



CENTRE FOR ECOSYSTEM RESTORATION - KENYA

JOB DESCRIPTION 1:

Physicist / Engineer (Sensor Systems & Computational Modelling)

Project: Asili – Non-invasive Ecosystem Monitoring (UKRI-funded)

Location: Limuru, Kenya

Duration: Up to 12 months (start as soon as possible)

Employer/Host: Centre for Ecosystem Restoration – Kenya (CER-K)

About the Role

The Centre for Ecosystem Restoration – Kenya (CER-K) is seeking a Physicist or Engineer (post-MSc or equivalent experience preferred) to join a multidisciplinary, international research team working on next-generation non-invasive ecosystem monitoring systems.

This role focuses on scaling up sensor technologies for soil health assessment using seismic and physics-based methods. The successful candidate will work closely with the Earth Rover Program, the University of Exeter, and CER-K's research team to develop robust, scalable, and field-deployable monitoring systems.

The role combines sensor engineering, computational physics, and data science, with an emphasis on automation, modelling, and machine learning for environmental applications.

Collaboration & Project Environment

The role is part of the UKRI-funded *Asili* project led by the University of Exeter, in partnership with CER-K, Earth Rover Program, University of Nairobi, Mpala Research Centre, and Lion Landscapes. The successful candidate will participate in regular international team meetings, in-person workshops in Kenya, and a one-month research visit to the University of Exeter within the first six months.





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Key Responsibilities

- Develop and scale sensor systems for non-invasive soil and ecosystem monitoring
- Support the advancement of seismic-based soil health measurement techniques
- Design and implement automated data pipelines for field and lab data
- Apply physics-informed machine learning approaches to ecological datasets
- Develop and maintain Python-based analytical and modelling tools
- Contribute to experimental design in collaboration with CER-K soil scientists and geophysicists
- Integrate sensor outputs with wider Asili project datasets and platforms
- Collaborate with international partners including the Earth Rover Program and University of Exeter
- Participate in field deployments, testing, and calibration of sensor systems in Kenya

Required Qualifications & Experience

- MSc or higher in Physics, Engineering, Applied Physics, Geophysics, or related field
- Demonstrated experience in sensor systems, instrumentation, or experimental physics
- Strong programming skills (Python essential)
- Experience with data pipelines, signal processing, or scientific computing
- Interest in environmental systems, sustainability, or ecological applications

Desirable Skills

- Experience with machine learning or physics-informed ML
- Familiarity with geophysical or seismic methods
- Experience working in interdisciplinary research teams
- Prior fieldwork experience in environmental or remote sensing contexts





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Apply by sending your CV and certificates as one PDF document to
recruit@cerkenya.org by 30th April 2026.



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