MERCURY

GIS Application In Disaster Risk Reduction Training

14 - 25 Jul 2025
London (UK)

GIS Application In Disaster Risk Reduction Training

Ref.: 15525_313371 **Date:** 14 - 25 Jul 2025 **Location:** London (UK) **Fees:** 9500 **Euro**

Introduction:

Information and Communication Technologies ICTs have greatly enhanced the capabilities for technical problem-solving using Geographical Information Systems GIS in the context of disaster risk reduction DRR. It includes the utilization of GIS for hazard mapping and modeling, employing web-based data resources for research on disaster management, and harnessing searchable databases for hazard information. However, not all Caribbean countries have managed to leverage these technological advancements fully.

This GIS application in disaster risk reduction course is designed to equip participants with practical skills for employing GIS to address the myriad challenges encountered throughout the various phases of disaster management. Disaster Risk Reduction DRR is a systematic approach to minimizing the damages caused by natural and man-made hazards.

Through the application of GIS in disaster risk reduction, professionals can implement disaster risk reduction strategies, develop disaster risk reduction frameworks, and partake in disaster risk reduction management to mitigate risks. It will cover the disaster risk reduction theory, offer insights into the benefits of disaster risk reduction, and delve into the specifics of disaster risk reduction programs.

Targeted Groups:

The GIS application in disaster risk reduction training will benefit professionals in diverse sectors, including:

- Individuals working in development and disaster risk management-related fields.
- Managers from various institutions and companies.
- Leaders of crisis and risk management departments.
- Personnel involved in disaster and crisis management.
- Public relations and media operatives due to their critical role in crisis control.
- Security staff of organizations.
- Relief workers and emergency response teams.
- Those keen on enveloping their skills within this field.

Training Objectives:

By the conclusion of this GIS application in disaster risk reduction course, participants will be able to:

- Describe and exploit spatial data effectively.
- Comprehend using spatial data through the pre-disaster, in-disaster, and post-disaster phases.

Targeted Competencies:

The GIS application in disaster risk reduction course is aimed at fortifying competencies in:

- Maintenance Planning Planners, Schedulers, Engineers, Leaders, and Managers.
- Maintenance Engineers, Supervisors, Section Leaders, Team Leaders, and Managers.
- Reliability Engineers, Section Leaders, Team Leaders, and Managers.
- Integrity Engineers, Section Leaders, Team Leaders, and Managers.
- Operation Engineers, Section Leaders, Team Leaders, and Managers.

Course Content:

Unit 1: Disaster Management Concepts and Institutional Framework:

- Basic GIS concepts and terminologies in disaster management.
- International and Regional Protocols and action plans relating to disaster risk management.
- Introduction to spatial information.

Unit 2: Introduction to Geoinformatics, GIS Data Sources, and Data Collection:

- Geographic Information System GIS overview.
- Data sources pertinent to Disaster Risk Management DRM.
- Data gathering techniques utilizing Global Positioning Systems GPS.
- Mobile Data Collection processes, such as Open Data Kit ODK.
- Introduction to GIS functions with QGIS software.
- Crafting an Earthquake Hazard Map.

Unit 3: Hazard, Vulnerability, and Risk Assessment with QGIS:

- Exploring risk assessment types, methods of risk evaluation, and vulnerability analysis.
- Spatial data management and GIS integration methods in tandem with Microsoft Excel.
- Application of GIS in disaster readiness planning.
- Assessment of elements at risk through GIS-enabled hazard and vulnerability analysis.
- Employing GIS multi-criteria analysis for vulnerability assessment.

Unit 4: Application of Risk Information for Risk Reduction Planning:

- Visualization of risk information through QGIS.
- Risk cartography and generation of databases using QGIS.
- Practical Exercise: Developing a risk map.

Unit 5: Applications of Geoinformation in Disaster Management:

- Scoping Disasters: Examples and Technological Advancements.
- Introduction to Quantum GIS QGIS - open source platform.

Unit 6: Global and National Initiatives in Disaster Management:

- Assessing The Disaster Management Support Program.
- Key International and Regional Initiatives in DRR.
- Case Studies on Disaster Management Planning and Emergency Responses.

Unit 7: Public Participatory GIS and Disaster Risk Management:

- Application of Participatory GIS for DRR mapping.
- Utilizing Google Maps and Google Earth in DRM.
- Mapping community crises through participatory approaches.

Unit 8: Utilizing GIS for Flood Analysis and Management:

- Mapping inundation from floods.
- Assessing flood damage at a preliminary level.

Registration form on the :
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