

2nd PhD scholarship in Climate-smart agricultural intensification project, University of

Embu About the scholarship

Addressing low agricultural productivity in the light of the rapidly declining soil fertility and population growth is an increasingly important challenge in Sub-Saharan Africa. Our project seeks to simultaneously address soil and water conservation and soil fertility issues by integrating selected isolated approaches towards sustainable intensification of agricultural productivity in the Central Highlands of Kenya. Through this process, farming communities will be given the opportunity to select (combinations of) well-targeted interventions, ranked according to their potential to create resilience in the farming systems. These interventions will be studied using novel, state-of-the-art methodologies, in part heavily relying on stable isotope techniques, erosion/runoff measurements and modelling.

We are looking for an enthusiastic young (not older than 30 years) MSc holder to undertake a PhD study under the aegis of VLIR UOS project, being implemented by a team of researchers from the University of Embu in collaboration with KU Leuven (Belgium), Kenyatta University, University of Nairobi and Kenya Agricultural and Livestock Research Organization (KALRO), among other partners. The project title is “*Climate-smart options allowing agricultural intensification for smallholders in the dry zones of the Central Highlands of Kenya*”. The candidate will be responsible for the implementation of one biophysical objective of the project: **quantification of water use efficiencies in selected climate-smart strategies**. The research site is in Tharaka South sub-county in Tharaka-Nithi County, Kenya.

Responsibilities of the Candidate

The project team values innovation and creativity; openness and engagement; teamwork and pro-activeness; and respect and reliability. As such, we are seeking to recruit talent aligned to these values in the pursuit of research excellence. The responsibilities will include:

- Project data collection, compilation and analysis.
- Assisting MSc students in designing and implementation of field experiments and data collection.
- Writing and submitting high-quality publications in international scientific journals.
- Willingness to spend a significant part of the time at the study site.
- Contribution to project activities as requested by the local promoter, and this may include:
 - o Supporting the supervision of MSc students.
 - o Timely compilation of project reports.
 - o Guide field technicians and project interns.
 - o Any other responsibilities relevant to the project as might be assigned by the project team.

Desired profile of the candidate

The candidate should fulfil the following requirements:

- Not older than 30 years.
- Has an MSc degree in one of the following areas: Soil Science, Land and water

management, Agricultural Resource Management, Integrated Soil Fertility Management or any other closely related specialization.

- Demonstrable knowledge in the use of basic statistical analysis
- Ability to publish in high-impact journal articles.
- Knowledge/experience in plant tissue water and soil water sampling for $^{13}\text{C}/^{12}\text{C}$ and $^{18}\text{O}/^{16}\text{O}$ fractionations and quantification of the relationships between the various isotope signals will be an added advantage.
- Excellent project and time management skills to ensure that milestones and deliverables are achieved on time and to high quality.
- High level of proficiency in English sufficient to communicate effectively with colleagues and report-writing.
- Ability to work as a member of a team within a dynamic research group.
- Ready to immediately register for a PhD program.
- Willing to be a full-time student cum project assistant for at least three years.

The Offer

We offer a 3-year full-time PhD position. This will consist of 3 months' probation period, to be confirmed upon satisfactory performance. The offer is inclusive of university tuition and statutory fees, and a modest monthly stipend.

How to apply

Applications should be submitted by 21st September 2019, enclosing the following documents:

- One page research statement(single-spaced, A4 size, font 12).
- Concise CV with two references (Maximum 2 pages, A4 size font 12).
- Scanned copy of your MSc and BSc degree certificates, transcripts and KCSE certificate.

Applications need to be submitted via email with subject '**PhD Scholarship: VLIR UOS 2019 project**' to milka.kiboi@gmail.com and ngetich.felix@embuni.ac.ke with a copy to njiru.daniel@embuni.ac.ke