RISK METHODS SCHOOL

10 – 22 SEPTEMBER 2018

ARDHI UNIVERSITY - DAR ES SALAAM

Stream Three: Integrated Research Methods in Disaster Risk and Resilience Studies

Course I: ***Proposal development for integrated disaster risk and resilience research***
Date: ***10 - 14 September, 2018***

This intensive course aims to strengthen postgraduate students' understanding of the theoretical, empirical and methodological approaches/methods that can be applied in risk and resilience related research. It specifically focuses on PhD proposal development for topics that have a risk and resilience lens. The course integrates the elements involved in proposal development with the theoretical, conceptual and empirical dimensions of disaster risk and resilience. For the final two days of the course, participants will separate into two parallel sub-streams for methodological immersion in either drought or flood/landslide analysis themes. This reflects East Africa's recognised drought risk profile, along with its changing geophysical risk profile associated with land pressures and urbanisation as well as climate change.

This course is highly relevant for postgraduate students and emerging academics who are developing their PhD research proposals, particularly those who wish to strengthen their proposals with an integrated risk and resilience component. It is applicable to postgraduate students with interests in drought and disasters/risks associated with rapid development in Africa (eg food security, rural development work, engineering and or architectural, urban planning students, climate change adaptation).

This course is also useful for development practitioners and senior risk managers who are keen to hone their integrated disaster risk and resilience skills, and who wish to update their conceptual and methodological knowledge in an intensive course.

On completion of the course, participants will be able to:

- Understand the core elements of a robust research proposal and plan.
- Understand and be able to integrate the elements of disaster risk research proposal.
- Understand and be able to apply different theoretical and empirical approaches to disaster risk and resilience research.
- Develop skills to apply to specific risk & resilience research methods, with particular focus on drought, landslide and flood risk.

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Course content

- Introducing/revisiting the core elements of a robust research proposal
- Conceptual/theoretical developments of the "disaster construct"
- Understanding hazards/shocks- focus on environmental & physical hazards
- Disaster (Risk) research agenda: Theoretical, methodological and empirical issues.
- Vulnerability &resilience: Organizing concepts for empirical research on disaster risk

❑ **Drought risk sub-stream (13-14 September)**

- Ground-based and satellite drought Indicators
- Modelling extreme drought events using STATA
- Drought vulnerability vs drought Resilience
- Measuring vulnerability or resilience as a multi-dimensional latent construct
- Measuring vulnerability or resilience as a probability to fall below or above a wellbeing threshold.
- Measuring vulnerability or resilience as the ratio of consequence to the total exposed units threshold.

❑ **Landslide and flood risk sub-stream (13-14 September)**

- Understanding the impacts of climate change on floods and landslide risks globally and in Africa
- Factors used in determining areas prone to floods and landslides hazards
- Flood vulnerability vs resilience
- Landslide vulnerability vs resilience
- Conceptual approaches of designing research proposals on floods and on landslide risks assessments based on factors such as impacts of climate change, land pressures and urbanization.

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Entry prerequisites and requirements

- Minimum of a Bachelors degree in the Health Sciences, Geography, Urban Planning, Disaster (Risk) Management, Development Studies or related field (but preferably – evidence of current enrolment in an approved Masters/PhD programme).
- Participants should be fluent in reading and speaking English.
- Relevant experience (especially for health professionals, humanitarian workers, researchers, disaster risk managers, health advisors and practitioners) in development and emergency contexts.

Equipment implications

While Ardhi will provide access to GIS computer laboratory facilities, participants are also encouraged to bring their own laptops or other equipment. Please check the Administrator Rights on your equipment, to ensure that settings can be adjusted if necessary.

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Course presenters

Professor Sam Ayonghe

Born in Cameroon, Professor Ayonghe obtained a PhD in Geophysics from the Imperial College, University of London in 1998, taught in the University of Yaoundé, from 1990, in the University of Buea from 1993 to present, and was promoted to full Professor in 2008. He has published over 60 articles on volcanology, landslides, climate change, hydrogeology and seismology, supervised six PhDs and over 35 MSc theses. Professor Ayonghe has been the Dean of the Faculty of Science at the University of Buea since 2016, is President of the National Scientific Committee on Monitoring Eruptions of Mt Cameroon, Fellow of the Cameroon Academy of Sciences and Coordinator of the USAID Periperi U Grant UBuea Consortium.

Professor Sarah Howie

Sarah Howie is the Director of the Africa Centre for Scholarship and Professor at the University of Stellenbosch, South Africa. She is the Deputy Chair of the board of the South African Qualifications Authority; member of the Assessment and Standards Committee at Umalusi and member of the Universities South Africa Admissions Committee. Internationally, she was a member of the UNESCO-Brookings Institute international Learning Metrics Task Force for Post-primary (in preparation for Education for All 2015). She is also a member of four international technical research committees associated with design and development of international large-scale assessments of the International Association for Evaluation of Educational Achievement (IEA) and the Organisation for Economic Cooperation Development (OECD). She is a member of a number of Editorial Boards of international Journals including those in the Taylor and Francis and Elsevier publishing houses.

Assoc. Professor Tesfahun Kasie

Tesfahun Kasie is a PhD graduate and associate professor at the Institute of Disaster Risk Management & Food Security Studies at Bahir Dar University, Ethiopia. He is currently teaching disaster risk and food security related courses for postgraduate students. His research interests include food security and livelihood resilience in risky environments. Tesfahun has served in several positions, including Chair of Disaster and Development related course systems, and Head of the Department of Disaster Risk Management & Sustainable Development at Bahir Dar University.