Environmental Investigation: Techniques and Best Practices

25 – 29 October 2027
Rome (Italy)



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Why This Course

Environmental investigations are essential for identifying contamination, assessing environmental risks, supporting regulatory compliance, and developing effective remediation strategies. Whether dealing with contaminated land, water pollution, air quality concerns, ecological impacts, or industrial site assessments, professionals need a structured approach to collect reliable data and make informed decisions.

This comprehensive 1-week Environmental Investigation Training program equips participants with the knowledge and practical skills needed to conduct thorough environmental site assessments from initial review to remediation planning. The course covers investigation methodologies, legal frameworks, desktop studies, field sampling, data quality, laboratory result interpretation, risk assessment, geophysical surveys, GIS, ecological surveys, contaminated land strategies, remediation technologies, and reporting. Through practical exercises and field-focused techniques, participants will learn how to identify environmental hazards, analyze findings, and recommend appropriate corrective actions.

What You'll Learn and Practice

By joining this program, you will:

- Understand the principles and methodologies of environmental investigation.
- Conduct initial site assessments and desktop studies.
- Identify environmental hazards and potential contamination sources.
- Understand legal, regulatory, and compliance requirements.
- Apply soil, water, and air sampling techniques.
- Use field equipment safely and effectively.
- Apply data quality assurance and control practices.
- Analyze and interpret environmental data and laboratory results.
- Conduct risk assessments for environmental hazards.
- Explore advanced investigation methods such as geophysical surveys, GIS, and remote sensing.
- Apply ecological survey and biodiversity assessment techniques.
- Develop site-specific remediation plans and professional investigation reports.



The Program Flow

Day 1: Introduction to Environmental Investigation

- Understand the environmental investigation process from planning to reporting.
- Review legal and regulatory frameworks related to environmental investigations.
- Apply site assessment techniques for identifying potential environmental concerns.
- Conduct initial data gathering and desktop studies.
- Develop investigation objectives, scope, and preliminary site understanding.

Day 2: Field Sampling and Data Collection

- Apply soil sampling methods for environmental investigation.
- Use water sampling techniques for surface water and groundwater assessments.
- Conduct air quality assessment and basic monitoring activities.
- Operate and maintain field equipment properly.
- Follow good field practices for sample handling, documentation, and chain of custody.

Day 3: Environmental Data Analysis and Interpretation

- Apply data quality assurance and quality control procedures.
- Use statistical methods to analyze environmental data.
- Apply risk assessment methodologies to evaluate potential impacts.
- Interpret laboratory results in relation to standards and site conditions.
- Translate technical findings into practical environmental conclusions.

Day 4: Advanced Investigation Techniques

- Explore geophysical survey methods for subsurface investigation.
- Use remote sensing and GIS applications for environmental assessment.
- Conduct ecological surveys and biodiversity assessments.
- Apply contaminated land investigation strategies.
- Select suitable advanced techniques based on site conditions and investigation objectives.

Day 5: Remediation Planning and Reporting

- Review remediation technologies for soil, water, and contaminated land.
- Develop site-specific remediation plans based on investigation findings.
- Understand the role of environmental impact assessment in project planning.
- Prepare clear environmental investigation reports.
- Present findings, risks, and recommendations to stakeholders and decision-makers.



Individual Impact

- Build confidence in conducting environmental investigations.
- Strengthen practical skills in field sampling, data collection, and site assessment.
- Improve the ability to analyze laboratory results and environmental data.
- Gain knowledge of remediation planning and regulatory expectations.
- Develop stronger technical reporting and presentation skills.

Work Impact

- Improve the quality and reliability of environmental site assessments.
- Support better compliance with environmental regulations and standards.
- Strengthen decision-making around contamination risks and remediation needs.
- Improve environmental risk identification and mitigation.
- Support more effective communication with regulators, clients, communities, and project teams.

Training Methodology

This program combines environmental investigation principles with practical field application through:

- Environmental site assessment case studies.
- Desktop study and initial investigation exercises.
- Soil, water, and air sampling practice scenarios.
- Data quality, statistical analysis, and risk assessment activities.
- GIS, remote sensing, and contaminated land investigation discussions.
- Remediation planning, reporting, and presentation workshops.

Beyond the Course

Upon completion, participants will be able to:

- Conduct comprehensive environmental site assessments.
- Use field sampling equipment and techniques with greater confidence.
- Collect, manage, analyze, and interpret environmental data.
- Assess environmental risks and identify appropriate response actions.
- Develop effective remediation strategies for site-specific conditions.
- Prepare professional environmental investigation reports and recommendations.

