



## INTRODUCTION

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- ❖ The International Organization for Standardization, or ISO, is an independent voluntary organization and non-governmental body with a membership of 167 national standards bodies.
- ❖ Founded on 23<sup>rd</sup> February 1947, with the goal to develop and publishes worldwide technical, industrial, engineering and commercial standards that are beneficial to business in all nations.
- ❖ Use of the standards aids in the creation of products and services that are safe, reliable.
- ❖ Headquarter in Geneva, Switzerland
- ❖ The three **official languages** of the **ISO** are English, French, and Russian
- ❖ ISO was born from the union of two organizations. One was ISA (International Federation of the National Standardizing Associations) and the other was UNSCC (United Nations Standards Coordinating Committee).

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- ❖ Of the 11,000+ existing ISO standards, about 350 are related to environmental management systems.
- ❖ The organization's interests include quality management, environmental impact management, health and safety, energy management, food safety, and information technology security.
- ❖ Standards are developed by groups of experts called technical committees.
- ❖ The ISO has created ISO 14000 family on 1<sup>st</sup> January 1996, The standard provides tools for companies and organizations to help them identify and control their environmental impact.

# ISO

- ❖ ISO - International Organization for Standardization
- ❖ It is the body responsible for establishing and implementing various standards across a wide range of proprietary, industrial, and commercial applications.

# 14000

- ❖ The number following "ISO" is an identifier can also refer to a specific standard within the family, in this case it refers to the broad family of **EMS** standards: ISO 14000.
- ❖ EMS - Environmental Management Systems



## WHAT IS AN ENVIRONMENTAL MANAGEMENT SYSTEM?

Is a framework that helps a company achieve its environmental goals.

# ENVIRONMENT MANAGEMENT SYSTEM - EMS

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- ❖ An EMS is defined by ISO as: "part of the overall management system, that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, and maintaining the environmental policy."
- ❖ An EMS, is a set of policies and procedures designed to help organizations:
  - Reduce negative environmental impact
  - Improve efficiency and operational effectiveness

## WHY IS EMS NEEDED ?

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- ❖ There is now a considerable amount of public concern about the health of the environment in almost all developed countries of the world.
- ❖ As a consequence, the adoption by companies of procedures that minimise damage to the environment is becoming an important ingredient in their success, and is almost as important as the quality of the goods and services that they provide.
- ❖ Any actions of companies that lead to environmental pollution or damage, whether intended or not, cause widespread public anger that may lead to a boycott of the company's products or services, or even more direct action that interferes with its operations.
- ❖ Thus, the implementation of an environmental management system (EMS) that minimises damage to the environment through a company's operations is becoming almost mandatory if the consequences of causing environmental damage are to be avoided.

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Each EMS is unique, many consider issues such as:

- ❖ Air pollution
- ❖ Waste management
- ❖ Climate change mitigation and adaptation
- ❖ Resource use
- ❖ Soil contamination
- ❖ Wastewater discharge
- ❖ Degradation of ecosystems
- ❖ Loss of biodiversity

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The goals of EMS are to increase compliance and reduce waste - to improve environmental performance

- ❖ **Compliance** is the act of reaching and maintaining minimal legal standards. By not being compliant, companies may face fines, government intervention.
- ❖ **Waste reduction** begins at the design phase through pollution prevention and waste minimization. At the end of the life cycle, waste is reduced by recycling.



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### Features

- ❖ Provides a systematic way of managing an organization's environmental affairs
- ❖ Is the aspect of the organization's overall management structure that addresses immediate and long-term impacts of its products, services and processes on the environment.
- ❖ Gives order and consistency for organizations to address environmental concerns through the allocation of resources, assignment of responsibility and ongoing evaluation of practices, procedures and processes
- ❖ Sets framework for training to achieve objectives and desired performance.
- ❖ Focuses on continual improvement of the system and a way to implement policies and objectives to meet a desired result.
- ❖ Encourages contractors and suppliers to establish their own EMS.

## ems model

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- ❖ An EMS follows a Plan-Do-Check-Act, or PDCA, Cycle.
- ❖ The model is continuous because an EMS is a process of continual improvement in which an organization is constantly reviewing and revising the system.
- ❖ This is a model that can be used by a wide range of organizations – from manufacturing facilities to service industries to government agencies.



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PDCA can be briefly described as follows (Nenadál, 2005; ISO, 2009):

**Plan:** establish the objectives and processes necessary to deliver results in accordance with the organization's environmental policy.

**Do:** implement the processes.

**Check:** monitor and measure processes against environmental policy, objectives, targets, legal and other requirements, and report the results

**Act:** take actions to continually improve performance of the environmental management system.



Environmental Management System Model by ISO 14000

## ISO 14000

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- ❖ Prior to the development of the ISO 14000 series, organizations voluntarily constructed their own EMSs, but this made comparisons of environmental effects between companies difficult; therefore, the universal ISO 14000 series was developed.
- ❖ ISO 14000 is a series of international, voluntary environmental management standards and guides and technical reports. which specifically concentrates on environmental management systems, operating practices, products, and services.
- ❖ It is created to help companies around the world reduce their adverse impact on the environment.
- ❖ These standards do not mandate a particular level of pollution or performance, but focus on awareness of the processes and procedures that can effect the environment.

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- ❖ ISO 14000 shares many similarities with the ISO 9000 family, which is a group of standards for the development and continuous improvement of a quality management system (QMS).
- ❖ Just as ISO 14000 is focused on the guidelines for setting up a successful environmental management system based on a clear environmental policy and a system of continuous improvement, ISO 9000 standards use many of the same techniques, such as PDCA and continuous improvement to outline the quality standards of an organization.

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These tools can provide significant **tangible economic benefits** -

- ❖ Reduced raw material/resource use
- ❖ Reduced energy consumption
- ❖ Improved process efficiency
- ❖ Reduced waste generation and disposal costs
- ❖ Utilization of recoverable resources

There are also **non-tangible benefits** -

- ❖ such as improved employee morale
- ❖ improved corporate image
- ❖ feeling of "doing the right thing".

# Standards of iso 14000

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Key Standards Include In ISO 14000

**ISO 14001** - Specification of Environmental Management Systems or - Requirements with guidance for use

**ISO 14004** - General guidelines on implementation

**ISO 14005** - Guidelines for a flexible approach to phased implementation

**ISO 14006** - Guidelines for incorporating ecodesign

**ISO 14010 - ISO 14015: Environmental Auditing and Related Activities**

**ISO 14010** - Guidelines for Environment Auditing

**ISO 14011** - Guidelines for Auditing of an EMS

**ISO 14012** - Auditing – Qualification criteria

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ISO 14013 - Management of Environmental Audit Programs

ISO 14014 - Initial Reviews

ISO 14015 - Environmental assessment of sites and organizations (EASO)

ISO 14020 - ISO 14025: Environmental labels and declarations

ISO 14021 - Self Declaration- Environmental Claims- Terms and Definitions

ISO 14022 - Symbols

ISO 14023 - Testing and Verification Methodologies

ISO 14024 - Practitioner Programs- Guiding principles, practices and certification procedures of multiple criteria (type1)



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**ISO 14030** Green bonds -- Environmental performance of nominated projects and assets; discusses post-production environmental assessment

**ISO 14031 and ISO 14032: Environmental Performance Evaluation- Guidelines**

**ISO 14040 – ISO 14049: Life Cycle Assessment; discusses pre-production planning and environment goal setting**

**ISO 14040** - General Principles and Practices

**ISO 14041** - Goal and Definition/Scope and Inventory Assessment

**ISO 14042** - Impact Assessment

**ISO 14043** - Improvement Assessment

**ISO 14050** - Vocabulary; terms and definitions

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**ISO 14060** - Guide for the Inclusion of Environmental Aspects in Product Standards

**ISO 14062** - Integrating environmental aspects into product design and development

**ISO 14063** - Environmental communication- Guidelines and examples

**ISO 14064** - Greenhouse gases; measuring, quantifying, and reducing greenhouse gas emissions

**ISO 14090** - Adaptation to climate change — Principles, requirements and guidelines



## ISO 14001 OVERVIEW

ISO 14001:2015 is the leading standard for environmental management systems.

- ❖ ISO 14001: Environmental Management Systems: Specification with Guidance for Use
- ❖ ISO 14001 was first published in 1996.
- ❖ ISO 14001 is the world's most recognized framework for EMS.
- ❖ This standard defines the requirements for controlling and improving the organization's environmental impact. E.g. Use of environment resources, environmental waste management & energy consumption.

## ISO 14001

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- ❖ ISO 14001:2015 is the latest revision of the EMS requirements standard and it was introduced on September 2015.
- ❖ The new version of ISO 14001 focuses on the improvement of environmental performance rather than the improvement of the management system itself.
- ❖ It also includes several new updates all aimed at making environmental management more comprehensive and relevant to the supply chain.
- ❖ ISO 14001:2015 sets out the criteria for an environmental management system and can be certified to. It maps out a framework that a company or organization can follow to set up an effective environmental management system.
- ❖ ISO 14001:2015 can provide assurance to company management and employees as well as external stakeholders that environmental impact is being measured and improved.

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- ❖ ISO 14001:2015 is applicable to any organization, regardless of size, type and nature, and applies to the environmental aspects of its activities, products and services.
- ❖ ISO 14001 helps businesses of all sizes across all sectors make their day to day operations more sustainable. Sustainability can ultimately save money, improve brand reputation, engage employees and build resilience against uncertainty as well as the ability to rapidly adapt to change.
- ❖ The ISO 14001 standard is the only ISO 14000 standard that allows an organization to be registered or "certified. (If desired, this can be audited and certified by national accrediting bodies).

## ISO 14001:2004

0. INTRODUCTION

1. SCOPE

2. NORMATIVE REFERENCES

3. TERMS AND DEFINITIONS

4. ENVIRONMENTAL MANAGEMENT SYSTEM

4.2. ENVIRONMENTAL POLICY

4.3. PLANNING

4.4. IMPLEMENTATION AND OPERATION

4.5. CHECKING

4.6. MANAGEMENT REVIEW

## ISO 14001:2015

0. INTRODUCTION

1. SCOPE

2. NORMATIVE REFERENCES

3. TERMS AND DEFINITIONS

4. CONTEXT OF THE ORGANIZATION

5. LEADERSHIP

6. PLANNING

7. SUPPORT

8. OPERATION

9. PERFORMANCE EVALUATION

10. IMPROVEMENT

- ❖ This structure makes the standard more consistent and much easier to integrate with all ISO Management Systems, because it has 10 clauses, common terminology and definitions.
- ❖ The second aspect is a lifecycle approach that increases the organizations focus on the impact that their products / services have on the environment, from raw material sourcing to product recycling.
- ❖ Other aspect is the control of outsourcing, the focus is to keep control or influence the activities to be outsourced in accordance with the requirements of the EMS.
- ❖ It focused on protecting the environment, including reliability for organizations to demonstrate their understanding of all environmental impacts.



# Steps to ISO 14001 Certification



## Step - 1 Application

Application for ISO 14001 : 2015 certification from new (Fresh) client and existing client.



## Step - 2 Offer Submission

After understanding your business, we create an offer that helps you to attain 14001 : 2015 Environmental Management Systems (EMS) Certification without hassles.



## Step - 3 Offer Acceptance

Acceptance of Offer by client and Confirmation of agreement by both client organization and IRQS.



## Step - 4 Certification Audit

Conduct of Initial Certification audit - (Stage 1 + Stage 2) for new (Fresh) clients / Re-Certification audit (for existing clients).



## Step - 5 Approval

Issuance of the "Certificate of approval" on successful completion of the initial / Re-certification audit process.



## Step - 6 Surveillance

Surveillance audits are undertaken annually to ensure that compliance to the chosen Standard(s) is maintained throughout the three-year certification cycle.



## Step - 7 Recertification

The recertification audit process is to be initiated 3 months prior to the expiry of the certificate.



## ISO 14001 Certification: 2015 Environmental Management Systems (EMS)

- ✓ Enhance your brand image and credibility
- ✓ Reduce environmental risks
- ✓ Achieve a higher level of cost control

Get a quote Now



## Get a Quote Now

CLOSE

Your Name\*

Your Company name

Your Location\*

Email ID\*

Phone Number\*

Certification

ISO 9001:2015 (QMS) ▼

Message

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Certification procedure for EMS under ISO 14001 certification: An application form is there for certification from the client.

- ❖ EMS form is offered from IRQS India.
- ❖ Acceptance of offer and order confirmation from client and by IRQS India.
- ❖ The pre-audit process is optional.
- ❖ Two stages are classified for certification Process which are: Stage 1 + Stage 2.
- ❖ The certificate is issued by successful completion of certification audit.
- ❖ A surveillance audit is thereby defined the period process.
- ❖ Recertification audit is necessary after every 3 years.

# ISO 14001



## CERTIFIED ENVIRONMENTAL MANAGEMENT SYSTEM



The **importance of ISO Certification** is it improves the quality, credibility of your business as well as the overall efficiency of the business.

## Benefits of ISO 14001 Certification



### Customer Satisfaction

Reassure your customers that they are buying from an environmentally friendly business.



### Improve Environmental Performance

Reduce the impact of your business activities on the environment.



### Increase Revenue

Boost your revenue by attracting more customers and reducing operational costs.



### Legal Compliance

Demonstrate compliance with statutory and regulatory requirements.



### Improve Brand Image

Enhance your company image and improve your green credentials.



### Reduce Cost

Make tangible cost reduction by using the reduce, reuse, recycle approach.

*Go for Sustainable for a Better Future*

## What is ISO Certification

It refers to the seal which is approved from an external body whereby a company complies to one of the internationally recognized ISO management systems.

### ISO certification bodies

By ISO certification body we mean a registrar which is competent and authorized to issue certification on the management system after an audit.

## What is the cost for ISO Certification

The cost for ISO Certification is not fixed. It varies from organization to organization. It depends on parameters such as:

- ❖ How many employees there in the organization
- ❖ How many processes are there
- ❖ Level of risk involved along with the scope of services of the organization
- ❖ The complexity of the management system
- ❖ Working shifts numbers etc.

## How long it will take to get Certification

It vary from organization to organization. Usually, the time taken for the ISO online process is approximate:

- ❖ For small Organizations: 6-8 months
- ❖ Medium organizations: 8-12 months
- ❖ Large organizations: 12-15 months

## Some of the best ISO certification bodies in India

- ❖ Bureau Veritas
- ❖ TUV Nord
- ❖ TUV SUD
- ❖ BSI
- ❖ TUV Rheinland
- ❖ Intertek

# ISO 14004

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- ❖ ISO 14004 provides guidance for an organization on the establishment, implementation, maintenance and improvement of a robust, credible and reliable environmental management system.
- ❖ This International Standard helps an organization achieve the intended outcomes of its environmental management system, which provides value for the environment, the organization itself and interested parties. Consistent with the organization's environmental policy, the intended outcomes of an environmental management system include:
  - enhancement of environmental performance;
  - fulfilment of compliance obligations;
  - achievement of environmental objectives.
- ❖ ISO 14004 is applicable to any organization, regardless of size, type and nature, and applies to the environmental aspects of its activities, products and services that the organization determines it can either control or influence, considering a life cycle perspective.

## *ISO 14010: Guidelines for Environmental Auditing: General Principles*

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- ❖ This International Standard provides the general principles of environmental auditing that are applicable to all types of environmental audits.
- ❖ This set out the necessary basic conditions that have to be satisfied before an audit can be carried out, such as the availability of adequate documentation, the provision of sufficient resources to support the audit, and the willing cooperation and assistance of the company whose EMS is being audited.

## *ISO 14011: Guidelines for Environmental Auditing: Audit Procedures: Auditing of Environmental Management Systems*

- ❖ This explains the usual objectives of an EMS audit to confirm that the EMS has been properly implemented and is meeting its objectives, is managed satisfactorily and is reviewed regularly to try to achieve continual improvement in its performance.

### *ISO 14012 : Guidelines for Environmental Auditing: Qualification Criteria for Environmental auditors*

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- ❖ This standard sets out the educational qualifications required, personal skills needed and the level of training and experience necessary for auditors who are appointed by Standards Bodies to carry out audits and certify an EMS.

### *ISO 14015 : Environmental Management Systems: Environmental Assessment of Sites and Organisations*

- ❖ This International Standard provides guidance on how to conduct an EASO through a systematic process of identifying environmental aspects and environmental issues. This International Standard covers the roles and responsibilities of the parties to the assessment, and the stages of the assessment process (planning, information gathering and validation, evaluation and reporting).

### *ISO 14020: Environmental Labels and Declarations: General principles*

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- ❖ This gives guidelines on the use of labels to indicate the environmental impact of products. It requires that labels should be accurate and verifiable. Such labelling is provided for the benefit of environmentally conscious customers, who can decide whether or not to purchase a product, according to its environmental performance.

### *ISO 14021: Environmental Labels and Declarations: Self-declared Environmental Claims (Type II Environmental Labelling)*

- ❖ This sets common standards for the use of particular environmental labels and symbols. It specifies the requirements that must be satisfied for the application of various labels such as 'degradable' and 'recyclable'.



### *ISO 14024: Environmental Labels and Declarations: Type I Environmental Labels: Principles and Procedures*

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- ❖ This extends ISO 14020 by providing a framework for issuing licenses to permit the use of particular environmental labels on products, and to assess the continued compliance of the products at regular intervals.

### *ISO 14031: Environmental Management: Environmental Performance Evaluation Guidelines*

- ❖ This is provided as a management tool to help companies to assess whether its environmental performance is meeting the targets set. It includes guidance on identifying the environmental impact of operations and setting targets for reduction in environmental damage.

### *ISO 14040 : Environmental Management: Life Cycle Assessment: Principles and Framework*

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- ❖ This standard defines a suitable framework for conducting life-cycle assessments for products in terms of their environmental impact.
- ❖ Recommendations are made about setting environmental targets and defining relevant indicators of environmental performance for all stages in a product's life cycle, including raw material acquisition, product manufacture, product use and product disposal at the end of its useful life.

### *ISO 14041: Environmental Management: Life Cycle Assessment: Goal and Scope Definition and Inventory Analysis*

- ❖ This extends ISO 14040 by providing further guidance on defining the goals of life-cycle assessment and collecting data to assess environmental performance against the indicators set.

### *ISO 14042: Environmental Management: Life Cycle Assessment: Life Cycle Impact Assessment*

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- ❖ This provides guidance on how the performance indicator data should be used to assess the environmental impact of a product and identify opportunities to improve the product to reduce its environmental impact.

### *ISO 14043: Environmental Management: Life Cycle Assessment: Life Cycle Interpretation*

- ❖ This provides guidance on how the impact assessments made according to ISO 14042 should be summarised, interpreted and discussed with respect to the environmental goals set according to ISO 14041.

### *ISO 14048: Environmental Management: Life Cycle Assessment: Data Documentation Format*

- ❖ This provides a standard framework for the documentation of the performance indicators as specified in ISO 14041 and provides appropriate standards for data collection, quality and analysis.

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THANK YOU!