Rapid Response Mapping in Disaster Situations

Type: Course
Location: Geneva, Switzerland
Date: 25 Apr 2017 to 27 Apr 2017
Duration of event: 3 Days
Programme Area: Satellite Imagery and Analysis
Specific Target Audience: No
Website: http://www.unitar.org/unosat
Price: No Fee
Event Focal Point Email: cerg@unige.ch
Event Focal Point Contact Number: +41 (0) 22 767 4020

BACKGROUND

When disasters strike, the first thing the international early response community needs is information: What has happened, where did it happen, what is the effect, what response is needed? Not only can satellite imagery taken immediately after an event like an earthquake or tropical cyclone show what has happened through images of destroyed infrastructure or flood surge, but with their inherent geo-coding, one can tell immediately where the event took place and the apparent impact of the disaster. This is key information for an efficient planning and coordination of emergency response operations. The value of Geographic information systems (GIS) in emergency response arises directly from the benefits of obtaining, integrating, organizing, inquiring and analyzing geographic information and databases. This course introduces the application of GIS in emergency response mapping and damage assessment in disaster situations from the perspective of United Nations.

LEARNING OBJECTIVES

The aim of the course is to provide training participants with concepts and GIS methodologies to perform satellite based rapid response mapping and damage assessment including the understanding of the benefits and limitations of using geo-spatial information technology in the immediate aftermath of a disaster.

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

- Explain the role of Geo-information in the response phase of a disaster;
- Gain awareness of GIS methodologies related to the rapid mapping processing chain to support emergency response;
Identify, access, search, collect, organize and analyze geospatial data for emergency response mapping;
Apply basic GIS methodologies to perform impact analysis and preliminary damage assessment in the immediate aftermath of a disaster.

CONTENT AND STRUCTURE

The course is focused on providing insight into various tools available in GIS for situation mapping. Focus is given to understand the concept of GIS and its integration in disaster situations. A central part of the course is the case which involves collecting information and GIS data from web sources, preparing, and analysing and creating situation maps to support emergency response. Hands on experience with the field data collection tools like Global Positioning System (GPS) receivers and smart phone applications such as UN-ASIGN will also be part of the course. During GIS lab exercises, students will work with real case datasets from past disasters.

METHODOLOGY

This is a full-time, face-to-face course with lectures and GIS lab exercises using local datasets and real case scenarios (60% lab exercises, 40% lectures and discussions). This course is divided into 2.5 modules. Each module is structured into 4 sessions of 1.5 hour each. The average workload of the entire course is likely to be around 15 hours.

TARGETED AUDIENCE

Disaster management professionals working in governmental organizations who wish to strengthen their GIS skills in emergency response mapping. It is recommended that participants taking the course have a working knowledge of English including basic experience in GIS and Remote Sensing applications.

ADDITIONAL INFORMATION

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

Class Size:
The number of participants is limited to 25 to ensure quality support is provided.

Course Coordination
Mr. Luca Dell’Oro
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Registration
Information request should be sent to the coordination of the CERG-C program at: cerg@unige.ch

Fees:
Training cost on request

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