

TERMS OF REFERENCE FOR REGIONAL EXPERT (Irrigation/Water Management Engineer)

Remote Rural Communities Development Project (RRCDP) Ministry of Agriculture & Forests, Thimphu

Background

The Royal Government of Bhutan (RGoB) through the Ministry of Agriculture & Forests (MoAF) is implementing World Bank funded multi-sector Remote Rural Communities Development Project (RRCDP). The investment program, aims to increase agriculture productivity and access to community assets in remote rural areas by improving access to markets, irrigation, agricultural technologies and community infrastructure. The project consists of three main components of which the Irrigation development is one of the sub-components. This sub-component will finance rehabilitation of existing irrigation channels covering command area of 984 ha and development of high efficiency irrigation system covering about 60 ha. The project will also support the installation of two storage structures in each district, where feasible. High efficiency irrigation development will include pilots to test new technologies such as gravity-fed low pressure sprinkler, micro-jets, and drip systems. Small perennial streams will be tapped and water will be conveyed under gravity through pipes to provide irrigation through more efficient irrigation systems. The location of water storage structures has to be carefully selected to avoid excessive floods or sediment into the reservoirs. The engineering capacity within the Engineering Division of the Department of Agriculture as well as at the district level is not adequate to design the more complicated structures such as the larger abstraction works and the storage structures. During the first few years of project implementation, the project will therefore need intermittent support of an experienced Water Management or irrigation engineer.

In this context, the Project Management Unit (PMU), RRCDP is looking for a Regional Expert (Irrigation/Water Management Engineer) to provide technical support and guidance to the engineers of Engineering Division under Department of Agriculture and project districts who are involved in implementing aforementioned irrigation activities.

Objectives

The main objective of the Regional Expert's (Irrigation/Water Management Engineer) assignment is to provide technical backstopping and to facilitate and assist the engineers of Engineering Division (ED) and project districts to implement irrigation activities under the project. Broadly, he/she will be responsible together with the Project Management Team (PMT)/ED, in successful implementation of the irrigation infrastructure related activities. His/her main input will be in conducting feasibility study, carrying out detail survey and design, and cost estimation for the above mentioned high efficiency new irrigation systems and water storage reservoirs.

Scope of Services

The Regional Expert will be working with the PMT and Engineering Division under the Department of Agriculture (DoA). The Regional Expert will be closely involved in surveying, designing, and assessment works during the initial project period. He/she will be working with the Project Director. The Regional Expert will assist/advise the Project Management Unit (PMU) in supporting the districts in the implementation of irrigation sub-components.

The Regional expert's main responsibilities are:

- Undertake feasibility study including preliminary investigations, data collection and site identification for potential irrigation development under the project especially;
 - High efficiency irrigation system (Sprinkler system) in Chukha and Samtse districts.
 - 4 nos. of water storage structures/reservoirs in four projects districts, where feasible.
- Design and prepare drawings of above-mentioned irrigation systems including preparation of cost estimates.
- Assess the irrigation performance of the selected sites.
- Assume responsibility for finalizing and submitting timely based reports to the PMU, RRCDP and ED, DoA.
- Develop an operations and maintenance plan

Knowledge management/professional development

The Regional Expert will contribute in a demonstrable manner to the development of knowledge, approaches, methods and techniques. He/she must actively contribute to sharing his/her knowledge with partner/clients, colleagues with the engineers in the Department of Agriculture and the Districts.

Process/relations

The Regional Expert will maintain partner relations based on Terms of References agreed with the partner organisations. He/she must manage own activities based on a work plan and works independently with minimum supervision. He/she must balance partner expectations, colleagues' needs, innovation (external & internal) and efficiency considerations.

Contacts, partners

- Engineering Division, Department of Agriculture (DoA), Ministry of Agriculture and Forest (MoAF)
- Project Management Unit, PPD, MoAF.
- District Engineers, District Agriculture Officers, Site Engineers, Agriculture Extension staff

Requirements

1. Qualifications:

The ideal candidate must meet the following requirements:-

- Hold at least MSc Post Graduate qualification with specialization in Irrigation/Urban Water Supply/Water Resources/Civil Engineering

2. Experience:

- At least 10 years' of professional experience in the field of irrigation development.
- The expert must have proven track record of successful implementation of irrigation projects in the region. Implementation of irrigation projects in hilly or mountainous region similar to Bhutan will be a distinct advantage
- The expert should have experience in survey and design, quality control, construction management and ability to train other persons.
- Experience of managing projects involving studies for irrigation development, design of small scale gravity works, drip & sprinkler works and water storage structure/reservoir.
- Experience of managing a small team to undertake studies and design works will be essential.
- Experience of working closely with counterparts and providing training/capacity building.

3. Other requirements:

- Survey and design knowledge using relevant computer aided software.
- Knowledge and experience in workshop facilitation, training, presentation and participatory techniques.
- Experience with writing of strategies, reports and assessments.
- Literate in computer applications.
- The expert is expected to report in English and thus will require fluency in this language.
- Posses the ability and commitment to work and give results with minimum supervision.
- Ability to work under pressure and to coordinate and link with multi-disciplinary experts; and willingness to travel frequently to project sites.
- Must be willing to travel extensively in remote areas.

Skills Transfer

The expert will be required to work with junior professional counterparts to whom he will transfer skills and knowledge.

Reporting

The Regional Expert will report to the Project Director and the Component Managers who will be responsible and accountable for the right use and delivery of the outputs. He/she will work as a team member with the Project Management Team, Dzongkhag Engineers, Dzongkhag Agriculture Officers, geog RNR extension officials and local leaders who will assists him/her in coordination of work within the dzongkhag. He/she will report from time to time on progress of the work and on any other issues during the course of implementation.

Logistics

The Regional Expert will be provided office space under Engineering Division, DoA, Thimphu. The DE/DAO and geog extension agents will help with logistics and office space when he/she is working in the geogs and dzongkhags. The Regional Expert shall have to make his/her own arrangement for any transportation and communication facilities required.

Work Station

Thimphu, Chukha, Dagana, Haq, Samtse, Trongsa and Wangdue Districts but will require extensive travel to remote areas of the identified geogs/chiwogs.

Work Duration

The duration of the employment is 5 months at a stretch from the date of appointment with a possibility of extension, subject to review of performance.

Outputs/Deliverables

The following table lists the deliverables against required timeframes.

Sl. No.	Activity	Duration (in Months)				
		1st	2nd	3rd	4th	5th
1	Survey, Design and Cost estimate of Sprinkler System in 2 sites, where feasible	X	X			
2	Feasibility studies, survey, design and cost estimate of 4 nos. of water storage structures			X	X	X

Remuneration

The client will pay the Regional Expert a negotiated contract amount in US Dollars commensurate with experience.

The interested qualified candidates must submit the following documents to the Project Director, Remote Rural Communities Development Project (RRCDP), Policy & Planning Division, Ministry of Agriculture & Forests, Thimphu. The documents must be submitted in a clearly labelled Envelope “**Expression of Interest for the Regional Expert - Water Management/Irrigation Engineer**” not later than 1230 hours, on 11 April, 2014, to the address mentioned above.

1. Detailed CV
2. Copies of Academic Certificates
3. Motivation letter
4. Reference/Support documents.
5. Medical certificate certifying fitness to take up this assignment

Note:

Only shortlisted candidates will be contacted for interviews.