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Environmental management systems — Guidelines for a flexible approach to phased implementation

Systèmes de management environnemental — Lignes directrices pour une approche souple de la mise en oeuvre par phases

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 1, *Environmental management systems*.

This second edition cancels and replaces the first edition (ISO 14005:2010), which has been technically revised throughout.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Organizations face a growing number of challenges caused by the deteriorating state of the natural environment due to human activities. For example, pollution is affecting the use of water, air and land; raw materials and energy costs are becoming more volatile because of the inefficient use and scarcity of non-renewable resources; and threats from storms, flooding or droughts are increasing as a result of rising global temperatures and climate change.

These challenges are causing significant effects on business and society. Regulators, consumers, clients, local communities and other interested parties demand assurances from organizations that their interactions with the environment are responsibly managed and that their activities, products and services are not inducing detrimental environmental impacts.

A systematic approach to environmental management provides the means for the management of business risk and demonstrates a high level of environmental commitment. This enables organizations to respond to the needs and expectations of interested parties. Business benefits of a formalized environmental management system (EMS) include more efficient use of resources, reduced negative effects on the environment, better compliance with legal requirements and improved customer relations.

Many organizations already benefit from a formalized EMS. But many more organizations, particularly small and medium-sized enterprises (SMEs), lack a formal system and therefore lose the benefits that an increased formality can bring. A systematic approach to environmental management can provide long-term success and enable sustainable development. This includes protecting the environment, mitigating the potential adverse effects of environmental conditions on organizations, assisting in the fulfilment of compliance obligations, enhancing environmental performance, preventing environmental impacts from being unintentionally shifted elsewhere within the life cycle, achieving financial and operational benefits, and supporting communication with relevant interested parties.

The full implementation of an EMS across the whole organization at the same time, however, might prove difficult and depends on the availability of staff and other resources. A phased approach allows organizations to develop their EMS gradually over time.

A phased approach offers several advantages. Organizations can readily evaluate how the time and money put into an EMS provide a return. They can develop a system that meets their needs, allowing them to implement it at their own pace, depending on the available human and financial resources. This approach can help organizations to see how improvements in environmental management can reduce costs, demonstrate legal compliance, improve community relations and help to fulfil the expectations of interested parties.

This document shows how organizations can implement an EMS, using a phased approach to ultimately meet the requirements of ISO 14001. Each phase incorporates six consecutive stages. The number of phases is flexible. This allows organizations to develop the scope, i.e. the activities, products and services included, and maturity of their EMS, in line with their objectives and available resources.

The phased approach could, for example, start with a project focusing on a specific environmental aspect, such as the use of energy or natural resources. It could also be used to address the needs of a certain interested party, such as a customer requirement, or to manage a specific issue, such as demonstrating legal compliance. The EMS can be expanded over time by progressing through more phases, e.g. to cover more environmental aspects, to systematically address all relevant needs and expectations of interested parties, or to improve environmental performance beyond legal compliance.

The maturity matrix in Annex A is a tool for measuring the progress of EMS implementation. This is useful to track the achievements of an organization's environmental objectives and associated benefits and to ensure the efficient use of financial and human resources.

The structure of the maturity matrix incorporates rows that correspond to the different EMS elements, as defined in the clauses of ISO 14001:2015. The columns represent five maturity levels. Each element

can be developed incrementally from maturity level 1 through to full maturity in level 5. At this point, the element will satisfy the requirements of the respective clause in ISO 14001:2015.

An assessment sheet that supports the maturity matrix can be found on the website of ISO/TC 207/SC 1, https://committee.iso.org/home/tc207sc1. It follows the same structure as the maturity matrix and helps organizations to determine their level of maturity for each element.

The ISO/TC 207/SC 1 website also provides examples, e.g. on how a company developed a full EMS using the phased approach.

Environmental management systems — Guidelines for a flexible approach to phased implementation

1 Scope

This document gives guidelines for a phased approach to establish, implement, maintain and improve an environmental management system (EMS) that organizations, including small and medium-sized enterprises (SMEs), can adopt to enhance their environmental performance.

The phased approach provides flexibility that allows organizations to develop their EMS at their own pace, over a number of phases, according to their own circumstances. Each phase consists of six consecutive stages. The system's maturity at the end of each phase can be characterized using the five-level maturity matrix provided in Annex A.

This document is applicable to any organization regardless of their current environmental performance, the nature of the activities undertaken or the locations at which they occur.

The phased approach enables an organization to develop a system that ultimately satisfies the requirements of ISO 14001.

The guidance does not cover those elements of specific systems that go beyond ISO 14001 and it is not intended to provide interpretations of the requirements of ISO 14001.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1 Terms related to organization and leadership

3.1.1
management system
set of interrelated or interacting elements of an *organization* (3.1.4) to establish policies and *objectives* (3.2.5) and *processes* (3.3.5) to achieve those objectives

Note 1 to entry: A management system can address a single discipline or several disciplines [e.g. quality, *environment* (3.2.1), occupational health and safety, energy, financial management].

Note 2 to entry: The system elements include the organization's structure, roles and responsibilities, planning and operation, performance evaluation and improvement.

Note 3 to entry: The scope of a management system can include the whole of the organization, specific and identified functions of the organization, specific and identified sections of the organization, or one or more functions across a group of organizations.

[SOURCE: ISO 14001:2015, 3.1.1]

3.1.2
environmental management system
EMS
part of the *management system* (3.1.1) used to manage *environmental aspects* (3.2.2), fulfil *compliance obligations* (3.2.9), and address *risks and opportunities* (3.2.11)

[SOURCE: ISO 14001:2015, 3.1.2]

3.1.3
environmental policy
intentions and direction of an *organization* (3.1.4) related to *environmental performance* (3.4.11), as formally expressed by its *top management* (3.1.5)

[SOURCE: ISO 14001:2015, 3.1.3]

3.1.4
organization
person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its *objectives* (3.2.5)

Note 1 to entry: The concept of organization includes, but is not limited to sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution, or part or combination thereof, whether incorporated or not, public or private.

[SOURCE: ISO 14001:2015, 3.1.4]

3.1.5
top management
person or group of people who directs and controls an *organization* (3.1.4) at the highest level

Note 1 to entry: Top management has the power to delegate authority and provide resources within the organization.

Note 2 to entry: If the scope of the *management system* (3.1.1) covers only part of an organization, then top management refers to those who direct and control that part of the organization.

[SOURCE: ISO 14001:2015, 3.1.5]

3.1.6
interested party
person or *organization* (3.1.4) that can affect, be affected by, or perceive itself to be affected by a decision or activity

EXAMPLE Customers, communities, suppliers, regulators, non-governmental organizations, investors and employees.

Note 1 to entry: To "perceive itself to be affected" means the perception has been made known to the organization.

[SOURCE: ISO 14001:2015, 3.1.6]

3.2 Terms related to planning

3.2.1
environment
surroundings in which an *organization* (3.1.4) operates, including air, water, land, natural resources, flora, fauna, humans and their interrelationships

Note 1 to entry: Surroundings can extend from within an organization to the local, regional and global system.

Note 2 to entry: Surroundings can be described in terms of biodiversity, ecosystems, climate or other characteristics.

[SOURCE: ISO 14001:2015, 3.2.1]

3.2.2
environmental aspect
element of an *organization's* (3.1.4) activities or products or services that interacts or can interact with the *environment* (3.2.1)

Note 1 to entry: An environmental aspect can cause (an) *environmental impact(s)* (3.2.4). A significant environmental aspect is one that has or can have one or more significant environmental impact(s).

Note 2 to entry: Significant environmental aspects are determined by the organization applying one or more criteria.

[SOURCE: ISO 14001:2015, 3.2.2]

3.2.3
environmental condition
state or characteristic of the *environment* (3.2.1) as determined at a certain point in time

[SOURCE: ISO 14001:2015, 3.2.3]

3.2.4
environmental impact
change to the *environment* (3.2.1), whether adverse or beneficial, wholly or partially resulting from an *organization's* (3.1.4) *environmental aspects* (3.2.2)

[SOURCE: ISO 14001:2015, 3.2.4]

3.2.5
objective
result to be achieved

Note 1 to entry: An objective can be strategic, tactical or operational.

Note 2 to entry: Objectives can relate to different disciplines (such as financial, health and safety, and environmental goals) and can apply at different levels [such as strategic, organization-wide, project, product, service and *process* (3.3.5)].

Note 3 to entry: An objective can be expressed in other ways, e.g. as an intended outcome, a purpose, an operational criterion, as an *environmental objective* (3.2.6), or by the use of other words with similar meaning (e.g. aim, goal, or target).

[SOURCE: ISO 14001:2015, 3.2.5]

3.2.6
environmental objective
objective (3.2.5) set by the *organization* (3.1.4) consistent with its *environmental policy* (3.1.3)

[SOURCE: ISO 14001:2015, 3.2.6]

3.2.7
prevention of pollution
use of *processes* (3.3.5), practices, techniques, materials, products, services or energy to avoid, reduce or control (separately or in combination) the creation, emission or discharge of any type of pollutant or waste, in order to reduce adverse *environmental impacts* (3.2.4)

Note 1 to entry: Prevention of pollution can include source reduction or elimination; process, product or service changes; efficient use of resources; material and energy substitution; reuse; recovery; recycling, reclamation; or treatment.

[SOURCE: ISO 14001:2015, 3.2.7]

3.2.8
requirement
need or expectation that is stated, generally implied or obligatory

Note 1 to entry: "Generally implied" means that it is custom or common practice for the *organization* (3.1.4) and *interested parties* (3.1.6) that the need or expectation under consideration is implied.

Note 2 to entry: A specified requirement is one that is stated, for example in *documented information* (3.3.2).

Note 3 to entry: Requirements other than legal requirements become obligatory when the organization decides to comply with them.

[SOURCE: ISO 14001:2015, 3.2.8]

3.2.9
compliance obligations (preferred term)
legal requirements and other requirements (admitted term)
legal *requirements* (3.2.8) that an *organization* (3.1.4) has to comply with and other requirements that an organization has to or chooses to comply with

Note 1 to entry: Compliance obligations are related to the *environmental management system* (3.1.2).

Note 2 to entry: Compliance obligations can arise from mandatory requirements, such as applicable laws and regulations, or voluntary commitments, such as organizational and industry standards, contractual relationships, codes of practice and agreements with community groups or non-governmental organizations.

[SOURCE: ISO 14001:2015, 3.2.9]

3.2.10
risk
effect of uncertainty

Note 1 to entry: An effect is a deviation from the expected — positive or negative.

Note 2 to entry: Uncertainty is the state, even partial, of deficiency of information related to, understanding or knowledge of, an event, its consequence, or likelihood.

Note 3 to entry: Risk is often characterized by reference to potential "events" (as defined in ISO Guide 73:2009, 3.5.1.3) and "consequences" (as defined in ISO Guide 73:2009, 3.6.1.3), or a combination of these.

Note 4 to entry: Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated "likelihood" (as defined in ISO Guide 73:2009, 3.6.1.1) of occurrence.

[SOURCE: ISO 14001:2015, 3.2.10]

3.2.11
risks and opportunities
potential adverse effects (threats) and potential beneficial effects (opportunities)

[SOURCE: ISO 14001:2015, 3.2.11]

3.3 Terms related to support and operation

3.3.1
competence
ability to apply knowledge and skills to achieve intended results

[SOURCE: ISO 14001:2015, 3.3.1]

3.3.2
documented information
information required to be controlled and maintained by an *organization* (3.1.4) and the medium on which it is contained

Note 1 to entry: Documented information can be in any format and media, and from any source.

Note 2 to entry: Documented information can refer to:

— the *environmental management system* (3.1.2), including related *processes* (3.3.5);

— information created in order for the organization to operate (can be referred to as documentation);

— evidence of results achieved (can be referred to as records).

[SOURCE: ISO 14001:2015, 3.3.2]

3.3.3
life cycle
consecutive and interlinked stages of a product (or service) system, from raw material acquisition or generation from natural resources to final disposal

Note 1 to entry: The life cycle stages include acquisition of raw materials, design, production, transportation/delivery, use, end-of-life treatment and final disposal.

[SOURCE: ISO 14001:2015, 3.3.3]

3.3.4
outsource, verb
make an arrangement where an external *organization* (3.1.4) performs part of an organization's function or *process* (3.3.5)

Note 1 to entry: An external organization is outside the scope of the *management system* (3.1.1), although the outsourced function or process is within the scope.

[SOURCE: ISO 14001:2015, 3.3.4]

3.3.5
process
set of interrelated or interacting activities which transforms inputs into outputs

Note 1 to entry: A process can be documented or not.

[SOURCE: ISO 14001:2015, 3.3.5]

3.4 Terms related to performance evaluation and improvement

3.4.1
audit
systematic, independent and documented *process* (3.3.5) for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled

Note 1 to entry: An internal audit is conducted by the *organization* (3.1.4) itself, or by an external party on its behalf.

Note 2 to entry: An audit can be a combined audit (combining two or more disciplines).

Note 3 to entry: Independence can be demonstrated by the freedom from responsibility for the activity being audited or freedom from bias and conflict of interest.

Note 4 to entry: "Audit evidence" consists of records, statements of fact or other information which are relevant to the audit criteria and are verifiable; and "audit criteria" are the set of policies, procedures or *requirements* (3.2.8) used as a reference against which audit evidence is compared, as defined in ISO 19011:2018, 3.9 and 3.7, respectively.

[SOURCE: ISO 14001:2015, 3.4.1, modified — The reference to ISO 19011 has been updated to the latest edition.]

3.4.2
conformity
fulfilment of a *requirement* (3.2.8)

[SOURCE: ISO 14001:2015, 3.4.2]

3.4.3
nonconformity
non-fulfilment of a *requirement* (3.2.8)

Note 1 to entry: Nonconformity relates to requirements in this document and additional *environmental management system* (3.1.2) requirements that an *organization* (3.1.4) establishes for itself.

[SOURCE: ISO 14001:2015, 3.4.3]

3.4.4
corrective action
action to eliminate the cause of a *nonconformity* (3.4.3) and to prevent recurrence

Note 1 to entry: There can be more than one cause for a nonconformity.

[SOURCE: ISO 14001:2015, 3.4.4]

3.4.5
continual improvement
recurring activity to enhance *performance* (3.4.10)

Note 1 to entry: Enhancing performance relates to the use of the *environmental management system* (3.1.2) to enhance *environmental performance* (3.4.11) consistent with the *organization's* (3.1.4) *environmental policy* (3.1.3).

Note 2 to entry: The activity need not take place in all areas simultaneously, or without interruption.

[SOURCE: ISO 14001:2015, 3.4.5]

3.4.6
effectiveness
extent to which planned activities are realized and planned results achieved

[SOURCE: ISO 14001:2015, 3.4.6]

3.4.7
indicator
measurable representation of the condition or status of operations, management or conditions

[SOURCE: ISO 14001:2015, 3.4.7]

3.4.8
monitoring
determining the status of a system, a *process* (3.3.5) or an activity

Note 1 to entry: To determine the status, there might be a need to check, supervise or critically observe.

[SOURCE: ISO 14001:2015, 3.4.8]

3.4.9
measurement
process (3.3.5) to determine a value

[SOURCE: ISO 14001:2015, 3.4.9]

3.4.10
performance
measurable result

Note 1 to entry: Performance can relate either to quantitative or qualitative findings.

Note 2 to entry: Performance can relate to the management of activities, *processes* (3.3.5), products (including services), systems or *organizations* (3.1.4).

[SOURCE: ISO 14001:2015, 3.4.10]

3.4.11
environmental performance
performance (3.4.10) related to the management of *environmental aspects* (3.2.2)

Note 1 to entry: For an *environmental management system* (3.1.2), results can be measured against the *organization's* (3.1.4) *environmental policy* (3.1.3), *environmental objectives* (3.2.6) or other criteria, using *indicators* (3.4.7).

[SOURCE: ISO 14001:2015, 3.4.11]

3.5 Other terms

3.5.1
maturity level
level of achievement in the implementation *process* (3.3.5) measured on a scale of maturity for *environmental management system* (3.1.2) elements

Note 1 to entry: The maturity matrix (see Annex A) in this document uses a scale of five maturity levels.

Note 2 to entry: "Element" reflects the *requirements* (3.2.8) in each clause and subclause in ISO 14001:2015, Clauses 4 to 10.

4 Benefits of a flexible, phased approach

The use of a systematic approach to environmental management has a number of benefits for organizations, including:

— meeting the needs and expectations of interested parties, including demonstrating legal compliance and improving relations with local communities;

— delivering cost savings (e.g. reducing the cost of energy, materials and other resources);

— improving their reputation with interested parties.

Using a phased approach to implement the EMS has a number of additional benefits for organizations, particularly SMEs or those with limited resources. The phased approach offers flexibility that allows an organization to:

— develop an EMS at its own pace;

— decide the scope of implementation and expand it to suit its resources;

— decide the number of phases it undertakes and the level of maturity it wants its EMS to achieve;

— start with areas that indicate the greatest potential for environmental improvement and returns on investment;

— prioritize environmental performance improvement (e.g. improvement with respect to material and energy efficiency, or to a specific waste stream);

— stimulate a positive culture towards environmental management;