INTRODUCTION TO ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEMS

MEKONG RIVER COMMISSION
MRC
FOR SUSTAINABLE DEVELOPMENT

Course Learning Objectives

At the end of this course you should be able to:

➔ Describe the role of environmental management systems (EMS) in sustainable development

➔ Identify potential options for environmental protection and cleaner production

➔ Describe the factors leading to the adoption of ISO 14001 worldwide

➔ Describe the role of ISO 14001 in environmental protection

Course Learning Objectives (Cont'd)

At the end of this course you should be able to:

➔ Describe the requirements of ISO 14001

➔ Identify potential applications of ISO 14001 in individual riparian countries and in the Mekong River Basin (MRB) overall

➔ Describe strategies for implementing ISO 14001

➔ Explain EMS auding procedures

Lesson Learning Goals

At the end of this lesson you should be able to:

➜ State the correct name of ISO

➜ Describe the purpose of ISO Standards

➜ Name at least three ISO 14000 series Standards

➜ List at least five benefits of ISO 14001

➜ Summarize the process of registration/certification to ISO 14001

What is an Environmental Management System (EMS)?

The part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining the environmental policy

What is an EMS?
Unofficial Definition

➡ A complete 'box of tools' to be used by organizations to improve all activities that may affect the environment

➡ The toolbox contains:
  » environmental plans, knowledge, and awareness
  » competent individuals with clear responsibilities
  » consistent procedures for all operations
  » regular checks on performance
  » rapid response to correct and prevent problems
  » effective internal and external communications

What or Who is ISO?

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

➔ Federation of National Standards agencies from 136 countries

➔ Founded in 1947; headquarters in Geneva

➔ Develops international standards in all technical areas except electrical and electronics engineering (responsibility of IEC)

➔ ISO means 'equal' (as in isobar, isotherm, isometric, isosceles, isomer, isotope)

Objective of ISO

➔ Promote development of standardization in the world with the aim of easing international exchange of goods and services

➔ Develop cooperation in intellectual, scientific, technological, and economic activities

Mekong River Basin Members of ISO

➔ Cambodia: ISC, Industrial Standards Bureau

➔ Thailand: TISI, Thai Industrial Standards Institute

➔ Vietnam: TCVN, Directorate for Standards and Quality

International Organization for Standardization

➔ Has published approximately 13,000 industrial standards, e.g:
  - » film speed
  - » credit/phone card size and thickness
  - » freight containers
  - » screw thread dimensions
  - » paper size (A4, legal, letter)
  - » book catalogue codes (ISBN numbers)
  - » sampling, testing, analysis of air, water, soil

Plus

Management System Standards:

➔ Quality (ISO 9000 series, 1987, 1994, 2000)

➔ Environmental Management (ISO 14000 series, 1996)

➔ These are intended for use by all types and sizes of organizations, e.g., private sector manufacturing and service companies, government agencies, and non government organizations (NGO)

ISO Standards

Intended to:

→ Make development, manufacture, and supply of products and services more efficient, safer, and cleaner

→ Make trade between countries easier and fairer

→ Safeguard users and consumers of products and services

→ Make life simpler

ISO Definition of a Standard

Documented agreement containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics to ensure that materials, products, processes and services are fit for their purpose

ISO Standards Development Process

Committees of experts from ISO member countries

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Committee drafts sent out for review and comment

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Draft Standard sent for review and comment

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ISO Standard issued

ISO 14000 Series of Standards and Guidelines

Consists of:

➔ ISO 14001 Environmental Management Systems - Specification with Guidance for Use

➔ ISO 14004 Environmental Management Systems - General Guidelines on Principles, Systems, and Supporting Techniques

ISO 14000 Series of Standards and Guidelines (Cont'd)

Consists of:

Guidelines for Environmental Auditing -

➔ ISO 14010 General Principles

➔ ISO 14011 Audit Procedures - Auditing of Environmental Management Systems

➔ ISO 14012 Qualification Criteria for Environmental Auditors

ISO 14000 Series of Standards and Guidelines (Cont'd)

Consists of:

➔ ISO 14020 Series - Environmental Labels and Declarations

➔ ISO 14031 Environmental Performance Evaluation

➔ ISO 14040 Series - Life Cycle Assessment

➔ ISO 14050 EMS Vocabulary

ISO 14000 Series of Standards and Guidelines (Cont'd)

Intended to be:

➔ Relevant in all countries

➔ Cost-effective, non-prescriptive, flexible

➔ Usable by all types and sizes of organization

➔ Suited to the needs of users and the public

➔ Practical, useful, and useable

➔ Suitable for internal or external verification

What is ISO 14001?

A voluntary international standard which:

➔ defines the components required for a good environmental management system (EMS)

➔ provides a framework for continual improvement of environmental performance

➔ can be assessed by an independent agency and awarded certification/registration recognized worldwide

What ISO 14001 is Not

➔ Prescriptive

➔ Legal document

➔ Guarantee of trouble-free environmental performance or compliance with laws and regulations

➔ Certificate of approval by ISO

➔ Certification that a product is environmentally friendly

➔ Government inspected or approved

Benefits from ISO 14001

➔ Strategic approach to environmental performance - use vision and initiative

➔ Helps to provide order and consistency in environmental performance

➔ Less need for government 'command and control' mode of regulation

➔ Demonstrates 'Reasonable Care' and 'Due Diligence'

➔ Improved risk management

Benefits from ISO 14001 (Cont'd)

➔ Usually results in savings through:
  » Reduced waste handling and disposal costs
  » Savings in raw material costs
  » Reduction in energy use

➔ Lower use of natural resources ➔ ➔ ➔ sustainable development

➔ Better reputation with government regulators, employees, customers, public, neighbours, NGOs

Benefits from ISO 14001 (Cont'd)

➔ Expanded market and investment opportunities - competitive advantage

➔ Independent third-party certification of the EMS recognized worldwide

➔ Team work leading to better sharing of information

➔ Better control of emissions

➔ Improved environmental performance

Reasons for
ISO 14001 Registration

➔ Streamline environmental effort (35%)

➔ Senior management directive (26%)

➔ Competitive advantage (21%)

➔ Customer pressure (16%)

Obstacles to ISO 14001 Implementation

→ Insufficient resources (35%)

→ Lack of management support (27%)

→ Cost of certification and maintaining the environmental management system (24%)

→ Incorporating ISO 14001 requirements with existing management system (12%)

Registration/Certification to ISO 14001

➔ Done by independent, accredited body

➔ Accreditation done by country's National Standards agency, which in turn is a member of ISO

➔ International Accreditation Forum (IAF) attempts to achieve consistent standards of assessment worldwide

ISO 14001 Registrations

➔ Total worldwide to end of 2000: 22,897 in 98 countries

➔ Increase in certificates in 2000: 8,791

➔ Country with the most ISO 14001 certificates:

   » Japan 5,556
   » Thailand 310
   » Vietnam 9

Concluding Thoughts

Important points to remember are:

➡ ISO - International Organization for Standardisation issues technical and management systems standards to assist international trade

➡ National Standards bodies in 136 countries are members of ISO

➡ ISO 1400 Series consists of of Standards for EMS, environmental auditing, ecolabelling, performance evaluation, and life cycle assessment

Concluding Thoughts (Cont'd)

Additional points to remember are:

➔ Use of ISO 14001 EMS Standard is voluntary

➔ ISO 14001 provides a framework for an EMS that can be assessed by a third party for registration/certification to the Standard

➔ Benefits from implementing ISO 14001 can include improved environmental performance; savings in operating costs; better relations with government and other interested parties; new business opportunities; clarity in decision-making procedures