

PHD SCHOLARSHIP IN THE FIELD OF AGRICULTURAL RESOURCE MANAGEMENT/APPLIED ECONOMICS, GEOGRAPHY AND GEOINFORMATICS IN AN INTERDISCIPLINARY RESEARCH PROJECT

University of Nairobi hereby announces a PhD scholarship in collaboration with the World Agroforestry Centre (ICRAF) in Nairobi, the Swedish University of Agricultural Sciences and Lund University, Sweden, within the framework of an interdisciplinary research project on “Unravelling the Causes and Implications of Crop Productivity Gaps in Underperforming Regions through Integration of Geospatial, Biophysical and Socio-economic Factors” (see project description below). The PhD Programme will be carried out jointly between the University of Nairobi and ICRAF with co-supervisors from the Swedish Universities. The student will spend about 3 months at a Swedish university. The PhD student will be formally enrolled at University of Nairobi under the condition that is set by the Board of Postgraduate Studies and registered as a PhD Fellow at ICRAF.

Project description:

To cope with projected population and income growth the agricultural sector dramatically needs to increase production and productivity without compromising environmental sustainability. Recent research provides evidence of stagnating crop yields and regionally very heterogeneous crop yield patterns. In order to reverse this trend it is essential to identify underperforming regions and understand key causes of poor productivity. The general assumption is that regions where the yield gaps (difference between potential and achieved yield) are large, holds promise for productivity gains and increase in food security. This project will focus on Sub-Saharan Africa (SSA) where some of the largest yield gaps are observed. The aim is to understand the causes of observed large yield gaps and to integrate biophysical and socio-economic explanations for these gaps. Crop yield maps will be created to study variations within and between villages, landscapes, and regions, spatially and temporally. Available socio-economic panel data will be combined with remote sensing and detailed investigations in selected villages in Kenya and Ghana with focus on soil conditions, management practices, labour availability and other agronomic, socio-economic and political aspects. With this approach, links between geo-spatial data and socio-economic characteristics could be made by relating crop performance patterns to soil characteristics, household specifications, combining detailed investigations with large spatial coverage, and thus progressing beyond site-specific observations and conclusions.

The PhD candidate will join an interdisciplinary team of researchers and educators in the fields of geography, agronomy, soil science, agribusiness, agricultural resources management, as well as the general area of agricultural and applied economics.

Requirements/qualifications:

We are looking for a highly skilled and enthusiastic young researcher who will be able to work in three, interconnected, interdisciplinary, research fields:

- Agronomy including soil fertility management
 - focused on biophysical characterization of crop performance and soil conditions at fields/farms and village sites
- Geospatial analysis using remote sensing and GIS
 - focused on research into crop yield estimations based on a variety of remote sensing platforms
- Socio-economic conditions including household survey, micro data

- focused on village and farm characteristics based on socio-economic survey data

Eligibility requirements will include completion of a degree at the Masters level in a scientific subject of relevance for the project in a recognized University. Excellent communication skills in English will be expected. The ideal candidate should have basic training in some of the following areas: aerial photography, remote sensing, GIS, advanced statistics, and experience from agricultural studies. Those with knowledge in image interpretation, land use/land cover mapping, soil and water resources applications using aerial and satellite imageries at various scales, together with experience in fieldwork, will have an added advantage.

The PhD training would have a course work component focusing either on GIS and remote sensing and/or on agricultural issues depending on the strength of the PhD candidate selected. The candidate is expected to interact with the network of scientists involved in the project. Flexibility, curiosity, being a team player and ability to work independently are essential qualities for such inter-disciplinary research. The working language is English.

Enclosures to the application:

- Comprehensive Curriculum vitae
- A pdf copy of a master thesis or equivalent independent work at the Masters level
- Transcript of BSc and MSc exams including grades
- Proof of proficiency in English
- Proficiency in relevant local/national language
- A certified copy of national ID or passport
- A list of at least three referees with contact details
- A statement of purpose showing the motivation for seeking the PhD scholarship; the motivation for choosing the announced scientific discipline

Scholarship conditions

- The scholarship will cover approved fees for the study period in the University of Nairobi and field work cost
- A monthly stipend
- A visit to a Swedish University for at least 3 months during the project period
- The candidate should be ready to abide by all the conditions set by the graduate school of the registering University

Basis of assessment

Only those who are or have been admitted to PhD-studies may be appointed to doctoral studentships. When an appointment to a doctoral studentship is made, the ability of the student to benefit from PhD-studies shall primarily be taken into account. In addition to devoting themselves to their studies, those appointed to doctoral studentships may be required to work with educational tasks, research and administration, in accordance with specific regulations in the ordinance.

Application date and other practicalities

The programme is expected to begin during the 2015/16 academic year of the University of Nairobi. However, the candidate may be required to spend a period of time working as a research assistant prior to the start of the academic year. Deadline for applications is 15th May 2015. A telephone/skype interview will be arranged for shortlisted applicants.

Where to send applications

All applications should be sent to the following email addresses:

kosura@uonbi.ac.ke/Willis.kosura@gmail.com

I.Oborn@cgiar.org