Unitar Online Catalogue

Hazard assessment using EO and GIS for Kenya

Cross-fertilizing Knowledge

种类 ：	Course
位置 ：	Kenyatta University,Nairobi, Kenya
日期 ：	9 9月 2019 to 13 9月 2019
期限 ：	5 Days
项目领域 ：	Satellite Imagery and Analysis
网址 ：	http://www.unitar.org
价格 ：	US$0.00
活动协调人 email:	luca.DELLORO@unitar.org
合伙 ：	IGAD’s Climate Prediction and Applications Centre (ICPAC)

背景信息

The Greater Horn of Africa region is a land of contrasts. If you look at the two most common hazards in the region notably droughts and floods, they are characterized by severe shortage or excess rainfall, respectively. Disasters pose multifaceted challenges in our region. Drought, for instance, is a phenomenon that not only puts the lives and livelihoods of the communities in the region at risk but also destroys the hard-earned development gains of communities and countries at large. The resources that countries are investing for years in drought

disaster response and recovery could have significant contributions to advance sustainable development. There is a strong need to put in place all the necessary mechanisms to prepare for and respond to disaster risks. Understanding hazards/risk and putting in place monitoring and early warning systems goes a long way towards ensuring Greater Horn of Africa countries better prepare for and mitigate the adverse effects of disasters.

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This training is organized with the objective of strengthening the capacity of national DRM institutions and relevant sector ministries through technical training on hazard assessment, monitoring, and early warning. Such technical training sessions provide a platform for sharing good practices in DRM practices among member states. In this five day course, participants will experience hands-on training and also get an opportunity to discuss recent methods and tools in hazard assessment which are believed to strengthen national efforts in disaster risk reduction.

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- Recall which earth observation (satellite) products are freely available
- Use remote sensing and GIS tools for hazard assesment, monitoring and early warning for disaster risk reduction
- Describe global and regional approaches and methods used to asses hazards.

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MODULE-1: Introduction to Earth Observation and GIS

Applications of Geospatial Technology in Disaster Risk Reduction (Flood and Drought)

Introduction to ArcGIS

Working with Baseline Data in GIS

Basic Geoprocessing and spatial analysis tools

MODULE-2: Earth Observation Products and Processing

Satellite Image Pre-processing (Download, Composing, Mosaicing and Clipping)

Image Processing – Unsupervised Classification

Exercise 2.1: GIS

Exercise 2.2: Remote Sensing

MODULE-3: Concepts and Terminologies in Disaster Risk Management

Hazard Assessment (Drought)

Exposure: Mapping Elements at Risk

Hazard Assessment (Floods)

Drought Vulnerability Assessment and Risk maps

Flood Vulnerability Assessment and Risk maps

Hazard Monitoring and Multi-hazard Early Warning Systems (Presentation and Discussion)

Final Group Exercise

(Droughts and Floods using real life examples – Remote sensing, GIS, Hazard/Risk Assessment)

Discussion and Way forward

Closing Remark –(HAC, IGAD and Participants)

The course is designed to offer a balanced approach between theoretical and practical methodologies, which will enable the participants to gain maximum knowledge on the subject. It will be taught in lecture/discussion formats

illustrated with Power Point presentations, live demos, videos, maps, diagrams, field visits, interactive sessions and content on web sites. Prior skills in Remote sensing and GIS are highly desirable.

The tools will include ArcGIS software for GIS and Remote sensing and Snap tool for flood and drought modelling.