

# Environmental Monitoring and Modelling

## INTRODUCTION

- This Environmental Monitoring and Modelling training course is designed to allow participants with the applicable skills and knowledge to evaluate and report on the conformance of an environmental management system and effectively implement an environmental management system. It provides the knowledge to develop, manage, and monitor Environmental Management Systems (EMS) suitable to the needs of their organisation focusing on environmental risks, activities, characteristics, and impacts.
- This training course aims to present to the participants the idea, methodology, and essential tools of environmental modeling. Nowadays, Models are imperative tools in environmental studies and management. To better understand environmental systems, to forecast their behaviour and to develop effective management strategies, it is essential to bring together ecological, socio-economic, and technological aspects of environmental problems.
- As concern grows for constantly improving the quality of the environment, organizations of all types and sizes are progressively turning their attention to the environmental effects of their activities, products, and services. The environmental act of an organization is of importance to internal and external concerned parties. Achieving thorough environmental performance requires organisational commitment to a systematic approach and continual improvement of their environmental performance.

This training course will highlight:

- Understanding the different types of environmental aspects and their environmental impacts
- Understanding the requirements of the environmental management standard ISO 14001:2015
- Developing and implementation of an Environmental Management System (EMS)
- Preparing operational plans for obtaining compliance with ISO 14001:2015
- Identifying all the waste stream types and, the opportunities for recycling of waste and land rehabilitation

## OBJECTIVES

- Environmental monitoring defines the processes and activities that need to take place to characterise and monitor the quality of the environment. It is used in the preparation of environmental effect assessments, as well as in several circumstances in which human events carry a risk of harmful effects on the natural environment.
- All monitoring strategies and programs have details and justifications which are often considered to establish the present status of an environment or to establish trends in environmental constraints.

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

- Understand types of environmental aspects and their environmental impacts
- Understand the requirements of newly revised ISO 14001:2015 standard
- Identify all waste stream types and opportunities for reducing costs of waste
- Understand environmental-management system definitions, ideas, and guidelines
- Understand the requirements of the ISO 14001:2015 standard
- Understand the Environmental Management System (EMS) implementation phases, learn best-practice techniques, examine useful tools, and understand the incorporation of the Environmental Management System (EMS) with other environmental programs
- Apply environmental-management principles to achieve continual Environmental Management System (EMS) improvement

## TRAINING METHODOLOGY

- The participants will learn by active participation through inspiring presentation tools and interactive techniques presented in a lively, enthusiastic, and exciting style. They will take part in practical team exercises, typical case studies, and open discussion forums, as related to their own organisation's operational activities.
- This Environmental Monitoring and Modelling training course combines instruction on the latest developments in the field of Environmental Management Systems with best Practices in obtaining ISO Certification including real-world case studies, video dramatizations, self-assessments, participatory discussions, and many exercises to make the course an exciting and enriching learning experience.

## ORGANISATIONAL IMPACT

- The key financial savings as a direct result of implementing an effective environmental management system
- Able to identify the environmental aspects and impacts, so reducing the risk from environmental incidents occurring
- Implement a system that ponders socio-economic needs and environmental circumstances
- Improve the efficiency of the environmental management system
- Have an in-depth knowledge of the requirements of ISO 14001:2015
- Implement and sustain an environmental management system in line with the requirements of ISO 14001:2015

## PERSONAL IMPACT

This training course will personally benefit the participants to gain or enhance their understanding and knowledge by the following:

- Able to better understand the nature of environmental aspects and the associated impacts within the organisation's operational activities
- Understand the environmental management principles and terminologies
- Know the purpose and role of the international standard for environmental management ISO 14001:2015
- Identify key benefits to your organization from implementing an effective EMS
- Apply good practice to the implementation using proven tools and techniques

## WHO SHOULD ATTEND?

- This Environmental Monitoring and Modelling course will significantly benefit all individuals who wish to improve their skills and develop their knowledge of Environmental Management Systems (EMS).

This training course is a suitably wide range of professionals but will significantly benefit:

- Production and Process Engineers
- Maintenance Engineers
- People who are involved in the managing and purchasing of hazardous substances
- Managers, Supervisors, and Consultants who will be part of an Environmental Management Systems Implementation Team
- Anyone involved in the implementation, maintenance or supervising of an ISO 14001

## Course Outline

### Introduction to Environmental Management

- Benefits of Good Environmental Management
- Key Environmental Management System (EMS) Elements
- Document Framework for an Environmental Management System
- Environmental Management System as a Process (Plan / Do / Check / Act)
- ISO 14001:2015 Environmental Management System Benefits
- ISO 14001:2015 Requirements

- Understanding Organisation's Activities and Interested Parties

## Environmental Management Systems / Leadership and Planning

- Initial Environmental Review (IER)
- Developing and Communicating an Environmental Policy
- Assigning Organisational Roles, Responsibilities, and Authorities
- Determining Organisation's Compliance Obligations
- Selecting Risk Control Measures for Managing Significant Impacts
- Setting Environmental Objectives and Programs to Achieve Them

## Environmental Aspects & Impacts

- Identifying and Analysing Environmental Aspects and Impact Risks
- Understanding Environmental Impacts
- Understanding Global, Regional and Local Environmental Issues
- How to Determine Significant Environmental Aspects
- Analysis of Impacts
- Carrying out an EIA
- Identifying Applicable Regulatory and Standards' Requirements

## Support and Operations

- Awareness
- Communication
- Documented Information
- Operational Control
- Contractor & Supplier Controls
- Emergency Preparedness and Response

## Performance Evaluation and Internal Environmental Auditing

- Carrying Out an Environmental Audit
- EMS Performance Monitoring, Measurement, Analysis and Evaluation
- Checking and Evaluation of Compliance Obligations
- Management Review Process