



# **MINISTRY OF WATER AND ENVIRONMENT**

## **ENVIRONMENT AND SOCIAL SAFEGUARDS POLICY**

**Ministry of Water and Environment**

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## **Forward**

The Ministry of Water and Environment (MWE) prepared the Environmental and Social Safeguards (ESS) Policy Framework, to ensure that, in implementing development programs, positive social impacts are maximized while negative ones are minimized or avoided. Experience, has shown that different Entities encounter risks therefore the appropriate social safeguards should always be incorporated in their programmes.

Currently the MWE follows the Uganda Environmental Impact Assessment guidelines derived from the National Environment Management policy and Act (1994) as well as donor specific Environmental and Social Safeguard Frameworks (ESMF) as may be required by specific projects to address ESS issues arising from projects being implemented by the Ministry.

This framework will be applied to all projects/programmes funded by Government of Uganda, Development Partners including Climate Financing such as Adaptation and Green Climate Fund, for which the MWE has overall responsibility for monitoring their implementation. The Ministry at the same time will ensure transparency and accessibility of information, in addition to facilitating the resolutions of disputes with respect to environmental and social risks.

This ESS Policy Framework was prepared in a participatory manner involving all stakeholders, leading to ownership and readiness to implement it for sustainable social benefits.

I therefore, on behalf of the Ministry of Water and Environment and all executing entities wish to express our commitment and readiness to implement the ESS Policy requirements.



Alfred Okot Okidi  
**Permanent Secretary**

## Executive Summary

Currently, the Environmental and Social issues are being addressed basing on the National Environment Management Policy and other guiding documents including the Environment Impact Assessment (EIA) guidelines and other Tools developed by National Environment Management Authority (NEMA) while some projects have been using the World Bank Environment and Social Safeguards Policies and other donor -specific ES policies. These are normally actualized through development of Environment and Social Management Frameworks (ESMF) for specific projects and programmes. Other key existing laws and policies relating to the safety of environment and people are prescribed in the Uganda Constitution (1995), the National Environment Management Policy (1994), the Resettlement Policy, the Environment Management Act (1994), National Climate Change Policy (2015), National Gender Policy (2007), Equal opportunities Policy (2008), National Land Policy (2013), Water Policy (1997) among others.

In order to harmonize the current trend, MWE has developed an ESS framework based on 15 ESS principles. The Environmental and Social-Safeguards Framework (ESSF), document is intended to provide the general framework within which Government and Donor funded projects in the Ministry are to be implemented / executed, as far as consideration of Environmental and Social Safeguards are concerned. At this stage, all MWE's projects and other executing entities will be required to follow this framework to ensure that ESS aspects are adequately addressed. Where the need arises, project specific ESMF will be developed to ensure maximum benefits to the intended communities without compromising the 15 ESS principles.

The ESS is aimed to ensure that in implementing development programs, positive outcomes are maximized and negative outcomes are minimized. This framework will therefore ensure integration of environmental and social concerns in all stages of project development and all levels including national, district and local levels, with full participation of the people as means of minimizing environmental and social impacts. It will further ensure identification of key environmental and social issues/aspects that will affect or will be affected by the projects/programmes and ensuring that risks are screened against the 15 principles as well as specification of appropriate roles and responsibilities, and outlining the necessary reporting procedures, for managing and monitoring environmental and social concerns including compliance; grievance mechanism, and establishment of institutional capacity building requirements to successfully implement the ESS as well as monitoring to ensure compliance.

There are 15 principles which apply to MWE's ESS Policy which determine the scope of risk and impact assessments. Some principles always apply to all projects (\*), some may or may not be relevant for a specific project/programme. The ESS principles are;

1. Compliance with the Law\*-
2. Access and Equity
3. Marginalized and Vulnerable Groups-
4. Human Rights\*
5. Gender Equality and Women's Empowerment
6. Core Labour Rights\*
7. Indigenous Peoples
8. Involuntary Resettlement-
9. Protection of Natural Habitats

10. Conservation of Biological Diversity
11. Climate Change -
12. Pollution Prevention and Resource Efficiency-
13. Public Health
14. Physical and Cultural Heritage-
15. Lands and Soil Conservation-

At project formulation stage, each development project must highlight key environmental and social impacts both negative and positive impacts. For positive impacts enhancement measures are suggested whereas for negative impacts mitigation measures must be suggested to minimize these negative impacts on the environment and the communities in which the project is to be implemented.

The Ministry will screen all proposed projects and programmes to determine their potential to cause environmental or social harm, undertake Environmental and Social Assessments for all projects and programmes that have the potential to cause environmental or social harm and develop Environmental and Social Management Plans that identifies measures necessary to avoid, minimize, or mitigate the potential environmental and social risks and lastly monitor, evaluate and report to ensure that all environmental and social risks identified during project and programme assessment and design are adequately addressed during and after implementation. The framework also looks at Public Disclosure and Consultations as well as the grievance handling mechanisms.

## Acronyms

AF	Adaptation Fund
CCD	Climate Change Department
ESMF	Environmental and Social Management Framework
ESS	Environmental and Social Safeguard
EIA	Environment Impact Assessment
GHG	Greenhouse Gas Emissions
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MWE	Ministry of Water and Environment
MEMD	Ministry of Energy and Mineral Development,
MPED	Ministry of Finance, Planning and Economic Development
NWSC	National Water and Sewerage Corporation
NDP-II	National Development Plan II
NEMA	National Environment Management Authority
NFA	National Forestry Authority
TPM	Top Policy Management
UNMA	Uganda National Meteorological Authority

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## 1.0 Introduction

The Ministry of Water and Environment (MWE) is a lead institution for the Water and Environment Sector. It is responsible for the overall coordination, policy formulation, setting standards, inspection, monitoring, and technical back-up and initiating legislation. It also monitors and evaluates sector development programmes to keep track of their performance as well as efficiency and effectiveness in service delivery.

The Water and Environment Sector encompasses managing water as a resource, establishing water infrastructure for development, harnessing weather and climate and promoting ecosystems and biodiversity resiliencies ‘The **Vision** is “*Sound management and sustainable utilisation of Water and Environment resources for the betterment of the population of Uganda.*’

Its’ **Mission** is ‘*To promote and ensure the rational and sustainable utilisation, development and effective management of water and environment resources for socio-economic development of the country*’ The **Mandate** of the Ministry is derived from the Constitution of the Republic of Uganda (1995) and the Local Governments Act, CAP 243 and includes *initiating legislation, policy formulation, setting standards, inspections, monitoring, and coordination and providing back up technical support to water and environment sub sectors.*

### 1.1 Institutional Framework

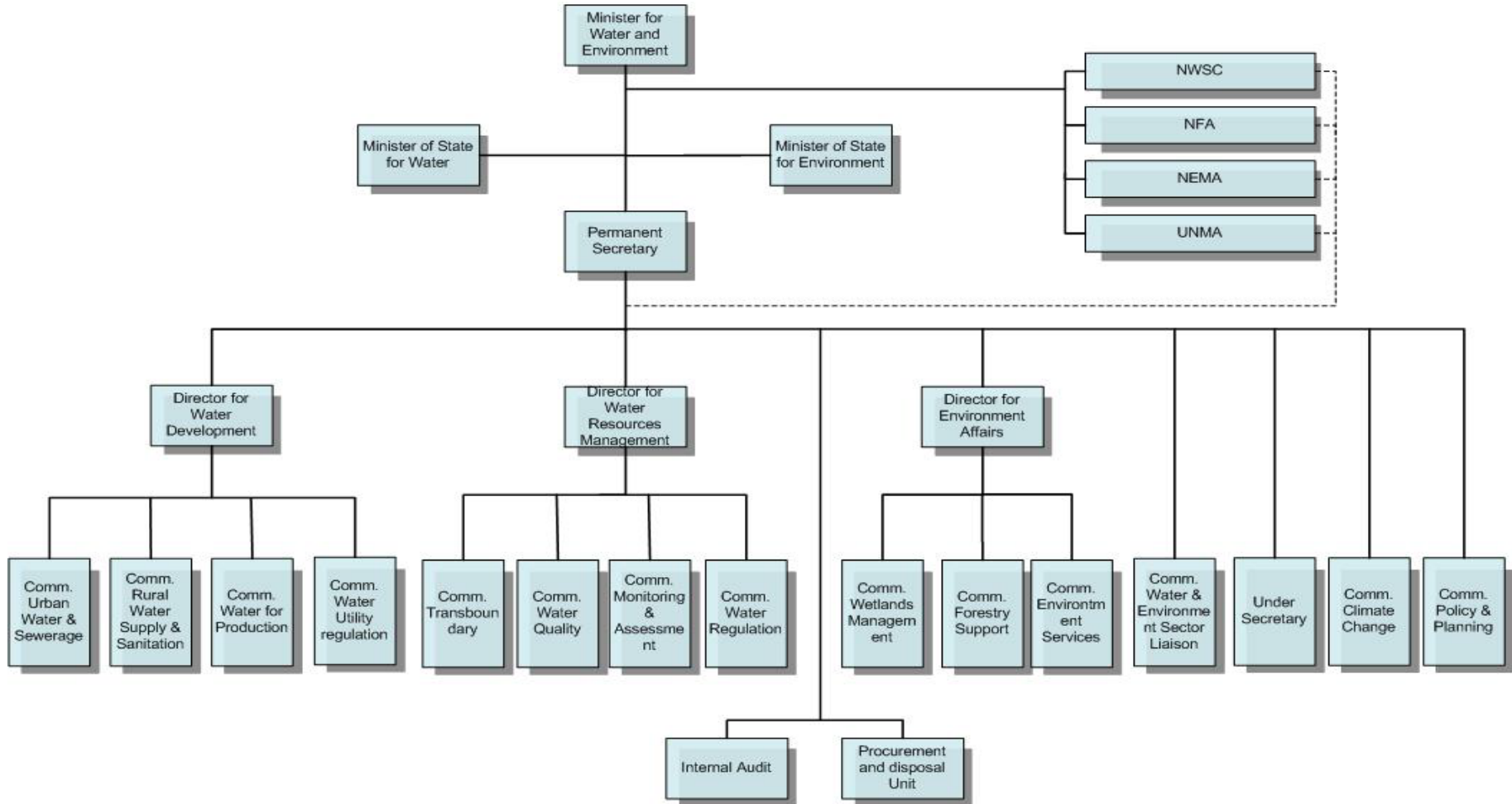
The Ministry is comprised of three of Water Resources Management (DWRM), Directorate of Water Development (DWD) and the Directorate of Environmental Affairs (DEA). In addition, the Ministry is supported by stand-alone departments in support to the technical departments namely the Finance and Administration, Water and Environment Sector Liaison, Policy and Planning and the Climate Change Department.

The ministry has affiliate semi-autonomous Institutions including the National Water and Sewerage Corporation which is a public and state owned utility currently providing water supply and sewerage services in large urban towns, the National Forestry Authority which is mandated to manage Central Forest Reserves and supply high quality forestry related products and services, the National Environment Management Authority responsible for ensuring sound environmental management practices for sustainable development as well as the Uganda National Meteorological Authority (UNMA) responsible for monitoring weather and climate, maintaining a climate database and providing regular advisories on the state of the weather and climate to government and any other clients including Agriculture sector, transport, disaster preparedness and the public. (**Figure 1**). Other key stakeholders include the Local Government, Donors, Civil Society Organisations, Private Sector and Local Governments are key implementers in the delivery of services in the sector.

The sector is guided by the Top Policy Management (TPM) headed by the Senior Minister and assisted by two Ministers of State for Water and Environment respectively. In addition is the Water and Environment Sector Working Group (WESWG) that is chaired by the Permanent Secretary, assisted by two co-chairs persons representing Water and Sanitation donor group and Environment and Natural Resources donor group. The WESWG is responsible for the overall sector coordination, resource mobilization and allocation as well as reviewing of progress. The Water and Sanitation Sub-Sector Working Group (WSSWG) and the Environment and Natural Resources Subsector Working Group (ENR-SWG) are responsible for the sector planning and priority setting, implementation, monitoring, supervision and management of their respective subsectors in support to the WESWG.

**Figure 1: Macro Structure of Ministry Water and Environment**

**MACRO STRUCTURE OF THE MINISTRY OF WATER & ENVIRONMENT 2014**





## **1.2 Strategic Objectives**

In order to achieve its vision, the sector is guided by the following strategic objectives in the implementation of its policies and programs;

- i. To provide safe water within easy reach and hygienic sanitation facilities based on management responsibility and ownership by users to 79 percent of the population in rural areas and 100 percent in urban population by the year 2020, with 95 percent effective use and functionality of the facilities.
- ii. To provide viable urban Water Supply and Sewerage/Sanitation systems for domestic, industrial and commercial uses.
- iii. To develop water supply for production/multipurpose use for socio-economic development, modernize agriculture and mitigate the effects of climate change.
- iv. To manage the water resources of Uganda in a wise, integrated, sustainable and coordinated manner so as to secure water of adequate quantity and quality to meet all social and economic needs of present and future generations.
- v. To promote a sustainable productive Natural Resource Base (NRB) and healthy environment for improved livelihoods, poverty eradication and economic growth.
- vi. To develop capacity and promote sustainable harnessing and use of climate and weather resources for socio-economic development of Uganda.’
- vii. To coordinate and ensure compliance with Government policy, legislation, standards and regulations in the Ministry of Water and Environment and the affiliated agencies/institutions implementing or supporting programs related to Water and Environment.

## **2.0 Justification for Environmental and Social Safeguards Framework**

The Ministry of Water and Environment has been implementing a number of projects and programs which inevitably affect the environment and vulnerable groups. Environmental and social issues have been addressed basing on the National Environment Management policy and other guiding documents including the Environment Impact Assessment (EIA) guidelines and other Tools developed by National Environment Management Authority (NEMA) while some projects have been using the World Bank Environment and Social Safeguards Policies and other donor ES policies. These are normally actualized through development of Environment and Social Management Frameworks (ESMF) for specific projects and programmes.

This Environmental and Social Safeguards Framework has been formulated to facilitate the MWE to effectively address the environmental and social issues for projects and programmes funded by the Adaptation Fund upon its accreditation in a harmonized and coherent manner in order to minimize negative Environmental and social impacts on the Environment and beneficiary communities during and after projects/programmes implementation.

### **2.1 Objectives of Environment and Social Safeguards Framework**

This Environment and Social Safeguards Framework is to be used by the Ministry to ensure that all environmental and social safeguards are adequately addressed as required by the Adaptation Fund. The goal is to avoid unnecessary environment and social harm as a result of implementation of Adaptation Fund projects by the ministry which is a key requirement of the fund.

This Environment and Social Safeguards framework aims specifically at the following:

- i. To ensure integration of environmental and social concerns in all stages of project development and all levels including national, district and local levels, with full participation of the people as means of minimising environmental and social impacts
- ii. To identify key environmental and social issues/aspects that will affect or will be affected by the projects/programmes and ensuring that risks are screened against Adaptation Fund 15 principles;
- iii. To specify appropriate roles and responsibilities, and outlining the necessary reporting procedures, for managing and monitoring environmental and social concerns including compliance; and
- iv. To establish institutional capacity building requirements to successfully implement the ESS, with particular focus on monitoring framework for its implementation and compliance;

The following flow chart describes the process of ensuring that the ESS process is adhered to:

**Fig 1: Demonstration of the adherence to the ESS process**



### 3.0 Policy and Legal Framework

This Environment and Social Safeguards Framework is aligned to the principles relating to the safety of environment, and the people as enshrined in various laws and policies including among others;

#### 3.1 The Constitution of the Republic of Uganda (1995)

The overarching policy document for ESS in Uganda is the Constitution of the Republic of Uganda, 1995 states that:

- i. The State shall ensure gender balance and fair representation of marginalized groups on all constitutional and other bodies (Constitution of the Republic of Uganda, 1995, Chapter V).
- ii. The State shall take all necessary steps to involve the people in the formulation and implementation of development plans and programs which affect them (Constitution of the Republic of Uganda, 1995, Chapter X).
- iii. The State shall protect important natural resources, including land, water, wetlands, minerals, oil, fauna and flora on behalf of the people of Uganda (Constitution of the Republic of Uganda, 1995, Chapter XII).

### **3.2 The National Environmental Management Policy (1994)**

The National Environment Management Policy is a multi-sector crosscutting policy that is found in nearly every other policy. The National Environment Policy overall goal is ‘to encourage sustainable development by wise use of natural resources while enhancing environmental quality without compromising the ability of future generations to meet their own needs’. The policy has six policy objectives, 18 guiding principles, 14 cross-sector policies and 4 (four) sector policies. The key objectives of the Policy are to:

- i. Enhance health and quality of life through sustainable development, sound environmental management and wise use of natural resources;
- ii. Encourage participatory integration of environmental concerns in all development policies, planning, and activities at national, district and local levels;
- iii. Conserve, preserve and restore ecosystems and maintain ecological processes and life support systems, especially conservation of national biological diversity;
- iv. Optimize resource use and achieve a sustainable level or resource consumption;
- v. Raise public awareness, sensitization and advocacy for a linkage between environment and development;
- vi. Ensure individual and community participation in environmental improvement activities.

The key underlying principles that support the policy include: - every person has a constitutional right to a clean environment; sustainable natural resource use; security of land tenure; the use of environmentally friendly technologies; enforcement of environmentally friendly laws, involvement of gender and vulnerable groups, integration of environmental concerns in all sectors, involvement of the communities in decision making and meeting international and regional obligations.

### **3.3 National Development Plan II (NDPII 2015-2020)**

The Policy is also consistent with the National Development Plan (NDP-II) for the period of 2015-2020 which highlights for the following: i) protecting, restoring, and maintaining the integrity of degraded fragile ecosystems; ii) increasing sustainable use of environment and natural resources; iii) increasing national forest cover and economic productivity of forests; iv) increasing the national wetland coverage; v) increasing the functionality and usage of meteorological information systems; and vi) increasing the country’s resilience to the impacts of climate change. Furthermore, the NDPII also advocates for decent employment and labour productivity, provides social protection services, promotion of youth employment and participation, promote equality and women empowerment, and strengthening institutional capacity and redressing the imbalance and promoting equal opportunities for all.

### **3.4 The Local Governments Act, 1997**

The Local Governments Act, 1997 implements the government's decentralization policy. The Local Government Act devolves some functions from the Central Government to district. The most relevant sections of the Local Government Act are summarised below.

Section 31 (1) (b) of the Local Government Act provides that a local government shall within its area of jurisdiction 'provide services as it deems fit' except 'the functions, powers and services' reserved to the Central Government under Part I of the Second Schedule to the Local Government Act. Item 7 of Part II of the Second Schedule provides that the function of water resources management is reserved to the Central Government. Under the same Act, the general water resource management policy is a function reserved to the Central Government under the Local Government Act. Part II of the Second Schedule to the Local Government Act shows that supply of water is a decentralised function.

### **3.5 Legislative Framework for Environmental Assessment Category and its Processes within the Water and Environment sector.**

The National Environmental Act, 1995 is the principal law governing environmental management and conservation in Uganda. A number of supporting regulations are also applicable to water resources management and include:

- a. The Water Act, Cap 152, 1997;
- b. The Land Act Cap 227, 1998;
- c. The Water Resources Regulations, 1998;
- d. The Water (Waste Discharge) Regulations, 1998;
- e. The Environmental Impact Assessment Regulations, 1998;
- f. The National Environment (Waste Management) Regulations, 1999;
- g. The National Environment (Standards for Discharge of Effluent into water or on land) Regulations, 1999;
- h. The National Environment (Wetlands, River banks and Lake Shores Management) Regulations, 2000.
- i. Draft Standards for Air Quality Management, 2007;
- j. The National Environment (Noise Standards and Control) Regulations, 2003;
- k. National Environment Instrument (delegation of waste discharge functions) 1999;
- l. National Environment Notice (designation of Environmental Inspectors), 2000;
- m. National Policy for the Conservation and Management of Wetland Resources, 1995; and
- n. The National Environmental Management Policy, 1994;
- o. National Climate Change Policy (2015)

#### **Other relevant Laws and Policies include;**

Other laws and policies that are relevant to the implementation of this Environment and social framework include: The National Environment Act (1994), the National Irrigation Policy (2018), National Gender Policy (2007), Petroleum Supply Act (2003), Equal Opportunities Policy (2008), National Land Policy (2013), National Land Use Policy (2010) Employment Act (2006), Occupational Safety and Health Act (2006); among others.

## **4.0 Environment and Social Safeguard (ESS) Principles**

### **4.1 Statement of Commitment**

This Environmental and Social Safeguards Framework of the Ministry of Water and Environment of Uganda highlights the importance of managing environmental and social performance for all Ministry supported or implemented projects and programmes. The Ministry of Water and Environment is committed to avoiding, minimizing, or mitigating adverse environmental and social impacts associated with its projects. All proposed MWE projects and programmes will be subject to review and screening during preparation, and they will be fully assessed, designed, implemented, monitored and reviewed accordingly to ensure that all environmental and social issues are adequately addressed. This requirement will be applied to all Government and Donor funded projects for which the Ministry has overall responsibility for management and results. The Ministry is also committed to ensuring transparency and accessibility of information, in addition to facilitating the resolution of disputes, with respect to environmental and social risks.

### **4.2 Environment and Social Safeguard Principles**

This Environmental and social safeguards Framework is crucial for ensuring that the projects and programmes being supported or implemented by the Ministry do not unnecessarily harm the environment, public health or vulnerable communities. The Ministry shall ensure that all projects and programmes it designs and implements directly or through other organizations, agencies and lower local governments conform to the following environmental and social principles, although it is recognized that depending on the nature and scale of a project or programme all of the principles may not be relevant to every project or programme.

#### **4.2.1 Compliance with the Law\***

The Ministry of water and Environment as an implementing entity (IE) will provide, when relevant, a description of the legal and regulatory framework for any project activity that may require prior permission such as environmental permits, water abstraction /extraction permits especially during the construction of water Irrigation Schemes and water for production facilities.

#### **4.1.2 Labour Laws and Working Conditions**

Ensure that its projects and programmes comply with National labour laws and with the objectives of the International Labor Organization (ILO) Standards. This includes fully complying with relevant National legislation including: Employment Act (2006), Equal Opportunities Commission Act (2007), Occupational Safety and Health Act (2006) among others. This is triggered since the construction works will require the recruitment of a labour force to dig the trenches, lay pipes and undertake the required construction and rehabilitation works. As with all works related to water projects, these might expose employees to occupational safety risk and infections. This occupational safety risk will be mitigated through the selection and effective use of mechanical equipment and personal protective equipment. Work procedures, training, and awareness creation/sensitisation will be implemented.

### **4.1.3 Access and Equity**

Projects and programmes implemented or supported by the Ministry shall provide fair and equitable access to benefits in a manner that is inclusive and does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. These Projects or programmes should not exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups.

### **4.1.4 Marginalized and Vulnerable Groups**

All projects and programmes implemented or supported by the Ministry shall avoid imposing any disproportionate adverse impacts on marginalized and vulnerable groups including children, women and girls, the elderly, indigenous people, tribal groups, internally displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. During project or programme assessment the Ministry shall assess and consider particular impacts on marginalized and vulnerable groups. This includes fully complying with relevant national legislation including the HIV/ AIDS Policy 2011, and the National Policy Framework on Social Protection (November 2015) aimed at reducing social vulnerabilities.

### **4.1.5 Human Rights**

The projects and programmes will be designed and implemented in a manner that will promote, protect and fulfil universal respect for, and observance of, human rights for all as recognized by the United Nations. The Ministry will undertake robust environmental and social due diligence so that its projects and programmes do not cause, promote, contribute to, perpetuate, or exacerbate adverse human rights impacts.

### **4.1.6 Gender Equality and Women's Empowerment**

Projects and programmes implemented or supported by the Ministry shall be designed and implemented in such a way that both women and men (a) have equal opportunities to participate as per the Fund Gender Policy (refer to Adaptation Fund Gender Policy: Annex 4 for details); (b) receive comparable social and economic benefits; and (c) do not suffer disproportionate adverse effects during the development process. This includes fully complying with relevant national legislation including National Gender Policy, 1997; Equal Opportunities Commission Act; and Gender Seal that was launched in 2017 to recognize entities that adhere to gender equality standards. Like other Ministries, the Ministry of Water and Environment shall ensure that planning, budgeting and resource allocation adheres to requirements of Gender Compliance by the Ministry of Finance, Planning and Economic Development.

### **4.1.7 Indigenous Peoples**

Projects and programmes undertaken by the ministry shall avoid adverse impacts on indigenous peoples, and when avoidance is not possible, will minimize, mitigate and/or compensate appropriately and equitably for such impacts, in a consistent way and improve outcomes over time; promote benefits and opportunities; and respect and preserve indigenous culture, including the indigenous peoples' rights to lands, territories, resources, knowledge systems, and traditional livelihoods and practices.

All Ministry projects and programmes shall support the full and effective participation of indigenous peoples and the design and implementation of activities will be guided by the

rights and responsibilities set forth in the United Nations Declaration on the Rights of Indigenous Peoples including, of particular importance, the right to free, prior and informed consent, which will be implemented by the Ministry all in applicable circumstances. It will ensure that all projects and programmes it implements or support are consistent with the rights and responsibilities set forth in the UN-Declaration on the Rights of Indigenous Peoples and other applicable international and National instruments relating to indigenous peoples. Uganda Resettlement / Land Acquisition Policy Framework, 2002.

#### **4.1.8 Involuntary Resettlement**

The ministry undertakes to avoid involuntary resettlement to the extent feasible, or to minimize and mitigate its adverse social and economic impacts. Projects and programmes shall be designed and implemented in a way that avoids or minimizes the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process shall be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation. It shall promote participation of displaced people in resettlement planning and implementation, and its key economic objective is to assist displaced persons in their efforts to improve or at least restore their incomes and standards of living after displacement. The Ministry shall promote fair and timely compensation and other resettlement measures to achieve its objectives and requires that all projects prepare adequate resettlement planning instruments prior to appraisal of proposed projects.

#### **4.1.9 Protection of Natural Habitats and Conservation of Biological Diversity**

The Ministry shall not design, implement or support projects and programmes that involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognized by authoritative sources for their high conservation value, including as critical habitat; or (d) recognized as protected by traditional or indigenous local communities. Also all projects and programmes shall be designed and implemented in a way that avoids any significant or unjustified reduction or loss of biological diversity or the introduction of known invasive species. The activities designed and implemented in a manner that will protect and conserve biodiversity and critical habitats, maintain the benefits of ecosystem services, and promote the sustainable use and management of living natural resources. This includes fully complying with relevant national legislation including: Water Policy (1997), Environment Management Act (1994), National Climate Change Policy (2015), and National Forestry and Tree Planting Act 2003 among others.

#### **4.1.10 Climate Change**

During preparation of projects and programmes implemented or supported by the Adaptation Fund, Green Climate Fund and other Donors, the Ministry shall ensure that projects do not result in any significant or unjustified increase in greenhouse gas emissions or other drivers of climate change. This includes fully complying with relevant national legislation including, National Climate Change Policy (2015), and National Forestry and Tree Planting Act 2003 among other. For each sub-project, an assessment of the climate change impacts shall be evaluated using the INDC guidelines. This will help identify an appropriate adaptation action including relevant activities for each sub-project as well as capacity building needs for the Executing Agency.

#### **4.1.11 Pollution Prevention and Resource Efficiency**

This is triggered by the nature of the activities that are covered under both the construction and operation phases. There is handling of oil, management of faecal sludge that could pose. Use of equipment could also result in release of Greenhouse gases. The Ministry shall ensure that its projects and programmes are designed and implemented in a way that meets applicable international standards for maximizing energy efficiency and minimizing material resource use, the production of wastes, and the release of pollutants. It shall ensure that its projects and programmes promote more sustainable use of resources, including energy and water, reduce project or programme -related greenhouse gas (GHG) emissions, and avoid or minimize adverse impacts on human health and on the environment. This includes fully complying with relevant national legislation including: National Environment Act (1994), Petroleum Supply Act (2003). National Environment (Waste Management) Regulations, 1999. Water (Waste Discharge) Regulations, 1998 as well as the National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations, 1999 among others.

#### **4.1.12 Public Health**

The Ministry shall ensure that its projects and programmes are designed and implemented in a way that avoids potentially significant negative impacts on public health. This includes fully complying with relevant National legislation including: Occupational Safety and Health Act (2006) and the Public Health Act 2000.

#### **4.1.13 Physical and Cultural Heritage**

The Ministry shall ensure that its projects and programmes are designed and implemented in a way that avoids the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural values recognized as such at the community, national or international level. Projects/programmes should also not permanently interfere with existing access and use of such physical and cultural resources. It will ensure that its projects and programmes protect cultural heritage, support their preservation, and promote equitable sharing of benefits from their use. This includes fully complying with relevant national legislation including: Institution of Traditional or Cultural Leaders Act (2011), Uganda Tourism Act (2008) and the Historical Monuments Act (1968).

#### **4.1.14 Lands and Soil Conservations**

The Ministry shall ensure that its projects and programmes are designed and implemented in a way that promotes soil conservation and avoids degradation or conversion of productive lands or land that provides valuable ecosystem services.

### **5.0 Organizational and Implementation Approach**

The Ministry of Water and Environment shall take the responsibility of ensuring that environment and social issues are mainstreamed in all its projects. The permanent Secretary of MWE with the support of the various Directors and Heads of Departments has the overall duty of ensuring that ESS are mainstreamed in all its projects/programmes implemented by the MWE and other executing agencies. Further, the ministry in collaboration with the NEMA shall ensure that proper EIAs are conducted and ESIA certificates issued. The NEMA will also conduct regular monitoring, reviewing in ensuring compliance with the ESS/ESMF for all projects.



The MWE has a fully-fledged Department of Environmental Support Services (DESS) with a Senior Environment Officer (Policy, Planning and Research) designated to coordinate compliance to E&S policy formulation and implementation. In addition, MWE has a Water and Environment Sector Liaison Department (WESLD) mandated to coordinate issues of cross cutting nature including social /community engagement, gender mainstreaming, HIV/AIDS mainstreaming, pro-poor initiatives among others. The aforementioned functions are coordinated by a Principal sociologist, who works closely with other Senior Sociologists and Sociologists deployed across all departments and projects. Under the ESS Policy Framework, the Departments of Environment Support Services (DESS) and Water and Environment Sector Liaison (WESLD) shall be the Coordinating Unit and shall ensure that projects and programmes in all the three Directorates namely; Directorate of Water Resources Management (DWRM), Directorate of Water Development (DWD), Directorate of Environment Affaires (DEA) and other Executing Entities adequately integrate and address Environment and social issues in their scope. It is envisaged that projects and programmes will develop specific Environmental and Social Management Frameworks (ESMFs) being guided by this policy, that will guide the implementation and monitoring of project specific mitigation measures. Specifically,

- Under WESLD, the key technical personnel responsible for implementation of the Social component of the ESSPF is the Principal Sociologist mandated to coordinate issues of cross cutting nature including social /community engagement, gender mainstreaming, HIV/AIDS mainstreaming, pro-poor initiatives.
- Under DESSS, the key technical personnel responsible for implementation of the Environment component of the ESSPF are the Assistant Commissioner and 3 Senior Environment Officers.

All Project Coordinators have a shared responsibility for implementation of ESS policies through Social and Environment Officers. Hence, according to the ESS Policy Framework each Directorate will be assigned Focal Point Officers (FPOs) responsible for all projects within the Directorate and shall make regular reports concerning the implementation of the Environmental Social Safeguards at each project to the above mentioned Coordination Unit.

## **6.0 Integration Environment and social issues into projects and programmes**

Integration and implementation of environment and social issues into projects and programmes shall be guided by the following procedure/steps.

### **6.1 Screening of Environmental and Social Risks**

The Ministry shall ensure that all proposed projects and programmes are screened to determine their potential to cause environmental or social harm. The purpose of screening is to identify potential environmental and social impacts and risks, taking into consideration the AF 15 Principles of the Environment and Social Safeguards Policy above. The screening process shall consider all potential direct, indirect, trans-boundary, and cumulative impacts in the project's or programme's area of influence that could result from the proposed project or programme.

All proposed projects and programmes shall be categorized according to the scale, nature and severity of their potential environmental and social impacts. Projects or programmes likely to have significant adverse environmental or social impacts that are for example diverse, widespread, or irreversible shall be categorized as Category **A** projects/programmes. Those with potential adverse impacts that are less adverse than Category **4** projects and programmes, because for example they are fewer in number, smaller in scale, less widespread, reversible or easily mitigated shall be categorized as Category **B** whereas those projects and programmes with no adverse environmental or not have potential significant social impacts should be categorized as Category **C** or **D** respectively as described in table 6.1.

The screening shall help in determining the extent to which the project or programme requires further environmental and social assessment, mitigation, and management. The results of the environmental screening shall be included in the project or programme proposals submitted by the Ministry to the Adaptation Fund.

**Table 6.1: Requirements for Screening/ Categorization of Projects**

Category	Description
Category A: ESSF	An EIA is normally required because the project may have diverse significant impacts. Projects in this category could include: water projects requiring water to a level more than 400m <sup>3</sup> in any period of twenty-four hours, or projects requiring using motorized pumps; storage dams, barrages, weirs, valley tanks and dams; river diversions and inter-basin water transfer among others.
Category B: ESSF	A limited environmental analysis is appropriate, as the project impacts can be easily identified and for which mitigation measures can be easily prescribed and included in the design and implementation of the project. Projects in this category could include: rural water supply, large earth reservoirs, but not located in very sensitive areas, big gravity flow schemes, all category one projects located in sensitive areas etc.
Category C: ESSF	Environmental analysis is normally unnecessary, as the project is unlikely to have significant environmental impacts. A project brief is enough. This could include project location in less sensitive areas or where many such schemes are in the same locality and their synergetic effects have potential impacts.
Category D: ESSF	Small projects which do not have potential significant impacts and for which separate EIAs are not required, as the environment is the major focus of project preparation. These could include borehole drilling, hand augured shallow wells, protected springs and earth reservoir construction.

## 6.2 Environmental and Social Assessment

The Ministry shall ensure that for all projects/programmes that have the potential to cause environmental or social harm (i.e. all Category A and B projects or programmes), the implementing entity shall prepare an environmental and social assessment that identifies any environmental or social risks, including any potential risks associated with the Fund's environmental and social principles outlined above.

The assessment shall (i) consider all potential direct, indirect, trans boundary, and cumulative impacts and risks that could result from the proposed project or programme; (ii) assess alternatives to the project/programme; and (iii) assess possible measures to avoid, minimize, or mitigate environmental and social risks of the proposed project or programme. As a

general rule, the environmental and social assessment shall be completed before the project/programme proposal submission to the Adaptation Fund, Green Climate Fund and any other funding agency. In some Category A&B projects/programmes where the proposed activities requiring such assessment represent a minor part of the project, and when inclusion in the proposal is not feasible, a timeline for completing the environmental and social assessment before actual implementation begins shall be incorporated in the agreement between the Board and the Ministry following the project or programme approval, and reported through the annual project/programme performance report. A copy of the environmental and social assessment shall be provided to the funding entity as soon as the assessment is completed.

**Environmental and Social Management Plan.** The Ministry shall develop environment and social management plans for projects basing on the findings of the environmental and social assessments that identify those measures and actions, assessment shall be accompanied by an environmental and social management plan that identifies those measures necessary to avoid, minimize, or mitigate the potential environmental and social risks. The Ministry commits to develop and implement these plans for all projects and programmes under its docket and this will be reflected in routine reporting and monitoring Reports.

## **7.0 Monitoring, Reporting, and Evaluation**

The Ministry's and project specific Monitoring and Evaluation systems shall address all environmental and social risks identified during project or programme assessment, design, and implementation. Project or programme performance reports shall include a section on the status of implementation of any environmental and social management plans, including those measures required to avoid, minimize, or mitigate environmental and social risks. The reports shall also include, if necessary, a description of any corrective actions that are deemed necessary. The mid-term and terminal evaluation reports shall also include an evaluation of the project or programme performance with respect to environmental and social risks.

## **8.0 Public Disclosure and Consultation**

The Ministry shall identify stakeholders and involve them as early as possible in planning any project or programmes supported by the various funding agencies including AF and GCF. The results of the environmental and social screening and a draft environmental and social assessment, including any proposed management plans, shall be made available for public consultations that are timely, effective, inclusive, and held free of coercion and in an appropriate way for communities that are directly affected by the proposed project or programme. Ministry shall publicly disclose the final environmental and social assessment through the Ministry's website and hold stakeholders' meetings targeting all project-affected people and other stakeholders to disseminate the findings where feasible. Project or programme performance reports including the status on implementation of environmental and social measures shall be publicly disclosed. Any significant proposed changes in the project or programme during implementation shall be made available for effective and timely public consultation with directly affected communities.

## **9.0 Grievance Mechanism**

The Ministry shall establish Grievance handling mechanisms for all projects and programmes active at all levels. The communities to be affected or likely to be affected by projects or programmes shall be informed of the existence grievance and redress mechanism at the

earliest opportunity of the stakeholder engagement process and in an understandable format and in all relevant languages. The details for sending complaints containing the contact information and the appropriate modes by which these will be received shall be provided by the Ministry and disseminated with other involved institutions.

The grievance and redress mechanism shall receive and facilitate the resolution of concerns and grievances about the environmental and social performance of projects and programmes and will seek to resolve complaints in a manner that is satisfactory to the complainants and other relevant parties that will be identified, depending on the nature of the complaint. The Redress Mechanism will address the grievances and complaints filed by people and communities who may be or have been affected by the adverse impacts in connection to the potential failures projects or programmes

The mechanism shall facilitate the resolution of grievances promptly through an accessible, fair, transparent and constructive process. It will also be culturally appropriate and readily accessible, at no cost to the public, and without retribution to the individuals, groups, or communities that raised the issue or concern. The mechanism will not impede the access to judicial or other administrative remedies that may be available through the country systems. The existing system of using the Ministry website and hotline will be explored. The Ministry will respond promptly to all such complaints in reference to the procedures provided in the Ministry's Clients Charter.

## Annex A: Glossary

1. **Adaptation** -Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
2. **Afforestation**- The direct, human-induced conversion of land that has been unfrosted for at least 50 years to forested land through planting, seeding and/or human induced promotion of natural seed sources; This is distinct from reforestation, which is defined as the conversion of land that has been unfrosted since at least 31 December 1989 to forested land.
3. **Climate change** -Any significant change in measures of climate, such as temperature, precipitation or wind, lasting for an extended period (decades or longer); This report refers to climate change induced by human activities that change the atmosphere's composition (e.g., burning fossil fuels) or the land's surface (e.g., deforestation, reforestation, urbanization, desertification, etc.).
4. **Cumulative impacts** - result from the incremental impact, on areas or resources used or directly affected by the project, from other existing, planned or reasonably defined developments at the time the risks and impacts are identified.
5. **Disadvantaged or vulnerable** - refers to those who may be more likely to be adversely affected by the project impacts and/or more limited than others in their ability to take advantage of a project's benefits. Such an individual/group is also more likely to be excluded from/unable to participate fully in the mainstream consultation process and as such may require specific measures and/or assistance to do so.
6. **Due diligence** in the context of environmental and social management system, means the process of investigating potential investments to confirm all facts, such as reviewing environmental and social safeguards, audits, assessments, and compliance before consideration of funding or entering into an agreement with another.
7. **Environmental and social assessment** means the assessment of environmental and social risks, impacts and opportunities undertaken by the accredited entities in a manner that follows good international industry practices, identifies best alternatives and allows for an integrated and balanced view of the environmental and social risks and impacts. This type of assessments may include specific impacts assessment, audits, and due diligence studies, among others.
8. **Environmental and social impact assessment (ESIA)** - refers to a process or tool based on an integrated assessment where the scale and type of potential biophysical and social impacts of projects, programs and/or policy initiatives, are predicted, acknowledged and evaluated. It also involves evaluating alternatives and designing appropriate mitigation, management and monitoring measures to manage the predicted potential impacts.
9. **Environmental and social management frameworks (ESMF)**- describes the roles and responsibilities and the processes to manage environmental and social risks and impacts including screening, preparation, implementation and monitoring of subprojects.
10. **Environmental and social impacts** - refer to any change, potential or actual, to (i) the physical, natural, or cultural environment, and (ii) impacts on surrounding community and workers, resulting from the activities to be supported.
11. **Environmental and social risk**- is a combination of the probability of certain hazard occurrences and the severity of impacts resulting from such an occurrence.
12. **Environmental and social management system (ESMS)**- refers to a set of management processes and procedures that allow an organization to identify, analyse, control and reduce the environmental and social impacts of its activities in a consistent way and to improve

performance in this regard over time. For the purposes of this document, “ESMS” refers to the environmental and social management system of MWE. When used in the long form, “environmental and social management system”, it refers to the entities’ management system.

13. **Environmental and social management plan (ESMP)** - refers to a document that contains a list and description of measures that have been identified for avoiding adverse environmental and social impacts, or minimising them to acceptable levels, or to mitigate and compensate them and usually the main output of the ESIA process.
14. **Environmental and social safeguards (ESS)** - refers to a set of standards that specifies the desired outcomes and the specific requirements to achieve these outcomes through means that are appropriate to the nature and scale of the activity and commensurate with the level of environmental and social risks and/or impacts. 11. **Involuntary resettlement** - means physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, including those that lead to loss of income sources or other means of livelihood), or both, caused by project-related land acquisition or restrictions on land use. 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.
15. **Land acquisition**- refers to all methods of obtaining land for project purposes, which may include outright purchase, expropriation of property and acquisition of access rights, such as easements or rights of way.
16. **Mitigation**- The reduction and/or avoidance of emission of greenhouse gases into the atmosphere, through financing and implementing low-carbon technologies, programmes and projects.
17. **Mitigation hierarchy**- as described in the ESS standards that set prioritized steps for limiting adverse impacts through avoidance, minimization, restoration and compensation as well as opportunities for culturally appropriate and sustainable development benefits.
18. **Stakeholders**- refers to individuals or groups who: (a) are affected or likely to be affected by the activities; and (b) may have an interest in the activities (other interested parties). The stakeholders of an activity will vary depending on the details of the activity and may include local communities, national and local authorities, neighbouring projects, and non-governmental organizations.
19. **Greenhouse gas (GHG)** - Any gas that absorbs infrared radiation in the atmosphere, including (but not limited to) water vapour, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), hydro chlorofluorocarbons (HCFCs), ozone (O<sub>3</sub>), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>).

# **MINISTRY OF WATER AND ENVIRONMENT**

**DIRECTORATE OF WATER RESOURCES MANAGEMENT**

**ENVIRONMENTAL SCOPING REPORT FOR PROPOSED SITES FOR  
ESTABLISHMENT OF HYDROMETEOROLOGICAL MONITORING STATIONS  
UNDER THE INTEGRATED WATER MANAGEMENT AND DEVELOPMENT  
PROJECT (IWMDP)**

**SEPTEMBER 2019**

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# 1. INTRODUCTION

The Government of Uganda through her Ministry of Water and Environment is implementing the Integrated Water Management and Development project (IWMDP) funded by IDA (World Bank), which will support the Government of Uganda in achieving the United Nation's Sustainable Development Goal six (SDG6) and will also support the fulfilment of the Second National Development Plan (NDPII) goals and priority actions.

The Project will support WSS infrastructure investments in big and small towns located primarily in Uganda's Northern and Eastern regions. The Project will also support RGCs in Uganda's Central and Midwestern regions. The water resource activities are designed to consolidate IWRM in overall water sector planning and infrastructure development. Specific water resources measures will be implemented in the Upper Nile and Kyoga WMZs where a number of CMPs have been prepared and where most of WSS infrastructure investments proposed under this Project are located.

The Project will integrate infrastructure investment, water source and catchment protection measures, and comprehensive sanitation planning to ensure sustainability and increased resilience to climate change and variability. The IWMDP is comprised of four (4) components: (1) WSS in Small Towns and RGCs and Support to Districts Hosting Refugees; (2) WSS in Large Towns and Support to a District Hosting Refugees; (3) Water Resources Management and; (4) Project Implementation and Sector Support.

Under Component 3 the project plans to among other things construct hydrologic monitoring systems in different parts of the country. Operational Policies of the World Bank (Bank), provide a mechanism for integrating environmental and social concerns into Bank-supported project decision-making and require that potentially adverse environmental.

The Scoping exercise is in line with the recommendation of a meeting held on 19th may 2014 at the World Bank Office. It is an important step in ensuring compliance with the World Bank Environment and Safeguard Policies. The major objective of Scoping is to determine the level of environmental assessment to which the candidate project will be subjected.

## 1.1. Objective of the Scoping exercise

The overall objective of the environmental Scoping exercise was to determine the level of environmental assessment that the proposed project will be subjected to in accordance with World Bank Safeguards. The specific objectives are:

1. To identify potential impacts of the project on the biophysical and socioeconomic environment with specific emphasis on possible sources of conflict.
2. To probe whether there are any proposed activities that could result in significant cumulative impacts or that in combination could affect the social and economic opportunities of the inhabitants of the immediate project area.
3. To guide project design by suggesting appropriate mitigation measures to address the identified negative impacts.
4. To ascertain whether all the required permits for the project and all the other relevant legislation, regulations, policies and plans have been adhered to.

## 1.2. Methods

The methods used for collection of data used in the preparation of this Scoping Report included literature review, physical observation of the proposed site characteristics and key informant interviews. Literature reviewed included:

- The Project Implementation Manual.
- The World Bank Safeguards
- National Environment Management Act, Cap 153.
- Environmental Impact Assessment Regulations, S.I No 13/1998.

A field visit was undertaken in September, 2019 to the proposed project sites located in the four Water Management Zones, and in the Districts of Kaliro, Moroto, Kotido, Lira, Pader, Kitgum, Mityana, Hoima, Bullisa, Rukungiri, Kasese, Kampala, Wakiso and Mutukula.

Stakeholder consultations were held with selected staff of the WMZ and district officials from various districts, partner NGOs, stakeholders and beneficiaries in the areas visited.

## 2. PROJECT SITE DESCRIPTION

The architectural and engineering designs for the proposed project are already developed at the time of the study.

### 2.1. Groundwater stations

#### 2.1.1 Lira groundwater monitoring station, Lira district

##### a) Location and neighborhood of proposed Project site

The proposed project site is located in Lira central, Lira Municipal Council, near Lira CPS. The proposed site is in the fence of Lira DHQ, it is surrounded by a wall fence, existing weather station, and Education department, accessible through the eastern direction.

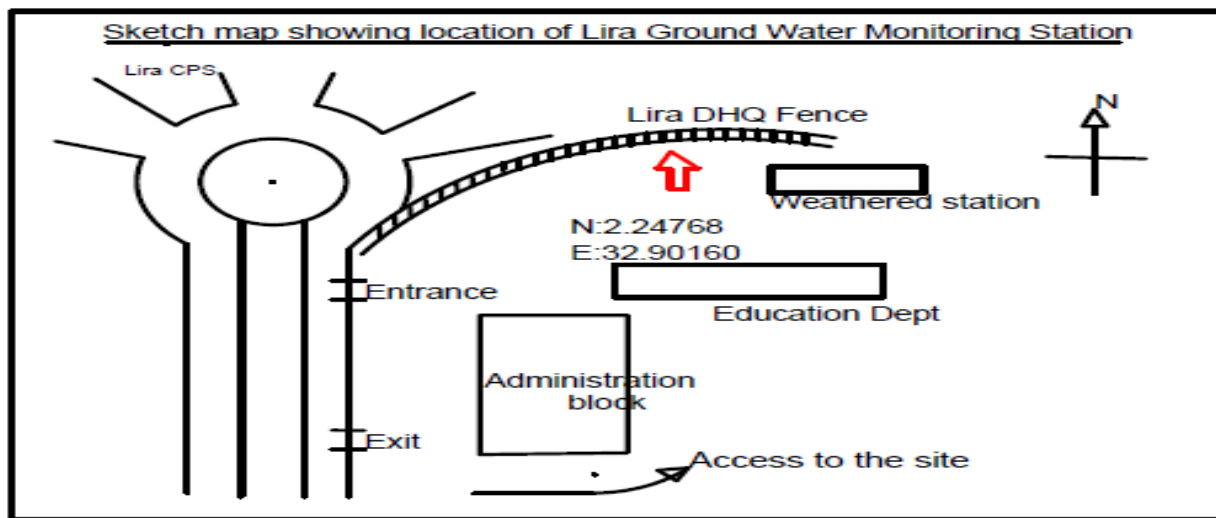


Figure 1: Sketch showing the site layout of the proposed ground water monitoring station in Lira

##### b) Topography and Geomorphology

The general topography of the proposed project site is generally a flat land. The soils of Lira Town are typical of those of the wider Northern Uganda that are characteristic of the Precambrian period consisting of the predominant rocks formed between 3,000 and 6,000 million years ago (Ollier, 1960). According to Ollier (1960), the region is underlined by granitic and metamorphic rocks of the basement complex (Pre-Cambrian). The rock types include schist, gneiss, alluvium, and quartzite. These soils can best be described as shallow and brown loams.

##### c) Flora and fauna

The proposed site is relatively devoid of trees on the North –West and green vegetation at the exact point for proposed site. No fauna of significant importance were observed.



Photo 1: A photo showing flora of proposed site in lira

Table 1 Contact person for the proposed ground water monitoring station at Lira district head office.

S/N	NAME	TEL
1	David (PAS)	0777930411

## 2.1.2 Kaliro ground water monitoring station, Kaliro District

### a) Location and neighborhood of the proposed Project site

The proposed site is located North of the District Headquarters at coordinates; N:00.91709 and E:33.49425 and is surrounded by a chain link fence, Trees on the East and South-West, Water office in the south and buildings on the East of the proposed site.

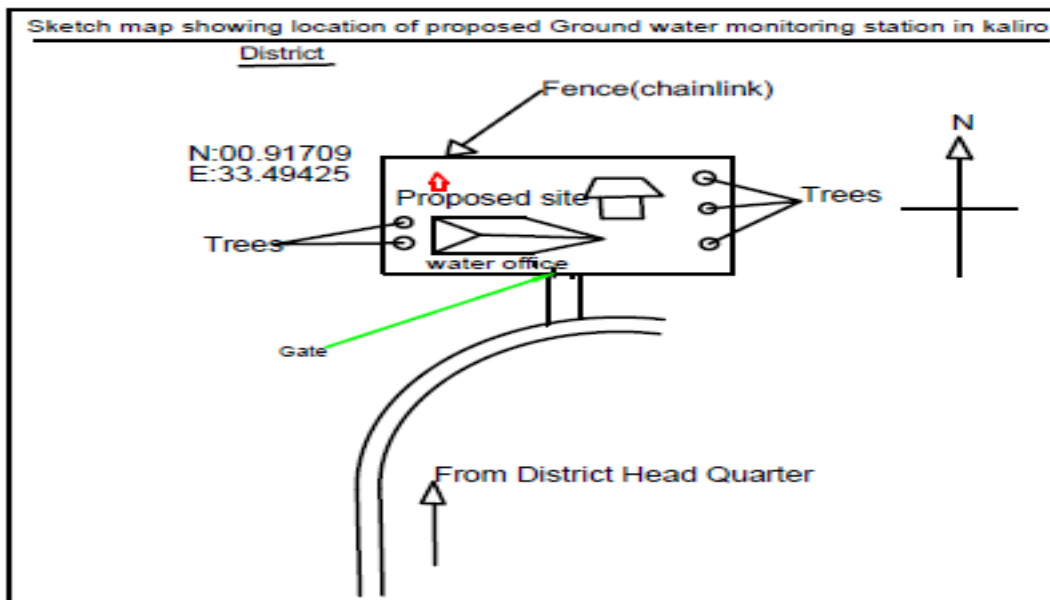


Figure 2: Sketch showing the site layout of the proposed ground water monitoring station in Kaliro

## b) Topography and Geomorphology

The general topography of the proposed project site is generally a flat land. Kaliro Geologically exist of wholly changed rocks, a kind of Precambrian rocks only found on the lakeside of lake Kyoga one finds quaternary Sedimentary rocks. The type of soil is predominantly dark brown clay underlain by gneiss.

## c) Flora and fauna

The proposed site is predominantly covered by vegetation which is savannah mosaic and constituted of a mixture of forest remnants and savannah trees with grass and shrubs. No fauna of significant important were observed.



*Photo 1: A photo showing stick being firmly ground at the position where the site is proposed to be at Kaliro*

*Table 2: Contact persons for the proposed ground water monitoring station at Kaliro district head office.*

S/N	NAME	TEL
1	Jumbwike Ronald (Admin Assistance water office)	0782269304
2	M. r Edhaya (District water officer)	0777061136

## 2.1.3 Arua ground water monitoring station, Arua District

### a) Location and neighborhood of proposed Project site

The proposed site is located along Arua town road at coordinates; N:03.01781 and E:30.90984 and is surrounded by the District Water office fence, uniport in the North East, Office in the North and there is an access road in the East of the proposed site.

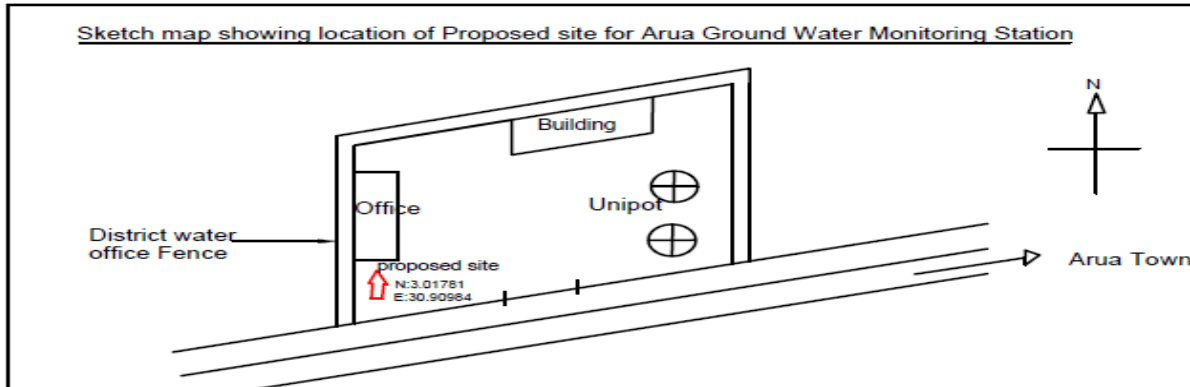


Figure 3: Sketch showing the site layout of the proposed ground water monitoring station in Arua

### b) Topography and Geomorphology

The general topography of the proposed project site is generally a flat land. The soil of Arua District is basically soils with a very shallow profile depth and they often contain large amount of gravel. They typically remain under natural vegetation being especially susceptible to erosion, desiccation or water logging, depending on climate and topography and this type of soil is basically described as leptosols.

### c) Flora and fauna

The proposed project site is composed of green vegetation covering the site which consists of small green shrubs scattered the whole area and there are some small trees near the site. There is no significant important fauna observed.



Photo 3: A photo showing Arua District officials locating site for the monitoring station

Table 3: Contact persons for the proposed ground water monitoring station at Arua district HQ.

S/N	NAME	TEL.
1	Madam Molly (sec. water office)	0775800391
2	Madam Gloria (office attendant CAO)	0789115748
3	Paul (security guard water office)	0789654894

## 2.1.4 Butiaba ground water monitoring station, Buliisa district

### a) Location and neighborhood of proposed Project site

This is a groundwater monitoring site that will be used to monitor the relationship between the ground and lake water levels and this was discussed with the District water officer as he was proposing the station to a different location far from the proposed.

The identified site is near Butiaba landing site at a location: N01.81427<sup>0</sup>, E31.34893<sup>0</sup> adjacent to the police post, water supply, the Subcounty and the fisheries offices.

Below is the layout of the proposed Butiaba groundwater monitoring site and photos taken.

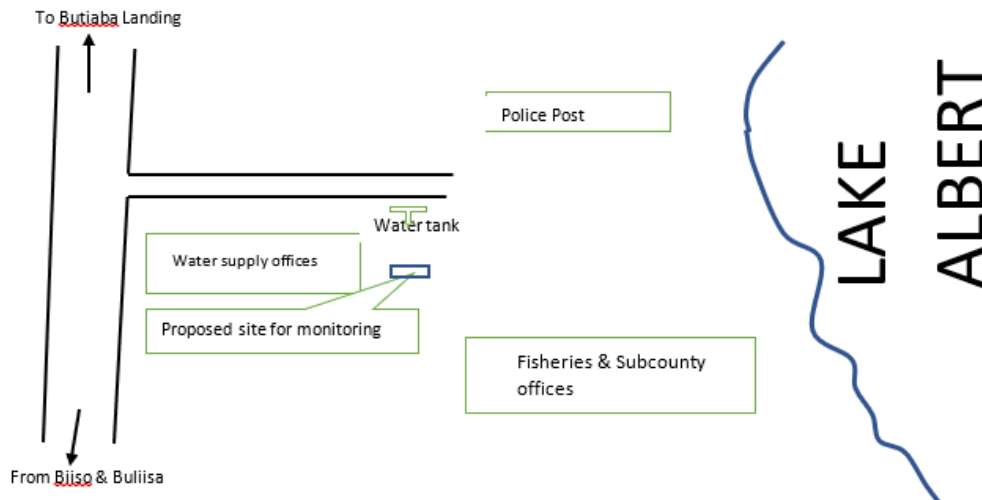


Figure 4: Layout of the proposed site for Ground water monitoring station in Butiaba

### b) Topography and Geomorphology

The site is within Butiaba landing site that lies in the central plateau of Uganda on the shores of Lake Albert at an altitude of 680 masl. In the western fringes, lies the Rift Valley an area that is largely covered by Lake Albert and the Escarpment.

The morphology of the landscape is related to the processes of denudation that in turn, greatly influences pedogenic processes.

### c) Flora and fauna

The area is with scattered shrubs with scanty grass exposing the soil as per the photographs below.





Location of the proposed ground water monitoring station



Discussing at the proposed site with the subcounty chief and LCIII chairperson of Butiaba

Photo 2: Showing the location of the ground water monitoring site at Butiaba

Table 4: Contact person for Ground water monitoring station at Butiaba

S/N	NAME	TEL
1	Busingye Kayakubu(Sub county chief)	0774952425
2	Mugyenyi Malitabu(Chairman LC3)	0774984667

## 2.1.5 Kajoji groundwater monitoring station, Mityana district

### a) Location and neighborhood of proposed Project site

The ground water monitoring site in Mityana was sighted at Kajoji health centre in Kikunyu parish, wwKikandwa sub county along Kikunyu – Semuto road. The health centre currently is not fenced but its fencing is underway as during the discussions, there are funds allocated for this during this financial year. The site is at a location of; N00.61067<sup>0</sup>, E32.17924<sup>0</sup>

During droughts, the groundwater table is low, this led to the relinquishment of a bore hole, N00.60956<sup>0</sup>, E32.17908<sup>0</sup> close to the health centre as the yield was too low.

Below is the site layout.

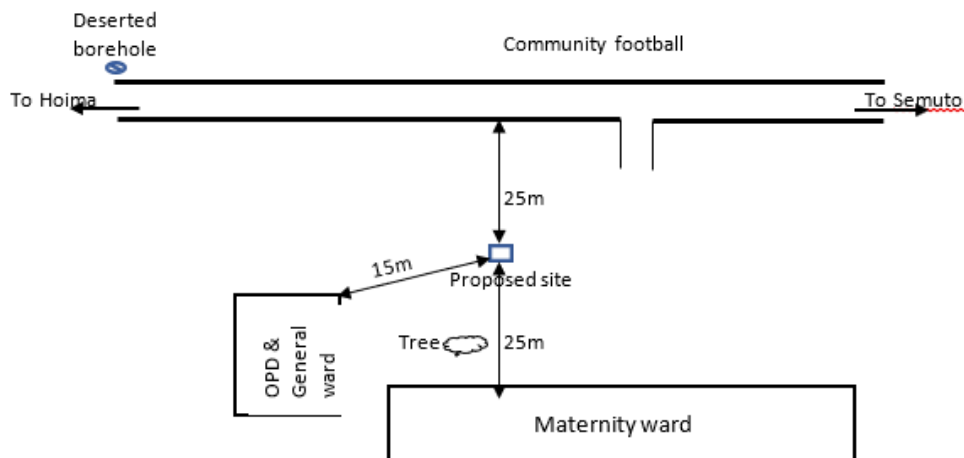


Figure 5: Sketch showing the proposed groundwater monitoring station in Kajoji

## b) Topography and Geomorphology

The proposed site for the project is generally located on a flat land. The soil of the proposed site is typically characterized by fine textured subsurface layer of low silt-to-clay ratio, high contents of kaolinitic clay and iron and aluminum oxides and low amount of available calcium, rocks are basalts, diorites etc.

## c) Flora and fauna

The proposed site has small busy green vegetation and flowers near the roadside and a big tree on the south –West of the proposed site near the maternity ward. No important significant fauna were observed.



Photo 5: showing the proposed site for the monitoring station

Table 5: Contact person for Ground water monitoring station at Kajoji, Mityana district

S/N	NAME	TEL
1	Mr. Ssonko James, District Water Officer	0774744690
2	Dr. Lwassa Mpiiga Fred, District Health Officer	0772454145

## 2.2. Surface water monitoring stations

### 2.2.1 River Pager, Kitgum district

#### a) Location and neighborhood of proposed Project site

The proposed project site is located in the North –West part of Kitgum town. The site is on the west of the new bridge that is along Palabek-Lamwo road near an old bridge that is on the west of the new bridge. The proposed site is situated at N: 03.30068 and E: 32.87941.

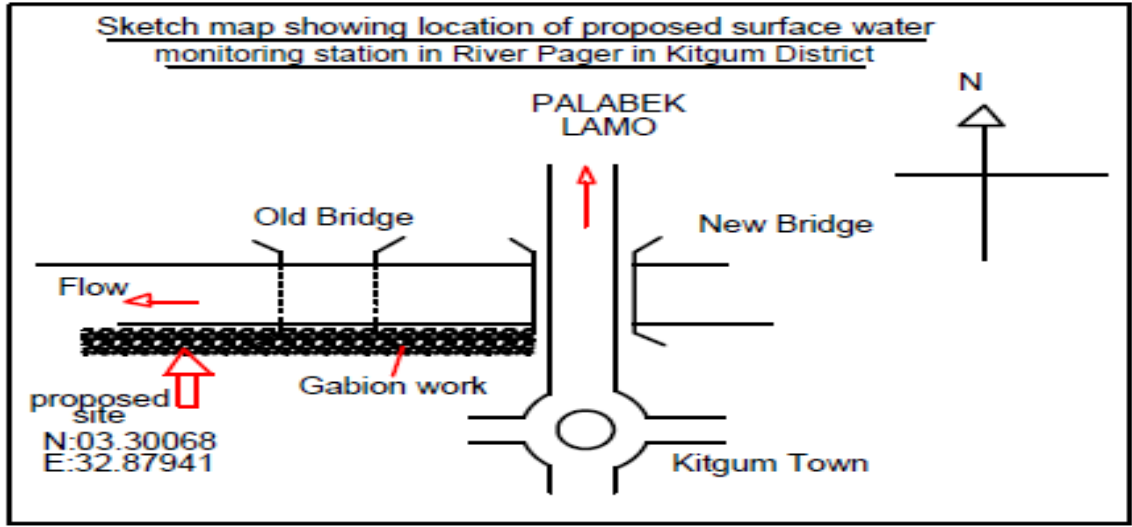


Figure 6: Layout of the proposed site on River Pager, Kitgum District

**b) Topography and Geomorphology**

The general topography of the proposed project site is gently sloping in the Eastern direction. The soils of River Pager are typical of those of swampy areas that are characteristics of smaller particle size and the structure tends to be very dense and this density is responsible for soils being thick and heavy. The soil type can best be described as brown clay soil. The types of rocks include granite, and alluvium.

**c) Fauna and flora**

The proposed site for location of surface water monitoring station in River Pager is covered by small green vegetation and shrubs with some trees near the site.

**2.2.2 River Longiro, Kotido District.**

**a) Location and neighborhood of proposed Project site**

The proposed project site is located in the sorghum plantation ready for harvest in the North –East of the Bridge along Abim-Kotido road and is on the River bank of river Longiro. The site is situated at N:02.99559 and E:34.09223 and is 20m away from the North of the brick wall structure. There is also sand mining on the other bank of the river opposite to the location of the proposed project site.

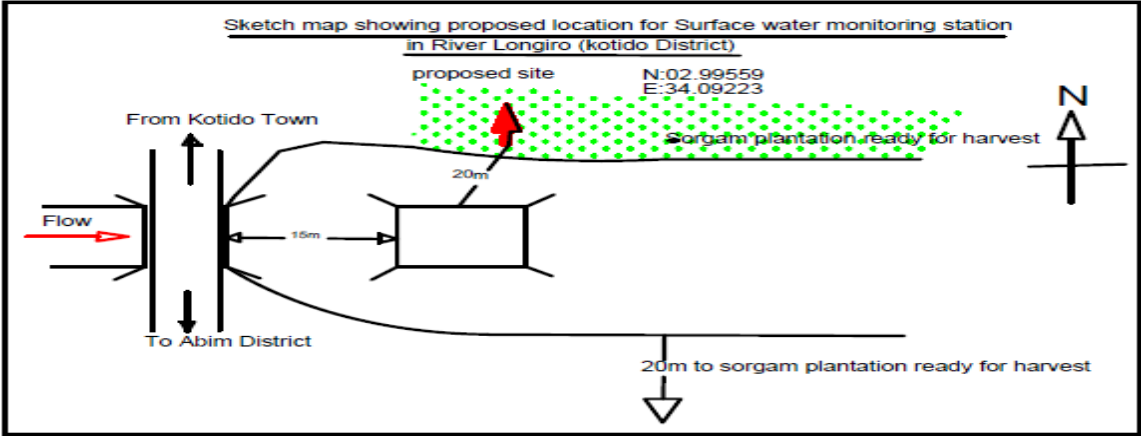


Figure 7: Site layout of the proposed surface water monitoring station on River Longiro

## b) Topography and Geomorphology

The general topography of the proposed project site is gently sloping in a South –East direction. The soils of River Longiro is typically sand which is characteristics by granular materials composed of finely divided rocks and mineral particles. It's size finer than gravel and coarser than silt .it is a textural class of soil i.e. soil containing more than 85% sand sized particles by mass. The type of rocks includes granite and alluvium.

## c) Flora and fauna

The proposed site is at the bank of the river covered with sorghum plantation ready for harvest and there are trees north of the proposed site, green vegetables comprising of green grasses and shrubs. No significant important fauna was observed.



Photo 3: A picture showing the flow direction of River Longiro and the flora around

### 2.2.3 River ASWA II at Puranga, Pader district

#### a) Location and neighborhood of proposed Project site

The proposed site is located 10m away from the ASWA II and 30m from Lira kitgum road that is on the Northern side of the proposed site. the site is surrounded by Puranga bridge on the North-East, Puranga trading center on the North East which is 1km away from the proposed site.

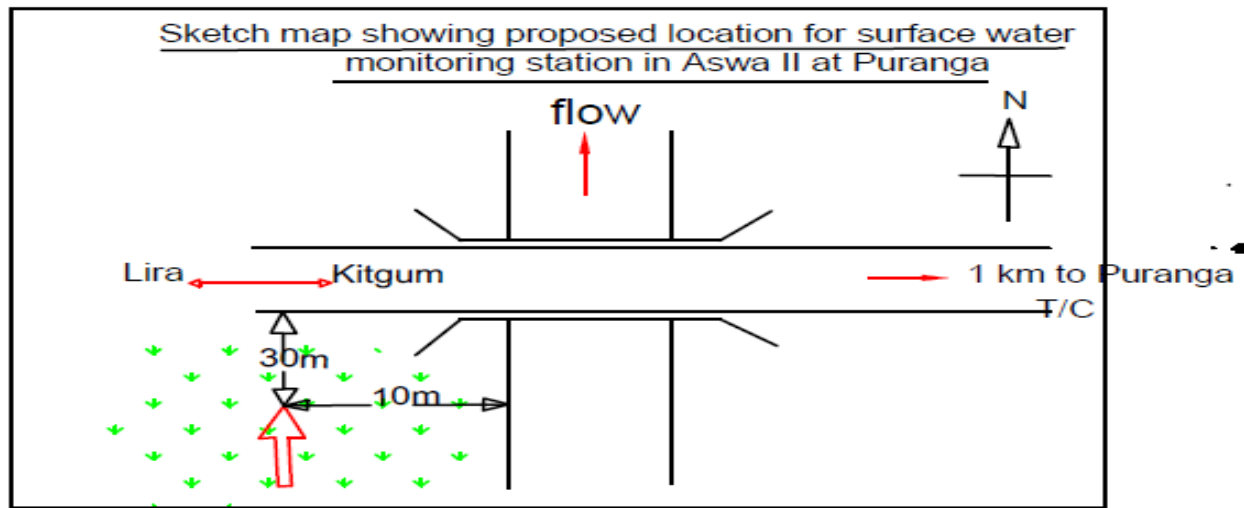


Figure 8: Layout of the proposed site for Surface water monitoring station on Aswa II at Puranga

## b) Topography and Geomorphology

The general topography of the proposed project site is gently sloping in the Northern direction. The soils of ASAW II is typically that of the river areas consisting of an old alluvial soils at the bottom of the river and the soils at the bank of the river is typically brownish color, and resembles a loam more than silt although is still finer.

### **c) Flora and fauna**

The proposed site is covered by green vegetables all over and trees at the exact point of the proposed site. No fauna of significant important were observed.



*Photo 4: A photo showing Puranga Bridge and the surrounding flora near the site*

## **2.2.4 River Nyamwamba, Kasese district**

### **a) Location and neighborhood of proposed Project site**

The river flows from the Rwenzori mountains through Kilembe mines and during heavy rains it usually floods. During this survey, quite a good length along the river was traversed and the best location for a hydrological monitoring station is slightly downstream of the Kasese-Fort portal road at position: N00.19432<sup>0</sup>, E30.16540<sup>0</sup>.

This site is close to the fence of Civil Aviation Authority, approximately 50m, that have plans to upgrade it and not comfortable to having a structure, like a protective housing, that may interfere with their flights. More discussion at higher levels may be required as this is the best location along the river. Far downstream at the railway crossing, N00.18109<sup>0</sup>, E30.11835<sup>0</sup> is not good for a monitoring station as observed in the photographs that were taken.

Below is a sketch layout of the proposed site on river Nyamwamba

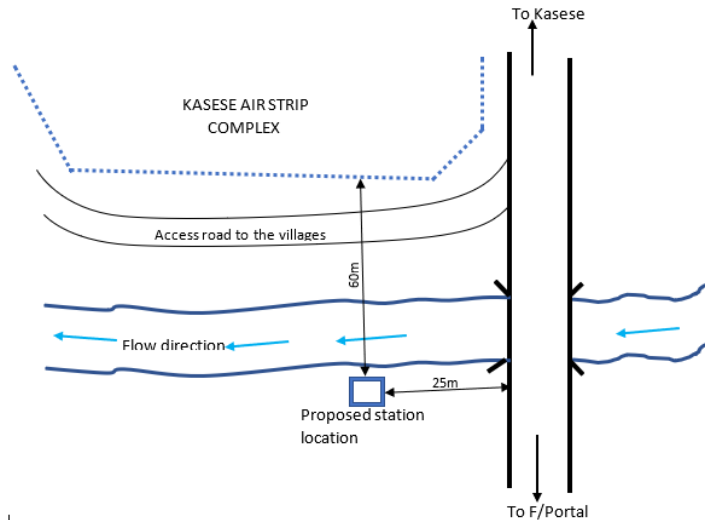


Figure 9: layout of proposed site for surface water monitoring in Nyamwamba

### b) Topography and Geomorphology

The topographic location is generally through the perennial water resources flowing from the alpine mountains of the Rwenzori mountains, through Kasese to Lake George. The district is composed of mountainous areas that consist of rugged mountain relief, the undulating region at the foothills and the low-lying flat land areas in the south and south-eastern.

Geologically, the district consists of low to high grades of metamorphic and igneous rocks and within the rift valley with a number of mineral deposits; viz, copper ore, cobalt, salt and limestone believed to be in small quantities.

The actual location of the monitoring station is rich of sand with a lot of sand mining to downstream of the river near the railway crossing bridge.

### c) Fauna and flora

The proposed project site is covered by bushy tall grasses and shrubs with small trees near the river. There was no important significant fauna observed.



Photo 5: Showing Nyamwamba Bridge and the surrounding flora near the site

## 2.2.5 Surface water monitoring station in Nchwera

### a) Location and neighborhood of proposed Project site

The river flows from the Kigezi hills through the Queen Elizabeth National Game Park to Lake Edward. The selected monitoring section is where the river crosses the Katungulu – Ishasha road with a geographical location of S00.45835<sup>0</sup>, E29.80148<sup>0</sup>. The protective structure should be raised up to the road level with an access platform from the road to the structure.

Below is the site layout of the proposed monitoring station.

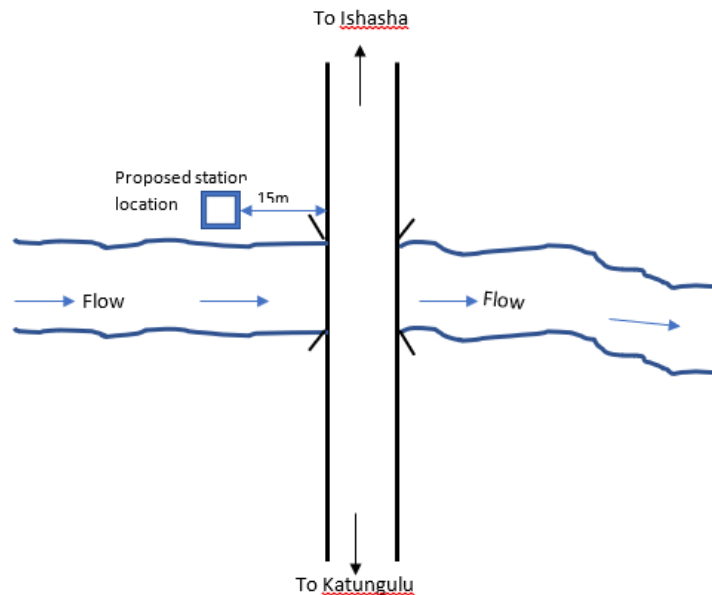


Figure 10: Layout of proposed project site for surface water monitoring station in Nchwera

### b) Topography and Geomorphology

The proposed site is gently sloping in the South-East direction with the soil type being that of the Ishaka district being defined by fine –textured subsurface layer of low silt-to-clay ratio, high contents of kaolinitic clay and iron, aluminum oxides and low amount of available calcium.

### c) Fauna and flora

This site has small green grasses and shrubs at the exact point for proposed site and there was no important significant fauna observed.



Photo 6: A photo showing flora of the proposed project site in Nchwera

## 2.3. Automatic weather stations

### 2.3.1 Moroto District

#### a) Location and neighborhood of proposed Project site

The proposed site is situated at N: 02.53157 and E: 34.66192, And is surrounded by an old weather station in the North, Production unit that is 30m away in the South, Big trees that are 25m away from the proposed site in the East. Also, there is a pack yard North-East of the old weather station, planning unit 6m away from the old weather station in the West and URA offices in the North West of the old weather station. UNMA were consulted that is Mr. Waiswa Milton Michael (0777216000), manager installation and maintenance he confirmed that the weather station of Moroto is not working because the computer and the modem of the system had broken down , but currently they are going to install another automatic weather station in the airfield of moroto under MAAIF, but he later proposed this station to be in Nadunget or Katikekile Sub- country in the South or Ngoleriet sub – country in the East ,or Rupa sub country in the North respectively of Moroto.

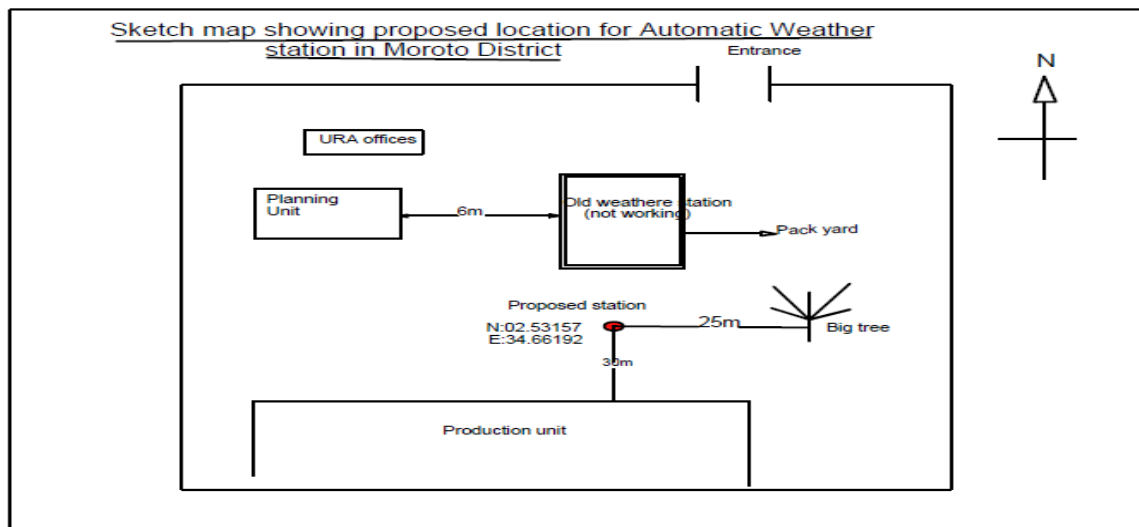


Figure 11: Sketch map showing the layout of proposed site for Automatic weather station in Moroto



## b) Topography and Geomorphology

The general topography of the proposed project site is generally a flat land. The type of soil is typically clay-rich soils that contain a type of expansive clay that shrinks and swells dramatically. this soil therefore shrinks as they dry and swell when they become wet and this type of soil is basically described as vertisols.

## c) Fauna and flora

The proposed site is typically semiarid with dry tree savannah species dominantly grass species. dry moisture forest at high altitude, savannah woodland, semi-ever green thickets, deciduous thickets, grass stepped communities' forest are found in the hills. No fauna of significant important were observed.



*Photo 7: A photo showing Flora near the old weather station where the site is proposed*

*Table 6: Automatic weather station contacts persons for the proposed site at Moroto district HQ*

S/N	NAME	TEL
1	Edward Eko (A. CAO)	0782110191
2	Agan. G. Sagal (District IT officer)	0774382560
3	Madam Naigaga (police officer)	0781491246
4	Bosco. A (URA officer)	0777180872

## 2.3.2 Mutukula

### a) Location and neighborhood of proposed Project site

During our discussions with the Mutukula town council team that included the Town clerk, Mr. Sebaduka Francis (0772671631), his assistant, Miss Nantege Phoinah (0700415241) and the accounts assistant, Mr. Lawrence (0706054549), two sites were identified, viz; at the community centre where the council offices are to be constructed and at Mutukula primary school. At the Primary school was preferred due to security and this will also act as a learning aid to the pupils. The school administration, the deputy headteacher and a teacher, also welcomed the idea and granted for the construction of the automatic weather station within their compound as per the sketch below. When UNMA that is Mr Waiswa Milton Michael (0777216000), manager installation and maintenance was consulted, he said this would boost the current weather station which is operated manually in Kibanda in kyotera district, he therefore welcomed the idea of installation of the automatic weather station in mutukula.

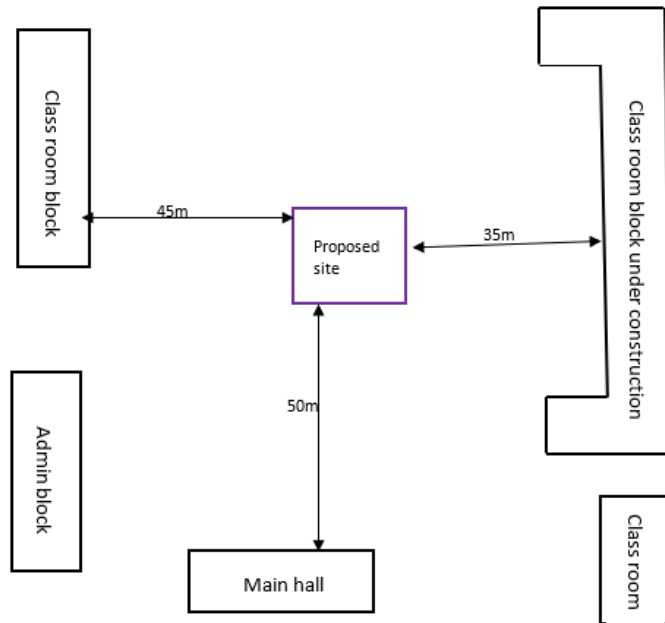


Figure 12: Layout of proposed site for Automatic weather station in Mutukula

### b) Topography and Geomorphology of Ground water monitoring station in Mutukula

The proposed site for project location is located on a generally flat land. The soil of the site is generally that of Mutukula having a light –coloured, coarse-textured, surface horizon that shows signs of periodic water stagnation and abruptly overlies a dense, slowly permeable subsoil with significantly more clay than surface horizon.

### c) Fauna and flora of the proposed project site in Mutukula

The proposed site has small green vegetation with trees on the East and South-West near the class rooms and there is no important significant fauna observed.

Table 7: Contact person for the Automatic water monitoring station at Mutukula

S/N	NAME	TEL
1	Mr. Sebaduka Francis, Town clerk	0772671631
2	Miss Nantege Phoinah, Assistant town clerk	0700415241
3	Mr. Lawrence, Accounts assistant	0706054549
4	Kakumba Matthias, D/Head teacher, Mutulala P/S	0774066381
5	Ochola Joseph, Teacher, Mutulala P/S	0779413299

## 2.4. Water quality monitoring stations

The proposed sites for water quality wet precipitation and dry deposition.

### 2.4.1 Entebbe Meteorological Station within the Directorate of Water Resources Complex, Wakiso district

#### a) Location and neighborhood of proposed Project site

This station is an existing station which originally had hydrological and water quality equipment. The coordinates are; N:00.048595 and E:32.472278. The station is surrounded by administrative

buildings thus; Water Resources Institute approximately 100 m away, NBI also approximately 100m away, Water Quality National Reference Laboratory approximately 80m away.



*Photo 8: layout of Entebbe monitoring station for the Wet and Dry monitoring*

### **b) Topography and Geomorphology**

The site for water quality monitoring station is located on a flat land. The soil of the proposed site is typically characterized by fine textured subsurface layer of low silt-to-clay ratio, high contents of kaolinitic clay and iron and aluminium oxides and low amount of available calcium, rocks are basalts, diorites etc.

### **c) Fauna and flora of Entebbe water quality monitoring station.**

Entebbe water quality monitoring station is located within quadrangle which comprises of mainly green vegetation which is maintained slashed yearly. No important significant fauna observed.



*Photo 14: showing green vegetation and trees at Entebbe monitoring station.*

## **2.4.2 Makerere University, Kampala**

### **a) Location and neighborhood of proposed Project site**

The Makerere University Wet and Dry Stations is going to be located within Makerere University weather station. The coordinates of the station; E451997, N32.568632. The station is behind Social

Sciences Department about 70m away, the Senate House is across the road situated about 100m away. In the northern side, is the Makerere Freedom Square which has a lawn with trees surrounding it. In terms of flora and fauna, the station is within an area that is maintained slashed all year round. On the eastern side are trees which are across the road towards the Senate building.



*Photo15: Proposed wet and Dry station at Makerere University weather station*

#### **a) Topography and Geomorphology**

The site for automatic weather station in Makerere is located on a flat land. the soil type is typically that of Kampala areas having mineral soils conditioned by a wet (sub) tropical climate. major landforms in the (sub) humid tropics.

#### **b) Fauna and flora**

The site for water quality monitoring is located in an open area having small green vegetation (pass Palam) which is slashed monthly and there are some trees few meters away from the station. No important significant fauna observed.



*Photo 16: Showing flora of the water quality monitoring station in Makerere University*

### **2.4.3 National Water and Sewerage, Hoima**

#### **a) Location and neighborhood of proposed Project site**

The water quality dry and wet station in Hoima is located at the National Water and Sewerage Water treatment Works station. The location is an established site already has an engineering installation including ground water monitoring station. The coordinates of the location; E:316696.1 N:158471.3.

#### **b) Topography and Geomorphology**

The site for water quality monitoring station is located in a flat land. the soil type is typically that of Hoima district which is described as dystric regosols. i.e. group of regosols is a taxonomic rest group containing all soils that could not be accommodated in any of the other groups.

#### **c) Fauna and flora**

The site for water quality monitoring is located in an open area having small green vegetation (pass Palam) which is slashed monthly and there are some trees few meters away from the station.

No important significant fauna observed.

### 3. DESCRIPTION OF POTENTIAL IMPACTS

This section constitutes a preliminary identification and evaluation of significant environmental consequences related to the construction of ground, surface and automatic weather monitoring station across the country. The Scoping team recognizes that this development has both reversible and irreversible impacts on the environment. The positive aspects of the proposed development on the existent biophysical environment should be enhanced and relevant mitigation measures should be put in place to minimize adverse environmental impacts predicted. It is worthy to note that the identified impacts are not exhaustive as the Scoping exercise was a rapid environmental assessment.

The interaction of development activities with the environment will result in environmental impacts, which are categorized as follows:

- i. Direction- Positive or Negative,
- ii. Duration- Long- or short-term,
- iii. Location- Direct or Indirect,
- iv. Magnitude- Large or small,
- v. Extent- wide or local
- vi. Significance- Significant or insignificant

To systematically evaluate the impacts associated with this development activity, an impact matrix (Table 9) has been constructed as per the categories identified. Table 1 below gives the score guide used to rate the impacts indicated on the impact matrix:

*Table 8: Score guide for identified impacts as stated in the impact matrix for construction of the new proposed sites for weather stations.*

Attribute	Score/Rating					
Direction	Positive/ Negative	Positive/ Negative	Positive/ Negative	Positive/ Negative	Positive/ Negative	Positive/ Negative
Duration	Long	Short	Short	Long	Long/Short	Long
Magnitude	Large	Small	Large	Small	Large	Large
Extent	Wide	Local/Wide	Wide	Wide/Local	Local	Local
Overall assessment	Significant	Insignificant	Significant	Insignificant	Medium	Significant

#### 3.1. Scoring related to project duration

Explanatory notes of descriptive parameters used in the score guide (Table 1) – based on the Scoping team’s professional judgement.

**Long (long duration impact)** – permanent or long-term changes that will affect the ability of the ecosystem to recover after activities are completed

**Short (short duration impact)** – temporary or short-term changes that will most likely enable the ecosystem to quickly recover after activities are completed

Scoring related to magnitude of impact

**Large (large intensity impact)** – an impact that is envisaged to be major or clearly noticeable and that is sufficient to destabilize ecosystem functionality such as a change in a sensitive ecosystem or effect on a critical/rare/endangered biodiversity component

**Small (small intensity impact)** – an impact that is envisaged to be so minor that they will neither destabilize nor noticeably alter the ecosystem functionality such as a change in a relatively resilient ecosystem or abundant biodiversity component that is capable of withstanding pressure exerted on it from project activities.

### 3.2. Scoring related to the size of area affected

**Wide (wide scope impact)** – an impact that is envisaged to extend beyond the immediate project area and could result into a large, measurable, and destabilizing change in the carrying capacity of the affected area.

**Local (narrow scope impact)** – an impact that is envisaged to be limited to the immediate project area and does not result in a measurable change in the carrying capacity of the affected area.

*Table 9: Impact Matrix for construction of the proposed groundwater monitoring stations.*

Impact	Direction	Duration	Magnitude	Extent of Impact	Overall assessment
<b>Site Preparation Phase</b>					
Destruction of vegetation	Negative	Short	Small	Local	Insignificant
Soil erosion	Negative	Short	Small	Local	Insignificant
<b>Construction Phase</b>					
Increase in Domestic refuse and effluent from construction workforce	Negative	Short	small	Local	Medium
Influx of people	Negative	Long	Large	Local	Medium
Increased demand for local goods and services	Positive	short	Large	Local	Significant
Creation of new employment opportunities	Positive	Long	small	Local	Significant
Disruption of traffic	Negative	Short	Small	Local	Insignificant
Increase in dust	positive	Short	Large	Local	Medium
Increase in noise	positive	Short	Large	Local	Medium
Increase in sewerage	Negative	Short	Small	Local	Insignificant
Increased demand on water supply	Negative	Short	Large	Local	Medium
Increased demand on sewerage system	Negative	short	Small	Local	Insignificant
Increased demand on waste disposal and treatment	Negative	Short	Small	Local	Insignificant
Increased demand on energy supply	positive	Long	Small	Local	Significant
Increased demand on natural resources	Negative	Short	Large	Wide	Insignificant

Impact	Direction	Duration	Magnitude	Extent of Impact	Overall assessment
outside the project area					
Spread of diseases e.g. HIV/AIDS	Negative	Short	Large	Local	Medium

Table 10: Impact Matrix for construction of the proposed Surface water monitoring stations and Automatic Weather stations.

Impact	Direction	Duration	Magnitude	Extent of impact	Overall assessment
<b>Site Preparation Phase</b>					
Destruction of vegetation	Negative	Short	Small	Local	Insignificant
Soil erosion	Negative	Short	Small	Local	Insignificant
<b>Construction Phase</b>					
Increase in Domestic refuse and effluent from construction workforce	Negative	Short	Large	Local	Medium
Influx of people	Negative	short	small	Local	insignificant
Increased demand for local goods and services	Positive	short	Large	Local	Significant
Creation of new employment opportunities	Positive	Long	small	Local	Significant
Disruption of traffic	Negative	Short	Small	Local	Insignificant
Increase in dust	Negative	Short	Large	Local	Medium
Increase in noise	positive	Short	small	Local	Medium
Increase in sewerage	Negative	Short	Small	Local	Insignificant
Increased demand on water supply	Negative	Short	Large	Local	insignificant
Increased demand on sewerage system	Negative	short	Small	Local	Insignificant
Increased demand on waste disposal and treatment	Negative	short	Small	Local	Insignificant
Increased demand on energy supply	positive	Long	Small	Local	Significant
Increased demand on natural resources outside the project area	Negative	Short	Large	Wide	insignificant
Spread of diseases e.g. HIV/AIDS	Negative	Short	Large	Local	Medium



### **3.3. Statistical Analysis of identified impacts**

Out of a total of 16 identified impacts in Ground water monitoring stations, 5 (33.3%) were positive and 11 (68.75%) were negative. Of the negative impacts 9 (81.8%) were rated insignificant, 3(27.3%) were rated medium (moderately significant), while 0 (0%) were rated as significant.

Also, of total of 16 identified impacts in surface water monitoring stations and Automatic Weather station, 4(25%) were positive and 12(75%) were negative of the negative impacts 9(75%) were insignificant and 3(25%) were rated medium (moderately significant), while 0(0%) were significant.

### **3.4. Potential Impacts of the proposed project on the biophysical environment**

#### **3.4.1 Impacts during the site preparation phase**

##### **a) Loss of Vegetation and animal habitat during site clearance.**

There is anticipated loss of the existing trees, green grasses and shrubs which includes loss of Sorghum ready for plantation at the site that have been useful for maintaining soil fertility. Other associated impacts could include: loss of habitat for fauna (mainly birds) that perch on the trees.

##### **b) Migration of birds and insects**

Felling of trees on site leading to destruction of animal habitat, coupled with the disturbance caused by the noise and vibrations from large equipment, could lead to the eventual migration of animals from the proposed site. However, the anticipated effects of the project on bird and insect biodiversity may not significantly affect the conservation status of these organisms as there are alternative habitat locations in the neighbourhood of the sites. This implies that the affected birds and insects will have alternative sources of forage and nesting sites within the neighborhood.

##### **c) Disturbance to fauna**

Site clearance is usually associated with the use of heavy machinery and equipment. The noise and vibrations that accompany site clearance activities are likely to cause considerable disturbance to the existent fauna (birds and insects).

#### **3.4.2 Impacts during the construction phase**

##### **a) Increase in domestic refuse and effluent from construction workforce**

The proposed development is likely to attract a large number of people that are seeking to provide their labour during construction. This is likely to be accompanied by the production of large quantities of domestic waste such as water bottles and polythene.

##### **b) Increase in sewerage**

Given the large number of people that are likely to be attracted by the proposed project, there is a likely to be an increase in the volume of human waste generated. The use of water borne toilets will lead to an increase in the volume of sewerage produced from this site.

##### **c) Increased demand on existing services - water supply, sewage, waste disposal and energy**

The anticipated increase in the number of people to be occasioned by the project is likely to exert pressure on the existing water, sanitation and energy services (both renewable and non-renewable).

### **3.5. Potential Impacts of the proposed project on the Socio-economic environment**

#### **3.5.1 Negative Impacts Influx of people**

The proposed project is likely to attract a large number of people from both within and outside the project area that hope to benefit from it directly and indirectly. Conflicts are likely to emerge in the course of interaction between immigrants and settlers, fuelled by a number of factors – cultural differences, marriage disruptions, quarrels in drinking places etc.

##### **a) Disruption of traffic**

The project is likely to cause an increase in traffic especially during the construction phase since heavy trucks will be used in the transportation of construction materials to and waste from the proposed site.

##### **b) Increase in dust**

Dust will be produced during earth movement in the site preparation phase as well as during the movement of construction materials to and soil waste from the site.

##### **c) Increase in noise**

The use of heavy machinery (such as noise during drilling) in preparing the site is likely to cause excessive noise and vibration that will disturb the neighborhood of the proposed construction site.

##### **d) Increased demand on natural resources outside the project area**

The proposed development is likely to exert extra pressure on construction materials that are obtained from existing natural resources in the wider landscape. During the stakeholder interviews, it emerged that sand used in construction within Lira Municipality is obtained from as far away as Kalongo in Agago District, while mud bricks are obtained from the neighbouring Apac District. In addition to the impact on the landscape that comes with soil excavation, the wood fuel used in firing the mud bricks is a significant contributor to deforestation.

##### **e) Spread of diseases e.g. HIV/AIDS**

The anticipated influx of people to be triggered by the project will lead to new social relationships that could enhance the spread of HIV/AIDS.

#### **3.5.2 Positive Impacts**

##### **a) Creation of new employment opportunities**

The proposed construction of the monitoring stations is likely to create several employment opportunities – direct and indirect – for both local residents and people from within the project sites.

##### **b) Increased demand for local goods and services**

The anticipated influx of people will inevitably lead to a corresponding increase in the demand for local goods and services, thereby boosting trade and positively contributing to the local economy.

## **4. PRELIMINARY MITIGATION MEASURES**

The following preliminary mitigation measures are proposed for projected negative impacts associated with the construction of the proposed Groundwater monitoring station, Surface Water Monitoring station and Automatic Weather station:

### **4.1. Proposed mitigation measures for impacts during the site preparation phase**

#### **Loss of Vegetation and animal habitat during site clearance**

Project design should take into account the planting of trees belonging to the species *Delonix regia* to replace the existing trees that are to be felled during site preparation.

#### **Disturbance to fauna**

The machinery and equipment to be used during site clearance should be fitted with appropriate silencers to reduce the noise generated from them. The timing of these activities could be restricted to mid-morning to mid-afternoon when the birds are expected to have moved away in search of food.

### **4.2. Proposed mitigation measures for impacts on the biophysical environment during the construction phase**

#### **Increase in domestic refuse and effluent from construction workforce**

A waste management plan should be developed prior to commencement of construction work.

##### **a) Increase in sewerage**

Additional and alternative toilet facilities should be established to match the anticipated increase in the volume of sewage that is likely to be realised due to the increase in number of people.

##### **b) Increased demand on existing services - water supply, sewage, waste disposal and energy**

The NWSC should be notified of the likely period of construction so as to ensure increased availability of water in the reservoirs during this period.

Appropriate energy saving methods such as the use of improved cook stoves could be used to avert the anticipated increase in pressure exerted on renewable energy sources. The UMEME should also be informed about the construction period so that appropriate measures to ensure adequate and steady supply of electricity are put in place.

Reputable waste disposal companies should be identified and contracted to serve the project site during construction.

### **4.3. Proposed mitigation measures for impacts on the Socio-economic environment during the construction phase**

#### **a) Influx of people**

Appropriate conflict resolution measures should be put in place to handle conflicts that are likely to develop due to interactions between immigrants and local people. Such measures include: appointing

of a site manager to whom all complaints could be directed, notifying the existing local administrative structures (LCs) about the names and number of people employed at the site etc.

**b) Increase in dust**

Sprinkling of water at the site during earth movement works would help reduce the amount of dust produced. Trucks transporting sand to and moving soil waste away from the site should be covered with tarpaulin to reduce the spread of dust caused by wind.

**c) Increase in noise**

Working time should be restricted to day time to minimize noise disturbance caused to neighbours of the site. and drilling should be done on weekend to avoid noise to nearby offices

**d) Increased demand on natural resources outside the project area**

Alternative materials to mud bricks could be improvised to avert the direct and indirect impacts on the environment associated with the use of mud bricks.

**e) Spread of diseases e.g. HIV/AIDS**

Initiate deliberate programs aimed sensitising construction workers on the risk of contracting and spreading HIV/AIDS.

## **5. CONCLUSION AND RECOMMENDATION**

The scoping exercise revealed 27.3% of the negative impacts which are most likely to occur during the various phases of construction of ground water monitoring stations are moderately significant. Also 25% of the negative impacts which are most likely to occur during the various construction phases of surface water monitoring stations and Automatic Weather stations are moderately significant. However, of these 0% are significant. Based on this analysis, the proposed projects should therefore not be subjected to a Project Brief.

## 6. APENDIX I: LIST OF LAND PERMISSION FORMS TO CONSTRUCT ON IDENTIFIED LAND.

Fax: 505941  
E-mail  
Telephone General 505942  
Hon Minister: Direct: 504621  
Hon. Minister of State (Environment): 222514  
Hon. Minister of State (Water): 222572  
Permanent Secretary: 505945  
Director of Water Development: 505942



MINISTRY OF WATER AND ENVIRONMENT  
P.O. BOX 20026  
KAMPALA, UGANDA

In any correspondence on:  
this subject please quote no.

September 23<sup>rd</sup>, 2019

CAO MOROTO ALG



### PERMISSION TO CONSTRUCT AND OPERATE AN AUTOMATIC WEATHER STATION FOR INTEGRATED WATER MANAGEMENT AND DEVELOPMENT PROJECT (IWMDP) UNDER DIRECTORATE OF WATER RESOURCES MANAGEMENT, MINISTRY OF WATER AND ENVIRONMENT

The Directorate of Water Resources Management of the Ministry of Water and Environment under the Integrated Water Management and Development Project is constructing several **Automatic Weather Stations** around the country. These stations will be used for recording climatic/weather data for the different climatic parameters. This data is used for assessment studies to determine variations in climatic parameters over time and also to make forecasts of the likely occurrences in the near future including impacts of Climate Change. This information is very vital for decision makers during infrastructure and development planning.

These activities are funded by World Bank and a contract is underway to construct these stations. This is therefore to request you provide land in the selected areas and permit the operation/ activities that are going to be carried out during and after the installation of the stations.

Your assistance will be highly appreciated.

  
Otulu Daniel Nickie  
For: The Permanent Secretary

*No objection with the above  
raise with the above  
Mr. Heli Mark on  
0774934365*



Fax: 585941  
E-mail  
Telephone General: 585942  
Hon Minister Direct: 584621  
Hon. Minister of State (Environment): 222514  
Hon. Minister of State (Water): 222572  
Permanent Secretary: 585945  
Director of Water Development: 585943



The Republic of Uganda

KALIRO DISTRICT LOCAL  
GOVERNMENT  
23 SEP 2019  
P. O. BOX 56, KALIRO  
CHIEF ADMINISTRATIVE OFFICER

MINISTRY OF WATER AND  
ENVIRONMENT  
P.O. BOX 20026  
KAMPALA, UGANDA

*Noted. No objection  
Liale with the District  
Water Engineer - Edhaya  
077 061136  
23/09/19*

In any correspondence on:  
this subject please quote no.

September 23<sup>rd</sup>, 2019

C.A.O. KALIRO D.T.G.

**PERMISSION TO DRILL AND OPERATE GROUNDWATER MONITORING WELL FOR INTEGRATED WATER MANAGEMENT AND DEVELOPMENT PROJECT (IWMDP) UNDER DIRECTORATE OF WATER RESOURCES MANAGEMENT, MINISTRY OF WATER AND ENVIRONMENT**

The Directorate of Water Resources Management of the Ministry of Water and Environment under the Integrated Water Management and Development Project is constructing several **groundwater monitoring wells** around the country. These wells will be used for monitoring groundwater levels including assessment studies of ground water occurrence, sustainability in relation to climate change and groundwater abstraction and also interaction between the surface water and groundwater.

These activities are funded by World Bank and a contract is underway to drill the monitoring wells. This is therefore to request you provide land in the selected areas and permit the operation/ activities that are going to be carried out during and after the installation of the monitoring wells.

Your assistance will be highly appreciated.

Otulu Daniel Nickie  
For: The Permanent Secretary

**PERMISSION TO DRILL AND OPERATE GROUNDWATER MONITORING WELL FOR  
IWMDP UNDER DIRECTORATE OF WATER RESOURCES MANAGEMENT, MINISTRY OF  
WATER AND ENVIRONMENT**

---

I/We Arua DLG..... give permission to the Directorate of Water Resources Management of the Ministry of Water and Environment to construct and operate a groundwater monitoring well on my/our land.

The well will be used for monitoring groundwater levels including assessment studies of ground water occurrence, sustainability in relation to climate change and groundwater abstraction and also interaction between the surface water and groundwater. The activities are funded by Integrated Water Management and Development Project (IWMDP).

I/We therefore allow DWRM to operate their groundwater monitoring station (siting, drilling etc. and data collection), on our piece of land measuring..... 4 M by 4 M..... for water depth

Land owner: Arua DLG

Witness: Ogwang Robert Charles (Deao)

Witness: Amal Patrick (Hydrologist)

Date: 27.9.19







**PERMISSION TO DRILL AND OPERATE GROUNDWATER MONITORING WELL FOR  
IWMDP UNDER DIRECTORATE OF WATER RESOURCES MANAGEMENT, MINISTRY OF  
WATER AND ENVIRONMENT**

I/We, Lotsoho Isaac on behalf of Nityana SDC give permission to the Directorate of Water Resources Management of the Ministry of Water and Environment to construct and operate a groundwater monitoring well on my/our land.

The well will be used for monitoring groundwater levels including assessment studies of ground water occurrence, sustainability in relation to climate change and groundwater abstraction and also interaction between the surface water and groundwater. The activities are funded by Integrated Water Management and Development Project (IWMDP).

I/We therefore allow DWRM to operate their groundwater monitoring station (siting, drilling etc. and data collection), on our piece of land measuring.....6m.....by.....6m.....

Land owner: Lotsoho Isaac

Witness:

Witness: Sibonko James

Date: 17/11/2014



Under ground monitoring well

Space Required

6x6m

Coordinates

0-61067° - North

32-17924° - East

at Kajisi H/C  
Nityana SDC  
Nityana District.

PERMISSION TO CONSTRUCT AND OPERATE AUTOMATIC WEATHER STATIONS FOR  
IWMDP UNDER DIRECTORATE OF WATER RESOURCES MANAGEMENT, MINISTRY OF  
WATER AND ENVIRONMENT

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I/We Mutukula Primary School..... give permission to the Directorate  
of Water Resources Management of the Ministry of Water and Environment to **Construct and  
Operate an Automatic Weather Station** on my/our land.

This land will be used for recording climatic/weather data for the different climatic parameters.  
This data is used for assessment studies to determine variations in climatic parameters over time  
and also to make forecasts of the likely occurrences in the near future including impacts of Climate  
Change. This information is very vital for decision makers during infrastructure and development  
planning. The activities are funded by Integrated Water Management and Development Project  
(IWMDP).

I/We therefore allow DWRM to operate their Automatic Weather Station on our piece of land  
measuring..... 10m by..... 10m.....

Land owner:

Witness:

Witness:

Date:



*[Signature]*  
Deputy head teacher