THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER RESOURCES MANAGEMENT

INTEGRATED WATER MANAGEMENT AND DEVELOPMENT PROJECT (IWMDP)

TERMS OF REFERENCE FOR LOT 1: CONSULTANCY SERVICES FOR TECHNICAL SUPERVISION OF IMPLEMENTATION OF CATCHMENT MANAGEMENT MEASURES IN LWAKHAKHA SUB-CATCHMENT

SEPTEMBER 2020

1 INTRODUCTION

Government of Uganda, with funding from the World Bank is implementing Integrated Water Management and Development Project which provides support to catchment management and activities in sub-catchments of Lwakhakha (Mpologoma catchment), Lake Okolitorom and Apeduru Apapai (Awoja catchment), Kochi (Albert Nile catchment), and Aswa II (Aswa catchment). The project supports implementation of catchment management measures, including soil and water conservation, eco-system protection and restoration; livelihood improvement for the affected communities and supporting stakeholder engagement and the establishment of micro catchment structures for sustainable management of the interventions.

Implementation of the IWMDP is fully integrated within the government structure. Thus, the water resources management component of the project is implemented by the Directorate of Water Resources Management (DWRM) through its various departments and the relevant Water Management Zones (WMZs). The task teams are composed of staff from DWRM, WMZs, relevant MWE departments and agencies, and other government ministries and agencies. The services and works for implementation of project activities will be outsourced to consultants and contractors.

These Terms of Reference are for technical supervision of implementation of catchment management measures in Lwakhakha sub-catchment in Mpologoma catchment in Kyoga Water Management Zone.

The Ministry intends to procure consultancy services for technical supervision of the implementation of catchment management measures in Lwakhakha sub-catchment. The selected consultant will carry out tasks associated with the execution of all obligations entrusted to him in accordance with the contract between the client and the consultant.

1.1 Lwakhakha Sub Catchment Description

Lwakhakha Sub Catchment, is a transboundary catchment found on the Eastern Side of Mpologoma Catchment, in Kyoga Water Management Zone, comprises of majorly the district of Namisindwa, parts of Manafwa, Bududa, Kween and Tororo that occupy 57.9%, 1.9%, 21.4%, 0.1%, 18.7% of the total sub-catchment area respectively on the Ugandan side of the sub catchment. It covers a total area of 586Km^2 as a whole with about 362.7Km^2 on the Ugandan side of the sub catchment.

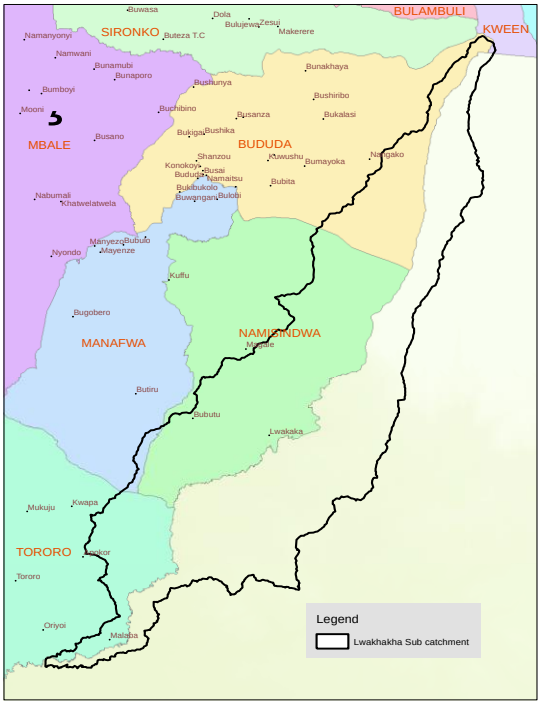

Figure 1-1: Extent of Lwakhakha Sub catchment (Districts that lie wholly / partially in Lwakhakha sub catchment)

1.1.1 Physical Environment

a) Climate

The climate of Lwakhakha sub catchment is mainly influenced by the presence of Mt Elgon. The mountain is vital to the social and economic functioning of the area, and is a water catchment supplying millions of people in Uganda and Kenya.

Rainfall distribution in Lwakhakha is bimodal, allowing two

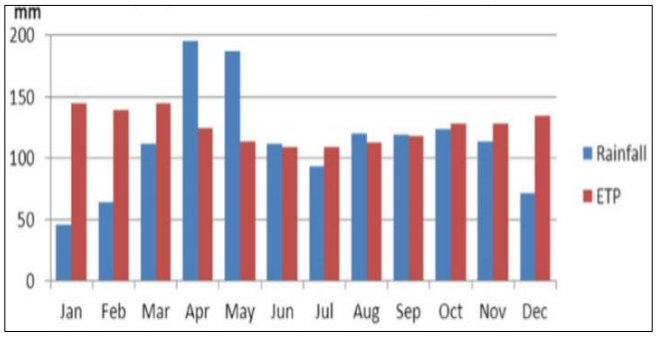

Figure 1-2: Mean monthly rainfall and ETP patterns for the Sub catchment

crops annually, and adequate grazing for livestock throughout the year. There is a long rainy season from March to May and a short one from October to November. The annual rainfall averages are about 1370 mm in the sub catchment. The Temperatures also vary with altitude with average of 21.6 °C. The mean minimum temperature is 12°C while the mean maximum temperature is 25°C. The humidity is relatively high with mean evaporation being between 1500mm to 2000mm in a year.

Weather changes at the in the sub catchment at a given time are irregular due to the existence of the hills, and instances are common where rainfall is pouring at the top and middle of the mountain but at the bottom, there are so signs of rain pour.

b) Topography

The relief of the sub catchment is characterized mainly with hills and stretching ranges of Mount Elgon. The highest elevation of the sub catchment is about 4170masl and is towards the top of the mountain where the river Lwakhakha starts. The lowest points of the sub catchment are about 1170masl and are located towards Tororo district. The existence of steep hills, ranges and valleys make some parts of the sub catchment difficult or incapable of access. These hills and ranges and hills have further influenced in the general, the climate of the sub catchment as well as dictated the economic and agricultural activities that can be carried out within the sub catchment.

c) Soils

The Lwakhakha sub catchment has a wide range of soil types which exhibit considerable variation in fertility and drainage properties. The flood plains have hydromorphic alluvial sand deposits with thin layer of silt loam underlain with clay supporting the growing of crops such as rice, sugar cane, millet, rice and maize. The narrow river valleys have sand deposits.

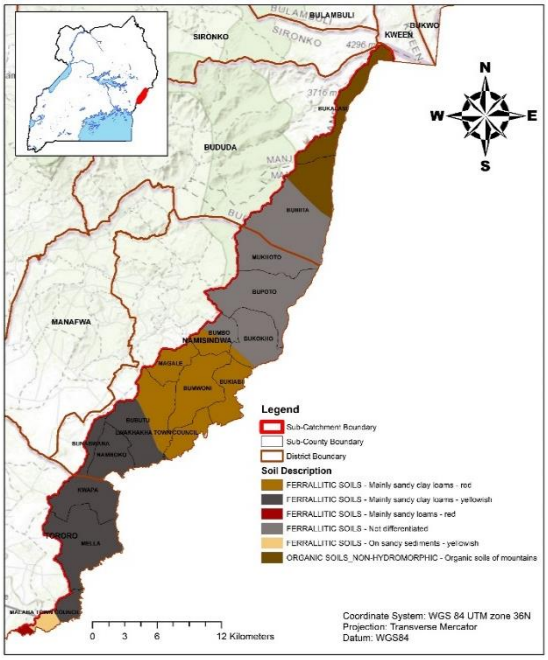

Figure 1-3: Soil map of the Lwakhakha sub catchment

On the upper slopes of Mt. Elgon, there are essentially three soil types: Andosols (eutrophic soils of tropical regions), Nithosols (ferrisols) and the Histosols (hydromorphic soils). These soils are volcanic in origin, fertile and rich in minerals. The soils in the middle ecological zone of the sub catchment are comprised of well drained, moderately deep to very deep, reddish brown to yellow brown, friable clay. Along the river valleys, the soils consist of a complex of imperfectly drained to poorly drained, soils often underlying a topsoil of friable sandy clay loam.

d) Hydrology

The main river in Lwakhakha Sub catchment is River Lwakhakha (also known as Malaba River) that has its origins on the slopes of Mount Elgon and flows into River Mpologoma before draining into Lake Kyoga. The hydrology of the Lwakhakha sub catchment is characterized with a variety of water streams which move through the valleys in between the hills and the Elgon ranges that pour into the River Lwakhakha. A number of tributaries exist in the sub catchment that pour into R. Lwakhakha. These rivers/streams including

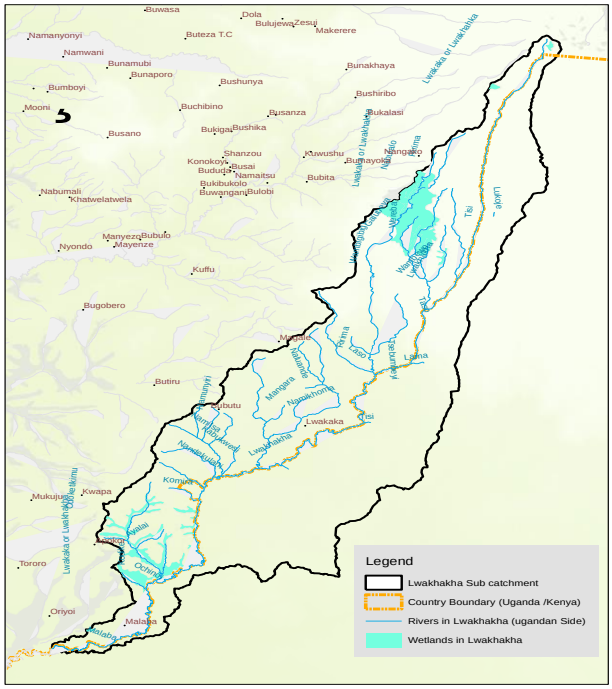

Figure 1-4: Rivers and Wetlands systems in Lwakhakha

swamps/wetlands and springs are sources of water to the communities although they are prone to contamination due to the different human activities that have been carried out within the sub catchment.

1.1.2 Socio-Economic Environment

a) Population

The population in the Ugandan part of the Lwakhakha sub catchment is estimated at about 121,531 with 51% of the population being females. There are about 24,842 households in the sub catchment with an average household size of five (5) people per household according to the National Population and Housing Census, November 2014.

b) Ethnicity

In the Lwakhakha sub catchment, there are a variety of ethnic groups with the Bagisu the most dominant with about 90% of the population, with the Itesots making up a minority contribution and they mainly settled in the low areas of the sub catchment towards Tororo district. There are some Kenyan migrants who come to hawk different merchandise and some of them end up settling around the Lwakhakha trading centre.

c) Economic Activities and Livelihood

Most of the rural population in Lwakhakha sub catchment mainly relies on subsistence farming as their main source of livelihoods. The main crops grown are sorghum, millet, coffee, Irish potatoes, sweet potatoes, maize and beans. The agriculture is largely rain-fed and production is entirely dependent on use of traditional implements, with limitations in the quality and quantity of production. The productivity for major crops has been fairly low and has decreased over time, probably due to declining soil fertility and soil erosion. This has created a trend where the farmers resort to opening land for agriculture, with wetlands and forests falling target to land use change and degradation.

d) Land use and Land tenure

According to the land act, Uganda has about four main land tenure system which comprise of freehold, leasehold, customary and mailo land tenures. In the Lwakhakha sub catchment, the most common land tenure system is the customary land holding where the land is owned communally by mainly clans and families. Transfer of land ownership is usually through inheritance although cases where owners agree to sell to other parties have been noticed.

The terrain of the sub catchment had dictated the land use of the area with most of the population using the land for cultivation and animal grazing with homesteads mainly established on both the hill tops and the slopes of these hills. Issues of landslides and soil erosion have highly increased the unproductivity of the land in the sub catchment, but practices such as cultivation on terraces have been utilised to ensure sustainability of the lands and reduce the soil erosion and other effects due to the run off from the hills.

1.1.3 Biological Environment

a) Floral Characteristics

Due to the mountainous nature of the Lwakhakha sub catchment, the vegetation species observed tend to change due to changes in the physical factors especially changes in the climate and altitude in the different areas of the sub catchment. As elevation increases above sea level, a progressive change is observed in the climatic and vegetation zones which leads to situations where tropical savannah and grassland savannah on the plain change to tropical forest then to alpine vegetation towards the mountain Elgon summit. The different vegetation zones include grasses, forests and swampy vegetation bamboo a local delicacy is uniquely the dominant vegetation in the temperate zones of Mt Elgon. In the lower elevations of the sub catchment, the major vegetation is *combretum species* characteristics such as the *Ficus natalensis (IUCN Status-LC),*

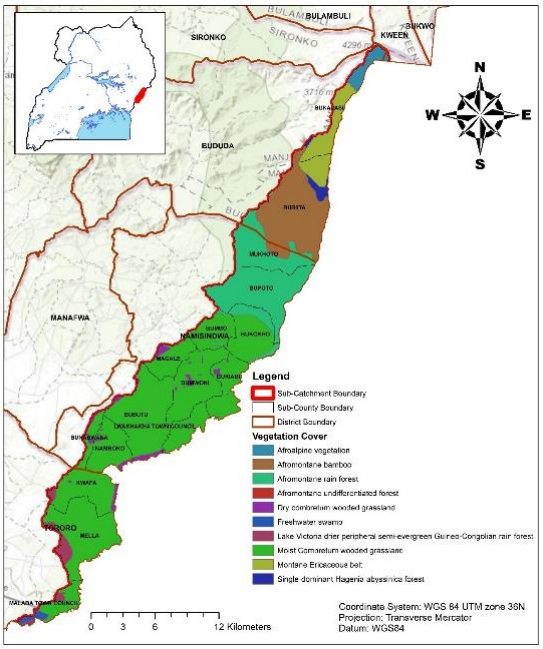

Figure 1-5: Vegetation Map for Lwakhakha

and as the elevation increases, the major vegetation species observed included a variety of acacia trees, *albizia coriara (IUCN Status-Not evaluated), Boscia salicifolia(IUCN Status-LC), Lantana Camara (IUCN Status-Not evaluated)*, *Tithonia diversifolia (IUCN Status-Not evaluated) and Cascabela thevetia (IUCN Status-LC),* a few *Commiphora Africana (IUCN Status-LC)* among others.

b) Faunal Characteristics

The gazetted Mt. Elgon forest is host to a diverse number of wildlife like leopard (Panthera pardus, a threatened species), giant forest hog (Hylochoerus meinertzhageni, *IUCN status - Least concern*), waterbuck (Kobus ellipsiprymnus, *IUCN status - Least concern*), bushbuck (Tragelaphus scriptus, *IUCN status - Least concern*), duiker (Sylvicapra grimmia, *IUCN status - Least concern*), black and white colobus monkey (Colobus guereza, *IUCN status - Least concern*), blue monkey (Cercopithecus mitis, *IUCN status - Least concern*). Heavy mammals such as elephants and buffaloes are reportedly absent.

Animal species in the catchment zones are influenced by Mt. Elgon system that harbours among other animal species monkeys, snakes and varieties of birds. Animal presence in the entire sub catchment, however, has been interfered with by human activities and settlements. On the lower altitudes, there is restriction of wildlife prominence due to human settlements and the locals have settled to rearing of cattle, goats, chicken and sheep.

1.1.4 Sub-catchment Management Issues

A number of issues were identified in the sub catchment through using the methods explained in chapter 3 of this report. The issues that concern water for environment, which is of critical importance in project area include:

a) Deforestation and tree cutting

Deforestation is one of the leading activities of catchment degradation especially along the slopes of Mt. Elgon with the increased use of charcoal and firewood as the main fuel source in homes being the pull factor for the activity. Most of the hills within the catchment have been cleared of the tree cover, with the degradation more prone in Bubutu Sub County, all parishes and villages in Namboko Sub County in Namisindwa district and the Nanderema hills in Nanderema Parish, Bunabwana Sub County in Manafwa district.

Figure 1-6: Shrubs along hill slopes with no trees in Kisokoti village, Bumusomi Parish in Bubutu Sub county, Namisindwa district

This has opened up the land to different land degradation practices, increased soil erosion along the slopes, caused deep gullies and siltation in the rivers which as well can lead to river flooding.

b) Land degradation and soil erosion

Due to the nature of the terrain of the Lwakhakha, the sub catchment has faced different kinds of degradation especially due to the poor agricultural practices that are being carried out by the different communities, the increased population which has led to the need for more habitable land and more land for agriculture. These activities have increased the occurrence of soil erosion which destroys crops especially those with soft root systems and increases the formation of gullies. Since the area is hilly, the increased soil erosion lead to the siltation of the rivers within the valleys which in turn can lead to river flooding and riverbank degradation. These activities are commonly noticeable in Bumbo Sub County.

Figure 1-7: Soil erosion and mudslides in Bukimatya village, Bunanyama parish, Bumbo S/C

c) Riverbank degradation

Riverbank vegetation/ riparian vegetation plays an important role in the protection of the river from contamination and pollution from the terrestrial areas. Furthermore, they are habitats of semiaquatic creatures as well as other terrestrial animals and are host to a variety of river dependant plants. River bank degradation was observed for all the rivers throughout the sub-catchment and mainly midstream of the catchment. This is attributed to the accumulation of water from the streams in the upper catchment that are tributaries to the main rivers, which slowly build up and becomes highly erosive towards the midstream of the catchment causing river bank bursts, collapse and erosion. The catchment is degraded, and hardly holds any rainy water, incidences of soil erosion were observed in the entire catchment. Other contributing factors are river bank cultivation, sand mining which further weaken the river banks exposing them to the high-speed run-off. This is mostly observed in along the R. Namunyir in Bumbo Sub County, Namisindwa district.

Figure 1-8: River bank degradation along R. Namunyir, in Bumulika Parish, Bumbo Sub County.

d) Deep gully formation

Deep gullies are landforms that are created by runoff and storm water by eroding sharply into soil typically on hill slopes. These increase in size depending of the types of soils being eroded and the run off speed. Within the Lwakhakha sub catchment, these deep gullies are found mainly in Bumwoni Sub County due to its hilly nature and its soil structure on the hill slopes. The more they stay in place, they increase in depth and in width depending on the rainfall intensity and this later affects the drainage of the area. Deep gullies are also a danger to the surrounding communities who be moving their animals to grazing areas and these gullies end up causing injuries and in some cases deaths to the people and their animals.

Figure 1-9: Deep gully formations in Mutinyi village, Bwiire parish, Bumwoni S/C, Namisindwa district

e) Flooding

Floods were mainly observed along the river banks and hence referred to as River bank flooding. This is mainly attributed to the accumulated silt that reduces the water holding capacity of the river hence the overflow in form of floods. This is worsened by the river bank cultivation and poor agronomic practices upstream, degraded catchment that contributes to the high run off, resulting river flooding. These cases were mainly observed in some of the rivers within the Bukhoho Sub County.

Figure 1-10: River flooding section along River Laaso in Bukhoho sub-county

f) Poor water quality

For all the identified hotspots by stakeholders and verified by the team, the issue of poor water quality was attributed to the limited water access, hence communities resorting to un protected hand dug wells and un protected springs. Poor water quality issues were also mentioned to be caused by high dependence on pesticides, fungicides and fertilizers used by most of the farmers to boost the agricultural production which find their way into the river systems from the rainwater

Figure 1-11: A woman collecting water from one of the water holes in Kisokoti village, Bamusomi parish, Bubutu sub-county. Namisindwa District. Upstream is an unprotected spring that feeds the fetching point.

runoff and hence affecting the quality of water in the water source. In addition, there are isolated cases of poor waste discharge (point source pollution) within in Town councils and trading centers which eventually finds its way into the river system along with storm water.

1.2 Scope of Implementation by Contractor to be Supervised

The Non-consultancy shall include the following major activities:

1. Restoration of 72 km (36 km on each side) of the degraded stretches of the major rivers in Lwakhakha sub-catchment through use of catchment management measures
2. Treatment and restoration of 6.73 km stretch of gullies to control erosion, siltation and destruction of property in Lwakhakha sub-Catchment
3. Restoration of 200 ha of degraded communal and individual land through tree growing (afforestation, reforestation and agroforestry)
4. Promote and support establishment of soil and water conservation measures on 150 ha of individual farmers/public land to restore degraded hotspots and reduce/control runoff to control soil erosion and siltation
5. Integrate livelihood options in the management measures

2 OBJECTIVE OF THE CONSULTANCY

The overall objective of the Consultancy is to assist the Ministry of Water and Environment to ensure high standards of quality assurance in the implementation of catchment management measures in Lwakhakha sub-catchment and completion of work within stipulated time and budget limits including knowledge transfer as much as possible.

3 NATURE OF ASSIGNMENT, SCOPE OF SERVICES, TASKS AND TIME OF DELIVERY

3.1 Nature of Assignment

The assignment covers activities related to technical supervision of the implementation of catchment management and restoration activities. The consultant will administer the implementation contract and ensure that the contractual clauses with respect to both quality and quantity of work are adhered to and the works are constructed in accordance with the provisions of the implementation contract.

The consultant will ensure coordinated and accurate communication of information to the beneficiary communities and local authorities especially on technical aspects.

The consultant shall provide suitable qualified and experienced staff for contract supervision duties during implementation works. Implementation supervision will involve duties and tasks associated with the execution of all obligations entrusted to the consultant in accordance with the contract between the client and the contractor.

There shall be an inception period of not exceeding 4 weeks during which the consultant shall mobilise staff, be introduced to project area, familiarize with the project documentation including the implementation contract and advise the client on any likely positive or negative aspects that may influence the contract implementation and remedies where applicable

3.2 Scope of Services and Tasks

Implementation supervision will encompass all activities related to the project. Implementation supervision activities will cover three distinct phases:

i. Pre-implementation and mobilization phase and

ii. Implementation phase

3.2.1 Pre-Implementation and Mobilization Phase

During the pre-implementation and mobilisation phase, the consultant's task shall include, but not be limited to the following:

1. Review the contractor's work programme and method statements while highlighting areas that may pose a risk to timely and in-budget project completion.
2. Review contractor's deployment of staffing and equipment vis a vis those indicated in the bid.
3. Review and make recommendations to the contractor's procurement schedule.
4. Ensure that materials are checked at site to verify that they are of the required quality and specifications. If not, the materials should be rejected at site.
5. Establish sub-catchment and micro catchment structures and set up associated committees for coordinated planning and implementation of the Catchment Management measures in Lwakhakha sub-catchment.
6. Undertake a baseline situational assessment of the degraded hotspots so as determine and measure forest, grassland, and wetland coverage and condition using standardized methodologies as a proxy for ecosystem service provisioning related to specific catchment management measures
7. Develop an effective, sustainable and interactive monitoring and evaluation (M&E) system for tracking catchment management measures against baseline indicators
8. Ensure that the contractor meets environmental, health and safety standards. The contractor shall comply with the Uganda national regulations and World Bank safeguard policies as outlined in the Environmental and Social Management Framework (ESMF) of the project. Investments to be implemented are subjected to environmental and social screening following the OP 4.01 requirements and informed by the GoU requirements. The environmental and social screening will identify the environmental category and level of assessment needed and the type of instruments to be prepared (Full/simplified ESIA/ESMP). The consultant shall ensure the proper implementation of the developed ESMP.

3.2.2 Implementation Phase

The consultant shall represent the client on site and supervise the entire implementation of catchment management measures. During the entire implementation process, the consultant shall work in close cooperation with MWE's project team and specifically the DWRM team in Kyoga WMZ on assignment activities. The Consultant will be introduced to the DWRM teams in Kyoga WMZ. During the implementation period, the consultant's tasks shall include, but not be limited to the following:

1. Approve/suggest modifications in the contractor's work programme, method statements, materials sources etc.
2. Supervise the contractor's work progress versus the planned project time schedule and ensure that delays are being kept to a minimum and, that the contractor at their cost takes measures to make up for time lost and pull the project back to planned schedule. In addition, the consultant is required to keep a monthly updated work program in liaison with contractor.
3. Timely issue to the contractor of all the necessary correspondences related to information, instructions, clarifications and suggestions so as to ensure consistency in quality, positive progress and planned costs.
4. Inspect, determine and approve the part of works before, during and after construction of part and, or whole of the works to ensure all time compliance with the specifications and standards.
5. Supervise the contractor's implementation activities, ensuring that all implementation is undertaken as designed, or in accordance with client-approved variations to the original design, and that all quality standards are met.
6. If necessary, approve any amendments to designs and/or specifications from the contractor in consultations with the client.
7. Inspect and certify all completed activities. Certify payment certificates for payments of completed activities or parts thereof. Ad-measure and certify all quantities invoiced by the contractor. Prepare the contractor's

payment statement including final certificate in accordance with General Conditions of Contract and Conditions of Particular application.

8. Periodically review the status of the contractor's real versus required staffing, equipment, insurance and recommend appropriate actions to the client.
9. State all methods and procedures that are intended to ensure robust quality control, execute all procedures accordingly, and report on all quality control undertakings and their results to the client.
10. In addition to continuous implementation supervision, schedule and organize weekly formal visitation, inspections and meetings with the Contractor's representative and agree with the Contractor on progress made within the given period.
11. Hold monthly site meetings with the contractor and client to review progress of implementation of project activities.
12. Develop and maintain a project progress reporting format that is both, concise and in accordance with the client's and the World Bank's requirements.
13. Report monthly progress to the client, and immediately report any issues identified that could impact on the project completion schedule.
14. Review and recommend action on any claims presented by the contractor during the course of the contract and prepare variation orders, if required, for approval by the Client. In the case of any work or event for which the Contractor may claim additional time or payment, record the relevant facts before any question of principle/approval has to be decided by the Supervisor.
15. Guide the Contractor on compiling guidelines for community maintenance works and shall forward 3 copies of the guidelines to the Client as shall be provided for in the implementation Contract. In liaison with the client, make necessary preparations for post implementation management arrangements ahead of completion. Such shall include participation and guidance of stakeholders in identifying the best management strategy and all associated preparatory activities towards adoption of the preferred strategy.
16. Commission and approve completed measures and facilitate hand over to client.
17. Supervise production of final as built drawings produced by the contractor for the interventions.
18. Recommend final acceptance of the works to the Client upon satisfactory completion of the specified maintenance period.

3.2.3 Document Best Practices and Lessons Learnt

Support is need for documentation of all processes and share lessons learnt for probable scaling out catchment management measures. The consultant shall document of all project processes and share lessons learnt through;

i. Production of project brief pull up banners, and posters
ii. Production of video documentaries
iii. Production of lessons learnt booklets for knowledge dissemination
iv. Organizing and holding radio talk shows to create awareness to public on the ongoing activities
v. Dissemination workshop on lessons learned and good practices documented for upscaling

3.3 Expected Time of Delivery

The estimated service delivery period is 24 calendar months tallying with the duration of the Implementation of the interventions by the contractor. The consultancy scheduling is as follows;

i. 3.0 months for Pre-implementation and mobilization phase: including 1 month for inception, and undertaking activities described in section 3.2.1
ii. 21 months for actual Implementation supervision (Implementation phase)
iii. Monthly progress reporting

It is the responsibility of the consultant to establish a detailed work program within the above time estimates. The estimated staff time inputs should be provided in accordance with the consultant's professional judgment and knowledge of the local conditions and needs.

4 ORGANIZATION OF THE ASSIGNMENT

4.1 CONTRACTUAL ARRANGEMENTS

A time- based contract shall be used for the consultancy services. The consultant shall show the costs of the proposed services accordingly.

4.2 Staffing Requirements and Staff Qualifications

4.2.1 Staffing Requirements

Within the technical proposal, the consultant shall elaborate on the envisaged logistical setup and deployment of appropriate skills for the execution of the assignment. The consultant shall present the staffing schedule in a manner that clearly shows the stage and duration where each of the proposed team members is planned to be involved in the project. An organogram reflecting the responsibilities of each staff member and line management setup of the proposed team shall be part of the proposal.

The Consultant is however expected to provide a team, composed of the following key staff.

i. 1No. Water/Environmental Management expert (Team Leader)
ii. 1No. Community Development Specialist
iii. 1No. Soil and Water Conservation Specialist
iv. 1No. Forestry/Tree Planting Specialist
v. 1No. Civil Engineer

In order to enhance the skills and experience, it is recommended that the consultant integrates local expertise into the project execution team. The consultant is free to propose additional skills as may be deemed necessary.

The above proposed staff bear different expertise and shall be expected on site for the duration of the specific interventions for which their expertise is required to ensure the works are done as per specifications and the logs are filled duly.

4.2.2 Staffing Qualifications

a) Key Experts

The key personnel shall have minimum academic qualifications and experience as stipulated below:

i *1 No. Water/Environmental Management expert (team Leader):* A master's degree in Water or Environmental Engineering / Management / Science or related field with 8 years of general experience, 5 years of Specific experience in undertaking water related environmental assessments and in environment management planning. Experience in use of Geographical Information System tools will be an advantage.
    i. He/She will be the Consultants' representative (and should be empowered to take decisions on behalf of the Consultants) and will coordinate the Services. He will be available during the implementation of activities when key decisions are expected to be taken or issues to be resolved.
    ii. The Team leader should be competent in planning, designing, contractual management, resolving problems, quality maintenance, budgeting and financial control, progress monitoring, communication skills and documentation.

ii. *1No. Community Development Expert:* The Social Development Specialist shall hold a degree in social sciences, social works & administration, development studies or community psychology.
    i. A minimum experience of 10 years, 5 of which should be in similar activities.

ii. He/She must have demonstrated experience in community mobilization and management in relations to development projects of a similar nature.
iii. The expert should have experience in undertaking impact, social and gender analysis.
iv. He/She should be knowledgeable in preparing appropriate awareness programs.
v. The specialist shall ensure communities are fully mobilized and sensitized during the project implementation process.

iii. *1No. Soil and Water Conservation Specialist:* The Soil and Water Conservation Expert should have a minimum Bachelor's degree in natural resources/water resources management, Agriculture, or related field.
   i. A minimum experience of 10 years, 5 of which should be in similar activities.
   ii. He/She must have demonstrated experience in preparation and implementation of soil and water conservation measures
   iii. He/She must have demonstrated experience in gully control, treatment and restoration.
   iv. He/She must have demonstrated experience in community involvement and training farmers in catchment restoration measures will be needed.

iv. *1No. Forestry/Tree Planting Specialist:* The Forestry Specialist will have a minimum of Bachelor's degree in Forestry, Forest Ecology or a closely related discipline.
   i. A minimum experience of 10 years, 5 of which should be in similar activities.
   ii. He/She must have demonstrated experience in preparation and implementation of catchment restoration measures
   iii. He/She must have experience in training farmers in tree planting and agroforestry at community level will be needed

v. *1No. Civil Engineer:* The Engineer should have a basic degree in civil engineering
   i. A minimum 5 years of professional experience, 3 of which shall be in similar activities.
   ii. He/she should have significant experience in design and construction supervision of basic water-related engineering infrastructure such as open-flow drainage systems and check dams/ gully plugs.
   iii. He/She must have basic engineering survey experience (topographic survey, mapping, & map digitization).
   iv. He/She must have basic experience in undertaking geotechnical assessments
   v. He/She must be computer literate and proficient in at least Excel and Auto Land Map (GIS capability) or other relevant survey application.

Key Staff must obtain a score of at least 75% upon Evaluation. Key Staff who obtain a score of less than 75% shall be replaced if the Consultancy firm progresses to negotiation stage.

b) Mandatory Non-key experts

CVs of Mandatory Non-Key staff must be submitted along with the Proposals and the staff meet the following minimum requirements.

GIS Expert: Must have a degree or postgraduate qualification in geographical information systems (GIS), geography or computer sciences with 5 years of relevant experience in building and maintaining GIS databases and using desktop GIS software to analyze the spatial and non-spatial data and information and create relevant thematic maps and graphs.

Mandatory non-Key staff who are established not to meet fully the minimum requirements shall be replaced if Consultant proceeds to contracting stage.

All the experts shall have some experience in water resources and environment related programs. The Community Development Specialist should possess extensive experience in stakeholder engagement in Uganda. All Projects

illustrating the expert's specific experience for the project (water resources/environment projects) and their experience in East Africa have to be clearly defined in the expert's CV (including Project name, Location, Country, Duration, Project value, experts' specific tasks, etc.).

In addition, the core expert team could be supplemented by short-term experts in other areas required for targeted input. These short-term personnel are expected to have demonstrated and appropriate technical experience (in the range of 10-15 years). Short term personnel are also expected to provide on-job training and to lead and carry out seminars and other training activities in their areas of expertise.

4.2.3 Firm Qualification

The consultant/firm shall demonstrate their capability and experience in undertaking similar assignments of the similar nature and overall magnitude over the last 5 years.

5 REPORTING AND MEETING REQUIREMENTS

5.1 Schedule of Reporting and Submissions

The consultant is required to submit the following reports to the client in English. All reports should be submitted as required below.

No.	Reports/Deliverable	Description	Timing	No. of Copies
1.	Inception report	This report should include state of mobilization, findings from review of project documentation, proposals for improvement of project implementation and revised programme among others.	One month after commencement of the assignment	4 copies plus a soft copy
2.	Sub-catchment and micro catchment structure formation report	Report summarizing the processes followed and the composition of the structures and their operational arrangements.	2 months after commencement of the assignment	4 copies plus a soft copy
3.	Baseline situational assessment of the degraded hotspots Report	Report detailing the forest, grassland, and wetland coverage and condition using standardized methodologies as a proxy for ecosystem service provisioning related to specific catchment management measures.	3 months after commencement of the assignment	4 copies plus a soft copy
4.	An effective, sustainable and interactive monitoring and evaluation (M&E) system for tracking catchment management measures against baseline indicators.	An effective, sustainable and interactive monitoring and evaluation (M&E) system for tracking catchment management measures against baseline indicators.	Within 3 months after commencement of the assignment	N/A
5.	Monthly progress reports	Report summarizing physical and financial progress to date, compared to programme and budget among others. They shall be submitted	within 7 days of the end of the period covered.	4 copies plus a soft copy
6.	Project completion report	The substantial completion report shall state the project scope, principal activities by the consultant and the	24 months after commencement of the assignment	4 copies plus a soft copy

		contractor (including deployment of resources during project implementation), the contractor's performance, all project relevant observations of the consultant, major issues that were encountered during project implementation and how these were solved, the project schedule citing all delays if any, and financial information.		
7.	Variation Orders and Claims reports	In case the Contractor submit claims for extension of time and/or increased costs, the Consultant shall submit valuation reports to the Client for each claim.	as soon as practically possible but not exceeding 7days after receipt by the Consultant.	4 Copies and soft copy (where possible)
8.	As built drawings.	Preparation of the As-built drawings for any infrastructure constructed e.g. gullies shall be largely the work of the Contractor, but the consultant shall be responsible for their final standard, accuracy and timely submission.	Within 30 days of provisional acceptance for the works contract.	4 copies plus a soft copy
9.	Guidelines for community maintenance works	The consultant shall ensure Guidelines for maintenance of the interventions by communities are prepared	Submitted to the client as soon as practically possible but not exceeding 7days after the establishment of the specific interventions.	4 copies plus a soft copy
10.	Documented Best Practices and Lessons Learnt	The reports and Video documentaries are intervention-specific and shall be prepared	Within 1 month after the completion of the implementation of a specific intervention.	4 copies plus a soft copy
11.	Training of Clients staff (Preparation of training report for client's staff attached to the project)	The completion of training report shall state the training obligations of the consultant and the contractor, as agreed with the client, the type and duration of training activities undertaken, the number of participants in each training and their professional background, training outputs and achievements, as well as recommendations for further/continued training if any.	Since on job training goes on throughout the project period, the final training report will be required at the end of the project, however, intermediate reports will be required every six months in order to monitor how the trainings are being conducted and address any upcoming issues	4 copies plus a soft copy

All reports will be submitted to:

The Director, Directorate of Water Resources Management,
1st floor, Ministry of Water and Environment Headquarters
Plot 3-7, Kabalega Crescent, Luzira

For the attention of: Dr. Callist Tindimugaya
Commissioner, Water Resources Planning and Regulation Department
1st floor, Ministry of Water and Environment Headquarters
Plot 3-7, Kabalega Crescent, Luzira
Email: callist.tindimugaya@mwe.go.ug, callist_tindimugaya@yahoo.co.uk

5.2 Meeting Arrangements

Following the submission of the inception report, the consultant will make a presentation and attend monthly implementation progress review meetings with the client during the entire project period. The review shall be for the purposes of:

1. Engaging the Ministry of Water and Environment and obtain guidance on the technical aspects of the assignment.
2. Assessing progress.
3. Providing information and data relevant for the successful accomplishment of the entire assignment.

The nature of the meetings, locations (e.g. site, MWE offices and consultant's offices) and agenda shall be agreed upon between the consultant's and the client's project managers.

For ensuring organizational and stakeholder wide appreciation and ownership of the project outputs, the consultant shall be required to organise coordination meetings/workshops for presentation of key reports after each project milestone to a representative group of stakeholders that is to be agreed upon with the client. In addition, the consultant's representative shall be available whenever stakeholder visits to the project sites are arranged. The Consultant will therefore be required to include a provisional sum of 30,000 USD to meet costs of holding the workshops and meetings. The Client will pay the Consultant based on actual and approved expenditure of the Consultant's budget (for workshops and meetings) which will have been discussed and agreed to prior to commencement of the Consultancy. The basis for payment of participants by the Consultant will be full participation for the entire duration of the workshop together with an authentic invitation letter of the participant.

6 SERVICES AND FACILITIES TO BE PROVIDED BY CLIENT

The client will provide free of charge all existing information, data, reports and maps in the custody of the client. This will include the:

i. Mpologoma Catchment Management Plan
ii. Sub catchment Hotspot Identification and Mapping Report
iii. Contract for the implementing Contractor
iv. Approved Environmental and Social Project Brief for the proposed Implementation of Priority Catchment Management Measures in Lwakhakha Sub-Catchment
v. Relevant GIS maps

7 CAPACITY BUILDING AND SKILLS TRANSFER

For purposes of capacity building and skills transfer in supervision services and skills transfer and ensuring adequate direct involvement of the client in delivering the project, the client will assign 2 counterpart staff. The consultant shall as part of his financial proposal include the cost for involving the 2 staff in attending site meetings, review of as-built drawings, preparation and review of progress reports. The costing shall be in Consultancy firm's costs of providing the training. MWE shall provide the costs for the allowances and transportation costs including fuel for its Staff.

The proposal shall include the proposed methodology for the knowledge transfer throughout the assignment, the proposed training obligations of the consultant and the contractor, the type and duration of training activities to be undertaken, the

optimum number of participants in each training, methodology for monitoring and evaluation of trainees, and any post training support and resources.