RISK METHODS SCHOOL
10 – 22 SEPTEMBER 2018
ARDHI UNIVERSITY - DAR ES SALAAM

Stream One: Investigating and Assessing Africa's Urban Risks: Geo-spatial applications

Course II: *Understanding & Managing Urban Risks in Africa: Advanced Geospatial Analysis*

Date: *17 -21 September, 2018*

This second more advanced course teaches participants how to use high resolution satellite images and a digital elevation terrain model to map flood and fire hazards, and then model flood and fire hazards. This course also involves a field visit to familiarize participants with the flood-modelled site, and for the purposes of flood vulnerability assessment.

This course is useful for post-graduate students and emerging academics and practitioners who already have basic GIS skills, and who wish to advance their capability in urban risk mapping, analysis and modelling.

On completion of the course, participants will be able to:
- Define urban risk, DRM concepts, GIS and Remote Sensing Concepts
- Apply core elements of GIS and Remote Sensing tools and methods, including ArcGIS software (also ArcCatalog, ArcMap and ArcToolbox).
- Apply GIS and Remote sensing tools to assess urban (flood and fire) risks, including the use of a Digital Elevation Model.
- Understood and apply risk modelling techniques, using HecRAS, GIS and Remote Sensing.
- Complete a flood risk assessment in Dar es Salaam, incorporating flood inundation maps and elements at risk.

Course content
- Revision of urban risk, DRM, GIS & RS concepts
- Urban flood and fire hazard mapping using RS and a Digital Elevation Model (DEM).
- Flood hazard modelling (using HecRAS)
- Physical vulnerability assessment (field visit)
- Flood risk assessment

Entry prerequisites and requirements
- Minimum of a Masters degree in Geography, Geomatics, Urban Planning, Disaster (Risk) Management, Development or related field.
- Participants should be fluent in reading and speaking English.
- Proof of completion of a relevant GIS/Remote Sensing course (comparable to the content of Course I: Assessment and Mapping of Urban Risks in Africa: Introduction to urban risk and Geographic Information Systems (GIS)

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, to ensure that settings can be adjusted if necessary.

http://www.riskreductionafrica.org/events/periperi-u-risk-methods-school.html

Stream One: Investigating and Assessing Africa's Urban Risks: Geo-spatial applications

Course presenters

Dr Guido Uhinga

Dr. Uhinga is a Geomatician and a climate change expert. He holds a PhD in Climate Change Studies, specializing in Climate Change Modeling, from Ardhi University and a Master of Science (M.Sc.) degree in GIS and Remote Sensing from the International Institute for Geo-Information Sciences and Earth Observation (ITC) of the Netherlands.

Dr Uhinga has fifteen years' experiences in teaching, research and consultancy activities related to GIS, Remote Sensing and Disaster risk management (DRM). His consultancy activities include National Hazard and Vulnerability Assessment Project, Phase II; Disaster Risks and Capacity Needs Assessment for Tanzania Mainland and Zanzibar; Advancing the use of ICT for Disaster Risk Management in Africa (AIDA) – African and European institutions using ICT to meet disaster challenges; and Participatory Community Risk Assessment and Mapping.

Dr Joseph Mayunga

Dr Joseph Mayunga is a Supporting Lecturer at Ardhi University, Dar es salaam, Tanzania. He is a Disaster Risk Management expert with more than 15 years' experience. He holds a PhD in Urban and Regional Sciences specializing in Environmental Hazard Management, from Texas A&M University in the United States. He also holds an MSc. degree in Urban Planning and Management, specializing in Geographical Information Systems and Remote Sensing from the International Institute for Geo-Information Sciences and Earth Observation (ITC), the Netherlands. Dr Mayunga has been involved in various training, research and consultancy projects related to urban and regional sciences, disaster risk management and the application of geographical information system and remote sensing.