



# unitar

United Nations Institute for Training and Research

## Unitar Online Catalogue

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### In-Country Technical Training on Hazard Assessment Using Earth Observation and GIS for Kenya

Cross-fertilizing Knowledge

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Type:	Course
Location:	Naivasha, Kenya
Date:	22 Jul 2019 to 26 Jul 2019
Duration:	5 Days
Programme Area:	Satellite Imagery and Analysis
Website:	<a href="http://www.unitar.org">http://www.unitar.org</a>
Price:	\$0.00
Event Focal Point Email:	luca.DELLORO@unitar.org
Partnership:	IGAD's Climate Prediction and Applications Centre (ICPAC)

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### BACKGROUND

The IGAD region is prone to recurrent disaster risks mainly drought, floods, landslides, among others that have been affecting significantly the lives and livelihoods of the communities. This is a setback to the efforts to bring about sustainable development to the region. Earth Observation (EO) and Spatial planning plays an important role in understanding these disastrous events,

through mapping of hazards and vulnerability, risk profiling at sub national level and more importantly planning (spatial) for preparedness, mitigation, response and recovery efforts.

It is with these background that United Nations Operational Satellite (UNOSAT) and ICPAC are jointly organizing a one week in-country technical training for the member states on the use of Geographic information system (GIS) for Hazard Assessment using earth observation. This training is designed based on the recommendation from the Regional Technical Training Workshop on Disaster Risk Assessment, Monitoring and early warning held during February 2018 in Mombasa, Kenya where hands on training was provided on drought and to limited extent on flood hazard assessment. The IDDRSI 2nd General Assembly (GA) recommended for an Early Warning and Early Response while, the 4th SC urged PCU to “Support the application and use of existing products such as the Disaster Loss Database and the IGAD Hazard Maps and Atlas to inform and improve programming of IDDRSI.”

This program is sponsored by the Global Facility for Disaster Reduction and Recovery (GFDRR) through World Bank and Norwegian Ministry of Foreign Affairs through UNOSAT.

## **EVENT OBJECTIVES**

This in-country capacity building training workshop is organized to build capacity of member states on hazard assessment, monitoring and early warning using earth observation and GIS technologies towards disaster risk reduction in the region.

## **LEARNING OBJECTIVES**

More specifically the technical training workshop is aimed at:

Strengthening the technical capacity of national staff on Earth observation (Satellite) products freely available and on how to make use of Remote Sensing and GIS tools for hazard assessment and monitoring for early warning

Demonstrating and train staff on steps and methods for hazard assessment using global and regional practices using examples on drought and flood hazard.

Provide a platform for technical experts to discuss the existing methods and tools at national level on hazard assessment, monitoring and early warning in their respective institutions and country at large.

## **CONTENT AND STRUCTURE**

The course is focused on providing insight into various tools available in Earth Observation and spatial planning in relation to flood risk and early warning. On the first day, the participants will be taken through theories and concepts of Earth observations and GIS and they will get familiar with ESRI ArcGIS software. On the second day they will be introduced to Spatial analysis tools and Earth observation products processing and analysis. On the third day, concepts of hazard assessment drought and floods will be introduced. On the fourth and fifth day, the trainees will work on a project in either Floods or drought hazard monitoring and mapping and they will be required to do presentations on the last day of the training.

## **METHODOLOGY**

This is a full-time, face-to-face course with lectures and GIS lab exercises using local datasets and real case scenarios. This course is divided into four modules. Each module is structured into 4 sessions of 1.5 hour each. The workload during this training is likely to be around 25-30 hours.

The whole course is designed in a way to have 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.

## **TARGETED AUDIENCE**

The technical training workshop is organized for technical staffs from relevant focal institutions of the country and more specifically for technical staffs

responsible for disaster risk assessment, monitoring and early warning data/information generation, processing, sharing and reporting. Prior skill on Remote sensing and GIS softwares is highly desirable as this is an advanced and intensive training.

Recommended pre-requisite are:

Basic GIS skills. Prior to the training, participants are highly recommended to attend a 4 hours long course “Getting Started with GIS” offered by ESRI. The course can be accessed through the following link -

<http://training.esri.com/gateway/index.cfm?fa=catalog.webCourseDetail&c...>

Work includes tasks related to flood risk assessment and early warning

Work includes use of geospatial technologies on a daily basis (alternatively, the person is planning to use GIT daily).