

Call for Consultants
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Terms of Reference for Rope and Washer Installation Consultant

Project Title:

“Supporting the transition from humanitarian crisis through recovery to sustainable economic development in Warrap State, South Sudan”

Period: 30 days between March 28th March to 5th May, 2017. This includes 5 days for developing the guideline and operation manual, 25 days of on-site work and report writing

Responsible: Islamic Relief South Sudan (IRSS)

Project Overview

The goal of the project is to reduce hunger, promote sustainable food production and livelihoods and build the long-term resilience of approximately 6,000 highly vulnerable households in Tonj North County, Warrap State, South Sudan by the end of March 2018. This goal will be achieved through improvement of nutrition, improving **agricultural productivity, improved incomes, better water quality, access to financial services and new markets, and better resilience to disasters and other risks.** The project follows an inter-agency rapid needs assessment conducted in March 2014 and a further assessment in July 2014 by Islamic Relief South Sudan (IRSS), which covered Tonj North County. This assessment was subsequently updated in December 2014 by a joint HelpAge/IRSS in-depth baseline and assessment update across the nine payams of Tonj North.

The focus of this programme is on 3 of the 9 payams in Tonj North (Awul, Rualbet and Kirrik). These three payams were identified as having an exceptional need for this programme.

Warrap state traditional livelihood systems are rooted in the agriculture sector, employing a mix of livestock and crop production, fishing, wild food collection and trade. With about 80 percent of the population relying on agricultural production to meet their food and income needs, this project that targets Warrap State, Tonj North County, Payams of Awul, Rualbet and Kirrik; 20 Bomas (villages) is critical in contribution towards the reduction of hunger and poverty through promoting sustainable food production and alternative livelihoods for 6.000 highly vulnerable households. In Warrap State, the livestock subsector contributes significantly to meeting the food and income needs of agro pastoralists' households, directly – through the consumption of meat, milk and other products – and indirectly – by exchanging animals or animal products for cereals or cash, which is used to buy cereals and meet other household needs. The potential of the subsector is constrained by livestock disease outbreaks; low productivity exacerbated by chronic droughts and insecurity; a lack of adequate marketing infrastructure; and poorly organized and informed herders and traders.

Warrap state has remained calm despite cases of conflict and tension experienced in the neighboring states of Jonglei, Upper Nile and Unity. Though there are regular clashes between villages about cattle raids, the frequency of clashes decreased recently. The

conflict in Unity has led to an influx of approx. 1.000 IDPs into Warrap, where the IDPs and the local population compete for the already scarce resources. According to OCHA-classification, Warrap is a “stressed state”. Further, the region has experienced heavy flooding in two consecutive years which caused widespread destruction of livelihood sources as well as communal support structures. Warrap state is composed of six counties; the project will be implemented in Tonj North County.

The Rope and Washer Irrigation Technology

Islamic Relief South Sudan (IRSS) in partnership with HelpAge International with funding from BMZ implements a development and recovery project in Warrap, Tonj-North South Sudan. Under the partnership agreement, IRSS implements Water, Sanitation and Hygiene (WASH) activities, Agriculture and the Group Savings and Loans Associations (GSLA) while HelpAge International implements components on Nutrition and DRR. Towards enhanced food security through innovative use of the Rope and Washer, IR expects to have groups and household targeted harvest water through constructed water pans and later utilize the water through use and adoption of Rope and Washer technology.

A rope and washer pump (or simply a rope pump) is a kind of pump where a loose hanging rope is lowered down into a well or a pan and drawn up through a long pipe with the bottom immersed in water. On the rope, round disks or knots matching the diameter of the pipe are attached which pull the water to the surface. The main or most visible component is a continuous piece of rope, in which the rope is integral in raising water from a well or a pan. Rope pumps are often used in areas with high levels of poverty, the most common design of which uses PVC pipe and a rope with flexible or rigid valves. Rope pumps are cheap to build and easy to maintain. Its made of the locally available materials.

Consultancy Objective

By the end of the consultancy assignment, the consultant/or the expert engineer is expected to have achieved the following objectives.

- I. Setting, design and construction of earth/water ponds
- II. Installation of rope and washer on the water pond
- III. Establishing a complete irrigation set-up powered by the rope and Washer

ACTIVITIES PRIOR TO TRAVEL:

1. Design an engineering lay-out of ponds fitted with rope and washer
2. Develop an installation plan of the rope and washer indicating its functionalities.
3. Develop training plan on the use, operation and maintenance of rope and washer. The training plan should cover 3 days and describe each session/activity to be conducted, training method, time and material required for each session, and including development of handouts on operation and maintenance.

Scope of Work

Under the assignment of Earth Dam construction and installation of rope and washer, the consultant engineer is expected to do the following set of activities to achieve the above objectives

- **Task 1:** The consultant will carry out surveys to determine the design of all earth dams, the layout of the site, elevations, the area of coverage, the locations of intake points and spillways.
- **Key output include:** Engineering drawings for all the earth dams with all its components and consequently the design drawings the rope pumps for each dam.
- **Task 2:** From the engineering drawings, the bill of quantities will be prepared to determine all the required materials and resources. The rope and washer pumps will

be incorporated into the dams and water will be pumped to the preferred location. This system is environmental friendly and most components are locally available. The consultant will supervise and advise on the installation process.

- **Key output:**

A complete system of the rope and washer pump and the dams

- **Task 3:**

- Excavation of the earth dams, compaction of embankments and assembly of the rope and washer pumps complete with irrigation kit

- **Key output:**

Completed earth dams and the rope and washer pumps

Preparations and Logistic Support

IRSS will make an information package comprising all relevant materials related to the project available prior to the start of the assignment. IRSS will oversee the implementation and construction of the Rope and Washer Irrigation Technology. The travel and other related costs will be provided by the BMZ project.

Outputs and Deliverables

The consultant should have constructed and installed 20 rope and washer pumps serving 500 people (5 per household) or a group of farmers depending on the set up. Final approval will be done by IRSS after assessing functional rope and washer pumps. The consultant is also expected to submit an inception report, a mid-way status report and a final implementation report. The final implementation report should contain or incorporate photographs of each rope and washer pump in the appropriate sections of the report.

Application Process and Timeline

Only digital applications will be accepted. Please email the following materials to IRSS.Tender@islamic-relief.or.ke

- A. Expression of interest, with a maximum length of 2 pages, including but not limited to:
 - i) A technical proposal illustrating understanding of the ToR and task to be accomplished
 - ii) A draft workplan for entire consultancy exercise (including logistics required)
 - iii) A financial proposal for the entire consultancy.
- B. CV of the consultant
- C. A relevant piece of work recently undertaken in South Sudan or any other country within the East Africa Region

Tax Liability

Settlement of any tax liability arising from this agreement will remain the responsibility of the consultant.

Deadline for submission of EoI and Interpretation of ToR: 28th of February, 2017