

REPUBLIC OF RWANDA



**MINISTRY OF AGRICULTURE AND ANIMAL RESOURCES
RURAL COMMUNITY SUPPORT PROJECT (RCSP)
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SELECTION OF CONSULTANTS

TERMS OF REFERENCE

FOR

**THE SUPERVISION OF THE EXECUTION OF HYDRO-
AGRICULTURAL DEVELOPMENT WORKS FOR KANYONYOMBALI
MARSHLAND (110HA) LOCATED IN GATSIBO DISTRICT EASTERN
PROVINCE**

SEPTEMBER 2017

1. Background

The Government of Rwanda (GOR) is pursuing a comprehensive Poverty Reduction Program which includes implementation of various sustainable development projects.

The Rural Community Support Project (RCSP) is one of the development initiatives designed under the Ministry of Agriculture and Animal Resources (MINAGRI) funded by KOICA in order to tackle the issues related to food insecurity and rural communities' livelihoods income.

The project aims at revitalizing the rural economy and improving the quality of life of the rural poor through increased transfer of technical and financial resources for sustainable rural development. The emphasis of RCSP is on broadening and deepening the support provided to accelerate the pace of intensification and commercialization of agricultural production.

It is in this regard that the Project will invest in marshlands rehabilitation and development by constructing the irrigation infrastructures, canals and related structures on the selected sites.

For this purpose the project has been conducting technical design assessment for development of the irrigation system of Kanyonyomba II marshland by endowing it with the long lasting hydraulic structures and an improved irrigation and drainage networks.

The execution works are expected to start in January 2018.

2. Objective(s) of the Assignment

The present terms of reference are intended to do services for Supervision of the execution of hydro-agricultural development works for Kanyonyomba II marshland (110ha).

Kanyonyomba II marshland covers parts of Remera, Muhura, Murambi, Kiziguro and Rugarama Sectors in Gatsibo District. The Downstream part of marshland is already developed on an area of 400 ha. The supply of water to irrigate both schemes comes from upstream catchment area of 60kmsq for KanyonyombaII and 74kmsq for Kanyonyomba I. The command area of marshland to be developed is 110 ha but there are neither formal irrigation weirs nor an organized irrigation network.

It is planned to construct 5 diversion weirs with periphery canals, secondary canal, tertiary canal and/ or drainage canal. There will be creation and rehabilitation of service road of 7.2 km in total running left side from bamboo plantation near proposed second weir up to Road crossing Kanyonyomba II marshland near the Dam.

3. Scope and duration of Services

It is required to engage a National Consultant Firm to provide technical services and input into the supervision of the Kanyonyomba II marshland development works.

The supervision service includes the contractor's contract management and technical administration of works, the quantity and quality control and preparation of provisional reception of works. The services are expected to take a period of 6 months as indicated below:

3.1. General contract administration

The duties of the Consultant related to General Contract Administration shall include, but not limited to, the following:

- a) Issuance of written Order to Commence
- b) Approval of the contractor's authorized representative and key personnel on site and monitoring of their performance
- c) Review, for conformance with the specifications, the Contractors' proposed site layout, camp facilities, construction roads, river crossing, water supply and sewage systems and miscellaneous site facilities and temporary works.
- d) Review and approve the manufacturer's designs, specifications, fabrication and shop drawings, civil design loads and analysis...etc for all mechanical works
- e) Monitoring of importation requests, by the Contractors, against the requirements of the works and approval/certification of justified requests.
- f) Critical review, corrections and approval of Method Statements to be submitted by the Contractor for the construction activities.
- g) Check and establish that the Contractor mobilizes and supplies to the site, all materials, equipment and machinery that have been committed in its bid, and ensure that all such items remain on site until their release has been authorized. Ensure that the Contractor properly records all equipment, materials and labour which have been supplied under the Works Contract, and keep and regularly update lists of the Contractor's equipment (and its condition) and personnel on site.
- h) Handle day to day work at the site
- i) Chair the weekly site meetings, write reports and submit them to the contracting authority

- j) Examination of the Contractors' Monthly Statements and preparation and issuance of Payment Certificates.
- k) Prepare monthly and periodic reports for all activities
- l) Prepare eventual amendments and submit them to the contracting authority;
- m) Suggest the halting of works in case of serious malfunctions from the contractor's side;
- n) Ensure a good collaboration among different stakeholders;
- o) Work as the mediator (in case of disagreement) between the contractor and the contracting authorities;
- p) Upon completion of the works, carry out the necessary inspection, specify and supervise any remedial works to be carried out and, upon completion of remedial works, propose to RCSP a date for a joint inspection, prior to the issuance of the Certificate of Completion/ Taking-Over Certificate. Issuance of the Taking-Over Certificate upon satisfactory completion of all tests and taking-over of the works by RCSP Project.
- q) Approval of the removal of Contractors' Equipment, Temporary Works and Materials;
- r) Preparation of a limited number of general record drawings for use in the Project Completion Report to supplement the As-built drawings, operation and maintenance manual prepared by the Contractor and approved by the Engineer.

3.2. Supervision of Works

The Consultant shall supervise the construction works, erection and commissioning activities to ensure compliance with the contract drawings, specifications and recognized international standards. This shall include, but not be limited to, the following:

- a) Review and check the completeness of the designs, drawings, specifications, Bill of Quantities, construction supervision manual and operation and maintenance manual,
- b) Checking the Contractor's surveys and setting out.
- c) Inspection of construction activities, site installations and infrastructure, management of temporary material dumps, spoil dumps, aggregate and concrete production, etc.
- d) Evaluate and determine acceptability of substitute or equal materials and equipments proposed by the Contractor.
- e) Maintaining record of visits to site and meetings held; details of equipment standing or lost time; and any other matters affecting the progress or cost of the works.

- f) Ensure that the contractor is respecting the engineering construction standards, working condition and execution techniques provided in the contract,
- g) Inform (as soon as possible) the contracting authority about any malfunctions that may affect the quality of work;
- h) Proceed with sampling, analysis and testing of materials
- i) Provide a technical support to the contractor whenever required
- j) Make sure that the contractor is in line with the time schedule (execution period)
- k) Monitor and ensure the quality of materials and equipments brought by the contractor;
- l) Advise the contracting authority in respect to necessary modifications to designs, drawings, technical specifications or methods of construction;
- m) Accept and approve the executed quantities before billing by the contractor;
- n) Repeat the surveying of structures in order to be sure of the executed quantities in case of billing;
- o) Request (to the contracting authority) for payment of quantities already verified and approved;
- p) Proceed with irrigation testing and ensure that water is well flowing and well distributed in the whole irrigation network
- q) Verify and approve the AS BUILT drawings;
- r) Ensure a proper reconditioning the zones of borrow materials in respect to environment requirements.
- s) Provide technical manuals on water management and maintenance works including weekly irrigation calendar and maintenance and costing.
- t) Ensure health and safety regulations are complied with on site.

4. Team Composition & Qualification Requirements for the Key Experts and consultant firm

To undertake the above scope of work, the consulting company should have the following qualifications, which are to be clearly documented in the proposal:

- i) Be an established specialist company working on the science of irrigation systems including design studies and/or construction supervision of irrigation development works. The consultant's experience shall have been gained over a minimum of ten years and work on at least six similar projects.

ii) The Consultant shall name individuals to participate in specified roles within the project team and provide an assurance that all members of the proposed team will be made available as specified in the proposal.

The key personnel to be assigned to the site, but not limited to the Consultant, must have the following minimal qualifications:

Engineer (Team Leader)

B.Sc. minimum with a degree in Civil engineering, Irrigation Engineer, Rural engineering or Agriculture Engineering. Must have 10 years of general experience in construction supervision works with 6 specific references leading supervision of hydro-agricultural construction works (gravity irrigation project). The Engineer is the head of the supervising team and bears full responsibility for the coordination of the team, the monitoring and keeping the construction time schedule, the construction of the works according to the relevant specifications and standards and the communication with the Client. The Engineer will be at the site three (3) days a week or 72 man-days on site for the whole period of works, including the provisional hand over.

Two Site Technicians.

Diploma in Civil Engineering or Agriculture Engineering, with a general experience of 7 years minimum in construction works with 5 specific references in supervision of hydro-agricultural construction works. The Site Technician will be assigned on site for daily supervision of all construction works in terms of quality and quantity. He shall be present at the site for the whole construction period equivalent to:

- a) For the technician 1 (for all diversion weirs & earthworks of the river bed): 6 man-months (6x25days).
- b) For the technician 1 (for marshland development): 6man-months (6x25days).

The total time input required for the whole service is 10man-months.

5. Reporting Requirements and Time Schedule for Deliverables

5.1. All the reports, documentations, calculations and drawings produced by the Consulting Engineer as part of the Services under this agreement are the sole property of the Client and the Consulting Engineer shall not reproduce it or give to any third party without the consent and written approval of the Client.

5.2. In performing his duties under this service the Consulting Engineer shall submit to the Client the following reports (and others as may be required during the course of the Project).

- i) Two (2) hard copies and a soft copy of Preliminary Report, it will include but not limited to the following:
 - a) Approval of the contractor's authorized representative and key personnel on site and monitoring of their performance
 - b) Review, for conformance with the specifications, the Contractors' proposed site layout, camp facilities, construction roads, river crossing, water supply and sewage systems and miscellaneous site facilities and temporary works.
 - c) Review schedule of site mobilizations and overall implementation plan for the contract and set the targets and indicators in the right way of achieving planned project executions period.

This report will be submitted at the end of the month after commencement of the activities at the site.

- ii) Two (2) hard copies and a soft copy of Monthly Progress Reports: The reports will includes completed activities in percentages with respects to estimates in BoQ, monthly contractors 'execution plans, financial statement, time contract management, modifications, challenges in implementing the contract or decisions made or technical proposals raised during weekly technical meetings by the contractor, etc. The submission of monthly reports should be on the third day of the 1st week of the next month.
- iii) Three (3) hard copies and a soft copy of Final Completion Report which, based on approved as-built drawings, describes the executed works and explain the operation of the system.
- iv) Three (3) hard copies and a soft copy of Technical manuals on water management and maintenance works including weekly irrigation calendar and maintenance and costing.

5.3. Client shall provide written consolidated comments and/or approval within 1 week upon submission of the monthly progress reports and two weeks upon submission of the final completion report. If no written response is received from the Client concerning unacceptability of the report within the periods mentioned above from the submission date, the submitted report shall be deemed to have been accepted by the Client.

6. Client's Input and Counterpart Personnel

- a) All Relevant studies & design reports, drawings, specifications, bill of quantities, construction contract documents and other documents related to the project.
- b) On behalf of the Ministry of Agriculture and Animal Resources (MINAGRI), RCSP will be the Executing Agency for the Project.
- c) The consulting company will ensure that all norms and standards are well respected as per design and where defaults found make necessary improvement of the design.