ISO 14001:2015

Environmental management systems -- Requirements with guidance for use

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.

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 1,*Environmental management systems*.

This third edition cancels and replaces the second edition (ISO 14001:2004), which has been technically revised. It also incorporates the Technical Corrigendum ISO 14001:2004/Cor.1:2009.

Introduction

0.1 Background

Achieving a balance between the environment, society and the economy is considered essential to meet the needs of the present without compromising the ability of future generations to meet their needs. Sustainable development as a goal is achieved by balancing the three pillars of sustainability.

Societal expectations for sustainable development, transparency and accountability have evolved with increasingly stringent legislation, growing pressures on the environment from pollution, inefficient use of resources, improper waste management, climate change, degradation of ecosystems and loss of biodiversity.

This has led organizations to adopt a systematic approach to environmental management by implementing environmental management systems with the aim of contributing to the environmental pillar of sustainability.

0.2 Aim of an environmental management system

The purpose of this International Standard is to provide organizations with a framework to protect the environment and respond to changing environmental conditions in balance with socio-economic

needs. It specifies requirements that enable an organization to achieve the intended outcomes it sets for its environmental management system.

A systematic approach to environmental management can provide top management with information to build success over the long term and create options for contributing to sustainable development by:

- — protecting the environment by preventing or mitigating adverse environmental impacts;
- — mitigating the potential adverse effect of environmental conditions on the organization;
- — assisting the organization in the fulfilment of compliance obligations;
- — enhancing environmental performance;
- — controlling or influencing the way the organization's products and services are designed, manufactured, distributed, consumed and disposed by using a life cycle perspective that can prevent environmental impacts from being unintentionally shifted elsewhere within the life cycle;
- — achieving financial and operational benefits that can result from implementing environmentally sound alternatives that strengthen the organization’s market position;
- — communicating environmental information to relevant interested parties.

This International Standard, like other International Standards, is not intended to increase or change an organization’s legal requirements.

0.3 Success factors

The success of an environmental management system depends on commitment from all levels and functions of the organization, led by top management. Organizations can leverage opportunities to prevent or mitigate adverse environmental impacts and enhance beneficial environmental impacts, particularly those with strategic and competitive implications. Top management can effectively address its risks and opportunities by integrating environmental management into the organization's business processes, strategic direction and decision making, aligning them with other business priorities, and incorporating environmental governance into its overall management system. Demonstration of successful implementation of this International Standard can be used to assure interested parties that an effective environmental management system is in place.

Adoption of this International Standard, however, will not in itself guarantee optimal environmental outcomes. Application of this International Standard can differ from one organization to another due to the context of the organization. Two organizations can carry out similar activities but can have different compliance obligations, commitments in their environmental policy, environmental technologies and environmental performance goals, yet both can conform to the requirements of this International Standard.

The level of detail and complexity of the environmental management system will vary depending on the context of the organization, the scope of its environmental management system, its compliance obligations, and the nature of its activities, products and services, including its environmental aspects and associated environmental impacts.

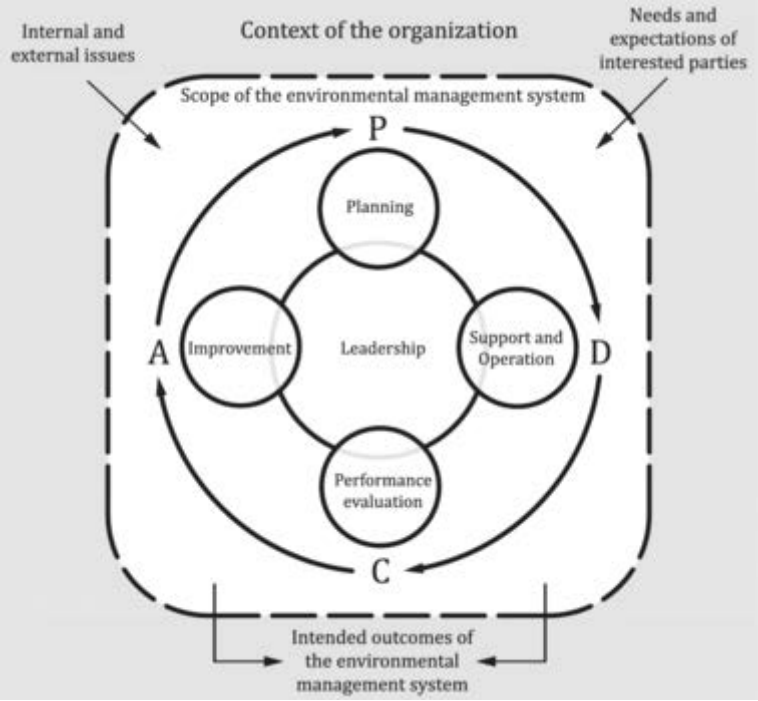
0.4 Plan-Do-Check-Act model

The basis for the approach underlying an environmental management system is founded on the concept of Plan-Do-Check-Act (PDCA). The PDCA model provides an iterative process used by organizations to achieve continual improvement. It can be applied to an environmental management system and to each of its individual elements. It can be briefly described as follows.

- — Plan: establish environmental objectives and processes necessary to deliver results in accordance with the organization's environmental policy.
- — Do: implement the processes as planned.
- — Check: monitor and measure processes against the environmental policy, including its commitments, environmental objectives and operating criteria, and report the results.
- — Act: take actions to continually improve.

Figure 1 shows how the framework introduced in this International Standard could be integrated into a PDCA model, which can help new and existing users to understand the importance of a systems approach.

Figure 1 — Relationship between PDCA and the framework in this International Standard



0.5 Contents of this International Standard

This International Standard conforms to ISO's requirements for management system standards. These requirements include a high level structure, identical core text, and common terms with core definitions, designed to benefit users implementing multiple ISO management system standards.

This International Standard does not include requirements specific to other management systems, such as those for quality, occupational health and safety, energy or financial management. However, this International Standard enables an organization to use a common approach and risk-based thinking to integrate its environmental management system with the requirements of other management systems.

This International Standard contains the requirements used to assess conformity. An organization that wishes to demonstrate conformity with this International Standard can do so by:

- — making a self-determination and self-declaration, or
- — seeking confirmation of its conformance by parties having an interest in the organization, such as customers, or
- — seeking confirmation of its self-declaration by a party external to the organization, or

- — seeking certification/registration of its environmental management system by an external organization.

Annex A provides explanatory information to prevent misinterpretation of the requirements of this International Standard. Annex B shows broad technical correspondence between the previous edition of this International Standard and this edition. Implementation guidance on environmental management systems is included in ISO 14004.

In this International Standard, the following verbal forms are used:

- — “shall” indicates a requirement;
- — “should” indicates a recommendation;
- — “may” indicates a permission;
- — “can” indicates a possibility or a capability.

Information marked as “NOTE” is intended to assist the understanding or use of the document. “Notes to entry” used in Clause 3 provide additional information that supplements the terminological data and can contain provisions relating to the use of a term.

The terms and definitions in Clause 3 are arranged in conceptual order, with an alphabetical index provided at the end of the document.

1 Scope

This International Standard specifies the requirements for an environmental management system that an organization can use to enhance its environmental performance. This International Standard is intended for use by an organization seeking to manage its environmental responsibilities in a systematic manner that contributes to the environmental pillar of sustainability.

This International Standard helps an organization achieve the intended outcomes of its environmental management system, which provide 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.

This International Standard 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. This International Standard does not state specific environmental performance criteria.

This International Standard can be used in whole or in part to systematically improve environmental management. Claims of conformity to this International Standard, however, are not acceptable unless all its requirements are incorporated into an organization's environmental management system and fulfilled without exclusion.

2 Normative references

There are no normative references.

3 Terms and definitions

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

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, 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.

3.1.2
environmental management system
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)

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)

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.

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.

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.

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.
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.
3.2.3
environmental condition
state or characteristic of the **environment** (3.2.1) as determined at a certain point in time
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)
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).
3.2.6
environmental objective
objective (3.2.5) set by the **organization** (3.1.4) consistent with its **environmental policy** (3.1.3)
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.
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.

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.

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.

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

3.3 Terms related to support and operation

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

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).

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 14044:2006, 3.1, modified — The words "(or service)" have been added to the definition and Note 1 to entry has been added.]

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.

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.

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 19011:2011, 3.3 and 3.2 respectively.

3.4.2
conformity
fulfilment of a **requirement** (3.2.8)

3.4.3
nonconformity
non-fulfilment of a **requirement** (3.2.8)
Note 1 to entry: Nonconformity relates to requirements in this International Standard and additional **environmental management system**(3.1.2) requirements that an **organization** (3.1.4) establishes for itself.

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.

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.

3.4.6

effectiveness

extent to which planned activities are realized and planned results achieved

3.4.7

indicator

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

[SOURCE: ISO 14031:2013, 3.15]

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.

3.4.9

measurement

process (3.3.5) to determine a value

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).

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).