



INVITATION FOR BIDS ON THE SUPPLY, INSTALLATION, AND TRAINING OF TECHNICIANS ON THE OPERATION OF ADVANCED GEOPHYSICAL SURVEY EQUIPMENT

Introduction

Uganda's Cattle Corridor is a semi-arid zone spanning five districts: Pader, Kitgum, Kole, Mityana, and Rakai, covering approximately 20,000 hectares of land. The region supports a large proportion of Uganda's agro-pastoral communities, who depend almost entirely on natural water resources for domestic consumption, livestock watering, and smallholder agriculture. Chronic water scarcity, recurrent droughts, land degradation, and the increasing impacts of climate change have severely constrained the livelihoods of approximately 60,512 people (51% female) in the target sites, making systematic groundwater resource characterization a critical priority.

Accurate delineation and assessment of subsurface hydrogeological conditions, including aquifer location, depth, geometry, and hydraulic properties, are fundamental prerequisites for the rational and cost-effective siting of boreholes, valley tanks, and other water supply infrastructure in this terrain. Geophysical survey methods, particularly Electrical Resistivity Tomography (ERT), Induced Polarization (IP), Self-Potential (SP), and Vertical Electrical Sounding (VES), provide non-invasive, spatially distributed, and cost-effective tools for this purpose.

The Government of Uganda has received grant funding through the Global Environment Facility (GEF) under the Least Developed Countries Fund (LDCF), implemented by Conservation International (CI-GEF), to finance the Fostering Water Security and Catchment Resilience in Uganda's Cattle Corridor Project (GEF Project ID: 11696). The project runs from May 2026 to July 2031, with a total GEF grant of USD 7,598,165 and confirmed co-financing of USD 56,108,088. The Uganda Ministry of Water and Environment (MWE) is the primary Executing Entity, in partnership with the Africa Innovations Institute (AfriII).

Project Background

Component 1 of the project focuses on inclusive access to safe and clean water for consumption and agricultural production by local communities in the Cattle Corridor. Under Output 1.1.2, the project will construct eight (8) solar-powered borehole water systems to benefit 12,000 people across the five target districts (51% female). Output 1.1.1 targets the construction or rehabilitation of five (5) valley tanks serving 15,000 people. The rational siting of all water infrastructure boreholes, valley tanks, and micro-irrigation systems requires prior geophysical investigation to characterize subsurface conditions, identify optimal drill targets, and minimize the risk of dry or unproductive boreholes.



Beyond direct infrastructure siting, the geophysical equipment will build long-term institutional capacity within AfrII and MWE for ongoing hydrogeological investigations across the Cattle Corridor. Trained technical staff will be equipped to conduct independent multi-dimensional resistivity and IP surveys, process and invert field data into 2D and 3D subsurface models, and integrate survey outputs with GIS-based catchment management plans developed under Output 1.3.1. This capacity will directly support the project's target of placing 20,000 hectares of land under sustainable management for climate resilience.

The Africa Innovations Institute (AfrII) is a not-for-profit, non-governmental center of excellence in agricultural and environmental research and innovations, established in 2005. AfrII undertakes research on environmental sciences, agriculture, and food systems across Eastern and Central Africa. To learn more, please visit: <http://www.afrii.org>.

Purpose of the Bid

The Africa Innovations Institute, on behalf of the Fostering Water Security and Catchment Resilience in Uganda's Cattle Corridor Project, is inviting qualified and experienced suppliers to submit bids for:

- i. The supply of a complete, fully operational Advanced Geophysical Survey System capable of conducting ERT, IP, SP, VES, and 1D/2D/3D/4D subsurface investigations;
- ii. On-site installation and commissioning of the system and all its components at the identified sites.
- iii. Comprehensive operator training for a minimum of four (4) AfrII/MWE technical staff on system operation, field data acquisition, data processing and inversion, GIS integration, and equipment maintenance.

The geophysical equipment will be used to guide the siting of all water infrastructure under the project, and to build sustained institutional capacity for hydrogeological investigations in Uganda's Cattle Corridor for the duration of the project (2026–2031) and beyond.

Technical Specifications

(*) *Compliance must be confirmed in detail by the bidder's offer and accompanying technical documentation; (**) if not compliant with AfrII's required parameters, the bidder must indicate their offered parameters in the Remarks column.*



No.	Technical Specification	Quantity	Unit Price	Total Price	* Compliance	** Remarks
Core Survey System	Multi-channel resistivity / IP / SP mainframe; minimum 2–10 simultaneous measurement channels; expandable architecture; suitable for ERT, IP (time-domain and/or frequency-domain), SP, VES, and 1D/2D/3D/4D survey configurations.	1				
	Minimum 48-electrode support; expandable to higher electrode counts preferred.	1				
	Minimum output voltage: 600 V.	1				
	Minimum output current: 2.0 A.	1				
	Minimum transmitter power: 200 W.	1				
	Minimum depth of investigation: 180 metres under standard survey conditions.	1				
	24-bit analogue-to-digital receiver resolution.	1				
	Integrated GPS/GNSS receiver for automatic electrode georeferencing.	1				
	USB, Ethernet, Wi-Fi, and Bluetooth connectivity (all four required).	1				



No.	Technical Specification	Quantity	Unit Price	Total Price	* Compliance	** Remarks
	IP65 or higher environmental protection rating (dust-tight and water-resistant).	1				
	Rechargeable field battery power supply; compatible with external power sources.	1				
	Ruggedized for use in harsh tropical field conditions (ambient 0–50°C operating range).	1				
	CE-marked or equivalent international certification.	1				
	Chromatography-grade field data acquisition software included (perpetual license).	1				
Standard Accessories	Stainless steel electrodes (compatible with mainframe; sufficient quantity for maximum electrode spread).	1				
	Multi-core electrode cables and take-out jumpers (adequate total length for full electrode array deployment).	1				
	Rechargeable field batteries and compatible chargers.	1				



No.	Technical Specification	Quantity	Unit Price	Total Price	* Compliance	** Remarks
	Communication cables and wireless electrode modules (where the system supports).	1				
	Rugged, waterproof transport and storage cases (Pelican-grade or equivalent) for all components.	1				
	Cable reels and protective field cable covers.	1				
Software (Perpetual Licenses)	2D resistivity/IP inversion and modelling software (e.g., RES2DINV-class or equivalent).	1				
	3D inversion and visualization software (e.g., RES3DINV-class or equivalent).	1				
	Survey planning and array optimization software.	1				
	GIS/CAD-compatible data export (e.g., .xyz, .shp, .dxf or equivalent). All licenses must be perpetual (not annual subscription). Proof of perpetual licensing must be provided.	1				
Value-Added Accessories	External ruggedized SSD storage device: minimum 2 TB capacity.	1				



No.	Technical Specification	Quantity	Unit Price	Total Price	* Compliance	** Remarks
	External rugged field visualization monitor or tablet (compatible with system and software).	1				
	Spare cables, connectors, fuses, and jumpers (minimum 2-year contingency supply).	1				
	Repair and maintenance toolkit (tools, test equipment, spare fuses, connectors).	1				
	Backup / standby power system and additional spare batteries.	1				
	Rugged field laptop with pre-installed licensed acquisition and processing software.	1				
	Differential GPS (DGPS) and mapping accessories for survey georeferencing.	1				
Optional Enhancement Modules (Desirable)	Transient Electromagnetic (TEM) integration module.	1				
	Seismic survey integration capability.	1				



No.	Technical Specification	Quantity	Unit Price	Total Price	* Compliance	** Remarks
	Drone / UAV compatibility for electrode positioning or data acquisition.	1				
	Cloud synchronization and remote monitoring capability.	1				
Consumables and Spares	Spare electrode pins / stakes (quantity as recommended by manufacturer for 2-year use).	As recommended				
	Spare fuses and circuit protection consumables.	As recommended				
	Contact gel / electrode electrolyte solution for low-contact-resistance coupling in dry soils.	10 L				
	Field safety kit: insulated gloves, warning tape, ground stakes.	1 kit				
	Sampling / test probes and calibration resistors for routine system self-checks.	1 set				
Grand Total						



() Compliance must be confirmed in detail by the bidder's offer and technical documentation and will be verified by AfrII during technical evaluation; (**) if not compliant with AfrII's required parameters, the bidder must indicate their parameters in this column.*

Terms and Conditions

1. The bid shall be delivered before **5:30 pm (EAT), on 13th August 2026.**
2. Delivery of the equipment shall be completed no later than 45 calendar days from the date of receipt of Notice to Commence from the Client.
3. Delivery Period shall be no later than 45 calendar days to the delivery point from the date of signing the Purchase Order. Delivery point: MWE Stores, Luzira, Kampala, Uganda (Delivered Duty Paid — DDP).
4. The geophysical survey equipment shall be supplied complete, with all necessary accessories, software, and consumables required for it to commence full field operations after installation and commissioning. A comprehensive user manual, maintenance guide, and troubleshooting guide in English shall be provided for each component. The bid must be accompanied by adequate technical documentation, catalogues, and any other pertinent technical information for all items quoted.
5. The equipment shall be supplied by a well-known, reputable manufacturer of geophysical survey instruments. Equipment must be unused, current-production models incorporating the most recent design improvements and components. The country of manufacture must be clearly stated for the mainframe and for each major accessory.
6. Bidders must demonstrate that they are approved importers, authorized distributors, or direct sales agents for the manufacturer of the equipment being proposed. Where a bidder is a third-party reseller, the bidder must demonstrate the supply chain and provide a letter from the manufacturer authorizing them to offer the equipment through their channel. Bids not accompanied by a valid manufacturer's authorization letter may be rejected.
7. Technical staff shall be trained for a minimum of five (5) days on the operation, field data acquisition, data processing and inversion, GIS data integration, and maintenance of the equipment, after installation and commissioning is complete. Training must be delivered in English. Training documentation and certificates shall be issued to all participants.
8. Offers must be made in English. AfrII reserves the right to accept all or part of any offer. AfrII will not be bound to accept the lowest tender, nor to assign a reason for the rejection of any tender.

9. Bidders must include full details of warranty conditions (minimum 12 months) and an overview of the recommended service intervals required to adhere to warranty conditions. Spare parts availability for a minimum of 5 years post-delivery must be confirmed.
10. Bidders must include in their offer the list of the manufacturer's authorized service outlets in Uganda or nearest to Uganda in the East Africa region.
11. The cost proposal must be all-inclusive of all fees, taxes, duties, freight, insurance, delivery to the delivery point, installation, commissioning, and training. Additional costs cannot be included after award, and revisions to proposed costs may not be made after submission, unless expressly requested by AfrII. For the purpose of the proposal, bidders must provide a detailed budget showing all major expense line items. Offers must show unit prices, quantities, and total price for all items. All items, services, and other costs must be clearly labelled and included in the total offered price. All cost information must be expressed in USD.

Company Name of Bidder:

Contact Person:

Address of Bidder:

Signature:

Date:

Email:

To ensure consideration, your complete, detailed bid must be submitted by **13th August 2026, 5:30 pm (EAT)**, in a sealed envelope marked:

"BID SUPPLY OF GEOPHYSICAL SURVEY EQUIPMENT; CATTLE CORRIDOR PROJECT"

to the following address:

Plot 1544, Koire Close, Off Old Kiira Road, Bukoto, Kampala

Tel: +256768 229 363

or as PDF by Email to: procurement@afrii.org copy to: cattle.corridor@afrii.org, info@afrii.org

Attention: Project Coordinator, Cattle Corridor Project / Africa Innovations Institute

Confidentiality



All proprietary information provided by the bidder shall be treated as strictly confidential and will not be shared with potential or actual applicants during the solicitation process. This includes but is not limited to price quotations, cost proposals, and technical proposals.

Gender Consideration

Africa Innovations Institute is an inclusive, non-discriminative institution committed to gender equality and promoting inclusivity in all its procurement processes. Women-led firms and firms with women in technical leadership roles are strongly encouraged to bid.

Prohibited Practices and Institutional Policies

All offers must ensure full compliance with AfrII, MWE, and CI-GEF policies on anti-corruption, anti-terrorism, and other prohibited practices. The relevant CI-GEF Prohibited Practices policy can be accessed at:

<https://www.conservation.org/docs/default-source/gef-documents/prohibitedpractices.pdf>