SUSTAINABLE NATURAL RESOURCE MANAGEMENT (SNRM): Enhancing Knowledge and Skills of Young African Scientists for a Better Tomorrow

Call for Application 2020 SNRM session 2 Summer School

Makerere University, Kampala, Uganda
19 July-02 August 2020

Context: Africa's natural resources are among those with the highest indices of degradation and mismanagement. Timely data collection, analysis (including modeling approaches) and dissemination of scientific information are fundamental for interventions in managing natural resources. Investing in young scientists who are able to commit to managing the resources sustainably is important. The primary objective of the summer school is to initiate the process of building a critical mass of skilled and competent young natural resource scientists in Africa through training and mentorship. It seeks to enhance the knowledge base and skills of passionate young scientists (MSc and early PhD students) involved in data collection and monitoring in natural resources management (agriculture, forestry and nature conservation) and adaptation to climate change but have low level skills in handling the data and using it to inform management and policy. This will be carried out through three Summer School sessions (2019, 2020, and 2021) with the following modules: Data management for sustainable use of natural resources (module 1); Geospatial techniques and tools for data collection and improved natural resources assessment (module 2); Data analysis using R; Scientific communication and management strategies in SNRM (module 3); Management strategies in NRM for a sustainable world (module 4); Dynamics social process analysis - Hands on with NetLogo (module 5) and Applied system thinking in natural resources management using R & VENSIM (module 6). The current call for application focuses on modules 3 and 4 designated session 2.

Organizers: Makerere University (Uganda) and the Leibniz Universität - Hannover (Germany) with financial support from the Volkswagen Foundation (Germany).

Venue and dates: Kampala, Uganda, 19 July-02 August 2020

Target: MSc and early PhD students less than 35 years of age from any university/research institution in sub-Sahara Africa or Germany with an interest in natural resources management

Participants and Scholarships: Participation in the course is free of charge. The course is fully funded and open to **20 Africans** MSc and PhD students. Scholarships will include the costs of air ticket, accommodation, meals, visa and transportation. However, participants will have to cover the cost for their travel health insurance.

Topics

MODULE 3. Data analysis with R, and scientific writing and communication

This module has two main parts; in the first module, students will be introduced to R, a statistical software package and programming environment. This module is fully practical and students will work on their computers, topics covered in the course include how to install and use R libraries, importing data into R, graphing, writing loops and conditional statements, creating user-defined functions, generating random numbers, and conducting optimizations. Vectorization; Statistical simulation; R for general linear models and general non-linear models; Multi-Level Models, and Time Series Analysis in R; Plotting and Lattice graphics with R. Individual and group exercises will be given with data of natural resource management (NRM) examples from Africa. There will also be a practical excursion to collect data on the Lake Victoria ecosystem. The second part of the module will be on scientific writing and dissemination. The key components for successful scientific proposals and publication writing will be provided with examples from different granting organizations. Discussions of effective oral and poster presentation techniques at conferences will also be done. The mode of delivery will be through interactive sessions, with questions and answers on specific issues so far encountered by students. Practicals will involve participants drafting a grant research proposal in groups on three selected calls in water resource, agricultural management and forests ecosystem management, and individual presentations of their research proposal orally and also by poster.

MODULE 4. Management strategies in NRM for a sustainable world

The section on different management strategies will be a series of lectures and group exercises on results-based management (RBM). This module will enable participants to have a common understanding of concepts and principles of RBM, impact pathway, theory of change (ToC), result chain; the know how to develop a result framework and distinguish between development hypothesis versus research hypothesis, and Associated Logic Models. This session will further cover good practices for building a results framework (RF) as well as the linkage between the RF and monitoring and evaluation (M&E). Identify and review performance indicators; and decision charts for selecting data collection approaches for the indicators; Data quality assessment; and development hypothesis analysis where results mapping will be explored. The course will explore methods, tools and practices for linking research to inclusive development for rural transformation in Africa across various landscapes and geo-political levels.

Language: The course will be delivered in English. Participants are expected to be fluent in writing and speaking of the English language.

How to apply

Applicants are kindly requested to fill in the application form available at https://form.jotformeu.com/90379161435358 and submit the following documents in English through by email to fellows@gem.uni-hannover.de and copy to jkarungi@caes.mak.ac.ug or lydiaolaka@gmail.com or africansummerschool@gmail.com

- a detailed curriculum vitae (maximum 2 pages)
- a letter of motivation (max. 1 page) for new applicants, and a letter of reflection on how they utilized the training for those who participated in session 1).
- a confirmation of enrollment at the university
- a letter of reference from the academic supervisor (with original signature);
- a draft of a project proposal to be presented (02 pages).

Important dates

Application deadline**: 6th March 2020.**

Announcement of accepted applicants: **04th May 2020**.

Confirmation of attendance by selected participants: **29th May 2020**.

Summer School held: **19 July-02 August 2020**

Further information on the summer schools is available from:
Assoc. Prof. Jeninah Karungi jkarungi@caes.mak.ac.ug/jtumutegyereize@gmail.com **;**
Dr Luc Hippolyte Dossa (dolhip@yahoo.com/hippolyte.dossa@fsa.uac.bj); Prof. Dr. Hartmut Stuetzel (stuetzel@gem.uni-hannover.de/fellows@gem.uni-hannover.de)