Training on the Application of GIT for Rapid Response Mapping in Bangladesh

United Nations Satellite Centre UNOSAT

Date limite: 25 Mar 2024

Type:	Course
Emplacement:	Dhaka, Bangladesh
Date:	30 Mar 2024 to 3 Avr 2024
Durée:	5 Days
Zone du programme:	Satellite Imagery and Analysis
Site internet:	https://unosat.org/
Prix:	0.00 $US
Personne de référence de l'évenement:	khaled.mashfiq@unitar.org
Partenariat:	Norwegian Agency for Development Cooperation (NORAD), Department of Disaster Management (DDM) Bangladesh, a2i – Aspire to Innovate

ARRIÈRE PLAN

In July 2021, UNOSAT and the Nowergian Agency for Development Cooperation (NORAD) signed a new cooperation framework to sustain and expand their

longstanding efforts to strengthen capacities in the use of geospatial information technologies for improved resilience in the Asia-Pacific and Africa. This 3 year-long project builds on previous experiences and aims to further enhance capacities by leveraging technological advances and innovation and providing integrated geospatial solutions for improved decision making in the fields of Disaster Risk Reduction, Climate Resilience, Environmental Preservation & Food Security in the eight target countries: Nigeria, Uganda, Bhutan, Bangladesh, Lao PDR, Solomon Islands, Vanuatu and Fiji. The project aims to develop sustainable capacities and implement tailored geospatial solutions to enhance policy and decision-making processes in resilience building.

Since 2011, with support from the Norwegian Ministry of Foreign Affairs and later the Norwegian Agency for Development Cooperation (NORAD), UNOSAT has been enhancing capacities of the different national and regional stakeholders from target countries in Asia and East Africa region. While the previous projects were successful in strengthening capacities and increasing awareness of government stakeholders in the use of geospatial technology applications for evidence-based decision making, government beneficiaries have expressed the further need for having more long-term in-country capacity development activities. Also, with the advent of new technologies such as machine learning, big-data analytics and the launching of new earth observation satellites it is very important that stakeholders in the LDCs & SIDS countries can make the best use of those technologies and support for evidence-based decision making.

Bangladesh is exposed to various natural hazards like flood, tropical cyclone, etc. especially from hydro-meteorological hazards which are likely to worsen with changing climate. For example, the rainfall pattern in Bangladesh is going to be more variable and erratic in future. There is an indication by Bangladesh Delta Plan 2100 that pre-monsoon and monsoon rainfall will increase under Business As Usual (BAU) scenario and on an annual basis and the rainfall is expected to increase in most regions during 2030. Under the Extreme (EXT) scenario, as temperature rise will be higher, more erratic behaviour of rainfall along with variation in amounts is projected. With that extreme flooding and tropical cyclone events are likely to occur more frequently.

OBJECTIFS DE L'ÉVÉNEMENT

To reduce the risks, its essential to understand the risk using geospatial information technologies (GIT), as factors like hazard, exposure, vulnerability are

location-bound. GIT has become one of the most crucial tools for DRM, both for risk reduction and response. During disasters, GIT can help us to estimate impacts for immediate response.

As part of the project activities, this training session will focus on topics of Geospatial Information Technology and its application in disaster management. The overall aim of the course is to improve on-the-job performance on the use of QGIS software and basic GIT applications for disaster risk assessment.

OBJECTIFS D'APPRENTISSAGE

Upon completion of the training program, participants will be able to:

- Describe the importance of Geospatial Information Technology (GIT) for Disaster Risk management;
- Recall basic methods and functionalities of GIS software (QGIS) and basic concepts related to GIS and Remote Sensing;
- Gather free geospatial data and satellite image available in the web;
- Assess exposure of selected elements for specific hazard;
- Utilise open source applications to collect field data for disaster response operations;
- Prepare a Rapid Response Map.

CONTENU ET STRUCTURE

The course will start with the concepts of GIS and Remote Sensing. The following sessions will also provide the participants with theoretical understanding of remote sensing and hazard mapping. The participants will then learn how to conduct exposure assessment of population and any other relevant element. Towards the end of the session the participants will plan and execute a complete exercise on the topics covered in the training.

MÉTHODOLOGIE

This is a full-time, face-to-face course with lectures, image processing lab exercises using GIS datasets and real case scenarios (60% lab exercises, 40% lectures and discussions). This course is divided into 6 modules. Each module is structured into 2 to 4 sessions of 1.5 hour each. The course is designed in a way

to have a balanced approach between theoretical and practical teaching methods consisting of presentations, live demos, interactive sessions, and lab exercises. At the end of the course, UNITAR-UNOSAT will set up a community of practice platform to maximise the learning experience of participants and to provide all required technical backstopping and assistance to training participants during and after the training.

AUDIENCE VISÉE

The course is designed to accommodate selected participants by Department of Disaster Management (DDM) and other relevant stakeholders. Since the main purpose of the training is to build capacity of technical staff to apply useful acquired GIT skills in their daily jobs, the suggested criteria of selection may include:

- Staff who have the commitment and mandate to use the knowledge and skills acquired to support disaster risk management operations;
- Basic computer literacy is required.

INFORMATIONS SUPPLÉMENTAIRES

All lab exercise will be conducted with open source software such as QGIS