Unitar Online Catalogue

Training on the use of Geospatial Information Technology (GIT) for Disaster Risk Reduction (DRR)

卫星分析和应用研究

截止日期 : 19 5月 2025

种类 :	Course
位置 :	Port Moresby, Papua New Guinea
日期 :	26 5月 2025 to 29 5月 2025
期限 :	4 Days
项目领域 :	Satellite Imagery and Analysis
网址 :	https://unosat.org/
价格 :	US$0.00
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合伙 :	UNDP (639)

背景信息

The training is part of the project “Enhanced Geospatial Decision Support for Disaster Risk Reduction and Climate Resilience in Papua New Guinea (GeoDRR PNG)”, implemented by UNITAR-UNOSAT in collaboration with UNDP Papua New Guinea. This initiative aims to enhance the capacity of national stakeholders in leveraging geospatial technologies for improved disaster risk management and

climate resilience.

Papua New Guinea faces frequent and severe natural hazards including floods, droughts, cyclones, earthquakes, volcanic eruptions, landslides, and tsunamis—exacerbated by its complex geography and climate-related vulnerabilities. Many communities, especially in remote and coastal areas, lack access to timely warnings and spatial risk information. Compounded by fragmented data and limited analytical capacity, these conditions hinder effective disaster planning and emergency response.

The GeoDRR PNG project addresses these challenges by developing a robust Spatial Decision Support System (DSS), conducting multi-hazard risk mapping, and delivering tailored training programmes.

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The training introduced participants to core concepts in GIS and remote sensing, practical data collection from web sources, and hands-on risk analysis for landslides and coastal inundation. It also builds capacity in the use of geospatial DSS tools to support evidence-based DRM planning and enhance institutional preparedness at national and sub-national levels.

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

- Explain the role of geospatial technologies in disaster risk management (DRM).
- Apply GIS software tools to process spatial data and create visualizations relevant to DRM.
- Identify and retrieve free geospatial datasets and satellite imagery from reputable online sources.
- Conduct landslide and coastal inundation risk assessments using appropriate geospatial analysis methods.
- Utilize geospatial decision support systems (DSS) to develop DRM plans and facilitate stakeholder engagement.

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The course introduces the application of geospatial information systems (GIS) and remote sensing for disaster risk management, with a focus on coastal and landslide hazard assessment in Papua New Guinea. The training begins with foundational modules on GIS tools and data handling, followed by practical sessions on gathering geospatial data from web sources. Participants will then engage in hands-on exercises to assess landslide exposure and coastal inundation risk. The final modules will explore how geospatial decision support systems (DSS) can be used to support disaster planning and enhance resilience through informed decision-making.

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This is a full-time, in-person course combining lectures, interactive sessions, and hands-on lab exercises using open-source GIS software and real-world disaster risk scenarios (60% lab exercises, 40% lectures and discussions), and collection of geospatial data from the web. This course is divided into 5 modules. The average workload is likely to be around 28 hours. The course is designed in a way to have a balanced approach between theoretical and practical teaching methods consisting of presentations, live demos, videos, interactive sessions, and lab exercises.

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The course is intended for participants nominated by UNDP Papua New Guinea, with a basic understanding of GIS and remote sensing. Participants may come from diverse professional backgrounds across relevant ministries and agencies. It is recommended that departments nominate individuals who are motivated to apply the skills gained from this capacity-building programme to their day-to-day work in order to enhance service delivery and project implementation within their respective institutions.

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Lab exercises will be based on open-source software and applications.