



REPUBLIC OF UGANDA

MINISTRY OF WATER AND ENVIRONMENT

**INTEGRATED WATER MANAGEMENT AND DEVELOPMENT PROJECT
(IWMDP)**

TERMS OF REFERENCE

FOR

**LOT 1: CONSULTANCY SERVICES FOR PREPARATION OF 2 MICRO CATCHMENT
MANAGEMENT PLANS FOR MICRO CATCHMENT AROUND SELECTED WATER
SOURCES IN ORA AND ANYAU SUB CATCHMENTS**

FEBRUARY 2020

1. BACKGROUND

1.1 The Project: Integrated Water Management and Development Project

The Integrated Water Management and Development Project (IWMDP) is a Seven (7) year Government of Uganda (GoU) Project funded with loan worth US \$ 313 Million by the World Bank. The Project will support GoU through the Ministry of Water and Environment (MWE) and National Water and Sewerage Corporation (NWSC) in achieving the United Nation's Sustainable Development Goals (SDGs), including SDG #6, 'Ensure availability and sustainable management of water and sanitation for all.' It is aligned to Vision 2040, which aims at transforming Uganda into a modern and prosperous country. In addition, it will support the fulfilment of the Second National Development Plan (NDPII) goals and priority actions namely; (a) Increasing the stock and quality of strategic infrastructure to accelerate the country's competitiveness; (b) Engaging human capital development; (c) strengthening mechanisms for quality, effective, and efficient service delivery; and (d) improving refugee management and host community development.

The overall project objective is to improve the sustainable provision of safe water and sanitation services to the host communities and refugee population in the refugee host districts in West Nile and Northern Uganda through provision of sustainable safe water and sanitation services, and management and conservation of water source catchments. The specific objectives in the selected districts are:

1. To increase safe water access in Refugee host communities and settlements
2. To Improve sanitation status in Refugee host communities and settlements
3. To improve food productivity through micro irrigation
4. To conserve and restore water source catchments

As part of IWMDP sustainability plan, Catchment management measures have been incorporated with a view of enhancing the environmental conditions in the catchment for a sustained hydrological regime which in a long run shall sustain the water demands of the established systems. The catchment management measures are essential in safeguarding the future quantity and quality of water sources and to adapting to climate change. The plans include the following objectives: (i) to prepare micro catchment management plans for areas around water sources; (ii) to implement identified micro- catchment management measures such as soil and water conservation, tree planting, wetland restoration, river bank restoration etc to ensure the integrity and security of the water sources; and (iii) to support the communities in the micro-catchment to carry out alternative livelihood improvement activities as will be identified in the micro catchment management plans, such as apiary, fish farming, fruit tree growing etc.

1.2 Water Resources Management in Uganda

Water resources supports key sectors of the economy namely hydropower generation, agriculture, fisheries, domestic water supply, industry, navigation etc. However, efficiency and sustainability of intervention under these sectors has recently been a concern in Uganda mainly due to inadequate sectoral collaboration in planning and implementation, increasing frequency of floods and droughts, environmental degradation and pollution of water resources. This situation therefore calls for development of collaborative mechanisms for promoting integrated development and management of water resources so as to create synergy among various sectors, promote efficiency in utilization of available resources, reduce water and environmental degradation and ensure more efficient utilization of water resources to meet various social and economic demands.

The Constitution of Republic of Uganda states that "the State shall take all practical measures to promote a good water management system at all levels". Management and development of water

resources in Uganda has been based on the integrated water resource management approach since the Water Action Plan in 1995, the Water Policy in 1999 and the Water Act Cap. 152. The 2005 Water Sector Reform Study and the 2006 Joint Sector Review (JSR) both recommended the implementation of IWRM at the catchment level. The National Water Policy provides an overall policy framework and defines the Government of Uganda's (GoU) policy objective as concerns WRM as: "To manage and develop the water resources of Uganda in an integrated and sustainable manner, so as to secure and provide water of adequate quantity and quality for all social and economic needs of the present and future generations and with the full participation of all stakeholders". A complete list of relevant legislation is given in the Uganda Catchment Management Planning Guidelines (2014).

In line with the 2005 Water Sector Reform Study and the 2006 Joint Sector Review (JSR) recommendations, the Ministry of Water and Environment developed the framework for catchment based integrated water resources management in 2010 as a basis for integrated development and management of water and related resources. In line with this framework, catchments have been demarcated and are or will be units through which water and related resources will be managed and developed considering that water does not follow administrative boundaries.

Each catchment will have a Catchment Management Organization (CMO) that will be the platform where stakeholder driven integrated water resources management and development will be coordinated. For each catchment, sub-catchment, micro catchment or watershed, stakeholder coordination structures will be created as found appropriate.

Thus, the strategic focus of water resources management in Uganda is promotion of coordinated water resources planning, development and management following a catchment. The Water Management Zones were created to promote catchment based planning, management and development of water resources of Uganda to address the socio-economic needs of the present and future generations of Uganda in a sustainable manner.

1.3 Rationale for micro-Catchment Management Planning

The Upper Nile Water Management Zone (UNWMZ) has so far developed CMPs for two of the three catchments of the UNWMZ, namely the Albert Nile catchment and the Aswa Catchment. The former covers the West Nile sub-region and parts of the Acholi sub-region, while the latter mostly overlaps with the rest of the Acholi sub-region, but also covers small parts of Karamoja, Lango and Teso sub-regions.

A CMO comprises the executive Catchment Management Committee (CMC), the Catchment Technical Committee (CTC), and the Catchment Stakeholder Forum (CSF). The CMC steers the overall catchment planning process and approves the final agreed plan and includes representatives of stakeholder groups with a direct interest in catchment management and activities, including the political leadership. The CTC is the technical arm of the CMO and includes the WMZ team and technical staff of relevant departments at DLGs concerned with implementation of the catchment plans. The CSF provides a forum for a broad spectrum of catchment stakeholders from beneficiary communities, civil society as well as statutory bodies, private sector, NGOs and other concerned organizations.

The CMOs with their coordinating and community-inclusive approach are key in the implementation of projects in the catchment. The CMOs play a central role in coordinating the planning activities among all the involved bodies/institutions, bridging the horizontal and vertical information flows and sharing between the micro-catchment and higher-level management bodies/institutions through the WMZ, and ensuring that the micro-catchment management plans to be developed are monitored and regularly updated as the implementation proceeds over time.

With regard to water in refugee settlements, Uganda has continued to receive refugees on a continuous basis since 1945 to date. The continued influx of refugees in Northern Uganda has put a lot of pressure on water and other natural resources. There is increased demand for water and

sanitation services as well as trees for poles and firewood as well as forest vegetation for settlements. Currently there are concerns of water security (quality and quantity) and environmental sustainability. Although a lot of progress has been made in provision of water, sanitation and hygiene services to refugees, humanitarian agencies have been overwhelmed by the refugee influx and are unable to fully meet the demands for water and other services. Many boreholes have dried up and water tracking continues and this is costing a lot of money and is hence unsustainable.

In addition, monitoring of groundwater and control of groundwater abstraction through water permits are not done in refugee settlements. There are high resource requirements to provide services to the refugees and host communities. Furthermore, operation and maintenance of water supply and sanitation systems in refugee settlements is becoming a big challenge due a number of factors including limited involvement of refugees in operation and maintenance of water systems and strategies to address this issue need to be developed. Many refugee settlements are also placed on soils with marginal productivity, including areas that are water deficient. There is also a need to improve coordination of partners working on water, sanitation and environmental management in refugee settlements from the national level down to the refugee settlements. This needs to build on existing coordination structures and mechanisms and improve them where necessary.

Infrastructure and environmental issues, including water in refugee settlements was governed and managed by the Office of the Prime Minister (OPM), in cooperation with the office of the United Nations High Commissioner for Refugees (UNHCR). Refugees were settled with limited consideration for the CMPs. The Ministry of Water and Environment (MWE) has not been actively engaged in water and environment related activities in refugee settlements yet its technical guidance and support is key. WASH partners need guidance in their work to be able to address the above challenges and move to the next phase of interventions, from humanitarian to development-oriented work.

Noting that Catchment Management Plans for the whole of Northern Uganda have been prepared, they could be used to guide coordinated planning for water and related resources in refugee camps and host communities. However, in order to ensure adequate stakeholder's engagement and participation within the local communities, a lower level micro catchment management plan is desirable. Through this project under component 1.3, it is hoped that experiences concerning stakeholder involvement, coordination and implementation of WRM interventions in refugee settlements can be gathered, systematized and applied.

Subsequently, the Project intends to facilitate local communities to prepare micro-catchment management plans for 4 micro-catchments. The micro catchment management plans will be prepared through a bottom-up fully participatory approach to ensure their ownership and sustainable impact. The prepared micro catchment management plans will provide details on activities, timelines, budgets, institutional and other implementation arrangements, which will ensure successful implementation of the plans.

Finally, the Consultant will also be required to develop technical manuals and guidelines for implementation of identified activities and also conduct a training of trainers for the DWRM staff.

2.0 OBJECTIVES OF THE ASSIGNMENT

2.1 Overall Objective

The objective of the assignment is to support DWRM to prepare micro catchment management plans in the refugee water supply sources to address challenges of water and/or natural resources degradation while improving people's livelihoods and develop specifications, bills of quantities and tender documents for their implementation.

The aim of the micro catchment management plan is to contribute towards addressing catchment degradation issues, promote conservation and enhance sustainable use of natural resources of the micro catchment for the benefit of the communities. The plan is seen as the first step in a continually evolving process whose next phase is the implementation of agreed protection actions.

2.2 Specific objectives

The specific objectives of the micro Catchment Management Planning are to:

- i. Assess the current status of the micro catchment regarding natural resources and the prevailing socio-economic structure;
- ii. Assess through a participatory process, the priority issues/problems as identified by the community and the community perception of reasons for catchment degradation;
- iii. Develop through a participatory process, a micro catchment management plan, including a range of activities, to address the priority problems;
- iv. Identify potential risks (including potential reluctance and resistance among stakeholders and beneficiaries) and formulate mitigation measures.
- v. Identify, confirm, quantify and prepare costed investment and management measures from the Plan including tender documents for the engagement of appropriate service providers.
- vi. Define arrangements for implementation (institutional, technical and financial) of the micro catchment management plan together with a robust monitoring and evaluation system.

3.0 DETAILED SCOPE OF SERVICES

Task 3-1 Delineation of the Micro- catchment and Catchment Baseline Information

The consultant will map the micro-catchment areas around the schemes so as to understand the extents of the area which the plan shall cover.

The consultant shall undertake to understand and describe the relevant features and characteristics of the micro-catchments to be protected. As well as collecting information and data about the micro-catchment areas, the consultant shall collect baseline information on the micro-catchment characteristics such as; (i) Land Area; (ii) Land Use and Habitats types and areas; (iii) Water features: streams, rivers, lakes, artificial canals/drainage channels, reservoirs, major sewers or pipelines; (iv) Soils, Geology and Aquifers; (v) Climatological, Hydrological and Environmental Monitoring Stations, and data; (vi) Planned future activities; (vii) micro-catchment institutional arrangements, water and related policies . This shall be done through document review and field assessments.

The consultant will hold a start-up planning meeting with UNWMZ/DWRM to agree on the approach and methodology for the development of the mCMP. This approach will as much as possible follow the draft Catchment Planning Guidelines that have been developed by the Ministry of Water and Environment in Uganda.

Task 3. 2: Stakeholder engagement and establishment of micro-Catchment Management Structures

The consultant will identify key stakeholders including refugees and host communities (with particular attention given to members from vulnerable groups such as women, elderly, people with disabilities, children heads of households, etc), Local Government representatives, refugee sub group, CRRF Secretariat in the Office of the Prime Minister and Development and Implementing partners and develop appropriate mobilization and sensitization tools and approaches. The aim is to raise their awareness of the problem to be solved, and why they should care. Awareness raising will be undertaken using relevant means such as radio, field tours, meetings, etc. to ensure stakeholders' and

community buy-in and involvement. Each session should make the stakeholders aware of the project and to ask for their insights into water and land management issues.

Micro-Catchment Management Structures with meaningful representation of all stakeholders shall be established for each micro-catchment to oversee the implementation of the micro-catchment management measures in the plan and to ensure sustainability of the measures. In order to improve the quality of discussions and decision-making around planning control measures during stakeholder engagement, field exchange visits and short training sessions may be organized to improve their understanding and appreciation of the challenges and opportunities.

All these approaches will be appropriately documented for lesson learning and experience sharing. Interim stakeholder identification and engagement reports will be produced at key events but stakeholder engagement will be a continuous process. The final report will be produced at the end of the assignment.

Task 3-3. Micro-catchment Problem/Threat identification and Analyses

The consultant, working together with relevant stakeholders and the local communities, through a process that, among other things, involves focused group discussions elicit a complete and ranked census of the real and perceived natural/water resources issues/problems and their underlying causes.

The consultant will also identify and assess key issues for sustainable IWRM, challenges and agro-ecological potentials for each of the delineated micro-catchments and the effectiveness of current and proposed actions and their delivery. The application of existing policies and regulatory frameworks shall be reviewed. The process will also include mapping of degraded areas which will be achieved by conducting transect walks to capture real water resources issues/challenges including geo-referencing of degraded hotspots. The methodology may include development of a Livelihood Improvement Beneficiary Form for each village including spatial, demographic, topographic, geographic, economic, education and health-related information as well of initial figures on how those these planned activities would negatively impact existing livelihood opportunities for Project Affected Persons (PAPs) already established in the target areas.

Based on the review conducted, screen & rank all the identified issues based upon a given criteria to obtain a detailed characterization of each micro-catchment.

Task 3-4. Micro-catchment Solution Identification and delineation of intervention areas

The consultant will,

- i) together with relevant stakeholders, facilitate the local communities to formulate a series of actions to address the identified problems/issues and seize available opportunities. The consultant should make use of best practices identified within the region and beyond, where applicable;
- ii) using the GIS tool, delineate areas of intervention with different colours/patterns corresponding to the various activities on e.g. forestland, wetland, agricultural land (if possible by type of activity, i.e. forage crops, agro-forestry and field crops) and small-scale irrigation, etc; (list of maps to be produced: geologic, soil types, road network etc)
- iii) undertake an assessment of the capacity building needs of the beneficiary communities with respect to natural resource management and livelihood improvement activities in the micro catchment. A capacity building program that incorporates individual and community needs including gender and HIV/AIDs mainstreaming issues will be developed and costed;
- iv) review the funding packages and other resources already available for the proposed actions.

The planning teams will assist to tabulate and explain cost implications of the proposed interventions including assignment of responsibilities. Cost-sharing arrangements including community contributions will be considered. The planning teams will also review solutions and screen them based

on: (i) correspondence with the problems; (ii) multiple effects (positive effect on both natural resources and rural livelihood); (iii) number of beneficiaries; (iv) cost of activities; and (v) demonstration effect and potential/ease of replicability.

Task 3-5. Preparation of the first Draft Micro-Catchment Management Plan

The consultant will develop a draft micro catchment management plan including an implementation matrix with a costed work plan and budget and also indicating how the success of the initiative can be measured in a variety of ways e.g. by assigning time targets to actions where appropriate. The time targets should be set for the short (6 months), medium (1-2 years) and long term (3+ years) clearly assigning roles and responsibilities. This should build on ongoing interventions and be shared with the communities and should include a range of labour-intensive activities that can be addressed under the project. Links with other plans and processes should also be established.

Task 3-6: Preparation of the final Micro Catchment Management Plan

Following comments on the draft mCMP, the consultant will produce a final micro catchment management plan and facilitate workshops for dissemination and adoption of the micro catchment management plan by relevant stakeholders. The plan should include, but not be limited to, details of all technical interventions and investments with due consideration of the intervention scope of the project and with particular focus on those activities which can be implemented following a labour-intensive / cash-for-work approach. The Plan should also indicate implementation/institutional arrangements as well as the monitoring and evaluation mechanism. Investments are expected to utilize best-practice examples for investments in, including sustainable management and maintenance of soil conservation investments: gully stabilization, shallow manual terracing, rehabilitation of degraded forests: afforestation, rehabilitation of degraded grazing land: rotational grazing, livestock drinking water for communal use, simple livestock shelters; livelihood investments on private land, small scale irrigation, and energy saving technologies such as briquettes for home use etc.

The plan should include interventions for environmental and livelihoods improvements whilst balancing both human and environmental needs.

Task 3.7: Identification and preparation of costed investment and management measures in the priority micro-catchment areas

With the prepared plans, the consultant shall with further stakeholder consultations undertake to identify, confirm and quantify the most appropriate micro-catchment investment and management measures to be implemented on the confirmed sites. These shall include identification of areas that i) are sensitive to the planned schemes and should be the focus of investment and management efforts and ii) that have greater potential for restoration to improve or enhance existing conditions. Thereafter, the consultant shall prepare costed bills of quantities for implementation including specifications and any designs for prioritised catchment investment and management measures.

Task 3.8: Preparation of Environmental and Social Project Briefs

The Consultant will prepare environmental and social project briefs for each of the sub projects in line with the NEMA environmental requirements, Water Sector EIA Guidelines, and World Bank Environmental and Social Safeguards. The Consultant will (i) Identify and assess the potential environmental, social, health and safety Impacts associated with implementation of the proposed micro catchment protection and management measures identified in the plan; (ii) Determine and propose appropriate mitigation measures for the management of the negative impacts identified (iii) Analyse project alternatives; (iv) Develop

an Environmental and Social Management Plan with mechanisms for monitoring and evaluating the compliance and environmental and social performance of the implementation process of the catchment investment and management measures.

Task 3.9: Preparation of appropriate tender documentation

Upon finalisation of the detailed cost estimates and specifications and approval by DWRM, the consultant will commence the preparation of tender documents for the engagement of appropriate service providers. The tender documents shall be structured in accordance with the World Bank procurement guidelines.

4.0 EXPECTED OUTPUTS

The main outputs of this consultancy are;

- A micro-catchment management plan for a prioritized micro catchment in the form of documents and maps and including (i) mCMP implementation matrix with a costed work plan and budget, a robust M&E mechanism indicating time targets for the short (6 months), medium (1-2 years) and long terms (3+ years) (ii) Community capacity building plan (iii) An Institutional set up for mCMP Implementation.
- Bills of quantities and detailed cost estimates for interventions in the selected water sources in Ora and Anyau micro catchments.
- Tender documents with selected measures and their specifications, costs and locations in the micro catchments.
- Environmental Project Briefs and social safeguards for the micro catchments.

5.0 REPORTS AND SCHEDULE OF DELIVERIES

List of reports, schedule of deliveries, and period of performance

The consultants will produce the following reports and attend the related meetings:

Report	Description	No of Copies
Inception report (end of 3 weeks from commencement)	Contains the Consultant’s mobilization, updated work plan and schedule for the Consultancy. Should include any major inconsistency in the TOR, and other challenges that have become apparent during this period, methodology and time schedule for the services and the proposed content and structure of the various reports. -desk review and suggested sites for field visits (including outline of travel plans and logistics for field visits)	3 hard copies and an electronic copy (memory stick)
Workshop 1 & Final Inception Report	To discuss inception report. RDE/CF to be included in the workshop. The PMU in collaboration with relevant officials in Uganda will provide consolidated comments from the stakeholders within one week after the workshop, after which the Consultant will submit the final inception report within two weeks to the Client.	
Interim Report (end of month 2),	will comprise of, <ul style="list-style-type: none"> - A map of the delineated micro catchment - Detailed characterisation of the micro catchment clearly outlining agro-ecological potentials for each of the micro catchments. 	3 hard copies and an electronic copy (memory

	<ul style="list-style-type: none"> - Results from the micro-catchment assessment including, the baseline conditions regarding natural resources and socio-economic development - Situational analysis including institutional and policy issues - Stakeholder analysis indicating key stakeholders, gender issues, existing conflicts in NRM and capacity gaps, - Identified challenges including an assessment of the participatory process and priority problems as identified by the community, community perception of reasons for degradation, and preliminary intervention measures. - A list of criteria for screening and ranking 	stick)
Workshop 2 & final interim Report	To discuss the interim report. MWE/WMZ will provide consolidated comments from the stakeholders within one week after the workshop, after which the Consultant will submit the final interim report within two weeks to the Client.	
Draft mCMP (month 4),	A draft Report detailing but not limited to: <ul style="list-style-type: none"> i) A draft mCMP with implementation matrix, work plan and budget ii) M&E mechanism 	3 hard copies and an electronic copy (memory stick)
Draft report of identified, and confirmed priority catchment management measures, bills of quantities and specifications and Environmental and Social Project Briefs (months 5)	To review and discuss draft report of identified, and confirmed priority catchment management measures, bills of quantities and specifications and Environmental and Social Project Briefs	3 to the DWRM and 1 Electronic copy (word, excel (all tables) and CAD (all drawings
Workshop 3	To review and discuss the draft mCMP. DWRM will provide consolidated comments from the stakeholders within two weeks after the workshop.	
Final mCMP Report (24 th week from commencement).	Should have incorporated comments from stakeholders on the draft mCMP report.	6 hard copies and 4 memory sticks
Report of identified, and confirmed priority catchment management measures, bills of quantities, specifications, Environmental and Social Project Briefs and Tender Documents (Month's 6)	This report shall contain identified, confirmed, quantified and costed catchment investment and management measures to be implemented on the confirmed sites within the micro-catchments. These shall include areas that i) are sensitive to the planned and future development and should be the focus of investment and management efforts and ii) that have greater potential for restoration to improve or enhance existing conditions. It will also include costed bills of quantities for implementation, and environmental project briefs for each of the sub projects including tender	6 hard copies and 4 memory sticks

	documents.	
Monthly progress reports on Consultant's own contract - 1 st week of every month	This report (1-2 pg maximum) comprising a narrative and other graphic presentation, showing details of the Consultant's progress, changes in the assignment schedule, impediments and proposed remedies will be submitted on a monthly basis.	3 hard copies and an electronic copy (Email)

The reports must contain all the appropriate documents, maps, plans, schedules, diagrams and annexes and be written in the English language. The maps shall be developed with open source GIS software and preferably QGIS tool that is already widely used within the DWRM or any other closely related tool.

It is envisaged that the assignment will take up to six calendar months from the designated project start date to be completed. The Consultants will be supervised on daily basis by a team consisting of MWE/DWRM Centre staff and the Water Management Zones (WMZs), and shall report to the Director, DWRM through the Commissioner of Water Resources Planning and Regulation. The Consultant shall prepare and submit the requisite reports and documents, in English, in an approved format to the Client.

Workshops

Several stakeholders' workshops will be organized to validate the outputs at various levels after submission of reports as part of the plan preparation. **Three workshops** will be organized. The Consultant will further be required to include in his financial proposal a provisional sum of **US\$60,000** to meet costs of holding workshops. The client will pay the Consultant based on actual and approved expenditure of the Consultant's budget. The Consultants budget (for the workshop) will have been agreed with the Client prior to holding the workshop. The basis for payments of the participants by the Consultant will be full participation for the entire duration of the workshop together with an authentic invitation letter for the participant.

The workshops will be organized and facilitated by the Consultant. At each workshop, the consultants will make Power Point presentations, provide concise background documents for discussion and prepare workshop reports to document the proceedings.

6.0 Duration of the Assignment

The assignment will take up to six (6) calendar months to be completed with an input of 8 Man-months (4-man months per micro catchment).

7.0 DATA AND SERVICES TO BE PROVIDED BY THE CLIENT

Data and documentation on hydrological, meteorological, water quality and other relevant aspects of the micro catchments which the project or Ugandan institutions may have, will be availed to the consultant; however, the consultant has the ultimate responsibility for collecting the required data and documentation which cannot be made available by the project from official sources.

Services to be provided to the Consultant:

- Liaison and assistance to obtain any other information and documents required from other government agencies which the Client considers essential for the proper conduct of the assignment;
- Arrange consultative meetings and linkage with relevant local authorities

- Provision of comments in a timely manner.
- Payment of dues as per the contract

8.0 INSTITUTIONAL ARRANGEMENTS

8.1 Liaison with MWE/DWRM

The Ministry of Water and Environment through the Directorate of Water Resources Management, under the Integrated Water Management and Development Project (IWMDP) will coordinate and manage the assignment and will be represented by the Director, DWRM. The Director, DWRM will appoint a Task Force to supervise the implementation of the project and the day to day activities shall be coordinated by a task force. All reports will be submitted to:

**The Director,
Directorate of Water Resources Management
P.O.Box 20026,
KAMPALA**

**Attention: Dr. Callist Tindimugaya
Commissioner, Water Resources Planning and Regulation
E-mail: callist.tindimugaya@mwe.go.ug, callist_tindimugaya@yahoo.co.uk**

The consultant shall hand over all data collected during the course of the assignment to the client in formats approved by the client including shape files. Reports shall be delivered to the client's address as stated above.

8.2 Staffing/Personnel

The Consultant is required to elaborate in his technical offer on the envisaged logistical set-up and deployment of appropriate skills for the execution of the assignment. The consultant should carefully review the scope of works and propose a team of well-organized competent staff, adequately equipped with the necessary skills/facilities to execute the assignment, bearing in mind that a substantial amount of work in this assignment is field based.

The Consultant will be expected to present his staffing schedule in a manner that makes it clear as to which personnel will be involved in a specific activity. A staff organogram reflecting the envisioned activities should therefore be presented.

8.2.1 Staffing Requirements

The Consultant shall identify and front a team necessary to carry out the assignment and should describe clearly the functions of each team member. The consultant's team is however expected to provide for the following key staff/expertise.

- i) Environmental Management Expert/Team leader
- ii) Hydrologist
- iii) Sociologist
- iv) Water Resource Economist
- v) Soil and Water Conservations Specialist
- vi) Forestry Expert

In addition, the Consultant is at liberty to propose additional staff/competencies/short-term specialists as deemed appropriate for the successful execution of the assignment.

8.2.2 Staffing Qualifications

The Consultant will form a competent team to carry out the study. The Consultant will organize all relevant inputs: finances, logistics; offices, vehicles, equipment and tools etc, as required to accomplish the assignment. The consultant is expected to field a team of

professionals who shall work in an efficiently coordinated process to execute the water and environment engineering and software aspects of the assignment prescribed and implied by the foregoing scope of services.

The Consultants core team shall comprise the following specialist for undertaking the assignment with a total time input of **8 man-months** for the assignment as given below:

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

- i) **Environmental Management Expert/Team Leader:** A master's degree in Environment Engineering/Environmental Science with 10 years relevant experience in undertaking strategic environmental assessments, environmental impact assessments, etc. and in environment management planning. Knowledge of World Bank safeguards policies is desirable and 5 Years of working in Uganda will be an added advantage; Experience in technical studies on watershed management, soil conservation, and sediment monitoring, geomorphology, land-use and erosion problems in addition to well-developed water resources modelling skills and ability to undertake feasibility level assessments for investments in catchment management measures is an added advantage.
- ii) **Hydrologist:** He/she should have a Msc. Water Resources Engineering or related fields. The expert should have at least 10 years of relevant experience in projects related to preparation and/or implementation of catchment management plans, with a specialization in water system simulation modeling, including the use of MIKEBASIN, and 10 years of relevant experience in undertaking water system simulation modeling;
- iii) **Sociologist:** A minimum of a master's degree bachelor's degree in Sociology or in a related field with 10 years of relevant experience in undertaking strategic social assessments, social impact assessments, etc. Knowledge of World Bank safeguards policies is desirable. The Social Development specialist should have extensive experience in stakeholder identification, mobilization and engagement, and gender issues in Uganda. Knowledge of the local language and previous experience on World Bank Funded projects will be an added advantage;
- iv) **Water Resources Economist:** A master's degree in Economics with specialization in water resources economics with 10 years relevant experience in conducting economic and financial analysis of water projects, as well as in the economics of investment planning, including at a river basin level.
- v) **Soil and Water Conservation Expert:** The Soil and Water Conservation Expert should have a minimum Bachelor's degree in natural resources/ water resources management, Agriculture, or related field. He/She shall have a minimum of 10 years overall experience in preparation and implementation of soil and water conservation measures.
- vi) **Forestry Specialist:** The Forestry Specialist will have a minimum of Bachelor's degree in Forestry. The Proposed experts should also have an advanced degree in Forestry, Environment Sciences, Forest Ecology or a closely related discipline. He/She shall have a minimum of 10 years overall experience in preparation and implementation of catchment restoration measures.

All the experts are expected to have some experience in water resources and environment related programs. Whereas special international expertise is required, local experience in Sub-Saharan Africa is an added advantage. The Sociologist should be Ugandan with extensive experience in stakeholder engagement in Uganda and should preferably be knowledgeable of the local language of the project area. All Projects illustrating the expert's specific experience for the project (water resources/environment projects) and their experience in Africa have to be clearly defined in the expert's CV (including Project name, Location, Country, Duration, Project value, expert's specific tasks, etc).

DWRM will hold discussions with the consultant at various stages in the consultancy to assess work progress, discuss challenges and constraints being encountered and possible interventions with an aim of ensuring standard work is completed within the agreed time lines.

8.2.3 Familiarization with the Assignment

To familiarize with the services to be provided under this invitation, the prospective bidder is advised to visit the Project area. However, it should be understood, that any cost incurred in this regard shall not be a reimbursable expense to the Consultant.

9.0 METHODOLOGY AND STANDARDS

The Consultant will be expected to employ the most effective methodology and standards to achieve results with optimum stakeholder and local community involvement. In addition, the Consultant will be expected to: (i) collect most data from review and analysis of existing secondary sources of information such as assessment reports and various other regional and global publications on the sub-sector (ii) prepare clear, concise and focused reports and (iii) ensure reports and necessary documents are delivered in time.

10.0 CAPACITY BUILDING AND TRAINING

The Consultant shall train designated staff with the aim of developing capacity and knowledge transfer. The training measures are defined (but not limited to) improving the performance of the designated technical staff installed. The training plan should include one local training. For tendering purposes, the tentative number of individuals to be trained during the local trainings is Eight (8).

11.0 PROJECT COSTS

Whilst all of the consultants' costs incurred in their participation, supporting the arrangement and running of stakeholder workshops must be included in the consultant's financial proposal. The costs of all other consultations, trainings, meetings etc. required by the consultant to adequately complete the assignment must be included in the financial proposals.

12.0 REFERENCE DOCUMENTS

Key References will include but not be limited to;

1. Water and Environment Sector Response Plan for Refugees and Host Communities
2. Comprehensive Refugee Response Framework
3. IWMDP, Project Implementation Manual
4. Albert Nile Catchment Management Plan
5. Upper Nile Water Management Zone Strategy and Action Plan
6. Catchment Planning Guidelines for Uganda, MWE
7. Water Source Protection Guidelines MWE
8. State of the Environment Reports, NEMA, MWE
9. Wetlands Atlas for Uganda, WMD, MWE
10. Environment and Natural resource sector investment plan, DEA, MWE
11. COWI, Uganda; Operationalization of Catchment-based Water Resources Management, Draft Final Report, DWRM, MWE, September 2010
12. Pem Consult, Revision of the Water for Production Strategy and Investment Plan, Final Report, DWD, MWE, August 2009
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