day compliance with the ESMF; and
- Maintain stakeholder engagement and grievance redress mechanisms active.

7.4. Technical Assistant

The implementing agencies will appoint a Technical Assistant (TA) to assist on technical project management issues. The main responsibilities of the TA would be:

- Monitor implementation of this ESMF and compliance with national and international regulations, and AfDB social and environmental standards;
- Decision making for the adoption of necessary measures including full integration of management measures within project Outputs and annual work plans;
- Establish and support GRM mechanism to address any grievances; and
- Report to and advise their implementing agencies on the status of ESMF implementation.

7.5. African Development Bank (AfDB)

- Provide oversight on all matters related to safeguards;
- Ensure that the Compliance Review and the Independent Review Mechanism are operational during the lifetime of the projects;
- Ensure adhere to the OS for project activities implemented using funds channeled through AfDB accounts and undertake appropriate measures to address any shortcomings.
- Verify and document that all AfDB OS requirements have been addressed; and

- Provide technical guidance on implementation of this ESMF and administrative assistance in recruiting and contracting expert safeguards services (as required), and monitor adherence of each sub-project to the ESMF and AfDB policies and procedures.

7.5.1. The Bank's Environmental and Social Safeguards Specialists

During the period of civil works the Bank's environmental and social safeguards specialist will make annual or more frequent mission visits to ensure compliance with project safeguard requirements. Between missions they will review various management reports to monitor progress and identify issues that may arise. The Safeguards specialists will monitor the implementation in accordance with the Bank safeguard policies and advise on corrective measures as needed. The implementation of the ESMPs will be closely monitored, both through reviewing reports, monitoring checklists and through field visits.

7.6. Environmental and Social Consultant

The Environmental and Social Consultant that developed this ESMF and SESA as appointed by MAWF, and will be available, as required for the following, during all phases of the project's implementation:

- Screening of sub-projects in consultation with MET, MAWF to allow phase two of environmental and social impact assessments of sub-projects
- Drafting terms of references for site specific management plans for contractors
- Undertaking environmental and social impact assessments of sub-projects
- Coordinating, managing and monitoring the implementation ESMPs at national and sub-project level
- Reporting environmental performance to MAWF and AfDB (construction) and PM (operations)
- Reviewing environmental management content of method statements during construction of Sub-Projects for Contractors.
- Ensuring that best environmental practice is undertaken throughout the duration of the project.
- Undertaking checks of the construction site and construction activities.
- Undertaking checks of maintenance works during operations.
- Provisioning of environmental awareness/management training and inductions.
- Responsible for the management, maintenance and revisions of this ESMF and subsequent environmental plans (e.g. Waste Management Plan); and
- Timely distribution of any relevant environmental documentation, including revisions to this ESMP, to all construction managers and contractors.

7.7. Ministry of Environment and Tourism (MET)

MET as the regulating authority their role in the ESMF implementation is to:

- Enforce compliance to specific sections of the ESMF;
- Monitor compliance to the national environmental laws and regulations;
- Approve environmental assessments (ESMPs) of sub-projects, review the reports and award environmental authorizations; and

- Periodic reviews of the separate supporting management documents that constitute this ESMF, i.e. ES, ESIA, ESMP for sub-projects.

7.8. Contractor's Responsibility regarding environmental protection

Construction/Rehabilitation Contractors are responsible for:

- Undertaking all activities related to environmental protection during construction and rehabilitation works.
- During the ESMP preparation phase, potential negative environmental impacts will be identified and implementing agencies will be obliged to ensure implementation of adequate mitigation measures by contractors.
- The Contractor appoint a person responsible for environment protection with adequate experience to be responsible for the implementation of all demands of environment protection and the Environment Monitoring Plan implementation.
- Ensure compliance to all the environmental and social needs, permitting and licenses (e.g. vegetation clearance permit, water abstraction permit, archaeological permit.)
- They will report to TA of respective implementing agencies and to the implementing agencies.

7.9. Supervision during implementation

Implementing agencies are responsible for the supervision of the ESMF implementation in the Project, which will be done through the consulting services by an appointed Environmental and Social Consultant. Following the approval of the Contractor's ESMPs document (Method statements), the Contractor together with the person on the Contractor's staff who will be responsible for implementation supervision of CEP will meet PSC on-site. If the plan is appropriate and implementable, environmental and social consultant will advise PE that the Contractor can now commence the work.

In respect to environmental requirements, the specific roles and responsibilities of Project Supervision Consultant shall include, but not limited to the following:

- Supervise the implementation of the ESMF by the Contractors;
- Monitor and review the screening and categorization process for each sub-project;
- Review and approve site specific environmental enhancement/mitigation designs worked out by the Contractor;
- Hold regular meetings with the MET;
- Review the Contractors Environmental Implementation Plans to ensure compliance with the Environmental and Social Management Plan (ESMP) assisted by program environmental and social consultant;
- Develop good practice construction guidelines to assist the contractors in implementing EMPs;
- Prepare and submit regular environmental monitoring and implementation progress reports;
- Continuously interact with the MET regarding the implementation of the environmental provisions;
- Ensure that proper environmental safeguards are being maintained at all ancillary sites such as

7.10. Accountability and Grievance Redress Mechanisms

7.10.1. Grievance Redress Mechanisms

The Grievance Redress Mechanism (GRM) will provide a way to provide an effective avenue for expressing concerns and achieving remedies for communities. Social accountability will need to be strengthened through the effective GRM. The GRM is established to ensure that complaints are directed and expeditiously addressed by the relevant agencies which are to enhance responsiveness and accountability. It is proposed that a Grievance Redress Panel (GRP) be set up at central and constituency levels. Its functions should include:

- Redressing grievances of project affected persons (PAPs) in all respects;
- Rehabilitation and resettlement (R&R) assistance and related activities;
- Dealing with or hearing issues related to R&R and individual grievances;
- Giving its decision/verdict within 30 days after hearing the aggrieved PAPs;
- The final verdict of the GRP will be given by the Chairperson/Head of GRP in consultation with other members of the GRP and will be binding on all other members;
- A grievance record file will be maintained in the GRP where all written and oral grievances will be filed and recorded; and
- The GRP will need its own by-laws.

7.10.2. Sub-Project-level Grievance Redress Mechanisms

Each sub-project will be required to establish a project-level Grievance Redress Mechanism (GRM) at the start of implementation. The full details of these GRMs will be agreed upon during the assessments completed for each project. Interested and affected stakeholders may raise a grievance at any time to the authorities. Councillors and traditional authority should facilitate communities/individuals to identify and articulate grievances at the local level and the tabling of issues with the Constituency-level GRP, chaired by the Chief Constituency Officer. Other members of the GRP should include constituency and regional-level representatives from government line agencies, and others as appropriate. At the community, constituency and regional levels, the GRM will strive not develop parallel structures but make use of existing and locally recognized grievance redress systems

7.10.3. Complaints/Grievance Logging Procedure

A complaint is received/reported to local GRP and recorded in the complaint logbook/sheet when a complainant completes the complaint form. The GRP would determine on the case, if action proposed is adequate a case is withdrawn. If no, the GRP will establish long term action, a follow up channel is set and inform the complainant (if appropriate) of the corrective measures and implement the corrective action. Refer to the Annex 3 for further details of the process and the grievance application form.

7.10.4. Accountability Mechanisms

AfDB recognize that even with strong planning and stakeholder engagement, unanticipated issues can still arise. Therefore, the ISSs are underpinned by an accountability mechanism outlined below:

- Independent Review Mechanism (IRM) that ensures individuals, peoples, and communities affected by projects have access to appropriate grievance resolution procedures for hearing and addressing project-related complaints and disputes.

The aim of IRM is to provide people adversely affected by a project financed by the AfDB, with an independent mechanism through which they can request the AfDB to comply with its own policies and procedures.

The IRM intervenes when affected people or communities submit a complaint. In this way, the IRM can be considered as a recourse instrument for project affected people who have previously been unable to resolve their problems with the AfDB's Management. The Independent Review Mechanism helps project-affected stakeholders, AfDB partners (governments, NGOs, businesses) and others jointly address grievances or disputes related to the social and/or environmental impacts of AfDB-supported projects.

What IRM do?

- *Problem Solving – Mediation*
- *Compliance Review – Investigation*
- *Advisory Service*
- *Outreach*

Further information, including how to submit a complaint to IRM, is found on the AfDB website at: <https://www.afdb.org/en/about-us/organisational-structure/independent-review-mechanism-irm>

8. CHAPTER EIGHT: PROPOSED MITIGATION AND ENHANCEMENT MEASURES

This chapter presents the management action plans or measures that will be used to develop appropriate ESMPs to ensure the implementation of the ESMF at sub-project level. The chapter further highlights the strategy and ESMPs for the programme sub-projects. The aim of ESMPs is to ensure that impacts stemming from the sub-project activities are managed to acceptable environmental and social levels. These acceptable levels are achieved through negative impact avoidance, where possible. Where impacts cannot be avoided, they need to be minimised. In cases where impacts cannot be avoided or minimised then the impacts need to be managed by providing mitigation measures and ensure the implementation of these mitigation measures in order to reduce the impacts' significance.

The following tables provide the mitigation measures (management plans) recommended to manage the anticipated identified impacts and issues raised and recorded in the SESA report. These mitigation measures are presented as follows:

- Planning and Design phase management plans for water supply activities and sanitation components (Table 1);
- Construction phase management action plans: bulk water supply, rural water supply and sanitation components (Table 2);
- Selected environmental and social components of the ESMP for monitoring.

8.1. Management Plans for the impacts associated with the Programme' Activities

8.1.1. Planning and Design Management Plans

Objective: The water infrastructure should be designed in such a way that they do not negatively impact the project area or communities where these infrastructures will be constructed and operated. These design management measures include the suitability of infrastructure for the areas it is meant to serve, putting in considerations the sites conditions and needs of the people benefiting from the sub-projects. The infrastructures should fit into the natural surrounding environment, making full use of the advantages of the sites and adding to the 'sense of place'.

Environmental performance indicator: The communities served by the infrastructures are not only satisfied with the infrastructure in terms of water supply and sanitation, but also in terms of other social, cultural and economic aspects such that no complaints are raised to the implementing agencies and or community/local leaders.

Table 9: Planning and Design Phase of the Water Infrastructure and Sanitation

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate
Infrastructure design and technology	Planning and design failure	All manufactured materials will be required to bear the mark of SABS/SANS approval or any internationally approved equipment and machinery for the intended project purposes. The agencies should ensure that the infrastructures' machinery and equipment are designed in such a way mechanical failure are minimal to none.	Certification of regional and or international approved standard of equipment and machinery	Planning and Design Engineer	Procurement of internationally and regionally (SABS/SANS) approved technology	Pre-construction	
Communication	Lack of communication (proper liaison between the communities/landowners and the implementing agencies and or their contractors)	The implementing agencies should appoint a Public Relation Officers (PROs) to liaise with the communities/landowners. The PROs should be introduced to the community leaders or local authorities and his or her contact details provided to them prior to undertaking activities for easy communication during the construction activities and subsequent operational phase. The agencies should compile a clear communication procedures/plans which should include a grievance mechanism The agencies should enter into written agreements with landowners and or communal land leaders before carrying out works on such land.	PRO should be appointed for each sub-project or as required Complaints logbook Land use agreements and permits	PRO	Complaints logbook PRO contact details to be provided to the affected landowners and local leaders	Throughout all the project phase	
Community involvement in decision making	Lack of community's involvement in decision making and mainstreaming of indigenous knowledge in the planning process through consultations	The affected local communities should be consulted and provided with ample time to give their input on the project activities in the early stages of planning The local knowledge of the community members with regards to the project activities should be considered and incorporated into the planning of the projects	Community consultation input process List of records of community consultation/engagement	PRO	Inputs and comments log	Throughout this phase	
Involuntary resettlement	Displacement of local people to pave way for the project activities	A National Resettlement Compensation policy should be implemented for the affected owners or occupiers of land. The social values (cultural) of the affected people should be respected and handled with dignity.	Involuntary resettlement consultation and agreements with affected communities/people	Ministry of Land Reform	Compensation records of affected people	Throughout this phase	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate
		As per the AfDB requirements, It seeks to ensure that when people must be displaced they are treated fairly, equitably, and in a socially and culturally sensitive manner; that they receive compensation and resettlement assistance so that their standards of living, income-earning capacity, production levels and overall means of livelihood.	Compensation policy shared with the affected people		List of all affected people and their details		
Construction schedule	Construction inconveniences to communities	Convenient construction schedules should be prepared and be shared with the Regional Constituency offices, local and Traditional Authorities, so that they can inform the local communities of when to expect the construction works in their areas and the anticipated inconveniences and the duration.	On-going engagement / communications with landowners and local leaders	Environmental Control Officer (ECO)	Complaints logbook Construction work notices sent to Regional councils and community leaders and local authorities	Pre-construction	
Water Resources utilisation	Water abstraction and use	Implementing agencies that will be abstracting water for commercial purposes (such as NamWater), either from surface or groundwater sources should apply for and obtain water abstraction and use permits from the Department Water Affairs and Forestry at MAWF. This will be done for each sub-project. The respective agency will ensure adherence to water volume allocations in the permits as well as permits' renewal as per their stipulated periods throughout projects' operations.	Water abstraction and use permits are issued and conditions contained therein are adhered to	Environmental Control Officer (ECO)	Technical reports to permit applications Records of permit numbers and conditions	Pre-operation and throughout the operations	
Land use conflicts	Damage to existing services infrastructure and future infrastructure	If there are known existing infrastructure in the project areas, the programmes' PRO should consult with the local communities and their leaders to help in locating buried services such as electricity cables and water pipelines in the area in order to avoid damage.	On-going engagement and consultation with local leaders and communities No. records of land use conflicts	PRO	Complaints logbook Marking of known areas with buried services	Throughout all the project phases	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate
	Cultural or heritage sites	<p>The communities should be consulted in cases where the sub-project activities pass next to or close to places of cultural value to the communities.</p> <p>Careful site selection and siting of all project components, taking account of community consultation/specialist surveys.</p> <p>Development of a Cultural Heritage Management Plan covering tangible and intangible (e.g. local traditions and practices) cultural heritage.</p> <p>Implementation of a “Chance Finds” procedure during construction.</p>	No record of complaints or conflicts between the communities and implementing agencies or contractors	Environmental Control Officer (ECO)	Record and marking of all known cultural sites	Pre-construction	
Land Use	Land use permits/agreements and or leaseholds	<p>The implementing agency should consult with the landowners and or traditional authorities or relevant land users to obtain a written land use/leasehold agreement prior to constructing infrastructure.</p> <p>All relevant land permits and leaseholds documents should be obtained from the landowners or authorities.</p> <p>Proper consultations should be done with the affected landowners and authorities with regards to land use and NWSSP projects.</p>	<p>No complaints of landowners and authorities with regards to unfair and unauthorised land uses</p> <p>All land use agreements and permits are in place and obtained prior to utilizing the land</p>	PRO	Documentation of all land use permits and or leasehold documents	Pre-construction	
Health and Safety	Construction workers	<p>Appropriate personal protective equipment (PPE) for the construction contractors should be made mandatory requirement in the tender documents compiled for construction. This is to ensure that the appointed contractor to carry out the construction works will have safety and health measures for all its employees in preparation for the construction phase.</p> <p>The Labour Act and its regulations should always be complied with.</p>	Incorporation of health and safety requirements in the tender documents	Environmental Control Officer (ECO) or Occupational Health specialist	Records of all health and safety requirements	Pre-construction	
Construction materials	Sourcing of construction materials from unauthorised or uncertified service providers	Sand required for construction and other locally derived building materials should be planned for prior to construction.	Certification of construction material and equipment suppliers	Environmental Control Officer (ECO)	Materials logbook	Pre-construction	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate
Construction and operational phase workers	Labour recruitment	<p>Preference for both casual works during construction and operational & maintenance work should be given to residents/locals in that area.</p> <p>No recruitment should be done on project sites. This should be carried out at the respective regional constituency offices.</p> <p>Preference of employment should be given to the youth and women.</p>	<p>Employment of people from the community</p> <p>No complaints of unfair recruitment of outsiders at the expense of local people.</p>	<p>Implementing agency: Human Resource Department</p> <p>For construction, the responsibility falls on the contractor</p>	Complaints logbook	Pre-construction (for construction workers) and operation (for operational phase workers)	
Visual (sense of place)	Visual	<p>Where required, infrastructures should be camouflaged to cause less of a nuisance in project areas.</p> <p>All the necessary options to improve the aesthetic of the infrastructures should be considered and incorporated in the designs. This should be done so that the water infrastructures blend in with the surrounding areas or at least enhance it for a better appeal to the public.</p>	No complaints of sight/visual nuisance from the neighbouring landowners or local communities	Planning and Design Engineer	MET Ombudsman	Pre-construction	
Construction contractors	Appointment of contractors	<p>For all the construction works, preference should be given to local companies (construction contractors) from the project areas in that region.</p> <p>Construction Contractors from out of the area/region can only be considered in the case that there are no capable/qualified or interested local construction companies.</p> <p>No tendering processes (apart from tender related site visits) or appointment of construction contractors should be done on project sites. The tendering process should be done at the implementing agency's premises as per their procurement / tendering procedures.</p>	<p>No complaints of unfairness or corruption from contracting outsiders at the expense of local companies</p> <p>Record of companies contracted for the construction works</p>	<p>Implementing agency: Procurement Unit</p>	As per respective agency's requirement and procedures	Pre-construction	
Vehicular Traffic	Traffic Safety	Enough and visible construction notices to be erected close to the site access from local main roads should be planned for. These will serve as a warning or an alert to vehicle drivers about upcoming construction works in the area.	Site drawings/layouts including parking lots, loading zones and traffic signals	Planning and design Engineer	Records of project designs and layouts	Pre-construction and throughout the project phases	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate
		Enough materials offloading and loading zones and parking for project vehicles should be included in the design phase.					

* - Cost estimate at an hourly rate

8.2. Construction Phase Management Plans

Objective: To construct the infrastructure with minimal disturbance to the surrounding bio-physical and social environment.

Environmental performance indicator: The 'environmental footprint' of the project will be limited to areas of development, with far surrounding areas untouched.

Table 10: Management Plans for the Construction Phase of the Water Supply Infrastructure and Sanitations

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
ESMP Training and implementation	Lack of ESMP Awareness and implications thereof	Employees appointed for construction work on respective infrastructure must ensure that all personnel are aware of necessary health, safety and environmental considerations applicable to their respective work.	Less to no record of contravening with the ESMP	Environmental Control Officer (ECO)	Monitoring records	Throughout all the project phases	
Land Use	Land use agreements	The implementing agencies should maintain on-going consultations/engagements	No complaints from landowners and authorities with regards to unauthorised land uses or breaching of land use agreements On-going engagements with landowners and authorities Prompt responses to landowners and authorities by implementing agencies regarding the land use grievances	PRO	Records of all land use permits and or leasehold documents	Throughout this phase	
Water Use/Availability	Over abstraction leading to the depletion water resources	Where possible, alternative water resources should be considered. The implementing agencies supplying water from shared resources should abstract water volumes within the allocated thresholds in the regional protocols for shared resources. Water resources management and protection awareness should be provided to communities in order to conserve their resource.	Proof/ recording/ quantification of water abstracted on an annual basis Water resources management awareness in rural and urban communities	Environmental Control Officer (ECO)	Monitoring records Water conservation pamphlets and sessions	Throughout the operational phase	
Water and soil pollution	Comprised water quality due to fuel and lubricant spills	Regular inspections and servicing of vehicles and machinery off-site or in designated areas. Fuels and lubricants must be stored in containers. If stored on the ground, these containers should be placed on a non-permeable surface (e.g. high-density polyethylene plastic sheets). Polluted soil must be collected and transported away from the site to an approved and appropriately classified hazardous waste treatment facility.	No complaints of contaminants in the water as a result of construction activities No visible oil spills on the ground or contaminated spots.	Environmental Control Officer (ECO)	Complaints logbook Waste containers Non-permeable material to cover ground.	Throughout this phase	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
		<p>Soil contamination should be minimised by lining the ground with durable plastic where necessary.</p> <p>Washing of equipment contaminated hydrocarbons, as well as the washing and servicing of vehicles should take place at a dedicated area, where contaminants are prevented from contaminating soil or water resources.</p> <p>The project effluent/wet waste and hydrocarbons should be contained on site in designated containers and disposed of in accordance to municipal wastewater discharge standards, so that they do not reach to local groundwater systems.</p>					
Waste	Hazardous waste	<p>Hazardous waste, including emptied chemical containers should be safely stored on sites where they cannot be reached and used by the unsuspecting and uniformed locals for personal use. No waste should be improperly disposed of on sites or its surroundings, i.e. unapproved waste sites</p> <p>A comprehensive list of all potentially hazardous wastes and estimated volumes shall be compiled for all activities. A hazardous materials inventory shall be kept and be readily available for inspection by implementing agencies and relevant authorities.</p> <p>Specifications for storing and handling of all hazardous waste and substances (e.g. fuel and chemicals) shall be adhered to. Specific attention shall be paid to designing the fuel storage sites and control during filling to manage pollution risks.</p> <p>All hazardous waste that cannot be handled safely shall be temporarily stored before being removed to a hazardous waste disposal site by authorised service providers.</p>	<p>No improper discarding of such waste on project sites or at any unapproved sites</p> <p>Records of waste disposal</p>	Environmental Control Officer (ECO)	<p>Sufficient hazardous waste disposal containers</p> <p>List of all hazardous wastes stored and used on sites</p> <p>Records of hazardous waste removal service providers</p>	Throughout this phase	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
	Material Safety Data Sheets (MSDS) usage	Material Safety Data Sheets shall be used in all cases in assisting in assessing the possible risk and best approach to handling and disposal methods. These shall be available at locations/sites where chemicals are stored and used.	Availability of MSDSs for all hazardous materials. Disposal / handling consistent with requirements	Environmental Control Officer (ECO)	Records of MSDs	Throughout this phase	
	Waste storage	If capacity is insufficient in the temporary storage area on site, additional temporary storage for hazardous wastes, fully bunded and covered, shall be required in order to safely contain the wastes until they can be disposed of safely and legally. Waste containers shall be stored above ground and under covering. Domestic waste shall be contained, and storage areas shall be contained to prevent scavenging by local persons or animals.	No improper disposal of waste on the project sites or in the surrounding areas Waste is sorted and stored in respective waste containers, i.e. according to waste type	Environmental Control Officer (ECO) MET	Records of temporary waste storage sites	Throughout this phase	
	Spill management	The necessary tools, materials and expertise shall be readily available to deal with spills of oil, fuels, lubricants and other hazardous materials. Spill clean-up kits shall be available on site. All spills of fuels, oils or other hazardous substances shall be immediately cleaned up and measures taken to remediate the spill. The incident shall be reported to the respective implementing agency's Safety, Health and Environmental (SHE) representative. The necessary tools, materials and expertise shall be readily available to deal with spills of oil, fuels, lubricants and other hazardous materials. Spill clean-up kits shall be available on site.	No spills on site soils Fuels, oils and other hazardous substances are well stored and sealed in their containers on sites	Environmental Control Officer (ECO) MET	Availability of required tools and materials. Drip trays for machinery and vehicles	Throughout this phase	
Fire	Fire prevention and management	A fire prevention and fire emergency management plan shall be prepared as part of the method statement for the implementing agencies. The plan shall include, but not be limited to, the following:	Minimum to no records of fire on project sites	Environmental Control Officer (ECO)	Enough fire extinguishers on sites	Throughout this phase	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
		<p>-Sources of fire risk;</p> <p>-Measures to minimise the risk of accidental bush fires caused by any activity related to the works;</p> <p>-Measures to control an accidental bush fire.</p> <p>Firefighting equipment shall be provided at specified localities on the work site.</p> <p>This equipment shall include, but not be limited to, fire extinguishers and fire-resistant clothing for fire fighters</p> <p>Suitable signs should be placed in areas of fire risk, such as no smoking, no open or naked flames, etc.</p>	Fire signs placed at potential fire risk areas such as the fuel storage areas		Records of site areas with potential risks of fires		
Water and soil pollution	Wastewater generated by project workers living on-sites.	<p>Provision of toilet facilities for project workers (type of pit latrine or chemical toilet).</p> <p>Emptying of chemical toilets according to the manufacturer's specifications. Treating latrine waste to render non-polluting.</p>	Adequate toilet facilities on sites.	Environmental Control Officer (ECO)	Chemical toilets or excavator (pit creation), waste treatment agents/chemicals	At site setup and throughout this phase	
Soils	Land degradation	<p>Soil erosion preventative measures should be put in place manage soil disturbance. Site soils should not be disturbed, if not needed or related to the actual construction works.</p> <p>Overburden material should be handled more efficiently during this phase to avoid erosion when subjected erosional processes.</p>	No signs of soil erosion	Environmental Control Officer (ECO) MET	Monitoring	Throughout this phase	
Air quality	Generation of dust from construction activities like pipeline excavations resulting in	<p>Provision of Personal Protective equipment to each employee on site.</p> <p>Construction equipment should be regularly maintained to ensure efficiency and so reduce dust generation.</p> <p>Implementation of dust suppression measures where necessary, such as sprinkling of water in working areas, particularly close to</p>	No. complaints from the public about excessive dust generation.	Environmental Control Officer (ECO) MET Local Leadership	Complaints logbook Dust suppression implement e.g. water bowser	Throughout this phase	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
	increased particulate matter in the atmosphere that negatively affect occupational and residential respiratory health.	homesteads. Vehicle speeds decreased further near homesteads to minimise potential dust impact. Dry dust suppression methods should be employed to minimise dust generation. The impact mitigation measures should be covered in the relevant farm access agreement as required by law on commercial farms.					
Air quality	Hydrocarbon emissions from vehicles	Vehicles and machinery on site should be serviced regularly to prevent emission of harmful gases. Sensitive site selection and siting of project components. Use of modern equipment meeting appropriate emissions standards, and regular preventative maintenance. Dust control and suppression measures such as dampening, watering of dust sources, use of vegetation hedges etc. No use of ozone depleting substances during construction. -Ensure sewage storage and treatment facilities are adequately contained; cover sludge with lime/earth at disposal sites.	No complaints from the public about vehicle emissions.	Environmental Control Officer (ECO)	Complaints logbook Vehicle and machinery mechanic	Throughout this phase	
Soils	Loss of topsoil	The use of existing tracks to avoid disturbance of new areas should be considered.	No proliferation of informal vehicle tracks. No new erosion gullies.	Environmental Control Officer (ECO)	Complaints logbook		
Illegal hunting	Illegal hunting of wildlife	No hunting will be done by project personnel on-sites. Site personnel should refrain from killing/poaching or snaring or intentionally disturbing local animals that may be found on and around the project sites. Personnel are not allowed to kill or in any way disturb local livestock	Incident reports of illegal hunting of wildlife by the crew.	Environmental Control Officer (ECO)	Complaints logbook	During site set up, and throughout this phase	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
Biodiversity (Flora)	Localised loss of habitat and vegetation	<p>All areas of interest should be clearly marked to prevent damage to areas unintended for the projects' footprints.</p> <p>Where clearing and/or damage is unavoidable, permits for clearing protected plant species should be obtained from the Forestry Department.</p> <p>With regards to the vegetation on or within proximity of site, the following mitigation measures should be implemented:</p> <p>(a) Even if certain vegetation is found within actual site footprints, this does not mean that it should be removed. Therefore, care should be taken when preparing the site without destroying the vegetation.</p> <p>(b) Vegetation found on the sites, but not on the site infrastructure footprints should not be removed or disturbed in any way but should be left to preserve biodiversity on the site.</p> <p>Environmental awareness on the importance of biodiversity preservation should be provided to the project workers.</p>	<p>No disturbance to unmarked areas.</p> <p>Occurrence of soil erosion due vegetation removal</p> <p>Number of trees removed.</p> <p>Existence of bare surfaces after project work start</p>	<p>Environmental Control Officer (ECO)</p> <p>MAWF; Department of Forestry Management</p>	Barricading tape (to indicate working areas)	Prior to construction	
Biodiversity (Fauna)		<p>Project workers should refrain from killing species (big or small) that may be found on and around the sites.</p> <p>Workers should refrain from disturbing, killing or stealing locals' animals and/or small soil animals' species found on sites.</p> <p>Environmental awareness on the importance of biodiversity preservation should be provided to the site contractors and workers.</p>	<p>No snaring or killing of local domestic animals</p>	<p>Environmental Control Officer (ECO)</p>	Complaints logbook	Throughout this phase	
Health and safety	General health and safety risks associated with different project activities	<p>A comprehensive health and safety plan should be construction activities.</p> <p>As part of their induction, the workers should be provided with awareness training on how to use and or operate site equipment as well as the risks of mishandling equipment and materials.</p>	<p>Comprehensive health and safety plan for all construction activities compiled.</p> <p>No injuries reported and recorded.</p> <p>Implementation of procedures and programmes.</p> <p>Workers wearing full PPE while on sites</p>	<p>Site/Project Manager</p>	<p>Time, printing resources.</p> <p>Adequate and appropriate PPEs</p>	Prior to site setup activities	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
		<p>All personnel should be trained in/sensitised to the potential health and safety risks associated with their respective jobs.</p> <p>Prior to operating and using site machines and equipment, personnel involved in different project tasks should be trained on how to properly and correctly use these, if they are not familiar with them.</p> <p>Appropriate personal protective equipment should be provided to personnel.</p> <p>Heavy vehicle, equipment and fuel storage site should be properly secured, and appropriate warning signage placed where visible.</p> <p>An emergency preparedness plan should be compiled and all personnel appropriately trained.</p> <p>When working on site, workers should be properly equipped with appropriate personal protective equipment (PPE) such as coveralls, gloves, dust masks, safety boots, earplugs, safety glasses, etc depending on the type of work being done.</p> <p>No worker should be allowed to drink alcohol prior to and during working hours as this may lead to mishandling of equipment which results into injuries and other health and safety risks.</p>			Health and safety awareness trainings to all personnel		
Health and safety	Accidental fire outbreak	<p>Portable fire extinguishers should be provided on site.</p> <p>No open fires to be created by project personnel.</p>	No wildfires recorded (due to presence of workers)	Environmental Control Officer (ECO)	Fire extinguishers (1 per vehicle)	Throughout this phase	
Archaeology and cultural heritage	Potential disturbance to archaeological and cultural heritage resources	<p>A chance find procedure will be prepared prior to commencement of activities on sites.</p> <p>Caution should be exercised when carrying out excavations associated with the construction activities if archaeological/heritage remains are discovered.</p> <p>The worksite manager should receive training by a suitably qualified archaeologist with respect to the identification of</p>	Preservation of all artefacts that are discovered around project area	Environmental Control Officer (ECO)	Salvage equipment	Prior to site setup activities	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
		<p>archaeological/heritage remains and the procedures to follow if such remains are discovered during construction.</p> <p>Personnel should be informed not to not destroy /damage or throw away any unknown object found/discovered on site during operations, but to report these objects to the site manager/leader who then informs the NHCN.</p> <p>If any archaeological materials are found, the National Heritage Council's Chance Find Procedures should be followed. Furthermore, the worksite manager should be notified, and all on-site activities stopped immediately.</p>					
Communication	Lack of communication (proper liaison) between community members and implementing agencies with regards to site/land use	Clear communication procedures/plans which should include a grievance mechanism should be prepared and shared with community leaders and or property owners affected by the project activities	Less to no complaints from the communities regarding the lack of grievances addressing	PRO	Complaints logbook PRO contact details to be provided to the affected landowners	Throughout this phase	
Employment creation	Creation of employment opportunities	<p>Non-skilled labour should be sourced from the locally affected area, in accordance with procedures approved by the relevant authorities.</p> <p>Equal opportunity should be provided for both men and women.</p>	Number of locals employed during construction activities	Site/Project Manager/TA	None	Throughout this phase	
Noise	Potential increase in noise levels	<p>The construction times should be set such that, no work is carried out during the night or very early in the mornings.</p> <p>Machinery and vehicles should be serviced regularly so that they function normally without excessive noise.</p>	Complaints from residents about noise.	Environmental Control Officer (ECO)	Complaints logbook	At site set up and throughout this phase	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
		<p>Construction activities will be restricted to daytime between 8am in the morning and 5pm in the evening.</p> <p>Noise from vehicles and equipment on site should be reduced to acceptable levels.</p> <p>When operating equipment, workers should be provided with applicable personal protective equipment (PPE), such as earplugs.</p>					
Traffic safety	Increase in traffic density.	<p>Enough and visible construction notices should be erected close to the site access from local main roads. This will serve as a warning or an alert to vehicle drivers about upcoming construction works in the area.</p> <p>Enough materials offloading and loading zones and parking for project vehicles should be included in the design phase.</p> <p>Drivers should drive slowly (40km/hour or less), and on the lookout for livestock and wildlife.</p> <p>All drivers of the project vehicles should be in possession of valid and appropriate driving licenses to operate such vehicles.</p> <p>Vehicle drivers should adhere to the road safety rules.</p> <p>Project vehicles should be in a road worthy condition and serviced regularly in order to avoid accidents as a result of mechanical faults of vehicles.</p> <p>Vehicle drivers should only make use of designated site access roads provided.</p> <p>Vehicles drivers should not be allowed to operate vehicles while under the influence of alcohol.</p> <p>No heavy trucks or project related vehicles should be parked outside the allocated or designated project site boundaries.</p> <p>The area(s) intended for the maintenance of equipment, vehicles and machinery shall be located on an impermeable surface and shall have a drainage and collective sump system (with oil/water separator). No hydrocarbon</p>	<p>No complaints from members of the public/ local communities regarding project related vehicular traffic safety</p> <p>Enough parking and loading zones on sites</p>	Environmental Control Officer (ECO)	None	Throughout this phase.	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
		contaminated water may be discharged into the environment.					
HIV and AIDS	Potential increase of prevalence of HIV and AIDS, as well as other STIs prevalence.	<p>The workers should be engaged in health talks and training about the dangers of engaging in unprotected sexual relations which results in contracting HIV/AIDS and other sexual related infections.</p> <p>Provision of condoms and sex education through distribution of pamphlets. These pamphlets can be obtained from local health facilities.</p>	Number of new infections recorded linked to project workers.	MoHSS Operational NGOs like UNICEF	<p>Sex and general education awareness pamphlets</p> <p>Availability of condoms at the project sites at all times</p>	Throughout this phase.	
Social nuisance	Influx of out-of-area people into the project areas	<p>The implementing agencies and their project contractors should prioritize the employment of local people, and only if necessary and due to lack of skills in the area, out-of-area people can be given some of the work. This is to avoid the influx of outsiders into the area.</p> <p>The locals to be employed during the project phases should be provided with the necessary training of skills required for the project to avoid bringing in many out-of-area employees.</p> <p>The workers should be engaged in health talks and training about the dangers of engaging in unprotected sexual relations which results in contracting HIV/AIDS and other sexual related infections.</p> <p>Out-of-area workers that may be employed (due to their unique work skills) on site should be sensitized on the importance of respecting the local values and norms, so that they can co-live in harmony with the local community.</p> <p>Construction workers or any project related worker should be prohibited from getting involved in sexual relations and/or engage in sexual activities with locals' young girls.</p>	<p>No record of public complaints against contractors</p> <p>No records of sexual relations between contractors and local young girls, especially school children (underage)</p>	<p>Environmental Control Officer (ECO)</p> <p>PRO</p>	Complaints logbook	Throughout this phase	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
		<p>Any construction worker who will be found or seen engaging in sexual relations with young girls shall be reported to the site managers and necessary actions taken against that worker.</p>					
Social impact	Potential damage or invading of private properties	<p>The implementing agencies and their project contractors should inform their workers on the importance of respecting the local communities' properties by not intruding or damage their homes, fences or killing their livestock.</p> <p>Any workers or site employees that will be found guilty of intruding peoples 'private properties should be called in for disciplinary hearing and/or dealt with as per their employer's code of employment conduct</p> <p>Site workers should be advised to respect the community and local's private properties, values and norms.</p> <p>No worker should be allowed to wander in people's private yards or fences while on sites.</p> <p>Site workers are not allowed to kill or in any way disturb local livestock or vegetation.</p> <p>No worker should be allowed to, without permission cut down or damage trees</p>	No record of complaints related to property damage by the public against contractors	<p>Environmental Control Officer (ECO)</p> <p>PRO</p>	Complaint logbook	Throughout this phase	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
		<p>belonging either to the landowners or in the community vegetation/forests.</p> <p>The property and rights of all landowners or land occupiers should always be respected.</p>					
Littering	Environmental pollution from solid waste during construction	<p>Project workers should be sensitized to dispose of waste in a responsible manner and not to litter.</p> <p>No waste may be buried or burned on site or anywhere else throughout the project lifecycle.</p> <p>All domestic and general waste produced on a daily basis should be contained until such that time it will be transported to designated waste sites on a weekly basis or as required.</p> <p>The sites should be equipped with separate waste bins for hazardous and general waste/domestic.</p> <p>A penalty system for irresponsible disposal of waste on site and anywhere in the area should be implemented.</p> <p>Provision of animal-proof waste storage containers for storage of waste until disposal at a designated disposal site.</p> <p>Personnel should dispose of waste in a responsible manner and not to litter.</p> <p>The project sites should be equipped with different waste bins for each waste type (except for sewage that will be contained in the provided chemical toilets and/ or periodical type of pit latrine).</p> <p>No waste may be buried or burned on site or anywhere else throughout the project lifecycle.</p>	No visible litter around the project areas	Environmental Control Officer (ECO)	Waste storage containers	Throughout this phase.	

Aspect	Impact	Mitigation Measure(s)	Key Performance Indicator (KPI)	Responsible Party	Resources	Deadline	* Cost Estimate (NAD)
		Provision of animal-proof waste receptacles for temporary storage until transportation to the nearest waste facility.					
Capacity building	Lack of capacity among agencies to implement and manage projects	<p>MAWF: The technical and human capacity of the department is very important and necessary because the success of the program lies on competent team to facilitate the execution of projects. Therefore, capacity building will need to be implemented for each project component as deem necessary.</p> <p>NamWater: The role of NamWater in this project is to provide technical knowledge and input on the available water resources and different management and conservation options.</p> <p>City of Windhoek: An international company will need to be contracted for the designing, construction and operation of the facility on a Build Operate and Transfer (BOT) basis.</p> <p>City of Windhoek (cont...): There is need for technical and skilled training of City of Windhoek team during the time the plant start operations and during planning work by the Contractor so that they are able to operate and maintain the plant on a long run. Therefore, capacitating the agency's technical staff will need to be implemented effectively.</p> <p>The implementing agencies should consider establishing capacity building partnerships with local tertiary institutions such as Namibia University of Science and Technology (NUST) and University of Namibia (UNAM), NamWater Vocational Training Centre/Human Resource Development Centre (HRDC), etc.</p>	<p>The staff of the implementing agencies are operating and managing the project activities with little to no supervision from the training experts</p> <p>Smooth functionality/operations of project activities as expected without technical complications or issues due to lack of capacity.</p>	<p>Technical Assistant</p> <p>As required, local tertiary and or vocational institutions</p>	<p>Intensive staff trainings on the required project components</p> <p>Records of staff capacity building trainings undertaken</p> <p>List of staff, designation and area of project expertise capacitated on</p>	Throughout the construction and operational phases	

* - Cost estimate at an hourly rate

8.3. Social and Environmental Impacts of Climate change in Namibia

The NWSSP is aimed at addressing impacts of climate change on water supply and scarcity in the different regions. Namibia being one of the hardest hit countries in terms of climate change induced drought, the country has witnessed devastating effects of climate change on the socio-economic folds of communities. The 2018/ 2019 rainfall season has been extremely poor and was seen in the form of delayed of the rainfall season, sporadic and erratic rainfall patterns as well frequent prolonged dry spells compounded by extremely high temperatures that exacerbated evaporation of the little moisture received. This is has affected the agriculture production and water sources, according to Namibia Meteorological Services rainfall report, March 2019 was the fifth consecutive month with suppressed rainfall over the large part of the country, most dams/ reservoirs levels are low due to very low inflow received this season compared to the corresponding period last year.

Provisional crop harvest estimates conducted by the MAWF in December 2018, indicated that crops producing regions were expecting massive reduction in the expected harvest. Cereal production was estimated to have reduced by 70 to 80% in the communal area and by 15% in the commercial below last season's harvest and over 42% below the 20-year average production. This reduction is compounded by extremely high temperature experienced countrywide during the rainy season resulting in mass wilting of crops during the critical stage of germination, flowering and grain formation. This has been compounded by the outbreak of fall armyworms in large parts of the Zambezi and some parts of Omusati, Kavango East and Kavango West region. We have noted that for this year's rainy season, we experienced extremely poor rainfall, which subsequently caused considerable delays in the cultivation activities.

8.3.1. Climate Change Resilient Activities

The pollution risks from activities under the programme are low. The programme will include measures to ensure that the activities it supports do not exacerbate the risks of climate change but instead mitigate climate change impacts. There risks are in uncontrolled abstraction of water, increased human, agricultural and Water activities around water sources and in catchment areas etc. in water scarce areas, improved water facilities can lead to degradation of natural resources due to increased concentration of people and Water. These risks will be considered in planning, design and siting water and sanitation facilities. The programme activities shall be guided by all policies, strategies, plans and regulations under the environmental sector and will not support any activity that supports to environmental degradation. The programme will be also subjected to Bank's climate safeguards system for classification and definition of adaption measures to be implemented to increase the resilience of the infrastructure to be built or rehabilitated to withstand the impacts of climate change. The infrastructure is climate resilient to ensure longevity of the infrastructure

9. CHAPTER NINE: TRAINING AND CAPACITY BUILDING TO ENABLE ESMF IMPLEMENTATION

Implementation of the NWSSP will require that appropriate and effective institutional structures and management mechanisms are in place at national, regional, constituency and local/community levels. It is assumed that, wherever possible, existing structures and mechanisms will be harnessed, and strengthened where necessary. But some new ones may also be necessary. There may also be a need to amend, harmonise, or even introduce new legislation, policies, rules and regulations to enable effective implementation of the program.

The institutional structures and mechanisms to implement this ESMF will need to be accommodated as an integrated part of these arrangements. They will also be required at national, regional, constituency and local levels. The ESMF describes key institutional, requirements, structures and responsibilities.

9.1. Institutional Needs Analysis

9.1.1. Stakeholder Consultation

Based on the institutional analysis presented in Section 3.5 of the SESA report, and the outcomes of the stakeholder consultations, the general capacity development and training needs for the key organisations involved in ESMF are listed in Table 8 of the ESMF. Some recommendations concern the need to establish new sections, or activate currently dormant sections, within institutions to address environment and/or social concerns in ESMF implementation, and to appoint new members of staff with appropriate qualifications or experience. A list of the stakeholders engaged in these consultations has been annexed to the Consultation Documents in the SESA Report.

9.1.2. Strengthening Existing Institutions

Each TA from implementing agencies will have the final responsibility for the integration of ESMP/stand-alone management plan(s) in the execution of the project. The integration of those plans will need to consider particular institutional needs within the implementation framework for application of the ESMP, including a review of the required budget allocations for each measure, as well as the authority and capability of institutions at different administrative levels (e.g. local, regional, and national), and their capacity to manage and monitor ESMP implementation. Where necessary, capacity building and technical assistance activities will be included to enable proper implementation of the ESMP.

Institution/Dep/Sect	Required capacity enhancement	Training needs
Ministry of Agriculture, Water and Forestry (MAWF)		
Environment Division	<ul style="list-style-type: none"> • A new section of the environmental division needs to be created with a section officer appointed with an environmental qualification and background, and knowledge on emerging environmental issues related to water development, to handle the environmental issues related to NWSSP at national level. Another option can be the Ministry of Environment and Tourism (MET) to provide environmental personnel to the MAWF. However, this would depend on the working relationship between the two ministries. 	<ul style="list-style-type: none"> • In case of MAWF appointing their own personnel, training should be provided to officials on key environment and social themes of this ESMF implementation – based on SESA and ESMF reports.
Climate Change and resilient aspect	<ul style="list-style-type: none"> • A critical section for NWSSP. Should be made active in order to contribute to climate change aspects of NWSSP implementation. Climate change officer can be employed at MAWF. 	<ul style="list-style-type: none"> • Training of other MAWF officers that would be responsible for the management of the program on how the climate change can be integrated in every component of NWSSP.
Gender and Social Aspects	<ul style="list-style-type: none"> • A section with responsibility to manage all the social concerns is needed within MAWF to support implementation of this ESMF, particularly to work on the issues related to gender, empowerment of indigenous people, occupational castes, and poor, disadvantaged and marginalized groups and communities. Ministry of Gender Equality and Child Welfare can provide Gender and Social Officers to work on the gender and social aspects of the ESMF or MAWF can create a section of gender within the ministry and appoint personnel. 	<ul style="list-style-type: none"> • Training of other MAWF officers that would be responsible for the management of the program on how the climate change can be integrated in every component of NWSSP.
AfDB Environmental safeguards monitoring	<ul style="list-style-type: none"> • Need to employ new personnel with the assistance of the Bank, an environmental and monitoring safeguard specialist or appoint environmental consultant. • The expert will offer an induction session for Project Management Units (and implementing partners, as needed) on safeguards responsibilities and approaches. 	<ul style="list-style-type: none"> • Offer training course on implementing AfDB environmental safeguards, site monitoring indicators. • Procure consultant firm to develop manuals that staff can use. • The AfDB should provide advice to project teams as needed to support the implementation of this ESMF and the preparation, implementation and monitoring of social and environmental management plans/measures.

Social safeguards monitoring	<ul style="list-style-type: none"> • Need to employ personnel with the assistance of the Bank a social safeguard and monitoring specialist or appoint environmental consultant. 	<ul style="list-style-type: none"> • Offer training course on implementing AfDB social safeguards, site monitoring indicators. • Procure consultant firm to develop manuals that staff can use.
Namibia Water Cooperation (NamWater)		
Environment Division	<ul style="list-style-type: none"> • NamWater has Environmental Affairs department that is responsible for managing all environmental issues related to their operations. Instead of opening or hiring services but they can strengthen the existing department. 	<ul style="list-style-type: none"> • Offer special training to strengthen the department.
Okahandja Training Centre	<ul style="list-style-type: none"> • NamWater has existing training Centre, NWSSP activities can utilize the Centre for training of NamWater staff. The Centre needs to be capacitated. 	<ul style="list-style-type: none"> • Equip the Centre from its dormant state so that it can serve the in-house training sessions
City of Windhoek		
Environment Division	<ul style="list-style-type: none"> • The proposed DRP for CoW would be the first plant in SADC, that means management of environmental issues associated with operations of the plant require experience so that adverse impacts from the plant are managed. Special training to strengthen the agency to be able to manage the impacts is necessary especially on issues of odor. 	<ul style="list-style-type: none"> • Need specially training on the operation of DRP so that impacts that associated by the operation of the plant are understood and managed • Visits to other countries where the plant is operation is key, exchange programs with these countries is very important.

Table 11: Institutional capacity building and training needs for ESMF implementation

9.2. Strengthening implementing agencies

Capacity building of implementing agencies will be achieved through:

- i. Training programs for the existing staff of the implementing agencies.
- ii. Technical Assistance: knowledge sharing and on-the-job training and mentorship.

9.3. Training

Implementing agencies will prepare an annual training plan to their staff which will be agreed with the Bank as part of strengthening their capacity and related institutions during the NWSSP implementation. It will include information on the title of training, institution that shall provide it, timeline, cost, number, position and names of relevant people to be trained. The training plan shall be updated in agreement with the Bank through the duration of the Project phases (Phase 1 and 2) at least annually or as required to reflect the actual project implementation needs.

With the aim of achieving as good environment protection as possible, the Contractors should enhance the proficiency of all employees through training and mobilization of all persons involved in the project. All employees at the construction site should be familiarized with:

- Guidelines for the implementation of good construction practice,
- Environment and Social Monitoring Plan requirements,
- Their tasks and responsibilities for achievement of the conformity with Environment Monitoring Plan requirements,
- Possible consequences in the case of aberration from established procedures.

9.4. Modes of Environmental Training

A key concept in training programs is to provide training through a combination of formal classroom training and practical on-the job sessions. Technical assistance should be made available to provide training, guidance and advisory support in all aspects of works implementation in order that the key players (environmental as well as technical team) become fully conversant with, and capable of carrying out their respective duties. Training for the various categories of staff needs to be carried out with varying durations and through different approaches, such as on-site and classroom training, workshops, seminars and practical on-the job training.

9.4.1. Training Methods

The most effective way of addressing such training needs is by carrying out the training in an environment which to the extent possible resembles the real situation in which the trainees will eventually operate.

1.1. On-the-job Training

On-the-job training is the most effective method of training most categories of government staff. This involves the extensive use of practical demonstrations and skill training at full-scale training sites. This approach is very effective for the training of managers, engineers and supervisors with the on-site training being supported by classroom components tailored for the various categories of staff. This report strongly recommends the on-site training approach. For the City of Windhoek sub-project, it will be the first DRP in SADC, so they are suggesting working on the Built Operate Transfer (BOT) basis during implementation with the capable contractor. Therefore, on-job-training is the best technique CoW can apply so that their workers are able to operate the plant during transfer to ensure project continuity.

1.2. Workshops

Intensive refresher courses for periods of one to three days are useful for addressing specific problem areas regarding the ESMF implementation. These workshops will be organized to supplement on-the-job training for some of the technical and administrative staff of the implementing agencies. Short workshop can either be arranged through the provision of technical assistance, an in-house training facility, or by contracting consultants.

1.3. Seminars

Seminars are useful as a means for disseminating data and information, for senior government officials at central and local level, as well as representatives of other government agencies. Seminars are an effective platform for policy makers, planners and administrators involved in the implementation of NWSSP to review the importance of an Environmental Management System.

10. BUDGET ESTIMATES FOR ESMF IMPLEMENTATION

Funding for implementation of the ESMF should be included when costing the sub-projects by contractors that will be involved in sub-projects civil works. During the preparation of this ESMF, many of the specific details of the investment works were not yet fully defined, therefore costing the implementation was very difficult and the figures might vary considerably. The indicative cost for preparing regional ESMPs is N\$2 910 000.00 and each regional ESMP will give indicative budget to implement proposed measures and monitor implementation of the specific sub-projects. The indicative budget to implement this ESMF is N\$1 105 000.00 as shown in the table below. The total cost is N\$4 015 000.00. However, when developing ESMPs for sub-projects, the estimated costs of ESMP mitigation activities will be presented as shown in Table 9 below.

The table below shows the indicative budgets for implementing this ESMF:

Table 12: Indicative ESMF Implementation Budget

No.	Activity	Cost (N\$)
1	Environmental and Social Safeguard awareness and sensitization training sessions for project communities	N\$375 000.00
2	Capacity building for safeguard implementation for safeguard focal persons and other relevant project staff	N\$280 000.00
3	E&S screening activities at subproject level and preparation of sub-project ESMPs as and when required	N\$2 910 000.00
4	Environmental & social safeguard monitoring including bi-annual environmental audit and reporting to MET	N\$450 000.00
Total		N\$4 015 000.00

Table 13: Breakdown of sub project level costs for ESMF implementation

Project Activity	Anticipated Environmental and Social Impacts	Proposed Mitigation/Management Measure(s) and Objective of Mitigation/Management Measure(s)	Technical and Operational Requirements of Mitigation/Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation Plan and Institutional Responsibilities	Timing	Cost Estimates and Source of Funds	Comments
Pre-Construction (Planning/Design) Phase								
Construction Phase								
Operation and Maintenance Phase								
Decommissioning Phase								

CONCLUSION

The program has potential to bring several positive benefits to several communities across the country among improved potable water supply, livelihood, healthy and economic boost. Adverse impacts identified in the SESA report can be minimized, avoided and mitigate if the management options proposed in this ESMF are correctly implemented assisted by enough monitoring of the implementation process. To improve the management of impacts at sub-project level and local level, Environmental and Social Management Plans at regional should be conducted. This aligns with a recommendation from Ministry of Environment and Tourism.

The anticipated adverse impacts include vegetation loss that lead to various habit losses and associated benefits of vegetation. Other impacts include land disturbances, generation of waste during construction, effects on wildlife, acquisition of communal land, resource use. However, the benefits offset the adverse impacts especially when the proposed mitigation and management options in this report are implemented.

Communities have high expectations from the project as they see it as their opportunity to have a reliable water supply. Implementing agencies need institutional capacity strengthening for them to successfully implement the program and for them to implement management options recommended in this report. Line ministries like the Ministry of Environment and Tourism, Ministry of Health and Social Service, Ministry of Land Reform and Ministry of Urban and Rural Development can provide adequate assistance. There is need to appoint the consultant that would ensure that contractors are complying to the needs of this ESMF and other management plans coming after this report, the regional ESMPs.

Based on the findings of the SESA and this ESMF reports, it is recommended that:

- Regional Environmental and Social Management Plans are prepared and submitted to MET and competent authority for approval to satisfy the country's requirements before implementation;
- The ESMPs should address adequate mitigation and management options to reduce, avoid, mitigate or compensate adverse impacts
- Implementing agencies should train staff that would be responsible for the implementation of the ESMF and other management plans or immediately appointed consultant whilst gradually train their staff to improve longevity and sustainability of the program;
- Institutional capacity strengthening of implementing agencies and key institutions involved is required and very necessary;
- Timely monitoring of activities is needed and implementing agencies should have capacity to monitor these activities. Strong reporting mechanisms are required and should be set prior implementation; and
- Grievances Redress Mechanism should ensure that affected and grieved parties are properly addressed, the Grievance Redress Panel should be set up starting from local to national level. At community, constituency and regional levels, the GRM will strive not to develop parallel structures but make use of existing and locally recognized grievance redress systems.

ANNEX 1

Screening of sub-projects

Listing of activities and prohibition in respect of listed activities that require environmental assessment in Namibia (Environmental Management Act No. 7 of 2007)

Section 27 (2) Activities listed, under subsection (1), may include activities in respect of any of the following areas -

- (a) Land use and transformation;
- (b) Water use and disposal;
- (c) Resource removal, including natural living resources;
- (d) Resource renewal;
- (e) Agricultural processes;
- (f) Industrial processes;
- (g) Transportation;
- (h) Energy generation and distribution;
- (i) Waste and sewage disposal; chemical treatment;
- (j) Recreation; and
- (k) Any other area which the Minister considers necessary for the purpose of listing.

1. Environmental Clearance Certificate Form Application for Sub-projects.

REPUBLIC OF NAMIBIA

ENVIRONMENTAL MANAGEMENT ACT, 2007

(SECTION 32)

APPLICATION FOR ENVIRONMENTAL CLEARANCE CERTIFICATE

Revenue
stamp or
revenue
franking
machine
impression

PART A: DETAILS OF APPLICANT

- 1.Name:
2. Business Registration/Identity No:
- 3.Correspondence Address:
- 4.Name of Contact Person:
- 5.Position of Contact Person:
- 6.Telephone No:
- 8.E-mail Address:

PART B: SCOPE OF THE ENVIRONMENTAL CLEARANCE CERTIFICATE

- 1.The environmental clearance certificate is for:

**2. Details of the activity(s) covered by the environmental clearance certificate:
Closure of public open space and construction of residential units**

Note: Please attach plans to show the location and scope of the designated activity(s), and use additional sheets if necessary:

Title of Activity:

Nature of Activity:

Location of Activity:

Scale and Scope of Activity:

PART C: DECLARATION BY APPLICANT

I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief. I understand the environmental clearance certificate may be suspended, amended or cancelled if any information given above is false, misleading, wrong or incomplete.

Signature of Applicant

Full name in Block Letters

Position

on behalf of

Date

SCREENING QUESTIONNAIRE FOR SUB- PROJECTS

SCREENING QUESTIONNAIRE FOR PROJECTS



MINISTRY OF ENVIRONMENT & TOURISM DIRECTORATE OF ENVIRONMENTAL AFFAIRS

The completion of this questionnaire is a requirement under section 20 (1) of the Environmental Management Act

PURPOSE OF THIS QUESTIONNAIRE

The information you provide in this questionnaire will provide the Government to gain a clear understanding of your proposed project.

Projects that are likely to have a significant impact on the environment may not go ahead unless an Environmental Assessment (EA) has been done first, and only if EA can demonstrate that it is possible and feasible to keep impacts to acceptable levels.

Nearly all projects have some impact, but some projects are so small and impacts so low, that it may not be necessary to do a full EA. On the other hand, some projects could have serious environmental impacts, and it is essential that we identify these before the projects are implemented. If an EA is not done, we may only discover the impacts after the project implementation. By then, it is usually too late to avoid the impacts. If this happens the developer might have to spend a lot of money fixing the problem or even abandon the project altogether.

The information you provide in this questionnaire can help us to make the right decision of whether an EA should be done or not, the level of detail of the EA, the main issues which should be investigated, and so on. This guides all of us in our future planning and could save money and time in the long run.

The developer must complete this questionnaire accurately, honestly and comprehensively. The Environmental Commissioner and the relevant ministry will jointly decide on whether the EA is necessary or not. Their decision based on whether the project is likely to have significant effect on the environment by virtue of its nature, size or location.

Your cooperation is essential

GENERAL INFORMATION

Name of the proposed project -----

Location of the proposed project -----

Name of the Proponent/ Developer -----

Contact Person -----

Address of the Proponent/ Developer -----

Tel: -----Fax: -----

NB: As stated on page 2 above, the information to be provided in this questionnaire will assist the Ministry to determine whether an EA is required or not. Therefore, such information must be as truthful and reliable as possible. It must be noted here that the proponent is accountable for any wrong and misleading information that may be provided in this questionnaire. From this perspective, any person who completes this questionnaire **must read and sign the declaratory statement provided on page 14** of this questionnaire.

PROJECT SUMMARY

Briefly describe the nature and purpose of the project. Provide key information on the projects main activities, industrial processes, raw materials, infrastructure, lifespan and closure. If available, attach a map, ground plan and a copy of pre-feasibility or feasibility reports

Guideline for completing the questionnaire

The following questions are designed to aid the screening processes. Questions are arranged in two sections with a series of sub headings.

Project information

Page No.

(Construction, operation & decommissioning)

- General -----
- Atmospheric environment -----
- Aquatic environment -----
- Waste Generation -----
- Hazards -----
- Social -----

The questions must be answered with a simple yes, or no? (if you do not know the answer). A space for any additional comments is also provided.

The person completing the questionnaire should base his/her answers on existing information. If the answers to some questions are not available or uncertain, please state this in the details/ comments space.

Environmental information

- Legislative protection -----
- General characteristics -----
- Aquatic features -----
- Landscape & visual characteristics -----
- Atmospheric conditions -----
- Historic and cultural features -----
- Seismicity -----
- Zoology -----
- Land Use -----
- Declaration -----

Project Information

General		Details/ Comments
<ul style="list-style-type: none"> • a license/ permit required for the activity? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • the project an extension of an existing activity? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ill the project involve land disturbance, site clearance, earthmoving, or underground workings? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ill the project involve re-zoning? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ill the project involve the transport, storage, handling, production or use of toxic or hazardous substances? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ill the project require the construction of facilities to bring power or water to the project? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ill new roads be constructed? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ill construction or operation of the project generate large volumes of traffic? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----

General (Continued)		Details/ Comments
Will explosives be used?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	-----
Will the project have large water requirements? (If yes, where will water be obtained?)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	-----
Will the project have significant energy requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	-----
Atmospheric Environment	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	-----
Will the project generate emissions to the air from fuel combustion, production processes or other sources?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	-----
Will the project involve disposal of waste through burning in the open air (e.g. slash material and construction debris)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	-----
Will the project give smell/ odour emissions?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	-----
Aquatic & Marine Environment	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	-----
Will the project require disposal of large volumes of sewage or industrial effluent?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	-----
----- -----	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	-----

Aquatic and Marine Environment (continued)		Details/ Comments
Will the project require channel dredging or straightening or crossing of streams	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Will the project require the construction of piers or seawalls?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Will the project require the construction of offshore structures?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Waste Generation Will the project generate overburden or mine process wastes?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Will the project generate domestic or industrial wastes?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Could the project contaminate soil or groundwater?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Noise	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Will the project cause noise, vibration, light, heat or other radiation into the environment?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
-----	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
-----	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----

Hazards		Details/ Comments
Will the project involve regular use of substances for pest or weed control?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Social Will project involve employment of large numbers of workers?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Will the project provide housing and other facilities for the workforce?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Any Other project information	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?

General characteristics		Details/ Comments
Is the project located in or near a game reserve?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Is the project located in an area with unique landscape or scenery?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Is the project located in an area with unique wildlife?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Is the project located in an area with unique Plant life?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Are there any archaeological features nearby?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Are there any national monuments nearby?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Is the area already experiencing pollution or other environmental damage?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Will the project be located in or close to wetlands, rivers or any other waterbody (including groundwater)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
.....	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?

Aquatic Features	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	Details/ Comments
Will the project adversely affect the quality, flow or volume or surface or groundwater?	
Visual Characteristics	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Will the project be visible to the public?		
Erosion	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Is the project likely to cause soil erosion?		
Ecology	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Will the project result in loss or disturbance of valuable habitats or ecosystems?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Will the project disturb wildlife migration, feeding or breeding?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Will the project cause the introduction of alien (exotic) plants or animals (excluding livestock)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?
Will the project significantly increase the risk of veldfires?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?

Land Use		Details/ Comments
Will the project be located in a densely populated area or in the vicinity of residential property or other sensitive land uses (e.g. schools, hospitals, community facilities)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Will the project be located on land of high agricultural value?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Will the project be located in an area of recreational/ tourist importance?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Land & Property		
Will the project require any people to be moved or resettled?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Will the project require any people to be removed or resettled?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Will the project attract a large number of people into the area?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Will the project result in demolition of structures or occupation of homes, gardens, businesses?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
Will the existing population be physically divided as a result of a project?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----

Wider Consideration		Details/ Comments
<ul style="list-style-type: none"> • as there been public concern about the project? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ill the project have an impact on the neighbouring country? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • as the public been consulted yet about the project? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<p>Other Environmental information</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ----- 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ----- 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ----- 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ----- 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ----- 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ----- 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ----- 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ----- 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ----- 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----
<ul style="list-style-type: none"> • ----- 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ?	----- -----

Declaration

I (name in full) understands that the information that I have provided in this questionnaire will be used by the Ministry of Environment and Tourism to decide whether my project requires an EA or not. I also understand that any wrong information provided in this questionnaire will mislead the decision of the Ministry on my project. Should this be the case, I am well aware that the Ministry will hold me accountable for my wrong and misleading information. Therefore, I honestly declare that the information that I have provided in this questionnaire is to the best of my ability true and reliable.

Signature:Date:

Proposed template for Environmental Baseline Information screening of Sub-project Site

CATEGORY OF BASELINE INFORMATION
<ul style="list-style-type: none"> • Geographical Location • Name of small town/Rural growth Centre • Location of the proposed project
<ul style="list-style-type: none"> • Land Resources • Topography • Geology • Soils • Land use
<ul style="list-style-type: none"> • Water Resources • Surface water (quality and quantity) • Ground water (quality and quantity)
<ul style="list-style-type: none"> • Biological Resources • Flora (include threatened/endangered/endemic species). • Fauna (include threatened/endangered/endemic species). • Fragile ecosystems (national parks, forest reserves).
<ul style="list-style-type: none"> • Climate • Temperature • Rainfall

Proposed template for Screening Impacts of sub-project during Construction

Screening Criteria for impacts during sub-project planning and design

No	Areas of Impact Will the project affect the following environmentally sensitive areas	Impact Evaluation					Potential Mitigation Measures
		High	Medium	Low	Non	Unknown	
1.1	National parks and game reserve						
1.2	Wetlands						
1.3	Productive traditional agricultural /grazing lands						
1.5	Areas with rare or endangered flora or fauna						
1.6	Areas with outstanding scenery/tourist site						
1.7	Within steep slopes/mountains						
1.8	Dry tropical forests						
1.9	Along lakes , along beaches, riverine						
1.10	Near industrial activities						
1.11	Near human settlements						
1.12	Near cultural heritage Sites						
1.13	Within prime ground water recharge area						
1.14	Within prime surface run off.						

Screening Criteria for impacts during sub-project implementation and operation

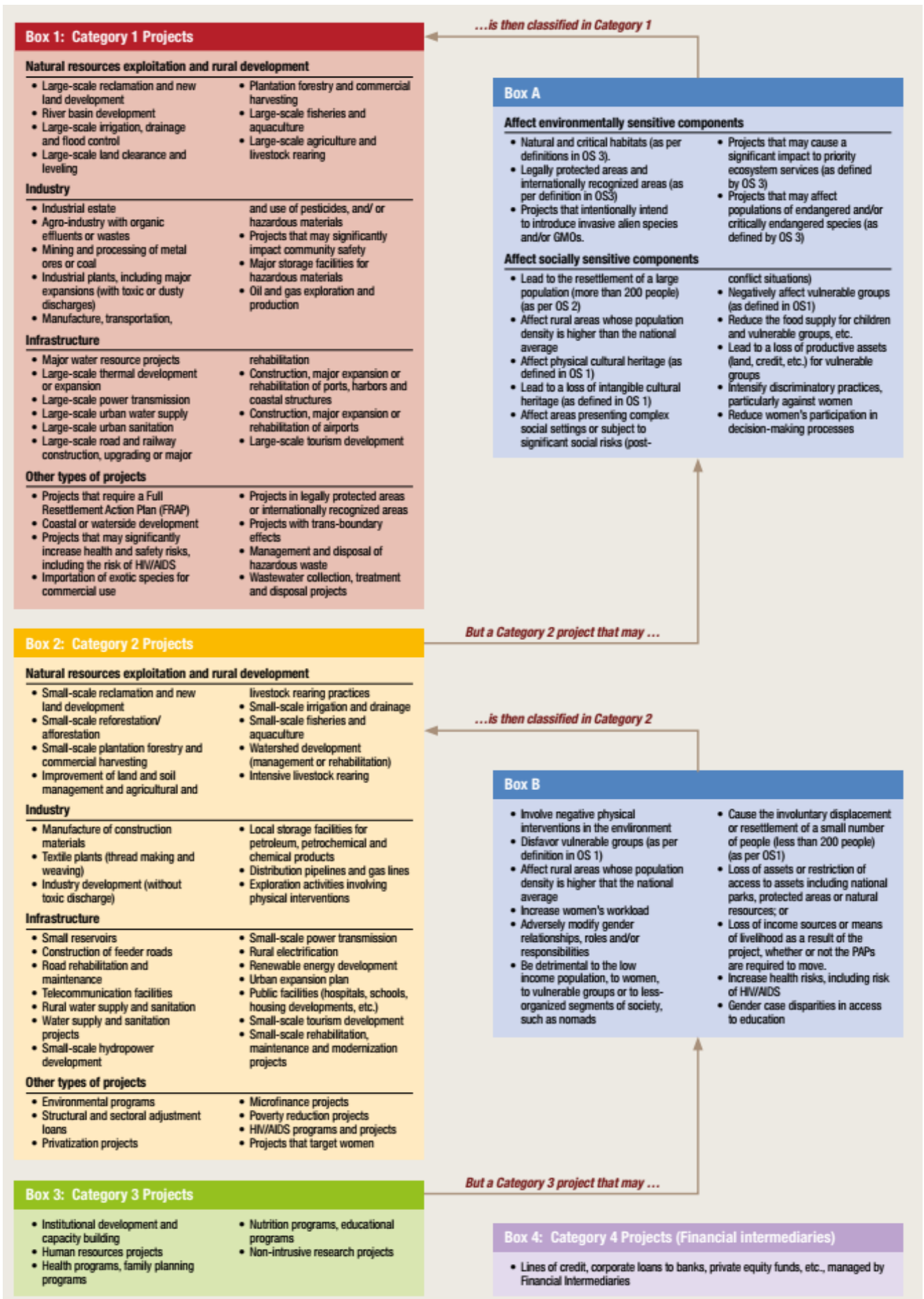
No	Areas of Impact Will the implementation /operation generate the following externalities/impacts?	Impact Evaluation					Potential Mitigation Measures
		High	Medium	Low	Non	Unknown	
2.1	Deforestation						
2.2	Soil erosion and siltation						
2.3	Siltation of watercourses, Dams						
2.4	Environmental degradation arising from mining of construction materials						
2.5	Damage of wildlife species and habitat Increased exposure to agro-chemical pollutants						
2.7	Hazardous wastes, Asbestos, PCB's						
2.8	Nuisance - smell or Noise						
2.9	Reduced water quality						
2.10	Increase in costs of water treatment						
2.11	Soil contamination						
2.12	Loss of soil fertility						
2.13	Salinization or alkalinisation of soils						
2.14	Reduced flow and availability of water						
2.15	Long term depletion of water resource						
2.16	Incidence of flooding						

2.17	Changes in migration patterns of animals						
2.18	Introduce alien plants and animals' diseases						
2.19	Increased incidence of plant and animal						

Template for Screening Social and Economic Impacts of Sub-Projects

No	Areas of Impact Will the implementation/operation of the project generate the following impacts	Impact Evaluation					Potential Mitigation Measures
		High	Medium	Low	Non	Unknown	
3.1	Loss of land/land acquisition for human settlement, farming, grazing						
3.2	Loss of assets, property, houses, agricultural produce						
3.3	Loss of livelihood						
3.4	Require a PRP						
3.5	Loss of cultural sites, graveyards, monuments						
3.6	Disruption of social fabric						
3.7	Interference in marriages for local people by workers						
3.8	Spread of STIs and HIV and AIDS, due to, migrant workers						
3.9	Increased incidence of communicable diseases						
3.10	Health hazards to workers and communities						
3.11	Changes in human settlement patterns						
3.12	Conflicts over use of natural resources e.g. water, land, etc						
3.13	Conflicts on land ownership						
3.14	Disruption of important pathways, roads						
3.15	Increased population influx						
3.16	Loss of cultural identity						
3.17	Loss of income generating capacity						

AfDB Initial Environmental and Social Screening Checklist



ANNEX 2

ESIA AND ESMP STRUCTURES

Contents of a Scoping Report in NAMIBIA (Environmental Management Act No. 7 of 2007)

A scoping report must include -

- (a) The curriculum vitae of the EAP who prepared the report;
- (b) A description of the proposed activity;
- (c) A description of the site on which the activity is to be undertaken and the location of the activity on the site;
- (d) A description of the environment that may be affected by the proposed activity and the manner in which the geographical, physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed listed activity;
- (e) An identification of laws and guidelines that have been considered in the preparation of the scoping report;
- (f) Details of the public consultation process conducted in terms of regulation 7(1) in connection with the application, including -
 - (i) The steps that were taken to notify potentially interested and affected parties of the proposed application;
 - (ii) Proof that notice boards, advertisements and notices notifying potentially interested and affected parties of the proposed application have been displayed, placed or given;
 - (iii) A list of all persons, organisations and organs of state that were registered in terms of regulation 22 as interested and affected parties in relation to the application; and
 - (iv) a summary of the issues raised by interested and affected parties, the date of receipt of and the response of the EAP to those issues;
- (g) A description of the need and desirability of the proposed listed activity and any identified alternatives to the proposed activity that are feasible and reasonable, including the advantages and disadvantages that the proposed activity or alternatives have on the environment and on the community that may be affected by the activity;
- (h) A description and assessment of the significance of any significant effects, including cumulative effects, that may occur as a result of the undertaking of the activity or identified alternatives or as a result of any construction, erection or decommissioning associated with the undertaking of the proposed listed activity;
 - (i) Terms of reference for the detailed assessment; and
 - (j) A draft management plan, which includes -

(aa) information on any proposed management, mitigation, protection or remedial measures to be undertaken to address the effects on the environment that have been identified including objectives in respect of the rehabilitation of the environment and closure;

(bb) as far as is reasonably practicable, measures to rehabilitate the environment affected by the undertaking of the activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and

(cc) a description of the manner in which the applicant intends to modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation remedy the cause of pollution or degradation and migration of pollutants.

CONTENTS OF AN ESIA REPORT in NAMIBIA (EIA Regulations of 2012)

An assessment report must contain all information that is necessary for the Environmental Commissioner to consider and to decide on the application, and must include -

- (a) The curriculum vitae of the EAP who compiled the report;
- (b) A detailed description of the proposed listed activity;
- (c) A description of the environment that may be affected by the activity and the manner in which the physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity;
- (d) A description of the need and desirability of the proposed listed activity and identified potential alternatives to the proposed listed activity, including advantages and disadvantages that the proposed activity or alternatives may have on the environment and the community that may be affected by the activity;
- (e) An indication of the methodology used in determining the significance of potential effects;
- (f) A description and comparative assessment of all alternatives identified during the assessment process;
- (g) A description of all environmental issues that were identified during the assessment process, an assessment of the significance of each issue and an indication of the extent to which the issue could be addressed by the adoption of mitigation measures;
- (h) An assessment of each identified potentially significant effect, including -
 - (aa) cumulative effects;
 - (bb) the nature of the effects;
 - (cc) the extent and duration of the effects;
 - (dd) the probability of the effects occurring;
 - (ee) the degree to which the effects can be reversed;
 - (ff) the degree to which the effects may cause irreplaceable loss of resources; and
 - (gg) the degree to which the effects can be mitigated;
- (i) A description of any assumptions, uncertainties and gaps in knowledge;
- (j) An opinion as to whether the proposed listed activity must or may not be authorised, and if the opinion is that it must be authorised, any conditions that must be made in respect of that authorisation; and
- (k) a non-technical summary of the information.

ESIA Report Content (AfDB Structure)

Project Title:	Project Number:
Country:	Department:
Division:	Project Category:
Executive Summary:	
Introduction:	
Scoping:	
Policy, Legal and Administrative Framework:	
Project Definition:	
Analysis of Alternatives Considered:	
Project Baseline:	
Evaluation of the Environmental and Social Impacts and their Significance	
Expected Residual Effects:	
Summary of Public Consultations and the Opinions Expressed:	
ESMP, including Management Measures, Actions, Roles and Responsibilities, Timeframes, Monitoring and Cost of Implementation: (See also GN on ESMPs).	
Annexes:	

Contents of the ESMP Report (AfDB Structure)

Project Title:
Country:
Division:

Project Number:
Department:
Project Category:

Summary:

Introduction, Including ESMP Purpose, Objectives and Methodology.

Project Description

Results of Environmental and Social Impact Assessment (Environmental and Social Risks or Impacts Identified):

Description of Environmental and Social Management Measures for each Environmental and Social Risk or Impact Identified:

Proposed Management Measure and its Objective:

Technical and Operational Requirements of Management Measure:

Monitoring/Reporting

Measures should be broken down into– planning/ design, construction, operation/ maintenance and decommissioning phases

Implementation Plan and Institutional Responsibilities

Contractor Responsibilities

Timeframe and Costs

Consultation

Overall Reporting and Supervision Arrangements

Annexes:

Project Activity	Anticipated Environmental & Social Impacts	Proposed Management Measure(s) and Objective of Management Measure(s)	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation Plan and Institutional Responsibilities	Timing	Cost Estimates	Consultation	Comments
Pre-Construction (Planning/Design) Phase									
Construction Phase									
Operation and Maintenance Phase									
Decommissioning Phase									

Format of Report: Environmental and Social Management Framework (ESMF)

Project Title:	Project Number:
Country:	Department:
Division:	Project Category:

Summary

Introduction, Including ESMF Purpose, Objectives and Methodology

Description of Program Operation:

- (a) Components to Finance Subprojects;
- (b) Anticipated Types of Subproject;
- (c) Types of Subproject to be Excluded from Financing;
- (d) Project Coordination and Implementation Arrangements; and
- (e) Annual Reporting and Performance Review.

Environmental and Social Baseline (National and Regional Level):

- (a) Required Information; and
- (b) Studies to be Conducted and Time Frames.

Procedures for Environmental and Social Impact Assessment of Subprojects

Measures to Develop Appropriate Environmental and Social Management Plans (ESMPs) for Subprojects:

- (a) Identification of Mitigation Measures;
- (b) Objectives of each Mitigation Measure;
- (c) Each Mitigation Measure's Implementation Requirements and Associated Responsibilities;
- (d) Each Mitigation Measure's Technical and Operational Requirements; and
- (e) Each Mitigation Measure's Timing.

Monitoring and Subproject Supervision:

- (a) Requirements for Monitoring and Subproject Supervision;
- (b) Roles, Responsibilities and Supervision Plan; and
- (c) Corrective Action Triggers and Performance Indicators.

Reporting Arrangements:

- (a) Scope;
- (b) Timing; and
- (c) Responsibilities.

Requirements for Training and Capacity Building

Implementation Arrangements (Including Consultation) and Institutional Responsibilities

Cost Estimate and Sources of Funds

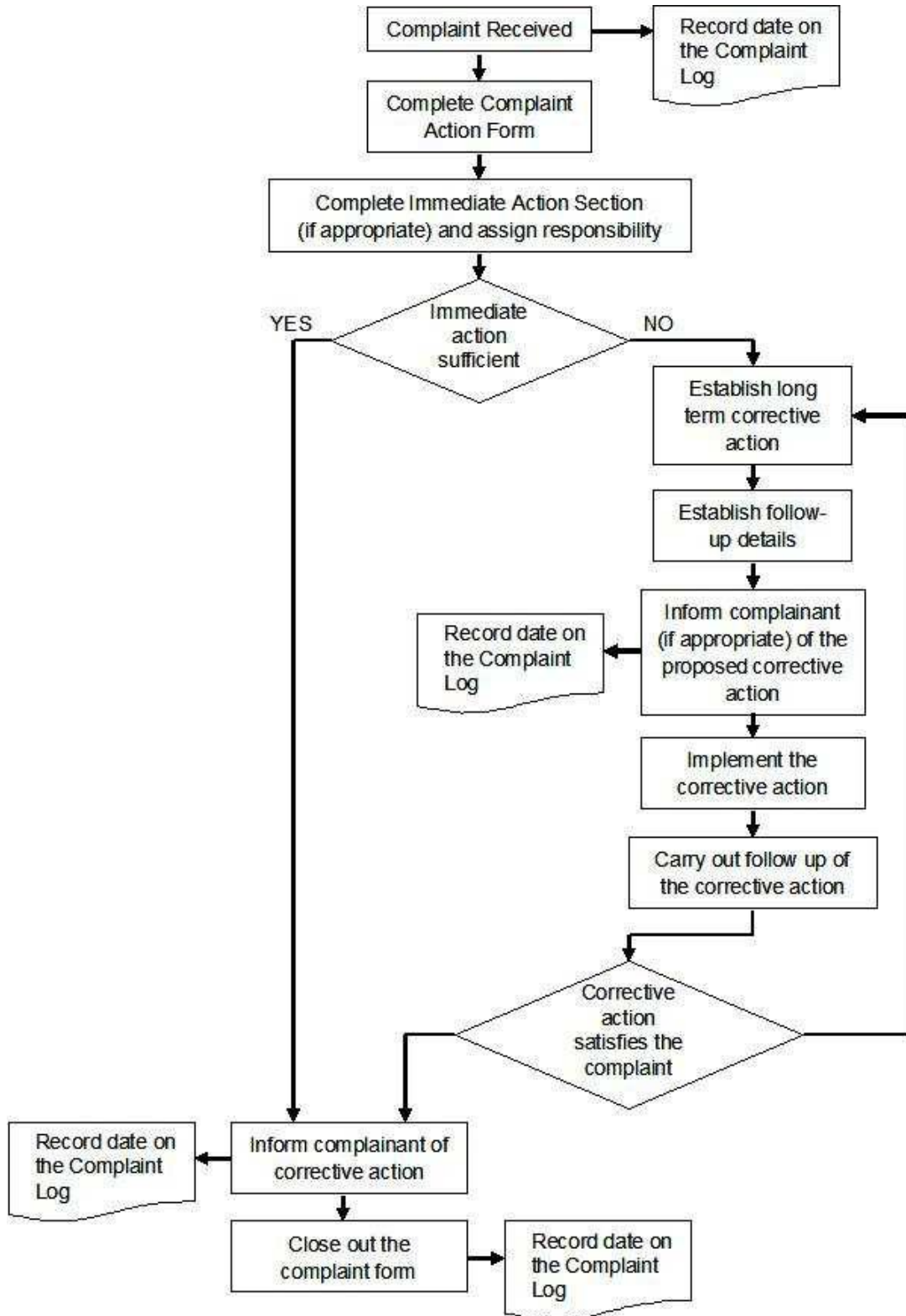
Schedule

Annexes:

Project Activity	Anticipated Environmental & Social Impacts	Proposed Management Measure(s) and Objective of Management Measure(s)	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation Plan and Institutional Responsibilities	Timing	Cost Estimates	Consultation	Comments
Pre-Construction (Planning/Design) Phase									
Construction Phase									
Operation and Maintenance Phase									
Decommissioning Phase									

ANNEX 3

Flowchart of Complaints/Grievance Procedure:



Sample Grievance Reporting Form

Grievance Reference Number (to be filled in by [name]):			
Contact Details	Name:		
	Address:		
	Tel:		
	e-mail:		
How would you prefer to be contacted? Please tick box	By post	By phone	By e-mail
Name and the identification information (from identity card).			
Details of your grievance. Please describe the problems, how it happened, when, where and how many times, as relevant?			
What is your suggested resolution for the grievance?			
How to submit this form to GRP	By Post to: [tbc]		
	By hand: please drop this form at [tbc]		
	By e-mail: Please email your grievance, suggested resolution and preferred contact details to: [tbc]		
Signature		Date	

ANNEX 4

List of consulted documents, people, reports

- African Development Bank Group. 2013. Safeguards and Sustainability Series: African Development Bank Group's Integrated Safeguards System — Policy statement and operational safeguards. Volume 1— Issue 1. Tunis, Tunisia.
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- Republic of Namibia. 2007. Environmental Management Act No. 7 of 2007. Ministry of Environment and Tourism. Windhoek, Namibia.
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All material used for public consultation and disclosure are attached in the SESA Report. Please refer to SESA Report for a file in the Annexes.

ANNEX 5

List of Contact People for this ESMF

No	Organization	Name	Position	Email address
1	Ministry of Agriculture, Water and Forestry	Mr. Victor Slinger	D. Director for Infrastructure Development	Victor.Slinger@mawf.gov.na
2	Ministry of Agriculture, Water and Forestry	Ms. Maria Amakali	Director for Water Resources Management	Maria.Amakali@mwaf.gov.na
3	City of Windhoek	Mr. David Adams	Acting Chief Engineer for Planning & Infrastructure Development	David.Adams@windhoekcc.org.na
4	NamWater	Mr. Onni-Ndangi lithete	Head: Legal Services	litheteO@namwater.com.na
5	NamWater	Mr. N P du Plessis	Environmental Manager	PlessisN@namwater.com.na
6	Consultant	Mr. Luckson Zvobgo	Environmental Assessment Practitioner (Water Management)	zvobgoluckson@gmail.com
7	Consultant	Mr. Tendai E. Kasinganeti	Environmental Assessment Practitioner (GIS)	ekasinganetie@gmail.com
8	Consultant	Ms. Martha L. Hangula	Environmental Assessment Practitioner	mafuta20@gmail.com
9	Consultant	Ms. Fredrika N. Shagama	Environmental Assessment Practitioner	fshagama@gmail.com
10	Consultant	Ms. Kornelia N. lipinge	Environmental and Social Researcher	kornelia.iipinge@gmail.com
11	African Development Bank	Ms. Muja Annah Rutebuka	Principal Social Safeguards Specialist	A.RUTEBUKA@afdb.org