

Geo-Information in Disaster Situations (Copenhagen)

Satellite Analysis and Applied Research

Deadline: Closed

Type:	Course
Location:	Copenhagen, Denmark
Date:	4 Mar 2019 to 22 Mar 2019
Duration of event:	10 Days
Programme Area:	Satellite Imagery and Analysis
Specific Target Audience:	No
Website:	http://www.unitar.org/unosat
Price:	\$2,200.00
Event Focal Point Email:	unosat@unitar.org

BACKGROUND

The increasing number and intensity of natural disasters in the past few years have had severe consequences in terms of human lives that were impacted, but also in terms of structural damage and economic losses. In years to come, extreme events will no longer be exceptions; therefore, it is essential for sovereign territories in the Caribbean region to strengthen both their preparedness and response capacities to efficiently cope with future disaster events.

Geospatial information technology including satellite imagery analysis and data visualization play a vital role in understanding the geographic extent and severity of catastrophic events. Nevertheless, the ability of national and regional authorities as well as disaster management experts to seamlessly collect, integrate, analyze and distribute geospatial information in a comprehensible format to support evidence-based decision making remains a challenge that needs to be addressed with ad-hoc training and capacity development programs.

To meet these challenges, UNOSAT is offering an introductory course in the use of Geo-Spatial Information Technology applications to support operational planning and decision making during emergency response. The course is designed to accommodate Master students on Disaster Management and selected participants from line ministries, national/regional authorities, UN and NGOs with little GIS experience

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EVENT OBJECTIVES

The aim of the course “Geo-Information in Disaster Situation” is to prepare the students to be able to effectively utilize geospatial tools and apply GIS methodologies for emergency response mapping. The course will provide a foundation for students interested in GIS related applications in the field of disaster risk management.

LEARNING OBJECTIVES

At the end of the course participants should be able to:

- Define and describe basic concepts and terminology related to Geospatial Information Technology (GIT);
- Apply basic methods and functionalities of GIS software (ArcGIS) to manage and analyse spatial data;
- Explain the role of geo-information in the response phase of a disaster;
- Identify suitable mechanisms for satellite imagery acquisition following major disaster events (i.e. international space charter);
- Identify, search, collect, organize and analyse geospatial related information relevant for disaster mapping;
- Apply basic GIS methodologies to perform impact analysis and preliminary damage assessment in the aftermath of a disaster event.
- Undertake the process of map-making in support of emergency response and post disaster / recovery operations;

CONTENT AND STRUCTURE

The course will develop basic technical GIS skills amongst master level’s students and selected participants so that they are able to collect, manage & analyse geospatial data and produce disaster maps using GIS software. During the first week of the training course delivered by the University of Copenhagen, focus will be given to impart basic concept and terminology relative to Geo-spatial Information Technology (GIT), and to learn basic functionalities of ArcGIS software to handle GIS datasets and to perform spatial analysis including the process to produce thematic maps.

Second week of the GIS course will be delivered by UNITAR-UNOSAT and will be focusing, through selected case studies, on specific GIT methodologies and applications to perform impact and damage analysis in the immediate aftermath of a disaster event. Mechanisms to collect pre and post disaster satellite images as well as GIS baseline

data to produce disaster maps in support of emergency response operations will be also covered during the second week of the GIS course.

METHODOLOGY

This is a full-time, face-to-face course with lectures and GIS lab exercises using datasets from past disasters (80% lab exercises, 20% lectures and discussions).

The whole course is designed in a way to have a balanced approach between theoretical and practical methodologies, which will enable the students 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. The final case-study will be designed to give a near real-time scenario for the students to have confidence in handling similar situations in the near future.

The course is divided into 10 Modules offered over a two weeks period. 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.

There will be field visits to various UN organizations in and around Geneva.

TARGETED AUDIENCE

It is recommended that the students taking the course are familiar with basic Microsoft Excel. It could be advantageous for students with prior knowledge on GIS applications, AutoCAD or similar software.

ADDITIONAL INFORMATION

Language:

English

Software:

GIS lab exercises will be based on ESRI ArcGIS editor ArcGIS 10.6 with extensions (spatial analyst), Google Earth and internet access.

Participants MUST have their own laptop (for the entire duration for the course) that are able to run ArcGIS software. Software will be provided by and installed with the help of UNOSAT

Class Size:

The number of participants is limited to 15-20 to ensure quality support and assistance by instructors.

UNITAR Certificate:

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

Training Venue:

University of Copenhagen, Faculty of Health & Medical Sciences, Copenhagen, Denmark

Institution:

This course is offered by UNOSAT, the operational satellite applications programme of the United Nations Institute for training and Research (UNITAR) on the basis of a joint agreement with Copenhagen University as part of the Master of Disaster Management course.

UNITAR'S Operational Satellite Applications Programme (UNOSAT) is a technology intensive programme that provides timely and high-quality geo-spatial information to UN decision makers, member states, international organizations and non-governmental organizations. UNOSAT develops solutions on integrating field collected data with remote sensing imagery and GIS data through web-mapping and information sharing mechanisms, including remote monitoring of development projects and sharing of geographic data using web-services. The main office of UNOSAT is located in Geneva, Switzerland with regional liaison offices in Bangkok and Nairobi.

Course Coordination:

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