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## **TENDER DOCUMENT FOR UPGRADING 3 HAND PUMPS TO SOLARIZED WATER YARDS IN KAPOETA IRSS-KP-09/02-24**

### **BACKGROUND/INTRODUCTION**

Islamic Relief is an independent humanitarian and development UK-based organization, with an active presence in over 40 countries across the globe, we strive to make the world a better and fairer place for people still living in poverty. Islamic relief began its humanitarian operation in South Sudan in 2004 focusing on providing lifesaving aid and implementing developmental Programmes to support people affected by the flood, drought, and Conflict establishing three sub-offices in Narus (Kapoeta East), Wau, Warrap. A satellite office in Yei and the Main office in Juba.

#### **Our vision:**

Inspired by our Islamic faith and guided by our values, we envisage a caring world where communities are empowered, social obligations are fulfilled and people respond as one to the suffering of others.

#### **Our mission:**

Exemplifying our Islamic values, we will mobilize resources, build partnerships, and develop local capacity, as we work to:

Enable communities to mitigate the effect of disasters, prepare for their occurrence and respond by providing relief, protection and recovery.

Promote integrated development and environmental custodianship with a focus on sustainable livelihoods.

Support the marginalized and vulnerable to voice their needs and address root causes of poverty.

We allocate these resources regardless of race, political affiliation, gender or belief, and without expecting anything in return.

## **INTRODUCTION**

### **1. Background**

Building **Resilience and Adaptation to Climate Change (BREAC)** is an IRW project funded by IRUSA that aims to reduce vulnerability among smallholder farmers, pastoralists, youth, and internally displaced persons.

In south Sudan, with outcome 2 of this project; increased access to adequate water for domestic and livestock consumption through improvement of water infrastructure, WASH sector is planning to execute drilling of 5 boreholes in Kapoeta as stipulated in the first output of this outcome.

2. Therefore, with this ToR, IRSS is sourcing for a highly experience and competent borehole drilling company with experienced hydrologist to carry out the drilling activities in Kapoeta East (Eastern Equatoria State) and North Counties (Warrap State) in the selected Payams.

**3. Scope of Work:**

The drilling work is expected to be implemented in targeted bomas of County as presented below;

Islamic Relief East Africa region proposes a 40-months climate adaptation and resilience-building project targeting Somalia, Ethiopia, Kenya, Sudan, and South Sudan. The main goal is to reduce vulnerability to climate shocks among smallholder farmers, pastoralists, unemployed youth, and Internally Displaced Persons in the East Africa Region.

In South Sudan the project's development impact will be realized through the efficient application of following key technical elements:

- Increase access to potable and sufficient water for human and livestock consumption and for small-scale irrigation;
- Improve agricultural and livestock productivity through improved access to support extension services and climate-smart agricultural practices for optimal food production;
- Increase income and asset growth for unemployed urban, peri-urban, and IDP youths.
- Strengthened community disaster risk reduction capacity (CMDRRs linked with Crises Modifier for response).
- Improved IR institutional capacity on climate resilience programming through action research;

Under the WASH outcome, the project proposed to upgrade 6 hand pumps to solarised water system in Warrap and Kapoeta East to provide sufficient water for domestic and livestock consumption.

The need to upgrade the existing hand pumps to solarized system came out during IRSS and county water department joint assessment held in 2023 December where needs of communities and institutions that are facing access to clean and safe water were mapped and earmarked to be supported with clean water supply. Furthermore, the CRA findings also highlights water supply as a core priority need in the RRAP. The lack of access to safe water negatively impacted in the lives of communities that were assessed. For instance, cases of diarrhoea are severe, skin related sicknesses are common and UTIs are on high rate among the population. Therefore, it is incumbent upon this basis that, this water infrastructural development is vital for communities to have portable water for domestic use and livestock consumption. The list of targeted locations are highlighted in the below section.

The construction of the solarized water supply schemes is to increase access to clean and safe water for the community to improve their health living conditions, reduce vulnerability for women and girls and increase productivity.

**Result/Outcome:** Improved access to potable and sufficient water for human, livestock consumption, and small-scale irrigation.

**Output:** 11250 individuals as per sphere standard will benefit from the water sources.

Because of this intervention, cases of waterborne diseases are anticipated to reduce and improve health conditions of the benefiting population.

The water yard upgrading will be undertaken in Kapoeta East county. As highlighted in the BoQ, the first step to be done prior to the actual work is consultation with the community, field assessment for the high yielding Hand pump including the population density of the area together with the county WASH department. The Terms of Reference/BoQ developed by IRWSS and hereafter, competitive tender process initiated to select an experienced drilling company to undertake the upgrading of the hand pumps to a solarized water yards to serve larger population. Thereafter completing the construction of the water yards, 2 cattle troughs will be constructed per water yard to supply water for the livestock.

### **Proposed sites/ distance/population size/GPS coordinate**

Kapoeta East Borehole locations		(village, boma & Payam - distance)	Northing	Easting
<b>Note: All the locations are accessible</b>	1	Borehole at Lopua PHCU	TBD	TBD
	2	Borehole at Lolim	TBD	TBD
	3	Borehole near Kapoeta East County Headquarter	TBD	TBD

All tenders are required to be submitted before **Wednesday 02th October 2024, 4.00 pm Local time** pursuant to the attached guidelines for submitting a quotation and be returned to; **HAND DELIVERY TO IRSS TENDER BOX** Hai Cinema, 2nd class, Plot no 52, Block B-XVI, South Sudan upon registration on the bid receipt form.

For any issues relating to the tender or its contents please email directly to; [IRSS.Tender@islamic-relief.com.ss](mailto:IRSS.Tender@islamic-relief.com.ss)

**All quotation providers are requested to fill in Appendix 1 and 2 below when submitting their proposal to IRSS**  
**Bill of quantities for drilling of 5 borehole**

#### **OT 1: BILL OF QUANTITY FOR UPGRADING 3 HAND PUMPS TO SOLARIZED WATER YARD**

**Note: This BoQ represents one water yard therefore multiply the subtotal by three.**

Ref Number	Item description	Quantity	Unit	Unit cost - USD	Amount - USD
<b>Item (1) Water supply system development</b>					
01	Mobilization: allow for the cost of transporting all equipment, and personnel to site and demobilisation at completion of contract.	01	Job		
02	Site survey, preparation and set-ups.	01	Job		
03	Allow for Disassembly of the existing hand pump, thereafter, carry out pump testing	01	Job		

04	Allow for reinstalling back of the hand pump for temporary use before the submersible pump is installed.	01	Job		
05	Overhaul the hand pump, thereafter, install the submersible pump, solar hand pump cylinder using 1 1/4" G.I.pipes riser mains to depth of 60.0m (20 pipes and connecting rods)	01	Job		
06	Provide but 1 1/4" G.I.pipes complete with connecting rods	20	Pieces		
07	Ditto but special hand pump water tank assembly with dual out lets	01	Piece		
08	Ditto but special solar hand pump stainless steel cylinder.	01	Piece		
09	Ditto but head assembly Indian MK II	01	Piece		
<b>Pumping test</b>					
10	Mobilize, pumping test for step draw down and constant discharge test, including installation removal of pumping test equipment and water level observation, for not less than 6 hours, ensure 80% well recovery is achieved at end of the exercise, the pumping test aims at establishing the recharge capacity of the well and the dynamic water level, crucial for designing the pump and pumping flow rate.	01	job		
<b>Solar and pump items</b>					
11	Supply and install solar powered submersible pump ( <b>GRANDFOS</b> ). SQF 5-70 Complete with 1 1/5" Raiser pipings and all accessories -	01	Set		
12	Supply and install 4mm 2-3	80	Meters		

	core submersible drop cable, complete with water proof couplings.				
13	Supply and install 4mm 2-3 core underground cable, in a PVC conduit provision for crossing roads.	20	Meters		
14	Supply and install NN-240w Polycrystalline photo voltaic solar modules and all necessary accessories	14	No		
15	CIU-903 interface unit for SQFlex controller	01	No		
	Cable splicing kits and insulation tape(cello)	01	No		

### TANK TOWER

16	<p>Fabricate 8m tower</p> <ul style="list-style-type: none"> <li>-150mmx150mmx10mm I Section columns to be on 400mmx400mmx10mm gusset plates complete with 16mm dis holes and stiffeners</li> <li>- 80mmx80mmx6mm Angle iron bracings with 16mm dia holes for allowable connections</li> <li>- 250x250x8mm Connectors with 16mm dia holes for connections</li> <li>- 400mmx120mmx8mm connectors with 16mm holes for allowable connections.</li> <li>- 250x120x8mm bracings with 16mm dia holes</li> <li>- 150mmx150mmx10mm I section top beams</li> <li>- Access ladder 40mmx40mmx2mm</li> </ul> <p>- Base plate 25mm thick, 06 No</p> <p>- Steel cage, 01 No.</p>	01	set		
	<b>Foundation works</b>				

17	-Excavation for foundation foot pads footings, Wall footings and shallow excavations for slab area.	M3	15		
18	- C 30 reinforced concrete foundation pads 150x150x60cm with 6 dia 12mm bars and 9mm stirrups @20cm. Min concrete cover is 5cm. - C 30 Reinforced short columns 50x50x150cm with 8mm dia12mm bars and 6mm stirrups c/c 20cm including 16mm anchor Bolts, nuts and washers. Min concrete cove is 4cm	M3	5.2		
19	- C30 Reinforced concrete grade beam 4.5m.x3.5m with 6 dia 12mm bars and 9mm stirrups c/c 20cm concrete cover is 5cm -Back fill foundation area with watered compacted quality marram	M3	11		
<b>Steel tank 36,000 liters</b>					
20	Supply and install in place, stainless steel tank 36m3 liters, complete with Floater valve and water level sensor, Roof with access walk way well painted.	01	Set		
<b>Plumbing items</b>					
21	In-let from pump to tank: Supply and install 1 1/5" G.I.pipes with anti-rust proof or ( HDPE pipes could be used) all Accessories included	80	Meter		
22	In-let from well head: 11/5" one-way valve fitted alongside the gate valve in the spout out-let.	01	unit		
23	Out-let pipe from tank:				

	supply and install 3" G.I.pipes from tank out-let to ground level or HDPE Pipes	20	Meter		
24	Wash-Out pipe from tank: supply and install 2" G.I.pipes from tank 100mm-150mm above tank base fitted alongside the gate valve in the spout out-let.	01	unit		
25	2" HDPE pipes in main lines, complete with all fittings and joints , excavation and back filling included.	1800	Meter		
26	1 1/4" HDPE pipes from 2" main line to 03 water collection points (200 m to each point), complete with fittings and joints, well connected into the water collection point, excavation and back filling included.	600	Meter		
27	2" water meter installed at out let from the tank, but at ground level. Well completed in a 400mmx400mm brick work manhole with a lid.	01	Piece		

**Water collection points( public stand posts/tape stands)**

26	-Grade C 20m Concrete, 1:2:4 plains in plate form-9.0m <sup>3</sup> (3m <sup>3</sup> /each point) 200mm thick solid block work in 1:4 cement to sand mortar, 6.0m <sup>2</sup> (2m <sup>2</sup> /each point), well plastered and finished smooth in cement putty. 1" brass bib cocks (water tapes) 10 pcs (for two water collection point). 3/4" brass bib cocks 05 No (for one water collection point near the tank) 1" HDPE pipe 6.0m (2.0m/each tap stand). 1" gate valve complete in a 400mmx400mm brick work manhole chamber with lid 03(01 gate valve/each tap stand). All required fittings	03	No		
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	and joints inclusive.				
27	Provide and allow for extra 4" PVC pipes extension of drainage channel crossing road, excavation and back filling included.	20	Meters		
<b>Fencing work :</b>					
28	<b>(A)</b> Provide and carry out fencing around the tank to perimeter, 10Mx8m (24 linear meters). -21/2"x21/2"x2.5m long angled iron bars in main posts including strainer posts, well welded 14 pcs, line wire, Chain link wires, Razor wires , Line wires , Cement bags, sand , aggregate . Metal door complete with provision for locking .	01	No		
29	<b>(B)</b> Provide and carry out fencing around water collection points (tap stands) to perimeter, 5mx4m (18 linear meters). -21/2"x21/2"x2.5m long angled iron bars in main posts well welded, line wire. Chain link wires, Line wires, Cement, sand, aggregate. Metal door complete with provision for locking 01 piece.	03	No		
30	Provide and allow for excavation of 1.5m diam. x 2.0m deep pit soak away pit, filled with selected filling stones, well covered with plastic sheet and soil.	03	No		
31	<b>Lightings:</b> Provide and install a 60 Watt, 6,000 lumens, public solar lights, integrated with a solar panel, well fixed on a 4 inches dia. G.I. pipe 6.00m high, razor wire will be rolled on the foot of the	03	No		



	pole to provide additional protection. The solar light is expected to have night and motion sensors, operate at 30% when at idle mode and 100% when darkness and motion is detected. Well installed in each of the water collection points.				
32	Visibility: Provide and fabricate, sign post (a) length 1.20m x height 0.80m fabricated using 40mmx40mm rectangular pipes in main frames, on 21/2" x 21/2" stands angled bars for (legs) at least 1.80m from the ground level. Sign post	04	No		
33	Visibility: Provide and fabricate, sign post length 1.20m x height 0.80m, fabricated using 40mmx40mm hollow section pipes in frames. This signpost does not have legs, hence is fixed up on the front side of the tank.	01	No		
34	Provision and allow proper fixing in place of anti-lightening arrest System	01	No		
35	Decommission – demobilization of the construction equipment and support systems. Removal and disposal of all wastes resulted from the construction activities.	01	No		
	<b>Sub total</b>				
	<b>Subtotal (lot 1) X3</b>				

**LOT 2: Construction of 2 Animal troughs (Note that this BoQ represents 2 animal troughs)  
Structural dimension:1.5Mx20m with one partition for floating valve**

36	Mobilization of materials, transportation	Lump	2		
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	and labour.	sum			
37	Clearance of the sites to provide safety of materials and personnel during and after construction	Job	2		
38	Excavation of the structure Foundation and trench for laying pipe	M3	3		
39	Allow provision of river sand required for the construction work	m <sup>3</sup>	15		
40	Allow provision of Aggregate required for the construction work (Concrete work)	m <sup>3</sup>	20		
41	Allow Provision of Iron Bar Y 12 for concrete slab/ Basement of the animal trough and concrete wall to 1meter height (basement slab should approximately 18m*4m)	Pcs	50		
42	Allow provision of cements sufficient for the concrete/construction work	Bags	60		
43	Allow concrete wall casting of 0.8-meter height with 0.20-meter thickness (1.0 m*20.0 m) using 1:2:4 concrete	M <sup>3</sup>	18		
44	Allow provision of binding wire for concrete work	Kg	30		
45	Allow provision of HDPE Pipes with all fittings (300 meter each site)	Meter	600		
46	Allow provision of T joint 2 inches for HDPE Pipe	Pcs	2		
47	Allow provision of manhole cover or concrete slabs for covering the floating vales	PCs	2		
48	Allow provision of Elbow for HDPE Pipe 2 inches	PCs	4		
49	Allow provision of socket for HDPE Pipe 2 inches	Pcs	2		
50	Allow provision and fixing of Floating valve 2 inches that is fit for HDPE Pipe	PCs	2		
51	Allow provision of 2 inches GI Pipe	PCs	2		
52	Allow provision and fixing of GI Elbow to connect HDPE Pipe with GI pipe	PCs	4		
53	Allow provision and gate valves to control water flow in to the animal trough	PCs	2		
54	Installation of fabricated metallic signpost <b>Technical description:</b> 120m width X 0.90m height wide metallic board. 40mmx40mm hollow section frame (1.8m height) to be casted with concrete mortar in to the soil.	Pc	2		

55	Allow provision of good quality Marram for backfilling and grading the surrounding of the facility after the work is done	M <sup>3</sup>	12		
56	Allow and fixing of 1200 watts solar light with sensor motion on metallic pole	Pcs	2		
57	Site clearance and handover	Job	2		
	<b>Subtotal</b>				
<b>Grand total (LOT 1+ LOT 2)</b>					

Note: This bill of quantities provided is for one (01) complete borehole, should be multiplied x 5 for overall cost.

Note: All the 5 sites are all accessible. The job is expected to be accomplished in 60 days, including mobilisation, decommissioning and handing over.

#### **4. Tasks and expected days of work**

The contractor is expected to carry out the job accordingly, while assigning specific and clear task of works to specific team group e.g. the hydrogeologist for geophysical survey, well logging and aquifer behavior, water engineer / technicians for test pumping and installation of hand pumps, drillers for good drilling operations. The whole work is expected to take 60 days including mobilization to and from the site.

#### **4 Reporting**

Contractor to report on each phase of work successfully completed, this includes: Phase (1) Preliminary report of geophysical surveys work conducted on the five proposed sites (2) drilling completed and test pumping done

Hand pump installation, apron construction and fixing of sign posts.

#### **5 Handing over**

Final inspection will be jointly conducted with the directorate of rural water supply and sanitation, community representatives' various components of the borehole will be inspected and verified, according to the check list. In case of defaults in any component, has to be rectified before final handing over is done.

After the facility is handed over, IRSS will carry out post construction monitoring for a period of three months before the liability (retention) money is settled.

#### **6 Visibility**

**A.** Visibilities technical description :0.80m height x 1.20m wide metallic sign post on 40mmx40mm hollow section frame, 21/2"x21/2" Round GI pipe (2inch) legs, 1.80m height stand (legs) shall be properly and appropriately placed and completed.

**B.** 3 metallic plate to be fixed (riveted)

**Visibilities technical description :**0.80m height x 1.20m wide metallic sign post on 40mmx40mm hollow section frame, 21/2"x21/2" Round GI pipe (2inch) legs, 1.80m height stand (legs) shall be properly and appropriately placed and completed.

### **Summary of Bid Prices**

<b>No.</b>	<b>Description</b>	<b>Total Price in USD (\$)</b>
<b>1</b>	<b>Grand Total Bid Price</b>	
<b>2</b>	<b>Discount Ratio (if any) ... % and the amount</b>	
<b>3</b>	<b>Grand Total after Discount</b>	
<b>4</b>	<b>Delivery time scales (in days)</b>	
<b>5</b>	<b>Quotation Validity</b>	

We have carefully checked and examined all bid documents and we are offering the costs above on a fixed basis and they are not subject to any changes or alterations including those due to currency fluctuations.

Total Price **USD (\$)**

**In words**

[ \_\_\_\_\_ ]

Bidder's Signature

Stamp

Date

**Bidder is required to stamp this document with their legal company stamp no bid will be accepted without a genuine company stamp**

### **Supplier Code of Conduct**

- 1 Islamic Relief's Supplier Code of Conduct**
- 2 Islamic Relief Worldwide requires all suppliers to adhere to:**

The Modern Slavery Act 2015

The International Labour Standards as defined by the ILO (International Labour Organisation).

The United Nations Global Compact's 10 principles as stated below:

#### **Human Rights**

**Principle 1:** Businesses should support and respect the protection of internationally proclaimed human rights; and

**Principle 2:** Make sure that they are not complicit in human rights abuses.

#### **Labour**

**Principle 3:** Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

**Principle 4:** The elimination of all forms of forced and compulsory labour;

**Principle 5:** The effective abolition of child labour;

and

**Principle 6:** The elimination of discrimination in respect of employment and occupation.

#### **Environment**

**Principle 7:** Businesses should support a precautionary approach to environmental challenges;

**Principle 8:** Undertake initiatives to promote greater environmental responsibility;

and

**Principle 9:** Encourage the development and diffusion of environmentally friendly technologies.

**Anti-Corruption**

**Principle 10:** Businesses should work against corruption in all its forms, including extortion and bribery.