
**Environmental management —
Environmental performance evaluation —
Guidelines**

*Management environnemental — Évaluation de la performance
environnementale — Lignes directrices*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 14031 was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 4, *Environmental performance evaluation*.

Annex A of this International Standard is for information only.

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Introduction

Many organizations are seeking ways to understand, demonstrate and improve their environmental performance. This can be achieved by effectively managing those elements of their activities, products and services that can significantly impact the environment.

Environmental performance evaluation (EPE), the subject of this International Standard, is an internal management process and tool designed to provide management with reliable and verifiable information on an ongoing basis to determine whether an organization's environmental performance is meeting the criteria set by the management of the organization.

An organization with an environmental management system in place should assess its environmental performance against its environmental policy, objectives, targets and other environmental performance criteria. When an organization does not have an environmental management system, EPE can assist the organization in:

- identifying its environmental aspects;
- determining which aspects it will treat as significant;
- setting criteria for its environmental performance; and
- assessing its environmental performance against these criteria.

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This International Standard (ISO 14031) supports the requirements in ISO 14001 and the guidance in ISO 14004 (see Bibliography), but it may also be used independently.

EPE and environmental audits help the management of an organization to assess the status of its environmental performance and to identify areas for improvement as needed. EPE is an ongoing process of collection and assessment of data and information to provide a current evaluation of performance, as well as performance trends over time. In contrast, environmental audits are conducted periodically to verify conformance to defined requirements. Further guidance on environmental auditing is provided in ISO 14010 and ISO 14011 (see Bibliography).

Examples of other tools that management can use to provide additional information for EPE include environmental reviews and life cycle assessment (LCA). While EPE focuses on describing the environmental performance of an organization, LCA is a technique for assessing the environmental aspects and potential impacts associated with product and service systems. Further guidance on LCA is provided in ISO 14040, ISO 14041, ISO 14042 and ISO 14043 (see Bibliography). Relevant information derived from these and other data sources can support the implementation of EPE, as well as the implementation of other management tools.

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Environmental management — Environmental performance evaluation — Guidelines

1 Scope

This International Standard gives guidance on the design and use of environmental performance evaluation within an organization. It is applicable to all organizations, regardless of type, size, location and complexity.

This International Standard does not establish environmental performance levels. It is not intended for use as a specification standard for certification or registration purposes or for the establishment of any other environmental management system conformance requirements.

2 Terms and definitions

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

2.1 environment

surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation

NOTE Surroundings in this context extend from within an organization to the global system.

[ISO 14001:1996]

2.2 environmental aspect

element of an organization's activities, products or services that can interact with the environment

NOTE A significant environmental aspect is an environmental aspect that has or can have a significant environmental impact.

[ISO 14001:1996]

2.3 environmental condition indicator

ECI
specific expression that provides information about the local, regional, national or global condition of the environment

NOTE "Regional" may refer to a state, a province, or a group of states within a country, or it may refer to a group of countries or a continent, depending on the scale of the condition of the environment that the organization chooses to consider.

2.4 environmental impact

any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products or services

[ISO 14001:1996]

**2.5
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

[ISO 14001:1996]

**2.6
environmental objective**

overall environmental goal, arising from the environmental policy, that an organization sets itself to achieve, and which is quantified where practicable

[ISO 14001:1996]

**2.7
environmental performance**

results of an organization's management of its environmental aspects

NOTE 1 Environmental performance is defined differently in this International Standard than in ISO 14001:1996 and ISO 14004:1996.

NOTE 2 In the context of environmental management systems, results may be measured against the organization's environmental policy, objectives and targets.

**2.8
environmental performance criterion**

environmental objective, target, or other intended level of environmental performance set by the management of the organization and used for the purpose of environmental performance evaluation

**2.9
environmental performance evaluation
EPE**

process to facilitate management decisions regarding an organization's environmental performance by selecting indicators, collecting and analysing data, assessing information against environmental performance criteria, reporting and communicating, and periodically reviewing and improving this process

**2.10
environmental performance indicator
EPI**

specific expression that provides information about an organization's environmental performance

**2.10.1
management performance indicator
MPI**

environmental performance indicator that provides information about the management efforts to influence an organization's environmental performance

**2.10.2
operational performance indicator
OPI**

environmental performance indicator that provides information about the environmental performance of an organization's operations

**2.11
environmental policy**

statement by the organization of its intentions and principles in relation to its overall environmental performance which provides a framework for action and for the setting of its environmental objectives and targets

[ISO 14001:1996]

2.12**environmental target**

detailed performance requirement, quantified where practicable, applicable to the organization or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives

[ISO 14001:1996]

2.13**interested party**

individual or group concerned with or affected by the environmental performance of an organization

[ISO 14001:1996]

2.14**organization**

company, corporation, firm, enterprise, authority or institution, or part or combination thereof, whether incorporated or not, public or private, that has its own functions and administration

NOTE For organizations with more than one operating unit, a single operating unit may be defined as an organization.

[ISO 14001:1996]

3 Environmental performance evaluation**3.1 General overview**

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3.1.1 EPE process model

Environmental performance evaluation (EPE) is an internal management process that uses indicators to provide information comparing an organization's past and present environmental performance with its environmental performance criteria. EPE, as detailed in this International Standard, follows a "Plan-Do-Check-Act" management model. The steps of this ongoing process are the following:

a) Plan

- 1) planning EPE;
- 2) selecting indicators for EPE (the process of selecting indicators may include both choosing from existing indicators and developing new indicators).

b) Do

Using data and information which includes:

- 1) collecting data relevant to the selected indicators;
- 2) analysing and converting data into information describing the organization's environmental performance;
- 3) assessing information describing the organization's environmental performance in comparison with the organization's environmental performance criteria;
- 4) reporting and communicating information describing the organization's environmental performance.

c) Check and Act

Reviewing and improving EPE.

Figure 1 provides an outline of EPE, with references to the numbers and titles of relevant clauses in this International Standard. Annex A provides supplemental guidance to support EPE.

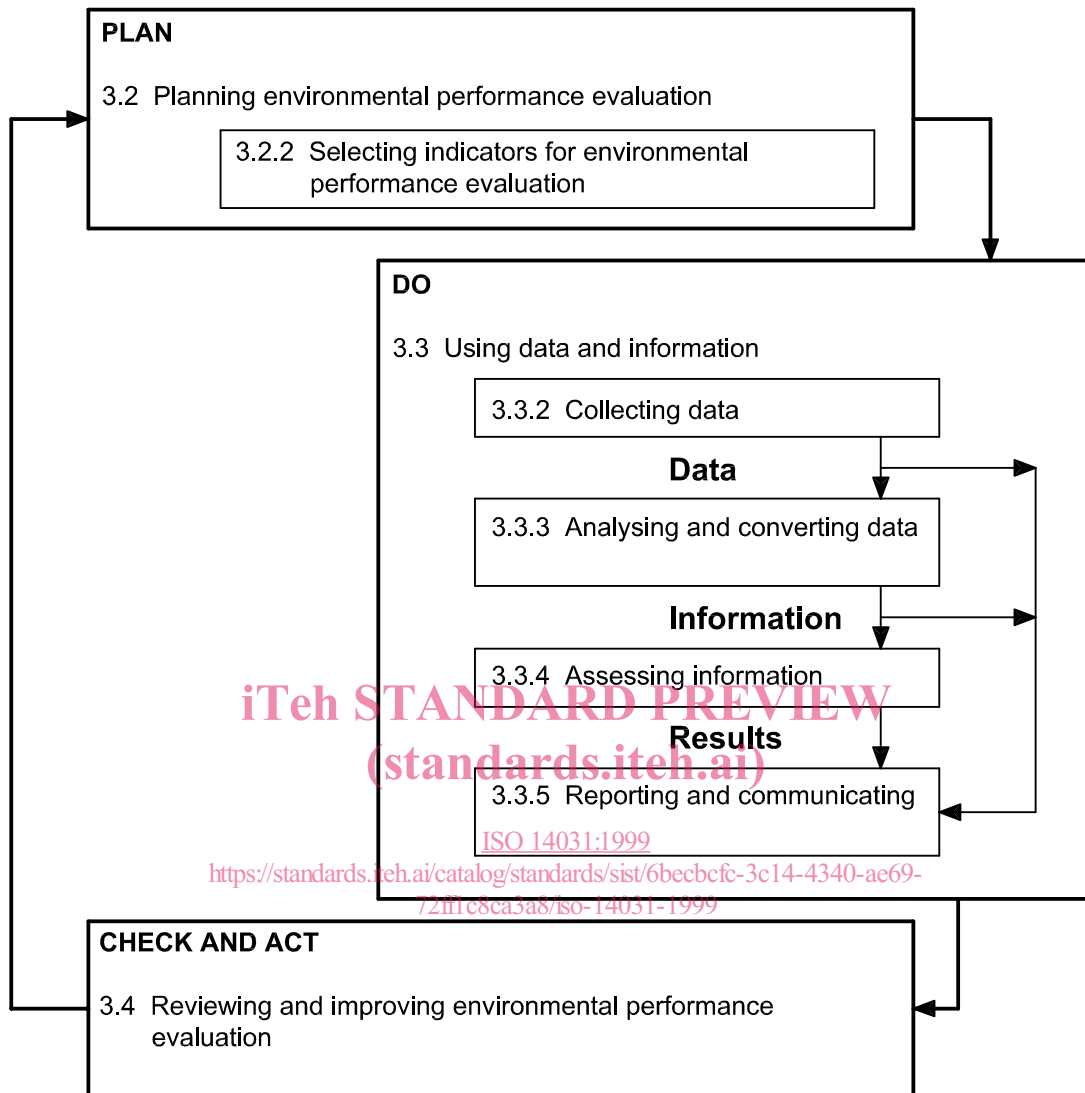


Figure 1 — Environmental performance evaluation

3.1.2 Indicators for EPE

This International Standard describes two general categories of indicators for EPE:

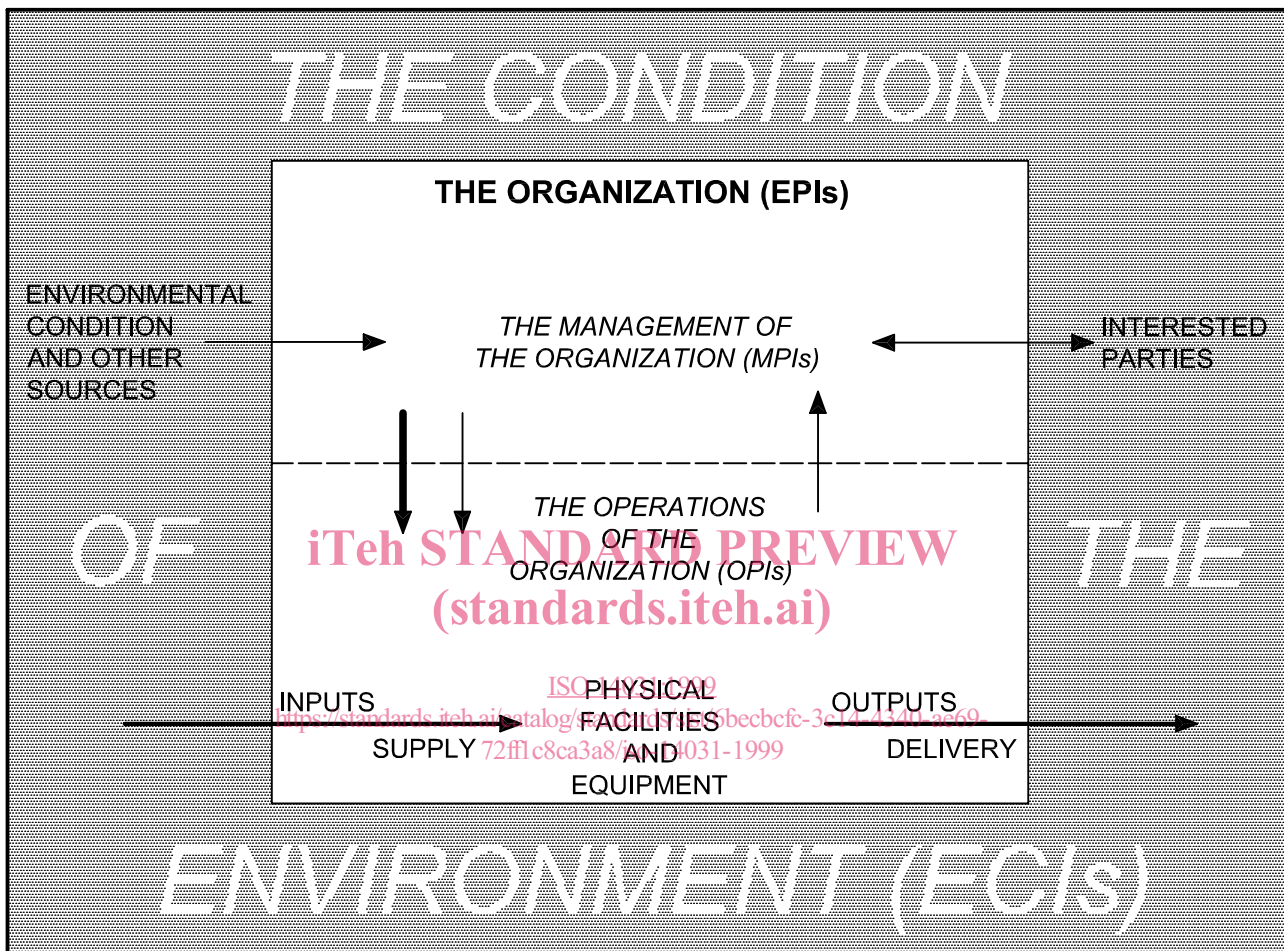
- environmental performance indicators (EPIs); and
- environmental condition indicators (ECIs).

There are two types of EPI:

- Management performance indicators (MPIs) are a type of EPI that provide information about management efforts to influence the environmental performance of the organization’s operations.
- Operational performance indicators (OPIs) are a type of EPI that provide information about the environmental performance of the organization’s operations.

ECIs provide information about the condition of the environment. This information can help an organization to better understand the actual impact or potential impact of its environmental aspects, and thus assist in the planning and implementation of EPE.

The decisions and actions of an organization’s management are closely related to the performance of its operations. Figure 2 illustrates the interrelationships among an organization’s management and operations, and the condition of the environment, noting the type of indicator for EPE related to each of these elements.



Key

- Information flows:
- Input and output flows related to the organization's opérations:
- Decision flows:

Figure 2 — Interrelationships of an organization’s management and operations with the condition of the environment

3.1.3 Use of EPE

Management commitment to implement EPE is essential. EPE should be appropriate to the size, location, and type of the organization and its needs and priorities. EPE should be cost-effective and part of the regular business functions and activities of an organization. The information generated by EPE can assist an organization to:

- determine any necessary actions to achieve its environmental performance criteria;
- identify significant environmental aspects;

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- identify opportunities for better management of its environmental aspects (e.g. prevention of pollution);
- identify trends in its environmental performance;
- increase the organization's efficiency and effectiveness;
- identify strategic opportunities.

Internal reporting and communication of information describing the organization's environmental performance is important to assist employees in fulfilling their responsibilities, thereby enabling the organization to achieve its environmental performance criteria. Management may also report or communicate such information to other interested parties.

An organization's EPE should be reviewed periodically to identify opportunities for improvement.

3.2 Planning EPE (Plan)

3.2.1 General guidance

An organization should base its planning of EPE (including the selection of indicators for EPE) on:

- the significant environmental aspects that it can control and over which it can be expected to have an influence;
- its environmental performance criteria;
- the views of interested parties.

NOTE Clause A.2 of this International Standard provides guidance on identifying the views of interested parties in the context of EPE.

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In planning EPE, the organization can also consider:

- the full range of its activities, products and services;
- its organizational structure;
- its overall business strategy;
- its environmental policy;
- information needed to meet its legal and other requirements;
- relevant international environmental agreements;
- environmental costs and benefits;
- information needed for analysis of financial effects related to environmental performance;
- the need for consistent information related to its environmental performance from year to year;
- information about the local, regional, national or global condition of the environment;
- cultural and social factors.

The financial, physical and human resources needed to conduct EPE should be identified and provided by management.

Depending on its capabilities and resources, the initial scope of an organization's EPE may be limited to those elements of its activities, products and services given highest priority by management. Over time, the initial scope of EPE can be widened to address elements of an organization's activities, products and services that have not been previously addressed.

The identification of an organization's environmental aspects is an important input in planning EPE. This information typically is developed in the context of an environmental management system. Guidance on identifying significant environmental aspects in the context of environmental management systems can be found in ISO 14001 and ISO 14004 (see Bibliography). An organization with an environmental management system in place should assess its environmental performance against its environmental policy, objectives, targets and other environmental performance criteria.

An organization without an environmental management system may use EPE to assist in identifying environmental aspects which it will treat as significant and setting criteria for its environmental performance. To determine significant environmental aspects, such an organization should consider:

- the scale and nature of material and energy usage;
- emissions;
- risks;
- the condition of the environment;
- the possibility of incidents;
- legal, regulatory and other requirements to which the organization subscribes.

For most organizations, the review of environmental aspects will focus on the organization's operations, as described in Figure A.1.

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Practical Help Box No. 1

Examples of approaches to identify environmental aspects and their relative significance in the context of EPE, for organizations without environmental management systems

- Identify activities, products and services of the organization, the specific environmental aspects and the relative significance associated with them, and the potential impacts related to significant environmental aspects.
- Use information about the condition of the environment to identify activities, products and services of the organization that may have an impact on specific conditions.
- Analyse the organization's existing data on material and energy inputs, discharges, wastes and emissions and assess these data in terms of risk.
- Identify the views of interested parties and use this information to help establish the organization's significant environmental aspects.
- Identify activities of the organization that are subject to environmental regulation or other requirements, for which data may have been collected by the organization.
- Consider the design, development, manufacturing, distribution, servicing, use, re-use, recycling and disposal of the organization's products, and their related environmental impacts.
- Identify those activities of the organization having the most significant environmental costs or benefits.

Whether it has an environmental management system or not, an organization should plan EPE in conjunction with the setting of its environmental performance criteria, so that the selected indicators for EPE will be appropriate for describing the organization's environmental performance against these criteria.

Examples of sources from which environmental performance criteria can be derived include: