Unitar Online Catalogue

Introduction to Geospatial Information Technology for Climate Resilience and Sustainable Development.

United Nations Satellite Centre UNOSAT

Date limite: 6 Mar 2026

Type:	Course
Emplacement:	Chiang Mai, Thailand
Date:	7 Mar 2026 to 8 Mar 2026
Durée:	2 Days
Domaine du programme:	Satellite Imagery and Analysis
Site internet:	https://unosat.org/
Prix:	0.00 $US
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Partenariat:	Chiang Mai University

CONTEXTE

Climate change impacts, particularly hydrometeorological hazards such as extreme floods, sea-level rise and salinity intrusion, are increasingly displacing rural farming communities across Southeast Asia. In response, a regional research initiative led by Chiang Mai University (CMU-SPP) and its partners aims

to support just and sustainable land allocation for displaced farmers in Cambodia, Thailand and Viet Nam. A central pillar of this initiative is the development of analytical and decision-support tools that help governments and communities assess displacement risks and plan relocation based on evidence, human rights principles and local vulnerabilities.

As a primary technical partner, the United Nations Satellite Centre (UNOSAT), under the United Nations Institute for Training and Research (UNITAR), is developing a Climate Displacement Risk Model using Geospatial Information Technology (GIT). Within this context, UNOSAT is offering an introductory course on Geospatial Information Technology for Climate Resilience and Sustainable Development.

Geospatial Information Technology (GIT) links hazards, people, infrastructure, and services through location. By integrating Earth observation, GIS, and socio-economic data, it turns complex information into decision ready maps and analysis that show where risks concentrate, who is most exposed, and where access gaps exist in essential services. GIT supports the full disaster risk management cycle, from prevention and preparedness to response and recovery, by enabling risk assessments that combine hazard, exposure, and vulnerability to estimate potential impacts and guide targeted risk reduction and early action. It also supports sustainable development by informing safer land use and infrastructure planning, protecting livelihoods and natural resources, and improving the equity and efficiency of investments so development gains are more resilient to climate and disaster risks.

OBJECTIFS DU COURS

The overall aim of the course is to provide participants with a basic introduction to Geospatial Information Technology, using practical scenarios and hands-on exercises including satellite data exploration, flood exposure mapping, and farmer displacement modelling to support climate resilience and sustainable development planning.

OBJECTIFS D'APPRENTISSAGE

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

- Explain the role of Geospatial Information Technology (GIT) and Earth observation in supporting climate resilience and sustainable development decision-making.
- Utilise web-based platforms to explore and extract basic satellite imagery for a defined area of interest.
- Conduct a basic flood exposure analysis in QGIS by overlaying flood layers with settlement and population data.
- Describe the use of geospatial modelling to assess farmer climate displacement risk and support risk
  informed resettlement planning.

CONTENU ET STRUCTURE

The course will provide participants with a basic understanding of the principles of Geospatial Information Technology (GIT), GIS, and Earth observation for climate resilience, including where to access satellite and geospatial data through web-based platforms and how to use QGIS for simple visualisation and flood exposure analysis. Participants will also be guided through practical examples of flood monitoring and farmer climate displacement modelling to strengthen their ability to interpret maps and apply geospatial information to support risk-informed and sustainable resettlement planning.

MÉTHODOLOGIE

This is intensive, in-person training that combines short lectures, live demonstrations, and hands-on lab exercises. The course emphasizes applied learning, with approximately 80% of time dedicated to practical exercises and 20% to conceptual discussions. Participants will engage in guided walkthroughs and collaborative exploration of open-source tools, building skills incrementally to understand the technical workflow behind climate-resilient planning.

AUDIENCE CIBLE

The course is intended for participants nominated by Chiang Mai University (CMU-SPP)

INFORMATIONS SUPPLÉMENTAIRES

Lab exercises will be based on QGIS software.