



**THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT**

**TERMS OF REFERENCE FOR THE DEVELOPMENT AND ESTABLISHMENT OF
MANAGEMENT MODEL FOR KABUYANDA LARGE-SCALE PIPED
IRRIGATION SCHEME (ISINGIRO DISTRICT)**

SEPTEMBER 2023

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ABBREVIATIONS

DLG	District Local Government
GOU	Government of Uganda
ICT	Information and Communication Technologies
IWUA	Irrigation Water User Association
M&E	Monitoring and Evaluation
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MTIC	Ministry of Trade, Industry and Cooperatives
MWE	Ministry of Water and Environment
O & M	Operation and Maintenance
WB	World Bank
WFP	Water for Production
WUA	Water Users Associations
WUC	Water User Committees

1. Introduction

1.1 Background

In 1997, the Government of Uganda (GoU) embarked on water sector reforms so as to ensure that water services are provided and managed with increased performance and cost effectiveness and to decrease the government's burden while maintaining the government's commitment to equitable and sustainable provision of water services. The National Water Policy was established in 1999 followed by four sub-sector reform studies: (a) Rural Water Supply and Sanitation (January 1999 - June 2000); (b) Urban Water Supply and Sanitation (September 1999 - December 2000); (c) Water for Production (WfP) (May 2002 - Jan 2004); and (d) Water Resources Management (July 2003 - August 2004). The reform resulted in sub-sector Strategies and Investment Plans (SIP). The WfP SIP (2009) aimed at developing an integrated policy framework for WfP and to improve efficiency and effectiveness of water service delivery.

The National Irrigation Policy (2018), co-signed by MWE and Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), sets the ambitious goal of developing 1,500,000 ha of irrigated area by 2040, compared to the current 77,000 ha, which would require creating 70,000 ha of newly irrigated land per year. The policy broadly identifies roles and responsibilities in irrigation development, attributing to MWE the development of off-farm irrigation infrastructure for medium and large-scale irrigation schemes; to MAAIF the development of on-farm irrigation infrastructure and implementation of appropriate on-farm activities, in addition to undertaking the development of the micro and small-scale irrigation systems; and Local Governments (LGs) main role is support and monitor the implementation of the irrigation Policy.

With irrigation being relatively new in Uganda, there is still uncertainty as to who plays what function in irrigation among public, private and civil society. Irrigation has been developed by different Ministries, Departments and Agencies (MDAs) and private sector with minimum or no coordination between the different key players in the sub sector resulting into conflicts and roles overlaps. Currently, management of public irrigation schemes in Uganda is delegated from MWE and MAAIF to the district where the scheme is located, and then to a farmers' organization (i.e., cooperative, association), which presents challenges. According to the strategy, only few facilities have actually been handed over to the users and the DLG into community-based management. Furthermore, as only a third of the facilities have a system for the collection of user fees in place and none of the facilities have an established O&M system/plan, very little can be concluded as to the functionality of the management models in place.

The National Irrigation Policy calls for users to be fully involved and contribute to the O&M cost of irrigation schemes, to promote ownership and sustainability. This contribution to the users is critical to limit the impact of such a massive irrigation expansion on government budget. While the Policy calls for the costs of service provision to be borne by the beneficiaries, fee recovery in the existing irrigation schemes in Uganda has generally been poor, sometimes uneconomic to administer and rarely related to performance or quality of service.

The WfP sector faces Institutional, Managerial, Operations and Management (O&M) challenges including, among others: (a) inadequate resources, (b) absence of viable financing system, (c) inadequate management structures, (d) poor community participation, (e) inadequate technology, (f) inadequate technical capacity, (g) poor construction and supervision

of construction, (h) lack of attention to environmental and health concerns, (i) limited interaction between management and water users, (j) limited participation of district officials in management decisions, (k) lack of land ownership by farmers, (l) lack of community contribution to the construction and management of facilities, (m) failure to maintain infrastructures of the schemes, (n) lack of participation in decision making by farmers, and (o) decline in volume of water leading to low efficiency. These challenges are deemed to become more acute as irrigation expands, thus the willingness of the Government to transfer management responsibility to other stakeholders.

The Government of Uganda with financial assistance from the World Bank (WB) is implementing the Irrigation for Climate Resilience Project ICRP (P163836). The project finances – among others – the construction of the Kabuyanda irrigation scheme in Isingiro District, which aims at providing farmers in the project area with access to irrigation and other agricultural services, and to establish maintenance arrangements for irrigation service delivery.

1.2 Kabuyanda irrigation scheme

Kabuyanda is a new large-scale piped irrigation scheme, to the benefit 10,700 farming households. The proposed scheme is located in the sub-counties of Kabuyanda, Kabuyanda Ton Council and Kikagati, all constituting eight parishes and thirty eight villages in Isingiro District, Western region, near the border with Tanzania. The command area is in the basin of the Mishumba River, which later joins the Kagera River along the Uganda-Tanzania border. The scheme consists of a dam and a piped irrigation network.

The dam will be a 33 m high earth-fill dam with reservoir of 8.8 MCM storage capacity, draining an area of about 90 km². It will be located 5 km north-west of Kabuyanda Town, and will submerge an area of 100 ha (1.1% of total forest area) within the Rwoho Central Forest Reserve (CFR) under the management of National Forestry Authority (NFA).

The network will serve a command area of 3,300 ha. The boundaries of the command area have been defined based on topography (elevation and slope), pedology (land suitability) and availability of water resources (simulation of water availability in the reservoir to guarantee satisfaction of irrigation and environmental needs). It is a ramified pipe network supplied by gravity (no pumping stations) from the dam, with a filtering station at the head of the network. The irrigation network has been designed to mirror to the extent possible the existing social structure, so to facilitate the management of the system: the main pipe cuts across the command area from north to south, mainly along the river; secondary pipes feed groups of villages, and then each tertiary pipe feeds each of the 38 villages. The network will serve 165 blocks of 20 ha each.

The block will be supplied by a block hydrant, with block boundaries along plots limits. Water will be provided on demand at the block hydrant. Modality of water distribution within the block remains to be decided, either with rotation between two groups of farms; or water will be provided at the farm gate (or shared between farms in case of farm area below 1 ha) on demand with splitting of the flow. Pressure at the farm gate will be above 25m over 52% of the command area, allowing for sprinkler and drip irrigation; between 15 and 25m over 25% of the command area, allowing for drip irrigation; and lower than 15m over 23% of the command area, allowing for irrigation with flexible hose. Farmers within each block will be part of one Farmer Field School to jointly learn about irrigation. Farmers within one block will be

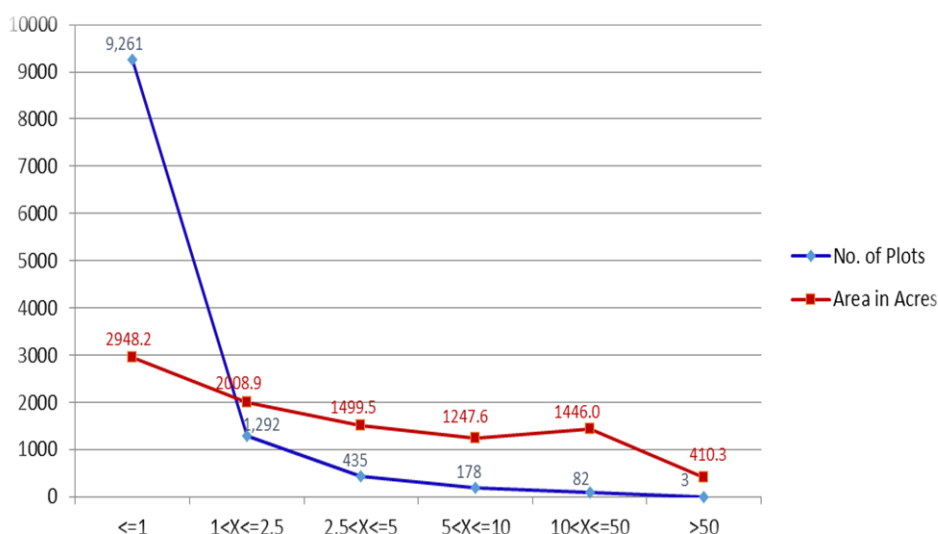
organized, but the kind of organization and the legal implications will have to be defined based on the proposed model and its structures.

Works for the dam are expected to start in October, 2023 and completed in July 2025. During construction, the following technical assistances will be mobilized:

- Construction supervision
- Safeguard supervision
- Extension service
- Value addition
- Stakeholders' engagement
- Gender Based Violence
- HIV/AIDs

Land ownerships is mainly informal, protected by the community and sub-county authorities. Due to population density, land is highly fragmented with family plots subdivided among siblings who live on the land with their families. In general, the South West Region is characterized by a high population density for rural Ugandan standards (above 200 inhabitants per km², Census 2014). Rural urban migration is very limited with most people opting for remaining on an assigned portion of the family land to settle and farm if given an option. Informal short and long-term lease agreements are common, while land sales exist but are less frequent. While most of the land is customary, traditional customary structures such as clans and sub-clans are not in place. Land disputes are common within and between families, have low intensity and are mostly addressed informally at the local level. Thanks to the cohesive social structure, land grabbing from elite capture has not been experienced to date. The presence of protected areas, private forests, and Nakivale refugees' settlement in Isingiro, further increase pressure on the remaining land. In November 2018, MWE carried out a survey in the proposed command area to inform scheme design. The survey identified 11,251 plots. The survey was carried out with reference to physical boundary between plots, without any formal recording of plot ownership, thus making not possible to link plots and farms. Of the 11,251 plots surveyed, more than 80% are below 0.4 ha, 11% are between 0.4 and 1 ha, and the remaining 9% are above 1 ha. The three properties above 50 ha include Iryango Kaiho Farm of the Kaiho Farm School Leavers Cooperative Programme, 235 ha; and two private properties of 116 ha and 59 ha, respectively.

Kabuyanda, plot survey



Market opportunities are several. The district counts producer groups and cooperatives which are getting farmers organized to save, market collectively, and access agro-inputs. For instance, Kabuyanda Agricultural Savings and Credit Cooperative Organization (SACCO) boasts of a membership of 2,500 persons and a loan portfolio of UGX 900 million which is an indication of strong farmers' institution. A few other SACCOs exist and are performing relatively well (e.g., Ankole Diocese Millennium SACCO, Kabuyanda Dairy Coop Society...), while requiring some strengthening for good corporate governance as well as linking them to other value chain actors (e.g., financial institutions, agro-input suppliers, processors, commodity buyers, extension service providers and researchers) for better chain integration. The area could take better advantage of its vicinity to Tanzania and Rwanda, and an Export Zone at the Kikagati border is under development with support from EU and COMESA. This zone shall constitute space equipped with ample commodity handling and storage facilities, vehicle parking and premises for business support services (e.g., banks, forwarding and clearing services, ...) all aimed at facilitating the bulking and eventual export of commodities to neighboring countries. Another envisaged opportunity is the high refugee population which inhabits Isingiro district in the settlements of Nakivale and Oruchinga. At approximately 134,000 persons in need to be fed, opportunities have been created by humanitarian agencies (mostly the World Food Program, WFP) to prioritize purchasing of food locally. This implies that grain and pulses produced within the district can have a ready market estimated at about 75,000 ton/year.

1.3 Justification for the Assignment

Kabuyanda irrigation scheme is the first of its kind in Uganda. With only 77,000 ha irrigated nation-wide, the irrigation sector is still underdeveloped. Existing schemes are usually with open canals, and either small or medium (less than 1,000 ha). With 3,300 ha command area, Kabuyanda will be the first large-scale irrigation scheme in the country. It will also present the new dimension of piped scheme, with provision of water on demand to the block. Kabuyanda scheme thus requires developing a new thinking and approach towards establishing a more robust sustainability and management system with matching regulatory and legal frameworks.

Roles and responsibilities of the involved stakeholders will need to be defined for Kabuyanda irrigation scheme. The need to clarify roles and responsibilities is even more needed for Kabuyanda scheme, considering its unique nature in terms of scale and design. In particular, there is need to define roles and responsibilities for the public sector actors: MWE, MAAIF and LG. For the farmers, there is need to achieve genuine farmer participation and representation, while recognizing that management of a complex infrastructure like the one in Kabuyanda requires professional technical and management personnel, and will require an establishment phase with Government's support that sets a foundation for operational evolution and role adjustments. There is also need to design irrigation service fees that can on one side cover the O&M costs while being affordable to the farmers. Finally, there is need to clarify the role that other private sector actors can play in the O&M of Kabuyanda. The appropriate management model therefore needs to be developed for the discussion, approval by the all-relevant stakeholders for adoption by the beneficiary water users. These arrangements would evolve in form over time as operational experience and data is obtained

Based on the above perspectives, the project requires procuring the technical services to provide technical assistance to develop the Kabuyanda irrigation management model and its

subsequent enrollment coupled with establishment of appropriate and functional management systems and structures.

2. Objective of the Assignment

The aim of this assignment is to develop and establish a management model for effective and efficient irrigation services for Kabuyanda irrigation scheme. This includes development and establishment of related organisational structures and systems to ensure functional Operation & Maintenance (O&M) of irrigation infrastructure, financial management and cost recovery, control and enforcement, supervision, monitoring and regulation of irrigation infrastructure, water resource use, rights, allocation and conflict management.

2.1 Specific objectives

The specific objectives of the assignment include:

1. To define and develop the management model for Kabuyanda irrigation scheme with clear roles and responsibilities of stakeholders to deliver irrigation service.
2. To support the establishment of functional institutions/Structures and operationalize the model to deliver the irrigation service.
3. To build the stakeholders' capacity to undertake their roles and responsibilities.

2.2 Scope of Services

Task 1: Development of the management model

The assignment will provide technical assistance to define the appropriate management model, contractual arrangements and obligations, operational procedures and guidelines, roles and responsibilities for management of irrigation infrastructure and services. The Consultant is to design robust institutional arrangements within a defined legal regime to provide for effective and sustainable management of irrigation services. This task shall entail the process of analysis, definition and development, consensus building on the model and its institutional management arrangements. It is also important that the proposed organization structures differentiate the functions, roles, responsibilities and interests of the various stakeholders for improved and sustainable irrigation services management and regulation.

Stakeholders' mapping

This task will start with stakeholder mapping, aiming at identifying actors and movers in the scheme, their interests, and their capacity assessment. Stakeholders will include, but not limited to: MWE (including regional office of Mbarara), MAAIF, DLG (including sub-county), farmers, and existing farmers organizations. The Consultant shall identify and analyse drivers for collective action (social and economic), loyalty systems, group dynamics, leadership organisation and management of irrigation services. The Consultant will undertake targeted interviews with key informants and relevant stakeholders at the community/farmer, local, regional and national levels.

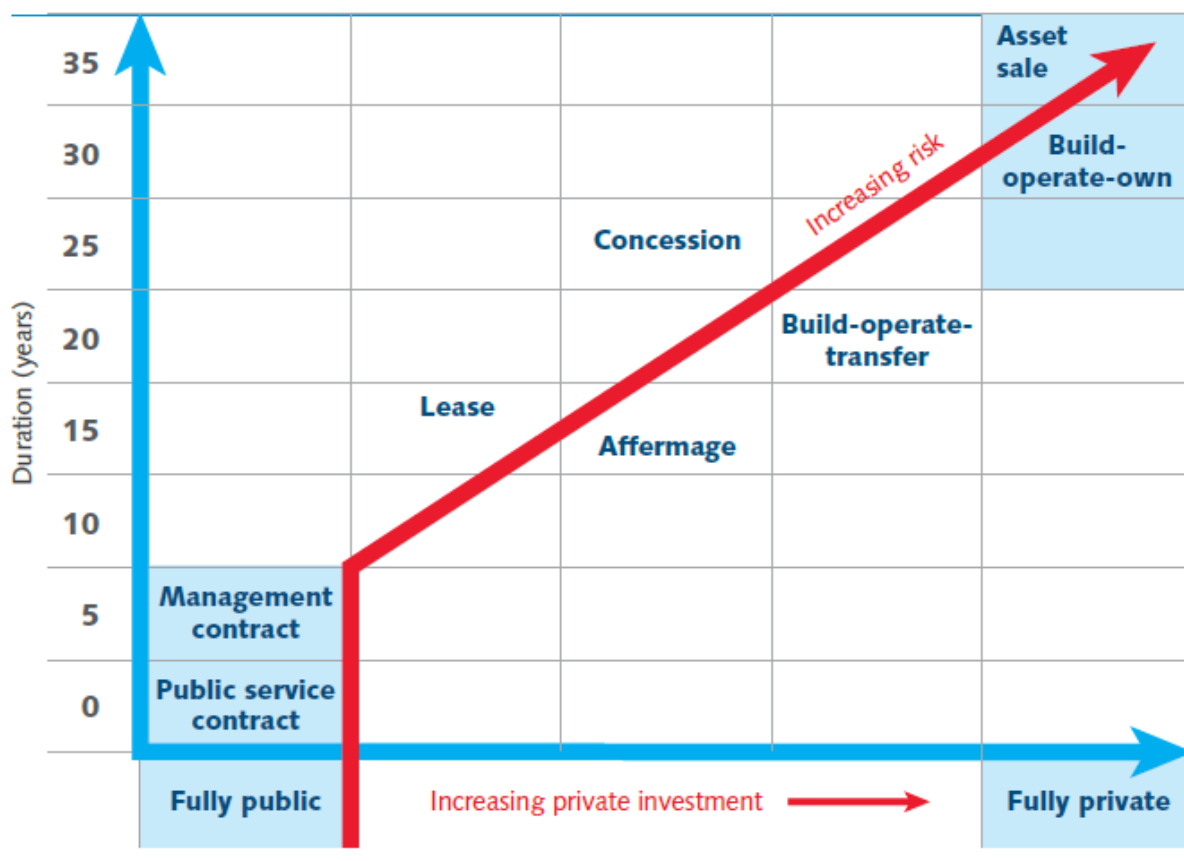
Model alternatives

The Consultant will gather relevant literature on management models for piped irrigation schemes, with particular focus on Africa, or any other developing country elsewhere in the world assessing pros and cons for each. These will provide ideas for possible modelling avenues for Kabuyanda irrigation scheme. The Consultant will, in their proposal, outline some of the types of management models that may be applicable to Kabuyanda, with reference to the kind of operational and functional cases that can be visited for the due diligence by the project staff and selected farmer leaders for understanding the operational dynamics to ease identification and model choice. The review is needed to contextualise the management models explored, and propose customisation based on the reality in Kabuyanda. In addition, the Consultant will draw lessons for the operationalization process of the management model of the water supply system in Uganda.

Draft of the management model

Based on the stakeholders mapping in Kabuyanda, and based on the analysis of the alternatives, the Consultant will produce a proposal of the management model for Kabuyanda. The consultant will propose scheme's organisational structures, their mandates and responsibilities for all stakeholders involved. The consultant shall recommend the top organ and other attendant institutions that shall be responsible for the scheme management, and propose a clear reporting hierarchy to enable delegated services under the scheme to deliver effectively to clients. The consultant will design management structures, positions and their horizontal and vertical inter-linkages.

A gravity pressurized pipe system presents major operational advantages over pumped or canal systems, not least low operational costs, on-demand supply and more direct hydraulic control. However, pipeline operations are easily interfered with or sabotaged, so strong relationships, and clear mandates and responsibilities are essential for operational longevity and success. Maintenance too, is key for reliable supply as pipe failures in pressure lines need immediate response to avoid serious and rapid damage. Successful operations require an effective technical, administration, financial and customer management team. The initial team will have to be bolstered at the start when systems are being established, during the same time as farmers are on a learning curve in terms of irrigation farming and water-institutions. The formulation of models should consider the relationship between risk and responsibilities across the different types of private-sector involvement in irrigation O&M in Uganda.



Source: Mandri-Perrott and Bisbey 2016.

Types of Irrigation and Drainage Contracts involving Public and Private Sectors

The lowest risk options from the perspective of private sector partners are variations of public service and management contracts. Public service contracts are task-specific and the public agency outsources certain services such as maintenance, meter reading, or fee collection. These are usually short-term contracts and renewable. Management contracts are more long term—about three to five years—and the operational responsibilities of a government organization are transferred to a private operator. These can be time-and-cost, or fixed fee arrangements for performing operational and managerial functions. Either of these are the most likely short-term institutional options, combined with the establishment of farmer water-user groups, and irrigation organizations. Private sector exposure in a situation with no track record or operational precedent is significant and African experiences identify various pitfalls that must be avoided. There are inherent risks on relying heavily on O&M revenue generation from thousands of smallholder farmers, though that is surely a goal.

Despite the strong motivations that favour private involvement in I&D O&M, and successes in developing countries, there are relatively few examples of successful PPPs in large public irrigation systems in developing countries. Institutional reform by bringing in private sector actors has many potential benefits, but the presence of large externalities, and other sources of market failure makes private stakeholders nervous about investing in irrigation and drainage projects. Cost-sharing between users and government is common and surely essential from the outset in Uganda. The specialised nature of transactions, legal and financial, require minimum baselines of operational norms to be in place. Models' alternatives should consider the

sustainable management of a dam, Irrigation network (Main pipeline, Secondary, tertiary and or up to farm hydrant)

Whatever options are considered and defined, the institutional arrangements, training for capacitation, and the allocation of responsibilities for operations, management and maintenance need to be defined from the start, in the knowledge that institutional evolution is intended. The starting arrangements will need to be assessed during and after 3 years, with anticipated transitions to more permanent streamlined arrangements throughout the organization. Farmer's irrigation organizations would need to be supported in that period alongside good water service delivery, and crop production and sales. A second phase, with greater cost-recovery from farmer's contributions to O&M, can be achieved with associated shifts in institutional setup.

From preliminary discussions, a possible first stage start-up model could entail the following:

- **MWE** would be responsible for water regulation, management, allocation and monitoring functions. MWE would delegate the management function once the scheme is constructed, in line with the approach taken so far for existing schemes.
- **MAAIF** would be responsible for the on-farm agricultural production function.
- **Farmers** would be the client of the water service, either individually-the water service will be provided up to the farm hydrant) or as a group, if the service is up to the block hydrant).
- **Farmers' water organizations** would either have an advocacy and conflict resolution role. The level of service provision (farm hydrant vs block hydrant) will determine the legal requirements for the Farmers' water organizations or any developed institutions.
- **Farmers' cooperatives** would be refocused on their original agricultural role in relation to value addition and market linkages.

Once the model is broadly identified, the Consultant will cost the model and come up with financial projections of its implementation. This will include scenarios of water fees. Ideally, collection of farmers' fees should cover O&M costs of the irrigation scheme. Comparison between water fees and farmers capacity to pay should also be developed based on the farmers' cost inputs, expected Farmer's revenues and relate all with operation and maintenance costs to be able to determine the affordable tariff.

From preliminary discussions, a possible set up would include:

- A one-off connection fee, in order to subscribe for the water service (either at the farm gate and or at the block hydrant). The ICRP has budgeted for a startup fund for O&M: a matching contribution would be provided for the connection fees collected.
- A volumetric fee, for the water use.

Develop Legal & Contractual obligations and implementation systems and procedure

Based on the workshops, the Consultant will finalize the management model proposed reflecting the inputs of the various stakeholders. At this point, the Consultant will investigate the most appropriate, effective and binding contractual arrangements that will lead to sustainable management for the Kabuyanda irrigation scheme. The consultant will investigate, evaluate and determine the different legal and regulatory instruments in place in Uganda governing the legal arrangements and status for irrigation management. This will guide the formulation and establishment of contractual management structure for the Kabuyanda irrigation scheme within prevailing enabling legal and regulatory framework and act as a

mechanism to strengthen the mode of practice of irrigation as a business and proposals for longer term contractual recommendations.

Several legal frameworks, laws and policies should be consulted to enable the Consultant to ascertain the legal foundations of the management model. Some of the legal frameworks consulted include;

- i. O&M strategy 2020
- ii. National Irrigation Policy, 2018
- iii. Water Act, Cap. 152
- iv. National Water policy, 1999
- v. Uganda Gender Policy, 2007
- vi. National Agricultural Extension Policy, 2016
- vii. Local Government Act, Cap. 243
- viii. Cooperative Societies Act, Cap. 112
- ix. National Agriculture Policy, 2013
- x. The Public-Private Partnerships Act, 2015

After understanding the existing national legal and regulatory frameworks, the consultant shall develop relevant performance management frameworks such as MOUs, constitutions and by-laws governing the operations of the scheme, among others and coordination of different stakeholders. The legal, regulatory and contractual arrangements shall detail the functions, duties and obligations of different parties at the scheme, the reporting hierarchy and regulatory responsibility. The Consultant will develop performance indicators for quality of the irrigation service delivery, regulation of irrigation services and regulation of water resource use.

The Consultant will propose refined specific mandates for lead sector agencies (MWE and MAAIF) to enable them to play their role in supporting and assisting sustainable irrigation schemes infrastructure management. Define specific oversight roles for MWE & MAAIF, regulatory roles and functions for district local government authorities, management and maintenance functions for of any agency mandated to manage the scheme. The mandates for the different departments and contractual relationships have been defined, for which draft contract terms and conditions have been provided.

The regulatory mechanism should define bye-laws, enforcement of rules and regulations, supervision and monitoring by district local government and central ministries, water resource regulatory mechanism – rights, access, use, allocation, protection and conflict management measures.

Consultation and validation of the model with stakeholders

The consultant having developed model alternatives, detailing how each works, what institutions are involved, roles of each stakeholder etc as required above, will then organise 4 No. (four) parish level community consultation meetings of approximately 100 persons each to discuss the draft model(s) with farmers at parish levels and capture the farmers’ inputs to the model improvement. The consultant will capture areas of concern from the farmers. The consultant needs to take note there eight parishes and therefore the consultant shall organize one meeting for every two parishes

It should be noted that the consultant shall in close coordination with the Local leaders (district, sub county and village council leaders) mobilize the farmers for the attendance and discussion of the management model at parish levels. Village council leaders need to participate in the parish level meetings.

The stakeholder engagements through the parish level community consultation meetings above are expected to stimulate agreement on common goals, performance targets, outcomes, mandates, strategy, actions, roles, responsibilities and obligations for delivery of irrigation services and regulation. The workshops will zoom in on the fee structure and the expected costs for the farmers. The Consultant will coordinate with the DLG and with the Extension service TA the organizations of these workshops. It is expected that the parish level community consultation meetings and engagements will be carried out to get farmers' views on the model to guide their subsequent endorsement of the model

The next stage for consultant is to present the draft model and the issues captured from the farmers to the National stakeholders who will include representatives from MWE, MAAIF, MoFPED, World Bank, Ministry of Trade and Cooperatives); regional stakeholders (MWE regional office); and Isingiro District Local Government (District and sub-counties) for approximately 50 Persons.

The consultants will then again organize another round of 4No. (Four) parish level community consultation meetings of approximately 100 persons at the parish level to discuss and harmonize the concerns /suggestions that rose at the national workshop

After the consultant has finalized compilation of comments and review of the model MWE and World bank will finally undertake the final review of the model for No objection to its implementation.

Important to note is that after every discussion of the model at each level, the consultant will make minutes and reports capturing the proceedings and issues raised and mitigations to guide the review of the model.

Task 2: Support the Establishment and Operationalisation and of the management structures

The consultant shall engage, mobilise the stakeholders in a participatory manner to achieve the establishment and operationalization of the approved scheme institutions as per approved management model. The institutions will need to be supported by the consultant to be legally registered. The support is in assisting them to come up with bylaws where applicable, constitutions and support them to register as required by the Ugandan laws. The establishment of these institutions should be gender sensitive ensuring at least one woman takes a key leadership position.

2.1 Development of systems and procedures

The Consultant will embark on development and translation of various systems and procedures, manuals and guidelines into Runyankole. The details of the material to be produced are given below. Please note that half of the copies of the materials will be produced in Runyankole, while the rest should be English:

- i. Human resources management and development manual (20 copies) -
- ii. Recruitment and performance appraisal systems and formats (20 copies)
- iii. Supervision and quality control manuals (50 copies)
- iv. Financial Management manual (50 copies)
- v. Audit manual (20 copies)
- vi. Procurement & disposal manual (30 copies)
- vii. Operation and Maintenance manual (100 copies)
- viii. User fees payment/collection system & guidelines (50 copies)
- ix. Water scheduling formats (50 copies)
- x. Development, printing off contract documents and agreements (20)

The consultant will organize workshops/meetings to discuss the drafts. One workshop at national level will be organized and facilitated for approximately 50 Persons, and 4 No. meetings at scheme level for the institutional leaders. After the above instruments have been adopted, the consultant shall print them and build capacities of the stakeholders during the capacity development phase. The days for such workshops will be determined by the consultant in the methodology based on the time the consultant would require to discuss such critical issues.

2.2 Development of ICT APP to Monitor Irrigation Services

The consultant shall identify appropriate APP or system (preferably open source), install it, test it, train irrigation management structure leaders how to use it to track functionality of the operational services such as payment of water user fees, detection of any water linkage in the irrigation network, identification and monitoring of any new grievances and information dissemination to key stakeholders on all operation and maintenance activities of the irrigation scheme. The ICT solutions need to include digital asset management and mapping systems, and establish farmer linkages to hydro-agricultural advisory informatics.

2.3 Support to the Procurement of the irrigation Service operating Firm

If it is agreed with the stakeholders to have a management firm, then the consultant will support the procurement of the irrigation management firm, specify the technical persons with their roles for Kabuyanda by MWE. The Consultant shall design contract specification, simplified bidding document, defining the service provider activities, outputs, performance indicators and other relevant contractual obligations including developing the irrigation service agreement. The consultant will demonstrate understanding in their proposal, of the key performance indicators for service-delivery, fee-structures and implications for operations and billings. The irrigation service agreement drawn by the consultant will be subjected to discussion and approval by the established institutions, MWE and World Bank. The parties in this agreement will be spelt out specifying their roles and responsibilities.

The Consultant could draw on the experience in Uganda for the procurement of such management firms for water supply over the past 20 years.

The consultant needs to rely on the Water Act (1997), in the course of the operationalisation of the model and in supporting the hiring of any firm or authority that will operate and maintain the irrigation infrastructure.

2.4 Conduct of Exchange Visit

The Consultant will organize one exchange Visit to bring key representatives of the stakeholders (MAAIF, MWE, LG and farmers' leaders for the numbers not exceeding 35 persons to visit irrigation schemes with a similar management model as the one adopted. This will allow the stakeholders to understand the challenges and opportunities that come with the management of such schemes using a similar model. This will be done before approval of the developed model.

The consultant will develop a concept note prior to the undertaking of the exchange visit that will be reviewed by the client and World Bank for its implementation. Please note that the funding of this activity is part of the client's funding as provided in the provisional sums.

Task 3: Capacity Development for Institutional Development

Capacity Development is critical since it imparts skills and equips the farmers, scheme institutions leadership core technical staff and other key stakeholders to enable the actors and to perform the stipulated functions for sustainable irrigation management. Capacity development will take account of institutional evolution, from start-up to streamlined and operational level. All training and capacity enhancement will be undertaken for the farmers leaders at the block and scheme level leadership; approximately Ten (10) meetings will be undertaken including training in ICT platform applications. Each meeting may approximately be of 70 persons.

Organizational and Institutional Capacity Development and Training

In developing the steps and process for capacity development the Consultant will focus on organizational and leadership strengthening on the following most critical areas among others:

- i) Stimulate farmers collective social action based on common/agreed goals, interests, incentives, shared values, personal commitment and positive attitudinal changes;
- ii) Engender participatory problem diagnosis/analysis, own solution finding/adoption, innovation, interactive learning and information gathering/exchange, adopting indigenous knowledge and sharing experiences;
- iii) Establish group cohesion, negotiation, teamwork, conflict resolution and consensus building;
- iv) Adopt confidence/trust based decision-making and ownership of farmer-based organizations and institutional systems
- v) Determine drivers for change; internal, external, local organisation, higher level institutions. Identify potential champions of change.
- vi) Define methods, procedures and tools
- vii) Carry out induction and orientation of key staff

- viii) Undertake human resource management, performance and skills enhancement and mentorship & training
- ix) Put in place Capacity Development strategy (50 Pcs) -20 copies in English and 30 translated in the local language)
- x) Undertake financial & audit training, coaching and mentorship
- xi) Enhance capacity of the operator on scheme operation and maintenance, enhance capacity of the scheme institutions in monitoring the operator's activities in areas of operation and maintenance
- xii) Undertake training of scheme institutions in procurement and disposal areas
- xiii) Undertake training in Monitoring and evaluation
- xiv) Farmers/scheme institutions capacity enhancement in understanding legal issues as contained in the legal/regulatory frameworks
- xv) Videos: On the implementation process, good practices and success stories or positive impacts (five copies)

The sections below expound on the needs of the critical manuals/training materials

a) Operation and Maintenance of Irrigation Infrastructure and Facilities:

The Consultant will provide support to staff and farmers in monitoring operation and maintenance of irrigation infrastructure and facilities. The Consultant will make recommendations for the organization, operationalization, and management of the infrastructure facilities. The operation and maintenance guidelines are closely linked to the water uses, the users and organizing a unit/ or management structures to operate, maintain and manage the irrigation schemes. The consultant will prepare manuals and training materials and undertake the training in operation and maintenance.

b) Administrative and Management Training:

Training and capacity development support will also focus on administration and management to improve governance and streamline irrigation scheme level operations. This is aimed at establishing clear and appropriate organizational management systems and procedures. This will lead to higher managerial effectiveness, clear linkages, adequate accountability and reporting both internal and external.

There will be limited conflict of roles between hired technical staff, private organisations staff, farmer organisations, technical committees and leaders. Regular performance appraisals for technical staff will be introduced through participatory development of performance indicators that are consistent with targets.

Emphasis will be made on the requirement to hire and retain technical human resource that meets the competence levels necessary to comply with performance expectations defined. In order to support implementation of conventional human resource planning and management, a human resource manual will be developed as part of the capacity development support. Participatory approaches to designing of management manuals will help transfer implementation and interpretation skills to the societies and their membership in addition to generating buy-in for the changes to take place. This will contribute to attraction of more adequate skills, improved management capacity and better facilitation of scheme staff resulting into high motivation and performance.

c) Regulatory Framework:

Training under this area will be undertaken at district local government level, private organisations and farmer leadership level with selected responsible officers of central

government ministries. The content will be designed to introduce service level contracting, specifically focusing on irrigation infrastructure management and maintenance contractual arrangements.

This will enable representatives of the key organizations and institutions to clearly understand and appreciate arrangements for management of hydraulic works and irrigation infrastructure and land as defined in the contractual protocols, including the mandates, roles and responsibilities. It will also cover the functions and obligations of farmer organisations, private organisations and the respective technical sub committees in order to guide the realignment of the institutional structures, which will subsequently be included in the bye-laws. This area of convergence institutional governance will need to be comprehensively addressed through training and handholding up to the first generation of reporting through practical guidance and report preparation.

d) Performance Evaluation and Functional Support

The Consultant will build capacity under this area as follows:

- i) Assist the implementing agency to start-up performance management system and evaluating the operationalization of the management model.
- ii) Establish effective determination of organisational and institutional development and performance indicators, including service delivery indicators.
- iii) Put in place control mechanism to deal with implementation challenges

The consultant is expected to undertake monitoring and evaluation through documentation of the process of implementation of the model and making necessary adjustment as required. Therefore, the Consultant shall develop a monitoring and evaluation mechanism for the implementation process based on indicators developed during the model development stage. The consultant shall draw lessons and document experiences and suggest improvements for effective management, operation and maintenance of Kabuyanda irrigation scheme.

The Consultant shall set-up systems for assessing the performance of leaders, technical staff and farmers in the execution of their functions, duties, roles and responsibilities and effectiveness of attainment of targets set. An assessment of the level of management of resources of the organization shall be done.

The Consultant shall test, correct and modify the reporting of performance and identify areas for improvement and the consultant shall give technical support.

e) *Financial Management and Business Planning:*

The Consultant shall respond to the needs for this purpose and also proposes sources of revenue and internal controls. Training will highlight advantages of retaining competent manpower with respect to specific tasks and linkages to financial management and accountability, with the broad objective of improving governance i.e., separation of financial management from leadership and the farmers. The Consultant shall develop Financial Management and Business Planning guidelines/manuals for the scheme organisations (50 copies)

The Consultant will train the farmers and the scheme management leadership on orientation and participation in higher level commercialization of irrigated agriculture produce/commodities.

The capacity enhancement is intended to ensure financial sustainability of the irrigation schemes, inculcating cost recovery practices, tariff setting and review mechanisms leading to levying of appropriate tariffs/user fees; in addition to instituting investment financing for major repairs and infrastructure renewal. The consultant shall train the staff, the leaders, farmers and key stakeholders in budgeting approaches (income/revenue and expenditure), business planning, costs recovery, tariff setting and progressive adjustment based on size of land holding per farming plot. The training phase will thus focus on justifying the proposals and generating buy-in.

f) Follow Up Farmers' Support:

After conducting the capacity development activities, the consultant is expected to identify gaps regarding technical and managerial issues and thereafter offer back up support to fill the gaps to ensure leaving behind a functional irrigation scheme management system. A functional management system means that what the management model proposes in terms of scheme institutions, operation and maintenance requirements, stakeholders' roles, are being effectively and efficiently implemented/ practised and the scheme can run sustainably with minimum support from the external source.

4.0 Duration of the assignment

The assignment shall have duration of 18 months.

5.0 Deliverables and Reporting

The assignment will be organised in terms of time, deliverables and reporting as follows;

5.1 Assignment Reporting and Coordination

The assignment will be coordinated and reported in the following manner;

The Ministry of Water and Environment through its Water for Production Department will coordinate and manage the assignment implementation will be represented by Project Coordinator.

All reports will be submitted to:

*Permanent Secretary
Ministry of Water and Environment
P. O. Box 20026
Kampala*

Attention:
*Component Coordinator – Irrigation Services
Irrigation for Climate Resilience Project.*

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 with a copy to the World Bank Task Team Leader for ICRP.

5.2 Assignment Deliverables and time

The assignment will be implemented and reported according to the set deliverables and implementation reports should bear implementation proof like photographs, attendance lists and or signed implementation forms signed by the respective Sub Counties.

The detailed schedule for the required reporting is contained in Table below.

ITEM	REPORT/DOCUMENT TITLE	TIMING AFTER COMMENCEMENT	CONTENT	NO. OF COPIES
A.1	Inception Report	Month 1	<p>a) The report shall outline the Consultant’s mobilization, the work plan, strategy, methodology, plan and timetable for the services, conduct field visits, incorporate field visit findings on gaps, opportunities and challenges plus recommendations in the inception report and comment on the TORs.</p> <p>b) The quality assurance plan shall include the following (i) A quality policy statement setting out the objectives of the plan and (ii) The personnel who will implement the plan, their responsibilities, deployments and authority.</p>	4 hard copies and an electronic copy on a memory stick o
A.2	Model development studies and analysis Report including the stakeholder mapping.	Month 3	Consisting of the comprehensive account of the key activities and model studies & research findings, field findings, model analysis and recommended model for Kabuyanda, endorsed minutes for the model workshop discussions at each level (Parish and national for each round) and also workshop reports, among others	6 hard copies and an electronic copy on a memory stick.
A.3	Irrigational model development Report	Month 6	Consisting of the comprehensive processes, stakeholder engagement discussions, recommendations, scheme organisation structures & onogram, roles and responsibilities of institutions/organisations, vertical and horizontal linkages, legal /regulatory / contractual obligations and implementations systems, frameworks, model costing, ensuring the full account	6 hard copies and an electronic copy on a memory stick

			of the key activities and outputs as per TORs.	
A.4	Scheme Institutions Establishment Report	Month 9	Consisting of the comprehensive account of the key activities and outputs done including among others scheme institutions establishment and operationalisation of the off-farm infrastructure management structures, conduct of farmers exchange visit and its report, manuals development, systems and procedures development, development of ICT tools to monitor irrigation services, procurement of the Irrigation Scheme Operator, development of Irrigation system operator's recruitment documents among others.	6 hard copies and an electronic copy on a memory stick
A.5	Capacity Development Report	Month 15	Consisting of the comprehensive account of the key activities and outputs done during capacity development phase including among others the stakeholder skill enlacement in scheme management and leadership, financial management, procurement, operation and management, monitoring and evaluation, regulation etc. as enshrined in the Capacity development deliverable, Organizational and Institutional Capacity Development and Training, Operation and Maintenance of Irrigation Infrastructure and Facilities, Administrative and Management Training, Regulatory Framework, Performance Evaluation and Functional Support, Business Planning and Follow Up Farmers' Support	6 hard copies and an electronic copy on a memory stick
A.6	Final and Farmers follow up support Report	Month 18	Consisting of the comprehensive account of the key activities, Out puts, findings recommendations from the commencement for each well specified deliverable by deliverable following all approved work plans. The final should include gaps identified and support offered to the farmers and scheme management. The proof of the efficient and functional system should be	6 hard copies and an electronic copy on a memory stick

			included. Photos arranged in each deliverable with captions to describe the activity on each photo. Lessons learnt and recommendations for further improvement can be included.	
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The Client shall review and provide comments on the reports within two weeks of submission and approval of the deliverable reports and work plans shall be approved by the client after the consultant has responded to the comments within two weeks of the reviewed report. The reviewed should be accompanied by the matrix showing the comments and consultant’s response indicating the pages and paragraphs for the reviews. The Consultant shall also prepare monthly reports after the inception stage to keep the MWE informed of the progress made, the challenges if any met and proposed solutions as well as risks and mitigation measures.

6.0 Assignment Implementation Modalities and facilitation

For ensuring organizational and Stakeholder wide appreciation and ownership of the proposed assignment, the consultant shall be required to organize coordination of workshops/activities for the national, district, regional stakeholders’ and farmers mobilization, sensitization, project awareness, training presentation of key reports after each project milestone to a representative group of stakeholders that is to be agreed with the client and as described in the TORs. The client has provided a provisional sum of USD 213513 and the Consultant is required to include the same in the financial proposal to meet costs of only holding national workshops, undertaking Exchange visits or any other emergency activity outside the proposed tasks. It should be noted that the consultant shall from time to time propose the workplan for the National workshops at the annual basis, broken into quarters with attendant activities and costs for the approval by the client for the activity implementation in the respective years of implementation. Similarly, the consultant shall organise the exchange visit activity, facilitate it with prior preparation of budgets for the approval by the client before implementation. The exchange visit will be undertaken in an irrigation scheme abroad in a country that has operational and functional model similar to the kind of model that will be proposed and adopted by the users, after approval by the client and World Bank. The country in which such a visit will be done will be determined during the approval process of the model.

The basis for the imbursements by the client to the consultant on provisional sums for workshops/exchange visits /emergencies shall only be output based as here below specified:

- i. National/regional and district workshops: The activity report will be prepared and submitted with signed attendance forms with telephone contacts and photos. In addition, there will be an activity implementation form/s which shall endorsed by the Ministry of Water and Environment staff.
- ii. Exchange Visits-: The activity report will be prepared and submitted with implementation forms endorsed by the Ministry as proof of undertaking such exchange visits plus photos and attendance lists will be the basis for the client to reimburse the consultant as per the concept note and budget approved by the client.

The National workshops will be organized and technically facilitated by the consultant based on the agreed work plan and methodology during the technical proposal and as reviewed during inception phase with the client and from time to time based on the reviews.

The consultant shall pre-finance all the workshops, exchange visit and any other proposed activity and will be re-imbursed accordingly as specified above during the deliverable certificate invoicing.

In addition to the provided provisional sum that is provided for the specific spending, the Consultant will be required to quote for the following; professional fees/man months and other attendant fees for parish level community consultation and scheme level meetings and mobilization, sensitisation, technical facilitation/ workshop/meetings preparation and presentations, field allowances of its staff, transport /training/ manual developments and processing, printing of reports and attendant documentation , studies, report writing, quality assurance, monitoring and evaluation, and other attendant firm costs like field offices, and development and dissemination of information, education and communication materials,; vehicles, Fuel, equipment and tools etc., as required to accomplish the assignment will be quoted by the consultant.

The client's experience during RAP implementation shows that communities need to be facilitated and or be reimbursed for their transport when they come for meetings and also items like food and or drinks may be provided. The consultant is therefore requested to quote for such facilitation for all community/scheme level consultation and or training meetings.

The consultant **should not** quote for the allowances and fuel for the client, district and central Government staff as all this will be handled by the client. The Consultant shall only be required to share the workplan with client, district and central Government staff in time to ensure their participation in the assignment activities where necessary.

7.0 Consultancy Technical and Team qualification requirements

7.1 Organisation experience and technical requirements

A competent Consultancy firm with the following professional qualifications is required:

- a. The Consultant Must demonstrate similar experience (Scope, nature and value) with in the last ten (10) years, with at least one verifiable assignment on a pressurized irrigation scheme (not less than 3000ha) in any of the following continents; Africa, Middle East, Latin America or Asia specific for the irrigation scheme model development, scheme institutional establishment and capacity enhancement for irrigated agriculture projects. This assignment should have been implemented in a developing country of similar economic and social conditions at a level of development similar to Uganda.
- b. Minimum of five years' experience in Managing, Mobilizing and engaging rural communities in Africa.
- c. The Consultant Must demonstrate experience in designing manuals, strategies, model developments, studies and systems for irrigated agriculture as envisaged in the terms of reference.
- d. The Consultant must submit firm's organogram to demonstrate technical and managerial capability.
- e. Presence of appropriate skills among staff in the areas of: (i) Irrigation model development (ii) Structure/ Organizational Development, (iii) Community Mobilization & Social development and (iv) Irrigation management.

7.2 Consultant's team qualification requirements

The Consultant will demonstrate availability a team of well qualified personnel/experts to undertake field activities. The Consultant shall present the staffing schedule in a manner that makes it clear as to which personnel will be involved in a specific activity. Key staff who score less than 75% during evaluation based on the criteria and sub-criteria in the RFP will be replaced at negotiations if the firm reaches that stage. The Consultant's team shall include the following key personnel:

Table 1: Key staff and expected man months

	Key staff	Number of consultants	No. of Staff Months
1	Team Leader/Project Manager	1	12
2	Irrigation management Specialist	1	12
2	Social Development Specialist	1	12
3	Assistant Community Development Officers	1	12
4	Agricultural Economist	1	8
5	ICT Specialist	1	4

	Key staff	Number of consultants	No. of Staff Months
6	Legal Expert	1	4
	Total staff months		64

7.3 Qualification and experience requirements of Key Staff

Position	Qualification and Experience
Team Leader/ Project Manager	Lead consultant of the following specifications; a University Bachelors and Master's Degree in any of the following; Sociology, Social Work and Social Administration, Development studies or other related humanity courses, irrigation engineering, agricultural engineering. A relevant working experience of minimum Ten (10) years in project management, specific experience for model development for a pressurised irrigation system and organisational experience in irrigation institutional development.
Social Development Specialist	Bachelor's degree and Post Graduate master qualification in Sociology, Social Work and Social Administration, Development Studies or population studies with suitable experience of seven (7) years in community development, capacity development community mobilization, and most importantly farmers' mobilisation for irrigation schemes. The candidate should be conversant with the Participatory Rural Appraisal procedures and methods. The understanding and fluency in speaking Runyankore Language understanding and having implemented activities of community mobilization & Social development assignments in the Western region of Uganda for a minimum of three years.

Position	Qualification and Experience
Legal Expert	<ul style="list-style-type: none"> • A Bachelors degree of Laws from the recognized University is required. • A Ugandan Diploma in Legal practice is required • A minimum of five (5) years' experience in legal Practice in Uganda; • Experience of supporting institutional development within the agricultural and Water Sectors in Uganda or elsewhere.
Information, Communication and Technology Specialist	<p>The consultant shall have the following competence and expertise:</p> <ul style="list-style-type: none"> • A Bachelor's degree in Information Technology • A Seven (7) years' hands-on experience in software ICT modelling and installation of ICT tools for Farmer groups base Administration and Information, Communication & Technology related activities.
Community Development officers	<p>Bachelor's degree in Social Sciences with suitable experience in community development and community mobilization with experience of three years. The cultural and Runyankore Language understanding of the intervention areas is critical requirement since all the work is community centred.</p>
Agricultural Economist	Qualification and experience

Position	Qualification and Experience
	Agricultural economist must have University Bachelors and Master's Degree in Agricultural economics. A relevant working experience of minimum Ten (10) years in Agricultural projects of specific experience in irrigation management model development, water fees determination and organizational experience in irrigation institutional development.
Irrigation management Specialist	Irrigation Water Management Expert should have a Bachelor degree and MSc in Civil Engineering/ Agricultural Engineering and have suitable experience in designing and implementing effective procedures and arrangements of irrigation water management, operation and maintenance procedures/guidelines for the irrigation schemes and at least one pressurized irrigation scheme of not less than 3000ha. Hands-on experience in supporting the development of Farmer management institutions is strongly preferred and with experience of not less than ten years.

Key Staff with a score below 75% shall be replaced at negotiations stage with more qualified personnel”

8.0 Key Stakeholders

The Consultant shall consider the following as the Key Stakeholders

1. Ministry of Water and Environment
2. Ministry Agriculture Animal Industries and Fisheries
3. MTIC
4. Ministry of Lands, Housing, and Urban Development
5. Ministry of Gender Labour and Social Development
6. Isingiro District Local Government

7. Sub County / Town Council level
 - i. Kabuyanda Sub County,
 - ii. Kabuyanda Town Council
 - iii. Kikagate Sub County
8. Parishes
9. Farming Households in 38 Villages
10. Individual Farmers
11. Land owners
12. CSOs/NGOs working in Isingiro District
13. Contractors and other project implementers

Data and Services from the Client

The Client will: -

- i) Assist the Consultant to make contacts with any relevant Government Institutions from whom information to enable execution of the assignment may be required.
- ii) Provide the available documents the client as listed below;
 1. Water for Production Capacity Building Strategy
 2. Water for production management strategy
 3. Irrigation Policy 2018
 4. Operation and maintenance Strategy and plan for sustainable management of Water for Production facilities 2020
 5. Water Policy 1995.
 6. MWE Gender mainstreaming strategy
 7. National Gender strategy
 8. Resettlement Action Plan
 9. Project Sectional Raps
 10. Irrigation Service Agreement for FIEFOC II schemes
 11. General MOU for FIEFOC II schemes
 12. Project feasibility reports
 13. Environment, Social Management Framework
 14. Resettlement Policy Framework
 15. Project Environment and Social Impact Assessment Report