## ISO14000 - Introduction

After the success of the ISO9000 series of quality standards, the International Standards Organization published a comprehensive set of standards for environmental management. This series of standards is designed to cover the whole area of environmental issues for organizations in the global marketplace.

## History of Development

The ISO 14000 series emerged primarily as a result of the Uruguay round of the GATT negotiations and the Rio Summit on the Environment held in 1992. While GATT concentrates on the need to reduce non-tariff barriers to trade, the Rio Summit generated a commitment to protection of the environment across the world. The environmental field has seen a steady growth of national and regional standards. The British Standards Institution has BS 7750, the Canadian Standards Association has environmental management, auditing, eco-labeling and other standards, the European Union has all of these plus the eco-management and audit regulations, and many other countries (e.g. USA, Germany and Japan) have introduced eco-labeling programs.

After the rapid acceptance of ISO 9000, and the increase of environmental standards around the world, ISO assessed the need for international environmental management standards. They formed the Strategic Advisory Group on the Environment (SAGE) in 1991, to consider whether such standards could serve to:

- Promote a common approach to environmental management similar to quality management;
- Enhance organizations' ability to attain and measure improvements in environmental performance; and
- Facilitate trade and remove trade barriers.

In 1992, SAGE's recommendations created a new committee, TC 207, for international environmental management standards. The committee, and its sub-committees include representatives from industry, standards organizations, government and environmental organizations from many countries. The new series of ISO14000 standards are designed to cover:

- environmental management systems
- environmental auditing
- environmental performance evaluation
- environmental labeling
- life-cycle assessment
- environmental aspects in product standards

## Why have these standards ?

A set of international standards brings a world-wide focus to the environment, encouraging a cleaner, safer, healthier world for us all. The existence of the standards allows organizations to focus environmental efforts against an internationally accepted criteria.

At present many countries and regional groupings are generating their own requirements for environmentla issues, and these vary between the groups. A single standard will ensure that there are no conflicts between regional interpretations of good environmental pactice.

The fact that companies may need environmental management certification to compete in the global marketplace could easily overshadow all ethical reasons for environmental management. Within Europe, many organizations gained ISO9000 Registration primarily to meet growing demands from customers. ISO 9000 quality registration has become necessary to do business in many areas of commerce. Similarly, the ISO 14000 management system registration may become the primary requirement for doing business in many regions or industries.

## Who do the standards apply to ?

The standards apply to all types and sizes of organizations and are designed to encompass diverse geographical, cultural and social conditions. For ISO14001, except for committing to continual improvement and compliance with applicable legislation and regulations, the standard does not establish absolute requirements for environmental performance. Many organizations, engaged in similar activities, may have widely different environmental management systems and performance, *and may all comply with ISO14001*.

## What do the standards apply to ?

This is primarily for the company to decide, and to clearly document the extent of coverage. However, limiting coverage to a small [inconsequential] area may provide competitors with an ideal                                    marketing                                    opportunity!.
There does not appear to be a limit to the coverage of the environmental management system in that it can include the organization's products, services, activities, operations, facilities, transportation,                                                                                        etc.
From a slightly different viewpoint, all of the elements in the previous sentence should be considered for environmental impact resulting from current practices, past practices and future practices, ......and should further be reviewed for their impact under normal, abnormal and emergency conditions.

## What does the ISO 14000 Series cover ?

The best way to answer this question is to provide a list of the proposed standards:

| Standard | Title / Description |
|---|---|
| 14000 | Guide to Environmental Management Principles, Systems and Supporting Techniques |
| 14001 | Environmental Management Systems - Specification with Guidance for Use |
| 14010 | Guidelines for Environmental Auditing - General Principles of Environmental Auditing |
| 14011 | Guidelines for Environmental Auditing - Audit Procedures-Part 1: Auditing of Environmental Management Systems |
| 14012 | Guidelines for Environmental Auditing - Qualification Criteria for Environmental Auditors |
| 14013/15 | Guidelines for Environmental Auditing - Audit Programs, Reviews & Assessments |
| 14020/23 | Environmental Labeling |
| 14024 | Environmental Labeling - Practitioner Programs - Guiding Principles, Practices and Certification Procedures of Multiple Criteria Programs |
| 14031/32 | Guidelines on Environmental Performance Evaluation |
| 14040/43 | Life Cycle Assessment General Principles and Practices |
| 14050 | Glossary |
| 14060 | Guide for the Inclusion of Environmental Aspects in Product Standards |

## General Description of ISO14001

ISO14001 requires an Environmental Policy to be in existence within the organisation, fully supported by senior management, and outlining the policies of the company, not only to the staff but to the public. The policy needs to clarify compliance with Environmental Legislation that may effect the organization and stress a commitment to continuous improvement. Emphasis has been placed on policy as this provides the direction for the remainder of the Management System.

Those companies who have witnessed ISO9000 Assessments will know that the policy is frequently discussed during the assessment, many staff are asked if they understand or are aware of the policy, and any problems associated with the policy are seldom serious. The Environmental Policy is different, this provides the initial foundation and direction for the Management System and will be more stringently reviewed than a similar ISO9000 policy. The statement must be publicised in non-technical language so that it can be understood by the majority of readers. It should relate to the sites within the organisation encompassed by the Management System, it should provide an overview of the company's activities on the site and a description of those activities. A clear picture of the company's operations.

The preparatory review and definition of the organization's environmental effects is not part of a ISO14001 Assessment, however examination of this data will provide an external audit with a wealth of information on the methods adopted by the company. The preparatory review itself should be comprehensive in consideration of input processes and output at the site. This review should be designed to identify all relevant environmental aspects that may arise from existence on the site. These may relate to current operations, they may relate to future, perhaps even unplanned future activities, and they will certainly relate to the activities performed on site in the past (i.e. contamination of land).

The initial or preparatory review will also include a wide-ranging consideration of the legislation which may effect the site, whether it is currently being complied with, and perhaps even whether copies of the legislation are available. Many of the environmental assessments undertaken already have highlighted that companies are often unaware of ALL of the legislation that affects them, and being unaware, are often not meeting the requirements of that legislation.

The company will declare its primary environmental objectives, those that can have most environmental impact. In order to gain most benefit these will become the primary areas of consideration within the improvement process, and the company's environmental program. The program will be the plan to achieve specific goals or targets along the route to a specific goal and describe the means to reach those objectives such that they are real and achievable. The Environmental Management System provides further detail on the environmental program. The EMS establishes procedures, work instructions and controls to ensure that implementation of the policy and achievement of the targets can become a reality. Communication is a vital factor, enabling people in the organisation to be aware of their responsibilities, aware of the objectives of the scheme, and able to contribute to its success.

As with ISO 9000 the Environmental Management System requires a planned comprehensive periodic audit of the Environmental Management System to ensure that it is effective in operation, is meeting specified goals, and the system continues to perform in accordance with relevant regulations and standards. The audits are designed to provide additional information in order to exercise effective management of the system, providing information on practices which differ to the current procedures or offer an opportunity for improvement.

In addition to audit, there is a requirement for Management Review of the system to ensure that it is suitable (for the organization and the objectives) and effective in operation. The management review is the ideal forum to make decisions on howe to improve for the future.

## Comparison of EMS Standards

| System Element | ISO14000 | EMAS | BS7750 |
|---|---|---|---|
| Environmental Management System | 4.0 | ANNEX I, Part B | 4.1 |
| Preparatory Environmental Review | ANNEX A.4.2.1 (Guide) | Article 3, Paragraph b ANNEX I, Part C | ANNEX A.1.2 (Guide) |
| Environmental Policy | 4.1 | ANNEX I, Part A and D | 4.2 |
| Organisation and Personnel | 4.3.1, 4.3.2 | ANNEX I, Part B2 & D11 | 4.3 |
| Environmental Effects/ Aspects | 4.2.1, 4.2.2 | ANNEX I, Part B3 & D2/3 | 4.4 |
| Objectives and Targets | 4.2.3 | ANNEX I, Part A4 | 4.5 |
| Environmental Management Programmes | 4.2.4 | ANNEX I, Part A5 | 4.6 |
| Manual and Documentation | 4.3.4, 4.3.5 | ANNEX I, Part B5 | 4.7 |
| Operational Controls | 4.3.6, 4.3.7, 4.4.1, 4.4.2 | ANNEX I, Part B4 & D6-7 | 4.8 |
| Records | 4.4.3 | ANNEX I, Part B5 | 4.9 |
| EMAS Audits | 4.4.4 | ANNEX I, Part B6, ANNEX II | 4.10 |
| Management Review | 4.5 | ANNEX I, Part B1 | 4.11 |
| Environmental Statement | N/A | Article 5 and ANNEX V | N/A |

**Official Sources of the Standards**

THE STANDARDS

The standards themselves are now most commonly procured in the form of downloads, usually in PDF format. The major two standards, ISO 14001 and ISO 14004, along with the audit standard ISO 19011, can be obtained via the ISO 14000 Download Page at BSI's Standards Direct outlet.

MANUAL, PROCEDURES, TEMPLATES

There are many commercial offerings of templates and tools ot assist in the implementation and understanding of these environmental management standards. One of the most straight forward and widely used of these is the [ISO 14000 and ISO 14001 Toolkit](#). This offers a wide range of fundamental items and forms targeted specifically at the standards.