



*Training Course:
Advanced GIS Management for Sustainable
Development and Planning*

*21 - 25 April 2025
Madrid (Spain)
Pestana CR7 Gran Vía*

Training Course: Advanced GIS Management for Sustainable Development and Planning

Training Course code: SC235527 From: 21 - 25 April 2025 Venue: Madrid (Spain) - Pestana CR7 Gran Vía Training Course Fees: 5775 € Euro

Introduction:

The integration of Geographic Information Systems GIS in sustainable development and urban planning has transformed how governments, planners, and organizations manage land use, natural resources, and infrastructure. This course, "Advanced GIS Management for Sustainable Development and Planning," is designed to provide professionals with in-depth skills to leverage GIS for creating environmentally sustainable solutions. Participants will explore advanced spatial analysis, data management techniques, and strategic GIS applications, specifically for sustainable urban development, resource conservation, and environmental planning.

Target Audience:

- Urban Planners and Developers
- Environmental Scientists and Consultants
- Government and Municipal Officers in Planning and Development
- GIS Managers and Coordinators
- Sustainable Development Practitioners
- Resource Managers and Conservationists
- NGOs and organizations working on urban planning, sustainability, and environment
- Infrastructure and transport planners

Objectives:

By the end of this training, participants will be able to:

1. Apply advanced GIS tools for sustainable urban development and environmental planning.
2. Integrate spatial data to create long-term planning solutions for cities and regions.
3. Conduct environmental impact assessments using GIS.
4. Develop GIS-based strategies for managing resources, land use, and infrastructure sustainably.
5. Use GIS for monitoring and evaluating the sustainability of projects and developments.
6. Build predictive models for climate change, urban growth, and natural resource management.

7. Incorporate geospatial analysis into strategic planning for sustainable development goals SDGs.

Outlines:

Day 1:

Fundamentals of Sustainable Development and Planning with GIS

- Introduction to GIS and its role in sustainable development
- Key concepts in sustainability, urban planning, and environmental management
- The role of spatial data in land use, resource management, and infrastructure planning
- Sustainable Development Goals SDGs and GIS applications
- Case studies: GIS in sustainable development planning around the world

Learning Outcome: Understanding how GIS integrates with sustainability and planning frameworks.

Day 2:

Advanced Spatial Data Management for Sustainability

- Advanced techniques for collecting, processing, and analyzing spatial data
- Managing large datasets: Land use, environmental, and infrastructure data
- Data accuracy, quality, and integration from various sources satellite, remote sensing, etc.
- GIS and remote sensing in environmental monitoring climate change, deforestation, etc.
- Cloud GIS and collaborative data sharing platforms for sustainable development

Learning Outcome: Mastering data management techniques for sustainability-focused projects.

Day 3:

GIS Applications for Urban Planning and Resource Management

- GIS in urban growth modeling and land use planning
- Transport infrastructure and environmental impact analysis using GIS
- Resource management with GIS: Water, energy, and natural resources
- Urban resilience: Using GIS for climate risk and vulnerability assessments
- GIS tools for zoning, green space planning, and smart city initiatives

Learning Outcome: Ability to apply GIS in urban planning and resource management for sustainability.

Day 4:

Environmental Impact Assessment and Predictive Modeling with GIS

- Conducting Environmental Impact Assessments EIA with GIS
- Predictive modeling for urban expansion, deforestation, and climate change
- Using GIS to simulate future scenarios for resource use and environmental changes
- Tools for monitoring and tracking sustainable development progress
- Case studies: GIS predictive modeling for sustainable cities and regions

Learning Outcome: Capability to use GIS for predicting and mitigating environmental impacts.

Day 5:

Strategic GIS Planning for Sustainable Development

- Developing and implementing GIS strategies for long-term sustainable development
- Integrating GIS into decision-making processes for land use, transport, and resource planning
- Monitoring and evaluating project sustainability using GIS dashboards and reports
- Collaborating with stakeholders for GIS-driven sustainable initiatives
- Hands-on workshop: Developing a GIS-based strategic plan for a sustainable development project
- Final assessment and discussion on emerging GIS trends in sustainability

Registration form on the Training Course: Advanced GIS Management for Sustainable Development and Planning

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