The United Republic of Tanzania
Ministry of Water

Water Sector Development Programme

Environmental and Social Management Framework
(ESMF)

Revised version

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ABBREVIATIONS

ARAP	Abbreviated Resettlement Action Plan
BWOs	Basin Water Offices
CBWSOs	Community-based Water Supply Organizations
CITES	Convention on International Trade in Endangered Species
DAWASA	Dar es Salaam Water and Sewerage Authority
DEMC	District Environmental Management Committee
DEMO	District Environmental Management Officer
DIA	Direct Influence Area
DPs	Development Partners
EISs	Environmental Impact Statements
EMA	Environment Management Act
EMC	Environmental Management Committee
EMO	Environmental Management Officer
ESC	Environmental Safeguard Coordinator
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMR	Environmental and Social Monitoring Report
ESSF	Environmental and Social Screening Form
EWURA	Energy and Water Utilities Regulatory Authority
GoT	Government of Tanzania
IAs	Implementing Agencies
IIA	Indirect Influence Area
LGA	Local Government Authority
MoW	Ministry of Water
NAWAPO	National Water Policy 2002
NEMA	National Environmental Management Act
NEMC	National Environment Management Council
NEP	National Environment Policy
NWSDS	National Water Sector Development Strategy
PAP	Project Affectation People
PCDU	Programme Coordination and Delivery Unit
PCR	Physical and Cultural Resources
PESIA	Preliminary Environmental Impact Assessment
PO-RALG	President's Office – Regional Administration and Local Government
RAP	Resettlement Action Plan
RMF	Resettlement Management Framework
RUWASA	Rural Water Supply and Sanitation Agency
RWSSP	Rural Water Supply and Sanitation Programme
RWSTs	Regional Water and Sanitation Teams
SRWSP	Sustainable Rural Water Supply Project
SS	Sewage System
SSC	Social Safeguard Coordinator
SWAP	Sector-Wide Approach to Planning
TSPs	Technical Service Providers

UWSAs	Urban Water and Sewerage Authorities
VGP	Vulnerable Group Plan
WATSANs	Water and Sanitation Committees
WRMP	Water Resources Management Programme
WSDP	Water Sector Development Programme
WSS	Water Supply System
WSSAs	Water Supply and Sanitation Authorities
WSSP	Water Sector Support Programme

EXECUTIVE SUMMARY

The overall objective of the **Environmental and Social Management Framework (ESMF)** is to guide the Ministry of Water (MoW) and the Implementing Agencies (IAs) in the environmental and social management during implementation of the Programme, by defining environmental and social concepts, methodologies, tools, and procedures that should be applied during the "project cycle" in order to comply with the National Laws and the World Bank's safeguard policies.

The ESMF will be applied by the Environmental and Social Safeguard Section of the Ministry of Water and by the responsible IAs. The document is organized into seven (7) chapters and Annexes to support environmental and social management during implementation of the Programme. The first four chapters include secondary information, which is the base of the environmental and social management; and the others 3 chapters include specific information about the concepts, methodologies, tools, procedures and responsibilities for the environmental and social management.

The "Environmental and Social Concepts, Methodologies and Tools" chapter presents the key environmental and social management concepts, methodologies and tools to be applied by the MoW and the IAs in the water supply and sanitation projects during the project cycle. The Framework includes a methodology to define the environmental and social risk levels of the projects' financed by the WSDP. In regards of the tools, three specific templates or forms have been designed for internal use by the IAs, through the Environmental Safeguard Coordinator or responsible person in order to ensure incorporation of the environmental and social variables throughout the project cycle, and systematize the environmental and social management information for process record-keeping purposes. The management tools designed for the environmental and social management are: i) Environmental and Social Screening Form (ESSF); ii) Environmental and Social Monitoring Report (ESMR); and iii) the Environmental and Social Final Report (ESFR).

The chapter for "Environmental and Social Management" describes the basis of legal and institutional framework; and Bank's safeguard policies as well as the main environmental and social management activities, procedures and responsibilities during the "project cycle". This chapter also include: a) the environmental and social project cycle; b) the role and responsibilities for IAs on the environmental and social management, and c) the internal procedures at the IAs level for the environmental and social management.

Finally, the last chapter "Assessment process to comply with the environmental national laws" summarizes the national environmental and social assessment process required for compliance with National Laws and Regulations.

CHAPTER ONE

1. INTRODUCTION

1.1 Background

The Government of Tanzania (GoT), in collaboration with Development Partners (DPs), has been implementing the **Water Sector Development Programme (WSDP 2006-2025)** since 2006 which follow sector wide approach of twenty years of implementation. This Programme focuses on prioritized water resources management and service delivery in the water and sanitation sector. Ministry of Water (MoW) is the implementing institution on behalf of the Government.

Ensuring the adequate environmental and social management during the WSDP implementation, and to comply with National Environmental Laws and the World Bank's safeguard policies, an **Environmental and Social Management Framework (ESMF)** and Resettlement Policy Framework (RPF) were developed by the MoW as part of project preparation in 2006.

These instruments have been applied during phase I of the Programme (WSDP I), at the beginning of phase II of the Programme (WSDP II), the Ministry decided to review, update and simplify these instruments, considering lessons learned in order to improve environmental and social management during the Programme implementation.

In regard of the environmental and social assessment safeguard, this updated version of the **ESMF** has been prepared by considering the Tanzanian's environmental laws and the World Bank guidelines of the Environmental Assessment Policy (OP/BP 4.01).

1.2 Objective

The overall objective of the ESMF is to guide the Ministry and the Implementing Agencies (IAs) in the environmental and social management issues during implementation of the Programme, by defining environmental and social concepts, methodologies, tools, and procedures to be applied during the "project cycle" in order to comply with the National Laws and the World Bank's safeguard policies.

The specific objectives of the ESMF are to:

i) Present the legal and institutional framework related to the environmental and social context in the water supply and sanitation as well as water resources management in the sector that the programme supports;

ii) Present the main potential environmental and social impacts on the water supply, sanitation and water resources projects, including the main aspects related to the adaptation of climate change in the water and sanitation projects;

iii) Introduce the environmental and social management process into the water and sanitation projects (parameters, methodologies, tools and procedures), to ensure the adequate environmental and social management throughout the project cycle and comply with national laws and the World Bank safeguard policies; and

iv) Include internal procedures that IAs should take into account during the project cycle, as well as the procedures to ensure compliance with National Laws with a view to obtaining the respective Environmental Certification.

1.3 Scope

This instrument will be applied by the Environmental and Social Management Safeguard Section of the Ministry and the responsible personnel of the environmental and social management in the IAs or the Environmental Management Units.

The document is organised into seven (7) chapters: **Chapter One** provides the background information on WSDP, objectives and scope of the ESMF; **Chapter Two** provides information about WSDP and its components; **Chapter Three** provides the relevant Tanzanian environmental policies and legislations applicable to WSDP, international agreements, institutional framework of WSDP and information about the World Bank's environmental and social safeguard policies; **Chapter Four** describes the environmental and social impact likely to be generated in the water supply and sanitation projects in the development phases (planning and design, construction, operation and maintenance, and the decommissioning phases). This chapter also includes relevant information about climate change adaptation in the water sector. **Chapter Five** presents definitions, methodologies and tools for environmental and social management. **Chapter Six** gives the environmental and social management procedures and responsibilities along the project cycle, including a flowchart to identify the main environmental and social management checkpoints during the project cycle. **Chapter Seven** presents the environmental and social assessment process in order to comply with National legislations, including the steps of the assessment process and its flowchart.

This updated version of the ESMF includes additional Annexes to support environmental and social management during implementation of the Programme, especially with regard to the main legislations, World Bank safeguard policies, environmental and social management safeguards templates, and different forms in the EIA and EA amended Regulations of 2018.

CHAPTER TWO

2. PROGRAMME AND PROJECTS DESCRIPTION

2.1 Water Sector Development Programme (WSDP) II

The second phase of the programme (WSDP II) began in July 2016 with the intention to operate for five years in all Local Government Authorities, Sector Ministries, Basin Water Boards and Water Supply and Sanitation Authorities in the country. The Programme Development Objective which is strengthening sector institutional for integrated water resources management and improve water supply and sanitation services has not changed.

The WSDP II is implemented in Water Resources Management to ensure availability of water for socio-economic development and environmental sustainability, in Rural Water Supply to provide improved quality and quantity of drinking water for the rural population; in Urban Water Supply and Sanitation to improve and sustain quality and quantity of water supply and sanitation services for urban populations; in Sanitation and Hygiene to provide access to improved sanitation and hygiene facilities to the population in Rural and Urban settings and in Programme Management and Delivery Support to provide facilitative services that support all other components to deliver planned outputs and expected outcomes. The Mid Term Review of WSDP II triggered the Dialogue Re-enhanced Mechanism into four main themes as follows;-

Theme 1: Financing & Planning, Institutional Capacity Building and Performance Monitoring; it has the following roles:

a) Discuss and agree strategic sector and programme issues – strategies, policy options and choices and implications, etc;
b) Identify thematic bottlenecks, suggest solutions and agree on process and responsibilities to overcome these and/or to speed up implementation;
c) Discuss future sub sector priorities and provide steer on priorities and sequences of interventions;

Theme 2: *Water Resources Management;* it has the following roles

a) Discuss new Water Resources development projects and assess relevance, impact and consequences
b) Discuss and jointly agree solution to emerging water resources issues Discuss programmes, projects and initiatives with regard to their compliance with agreed priorities and plans
c) Review financing mechanisms and allocations for water resources, budgets, expenditure and audits
d) Agree future priorities and resources allocation for future water resources projects and activities

Theme 3: *Water Supply and Sanitation Services Delivery (including Urban and Rural Water Supply);* it has the following roles

a) Monitor performance of rural and urban water services delivery; review performance indicators (resources, output, outcome and impact indicators)
b) Quality assure and approve performance and monitoring and evaluation systems
c) Develop and/or improve performance assessment frameworks for the projects and suggest actions for improvement
d) Review financing mechanisms and allocations per projects and suggest improvements, budget performance, expenditures, results and impacts

Theme 4: *Sanitation and Hygiene;* it has the following roles

a) Monitor and analyse the WSDP II progress and situation in the sanitation sub-sector with regard to coverage, impact and emerging challenges
b) Analyse hygiene practices and health impacts and suggest improved data collection
c) Evaluate lessons-learnt and seek consensus on appropriate approaches and models
d) Analyse and review the impact of HIV/AIDS and other cross cutting challenges on water sector development and promote HIV/AIDS mainstreaming strategies and plans

2.2Sustainable Rural Water Supply Program (SRWSP)

The proposed Sustainable Rural Water Supply and Sanitation Program (SRWSP) will support the Government in implementing the Water Sector Development Programme (WSDP II) and help achieve the targets under the program by focusing on one of its subsets consisting of rural water supply and sanitation services. The SRWSP specifically targets on rural water supply, sanitation and hygiene and program delivery support in a geographic area, which covers 17, Regions and 86 Districts. The selection based on the criteria of low access to water supply and sanitation, high stunting rates and high poverty rates.

The SRWSP is a hybrid operation that consists of two parts:
Part I comprise of a Program for Results (PforR), financing instrument which provides performance-based incentives to achieve results measured against disbursement-linked indicators (DLIs) that have been agreed with the GoT; and

Part II include Investment Project Financing (IPF, "Project") to support the GoT to achieve the SRWS Operation results.

2.3Water Sector Support Project (WSSP) II

The second phase of the Water Sector Support project (WSSP II) is a 5 year project started on July 2017. The project will contribute to the country's effort to address critical water dependent development challenges and deteriorating natural resources base. Building on results achieved under WSSP-I, the Project will continue supporting integrated climate resilient investment planning in the basins including institutional coordination and capacity building to plan and manage water resources and land use at a basin level, with the aim of achieving sustainable water management solutions to the broad set of water-dependent sectors and increase resilience and reduce water-related shocks to the economy and communities. The WSSP II will contribute to improve the knowledge base and management tools by modernizing system operations in critical basins. The Project will implement watershed management investments on sustainable land and water management practices in hotspot areas of Wami-Ruvu Basin towards reducing the water security challenges the basin and Dar es Salaam City is facing. In order for the WSSP II to address the mentioned areas and achieve its development objectives, the project will finance the following four components. Component 1: Integrated Water Resources Management; Component 2: Dar es Salaam water supply improvement; Component 3: Dar es Salaam Sanitation improvement; and Component 4: Project Management and Implementation Support.

CHAPTER THREE

3. LEGAL AND INSTITUTIONAL FRAMEWORKS AND WORLD BANK SAFEGUARD POLICIES

3.1 Legal Frameworks

A number of policies, instruments and Laws support environment and social impact assessment and implementation processes in Tanzania. The Environmental Management Act No. 20 of 2004 (EMA), the Environmental Impact Assessment and Audit amended Regulations, 2018 the National Environment Policy (1997), and the National Environmental Action Plan (2012-2017) are the key instruments that cover environmental and social management in all development sectors.

Apart from the National Environment Policy, there are a number of sectoral policies that consider Environmental Impact Assessment as one of the planning tools for facilitating and promoting sustainable development. These policies envisage that, by integrating environmental and social considerations in the decision-making process it is possible to avoid or minimize impacts associated with project implementation that may have negative effects on the environment and societies. The policies presented below are some of the relevant sectoral and cross-sectoral policies that require the undertaking of an ESIA study prior to commencement of project implementation. In addition, these policies provide directives on the management of the project in order to ensure minimum impact on the concerned natural resources and sensitive ecosystems, and welfare of the society.

3.1.1 National Policies

a) National Environment Policy, 1997

The overall objectives of the National Environment Policy (NEP) are:

i. To ensure sustainability, security and equitable use of resources for meeting the basic needs of the present and future generations without degrading the environment or risk health or safety;
ii. To prevent and control degradation of land, water, vegetation and air which constitute our life support systems;
iii. To conserve and enhance our natural and manmade heritage, including the biological diversity of the unique ecosystems of Tanzania;
iv. To improve the condition and productivity of degraded areas including rural and urban settlements in order that all Tanzanians may live in safe, healthful, productive and aesthetically pleasing surroundings;
v. To raise public awareness and understanding of the essential linkages between environment and development, and to promote individual and community participation in environmental actions;
vi. To promote international cooperation on the environment agenda, and expand our participation and contribution to relevant bilateral, sub-regional, regional, and global organizations and programs including implementation of Treaties.

The NEP seeks to provide the framework for making fundamental changes that are needed to bring environmental and social considerations into the mainstream of decision-making in Tanzania. It seeks to provide policy guidelines and plans, give guidance to the determination of priority actions, and provide for monitoring and regular reviews of policies, plans and programmes. It further provides for sectoral and cross-sectoral policy analysis in order to achieve compatibility among sectors.

The environmental objective of the Water Sector is to support the overall National objective of providing clean and safe water within easy reach, to satisfy other needs, to protect water sources, and prevent environmental pollution. In order to achieve this, the following policy objectives shall be pursued:

i. Planning and implementation of water resources and other development programmes in an integrated manner and in ways that protect water catchment areas and their vegetative cover;
ii. Improved management and conservation of wetlands;
iii. Promotion of technology for efficient and safe water use, particularly for water and wastewater treatment and recycling and
iv. Institution of appropriate user charges that reflect the full value of water resources.

b) National Water Policy, 2002

The main objective of National Water Policy is to develop a comprehensive framework for sustainable development and management of the Nation's water resources, in which an effective legal and institutional framework of its implementation will be put in place. The policy aims at ensuring that beneficiaries participate fully in planning, construction, operation, maintenance and management of community based domestic water supply schemes. This policy seeks to address cross sectoral interests in water, watershed management; and integrated and participatory approaches for water resources planning development and management.

The National Water Policy objective on environment is to have in place water management system that protects the environment, ecological system and biodiversity.

The policy stated that; Water supply projects will be subjected to environmental impact assessment at the design and planning stages so as to ensure that potential impact and proposed remedial measures are taken into consideration during the implementation and operation stages.

Development of large water schemes including construction of dams, large rainfall harvesting schemes, water intakes, river diversion works, pumping station, water well drilling, groundwater abstraction and use, and inter-basin water transfer must meet objectives of water resources management and will be subject to a permit and an environmental impact assessment.

c) National Forest Policy, 1998

The National Forest Policy identifies four main areas (forest land management, forest-based industries and products, ecosystem conservation and management, institutions and human resources) and present policy statements and instruments/directives to be applied to each of these. In accordance with the policy, an Environmental and Social Impact Assessment (ESIA) will be required for all investments, which convert forestland uses or may cause damage to the forest environment. Some of the policy strategic statements that are relevant for water and sanitation projects include the following:

i. To enable sustainable management of forest on public lands, clear ownership for all forests and trees on these lands will be defined and management responsibility promoted; and

ii. Biodiversity conservation and management as well as watershed management and soil conservation will be included in the management plans for all protected forests.

Involvement of forestry management authority, local communities and other stakeholders in conservation will be consulted while establishing water sources and project sites.

d) The Land Policy (1997)
The overall aim of a National Land Policy is to promote and ensure a secure land tenure system, to encourage the optimal use of land resources, and to facilitate broad-based social and economic development without upsetting or endangering the ecological balance of the environment

This policy represents a new turning-point in the development of Tanzania, the present system of land tenure accepted since independence, and further developed over three decades is á product of the past. Colonial history, conflicting statutory measures, broad socioeconomic patterns and demographic trends.

e) Health Policy (2003)
It is in line with the Government Development Vision 2025 goals, the Ministry of Health shall strive to raise and improve the health status and life expectancy of the people of Tanzania by ensuring delivery of effective, efficient and quality curative, preventive, promotive and rehabilitative health services at all levels.

f) Mining Policy (2009)
The Mineral Policy of 2009 seeks to address the challenges of the mineral sector mentioned in the introduction. The Government will continue to attract and enable the private sector to take the lead in exploration, mining, mineral beneficiation and marketing. Its purpose is to increase the mineral sector's contribution to the GDP and alleviate poverty by integrating the mining industry with the rest of the economy. Some of the objectives include:-

a) To improve the economic environment in order to attract and sustain local and international private investment in the mineral sector;
b) To promote economic integration between the mineral sector and other sectors of the economy, so as to maximize the contribution of the mineral sector to the economy;
c) To strengthen the legal and regulatory framework for the mineral sector and enhance the capacity for monitoring and enforcement;
d) To strengthen the institutional capacity for effective administration and monitoring of the mineral sector;
e) To participate strategically in viable mining projects and establish an enabling environment for Tanzanians to participate in ownership of medium and large scale mines;
f) To support and promote development of small scale mining so as to increase its contribution to the economy.

3.1.2 National Legislations
In addition to the above policies, there are a number of legal and regulatory frameworks that proposed water projects must comply with. The **Environmental Management Act No. 20 of 2004** is the principal legislation governing all environmental management issues in the country. Within each sector, there are sectoral legislations that deal with

specific issues pertaining to the environment. Some of the legislations and regulations that are relevant in the management of the environment are presented in the table below. A summary of the main environmental legislation in relation to the water supply and sanitation sectors is presented in **Annex 1**:

Table 3.1: Key Environmental Legislations in Tanzania

Act	Key elements	Implementing authority
Environmental Management Act, No. 20 of 2004	The objective of this Act is to provide for and promote the enhancement, protection, conservation, and management of the environment. This Act provides a legal framework necessary for coordinating harmonious and conflicting activities with a view to integrating such activities into an overall sustainable environmental management system by providing key technical support to Sectoral Ministries.	Vice President's Office, Environment. NEMC
Environmental Impact Assessment and Audit (amended) Regulations 2018	These Regulations shall apply to all projects undertakings and activities referred to in Part VI and the Third Schedule to the EMA, and the First Schedule to these Regulations.	Vice President's Office, Environment. NEMC
Wildlife Conservation Act, No. 5 of 2009	The Act protects wildlife and vegetation by restricting the utilisation of wildlife to license holders. The use of sensitive wildlife habitats is restricted during certain times of the year or for specified periods.	Ministry of Natural Resources and Tourism, Tanzania Wildlife Authority (TAWA)
Forest Act, No. 14 of 2002	The Act provides for the management of forests and its main objectives are to promote and enhance the contribution of the forest sector to the sustainable development of Tanzania and the conservation and management of natural resources for the benefit of the present and future generations. In addition, the legislation aims to ensure ecosystem stability through conservation of forest biodiversity, water catchments and soil fertility.	Ministry of Natural Resources and Tourism, Tanzania Forest Services (TFS)
Fisheries Act, No. 22 of 2003	The Act to repeal and replace the fisheries Act of 1970 to make provision for sustainable development, protection, conservation, aquaculture development, and regulation and control of fish, fish product, aquatic flora and its products and for related matters.	Ministry of Livestock and Fisheries.
Mining Act, No. 14 of 2010	The Act sets out government policy to regulate the law relating to prospecting for minerals,	Ministry of Minerals

Act	Key elements	Implementing authority
	mining, processing and dealing in mineral, to granting renewal and termination of mineral rights, payment of royalties, fees and other charges and any other relevant matters. Mining license applicants are required to submit plans for environmental protection.	
Local Government (District & Urban) Authorities Act, No. 7 &8 of 1982	Local authorities are empowered to enact bylaws regarding the protection of soil, agriculture, water supplies, and other natural resources. The act contains provisions to protect human health and regulate pollution.	Local authorities
Land Use Planning Act, No. 6 of 2007	An act provides for procedures for the preparation, administration and enforcement of land use plan. All land use plans prepared by relevant authorities under the Act shall be relevant at each level.	Ministry of Land, Habitant and Human Settlement, National Land Use Planning Commission
Public Health Act, No. 1 of 2009	The Act prohibits the discharge of certain substances into sewers. Violation of the ordinance is an offense, and penalties may be imposed on offenders.	Ministry of Health
Water Resources Management Act, No. 11 of 2009	An Act to provide for institutional and legal framework for sustainable management and development of water resources, to outline principles for water resources management; to provide for the prevention and control of water pollution; to provide for participation of stakeholders and the general public in implementation of National Water Policy.	Ministry of Water
Water supply and Sanitation Act No. 5 of 2019	An Act to provide for sustainable management and adequate operation and transparent regulation of water supply and sanitation services; to provide for the establishment of water supply and sanitation authorities, Rural Water Supply and Sanitation Agency, National Water Fund and community based water supply organisations; to provide for appointment of service providers, repeal of the Water Supply and Sanitation Act, 2009 and Dar es Salaam Water and Sewerage Authority Act, 2001 and to provide for related matters.	Ministry of Water, EWURA, UWSSA, RUWASA
EWURA Act No. 11 (2001)	This Act makes provision for the establishment of the Energy and Water Utilities Regulatory Authority (EWURA) and the EWURA Consumer Consultative Council, lays down rules relative to powers and functioning of the Authority and	Ministry of Water, UWSSA EWURA and RUWASA

Act	Key elements	Implementing authority
	the Council, and provides for the resolution of disputes in relation to regulated services and goods, including the supply of water and sewerage services.	

The EMA No. 20 of 2004 includes three specific regulations with regard to the water supply and sanitation projects:

a. Air Quality Standards Regulations (2007);
b. Solid Quality Standards Regulations (2007); and
c. Water Quality Standards Regulations (2007).

Other Laws which related to environmental and social safeguards in water sector include:

a. The Land Act, (No. 4), 1999;
b. The Village Land Act (No. 5), 1999;
c. The Tanzania Investment Act (No. 26), 1997;
d. The Occupational Health and Safety Act, (No. 5), 2003;

3.1.3 International Agreements

Tanzania is a party to many international agreements related to environmental and social management:

a. Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal (1989);
b. Convention of the Protection of the World Cultural and Natural Heritage, Paris (1972);
c. Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons, and their Destruction, London (1972);
d. Convention on Biological Diversity (1992)
e. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, 1973);
f. Convention on the Ban of the Import into Africa and the Control of Trans-boundary Movement and Management of Hazardous Wastes within Africa, Bamako, Mali (1991);
g. United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994);
h. Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994);
i. Montreal Protocol on Substances that Deplete the Ozone Layer (1987);
j. Phyto-Sanitary Convention for Africa, Kinshasa (1967);
k. United Nations Convention on the Law of the Sea (1982);
l. United Nations Framework Convention on Climate Change (1983);
m. Vienna Convention for the Protection of the Ozone Layer;
n. Nile Basin Commission; and
o. Protocol for Sustainable Development of Lake Victoria Basin Commission of 2003.

3.2 Institutional Framework

The programme oversight will be through the key government and non-government stakeholders and DPs. Programme management will be coordinated through the PCDU of

the MoW, and in general is supported with technical personnel from all components of Programme, as and when required. The following present the main WSDP stakeholders:

i) **Ministry of Water (MoW)** is responsible for overall coordination, monitoring and evaluation of the programme, facilitation of capacity building, and for ensuring policy compliance. MoW will be the Secretariat of the Sector Working Group and ensure cohesiveness of the sector coordination, monitoring and evaluation framework featured.

ii) **Basin Water Boards (BWBs)** are primarily responsible for Water Resources Development (WRD), including planning, management and overall coordination at the basin level. Basin management will be carried out through catchment committees and Water User Associations (WUAs).

iii) **Rural Water Supply and Sanitation (RUWASA)** in collaboration with respective Regional or District Authorities will be responsible for planning, managing and supervising the Rural Water Supply and Sanitation projects, including financial and procurement management as well as monitoring and evaluation of contracts with consultants and service providers assisting planning and implementation of the programme at the District level and in communities.

iv) **Water Supply and Sanitation Authorities (WSSA)** including DAWASA, are responsible for planning and managing the Urban Water Supply and Sanitation Services (UWSS). The utilities will enter into Memorandum of Understanding and performance agreements or contracts with MoW to handle routine operations and maintenance and secure professional services to assist them improve efficiency and expand their systems over time. The WSSAs operated at Regional level, District level, Small towns and National projects.

v) **Energy and Water Utilities Regulatory Authority (EWURA)** is responsible for providing licences to all utilities for technical operation and economic regulation purposes. EWURA will also monitor service performance and approve service tariffs.

With regard to the environmental authority, the Environmental Management Act (EMA 2004) provides the legal and institutional framework for the management of the environment and implementation of the National Environmental Policy. The **National Environmental Management Council (NEMC)** is responsible for managing and enhancing the environmental compliancy in the country other bodies include; National Environmental Advisory Committee which act as advisory body to the Minister of the Environment under Vice President Office. In the Ministry of Water the environmental and social issues are coordinated with the Environmental and Social Safeguard Section.

NEMC is in charge of the enforcement, compliance, review, monitoring of environmental impact assessments and the facilitation of public participation in environmental decision-making and supervision of all matters relating to the environment assigned to the Council. Amongst its functions, NEMC reviews ESIAs/PESIAs and recommends them (or not) for approval, and classifies projects for which environmental audit or monitoring must be conducted.

It is noted under the Act, NEMC may "delegate to any sector Ministry, environmental body, employee or agent of the Council, the exercise of any of the powers or the

performance of any of the functions or duties of the Council under the Act" (EMA 2004 paragraph 26).

3.3 World Bank Safeguard Environmental and Social Framework

According to the agreements between the GoT and the DPs, the projects or activities funded under the WSDP will comply with the WB's Safeguards Policies, irrespective of whether or not they are being funded in whole or in part by the WB, the GoT, or any other Development Partners.

The World Bank safeguard policies are divided into environment, social, and legal areas and the Bank has a public disclosure policy that should be applied in all safeguard policies. The Safeguard Policies pursue three objectives: (i) ensuring that environmental and social issues are evaluated in the preparation and decision-making process; (ii) reducing and mitigating the environmental and social risks of Bank-financed programs or projects; and (iii) providing mechanisms for consultation and information disclosure. Additionally, the safeguards policies pursue the compliance of the National Laws and Regulations in regards to the environmental and social issues.

The ESMF has also adapted the new World Bank Environmental and Social Framework (ESF) started to be used on 1st October 2018 to all new projects to be funded by World Bank. The framework provides ten Environmental and Social Standard (ESS10) designed to help Borrowers to manage the risks and impacts of a project, and improve their environmental and social performance, through a risk and outcomes based approach. The desired outcomes for the project are described in the objectives of each ESS, followed by specific requirements to help Borrowers achieve those objectives through means that are appropriate to the nature and scale of the project and proportionate to the risk level of environmental and social impacts. The ESF include the following ten (10) ESS which encompass the 8 IFC Performance Standards;

1. ESS1: Assessment and Management of Environmental and Social Risks and Impacts (ESIA);
2. ESS2: Labor and Working Conditions;
3. ESS3: Resource Efficiency and Pollution Prevention and Management;
4. ESS4: Community Health and Safety;
5. ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;
6. ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
7. ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities;
8. ESS8: Cultural Heritage;
9. ESS9: Financial Intermediaries; and
10. ESS10: Stakeholder Engagement and Information Disclosure.

A complete description of the World Bank's safeguards that triggers the environment and social can be found on the Bank's official Website, www.worldbank.org. Summaries are included in **Annex 2**.

Safeguard Operation Policies and WB procedures replaced by ESF:

The WSDP II, WSSP II and SRWSP triggered the following safeguard policies:

vi) OP/BP 4.01 Environmental Assessment
vii) OP/BP 4.04 Natural Habitats
viii) OP/BP 4.10 Indigenous People/Vulnerable group
ix) OP4.09 Pest Management
x) OP/BP 4.11 Physical Cultural Resources
xi) OP/BP 4.12 Involuntary Resettlement
xii) OP/BP 4.37 Safety of Dams
xiii) OP/BP 4.36 Forest

The ESF does not replace the following operation policies:
xiv) OP/BP4.3; Performance standards for private Sector Activities
xv) OP/BP7.50; Projects on International waterways, and
xvi) OP/BP7.60; Projects in Disputed Territories.

CHAPTER FOUR

4. ENVIRONMENTAL AND SOCIAL IMPACTS

4.1 Sources of Environmental and Social Impacts

The WSDP projects may negatively impact environmental and social during construction, operation as well as during decommissioning phases, especially due to the following activities:

i) Civil works for new structures will involve construction on virgin land, thereby affecting the forests, animals and other natural resources;
ii) Rehabilitation works will require demolition of existing infrastructure and will generate rubbles and waste that will need to be disposed properly;
iii) Both the new civil works and the rehabilitation works may require new land/land acquisition;
iv) Civil works for new structures as well as rehabilitation works will affect the communities both physically (air and water pollution, nuisance and contamination etc.); and socio-economically (land use, income generation, mobility and community association)
v) Water supply services will require additional water abstraction, resulting in changes in ground and surface water regimes, both inside and outside the project impact areas;
vi) Additional use of water will result in increases in wastewater generation;
vii) Water supply activities and civil works may cause water stagnation and environmental issues;
viii) Increase in numbers of people within the project location/areas will result in depletion of natural resources, pollution of public waters and degradation of soils. Consequently, several environmental components may be affected in one way or another by such activities; and
ix) Increase in interaction of different types of people will result in social and health problems caused by various diseases transmitted among these people and arising from high pressure on social and health services such as medical services.
x) Increase in cost of living, crimes and other cultural changes.

4.2 Description of the potential environmental and social impacts

The potential negative and positive impact depends on the project phase: planning and design, construction, operation and maintenance, and decommissioning.

Each of the project phases listed above has environmental and social consequences on the different environmental and social components such as soil, water and society. Most of the impacts will be felt during the construction and rehabilitation phases, while less impact will be felt during the operation and maintenance phases. **Table No. 4.1** presents an outline of typical projects or activities, and the potential impacts, both negative and positive, in WSDP projects.

Table 4.1: An Outline of Typical Project Activities and Examples of Potential Impacts, both Negative and Positive

ENVIRONMENTAL COMPONENTS / PROJECT ACTIVITIES	Geology	Soils	Topography	Surface water resources	Surface water quality	Groundwater resources	Groundwater quality	Archaeology/Palaeontol	Flora	Terrestrial Fauna	Aquatic fauna	Air quality	Noise and vibration	Cultural heritage and	Local communities	Livelihoods	Current land use	Future land use options	Local economy	National economy	Existing infrastructure	Health and safety	Aesthetic and amenity values
PLANNING AND DESIGN																							
Mobilisation of stakeholders															√								
Site identification															√	√	√	√	√		√	√	√
Surveying of the project site	√	√	√						√								√	√	√		√	√	√
Project design															√			√					
CONSTRUCTION AND REHABILITATION																							
Mobilisation of resources		√		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√
Land clearing activities	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√
Water source development	√	√	√	√	√	√	√	√	√	√	√				√	√	√	√	√		√	√	√
Construction materials acquisition	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Tank, pump-house and treatment Plant	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√
Access road construction	√	√	√	√	√			√	√	√	√	√	√	√	√	√	√	√	√		√	√	√
Latrine installation	√	√			√	√	√								√	√	√	√	√			√	√

ENVIRONMENTAL COMPONENTS PROJECT ACTIVITIES	Geology	Soils	Topography	Surface water resources	Surface water quality	Groundwater resources	Groundwater quality	Archaeology/Palaeontol	Flora	Terrestrial Fauna	Aquatic fauna	Air quality	Noise and vibration	Cultural heritage and	Local communities	Livelihoods	Current land use	Future land use options	Local economy	National economy	Existing infrastructure	Health and safety	Aesthetic and amenity values
Install water pipes and tap stands	√	√	√					√	√	√		√	√		√	√	√	√	√		√	√	√
Construct boreholes/intakes	√	√		√	√	√	√		√				√		√	√	√	√	√		√	√	√
Infrastructure rehabilitation		√	√	√	√	√	√		√	√	√	√	√		√	√	√		√		√	√	√
OPERATION AND MAINTANANCE																							
Catchment protection		√	√	√	√	√	√		√	√					√	√	√	√	√			√	
Water abstraction	√	√	√	√	√	√	√		√	√	√			√	√	√						√	√
Water treatment & supply		√	√		√				√	√	√				√	√			√			√	√
Provision of employment															√	√	√		√	√	√	√	√
Scheme Management				√	√	√	√		√		√				√	√			√	√		√	
Operation of infrastructure				√	√	√	√				√				√	√	√	√	√		√	√	√
Sewage treatment & discharge		√	√	√	√	√	√		√	√	√	√			√	√			√			√	√
Latrine operation		√	√	√	√		√		√	√					√	√			√		√	√	√
Septic Tank discharges		√			√		√				√				√	√			√		√	√	√
Infrastructure repair and maintenance					√	√	√						√		√	√			√		√	√	√
Water point															√	√			√		√	√	√

ENVIRONMENTAL COMPONENTS PROJECT ACTIVITIES	Geology	Soils	Topography	Surface water resources	Surface water quality	Groundwater resources	Groundwater quality	Archaeology/Palaeontol	Flora	Terrestrial Fauna	Aquatic fauna	Air quality	Noise and vibration	Cultural heritage and	Local communities	Livelihoods	Current land use	Future land use options	Local economy	National economy	Existing infrastructure	Health and safety	Aesthetic and amenity values
maintenance																							
Water collection and distribution															√	√			√		√		
Maintenance of water sources																							
DECOMMISSIONING AND CLOSURE																							
Demobilisation of resources			√						√						√	√		√	√				
Closure of construction sites	√	√	√		√				√						√		√	√	√			√	√

Note: √ indicates the component of the project activity that may have a potential impact (either negative or positive).

4.3 Climate change and Adaptation

Effects to consider

Climate changes have significant effects on the available sources of water as well as on the competing demands on its use. Small water utilities have to be alert to these effects as they pose threats to their long-term viability and sustainability.

a. Climate change effects:
   - Rising of sea levels;
   - Increased saline intrusion into groundwater aquifers;
   - Drying of water sources due to drought;
   - Water treatment challenges, including increased bromide, need for desalination; and
   - Increased risk of direct storm and flood damage to water utility facilities.

b. Effects of warmer climate:
   - Changes in discharge characteristics of major rivers due to upstream changes;
   - Changes in recharge characteristics of major groundwater aquifers due to upstream changes;
   - Increased water temperature leading to increased evaporation and eutrophication in surface sources;
   - Water treatment and distribution challenges;
   - Increased competing demands for domestic and irrigation;
   - Increased urban demand with more heat waves and dry spells;
   - Increased drawdown of local groundwater resources to meet the increasing water demands.

c. Effects of more intense rainfall events:
   - Increased turbidity and sedimentation;
   - Loss of reservoir storage;
   - Water filtration or filtration/avoidance treatment challenges; and
   - Increased risk of direct flood damage to water utility facilities.

Suggested strategies to adapt risks from climate change

Within the capabilities of water utilities, some strategies that can be implemented either as part of the daily operations, or as special measures in response to external developments include:-

i. Water conservation measures:
   - Metering of all production and connections;
   - Use tariff design to manage demand;
   - Disseminate water conservation guidelines to consumers.

ii. Design of facilities
   - If possible, have at least two sources of supply at different locations. Build superstructures above high flood-line level.
   - Adopt energy-efficiency programme and, where possible, select facilities which require less power consumption.
   - Monitor wells near coastlines to prevent salinization. If climate change causes sea levels to rise dramatically, even aquifers that have been sustainably utilized can suffer salinization.
   - Utilize renewable energy sources.

iii. Restoration of watersheds and riparian areas:
- Join or initiate community programs for watershed reforestation.
- Enlist the support of the community in protecting the watersheds.

iv. Adaptation of disaster effects
- Form disaster response committee.
- Network with multi-sectoral organizations.

v. Implementation of sustainable land management and use practices

CHAPTER FIVE

5. ENVIRONMENTAL AND SOCIAL CONCEPTS, METHODOLOGIES AND TOOLS

This chapter presents the key environmental and social management concepts, methodologies and tools to be applied by the Ministry of Water and the IAs, in the water resources, water supply and sanitation projects, during the project cycles. The WSDP include also investments in the construction of buildings for some IAs, so this ESMF include a methodology to define the environmental and social risk of those types of investments.

5.1 Concepts and definitions

Components and Magnitude of a Water Supply System

A **water supply** is a system of engineered hydrologic and hydraulic components, which provide water supply. A water supply system normally includes: 1) intake (spring, river, dam and reservoir, or well); 2) main transmission pipeline (raw water); 3) treatment plant; 4) treated water pipeline; 5) storage tank, and 6) distribution network. **Figure 2** describe the water supply components while **Table No. 5.1** summarizes the definition and the classification of each component in terms of its magnitude.

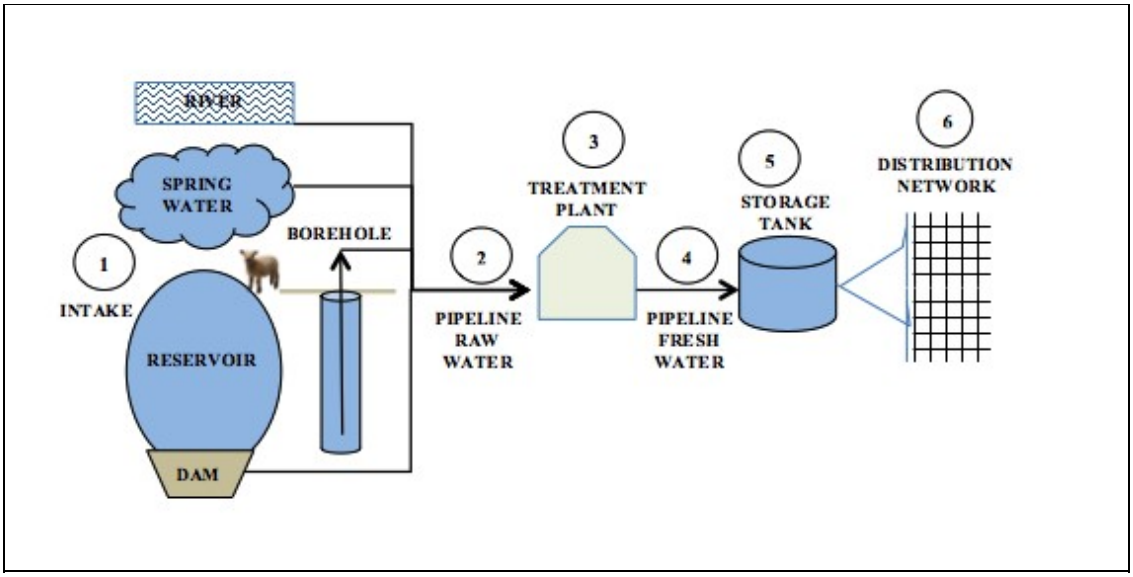


Figure 1: Water Supply System Components *(Source: MoW, Design Manual for Water Supply and Waste Water Disposal, Third Edition, 2009)*

Table 5.1: WSS Components, Definition and Magnitude

Sector	Type of project	Definition and Magnitude
WATER SUPPLY SYSTEM	**(1) Intake**	
	Spring water	Natural situation where water flows to the surface of the earth from underground. **Magnitude** / **Volume intake** Large (L) / More than 50,000 m^3/d. Medium (M) / Between 5,000 - 50,000 m^3/d. Small (S) / Less than 5,000 m^3/d.
	River	A natural flowing watercourse, usually freshwater, flowing towards the sea, ocean, lake, wetland or another river. Requires civil works to catch the water to the system.
	Dam + Reservoir	**Magnitude** / **Volume of intake** Large (L) / More than 50,000 m^3/d. Medium (M) / Between 5,000 - 50,000 m^3/d. Small (S) / Less than 5,000 m^3/d. A **dam** is a barrier that impounds or stores water to be used for different activities: water supply, irrigation, others. A **reservoir** is a natural or artificial lake, storage pond, or impoundment from a dam, which is used to store water. **Magnitude** / **Dam (Height)** / **Reservoir (Area)** Large (L) / More than 15m / More than 100 ha Medium (M) / Between 5 - 15m / Between 10 - 100 ha Small (S) / Less than 5m / Less than 10 ha
	Well or borehole	A **water well or borehole** is an excavation or structure created in the ground by digging, driving, boring, or drilling to access groundwater in underground aquifers. **Magnitude** / **Depth** High (H) / More than 500 m. Medium (M) / Between 100 - 500 m. Low (L) / Less than 100 m.

Sector	Type of project	Definition and Magnitude
	Rain Water Harvesting	A technique of collecting and storage of rainwater into natural or constructed reservoir or tanks.

Magnitude	Harvesting area
Large (L)	More than 100ha
Medium (M)	Between 10 – 100ha
Small (S)	Less than 10ha

(2) Aqueduct or Raw Water Pipeline

Watercourse constructed to convey raw water. The term **aqueduct** is used for any system of pipes, ditches, canals, tunnels, and other structures used for this purpose.

Magnitude	Length
Large (L)	More than 10 km.
Medium (M)	Between 1 - 10 km.
Small (S)	Less than 1 km.

(3) Water Treatment Plant

Water treatment describes those industrial-scale processes used to make water more acceptable for a desired end-use.

Magnitude	Volume
High (H)	More than 50,000 m^3/d.
Medium (M)	Between 5,000 - 50,000 m^3/d.
Low (L)	Less than 5,000 m^3/d.

(4) Fresh Water Pipeline

Watercourse constructed to convey fresh water from the Treatment Plant to the users.

Magnitude	Length
Large (L)	More than 10 km.
Medium (M)	Between 1 - 10 km.
Small (S)	Less than 1 km.

(5) Storage Tanks

Storage tank is a container for storing liquid, which are used in designed applications.

Magnitude	Volume
Large (L)	More than 100,000m^3
Medium (M)	Between 200-1000m^3

Sector	Type of project	Definition and Magnitude
		Small (S) | Less than 5-200m^3
	(6) Distribution Network	Pipes or tubes, that carries pressurized and treated fresh water to buildings.

Magnitude	Length
Large (L)	More than 10 km.
Medium (M)	Between 1 - 10 km.
Small (S)	Less than 1 km.

Components and Magnitude of a Sewerage System

A **sewerage system (SS)** or wastewater system is a water-carried waste, in solution or suspension, which will be removed from a community. It is more than 80% water and is characterized by volume or rate of flow, physical condition, chemical constituents, and the bacteriological organisms that it contains. A sewerage system normally includes: 1) sewerage network; 2) pump station; 3) wastewater pipeline; 4) sewerage treatment plant, and 5) effluent pipeline. Usually the final disposal of an effluent is in a water body (river, lakes, oceans and others), or it can be reused in productive lands. **Figure 3** describes the sewerage system components and **Table 5.2** below summarizes the definition of each component of a SS and the classification of each component in terms of its magnitude.

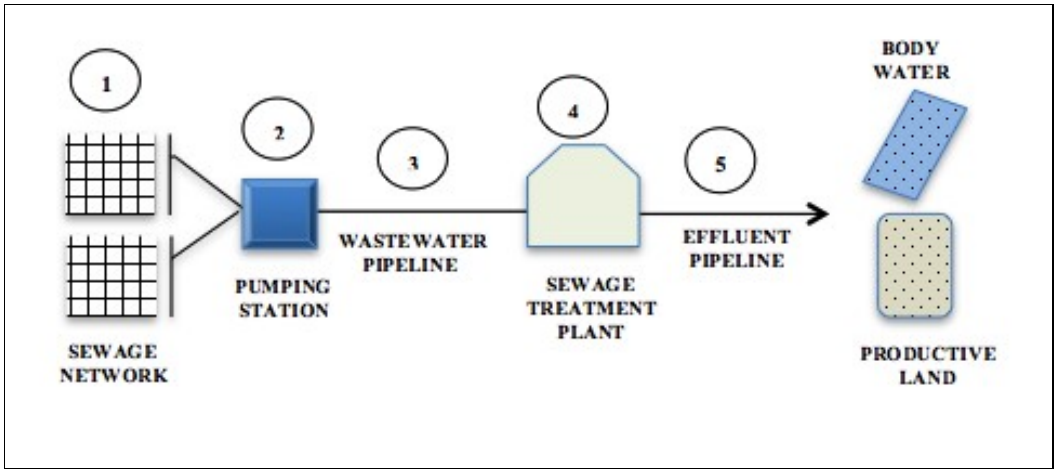


Figure 2: Sewerage System Components *(Source: MoW, Design Manual for Water Supply and Waste Water Disposal, Third Edition, 2009)*

Table 5.2: Sewerage System Components, Definitions and Magnitude

<table>
<tr><th>Sector</th><th>Type of project</th><th>Definition</th></tr>
<tr><td rowspan="5">SEWERAGE SYSTEM</td><td>(1) Sewerage Network</td><td>Sewage or wastewater transport from households to the main pipe or pumping station or treatment plant.
<table><tr><th>Magnitude</th><th>Length</th></tr><tr><td>Large (L)</td><td>More than 10 km.</td></tr><tr><td>Medium (M)</td><td>Between 1 - 10 km.</td></tr><tr><td>Small (S)</td><td>Less than 1 km.</td></tr></table></td></tr>
<tr><td>(2) Pumping Stations</td><td>Are facilities in infrastructure systems including pumps and equipment for pumping fluids from one place to another?
<table><tr><th>Magnitude</th><th>Volume</th></tr><tr><td>Large (L)</td><td>More than 50,000 m^3/d.</td></tr><tr><td>Medium (M)</td><td>Between 5,000 - 50,000 m^3/d</td></tr><tr><td>Small (S)</td><td>Less than 5,000 m^3/d.</td></tr></table></td></tr>
<tr><td>(3) Wastewater Pipeline</td><td>Sewerage or wastewater transport from the town, city or pumping station, to the treatment plant.
<table><tr><th>Magnitude</th><th>Length</th></tr><tr><td>Large (L)</td><td>More than 10 km.</td></tr><tr><td>Medium (M)</td><td>Between 1 - 10 km.</td></tr><tr><td>Small (S)</td><td>Less than 1 km.</td></tr></table></td></tr>
<tr><td>(4) Treatment Plant</td><td>Sewerage treatment is the process that removes the majority of the contaminants from wastewater or sewage and produces a liquid effluent acceptable for disposal to the environment.
<table><tr><th>Magnitude</th><th>Volume</th></tr><tr><td>Big (B)</td><td>More than 50,000 m^3/d.</td></tr><tr><td>Medium (M)</td><td>Between 5,000 - 50,000 m^3/d.</td></tr><tr><td>Small (S)</td><td>Less than 5,000 m^3/d.</td></tr></table></td></tr>
<tr><td>(5) Effluent Pipeline</td><td>A conduit to discharge treated wastewater into environment/water bodies.</td></tr>
</table>

Sector	Type of project	Definition
		<table><tr><th>Magnitude</th><th>Length</th></tr><tr><td>**Large (L)**</td><td>More than 10 km.</td></tr><tr><td>Medium (M)</td><td>Between 1 - 10 km.</td></tr><tr><td>Small (S)</td><td>Less than 1 km.</td></tr></table>

Components and Magnitude of Buildings

The building investments include the rehabilitation, improve or new construction of civil works for Implementing Agencies (IAs) who requires to bring better services to the public and improve the work station of the technical staff.

Table 5.3 below, summarizes the definition of Building components and the classification of each component in terms of its magnitude.

Table 5.3: WSS Components, Definitions and Magnitude

Sector	Type of project	Definition
BUILDING	**(1) Civil Works**	Construction, improvement, or rehabilitation of building <table><tr><th>Magnitude</th><th>Area</th></tr><tr><td>Large (L)</td><td>More than 5,000 m^2.</td></tr><tr><td>Medium (M)</td><td>Between 1,000m^2 – 5,000 m^2.</td></tr><tr><td>Small (S)</td><td>Less than 1,000 m^2.</td></tr></table>
	(2) Equipment	Equipment work/installation and furniture to operate the building. No environmental and social impacts.

Scope of works

Table 5.4 summarizes the classification usually used in the water and sanitation sector to define the scope of works.

Table 5.4: Scope of works definitions in WSS and SS

Scope of project	Definition

Scope of project	Definition
New project	When the proposed project constitutes a new investment, usually in new areas where, in most cases, land and/or households will be affected. The extension of pipeline also considered as a new project.
Improvement	When the project expects to improve the original design. For example, increase of the dam size, expansion of pipeline section to increase capacity and increased water-treatment capacity. In the case of sewerage, increased treatment plant capacity and expansion of sewerage networks. These projects potentially could affect productive lands or households.
Rehabilitation	When the existing structure of a WSS and SS requires specific work in order to recover its original characteristics, however, an increase in original design is not expected. No affectation of land or households.
Maintenance	Periodic works that the WSS or SS requires in order maintaining the project in optimal conditions.

Note: Projects classified as improvement, rehabilitation or maintenance might be considered as "existing projects" in order to apply the environmental assessment instrument required by the law.

Environment Site Sensitivity of Project Influence Area

The environmental site sensitivity depends on the ecological characteristics of the project area (direct and indirect influence area), which could be affected by the construction and operation of the project. The degree of site sensitivity could be HIGH, MODERATE or LOW. Most of the variables used to define site sensitivity are related to the Bank's safeguard policies. Table 5.5 presents the definitions of site sensitivity levels:

Table 5.5: Definition of Project Site Sensitivity

Site-Sensitivity	Definition	SP Triggered
HIGH	Areas with important ecological and sociocultural characteristics in the **direct influence area (DIA)**. Commonly inside national parks or protected areas. High degree of biodiversity, endemism, and threat (CITES). Great danger of environmental degradation (deforestation, hunt), critical ecosystem (wetlands, forests, etc.), areas with a high index of natural disasters (floods, earthquake, etc.), and places of significant cultural and historical interest.	EMA 2004 WB-ESF

Site-Sensitivity	Definition	SP Triggered
MODERATE	Areas with important ecological and sociocultural characteristic in the **indirect influence area (IIA).** Commonly in "buffer" zones. Moderate decree of biodiversity, endemism, and threat (CITES), Moderate danger of environmental degradation (deforestation, hunt), critical ecosystem (wetlands, forests, etc.), areas with high index of natural disasters (floods, earthquake, etc.), and places of significant cultural and historical interest.	EMA 2004 WB-ESF
LOW	Area previously affected (anthropic intervention) or with no critical ecosystem and social aspects in the DIA or IIA. Low degree of biodiversity, endemism and threat (CITES); low danger of environmental degradation (deforestation, hunt, etc.); low risk to natural disasters (floods, earthquake); and no presence of cultural/historical sites in the DIA or IIA.	GGESP

This classification should be considered also in the building investments, but most of these investments will be located in urban areas where no critical impacts are expected.

5.2 Methodology to define the environmental and social risk level: Screening

All WSDP projects require a preliminary analysis or screening to define the **environmental and social risk level (category)**. Based on this classification, the institution responsible for implementation of the project will define: the environmental and social studies required by national law and the Bank's safeguard policies; the estimated budget to implement the Plans; and the requirements of public participation and consultation. In addition, the screening process will also determine whether the project is eligible for approval from a safeguard point of view.

The environmental and social risk level differs depending on the "type" of project (WSS, SS or Buildings), magnitude and scope and "Site Sensitivity" (ecological and sociocultural issues). The methodology to develop this preliminary analysis requires three steps:-

Step 1: Classification in terms of the "type" of project

The type of project is a function of the project component, magnitude and scope of works. The next checklist table can be used to define the type of project.

Table 5.6: Classification Based on the Type, Magnitude and Scope of Water Supply projects

Component	Magnitude	Scope	Classification
□ Spring Water □ River	□ Volume intake > 50,000 m^3/d	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	a
		□ Maintenance	b
	□ Volume intake > 5,000 < 50,000 m^3/d	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Volume intake < 5,000 m^3/d	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	c
		□ Maintenance	d
□ Dam	□ Height more than 15 m	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	a
		□ Maintenance	b
	□ Height between 5 to 15 m	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Height less than 5 m	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	c
		□ Maintenance	d
□ Reservoir	□ Area more than 100 ha.	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	a
		□ Maintenance	b
	□ Area between 10 to 100 ha.	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Area less than 10 ha.	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	c
		□ Maintenance	d
□ Borehole	□ Depth more than 500 m	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Depth between 100 and 500 m	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	c
		□ Maintenance	d

	□ Depth less than 100 m	□ New construction	b
		□ Improvement	c
		□ Rehabilitation	d
		□ Maintenance	d
□ Treatment Plan	□ Volume more than 50,000 m^3/d	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Volume between 5,000–50.000 m^3/d	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	c
		□ Maintenance	d
	□ Volume less than 5,000 m	□ New construction	b
		□ Improvement	C
		□ Rehabilitation	d
		□ Maintenance	d
□Pipeline □Distribution Network	□ Length more than 10 km	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Length between 1 and 10 km	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	c
		□ Maintenance	d
	□ Length less than 1 km	□ New construction	b
		□ Improvement	c
		□ Rehabilitation	d
		□ Maintenance	d

Table 5.7: Classification based on the Type, Magnitude and Scope of SEWERAGE projects

SS Component	Magnitude	Scope	First Classification
□ Sewerage Network	□ Length more than 10 km	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Length between 1 to 10 km	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Length less than 1 km	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	c

		□ Maintenance	d
□ Pump Station	□ Volume more than 50,000 m^3/d	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Volume between 5,000-50.000 m^3/d	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	b
		□ Maintenance	c
	□ Volume less than 5,000 m^3/d	□ New construction	b
		□ Improvement	c
		□ Rehabilitation	d
		□ Maintenance	d
□ Sewerage Pipeline	□ Length more than 10 km	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Length between 1 to 10 km	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	c
		□ Maintenance	d
	□ Length less than 1 km	□ New construction	b
		□ Improvement	c
		□ Rehabilitation	d
		□ Maintenance	d
□ Treatment Plan	□ Volume more than 50,000 m^3/d	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	a
		□ Maintenance	b
	□ Volume between 5,000-50,000 m^3/d	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Volume less than 5,000 m^3/d	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	c
		□ Maintenance	d
	□ Length more than 5 km	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b

□ Effluent Pipeline		□ Maintenance	c
	□ Length between 1 to 5 km	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	c
		□ Maintenance	d
	□ Length less than 1 km	□ New construction	b
		□ Improvement	c
		□ Rehabilitation	d
		□ Maintenance	d

Table 5.8: Classification based on the Type, Magnitude and Scope of BUILDINGS

SS Component	Magnitude	Scope	First Classification
□ Building	□ Area more than 5,000 m^2	□ New construction	a
		□ Improvement	a
		□ Rehabilitation	b
		□ Maintenance	c
	□ Area between 1,000 to 5,000 m^2	□ New construction	a
		□ Improvement	b
		□ Rehabilitation	c
		□ Maintenance	d
	□ Area less than 1,000 m^2	□ New construction	b
		□ Improvement	c
		□ Rehabilitation	d
		□ Maintenance	d

This first classification (a, b, c and d) gives to the evaluator an initial impression of the potential environmental risks of the project, where projects classified as **"a"** could have more potential negative impact, and projects classified as **"d"** could have less potential negative impact. If the project has more than one component, this classification should be developed for each component.

Step 2: Environmental classification based on project site sensitivity

To define the environmental site sensitivity level of a project (High, Moderate, or Low), the person in charge of environmental and social management should complete the checklist in Table 5.8 to define the level of the environmental and social sensitivity.

Table 5.9: Environment Site Sensitivity Checklist

Sensitivity	Description	Trigger
HIGH	1.1 Protected areas in the Direct influence area (National Parks, Forest Reserve, etc.)	☐
	1.2 High danger of environment degradation (deforestation, hunting, others)	☐
	1.3 Sensitive or critical ecosystem in the Direct influence area (wetlands, mangrove swamps, primary or secondary forests, and others)	☐
	1.4 Mountainous topography (>35% of slope) when the project anticipates construction of access road, pipelines, etc.	☐
	1.5 Vulnerable areas to natural disasters (floods, earthquake, and others)	☐
	1.6 Presence of places of significant cultural and historical interest in the Direct influence area	☐
MODERATE	2.1 Protected Areas in the Indirect influence area or in buffer zones	☐
	2.2 Moderate danger of environment degradation (deforestation, hunting, others)	☐
	2.3 Sensitive or critical ecosystems in the Indirect influence area (wetlands, mangrove swamps, primary or secondary forests, and others)	☐
	2.4 Wavy topography (15-35% of slope) where the construction of access road, pipelines, etc. is expected	
	2.5 Moderate risk to natural disasters (floods, earthquake, and others)	
	2.6 Presence of places of cultural and historical significance in the Indirect influence area	
LOW	3.1 Intervened areas out of protected areas (national parks, or buffer areas)	☐
	3.2 Low danger of environmental degradation (deforestation, hunt, and so forth)	☐
	3.3 Sensitive or critical ecosystem areas in the direct influence area (wetlands, mangrove swamps, primary or secondary forests, and others)	☐
	3.4 Flat topography (<15% of slope), when the project expects the construction of access road,	☐

☐

☐

	pipelines, etc. 3.5 Zones at low risk to natural disasters (floods, earthquake, and others) 3.6 Absence of places with cultural and historical significance	

If at least one setting triggers the high variables, the evaluator can conclude that the project or component has a **HIGH** environmental site sensitivity; if there is no setting in high, but at least one setting is triggered in the moderate variables, the evaluator can conclude that the project or component has a **MODERATE** environmental site sensitivity; and if there are no triggers in the high or moderate settings, the evaluator can conclude that the project or component has a **LOW** environmental site sensitivity.

Step 3: Environmental risk level: Category

The "environmental risk level" is a function of the **TYPE** of project or component (step 1) and the **ENVIRONMENT SITE SENSITIVITY** (step 2). To obtain this result the evaluator can use the Matrix No. 1.

Matrix No. 1
Environmental and Social Risk Level

TYPE	SITE SENSITIVITY		
	High	Moderate	Low
a	A	A	B
b	A	B	B
c	B	B	C
d	B	C	C

Category A: **HIGH environmental risk level**. Project is likely to have a significant adverse impact on the environment, and in-depth study is required to determine the scale, extent, and significance of the impact, and to identify appropriate mitigation measures and requirements of Type A and special Projects as stipulated in EIA and Audit (amended) Regulations 2018 (Category A and Special Projects).

Category B: **MODERATE environmental risk level.** Project is likely to have a significant adverse impact on the environment, but the magnitude of that impact is not well known. A preliminary environmental assessment is required to decide whether the project can proceed without a full environmental impact assessment and requirements of Type B1 Projects as stipulated in the EIA and Audit (amended) Regulations 2018 (Category B1).

Category C: **LOW environmental risk level.** Project is likely to have no significant adverse environmental negative impacts; thus implementation can start after inclusion of environmental and social management guidelines and requirements of Type B2 Projects as stipulated in EIA and Audit (amended) Regulations 2018 (Category B2).

If a project has more than one component, this process should be applied for each component. The final result of the environmental risk level for the project will be the higher classification obtained in each component. For example, if the project includes the construction of a new pipeline and the rehabilitation of a Dam, and the first component was classified as type "a" and the second component was classified as type "b", the entire projects should be classified as type "a".

In order to facilitate the application of this methodology, section 5.6 presents the Environmental and Social Screening Form (ESSF) designed to apply this methodology during the project preliminary assessment (screening).

5.3 Environmental and social studies

To comply with national environmental law and WB safeguards policies, all WSDP projects must go through an environmental and social assessment process.

5.3.1 Environmental studies required by National Environmental legislations

The environmental studies required by National Environmental Legislations (EMA No. 20 of 2004 and Environmental Impact Assessment and Audit (amended) Regulations, 2018) and the Bank's Safeguard (OP/BP 4.01 Environmental Assessment) are the functions of the Environmental Risk Level.

According to EIA and Audit Regulations of 2005 (Amended 2018), the Minister may issue a Provisional Environmental Clearance (PEC) for projects fast-tracking to facilitate mobilization of resources while undertaking detailed ESIA, the PEC is valid for four months.

The table shows project categories according amended regulation

Projects category after being screened by NEMC		
	Type	**ESIA Requirements**
1	"A"	Mandatory Projects
2	"B1"	Borderline Projects
3	"B2"	Non-Mandatory
4	Special Projects (treated as Type "A" projects) e.g. Uranium, Gas etc.	May require Specialized study prior to ESIA

- **Category A (Type A and Special Projects)**: Environmental and Social Impact Assessment (ESIA)
- **Category B (Type B1 Projects)**: Preliminary Environmental and Social Impact Assessment (PESIA)
- **Category C (Type B2 Projects)**: Good Environmental and Social Practices Guidelines

In the case of existing projects, according to the National environmental Legislations, **Environmental and Social Audit (ESA)** is required. The main objectives of the EA are:

i) To determine how far activities and processes of a project undertaking conform with environmental legislations including environmental management practices and environmental quality standards;

ii) To ensure compliance of ESMP for projects which conducted the ESIA before commencement; and ;
iii) To provide a mechanism to learn from experience, and to refine design and implementation procedures of a project or undertaking so as to mitigate adverse environmental impacts.

The first schedule of the Environmental Impact Assessment and Audit (Amended) Regulation (2018) includes Types of projects that require an ESIA, PESIA and small projects that require registration but shall not require Environmental Impact Assessment. **Annex 3** indicate the list of projects in the first schedule of the Regulations. The guidelines to prepare the ESIA, PESIA and ESA, are included in **Annex 4**. For Category C or type B2 projects, MoW has prepared the "Guideline of Good Environmental and Social Practices for them to be considered during project implementation.

It is important to mention that **Category "**A" projects have to consider the following World Bank requirements: (i) ensuring the scope of ESIA includes all ancillary infrastructure necessary for full performance (e.g. access roads, transmission pipelines etc.), whether or not they are financed by the implementing agency; and (ii) contracting an ESIA to be undertaken by independent experts not affiliated with the project.

5.3.2Environmental and social studies required by WB safeguard policies

If any additional safeguard issues are identified during the screening process, it will be necessary to conduct additional environmental and social studies to comply with the WB's Safeguard Policies:

i) If **Natural Habitat** issues are identified in the screening process, it will be necessary to include a special analysis of the natural habitat in the ESIA in order to identify measures to prevent, mitigate, and/or compensate, the potential negative impact. Where significant amounts of natural habitat will be converted or degraded by the project, the special analysis must explain why there is no feasible alternative and show that the overall benefits of the project exceed the environmental costs.

ii) If **Involuntary Resettlement** issues is identified in the screening process, a full Resettlement Action Plan (RAP) is required if the number of Project Affected People (PAPs) is more than 200 people; or Abbreviated Resettlement Action Plan (ARAP) is required if the number of PAPs is more than 10 or less than 200 PAPs. These instruments must be developed and implemented before start of the construction. The guidelines to prepare these instruments are in the Resettlement Management Framework (RMF) developed by MoW.

iii) If **Vulnerable Group (VGs)** issue is identified in the screening process, a social assessment (SA) should be develop to identify vulnerable groups in order to assure their participation and consultation in the process. This SA could identify activities proposed by the community to prevent, mitigate or compensate the potential negative impact and to improve their quality of life. The vulnerable groups include: those that may be below the food poverty line, lack access to basic social services (including those that are geographically isolated), and are not integrated with society at large and its institutions due to physical, social, or cultural factors.

To identify if such groups are present in the project area a social assessment, as part of the ESIA, will be undertaken. If the ESIA confirms the presence of vulnerable

groups, a Vulnerable Group Plan (VGP) should be develop in order to propose measures to ensure that: such groups have been involved in a process of free, prior and informed consultation leading to broad community support for the project; any adverse impacts on such groups are mitigated; the groups obtain culturally appropriate as well as specific to their needs from the project; there is a process for grievance redress; and, the project includes monitoring and evaluation to assess the project's impacts on and benefits for vulnerable groups.

iv) If **Physical and Cultural Resources (PCR)** issue is identified in the screening process, a specific Physical and Cultural Resources Plan (PCRP) should be developed in order to prevent or avoid any damages. This PCRP and "Chance Find Procedures" should be included as part of the Environmental and Social Management Plan (ESMP) of the ESIA or PESIA document.

v) In case of **Dam projects** (new or existing dam), according to the Bank's safeguard policy (OP/BP 4.37), during operation of dam, the owner is in charge of looking over the adoption of appropriate measures and the supply of the necessary resources to support dam safety. In case of small or medium_size dams (normally less than 15 meters in height), generic dam safety measures designed by qualified engineers are usually adequate. Large dams (more than 15 meters height or more than 10 meters height with some specifics risks), this should require: (i) reviews by an independent panel of experts for the investigation, design, construction of the dam and the start of operations; (ii) preparation and implementation of detailed plans, including a plan for construction supervision and quality assurance, an instrumentation plan, an operation and maintenance plan, and an emergency preparedness plan; (iii) prequalification of bidders during procurement and bid tendering; and (iv) periodic safety inspections of the dam after completion.

   In the case of existing dams, the Bank requires that the project owner arrange for one or more independent dam specialists to inspect and evaluate the safety status of the existing dams or their appurtenances and its performance history; review and evaluate the owner's operation and maintenance procedures; and provide a written report of findings and recommendations for any remedial work or safety-related measures necessary to upgrade the existing dams to an acceptable standard of safety.

Annex 5 includes the guidelines to prepare all plans which considered the Bank's Safeguards policies.

5.4 Estimated budget for the ESMP implementation

At the preliminary stage, it is important to estimate the environmental and social budget for implementation of plans (ESMP, RAP/ARAP, VGP, etc.) in order to include an estimated budget in the total budget of the project. In the case of the ESMP for projects of Category A or B, the estimated budget amount is also a function of the environmental risk level.

To obtain this result the evaluator can use the matrix No. 2, where the estimated budget for the ESMP is a percentage of the total amount of a project.

Matrix No. 2
Estimation of the budget to implement the ESMP

TYPE	Site Sensitivity		
	High	Moderate	Low
a	6%	5%	4%
b	5%	4%	3%
c	4%	3%	2%
d	3%	2%	1%

This estimated budget should be confirmed once the ESMP and others Plans has been prepared, but at this stage it is important to have this estimation in order to properly assign the project budget. The estimation of the RAP/ARAP should be obtained once those instruments would be prepared.

5.5 Public participation and disclosure mechanism

a. Public participation

Public participation for Category A, B and C projects is required when determining their scope and fulfilling the terms of reference for the ESIA. Category A projects requires at least two (2) consultations: the first, prior to the preparation of the study (presentation of the ToRs (Scoping), inception report, etc.); and the second after completion of the draft ESIA. Category B and C projects require at least one (1) consultation process. In the case of Category C projects, the document used for the consultation process is the feasibility study, which includes an environmental and social assessment.

IAs, through the consultants responsible for ESIA/PESIA/ESA preparation, are responsible for identifying interested and affected parties, and ensuring that all parties concerned are given adequate opportunity to participate in the process.

Whenever there is strong public concern over a proposed project, and the impact is expected to be extensive and far-reaching, NEMC is required to organize a public hearing. The outcome of the public hearing should be considered when deciding whether or not a permit should be issued.

b. Disclosure

All WSDP projects should include a strategy for public information disclosure to keep the general public and those involved in the project informed about its purpose and potential environmental and social impacts. Information will be disseminated to local communities in the respective language of the community.

In general, the information published should contain:-

(i) Basic information of the project;
(ii) Schedule of activities before the bidding process and during construction;
(iii) Environmental and social studies, including the ESMP, RAP/ARAP, VGP, PCRP; and
(iv) The summary and results of the community dialogue and public participation.

5.6 Tools for the environmental and social management

A series of environmental and social tools (templates) have been designed to be used by the IAs, through the Environmental Safeguard Section/personnel, in order to ensure incorporation of the environmental and social variables throughout the "project cycle", and organize the environmental and social management information for process record-keeping purposes.

The management tools designed for the environmental and social management are: i) Environmental and Social Screening Form (ESSF); ii) Environmental and Social Monitoring Report (ESMR); and iii) the Environmental and Social Final Report (ESFR). **Annex 6** includes the templates of these management tools.

5.6.1 Environmental and Social Screening Form (ESSF)

The ESSF is the first management tool that should be applied by the person in charge of the IA's environmental and social management during the first stage of the project cycle (identification or preliminary assessment) to define: the environmental and social risk level of the project; the environmental and social studies required to comply with national legislation and the Bank's safeguard policies, and the estimated budget for the environmental and social plans.

5.6.2 Environmental and Social Monitoring Report (ESMR)

The ESMR is the second management tool that should be applied by the person in charge of environmental and social management during the construction and operation stages of the project, in order to follow up and monitor the implementation of the environmental and social measures identified in the ESMPs. The ESMR contains basic information about the periodic field visits, the persons who visited the project, the environmental and social aspects observed during the site visit, and recommendations for the contractor.

With regard to Category A projects, IA's has to submit the ESMR to the Safeguard section at the Ministry every three months; for Category B projects, the ESMR must be submitted every 6 months; for Category C projects, the ESMR must be submitted at least once during the project execution period.

5.6.3 Environmental and Social Final Report (ESFR)

The ESFR is the third and final management tool that the IAs use at the end of the construction stage and before the project construction closing, in order to verify compliance with the environmental and social measures agreed upon in the plans.

5.7 Monitoring of the environmental and social management

In order to assess the environmental and social management performance of the WSDP, it is necessary to monitor the application of the three (3) safeguards tools used during the project cycle; ESSF, ESMR and ESFR. The purpose of this safeguard monitoring is to ensure that management tools are applied by IAs and reported timely on quarterly basis.

In order to systematize this information, the ESS Section will develop an Excel table to process all the information and summarize.

Table 5.9: Summary of the environmental and social safeguards

SUMMARY OF THE ENVIRONMENTAL AND SOCIAL SAFEGUARDS
WATER SECTOR DEVELOPMENT PROGRAMME

Date:

COMPONENTS	Number Projects	ESSF		Category			Resettlment		Vulnerable Group	
		Yes	No	A	B	C	Yes	No	Yes	No
Component 1: WRDP Component 2: RWSSP Component 3: UWSSP										
TOTAL (%)										

For the specific monitoring of the Environmental Studies, Resettlement/Compensation Plans, and Vulnerable Group Plan, the ESS Section can use the following tables:

Table 5.10: Status of the Environmental Studies

WATER SECTOR DEVELOPMENT PROGRAMME

DATE:

WSDP COMPONENT	No. of Projects	ESSF		Category			Environmental Study					
		Yes	No	A	B	C	No start	Prep	Done	App. Mow	App. WB	App. NEMC
Component 1												
Component 2												
Component 3												
Total (%)												

Table 5.11: Status of the Resettlement Studies

WATER SECTOR DEVELOPMENT PROGRAMME

DATE:

WSDP COMPONENT	No. of Projects	ESSF		Category			Resettlement Action Plan					
		Yes	No	A	B	C	OP/BP 4.12	No Start	Prep	Done	App. Mow	App. WB
Component 1												
Component 2												
Component 3												
Total (%)												

Table 5.12: Status of the Vulnerable Group Studies

WATER SECTOR DEVELOPMENT PROGRAMME

DATE:

WSDP COMPONENT	No. of Projects	ESSF		Category			Vulnerable Group Plan					
		Yes	No	A	B	C	OP/BP 4.10	No Start	Prep	Done	App. Mow	App. WB
Component 1												
Component 2												
Component 3												
Total (%)												

CHAPTER SIX

6. ENVIRONMENTAL AND SOCIAL MANAGEMENT

The overall purpose of this section is to present the basis of the legal and institutional framework, safeguard policies, and main environmental and social management activities and procedures during the "project cycle". These include: a) the environmental and social project cycle; b) the role and responsibilities for implementing agency (IA) environmental and social management, and c) the internal procedures at IA level for the environmental and social management.

6.1 Environmental and social project cycle

The environmental and social management should be developed throughout the project cycle. In each of these stages the person in charge of the environmental and social management should develop activities in order to ensure compliance with national laws and safeguard policies. The environmental and social management project cycle has five stages: i) preliminary assessment; ii) assessment iii) legal agreement; iv) construction, and (v) operation and maintenance. Moreover, EIA and Audit Regulations of 2005 (Amended 2018) provide for issuance of Provisional Environmental Clearance.

Project Cycle in the WSDP

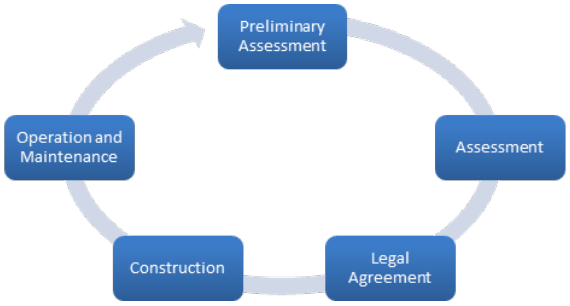


Figure 3: Project Cycle

6.2 Environmental and social stakeholders: Role and responsibilities

The stakeholders involved in the WSDP are:

i) The Ministry of Water is in charge of WSDP implementation and coordination;

ii) The **Implementing agencies (IA),** responsible for the implementation of water projects under components: **Component 1:** Basin Water Boards (BWBs); **Component 2:** Rural Water Supply and Sanitation Agency (RUWASA); and **Component 3:** Urban Water and Sanitation Authorities (UWSSAs) & Dar es Salam Water and Sanitation Authority (DAWASA), Small Towns and National Projects;

iii) The **Environmental authorities**, at the national, regional and district levels to oversee and guide on environmental management;

iv) **Consultants**, are responsible for the environmental and social studies preparation in order to comply with national laws and the Bank's policies.

v) **Contractors**, are responsible for ESMP, RAP/ARAP and/or VGP implementation, to ensure adequate environmental and social management during construction.

vi) **Community**, are beneficiary and operator of the projects; and

vii) The **DPs**, for financing and ensure compliance with the environmental and safeguard policies.

The responsibilities of key stakeholders are:-

i) **MoW** and the **IAs** are responsible for the implementation of environmental and social management of the WSDP. The instruments that ensure the environmental and social sustainability of the projects and the compliance of the environmental and social law and the Bank's safeguard policies are the Environmental and Social Management Framework (ESMF) and the Resettlement Management Framework (RMF).

ii) The **National Environmental Management Council (NEMC)** is the national authority responsible for ensuring compliance with national environmental laws. The main evidence of compliance with national environmental laws is the Environmental Certificate (EC). In each city, municipality, district, town council there is an appointed Environmental Management Officer (EMO). The responsibilities of the EMO include monitoring the preparation, review and approval of the ESIAs of local investments and project and to report to the Director of Environment on implementation of the Act within the area of his/her jurisdiction. Similarly, Committees and Environmental Management Officers are to be appointed at the Kitongoji (KEMO), Ward (WEMO), Mtaa (MEMO) and Village (VEMO) levels. They are empowered to coordinate all activities geared towards the protection of the environment within their local areas.

iii) The **World Bank** ensures that the projects which financed by them are comply with its safeguard policies. If the project has been classified as a HIGH environmental risk (Category A) + High or Moderate social risk level, the projects requires the Bank's **"no objection"** at the different stages of the project cycle.

6.3 Environmental and social management along the project cycle

The environmental and social management includes all the activities that the Implementing Agency (IA), through its Environmental and Social Safeguard Responsible[1] person/section, should have to develop during the project cycle to ensure the environmental and social quality of the WSDP projects, those activities are the following:

Stage 1: Preliminary assessment

i) Once the IAs identifies a project that the institution will support, the responsible of the environmental and social safeguards should prepare the **Environmental and Social**

[1] All IAs participating in the WSDP must assign to one of the staff engineers the responsibility of the environmental and social safeguards in order to ensure the application of the ESMF and RMF during the project cycle.

Screening Form (ESSF), which is the first environmental and social internal tool in the project cycle. The main purpose of the ESSF is to determine the project's level of environmental and social risk (category), in order to define the studies required by national legislation and the Bank's safeguard policies;

ii) The IAs sends the ESSF to the MoW for review and comments, then MoW sends the ESSF to the World Bank for its records. Category A projects require the Bank's "no objection";

iii) Once MoW and WB have approved the ESSF, the IAs starts the assessment process with the support of specialized consultants. Before starting preparation for studies, the IAs should confirm the scope of the environmental studies required per specific project with the environmental authority (NEMC at the central level or DEMO at the district level). In this regard, the IAs must submit to the environmental authority the project description summary, including the ESSF (the detail of this process is presented in the next chapter);

iv) Once the environmental authority approves the scope of the studies required, the IAs, prepare the TORs for the studies: ESIA, PESIA or EA. Also, if any social safeguard study is required, the IAs shall prepare the TORs of each study (i.e. VGP, RAP/ARAP); and

v) The TORs for Category A and B projects (ESIA/PESIA, RAP/ARAP, VGP), should be reviewed by the Environmental Safeguard Section of MoW. The Category A projects requires the Bank's "no objection".

Stage 2: Assessment

i) Based on the TORs approved in the previous stage, the IAs will hire the consultant (s) to prepare the environmental and social studies (ESIA, PESIA, EA, RAP/ARAP and VGP);

ii) The responsibility of the environmental and social safeguard personnel of the IA is to follow up on the preparation of the studies and ensure that the consultant includes the consultation process in the activities related thereto (at least two consultation procedures for Category A projects, and at least one consultation procedure for Category B and C projects);

iii) Once the IA received the draft documents (studies), the SC – IA will review and send comments to the consultant before submitting to MoW for review and comments. MoW will send studies for Category A to the World Bank for "no objection";

iv) Approved document/studies will be submitted to the environmental authority (NEMC) for review and obtaining the **Environmental Certificate.** The assessment process to obtain the EC is presented in the next chapter.

Stage 3: Procurement process

i) The IAs will procure the construction company to execute the project. The bid documents should include the environmental and social aspects so that the technical and financial proposals can incorporate implementation of environmental and social measures;

ii) Once the construction firm is selected, the IAs shall include in the legal agreements/contracts for the project construction a specific environmental and social clause to comply with and implement all actions and measures identified in the environmental and social studies.

Stage 4: Construction

i) The works cannot begin without the Environmental Certificate, so the contractor should verify the status of the EC before starting construction;

ii) During construction, the IAs with the support of the environmental and social safeguards, monitor the project in order to ensure compliance with environmental and social plans. To conduct this follow-up, the IA will use the second internal management tool, which is the **Environmental and Social Monitoring Report (ESMR)**. The purpose of the ESMR is to record observations from the field visit and any resulting recommendations, in order to confirm that environmental and social aspects are being properly managed during project execution. The number of visits depends on the environmental and social risk levels;

iii) The IAs must submit the ESMR to MoW for a Category A and B projects; and the MoW submit the ESMR to the WB for review and comments; and

iv) Once the project construction has been completed, the IAs should develop the third internal management tool, the **Environmental and Social Final Report (ESFR)**, to review and confirm the proper implementation of the environmental and social plans.

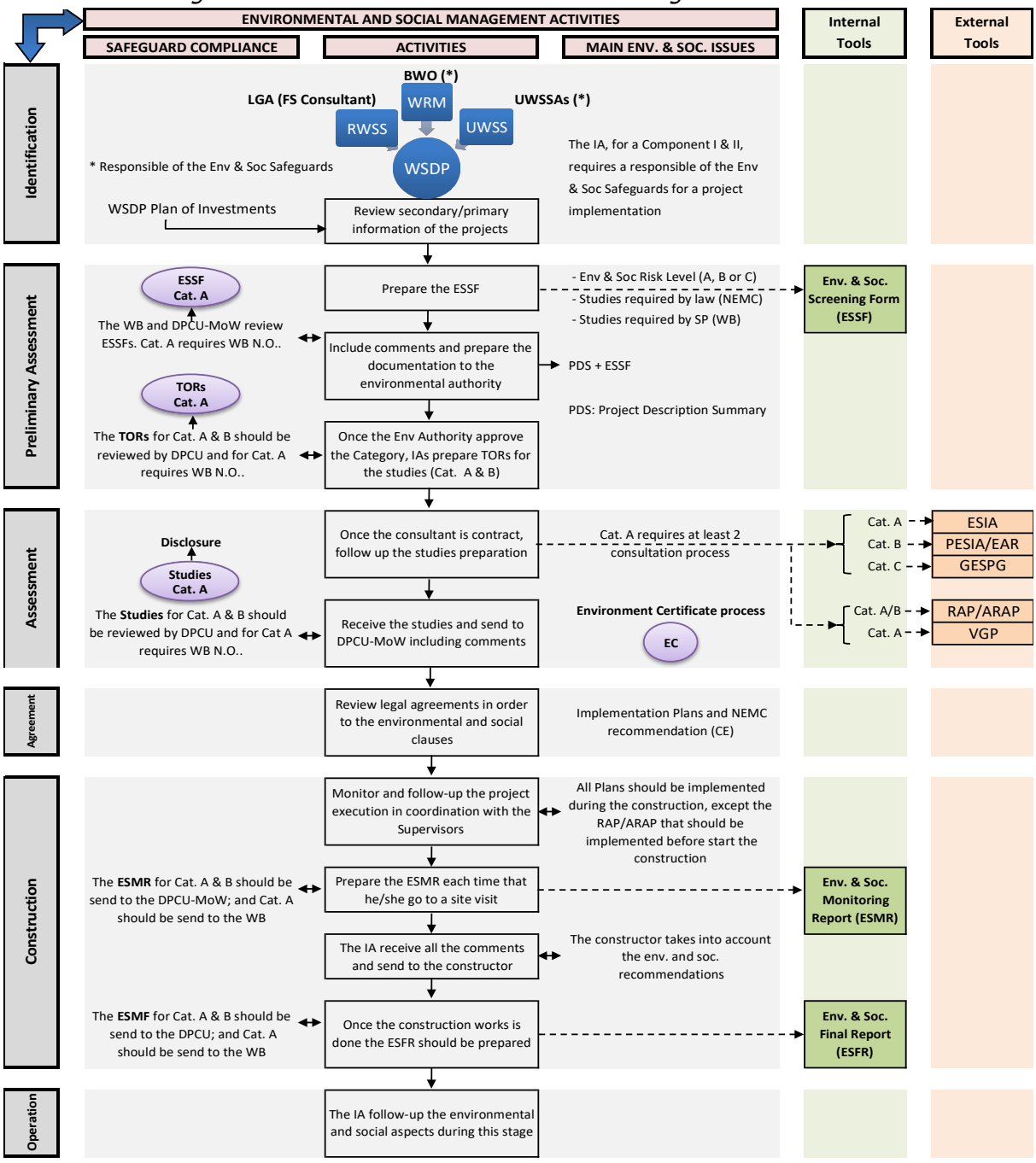
Stage 5: Operation

The IAs are responsible for the environmental and social management during the operation stage.

6.4 WSDP environmental and social management flowchart

A summary of the activities along the project cycle is summarized in the flow chart.

Figure 4: WSDP Environmental and Social Management Flowchart



Abbreviations:

ESIA: Environmental and Social Impacts Assessment
PESIA: Preliminary Environmental and Social Impact Assessment
EAR: Environmental Audit Report
GESPG: Good Environmental and Social Practices Guidelines
RAP: Resettlement Action Plan
ARAP: Abbreviated Resettlement Action Plan
VGP: Vulnerable Groups Plan

CHAPTER SEVEN

7. ASSESSMENT PROCESS TO COMPLY WITH THE NATIONAL ENVIRONMENTAL LAW

This chapter presents the environmental and social assessment process in order to comply with national legislation, including the steps of the assessment process and its flowcharts.

7.1 Steps to comply with the national environmental law

The environmental and social assessment process in Tanzania is presented in part VI of the EMA 2004, EIA and Audit (amended) Regulations of 2018, and also in the General Environmental Impact Assessment Guidelines and Procedure, prepared by VPO - Environment (revised in March 2002).

In summary, this process involves the following six main steps:

Step 1: The developer is required to prepare a project brief based on Form 1 (F-1), register the project with the NEMC. (**Annex 7.1)**

Step 2: The IAs send the F-1 to NEMC, including a brief project description and the screening (ESSF) that includes a proposal of categorization based on the preliminary assessment.

Step 3: Once the scope of the studies is confirmed to be ESIA or PESIA by the environmental authority, the Environment Safeguard Section (ESS) or Environmental Management Unit (EMU) of each Implementing Agency (IA) shall prepare the TORs needed to conduct the proposed study. Once the TORs for Categories A and B have been reviewed by the MoW and WB, will be submitted to NEMC for review and approval.

Step 4: The Consultant hired by the IAs shall conducts the ESIA or PESIA study according to the approved TOR.

Step 5: Before submitting the ESIA, PESIA or EAR to NEMC, the IAs should submit the study to MoW for review. In the cases of ESIA (Category A) MoW shall submit the study to the WB for "no objection". Once the ESIA is reviewed and accepted by MoW and WB, the IAs sends the ESIA/PESIA/EAR to NEMC for its review and approval. To submit the document (ESIA/PESIA/EAR) the IA has to use the **Form 2: Submission of the ESIA/PESIA/EAR (Annex 7.2)**. The Technical Advisory Committee (TAC) established by the NEMC shall review the ESIA/PESIA/EAR and notifies the Minister responsible for environment whether the ESIA/PESIA/EAR is acceptable or not. The NEMC could request the developer to make corrections and improvements based on the ESIA/PESIA/EAR comments.

Step 6: The IAs, with the support of the Consultant, incorporates NEMC recommendations and submits the final document to the NEMC for approval. If the document is acceptable, NEMC recommends to the Minister to issue the **Environmental Certificate (EC)**.

7.2 Flowchart to comply with the National Law

A summary of the activities for the environmental and social assessment process along the project cycle is summarized in the flow chart in Figure 6:

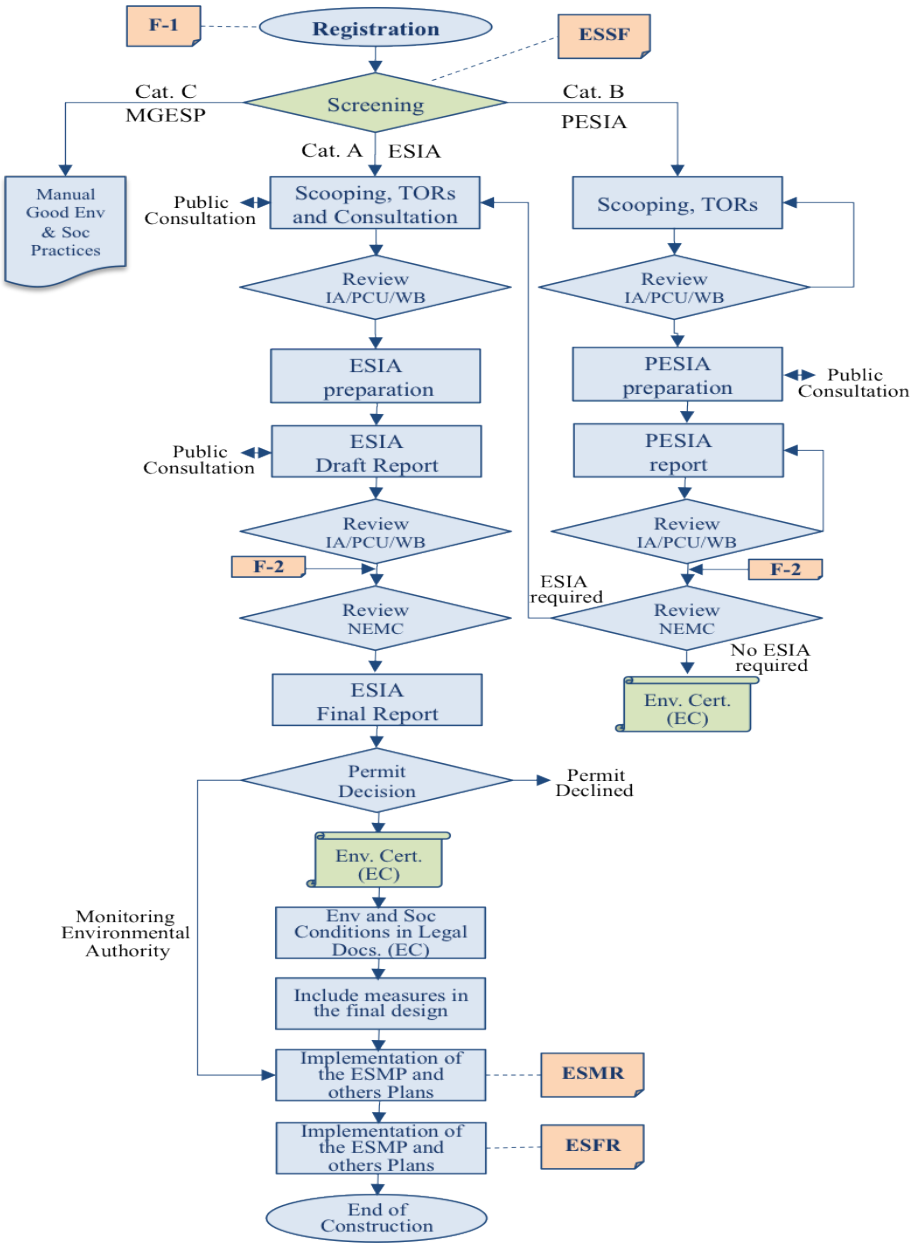


Figure 6: Flowchart of the Environmental and Social Assessment Process

ANNEXES

Annex 1: Summary of other environmental and social legal frameworks

a. Water Resources Management Act (2009)

The Water Resource Management Act (WRMA), 11/09, was passed by the National Assembly of the United Republic of Tanzania, on 28 April 2009 and assented to by the President on 12 May 2009. It came into force on 1 August 2009. The Act provides for the institutional and legal framework for sustainable management and development of water resources; outlines principles for water resources management; provides for the prevention and control of water pollution; provides for participation of stakeholders and the general public in implementation of the National Water Policy, repeal of the Water Utilization (Control and Regulation) Act, and provides for related matters.

The objective of this Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways which consider the following fundamental principles, including:

i) Meeting the basic human needs of present and future generations;
ii) Promoting equitable access to water and the principle that water is essential for life and that safe drinking water is a basic human right;
iii) Promoting the efficient, sustainable and beneficial use of water in the public interest;
iv) Facilitating social economic development;
v) Promoting stakeholders' involvement in water resources management at all levels, especially by ensuring decentralization to the lowest possible level of the government, consistent with available capacity at such level;
vi) Protecting biological diversity, especially the aquatic ecosystems;
vii) Providing for systems for managing the growing demand for water use through integrated planning and management of surface and groundwater resources, in ways which incorporate economic, environmental and social dimensions in the planning process;
- Preventing and controlling pollution and degradation of water resources;
- Providing implementation of international obligations stipulated under international legal instruments to which the United Republic is a party; and
- Promoting dam safety security and the management of water related disasters.

b. Water Supply and Sanitation Act No. 5 (2019)

An Act to provide for sustainable management and adequate operation and transparent regulation of water supply and sanitation services; to provide for the establishment of water supply and sanitation authorities, Rural Water Agency, National Water Fund and community based water supply organisations; to provide for appointment of service providers, repeal of the Water Supply and Sanitation Act, 2009 and Dar es Salaam Water and Sewerage Authority Act, 2001 and to provide for related matters.

c. Energy and Water Utilities Regulatory Authority, 2011

The general functions of EWURA are provided for under Section 7 of the Energy and Water Utilities Regulatory Authority Act, 2001. Under the provisions of Section 7 (1) of

that Act, the functions conferred on EWURA thereby shall be to perform the following in relation to the regulation of the provision of water supply and sanitation services by a water authority or other person, other than a community organization established in accordance with Section 37 of this Act:(a) exercise licensing and regulatory functions in respect of water supply and sanitation services including the establishment of standards relating to equipment attached to the water and sanitation system; and (b) also among others provide guidelines on tariffs chargeable for the provisions of water and sewage services.

d. The Forest Act, 2002

The Forest Act, (No. 14), 2002, provides for the management of forests. Its main objectives are to promote and enhance the contribution of the forest sector to the sustainable development of Tanzania and the conservation and management of natural resources for the benefit of present and future generations. In addition, the legislation aims to ensure the stability of ecosystems through the conservation of forest biodiversity, water catchments and soil fertility.

According to section 18 of this Act, an EIA is required for certain developments in accordance with the modalities and substance as set out in the guidelines by authorities responsible for the protection of the environment. Among others are: (a) road construction or the laying of pipelines; (b) construction of dams, power stations, electrical or telecommunication installations; and (c) construction of buildings.

e. Occupation Health and Safety Act, 2003

The Occupation Health and Safety Act, (No. 5), 2003, is an Act for health and safety. The Act is administered through the Ministry of Labour. Under the Act, the labour minister shall appoint the Chief Inspector (CI) to perform the functions stipulated in the Act. The CI may in turn also designate any person as an inspector to perform all functions assigned to an Inspector in respect of water projects, this act shall be enforced in all work places.

f. Contractors Registration Board Act, 1997

According to this act, all construction contracts are required to be executed by registered companies and entitled class in respect to the costs of the project.

Annex 2: World Bank Environmental and Social Standards

ESS1: Assessment and Management of Environmental and Social Risks and Impacts

It sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing, in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs). More details from (www.worldbank.org/esf).

ESS2: Labor and Working Conditions

It recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote

sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

ESS3: Resource Efficiency and Pollution Prevention and Management

The ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations. At the same time, more efficient and effective resource use, pollution prevention and GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable.

ESS4: Community Health and Safety

The ESS4 recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities. The standard addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.

ESS5: Land Acquisition, Restrictions on Land Use and Involuntary

It recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition1 or restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both. The term "involuntary resettlement" refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.

ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

It recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development. Biodiversity is defined as the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems. Biodiversity often underpins ecosystem services valued by humans. Impacts on biodiversity can therefore often adversely affect the delivery of ecosystem services. It recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support. Habitat is defined as a terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the nonliving environment. All habitats support complexities of living organisms and vary in terms of species diversity, abundance and importance.

ESS7:Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

The ESS recognizes that Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities have identities and aspirations that are distinct from mainstream groups in national societies and often are disadvantaged by traditional models of development. In many instances, they are among the most economically marginalized and vulnerable segments of the population. Their economic, social, and legal status frequently limits their capacity to defend their rights to, and interests in, land, territories and natural and cultural resources, and may restrict their ability to participate in and benefit from development projects.

ESS8: Cultural Heritage

It recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. People identify with cultural heritage as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. Cultural heritage, in its many manifestations, is important as a source of valuable scientific and historical information, as an economic and social asset for development, and as an integral part of people's cultural identity and practice. ESS8 sets out measures designed to protect cultural heritage throughout the project life cycle.

ESS9: Financial Intermediaries

It recognizes that strong domestic capital and financial markets and access to finance are important for economic development, growth and poverty reduction. The Bank is committed to supporting sustainable financial sector development and enhancing the role of domestic capital and financial markets. The financial Intermediaries are required to develop and maintain, in the form of an Environmental and Social Management System (ESMS), effective environmental and social systems, procedures and capacity for assessing, managing, and monitoring risks and impacts of subprojects, as well as managing overall portfolio risk in a responsible manner.

ESS10: Stakeholder Engagement and Information Disclosure

This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.

Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management and monitoring of the project's environmental and social risks and impacts.

The ESF has not replaced the following safeguard policies;-

A. Projects on International Waters (OP/BP/GP 7.50)

This policy applies when potential international water rights may be an issue for projects involving any of the following types of international waterways in Tanzania:

(i) Any river, canal, lake, or similar body of water that forms a boundary between, or any river or body of surface water that flows through, two or more states—for example, the lakes Victoria, Nyasa, and Tanganyika, which border neighbouring states;
(ii) Any tributary or other body of surface water that is a component of any waterway described in (i) above—many rivers in Tanzania are either sourced from or flow directly into one these lakes; and
(iii) Any bay, gulf, strait, or channel bounded by two or more states or, if within one state, recognized as a necessary channel of communication between the open sea and other states, and any river flowing into such waters.

Projects on international waterways may affect relations between the Bank and its borrowers and between states (whether members of the Bank or not). The Bank recognizes that the cooperation and goodwill of riparian is essential for the efficient use and protection of waterways. Therefore, the Bank strongly appreciates riparian making appropriate agreements or arrangements to ensure cooperation and goodwill across the entire waterway or any part thereof. The Bank stands ready to assist riparian in achieving this goal.

This policy requires the GoT, if it has not already done so, to formally notify riparian of the proposed WSDP and any details of project activities that will involve international waterways.

B. OP/BP4.3; Performance standards for private Sector Activities

This BP sets out the environmental and social review procedures ("ESRPs") to be followed for a Bank supported Private Sector Activity for which the WB Performance Standards apply in accordance with OP 4.03.

General Requirements
Differences in Bank and Private Entity Approaches to the Scope, Timing and Milestones of Private Sector Activities and their Development. Since the timing of the Bank's initial involvement in a Private Sector Activity often occurs after the Private Entity has been awarded a concession or made key business decisions relating to the Private Sector Activity, it may be necessary for the Bank to:

(a) Adapt rapidly the scope of the environmental and social review for the Private Sector Activity, as well as take into account the timing and key milestones of the Private Entity's preparation of the Private Sector Activity; and

(b) Review any approved permits, authorizations, and environmental and social management plans for consistency with the requirements of the WB Performance Standards.

Involvement of IFC If the Private Sector Activity involves potential support by a WB Group Entity, the Bank shares information regarding environmental and social aspects of the activity with the WB Group Entity, in accordance with its policy on Access to Information.

When a WB Group Entity has carried out or is carrying out environmental and social due diligence work for the Private Sector Activity under its environmental and social due diligence procedures, the Bank may choose to rely on such due diligence work for purposes of determining whether or not the Private Sector Activity has been prepared in accordance with the WB Performance Standards.

C. OP/BP7.60; Projects in Disputed Territories

Projects in disputed areas may raise a number of delicate problems affecting relations not only between the Bank and its member countries, but also between the country in which the project is carried out and one or more neighbouring countries. In order not to prejudice the position of either the Bank or the countries concerned, any dispute over an area in which a proposed project is located is dealt with at the earliest possible stage.

The Bank may support a project in a disputed area if the governments concerned agree that, pending the settlement of the dispute, the project proposed for country A should go forward without prejudice to the claims of country B. For every project in a disputed area, Bank staff consider the nature of the dispute.

The Project/Program Appraisal Document (PAD) for a project in a disputed area discusses the nature of the dispute and affirms that Bank staff have considered it and are satisfied that either (a) the other claimants to the disputed area have no objection to the project; or (b) in all other instances, the special circumstances of the case warrant the Bank's support of the project notwithstanding any objection or lack of approval by the other claimants.

Such special circumstances includes the project that is not harmful to the interest of other claimants, or that a conflicting claim has not won international recognition or been actively pursued. In all cases, the project documentation bears a disclaimer stating that, by supporting the project, the Bank does not intend to make any judgment on the legal or other status of the territories concerned or to prejudice the final determination of the parties' claims.

Annex 3: Categories of projects (As in the First Schedule of EIA and Audit (amended) Regulations of 2018)

3.1 List of Type A Projects (Mandatory List)

1. AGRICULTURE
(a) Large scale cultivation (≥ 100 Ha);
(b) Water resources development projects;
(i) Dams; command area ≥300 Ha;
(ii) Water supply; command area ≥500 Ha;
(iii)Flood control; command area ≥500 Ha;
(c) Irrigation, drainage; command area ≥500 Ha;
(d) Large scale mono-culture (cash and food crops) ≥100 Ha;
(e) Floriculture; ≥5 Ha; and

(f) In case of any project necessitating the resettlement of communities, please attach the Resettlement Action Plan.

2. FISHERIES
(a) Large scale fish farming including prawn farming; and
(b) Industrial fish processing and storage ≥50 tonnes per day.

3. TOURISM AND RECREATIONAL DEVELOPMENT
(a) Construction of resort facilities or hotels along the shorelines of lakes, River, islands and Ocean;
(b) Hill top resort or hotel development; and
(c) Development of tourism or recreational facilities in protected and adjacent areas (national parks, marine parks, forestry reserves etc.) on islands and in surrounding waters.

4. ENERGY
(a) Transmission of Electricity;
(b) Production of Natural Gas;
(c) Thermal Power development; capacity ≥50 MW;
(d) hydro-electric power development; capacity ≥ 50 MW;
(e) Nuclear power development; and
(f) Development of other large scale renewable sources of energy
(i) Off-shore Wind projects; and
(ii) Geothermal projects.

5. WASTE TREATMENT AND DISPOSAL
(a) Toxic and Hazardous waste:
    (i) Construction of Incineration plants;
    (ii) Construction of recovery plant;
    (iii) Construction of waste water treatment plant;
    (iv) Construction of secure landfills facility; and
    (v) Construction of storage (temporary) facility.
(b) Municipal solid waste:
    (i) Construction of Municipal Solid Waste landfill facility
(c) Municipal sewerage:
    (i) Construction of sewage sewer system

6. WATER SUPPLY
(a) Canalization of water courses;
(b) Diversion of normal flow of water;
(c) Water transfers scheme;
(d) Abstraction and/or utilization of ground and surface water for bulk supply; and
(e) Water treatment plants.

3.2 List of some of Type B1 Projects that may or may not require ESIA

1 AGRICULTURE
(a) Large scale cultivation (<100 to 50 Ha;
(b) Water resources development projects;
    (i) Dams (command area <300 Ha);
    (ii) Water supply (command area ≤500 to 200 Ha;
    (iii) Flood control (command area ≤500 to 200 Ha);

(iv)Irrigation, drainage (command area ≤500 to 200 Ha).

(c) Large scale mono-culture (cash and food crops) (<100 to 50 Ha); Floriculture (<5 to 2 Ha); and

(d) In case of any project necessitating the resettlement of communities, please attach the Resettlement Plan.

2. FISHERIES
(a) Medium to large scale fisheries;
(b) Artificial fisheries (Aqua-culture for fish, algae, crustacean's shrimps, lobster or crabs);
(c) industrial fish processing and storage (<50 to 10 tones per day).

3. TOURISM AND RECREATIONAL DEVELOPMENT
(a) any other construction for tourism and recreational activities; and
(b) Major construction works for sporting purposes.

4. ENERGY
(a) Distribution of Electricity projects;
(b) Storage of natural gas facilities;
(c) Thermal Power development (Capacity < 50 MW);
(d) hydro-electric power development (Capacity <50 MW;
(e) Development of other large scale renewable sources of energy:
(i) Solar projects;
(ii) Onshore Wind projects;
(f) Biomass projects.

5. WASTE TREATMENT AND DISPOSAL
(a) Municipal solid waste
(i) Construction of incineration plant; and
(ii) Construction of recovery/re-cycling plant.
(b) Municipal sewage
Construction of waste water treatment plant.

6. WATER SUPPLY
Water treatment plants

3.3 List of some of Type B2 Projects

List of small-scale activities and enterprises that require registration but shall not require Environmental Impact Assessment. Further, the projects shall not require screening and scoping, rather, the Project Brief shall be examined and issued with an Environmental Impact Assessment Certificate.

1. AGRICULTURE
(a) Large Scale cultivation (<50 to 10 Ha);
(b) Water resources development projects:
(i) Water supply (command area (<200 to <50 Ha;
(ii) Flood control (command area (<200 to <50 Ha);
(iii) Irrigation, drainage (command area (<200 to <50 Ha); and
(c) Large scale mono-culture (cash and food crops) (<50 Ha).
(i) Floriculture (<2 Ha).

2. WASTE TREATMENT AND DISPOSAL

(a) Municipal Solid Waste;
(b) Construction of composting plant;
(c) Municipal Sewage; and
(d) Night soil collection and treatment

Annex 4: Guidelines to prepare the environmental studies required by national legislation

4.1 Environmental and Social Impact Assessment (ESIA)

Executive Summary
Standard, comprehensive, and summarizing of all salient points of the ESIA.

Acknowledgments
Acknowledgments to all of those who were instrumental in the conduct and completion of the ESIA.

1. Introduction

Explains the purpose, structure, and audience of the ESIA, as well as the World Bank's and Tanzania's needs for the ESIA.

2. Project Description

Describes the project in detail, including goals, objectives, beneficiaries, outcomes, value, schedule, and implementing bodies.

3. Legal and Administrative Framework

- Describes the main legal instrumentation for environmental control and management, particularly specific instrumentation regarding the type of project (for example, hydropower/dams), and the general effectiveness of the legal instruments. Indicates government bodies responsible for each of the relevant instruments.

- Lists relevant ratified international conventions, and where appropriate and relevant, a track record to confirm compliance with those conventions.

- Describes the institutional framework for administration of the relevant environmental legislation and implementation of policy, and analyzes the capacity and effectiveness of institutions.

4. Project Alternatives

Discusses the various project alternatives that were considered and weighs the environmental merits of each. Rationalizes the selected project on various grounds, including environmental aspects.

5. Methodology

Describes how the assessment was conducted, including: screening, scoping, and bounding; composition of the assessment team; impact scoring system used (if used); the

public participation program; sources of data and information; field studies conducted; and other major inputs to the assessment.

6. Biophysical and Social Environment

Describes both the physical and social environment in which the project will take place, including soils, fauna, flora, protected areas, other special areas, biodiversity, population, ethnicity, relevant cultural patterns and traits, employment, health and relationship of the people to the resources, land use, and development patterns. Some of these areas will be surveyed to obtain primary data.

7. Potential Environmental and Social Impacts

Identifies the important potential impacts (biophysical and social), the most effective mitigation to conduct, the residual impacts to be expected, and the cumulative effect to be expected. Impacts may or may not be rated on a scale of, for instance, very significant, significant, moderately significant, low significance, or no significance.

Includes descriptions of World Bank Safeguard Policies that may be triggered and how these will be addressed.

8. Environmental and Social Management Plan

- Includes a detailed description of how each of the impacts will be mitigated along with cost, scheduling, and the responsible body.

- Includes a monitoring procedure with schedule, cost and responsibilities, as well as a monitoring feedback mechanism.

- Includes a self-assessment of institutional capacity-building needs for effective environmental management with a schedule and cost of various types of the capacity building required.

9. Literature Cited

A complete reference to all literature cited in the assessment and preparation of the ESIA report.

Various volumes covering separate studies (for example, social assessment, biological studies, and others) as well as an annex including detailed descriptions of impacts and most effective mitigations.

4.2 Preliminary Environmental and Social Impact Assessment (PESIA)

1. **Description of Adverse Impacts**

   Anticipated impacts are identified and summarized.

2. **Description of Mitigation Measure**

Each measure is described with reference to the effects it is intended to address. As needed, detailed plans, designs, equipment description, and operating procedures are included.

3. Description of Monitoring Programme

Monitoring provides information on the occurrence of impacts. It helps identify how well mitigation measures are working, and where better mitigation may be needed. The monitoring programme should identify what information will be collected, how, where, and how often. It should also indicate what level of impact would trigger a need for further mitigation. How environmental impacts are monitored is discussed below.

4. Responsibilities

The people, groups, or organizations that will carry out the mitigation and monitoring activities are defined, as well as to whom they will report and be responsible. There may be a need to train people to carry out these responsibilities and to provide them with equipment and supplies.

5. Implementation Schedule

The timing, frequency, and duration of mitigation measures and monitoring are specified in an implementation schedule and linked to the overall project schedule.

6. Cost Estimates and Source of Funds

These are specified for the initial project investment and for the mitigation and monitoring activities as the project is implemented. Funds to implement the environmental and social plans will predominantly come from the developer, with possible assistance from the WSDP.

4.3 Environmental and Social Audit (ESA)

An Environmental and Social Audit (ESA) shall be carried out through questionnaires, and environmental site visits and test analysis and in the manner specified in the EIA and Audit Regulation.

The environmental specialist shall consider the next information:

a. Description of the project;
b. Objective, scope and criteria of the audit;
c. All relevant environmental law and regulatory frameworks on health and safety, sustainable use of natural resources and on acceptable national and international standards;
d. Verify the level of compliance by the proponent or the developer with the conditions of the environmental management plan;
e. Evaluate the proponent's or the developer's knowledge and awareness of and responsibility for the application of relevant legislation;
f. Review existing project documentation related to all infrastructural facilities and design;
g. Examine monitoring programs, parameters, and procedures in place for control and corrective actions in case of emergencies;
h. Examine records of incidents and accidents and the likelihood of future occurrence of the incidents and accidents;
i. Inspect all buildings, premises and yards in which manufacturing, testing and transportation takes place within and without the project area, as well as areas where goods are stored and disposed of and give a record of all significant environmental risks associated with such activities;
j. Examine and seek views on health and safety issues from the project employees, the local and other potentially affected communities; and
k. Prepare a list of health and environmental concerns of past and ongoing activities.

The Contents of environmental audit report shall include:

a. A presentation of the type of activity being audited;
b. An indication of the various materials, including non- manufactured materials, the final products, and by-products, and waste generated;
c. A description of the different technical activities, processes and operations of the project;
d. A description of the national environmental legislative and regulatory frameworks on ecological and socio-economic matters relevant to that particular project or activity;
e. A description of the potentially affected environment on ecological and socio-economic matters;
f. A prioritization of all past and ongoing concerns of the project;
g. An identification of all environmental and occupational health and safety concerns of the project;
h. An opinion on the efficacy and adequacy of the environmental management plan of the project;
i. Detailed recommendations for corrective activities, their cost, timetable and mechanism for implementation;
j. An indication of the measures taken under the environmental management plan to ensure implementation is of acceptable environmental standards; and

k. A non-technical summary outlining the key findings, conclusions, and recommendations of the auditor.

Annex 5: Guidelines to prepare the World Bank Safeguard Studies

5.1 Vulnerable Groups Plan

Objectives and Scope

Where the project results in adverse impacts on vulnerable groups (VGs) the project should be classified as Category A, and a Vulnerable Group Plan (VGP) will be developed as a standalone document. However, where some vulnerable minority groups are integrated socially and economically with the mainstream population, and such is confirmed during the screening process and subsequent studies, a VGP will not be necessary.

Surveys and information required

a. Surveys

In projects with likely impacts on VGs, the ESSF should include additional specific screening to address this issue.

The social assessment should, among others, focus on VGs issues in projects with likely adverse impacts on those people. While the social assessment will address macro-level issues and broad strategies to mitigate impacts, specific and focused studies would be required for the VGP preparation.

b. Information Required

The information required for preparation of VGP will include the following:

- The basic census, socio-economic data and inventory of affected assets
- Household ownership of economic and productive assets
- Annual income from primary and secondary employment opportunities
- Economic information of community (e.g., brief information on economic and natural resources, production and livelihood systems)
- Social information of community (e.g., brief description of kinship, value system; types of social organizations of formal/informal groups, farming groups, etc., especially those that can help group in adjusting to potential impacts)
- Potential impact of sub-project on basic social services (e.g., water supply, health clinics, and schools)
- Potential impact of project on the social and economic livelihood

Information should be gathered from group meetings, one with a general assembly of affected vulnerable groups in the area and one with vulnerable women, especially those who live along the zone of influence of the project area. Discussions should focus on the project objectives, potential positive and negative impacts, and recommendations for project design. If the social assessment indicates that the potential impact of the proposed project will be significantly adverse and that the ethnic minority community rejects the project, the project authorities should consider redesigning or reformulating the project.

Formulation of Development Alternatives

The proposed mitigation measures should ensure that social and economic benefits they receive are in harmony with their cultural preferences. The focus of the VGMP should be on resource-based, non-cash measures that are developed through an extensive public participation and consultation to mitigate adverse impacts on such communities. The assistance should also include institutional strengthening and capacity-building of tribal elders, community groups working on resettlement activities.

Public Participation and Consultation

The community participation and consultation framework and grievance redress mechanism should be developed in culturally appropriate ways familiar to the vulnerable groups. They should be developed with the vulnerable groups and their leaders in close collaboration with local officials. Wherever possible, staff with vulnerable group background and experience should be hired as part of the social impact assessment team as well as the monitoring team.

Vulnerable Group Management Plan

In case the screening exercise identifies major impacts on some vulnerable groups, and further confirmed during the studies, warranting the preparation of standalone VGP, necessary surveys and investigations would be prepared during the feasibility study phase of project preparation.

A VGP addresses the (i) aspirations, needs, and preferred options of the affected VGs; (ii) local social organization, cultural beliefs, ancestral territory, and resource use patterns among the affected VGs; (iii) potential positive and negative impacts on VGs; (iv) measures to avoid, mitigate, or compensate for the adverse project effects; (v) measures to ensure project benefits will accrue to VGs; (vi) measures to strengthen the capacity of the Catalytic Fund to address VG issues; (vii) the possibility of involving local CBOs and NGOs with expertise in VG issues; (viii) budget allocation; and (ix) monitoring.

The VGP is prepared in a flexible and pragmatic manner, and its level of detail varies depending on the specific project and the nature of effects to be addressed. The VGP includes the following elements, as needed:

- A summary of the social assessment;
- A summary of results of the free, prior, and informed consultation with the affected VGs' communities that was carried out during project preparation and that led to broad community support for the project;
- A framework for ensuring free, prior, and informed consultation with the affected VGs' communities during project implementation;
- An action plan of measures to ensure that the VGs receive social and economic benefits that are culturally appropriate, including, if necessary, measures to enhance the capacity of the project implementing agencies;
- When potential adverse effects on VGs are identified, an appropriate action plan which includes measures to avoid, minimize, mitigate, or compensate for these adverse effects.
- The cost estimates and financing plan for the VGP;

- Accessible procedures appropriate to the project to address grievances by the affected VGs arising from project implementation and
- Mechanisms and benchmarks appropriate to the project for monitoring, evaluating, and reporting on the implementation of the VGP. The monitoring and evaluation mechanisms should include arrangements for the free, prior, and informed consultation with the affected VGs' communities.

5.2 Chance Finds Procedures

Contracts for civil works involving excavations should normally incorporate procedures for dealing with situations in which buried Physical and Cultural Resources (PCR) are found unexpectedly. The final form of these procedures will depend upon the local regulatory environment, including any chance find procedures already incorporated in legislation dealing with antiquities or archaeology.

Note: The general guidance provided applies when there will be an archaeologist on call. In exceptional situations in which excavations are being carried out in PCR-rich areas such as a United Nations Educational, Scientific, and Cultural Organization World Heritage site, there will normally be an archaeologist on site to monitor the excavations and make decisions. Such cases will require a modified version of these procedures, to be agreed upon with the cultural authorities.

Chance finds procedures commonly contain the following elements.

1. PCR Definition

This section should define the types of PCR covered by the procedures. In some cases, the chance find procedure is confined to archaeological finds; more commonly it covers all types of PCR. In the absence of any other definition from the local cultural authorities, the following definition could be used: "movable or immovable objects, sites, structures or groups of structures having archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance."

2. Ownership

This paragraph should state the identity of the owner of the artifacts found. Depending on the circumstances, the owner could typically be the state, the government, a religious institution, the landowner, or it could be left for later determination by the concerned authorities.

3. Recognition

This is the most difficult aspect to cover. As noted above, in PCR-sensitive areas, the procedure may require the contractor to be accompanied by a specialist. In other cases, the procedures may not specify how the contractor will recognize a PCR, and a clause may be requested by the contractor disclaiming liability.

4. Procedure upon Discovery

Suspension of Work

This paragraph may state that if a PCR is found during execution of the works, the contractor shall cease activity. However, it should specify whether all works should cease, or only the works immediately involved in the discovery, or, in some cases where large buried structures may be expected, all works may be stopped within a specified distance (for example, 50 meters) of the discovery. This issue should be informed by a qualified archaeologist.

After stopping work, the contractor must immediately report the discovery to the resident engineer. The contractor may not be entitled to claim compensation for work suspension during this period.

The resident engineer may be entitled to suspend work and request that the contractor provide excavations at the contractor's expense if the Eng. thinks that a discovery was made and not reported.

Demarcation of the Discovery Site

With the approval of the resident engineer, the contractor is then required to temporarily demarcate and limit access to the site.

No Suspension of Work

The procedure upon discovery may help the resident engineer decide whether the PCR can be removed and work can continue, for example, in cases where the find is one coin.

Chance Find Report

The contractor should then, at the request of the resident engineer, and within a specified time period, complete a Chance Find Report, recording:

- Date and time of discovery;
- Location of the discovery;
- Description of the PCR;
- Estimated weight and dimensions of the PCR; and
- Temporary protection implemented.

The Chance Find Report should be submitted to the resident engineer and other concerned parties as agreed upon with the cultural authority and in accordance with national legislation. The resident engineer, or other party as agreed, is required to inform the cultural authority accordingly.

Arrival and Actions of Cultural Authority

The cultural authority ensures that a representative will arrive at the discovery site within an agreed upon time, such as 24 hours, and determines the action to be taken. Such actions may include:

- Removal of PCR deemed to be significant;
- Execution of further excavation within a specified distance of the discovery point; or
- Extension or reduction of the area demarcated by the contractor.

These actions should be taken within a specified period, for example, seven days. If the cultural authority fails to arrive within the stipulated period (for example, 24 hours), the resident engineer may have the authority to extend the period by a further stipulated

time. If the cultural authority fails to arrive after the extension period, the resident engineer may have the authority to instruct the contractor to remove the PCR or undertake other mitigating measures and resume work. Such additional works can be charged to the contract. However, the contractor may not be entitled to claim compensation for work suspension during this period.

Further Suspension of Work

During this seven-day period, the cultural authority may be entitled to request the temporary suspension of the work at or in the vicinity of the discovery site for an additional period of up to, for example, 30 days.

The contractor may or may not be entitled to claim compensation for work suspension during this period. However, the contractor will be entitled to establish an agreement with the cultural authority for additional services or resources during this further period under a separate contract with the cultural authority.

5.3 Dam Safety Measures Report

This report is used when the purpose of the project is the rehabilitation of an existing dam or a dam under construction.

1. Purpose and Scope of Work

The purpose of the dam safety assessment is to prepare a reconnaissance-level assessment of quality management of a dam or weir, and of the reliability of the water source. The work will involve initial and wrap-up meetings with personnel responsible for the dam/weir; a field examination; and a DSMR of findings and recommendations. If deemed necessary, the report will provide a ToR for more thorough follow-up activities to identify (to feasibility level with cost estimates) the investments and other measures needed to ensure the safety of the dam/weir.

2. Qualifications of the Dam Specialist

The work will be carried out by a dam specialist (DS) independent from the owner/operator of the dam/weir and who has not been associated with the design, construction, and operation of the dam/weir. The DS will have appropriate qualifications and substantial experience with the design, construction, operation and maintenance of dams, especially in developing countries.

3. Investigations of Operating Conditions

The owner/operator of the dam/weir will provide the DS with the following information:

- Construction year, first impoundment;
- Dam size: height (m), crest length (m);
- Reservoir size (m^3);
- Dam type;
- Estimated population downstream that would be threatened by dam failure; and
- Estimated replacement cost.

The DS will discuss with the owner/operator past and current operations and maintenance (O&M) practice with particular reference to:

- Existing records;
- Maintenance logbooks;
- Instrumentation and monitoring;
- Emergency preparedness;
- O&M resources (human and financial); and
- Status of reservoir sedimentation and measures to prolong the life of storage (reservoir conservation).

4. Investigations of Structural Conditions

Depending on the type of dam/weir, a suitable checklist for the inspection activities will be used. Inspection details are left to the DS who will carry out the task; however, the inspection report should contain the following information:

- Construction year, first impoundment;
- Dam/weir size: height (m), crest length (m);
- Reservoir size (m^3);
- Dam type;
- Geotechnical aspects of foundations;
- Design flood return period (years);
- Availability of as-built drawings;
- Spillway reliability assessment;
- Bottom outlet reliability assessment;
- Seepage;
- Deformations, settlements;
- Conditions of slopes/concrete structures;
- Active storage (m^3);
- Estimated population downstream that would be threatened by dam failure; and
- Estimated replacement cost.

5. Investigations of Regulatory Framework

The DS will:

- Discuss the existing regulatory framework for dam/weir safety with relevant authorities (regulator, line ministries, utilities, and others);
- Compare the existing regulatory framework, in matrix format, with comments as necessary regarding the essential elements identified in the World Bank's *Regulatory Frameworks for Dam Safety—A Comparative Study*[2];
- Identify opportunities and constraints to achieving the essential elements; and
- If judged feasible, develop reference ToR for an action plan aimed at achieving the essential elements in the national context (priorities, institutional reforms, incentives, enforcements, and so forth)

6. Dam Safety Report

The DS will produce a Dam Safety Report that includes:

- Description of the dam/weir, ownership, and regulatory framework;
- Dam safety assessment according to international standards (such as the International Commission on Large Dams);

[2] D. Bradlow, A. Palmieri, and Salman M. A. Salman, *Regulatory Frameworks for Dam Safety—A Comparative Study*, World Bank Law, Justice, and Development Series, Washington, DC (2002).

- Structural measures required to bring safety to acceptable standards, including a preliminary cost estimate differentiating interventions in three categories: (i) emergency (human life at immediate risk); (ii) urgent (likely to pose a risk to human life, major assets at risk); and (iii) significant (any needed rehabilitation beyond meaningful maintenance);
- Non-structural measures (instrumentation and monitoring, standby electricity supply, training, dam safety plans) to be implemented to make dam safety sustainable after rehabilitation; reference should be made to OP/BP 4.37 Safety of Dams, and appendices of *Regulatory Frameworks for Dam Safety*;
- Preliminary assessment of reservoir sedimentation status and recommendations to prolong life of storage facilities;
- Resources needed for reliable O&M (human resources and recurrent costs);
- Overall assessment of challenges and opportunities for the management of the dam/weir; and
- TORs for the preparation of feasibility studies for any required rehabilitation measures (structural and non-structural).

5.4 Public Consultation Plan

The purpose of community involvement is not to find the "right" answer from the community, but to engage the community in the project so that they can share ownership and have the opportunity to inform the design process. It will also give the community the comfort of knowing early on in the process the mechanism through which affected individuals/households can make their voices heard. In developing a strategy for public involvement, there are number issues to be considered:

- Define goals clearly;
- Secure commitment to effective implementation;
- Plan consultation timing and phasing;
- Provide adequate resources;
- Identify and acknowledge site-specific sensitivities;
- Identify and acknowledge historical context;
- Recognize the interest of developers/operators; and
- Be prepared to hear different views.

In building a public involvement program, the following outline must be followed:

- Identify all stakeholder groups (typically integrated with social assessment)**.** Who will be affected directly and indirectly? Who else might have an interest or feel that they are affected?

- Identify the key issues for which public involvement will be required (scoping). These key issues would include:
  - Environmental and social issues, or decisions at stake;
  - Key organizations and interested parties involved;
  - Local authorities and the agencies involved;
  - Size of the issue or importance of the decision; and
  - Urgency and time frame.

- Understand the decision-making process:
  - Identification of parties making the decisions; and
  - Where in the project cycle decisions are made.

- Determine the necessary level of involvement. Meaningful public involvement takes place at three levels:

  - Conveying information to the public;
  - Listening to the opinions and preferences of the public; and
  - Involving the public in decision-making.

The nature and size of the project, combined with both the nature and number of stakeholders and the status of national legislation, will largely define when, where, and at what level public involvement is required for an EA and the environmental management plan.
Timely disclosure of information is key, and it may be useful to develop systems to ensure that stakeholders receive information on time and in an accessible format. While it is important that consultation take place before major decision points, the aim should be to facilitate consultation throughout the preparation and implementation phases. This implies that consultation will often be necessary as part of the research effort of the environmental assessment and in the development of mitigation measures during the analysis phase of the study. When building information disclosure systems:

- Select most effective involvement techniques to be used;
- Define a communication methodology; and
- Develop a budget.

Table: Methods and Levels of Public Involvement

Method	Description	Target	Level of public involvement	Public involvement analysis
Media announcement	– Operator will describe what is occurring – Operator could solicit input from the general public	General public	– Education – Information feedback	– No participation – Some participation
Storefront access	– Operator has open door policy for public to walk in and discuss project, issues, and offer input	General public	– Education to information feedback	– None to some participation
Newsletter	– Operator forwards regular progress newsletters to selected individuals and groups (stakeholders)	Identified stakeholders, groups, and individuals	– Education	– No participation
Questionnaire	– This method is more for gathering information as a project input	General public	– Education and information	– Could be reasonable participation

			gathering, but could be categorized as consultation as well	
Interest group meetings	– Operator holds regular meetings with different interest groups to educate – For information feedback – For input to decision making	Identified stakeholders, groups	– Education – Information feedback – Consultation or joint planning	– No participation – Some participation – More and possibly significant participation
Advisory groups	– Operator forms an advisory group of representatives of various stakeholder groups	Advisory groups of selected individuals	– Consultation – Joint planning	– Some participation – Significant participation
General meetings	– Operator holds general meetings at strategic times during the process	General public	– Education – Information feedback	– No participation – Some participation
Knowledgeable and influential persons	– Operator identifies the knowledgeable and influential individuals in the community	Knowledgeable and influential persons	– Education – Information feedback – Consultation	– No participation – Some participation – Some participation, but could be very significant
Planning group	– Operator assembles a group from the stakeholders who will provide planning input	Planning group of selected or elected individuals	– Joint planning	– Very significant participation

Annex 6: Templates for Environmental and Social Management Instruments

6.1 Environmental and Social Screening Form

ESSF

ENVIRONMENTAL AND SOCIAL SCREENING FORM

1. General Information			
Name of the project:			
Implementing Agency:			
Component of WSDP:	□ Water Resources Management □ Rural Water Supply and Sanitation Services □ Urban Water Supply and Sanitation Services		
Location:	**i) Region:** **ii) District:** **iii) Village:**		
Evaluator name:		**Date of field visit:**	

2. Project	
Description and general purpose of the project: _____ _____ _____ _____	**Specific works and activities to be undertaken** - _____ _____ - _____ _____

3. Stakeholders	
Direct: - _____ _____ - _____ _____	**Indirect:** - _____ _____ - _____ _____

4. Potential impacts and measures		
Impacts		**Measures**
Positive:	**Direct:** - _____ _____ - _____	- _____ _____ - _____

	_____	_____
	Indirect: - _____ _____ - _____ _____	- _____ _____ - _____ _____

Negative:	**Direct:** - _____ _____ - _____ _____	- _____ _____ - _____ _____
	Indirect: - _____ _____ - _____ _____	- _____ _____ - _____ _____

5. First Preliminary Classification: Type of project		
Water Supply System		
Components: (Apply Figure 2) □ Intake (spring or river) □ Intake (dam + reservoir) □ Intake (borehole) □ Main Transmission Pipeline □ Treatment Plant □ Treated Water Pipeline □ Storage Tank □ Distribution network	**Magnitude: (Apply Table 4)** □ Large □ Medium □ Small **Scope: (Apply Table No. 7)** □ New Construction □ Improvement □ Rehabilitation □ Maintenance	Applying **Table 8** the classification in function of the type of project is: □ a □ b □ c □ d
Sewerage System		
Components: (Apply Figure 3) □ Sewerage Network □ Pump Station □ Wastewater Pipeline □ Sewerage Treatment Plant □ Effluent pipeline	**Magnitude: (Apply Table No. 5)** □ Large □ Medium □ Small **Scope: (Apply Table No. 7)** □ New Construction □ Improvement □ Rehabilitation □ Maintenance	Applying **Table 9** the classification in function of the type of project is: □ a □ b □ c □ d
Buildings		

Components: □ Civil construction □ Equipment □ Others	**Magnitude: (Apply Table No. 6)** □ Large □ Medium □ Small **Scope: (Apply Table No. 7)** □ New Construction □ Improvement □ Rehabilitation □ Maintenance	Applying **Table 10** the classification in function of the type of project is: □ a □ b □ c □ d

6. Second Preliminary Classification: Environmental Site Sensitivity		
HIGH	**MODERATE**	**LOW**
▢ Protected Areas in the DIA (National Parks, Forest Reserve, etc.)	□ Protected Areas in the IIA or in Buffer Zones (National Parks, etc)	□ Intervened areas out of Protected Areas (national parks, etc.)
▢ High danger of environmental degradation (deforestation, hunt, etc.)	□ Moderate danger of environmental degradation (deforestation, others)	□ Low danger of environmental degradation (deforestation, etc.)
▢ Sensitive or critical ecosystem in the DIA (wetlands, mangrove swamps, forests, and others)	▢ Sensitive or critical ecosystems in the IIA (wetlands, mangrove swamps, forests, and others)	▢ Low sensitive or critical ecosystems in the influence area (wetlands, mangrove swamps, forests, others)
▢ Mountainous topography (>35% of slope) when the project expects construction of road, pipelines, etc.	□ Wavy topography (15–35% of slope) when the project expects the construction of road, pipelines,	□ Flat topography (<15% of slope), when expects the construction of access road, pipelines, etc.
□ igh risk to natural disasters (floods, earthquake, others)	□ Moderate risk to natural disasters (floods, earthquake, others)	□ Low risk to natural disasters (floods, earthquake, others)
▢ Presence of places of significant cultural/historical interest in the Direct Influence Area	□ Presence of places of cultural and historical significance in the Indirect Influence Area	□ Absence of places with cultural and historical significance
Environmental Site Sensitivity: _____		

7. Environmental Risk Level: Category	
Category A: Projects with high environmental risk level **Category B:**	**Matrix 1. Environmental and Social Category** **Preliminar** | **Site sensitivity**

Projects with moderate environmental risk level

Category C:
Projects with low environmental risk level

y classification	High	Moderate	Low
a	A	A	B
b	A	B	B
c	B	B	C
d	B	C	C

8. Social Risk Level		**Social Risk Level**
□ Potential **Vulnerable Group** (affect/ benefit) is expecting in the project: OP/BP 4.10 **If is High, apply next section VGSF**	□ In the Direct Influence Area	**HIGH**
	□ In the Indirect Influence Area	**MODERATE**
	□ No presence of Vulnerable Groups	**LOW**
□ Potential **Resettlement/Compensation** is expecting in the project: **If is High or Moderate, apply next section RSF**	□ More than 200 PAPs	**HIGH**
	□ More than 10 PAPs less than 200 PAPs	**MODERATE**
	□ Less than 10 PAPs	**LOW**

9. Environmental and Social studies required by National Law and Safeguard Policies		
□ **OP/BP 4.01**	□ Cat. A □ Cat. B (new project) □ Cat. B (existing project) □ Cat. C	□ Environmental and Social Impact Assessment (ESIA) □ Preliminary Environmental and Social Impact Assessment (PESIA) □ Environmental and Social Audit Report (ESAR) □ Good Environmental and Social Practices Guidelines
□ **OP/BP 4.10**	□ HIGH	□ Vulnerable Group Plan (VGP)
□ **OP/BP 4.12** □ **OP/BP 4.12**	□ HIGH □ MODERATE	□ Resettlement Action Plan (RAP) □ Abbreviated Resettlement Action Plan (ARAP)
□ **OP/BP 4.11**	□ HIGH	□ Chance Find Procedures Plan (CFPP) to be include as part of the ESIA or PESIA
□ **OP/BP 4.37**	□ HIGH	□ Dam Safety Measures Report (DSMR) – High risk Dams according with the OP/BP 4.37

		□ Others: _____

10. Environmental Budget for the ESMP implementation

- Estimated budget of the project: US$ _____

- Estimated budget for the ESMP implementation _____

TOTAL estimated budget of the project: _____

Nota: This budget doesn't include the resettlement and vulnerable group plans implementations) _____

US$ _____

Matrix 2. Environmental Budget for the ESMP implementation

Preliminary classification	Site sensitivity		
	High	Moderate	Low
A	6%	5%	4%
B	5%	4%	3%
C	4%	3%	2%
d	3%	2%	1%

11. Map, Design, and/or Other Supporting Drawing and Layout

12. Observations

Comments:
_____
_____
_____
_____

Officer:	Signature:	Date:

If in Section 8 of the ESSF, the information about the Involuntary Resettlement is "checked", the next form should be applied.

RESETTLEMENT/COMPENSATION SCREENING FORM (RSF)

Probable Involuntary Resettlement Effects	Yes	No	Not known	Possible	Remarks
– Will the project include any physical construction work?					
– Does the project include upgrading or rehabilitation of existing physical facilities?					
– Is any project effect likely lead to loss of housing, other assets, resource use, or incomes/livelihoods? Estimated number?					
– Is land appropriation likely to be necessary? Estimated area?					
– Is the site for land appropriation known?					
– Is the ownership status and current usage of the land known?					
– Will easements be utilized within an existing right of way?					
– Are there any people without land titles who live or earn their livelihood at the site or within the right of way? Estimated Number?					
– Will there be loss of housing? Estimated number?					
– Will there be loss of agricultural plots?					
– Will there be losses of crops, trees, or fixed assets?					
– Will there be loss of businesses or enterprises?					
– Will there be loss of incomes and livelihoods?					
– Will people lose access to facilities, services, or natural resources?					
– Will any social or economic activities be affected by land use–related changes?					
If involuntary resettlement impacts are expected:					
– Are local laws and regulations compatible with the World Bank's Involuntary Resettlement Policy?					
– Will coordination with the MoW be required to deal with land appropriation?					
– Does the IA retain sufficient skilled staff for resettlement planning and implementation?					
– Are training and capacity-building interventions required prior to resettlement planning and implementation?					
Information on affected persons:					
– Any estimate of the likely number of households that will be affected by the project?					Number: __
– Are any of the households poor, headed by a woman, or vulnerable to poverty risks?					Number: __
– Are any of the PAP from vulnerable groups? If yes, explain:					Number: __

Involuntary Resettlement/Compensation Classification:
After reviewing the answers above, the project team leader and social development/resettlement specialist agree, subject to confirmation, that the project is categorized as noted below.

[ ] HIGH risk: Significant resettlement impact (more than 200 people affected),	
	Full Resettlement/Compensation Action Plan (RAP) is required.
[ ] MODERATE risk: Limited resettlement impact (less than 200 people affected),	
	Abbreviated Resettlement Action Plan (ARAP) is required.
[ ] LOW risk: No resettlement impact,	
	No resettlement plan is required.
Consultant support is required to prepare RAP or ARAP.	

If in Section 8 of the ESSF, the information about the vulnerable groups is "checked", the next form should be applied.

VULNERABLE GROUP SCREENING FORM (VGSF)

1. Identification of vulnerable group in the project area				
Impact on vulnerable groups (VGs)	**Not known**	**Yes**	**No**	**Remarks or identified problems**
– Are there vulnerable groups (VGs) present in project locations?				
– Are they in the direct influence area (DIA) or in the indirect influence area (IIA)?				
– Do they maintain distinctive customs or economic activities that may make them vulnerable to hardship?				
– Will the project restrict their economic and social activity and make them particularly vulnerable in the context of project?				
– Will the project change their socioeconomic/cultural integrity?				
– Will the project disrupt their community life?				
– Will the project positively affect their health, education, livelihood or social security status?				
– Will the project negatively affect their health, education, livelihood or social security status?				
– Will the project alter or undermine the recognition of their knowledge, preclude customary behaviours or undermine customary institutions?				
– In case no disruption of vulnerable community life as a whole will there be loss of housing, strip of land, crops, trees and other				

fixed assets owned or controlled by VG households?				

2. Anticipated project impact on vulnerable groups		
Project activity and output	**Anticipated positive effect**	**Anticipated negative effect**
1.		
2.		
3.		

3. Decision on the Social Classification	
☐	– Should be classified as a **HIGH** risk and a Vulnerable Group Plan (VGP) is required
☐	– Should be classified as **MODERATE** or **LOW** risk and no VGP or specific action is required

4. Observations		
Comments: _____ _____ _____ _____		
Officer:	Signature:	Date:

6.2 Environmental and Social Monitoring Report

ESMR

ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Name of the projec			
Implementing Agency:			
Component of WSDP:	□ Water Resources Management □ Rural Water Supply and Sanitation □ Urban Water Supply and Sanitation	**Project Category:**	□ □ □
Location:	**i) Region:** **ii) District** **iii) Village:**		
Evaluator name:		**Sig:** **Date:**	

a. People participating in the site visit:

Name	Institution	Position	Signature
1.			
2.			
3.			

b. Status of the legal and safeguards compliance:

iv) What types of environmental and social studies were required by the project during the preparation phase? ESIA, PESIA, RAP, ARAP, VGP, Others.
v) Did the project have the Environmental Certificate?
vi) Were the safeguards instruments (ESIA, RAP, VGP) disclosed? Date of disclosure.

c. Status of project execution

vii) date of the commencement of the works
viii) expected date of completion of the works
ix) progress of the project, in terms of percentage
x) Have the main activities of the project with a potential environmental impact been carried out?

d. Environmental and social effects observed during the field visit

Summary of the environmental effects observed during the field visit:
- Predicted effects and nature of observation; and
- Unpredicted effects and nature of observation.

e. Compliance of Environmental and Social Specifications

Analysis of project compliance with environmental design specifications (Environmental

and Social Management Plan – ESMP), including environmental and social control, mitigation, and compensation measures, if any.

f. Conclusions and recommendations

Corrective measures are recommended, when necessary, for contractors, in order to take into account, the environmental and social problems observed during the site visit.

6.3Environmental and Social Final Report

ESFR

ENVIRONMENTAL AND SOCIAL FINAL REPORT

Name of the projec				
Implementing Agency:				
Component of WSDP:	□ Water Resources Management □ Rural Water Supply and Sanitation □ Urban Water Supply and Sanitation	**Project Category:**	□ □ □	
Location:	**i) Region:** **ii) District** **iii) Village:**			
Evaluator name:		**Signature:**	**Date:**	

On (date) _____, the final review of the environmental and social aspects corresponding to the project _____ was conducted to verify fulfilment of the prevention, mitigation and/or compensation measures proposed for the project in the ESMP, as well as to ascertain if any other negative impact has occurred during the period in which the activity took place. Content was integrated by the following persons:

Name	Institution	Position	Signature
1.			
2.			
3.			

a. Background

Describe case record including dates, brief narration of the problem, and recommendations from previous site visits.

b. Results of the review

Describe in detail the conditions in which the mitigation measures were developed, the grade of fulfilment, and current state, explaining when necessary the reasons why measures were not completed. Completing the table below will help visualize this information.

No.	Mitigation measures	Accomplishment			Time needed to accomplish measures	Observations
		Yes	No	%		

c. Conclusions and recommendations

Based on the examination, prepare conclusions regarding fulfillment of the mitigation measures and recommendations.

Annex 7: NEMC Forms for the environmental assessment process

FORM 1: APPLICATION FORM

Form No. 1 Regulation No. 5(3)

APPLICATION FORM

THE ENVIRONMENTAL MANAGEMENT ACT, CAP.191

DETAILS OF PROPONENT/DEVELOPER
Project name and location……..
Name (Person or
Firm)……..
TIN
……
Physical Address……..
Name of contact person……
Telephone No. ……..
Fax No.……
E-mail address …….

DETAILS OF ENVIROMENTAL IMPACT ASSESSMENT EXPERT
Name (Person or Firm)……..
TIN ……
Physical Address……..
Name of contact person……..
Telephone No. ……..
Fax No. ……
E-mail address …….

Type B2 Projects

Form No.2 Regulation 6(1)

PROJECT BRIEF

Application Reference No……..

THE ENVIRONMENTAL MANAGEMENT ACT, CAP.191
SUBMISSION OF PROJECT BRIEF

PART A
DETAILS OF PROPONENT/DEVELOPER
Name (Person or Firm)……..
TIN ……
Physical Address……..
Name of contact person……..
Telephone No. ……..
Fax No……..
E-mail address……

PART B
DETAILS OF THE PROJECT
1. PROPOSED UNDERTAKING/DEVELOPMENT
(a) Title of Proposal (general classification of undertaking);
(b) Description of Proposal (nature of undertaking, unit processes [flow diagram], raw materials, list of chemicals; {source, types an quantities}, storage facilities, wastes/by-products {solid, liquid and gaseous) and their management;
(c) Scope of Proposed Project (size of labor force and working hours, equipment and machinery, installed/production capacity, product type, area covered facility/proposal, market);
(d) Project cost; and
(e) Technology to be used.

2. PROPOSED SITE DESCRIPTION
(a) Proof of land ownership;
(b) Location: Administrative Location and Latitude and Longitude;
(c) Attach a site layout plan and location maps;
(d) Current zoning;
(e) Distance to nearest residential and/or other facilities;
(f) Adjacent land uses (existing & proposed);
(g) A declaration that the project site is not within or near the sensitive Ecosystem/areas (e.g. water bodies, protected areas, schools, public utilities and defense strategic areas); and
(h) Land Acquisition Process (Relocation or Compensation) attach Resettlement Action Plan.

3. INFRASTRUCTURE AND UTILITIES
(a) Structures (buildings and other facilities);
(b) Land required;
(c) Water (source, quantity;
(d) Power (type, source & quantity);
(e) Road;
(f) Other major utilities (e.g. sewerage, etc.).

4. ENVIRONMENTAL IMPACTS
(a) Potential environmental effects of proposed undertaking (both construction, Operation and decommission phases);
(b) project alternatives (site, design and/or technology);

5. OTHER ENVIRONMENTAL ISSUES

(a) Potential significant risks and hazards associated with the proposed project (including occupational health and safety) and its Emergence Preparedness and Response Plan; and
(b) State briefly relevant environmental studies already done and attach copies as appropriate.

6. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN
7. MONITORING PLAN
8. DECOMMISSIONING PLAN

PART C
DECLARATION BY THE PROPONENT
I hereby certify that the particulars given above are correct and true to the best of my knowledge.
Name……
Position……
Signature……..
On behalf of……..
Date……
(Firm name and Seal)

PART D
DETAILS OF ENVIRONMENTAL IMPACT ASSESSMENT EXPERT
Name (individual/firm)……..
Certificate of registration No……..
Address……
Tel……..Fax……..e-mail……

PART E
FOR OFFICIAL USE
Decision of the Council……

Comments
……
……
……
……
Officer……Sign……Date……..
Note that:
1. If the Project Brief does not contain sufficient information required under these Regulations the applicant may be required to provide further information concerning the project or be notified of any defects in the application and may be required to provide additional information.
2. Any fraudulently or false statement in a Project Brief will cause the Council to invoke relevant the provisions of these Regulations.

Important notices: Please submit the following:
(a) Three copies of the project brief;
(b) The prescribed fee to the Director General, of the National Environment Management Council, Plot No.28, 29 & 30 Regent Street,

P.O. Box ……,
11404 Dar es Salaam.
Tel ……..
Fax……...
E-mail……

Type B1 Projects

Form No. 4 Regulation 10(1)

SCOPING REPORT

Application Reference No……..

THE ENVIRONMENT MANAGEMENT ACT, CAP.191

SUBMISSION OF SCOPING REPORT

PART A

DETAILS OF PROPONENT/DEVELOPER

Name (Person or Firm)……..

TIN ……

Physical

Address……..

Name of contact person……..

Telephone No. ……..

Fax No.……..

E-mail address

……

PART B

DETAILS OF THE PROJECT

1. PROPOSED UNDERTAKING/DEVELOPMENT

(a) Title of Proposal (general classification of undertaking);

(b) Description of Proposal (nature of undertaking, unit processes [flow diagram], raw materials, list of chemicals {source, types an quantities}, storage facilities, wastes/by-products {solid, liquid and gaseous) and their management;

(c) Scope of Proposed Project (size of labor force and working hours, equipment and machinery, installed/production capacity, product type, area covered facility/proposal, market);

(d) Project cost; and

(e) Technology to be used.

2. PROPOSED SITE DESCRIPTION

(a) Proof of land ownership;

(b) Location: Administrative Location and Latitude and Longitude;

(c) Attach a site layout plan and Location map;

(d) Current zoning;

(e) Distance to nearest residential and/or other facilities;

(f) Adjacent land uses (existing & proposed);

(g) A declaration that the project site is not within or near the sensitive Ecosystem/areas (e.g. water bodies, protected areas, schools, public utilities and Defense strategic areas); and

(h) Land Acquisition Process (Relocation or Compensation) attach Resettlement Action Plan;

3. INFRASTRUCTURE AND UTILITIES

(a) Structures (buildings and other facilities);

(b) Land required;

(c) Water (source, quantity and quality)

(d) Power (type, source & quantity);

(e) Road; and

(f) Other major utilities (e.g. sewerage, etc.).

4. ENVIRONMENTAL IMPACTS
(a) Potential environmental effects of proposed undertaking (both construction, Operation and decommission phases); and
(b) Project alternatives (site, design and/or technology).

5. OTHER ENVIRONMENTAL ISSUES
(a) Potential significant risks and hazards associated with the proposed project (including occupational health and safety) and its Emergence Preparedness and Response Plan; and
(b) State briefly relevant environmental studies already done and attach copies as appropriate.

6. METHODOLOGIES OF CONDUCTING THE SCOPING EXERCISE

7. SYNTHESIS OF THE RESULTS OF THE SCOPING

8. STAKEHOLDERS INVOLVEMENT

9. PROJECT ALTERNATIVES

10. ENVIRONMENTAL MANAGEMENT PLAN

11. MONITORING PLAN

12. DECOMMISSIONINGPLAN

PART C
DECLARATION BY THE PROPONENT
I hereby certify that the particulars given above are correct and true to the best of my knowledge.
…… ……..
Name……..
Position…….
Signature……..
On behalf of……..
Date……
(Firm name and Seal)

PART D
DETAILS OF ENVIRONMENTAL IMPACT ASSESSMENT EXPERT
Name (individual/firm)……..
Certificate of registration No……..
Address……
Tel……..Fax……..……..e-mail……

PART E
FOR OFFICIAL USE
Decision of the Council……..

Comments ……..
……..
……
……
Officer……Sign……Date…….
NB:
1. If the Project Brief does not contain sufficient information required under the Environmental Impact Assessment and Audit Regulations the applicant may be required to conduct an environmental impact assessment study.
2. Any person who fraudulently makes a false statement in a project report or alters the project report commits an offence.
Important notices: Please submit the following:
(a) Three copies of the project brief;
(b) The prescribed fee to the Director General, of the National Environment Management Council, Plot No.28 29 & 30 Regent Street,
P.O. Box……,
11404 Dar es Salaam.
Tel …….. Fax……..
E-mail ……

FORM 2: Submission of the Environmental Impact Assessment Statement

FORM No. 2: SUBMISSION OF THE ESIA

Application Reference No.....

PART A: PROPONENT DETAILS

Name of proponent (Person or Firm).....
PIN No.....
Address.....
Name of contact person.....
Telephone No. .....

Fax No. .....
E-mail .....

PART B: DETAILS OF THE ENVIRONMENTAL IMPACT ASSESSMENT/STATEMENT

Title of the proposed project.....
Objectives and scope of the project.....
Description of the activities.....
Location of the proposed project.....
Proposed environmental management plan.....

PART C: DECLARATION BY THE PROPONENT

I hereby certify that the particulars given above are correct and true to the best of my knowledge:

Name: .....
Signature.....
On behalf of.....
Position.....
Date.....

PART D: DETAILS OF THE ENVIRONMENTAL IMPACT ASSESSMENT EXPERT

Name (individual/firm).....
.....
Certificate of registration No.....
Address.....
..... Tel.....Fax.....E-mail.....

PART E: FOR OFFICIAL USE

Decision of the Council.....
.
Comments
.....
.....
.....
.....

Officer.....Sign.....Date.....
.....

NB: Please submit the following:

(a) Three (3) copies of this form;
(b) Ten (10) copies of the project brief; and
(c) The prescribed fees to:

Director General,
The National Environment Management Council,
..... P.O. Box .....
Dar es Salaam. Tel .....Fax.....
E-mail.....

Annex 8: Environment, Social, Health and Safety (ESHS) Checklist

MINISTRY OF WATER

ENVIRONMENT, SOCIAL, HEALTH AND SAFETY (ESHS) CHECKLIST

(This checklist is intended to be used by MoW & IA's- ESHS Inspectors and Contractors for Monthly Monitoring and Self-Assessment respectively.

(Put (√) *for YES*, (X) *for No*, and (NA) *for Not Applicable*)

NN	ITEM	YES	NO	DESCRIPTION	REMARK
1.	**GENERAL ENVIRONMENTAL MANAGEMENT OF THE PROJECT.**				
	❖ **Employment and gender Approach**				
1.1	The local communities enjoy priority to the jobs. The Local Gov. was invited to submit list of proposed workers?				
1.2	Before starting recruitment, realistic description of the labour needs and the payment for each type of work was presented?				
1.3	Women are guaranteed equal opportunities in access of the jobs? *Invitation should include Statement "woman are highly encouraged to apply" and the interview panelist should include both men and women.*				
1.4	Is 5% of labour are women				
	❖ **Environmental awareness rising through induction course.**				
1.5	All personnel involved in the project activities are informed of the need to preserve natural and sensitive habitats in the project's area of influence.				
	❖ **Prevention of HIV/AIDS and Malaria**				
1.6	Awareness campaigns conducted on HIV/AIDS at work place?				
1.7	Pamphlets on HIV/AIDS are available at relevant places?				
1.8	Condom distributed at strategic places weekly?				
1.9	Awareness campaigns conducted on possible Malaria/fecal oral transmission diseases at work place?				
1.10	Good housekeeping and hygiene practices against malaria (prevention of standing water) and fecal oral transmission diseases?				
1.11	Distribution of impregnated nets to all staff at campsites and fumigation done?				
	❖ **Increase in crime**				
1.12	Cooperation with the local Gov. police about any crime				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
	noted at work places and camps?				
	❖ **protection of fauna and flora**				
1.13	Wild animal mentioned in ESMP which needs to be rescued were identified, rescued and transferred to a safe place?				
1.14	Tree falling, bush and structure clearing conducted after authorization of the Engineer? *Check filled daily authorization permits.*				
2	**SITE YARD**				
2.1	The location of ancillary infrastructure was chosen carefully in order to reduce disturbance of habitats and neighborhood?				
2.2	Infrastructure built in areas where vegetation is not intact?				
2.3	Pre-existing access roads are being use? Where possible.				
2.4	After the works have ended and the temporary infrastructure has been removed, degraded areas rehabilitated and to restore the previous situation?				
	❖ **Spill management**				
2.5	Storage and containment arrangement are adequate? *Check location and if are in continuous use.*				
2.6	All spills/leakage reported and logged?				
2.7	Spillage/ leakage of chemical /waste water timely attended?				
2.8	Spillage/ leakage of fuel/oil are timely attended and affected soil rehabilitated?				
2.9	Spillage/ leakage of sewage are timely attended and area disinfected?				
2.10	Spillage/ leakage of other material are timely attended?				
2.11	Oil and Water Separator Boxes (OWSB) working normally.				
2.12	Spill kits and drip trays in place and being used				
2.13	All bulk fuel/water facilities with impermeable bases are adequately fixed with warning signs?				
2.14	All bulk fuel/water facilities stored at least 5m away from all water courses or residential facilities?				
2.15	Use of drip trays in areas where oil drums, fuel containers, chemical containers are handled?				
	❖ **Concrete batching plant**				
2.16	Is there a noticeable dust emission?				
2.17	Noticeable noise persistence?				
2.18	Noticeable effluent (concrete) discharge (suspension solids, etc)?				
2.19	Reuse of batching plant water?				
	❖ **Asphalt plant**				
2.20	Noticeable noise perception?				
2.21	Noticeable air pollutant emission?				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
2.22	Noticeable effluent discharge (oils, etc).				
	❖ **Other facilities (workshops, fueling areas,**				
2.23	Containment basin (good state?)				
2.24	Waste management (good state?)				
2.25	Liquid spillage (good state?)				
	❖ **Collection and segregation of Non-hazardous Waste**.				
2.26	Is the worksite in a clean and tidy conditions, with waste placed into correct receptacles?				
2.27	Sufficient number of containers?				
2.28	Waste segregated in different categories?				
2.29	Sign to indicate which waste is to be deposited in each area				
2.30	Drum/container for metal waste in place?				
2.31	Drum/ container for wood waste in place?				
2.32	Has all waste wood had the nails remove prior to segregation?				
2.33	Drum/container for stone?				
2.34	Drum/container for fuel/oil?				
2.35	Drum /container for spilled chemicals?				
2.36	Drum/container for paper?				
2.37	Drum/container for food waste?				
2.38	Drum/container for plastic?				
2.39	Are all waste containers and bulk waste in areas so they do not create a fire hazard?				
	❖ **Hazardous waste Management**				
2.40	All hazardous waste stored properly?				
2.41	State/load of containers for waste oil?				
2.42	State/load of receptacles for hazardous solids wastes (oil filters, accumulators, etc)?				
2.43	State/load of receptacles for hazardous for contaminated wastes (contaminated soil, containers etc.)?				
2.44	Offsite disposal transfer notes completed?				
	❖ **Chemicals and hazardous substances management**				
2.45	All hazardous material not in use are stored within hazmat (hazardous materials) area?				
2.46	MSDS information is up to date?				
2.47	Are all chemicals correctly labeled and stored according to the manufacturer's instructions?				
2.48	Are all bulk fuel facilities situated on impermeable bases and adequately signed?				
2.49	Are all septic tanks for toilets facilities or portable toilets themselves, emptier on a regular basis to prevent effluent leakage to the environmental?				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
	❖ **Emergency Equipment**				
2.50	Spill kits/sand/saw dust used for absorbing chemical spillage readily accessible?				
2.51	Mobile pump set available and				
2.52	Environmental Emergency Number readily available?				
2.53	Of relevant staff in emergency procedures?				
	❖ **Erosion and sediment management**				
2.54	Storm water drainage around your site free of pollution?				
2.55	Stockpiles of top soil surrounded by a sediment fence?				
2.56	Vegetation observed on stockpiles?				
2.57	Continuous operation and maintenance of sediment trap?				
2.58	No discharge of sediment into the municipal drainage network?				
3.0	**WORK FRONT**				
3.1	Environmental Method Statement(s) submitted and approved? Refer the Environmental and Social management Plan (ESMP) section of the ESIA report.				
	❖ **Traffic management**				
3.2	Permit delivered by the Municipality and road authority?				
3.3	Road safety signalization are in place?				
3.4	Staff to help the traffic movements (flag bearers)?				
	❖ **Prevention of road accidents**				
3.5	Observance of the rules of circulation and speed limits?				
3.6	Workers using machinery and vehicles know the speed limits?				
3.7	Adequate signposting and placed at convenient places?				
3.8	Communities informed about the danger of walking on the road or near the work sites without due precaution?				
3.9	Visibility of dangerous areas at day and night provided?				
3.10	Fencing of all working places?				
	❖ **Physical alterations of the environment outside the limits of construction**				
3.11	Was there any destruction of private property and noted?				
3.12	Needless (minimize) destruction of natural vegetation?				
3.13	Was there any interference with sites of cultural and social interest? (*Grave, warship heritage areas, springs, etc.),*				
	❖ **Excavation works**				
3.14	Spoil storage site is ready?				
3.15	Waste and sludge properly removed?				
3.16	Proper clearing of vegetation?				
3.17	Elimination of all potential sources of erosion?				
3.18	Elimination of all risk of collapse?				
3.19	Extracted material properly stockpiled?				
	❖ **Interference with riparian population**				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
	and public service				
3.20	Safe passages built over the trenches to maintain the access to the housing shops and public buildings?				
3.21	The institution responsible for the infrastructures affected are being duly informed in advance?				
3.22	All details concerning treatment of the question are being established in close coordination with the local authorities and the relevant companies/ institutions *(DCC, MC TTCL, TANROAD, etc, as applicable*) before the start of works.				
	❖ **Social conflicts due to the presence of workers from outside the community**				
3.23	Adequate code of conduct distributed among the workers providing sanctions for violations of the code				
3.24	Regular meetings with the Liaison Committee inform them of the status of pipe/road rehabilitation and any potential impacts/disturbance on their lifestyles?				
	❖ **Local nuisances to riparian population and public services**				
3.25	Meetings with the local communities (Liaison Committee) to supply information about the dates forecast for the beginning and end of the works conducted, and the occurrence of noise and the emission of dust, and explaining the respective mitigation measures?				
3.26	Watering of the dirt roads done in order to reduce the emission of dust in populated areas?				
3.27	Visible dust observed in the air from vehicles or plant?				
3.28	Excessive noise or vibration experienced by communities? *Any complain noted*				
3.29	Any visible not cleaned oil spoilage?				
4.	**QUARRIES AND BORROW PITS**				
	❖ **Exploitation**				
4.1	Authorization delivered by the competent authorities? ie *City council (Ministry of Energy and Minerals*)				
4.2	Borrow pits are located in unpopulated areas.				
4.3	Users and local communities consulted, and if the land is being used an agreement was negotiated and procedures for compensation were established as per ESMF and RMF?				
4.5	New borrow pits is located at least 100m from the main road. Where practicable, borrow pits for the extraction of aggregate sourced from high locations, a minimum of 100m from drainage lines and rivers in order to minimize sedimentation?				
4.6	Environmental Methods Statement(s) submitted and approved				
	❖ **Transportation Materials**				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
4.7	The activity is carried out at normal period (7am to 5pm)?				
4.8	Is there any orderly dumping of material on the concrete formulation site?				
4.9	The truck is released dust after daily operation?				
4.10	Driver trained in emergency procedure?				
5	**SPOIL SITE**				
5.1	Environmental Method Statement(s) submitted and approved				
	❖ **Transportation sludge**				
5.2	Is truck sealed?				
5.3	Is there any dumping of material on the roadsides?				
5.4	How Trunk is up loaded?				
5.5	Driver trained in emergency procedure?				
	❖ **Sludge cells**				
5.6	Environmental Method Statement (s) submitted by Contactor and approved?				
5.7	Impermeable membrane laid and in good state?				
5.8	No contamination of surrounding areas?				
5.9	Effective containment of sludge?				
	Check list for routine site health &safety inspection				
6.0	**GENERAL (ALL SITES)**				
6.1	Approved Health and Safety Plan on site?				
7.0	**GENERAL SAFETY (ALL SITES)**				
7.1	Work method statements prepared and available?				
7.2	Wall openings & floor holes are covered (planked) or barricade/fenced?				
7.3	Rebar caps used for protruding bars?				
7.4	Concrete work? Silica dust training documented for all? Respirators?				
7.5	Can everyone reach their place of work safely, eg. are roads, gangways, passageways, passenger hoists, staircases, ladders and scaffolds in good condition?				
7.6	Have separate pedestrian, vehicle access points and routes around the site been provided? If not, are vehicles and pedestrians kept separate wherever possible?				
	Are access routes in good condition and clearly signposted?				
7.7	Are the results of inspections recorded?				
7.8	Monitoring of personnel and/or atmosphere/noise as required?				
7.9	Site fenced?				
7.10	Access to site controlled?				
7.11	Site access registered?				
7.12	Warning signs (in local language) in place?				
7.13	Is suitable clothing provided for those who have to work in wet dirty or otherwise adverse conditions?				
7.14	Open ditches protected?				
7.15	Drop-offs protected?				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
7.16	Utility ditches flagged or barricaded?				
7.17	Do workers have the required skills, knowledge, training and information to carry out the work required of them? (including new employees, apprentices, casual workers)				
7.18	Is adequate appropriate lighting provided when work is carried out at night or in unit areas				
7.19	Have toilet facilities been installed where there is no nearby access to such facilities?				
7.20	Are there clean wash basins, warm water, soap and towels?				
7.21	Adequate potable water supply? Adequate drinking cups?				
7.22	Are sanitary facilities clean?				
7.23	Are there facilities for changing drying and storing clothes?				
7.24	Is there a site hut or other accommodation where workers can sit, make tea and prepare food?				
7.25	Posters and safety signs/warnings?				
7.26	Safety meetings held periodically? Documentation available?				
7.27	Job related safety training completed? Documentation available?				
7.28	Health and safety plan available and reviewed with workers? Documentation available?				
7.29	Accident report book?				
7.30	Induction records?				
7.31	Work place inspection records?				
7.32	Emergency procedures?				
7.33	Training records?				
7.34	Documented safe work procedures?				
7.35	H &S representatives appointed?				
7.36	Substance abuse policy in place**?**				
8.0	**HOUSEKEEPING (ALL SITES)**				
8.1	General neatness of work areas?				
8.2	Regular collection and disposal of waste and trash?				
8.3	Procedures to handle hazardous waste?				
8.4	Are there waste bins/rubbish chutes close to all work areas?				
8.5	Are the bins used?				
8.6	Nails, boards, debris removed?				
8.7	Is there a designated area for the storage of waste products?				
9.0	**TRAINING (ALL SITES)**				
9.1	Occupational health and safety training and inspections held for new employees on a regular basis?				
9.2	First Aid (and CPR) trained individuals available for medical emergencies?				
9.3	Personnel familiar with the hazards of chemicals and trade products and have read the applicable Material Safety Data Sheets (MSDSs)?				
9.4	All personnel familiar with documented emergency				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
	evacuation plan?				
9.5	Fire extinguisher familiarization provided?				
9.6	Personnel are trained in the proper selection, use and maintenance of personal protective equipment? Documentation available?				
9.7	HIV/AIDS awareness training? Does it include local community outreach?				
9.8	Documentation available for all training?				
10	**CONSTRUCTION AND OFFICE SITES (ALL SITES)**				
10.1	Topsoil recovery and storage?				
10.2	Vegetation inventory available?				
10.3	Records of compensation for felled trees?				
10.4	Hand clearance and grubbing only?				
10.5	Are the aggregate and sand suppliers legally authorized operation?				
10.6	Do the aggregation and sand supplier have approved rehabilitation plans?				
10.7	Is there storm water drainage plan?				
10.8	Is the retention basin adequate?				
10.9	Discharge monitoring records?				
10.10	Are aggregate and sand supply trucks covered?				
10.11	Are high dust areas on the worksite identified and signposted?				
10.12	Are high dust noise areas identified and signposted?				
11.0	**PERSONAL PROTECTIVE EQUIPMENT (ALL SITES)**				
11.1	Safety glasses and /or goggles available &being used (eg. Work with chemicals, welding, chipping, power tools)?				
11.2	Face shield available for bulk liquid tasks? Grinding?				
11.3	Hand protection used/worn as required?				
11.4	Foot protection worn as required?				
11.5	Hearing protection worn where required?				
11.6	Hard hats worn on construction site?				
11.7	Other protective clothing?				
11.8	Respirators if required?				
11.9	Fall protection (edge protection), full body harness & lanyard used at > 2m?				
11.10	Are inspections being accomplished periodically/ before and after use? Records maintained?				
11.11	Physicals accomplished as required?				
11.12	**EXCAVATION (ALL SITES)**				
11.13	Are holes, trenches, and cuts over 1.5 meters deep shored, slopes or trench boxes used?				
11.14	Operation supervised by responsible person?				
11.15	Spoil banks at least 100cm from edges of cut?				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
11.16	Excavation-ladders if >1.2 meters deep?				
11.17	Ladder properly secured?				
11.18	Are roads and sidewalks supported and protected?				
11.19	Excavation barricaded and lighting provided as need?				
11.20	Are equipment ramps adequate?				
11.21	Could the excavation affect the stability of neighboring structures or services?				
11.22	Registry of daily inspection by a responsible person?				
11.23	**HAND TOOLS/POWER TOOLS (ALL SITES)**				
11.24	Good housekeeping where tools are used?				
11.25	Tools grounded or double insulated?				
11.26	Grinders (portable & stationery) have guards in place?				
11.27	Impact style air tools have safety clips/retainers installed?				
11.28	Pneumatic power tools have hoses secured?				
11.29	Portable circular saws equipped with protective guards?				
11.30	Unsafe hand tools are prohibited?				
11.31	Impact tools, hammers kept free of splinters?				
11.32	Handles free of crackers and attached to tool properly?				
11.33	Inspections and proper maintenance accomplished prior to use?				
11.34	Damaged or malfunctioning tools tagged out until repaired or replaced?				
11.35	Tools protected from unauthorized use?				
11.36	Instruction and supervision provided?				
11.37	Cords included in electrical inspection?				
12.0	**LADDER/STAIR SAFETY (ALL SITES)**				
12.1	Ladders are safe/in good condition and inspected as appropriate?				
12.2	Ladders secured to prevent slipping, sliding, or falling?				
12.3	Do side rails extend 1m above top of landing?				
12.4	Do fixed ladders in excess of 6m have fall protection?				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
12.5	Stepladders are only used in open position?				
12.6	Proper maintenance and storage?				
13.0	**WORK IN CONFINED SPACE (ALL SITES)**				
13.1	Approved Method Statement for working in confined space available?				
13.2	Air monitoring and records available?				
14.0	**EMERGENCY/FIRST AID (ALL SITES)**				
14.1	Emergency phone numbers posted and known by all?				
14.2	Emergency eyewash and/or shower units available and accessible as needed?				
14.3	First Aid kit available at work site? Adequately stocked?				
14.4	Emergency exists marked?				
14.5	Accident reporting procedure established?				
14.6	Injury records being kept?				
14.7	Injury-free days posted and updated?				
14.8	Emergency telephone numbers posted?				
14.9	Traffic routes identified?				
14.10	First aiders telephone numbers and locations available?				
14.11	Records of occupational injuries, illness, treatment and supplies dispensed?				
15.0	**SCAFFOLDING (ALL SITES)**				
15.1	Erection properly supervised? Scaffold design by qualified person?				
15.2	Does the competent person on site inspect the scaffolding weekly?				
15.3	All structural members free from defects and meet safety factor?				
15.4	Are all connections secured?				
15.5	Are the working platforms fully boarded and are the boards arranged to avoid tipping or tripping?				
15.6	Does scaffolding have adequate foundations?				
15.7	Is scaffold tied to structure?				
15.8	Are working areas free of dirt, debris, grease, etc?				
15.9	Are workers protected from falling objects?				
15.10	Is scaffold plumb and square, with cross-bracing?				
15.11	Are guard rails, intermediate rails, and toe boards in place?				
15.12	Are ropes and cables in good condition?				
15.13	Fall protection available and in use?				
15.14	Is scaffolding properly maintained?				
16.0	**HEAVY EQUIPMENT (ALL SITES)**				
16.1	Regular inspection and maintenance?				
16.2	Seat belts provided and used where appropriate?				
16.3	Backup (reverse) alarms working and audible?				
16.4	Slow moving vehicle emblem attached to rear of equipment				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
	operating at less than 40km/hr?				
16.5	No employees riding equipment without proper seating?				
16.6	Lights, brakes, warning signals operative?				
16.7	Wheels chocked when necessary?				
16.8	Haul roads well maintained and laid out properly?				
16.9	Equipment properly secured when not in use?				
16.10	Spark arresters used as necessary?				
17.0	**MOTOR VEHICLES(ENSURE THE FOLLOWING ARE INSISTED IN THE TRAINING)**				
17.1.	Have drivers received proper training? Documents available?				
17.2	Local laws observed?				
17.3	Brakes, lights, warning devices operative?				
17.4	Weight limit and load stress controlled?				
17.5	Personnel carried incorrect manner?				
17.6	All glass in good condition?				
17.7	Backup signal provided?				
17.8	Fire extinguisher installed?				
17.9	Seat belt warned?				
17.10	Tie down strap or chains inspected				
17.11	Are all vehicles checked at the beginning of each shift?				
17.12	Regular inspection and maintenance				
18.0	**NOISE (ENSURE THE FOLLOWING ARE INSISTED IN THE TRAINING)**				
18.1	Plant or machinery fitted with silencers?				
18.2	Is work sequenced to minimize the number of people exposed to noise				
18.3	Are others not involved in the work kept away?				
18.4	Is suitable hearing protection provided and worn in noisy areas				
19.0	**MASONY (ENSURE THE FOLLOWING ARE INSISTED IN THE TRAINING)**				
19.1	Proper scaffolding?				
19.2	Masonry saws properly equipped, dust protection provided?				
19.3	Safe hoisting equipment?				
19.4	Are limited access zones established as required?				
20	**DEMOLITION (ENSURE THE FOLLOWING ARE INSISTED IN THE TRAINING)**				
200.1	Approved method statement for Demolishing structures available?				
20.2	Are operations planned ahead?				
20.3	Utilities shut off?				
	Hazardous materials/chemicals removed from any pipes, tanks, or equipment?				
21.0	**LABOUR/WORKING CONDITIONS**				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
21.1	Any children employed on work sites? Is child labor exploitative/ harmful?				
21.2	Are employment conditions equivalent to forced labor?				
21.3	Is there a human resources policy and is it accessible to employees?				
21.4	Does the policy supply information to employment and labor laws?				
21.5	Do employees have written documenting employment terms and conditions				
21.6	Do the terms of the contract comply with existing legislation				
21.7	Is there a collective bargaining agreement?				
21.8	Are there worker organization/ representatives with access to workers?				
21.9	Will workers be laid off at end of construction-if so is there a retrenchment plan?				
21.10	Is there a worker grievance mechanism in place? Are grievances documented and addressed?				
22	**MAIN CAMP (SITE YARD)**				
22.1	Are there sufficient toilets facilities?				
22.4	Are there clean wash basins, warm water, soap and towels?				
22.5	Adequate potable water supply?				
22.6	Are sanitary facilities clean?				
22.7	Are there washing facilities in vicinity of the dining room?				
22.8	Is access to the man camp controlled?				
22.9	Any informal trading shacks established adjacent to man camp?				
	❖ **Electrical safety (site yard)**				
22.10	Electrical equipment properly maintained?				
22.11	Equipment properly grounded?				
22.12	Electrical panels are labeled?				
22.13	Electrical dangers posted?				
22.14	Proper fire extinguisher(s) provided?				
22.15	Are terminal boxes equipped with required covers (cover used)?				
22.16	Are circuits labeled in terminal boxes?				
22.17	Strains relief integrity for cords and plugs intact?				
22.18	Electrical cords inspected & have all prongs intact?				
22.1	Portable generators are grounded?				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
9					
	❖ **Compressed gasses (site yard)**				
22.20	Compressed gas cylinders stored secured & upright?				
22.21	Oxygen / acetylene torch units have flash back arrestors				
22.22	Compressed gas cylinders not in use have caps in places?				
23	**HAZARDOURS MATERIALS (SITE YARD)**				
23.1	Written management programs on hazardous materials (eg. chlorine gas) in place?				
23.2	Employees trained? Documentation available?				
23.3	All hazardous containers stored and labels are readable?				
23.4	Material safety Data sheet (MSDS) openly available to all employees;				
23.5	MSDS displayed in appropriate places?				
23.6	Supplies readily available for accidental chemical spills?				
23.7	Spills clean-up training provided? Documentation available?				
23.8	Control and disposal measures(s) established?				
	❖ **FIRE PREVENTION (SITE YARD)**				
24.0	Adequate number and type of fire extinguisher(s) available?				
24.1	Fire extinguisher inspection carried out (monthly/ periodically) ?				
24.2	Phone number of contact person/ fire department posted?				
24.3	Fire extinguisher(s) provided on appropriate equipment/location?				
24.4	Flammable liquids are in approved safety cans?				
24.5	Fire alarm available/fire evacuation plan established?				
24.6	Fuel supplies protected from accidental impact?				
24.7	Fire training given to appropriate personnel? Documentation available?				
24.8	Is equipment shut down prior to refueling?				
24.9	Is equipment properly grounded to fuel trucks before refueling?				
25	**FLAMMAMBLE LIQUIDS/MATERIALS (SITE YARD)**				
25.1	Empty containers removed?				
25.2	Only appropriate containers being used?				
25.3	Containers stored in approved and appropriate area(s)?				
25.4	Outside storage bonded for containment?				
25.5	Storage tanks properly grounded bonded & pressure relief provided?				
25.6	Cylinder stored/ secured in upright position?				
25.7	Signs prohibiting smoking posted in sensitive areas?				
26	**HOIST, CRANES AND DERRICKS (SITE YARD)**				
26.1	Are regulatory inspections completed?				
26.2	Are operators properly tested and physical exams current?				
26.3	Are daily inspections completed by operators?				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
26.4	Power lines deactivated, removed ,or warning signs posted warning of least 3.5m clearance from overhead power lines (voltage 50,000 volts or below)?				
26.5	Proper loading for capacity at lifting radius?				
26.6	Is the equipment on a firm level base?				
26.7	Operation in accordance with manufacturer's instruction?				
26.8	Equipment properly lubricated and maintained?				
26.9	Load testing accomplished?				
26.10	Alarm working and audible?				
27	**GARAGES AND REPAIR SHOPS (SITE YARD)**				
27.1	Fire hazards controlled?				
27.2	Oily rag containers used and emptied daily?				
27.3	Good housekeeping?				
27.4	Adequate lighting?				
27.5	Adequate ventilation				
27.6	Are fuels and lubricants in proper containers?				
27.7	Are fire extinguisher(s) provided, proper type and rating?				
27.8	Ample absorbent materials available and In use?				
27.9	Are proper storage areas designated and maintained for tools, supplies and used part tires?				
28	**WELDING AND CUTTING (SITE YARD)**				
28.1	Are operators trained? Documentation available?				
28.2	Screen and shield in places?				
28. 3	Are oxygen and acetylene stored properly?				
28. 4	Are bottles not in use secured with caps in place?				
28.5	Proper eye protection and PPE used?				
28.6	Fire extinguisher located near operations?				
28.7	Are valves shut off and regulator backed off each night?				
28.8	Flashback arresters placed on hoses (02 and fuel gas)?				
28.9	Electrical equipment grounded?				
28.10	Area inspected for fire hazards?				
28.11	Gas lines and power cables protected and in good condition?				
29	**STEEL ERECTION (SITE YARD)**				
29.1	Safety nets or planked floors?				
29.2	Hard hats, safety shoes, gloves and other PPE used?				
29.3	Taglines for controlling loads?				
29.4	Fire hazards covered and barricaded (fenced)?				
29.5	Floor openings covered and barricaded?				
29.6	Hoisting apparatus checked?				
29.7	Adequate fall protection?				
30	**CONCRETE (SITE YARD)**				
30.1	Batching plant located away from environmentally sensitive site? Not prone to flooding?				
30.2	Batching plant site bonded?				
30.3	Runoff collection in place?				
30.4	Dust control measures?				
30.5	Sand and aggregates transported in dampened to prevent				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
	dust generation (e.g. kept damp)?				
30.6	Forms properly installed and braced?				
30.6	Proper curing period and procedures used?				
30.7	Adequate PPE?				
30.8	Caps on rebar?				
30.9	Automatic shut off on power operated trowels?				
30.10	Nails and stripped (naked) form material removed from work area?				
31.1	**ROOF WORK (SITE YARD)**				
31.2	Are there enough barriers and is there other edge protection (e.g. nets) to stop people or materials falling from roofs.				
31.3	Do the roof battens provide safe hand and foot holds? If not, are crawling ladders or broads provided and used?				
31.4	Are precautions taken to stop people falling from the leading edge of the roof or from fragile or partially fixed sheets which could give away?				
31.5	Are suitable barriers, guard rails or covers, etc provided where people pass or work near fragile material such as roof lights?				
31.6	Are crawling broads provided where work on fragile materials cannot be avoided?				
31.7	Are people excluded from the area below the roof work? If this is not possible, have additional precautions been taken to stop debris falling into them?				
32	**MANUAL HANDLING (SITE YARD)**				
32.1	Has the risk of manual injuries been assessed?				
32.2	Are workers trained in manual handling/safe lifting techniques? Documentation available?				
32.3	Are hoist, tele handlers, wheel barrows and other plant or equipment used so that manual lifting and handling of heavy objects is kept in minimum?				
32.3	Are materials such as cement ordered in 25 kg bags?				
33	**BLASTING (WORK FRONT)**				
33.1	Contractor qualifications and credentials checked?				
33.2	Explosive inventory completed and accounted for at all times?				
33.3	Stray electrical currents checked?				
33.4	Blasting mats used when required?				
33.5	All signs, warning signal, and protective equipment in place?				
33.6	Non –essential removed from one area?				
33.7	Radio transmissions limited?				
33.8	Producers for handling misfire in place?				
33.9	Explosive properly stored?				
33.10	Is black powder prohibited?				
33.11	Experienced and trained personnel handling explosive? Documentation available?				
33.1	Detonators tested before each shot?				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
2					
33.13	Area inspection after each shot?				
33.14	Proper disposal of wrapping, waste and scarps?				
33.15	Operation suspended during electrical storms or when lighting is within 16 km?				
33.16	Explosive and related material properly stored?				
33.17	All blasting operations conducted between sun-up and sundown?				
34	**ROADS (WORK FRONT)**				
34.1	Competent flagmen properly dressed, trained, and posted?				
34.2	Adequate warning signs and makers?				
34.3	Equipment not blocking right-of-way?				
34.4	Traffic control through construction site?				
34.5	Adequate marking and maintenance of detours?				
34.6	Dust control used?				
34.7	Adequate lighting?				
34.8	Are barricades erected with correct directional stripes?				
35	**PROTECTING THE PUBLIC (WORK FRONT)**				
35.1	Appropriate barricades, fencing, hoarding, gantry (SCAFFORD) secure and in place?				
35.2	Signage in place?				
35.3	Suitable lighting for public access?				
35.4	Footpaths clean and free from debris?				
35.6	Dust and noise controls procedures in place?				
35.7	Site access controlled?				
35.8	Traffic control procedures in place?				
35.9	Public complaints procedure in place? Complaints auctioned?				
35.10	When work has stopped for the day by the community/workers:				
45.11	Traffic control procedures in place?				
35.12	Public complaints procedure in place? Complaints auctioned?				
35.13	When work has stopped for the day:				
35.14	Are the gates secured?				
35.15	Is the perimeter fencing secure and undamaged?				
25.16	Are all ladders removed or their rungs boarded so that they cannot be used?				
35.17	Are excavations and openings securely covered or fenced off?				
35.18	Is all plant immobilized (powerless) to prevent unauthorized use?				

NN	ITEM	YES	NO	DESCRIPTION	REMARK
35.19	Are bricks and materials safely stacked?				
35.20	Are flammable or dangerous substances locked away in secure storage places?				
36	**WASTE DISPOSAL SITE (SPOIL SITES)**				
36.1	Is waste disposed separately according to type?				
36.2.	Is waste disposed Covered on daily basis?				
36.3	Has hazardous waste cell been constructed? Is it concrete lined?				
36.4	Is waste disposal site fenced off?				
36.5	Is there a separate area for storage of recyclable materials? Is it safe for the public to recover material from this site?				
36.7	Is access to the site controlled?				
36.8	Is there a regularly maintained waste register?				
36.9	Is there a regularly maintained biomedical waste register				
36.10	Is there a separate area for storage of recyclable materials? Is it safe for the public to recover material from this site?				
36.11	Is access to the site controlled?				
36.12	Is there a regularly maintained waste register?				
	TOTAL No. of score 462 Achieved scores Y Not achieved scores X Percentage achieved (%) = $\frac{Y}{\text{Total Score}}$				

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