Knowledge to Lead

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Unitar Online Catalogue

Geospatial Information Technology Applications for Operational Planning and Decision-Making

Satellite Analysis and Applied Research

Type:	Course
Location:	Jakarta, Indonesia
Date:	14 Oct 2019 to 18 Oct 2019
Duration of event:	5 Days
Programme Area:	Satellite Imagery and Analysis
Specific Target Audience:	No
Website:	http://www.unitar.org
Price:	No Fee

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BACKGROUND

Indonesia is in one of the world’s most natural disaster-prone areas and is at risk to multiple hazards, including flooding, earthquakes, landslides, tsunami, volcano, and cyclone. Over the last 30 years, there have been an average of 289 significant natural disasters per year and an average annual death toll of approximately 8,000. The Government of Indonesia spends $300 to $500 million annually on post-disaster reconstruction. Costs during major disaster years reach 0.3 percent of national GDP and as high as 45 percent of GDP at the provincial level (Country Disaster Profile – GFDRR, 2017). Throughout 2018, Indonesia's National Disaster Mitigation Agency (BNPB) recorded almost 2,000 natural disasters that claimed more than 4,000 lives and displaced approximately 3 million people. Disaster events occurred in 2018 have also caused severe financial losses, which the agency estimates to be more than $2.9 billion from just the tsunami and 7.4 M earthquake in Central Sulawesi and the 6.4 M earthquake in Lombok events alone (Indonesia's National Disaster Mitigation Agency (BNPB)).

Over the last two decades Geo-spatial Information Technology (GIT) has rapidly developed and is now being also

called an “enabling technology” due to the benefit it offers across different application domains. GIT can help us to analyse and to better understand why and where things have happened in the past and it can also show us why and where they might happen in the future allowing us to make informed decision and better use of our resources. Geospatial Information Technology (GIT) can be a very useful tool for the whole disaster risk management cycle starting from the preparedness phase, mitigation to response, recovery and reconstruction. In addition, Geo-spatial Information Technology (GIT) including satellite imagery analysis and data sharing/visualization platforms play a vital role in understanding the geographic extent and severity of disaster events. Nevertheless, the ability of national and regional authorities as well as disaster management experts to seamlessly collect, integrate, analyse and utilise geospatial information to support evidence-based operational planning and decision making remains a challenge that may be addressed with ad-hoc training and capacity development solutions.

EVENT OBJECTIVES

Under the overall project framework “Engaging the private sector to support disaster risk reduction capacity and advance children’s rights in Indonesia”, UNITAR-UNOSAT and UNICEF are partnering to offer 1 week (5 days) training course: “Introduction to Geospatial Information Technology for humanitarian operational planning and decision-making”. The overall aim of this GIS course is to provide training participants with concepts and terminology of Geo-spatial Information Technology (GIT) including ad-hoc geospatial methodologies based on selected real case scenarios to support emergency response and recovery planning operations.

CONTENT AND STRUCTURE

The course will provide participants with a theoretical understanding of basic principles of GIS and Remote Sensing (RS) with focus on specific GIT applications to support humanitarian operational planning and decision-making. A central part of the course is the case which involves collecting disaster related information and GIS data from relevant data sharing platform, apply GIS methodologies for selected case studies and creating situation/impact and damage assessment maps to support emergency response and recovery planning. During GIS lab exercises, participants will work with real case datasets from selected past disasters events occurred in Indonesia.

METHODOLOGY

This is a full-time, face-to-face course with lectures and GIS lab exercises using GIS datasets and real case scenarios (60% lab exercises, 40% lectures and discussions). This course is divided into 5 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.

The course is designed in a way to have a balanced approach between theoretical and practical teaching methods consisting in PowerPoint presentations, live demos, videos, interactive sessions and GIS lab exercises.

TARGETED AUDIENCE

Expected target audience for this course are selected participants from line ministries, national ICT organizations and UN agencies with preferably professional experiences in the following fields: Disaster Risk Management, Disaster Risk Reduction and Humanitarian Response. Basic to intermediate skills in GIS/RS and Information management would be highly recommended for taking the course.

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