



# unitar

United Nations Institute for Training and Research

## Unitar Online Catalogue

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### Advanced Operational Application of Geospatial Information Technology for DRR

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Type:	Course
Location:	Dhaka, Bangladesh
Date:	29 May 2016 to 2 Jun 2016
Duration:	5 Days
Programme Area:	Satellite Imagery and Analysis
Website:	<a href="http://www.unitar.org/unosat">http://www.unitar.org/unosat</a>
Price:	\$0.00
Event Focal Point Email:	unosat@unitar.org
Contact Number:	+41 (0) 22 767 4020
Partnership:	(ADPC)

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### BACKGROUND

Geographic information systems (GIS) can be a very useful tool for the whole disaster management cycle starting from the preparedness phase, mitigation to response, recovery and reconstruction. GIS has proven to be efficient for implementing coherent disaster risk reduction (DRR) activities at regional, national and local scales. Quantifying risk and expected future losses is a key step in any disaster risk reduction program. Also the outputs and scenarios of a

risk assessment contribute to structuring overall risk reduction policies and planning. Geospatial risk assessment can be performed with GIS tools and techniques which can quantify risk and identify the locations in need of risk reduction measures. The role of GIS doesn't stop there; in the immediate aftermath of a disaster, satellite based rapid response analysis enables the emergency response agencies to respond in a better and coordinated way.

The first set of training was conducted during 14-27 October, 2015 in Dhaka, Bangladesh, the course provided training participants with concepts and geospatial methodologies for risk assessment and satellite based rapid response analysis. And all of the participants successfully achieved above 80% score on the defined learning objectives.

With the training students a community of experts was formed and using the community of practice the participants were able to develop a variety of mini-project directly related to their job field and DRR. The final set of training to be held in 29 May - 2 June, 2016 in Dhaka will equip the students with advanced tools and methodologies from completing the projects successfully.

## LEARNING OBJECTIVES

The aim of the course is to provide participants with advanced GIS and RS methodologies related to disaster risk reduction-

### **At the end of the course students should be able to:**

- Recall basic concepts and terminology related to geospatial information technology
- Classify Landcover from satellite Image
- Detect Change from multi-temporal Data
- Identify of Geomorphological Unit from Satellite Image
- Prepare GIS Database for Disaster Response & Recovery Planning Using Mobile Apps
- Apply of GIS and Remote Sensing for decision support services

## METHODOLOGY

This is a full-time, face-to-face course with lectures and GIS lab exercises using local datasets and real case scenarios (80% lab exercises, 20% lectures and

discussions). This course is divided into 10 Modules. Each module is structured into 4 sessions of 1.5 hour each. The average workload per week is likely to be around 25-30 hours.

First three days the students will gather knowledge advanced tools relevant to their project and set deliverables, which will be divided in two sets. Next two days' participants will work on the two sets of deliverables with the help of instructors and presents their analysis and outcome. Once the training is concluded the participants will get one more week to revise refine their result and resubmit, out of them 2 best projects will be considered for international publication.

## TARGETED AUDIENCE

Disaster Management Professionals working in governmental organizations who wish to strengthen their practical skills in GIS/RS applications for DRR. It is recommended that participants of the course "Geospatial Information Technology for DRR: From Preparedness to Emergency Response (Applications and Cases Studies)" held during 14-27 October in Dhaka, Bangladesh are selected for the training.

Participants are recommended to review the course materials from "Geospatial Information Technology for DRR: From Preparedness to Emergency Response (Applications and Cases Studies)" served at Bangladesh Expert Geospatial Working Group -

<https://www.learnatunitar.org/course/view.php?id=640>

## ADDITIONAL INFORMATION

### Language:

English

### Software:

GIS lab exercises will be based on ESRI ArcGIS editor 10.3 with extensions (spatial analyst), Google Earth and internet access.

### Class Size:

The number of participants is limited to 15.

**UNITAR Certificate:**

Students will be given a UN certificate from UNITAR on successful completion of the course.

**Course Coordination:**

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