INTERNATIONAL STANDARD

ISO 14016

First edition
2020-06

Environmental management — Guidelines on the assurance of environmental reports

Management environnemental — Lignes directrices sur l'assurance des informations figurant dans les rapports environnementaux

Reference number
ISO 14016:2020(E)

© ISO 2020



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

© ISO 2020 – All rights reserved

Contents

Page

Foreword ... **iv**

Introduction ... **v**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**
3.1 Terms related to assurance ... 1
3.2 Terms related to environmental sustainability ... 3
3.3 Terms related to reporting ... 4
3.4 Terms related to organizations ... 5

4 Principles ... **6**
4.1 General ... 6
4.2 Principles for assurance engagement ... 6
4.3 Principles for assurance providers ... 6

5 Guidelines on planning and performing the assurance engagement ... **7**
5.1 General ... 7
5.2 Planning the assurance engagement ... 10
5.2.1 Agreeing on the terms of the assurance engagement ... 10
5.2.2 Assurance objective(s) ... 11
5.2.3 Scope of the assurance engagement ... 11
5.2.4 Determining the assurance criteria ... 12
5.2.5 Level of assurance ... 13
5.2.6 Risk assessment ... 15
5.2.7 Information gathering methods and techniques ... 16
5.2.8 Assurance plan ... 17
5.3 Performing assurance activities ... 17

6 Assurance statement and reporting ... **18**
6.1 General ... 18
6.2 Assurance statement ... 18
6.3 Assurance report ... 19
6.4 Considering subsequent information ... 19

7 Competence ... **20**
7.1 General considerations ... 20
7.2 Determination and application of competence ... 20
7.3 Assurer and assurance team competence ... 20
7.4 Evaluation of competence ... 22

Annex A (informative) **Considerations in the assurance of environmental reports and reporting processes** ... **23**

Bibliography ... **25**

© ISO 2020 – All rights reserved

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.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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

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 2, *Environmental auditing and related environmental investigations.*

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.

© ISO 2020 – All rights reserved

Introduction

This document addresses the need for providing confidence in the assurance of environmental reports.

An environmental report includes voluntary and/or legally required disclosure by an organization of environmental information. It can be presented as a stand-alone environmental report or as non-financial information in an organization's annual report or be part of a sustainability report. This information is intended to fulfil the needs and expectations of the organization's interested parties, which can include investors, regulators, stock exchanges and customers.

External assurance from an impartial assurance provider can increase the credibility and reliability of reported environmental information (reliability of information is required by ISO 14001:2015, 7.4.1) and potentially improve the perceptions of the reporting organization with interested parties.

Environmental reports can take the form of:

— a stand-alone environmental report;

— the environmental component of a sustainability report also including non-environmental information;

— the environmental component of an annual integrated report;

— an environmental report made available to the public on an organization's website;

— a disclosure of environmental information using a specific framework, e.g. CDP (formerly known as the Carbon Disclosure Project), Global Reporting Initiative (GRI);

— real-time reporting of environmental performance.

Assurance is recognized as improving trust in and credibility of environmental reports and the reliance that intended users can place on them. Organizations can achieve multiple benefits from assurance[11], including the following.

a) Increasing the use of environmental information by leadership for decision making. With increased interest in non-financial sustainability information, including environmentally related information and its importance for driving improvements in organizational strategy, performance and reputation, sustainability issues are being addressed by top management. Disclosures and data that are believed to be accurate, trustworthy and credible are more likely to be used for internal decision making.

b) Reducing data quality risk and enhancing trust. Data quality continues to be a significant issue for reporting organizations and report users. In this context, it is not unusual for large companies to issue restatements of sustainability disclosures. In a 2011 study, it was found that a third of the largest 250 global companies had issued a restatement of non-financial information[12]. The role of assurance in reducing data quality risks is widely recognized. Disclosures that are viewed as robust and credible are more likely to be relied on, thus increasing the value of reporting.

c) Improving the involvement of intended users. Assurance engagements can involve reviewing a reporting organization's engagement processes with interested parties. Some organizations use their environmental reporting processes and/or sustainability reporting as the basis for ongoing dialogue with interested parties. Both of these can help promote mutual communication and understanding.

d) Strengthening internal environmental reporting for improving performance. Robust internal environmental reporting systems and controls play a role in managing sustainability performance and impacts. External assurance can help confirm that internal systems and controls are robust, and can recommend any necessary improvement.

e) Improving image and reputation. An assured environmental report can provide an organization's interested parties with a greater sense of confidence in disclosures. Among other things, it reflects

© ISO 2020 – All rights reserved

the seriousness with which the reporting organization approaches reporting. Investors, rating agencies and other analysts increasingly look for assurance when making investment and rating decisions.

This document provides principles and guidelines for assuring the environmental information an organization includes in environmental reports. It also provides guidance on:

— the output of the assurance engagement, i.e. the assurance statement and/or the assurance report;

— how the assurance engagement should address materiality, in terms of both:

  — determining if material issues have been included in the environmental report;

  — identifying any material misstatements and/or omissions.

Assurance is based on validation and/or verification of environmental information and the processes used to provide that information, depending on the scope of the assurance engagement and the intended use of the environmental report.

In this document, the term verification is applied to the processes for determining whether historical data or other information in an environmental report is materially correct. Validation is undertaken where confidence is sought for projected information, typically of future environmental performance or outcomes.

Assurance is the result of a process to determine whether reported environmental information meets the particular need for which it is intended. For example, although information related to a specific discharge is accurate and reliable, assurance may reveal that the information is not appropriate or relevant for the intended user(s).

The reporting organization defines its method to determine materiality in order to ensure the environmental report is suitable for the intended use. As part of the assurance engagement, the assurance provider could be required to review the rationale behind the methodology used to determine what is material, depending on the scope of the assurance engagement.

Assurance therefore may extend to the information in the environmental report and to the processes used for data collection, aggregation and analysis, and those used to determine the suitability of the information for the intended use (see Figure 1). Typically, it is not possible to assure every item of data from original source to aggregation for inclusion in an environmental report. Instead, a sample of data is subjected to detailed examination which, together with a review of the data collection processes, provides confidence in the information in the report as a whole. Assurance of the materiality process applied by the organization also gives confidence that the report is suitable for its intended users.

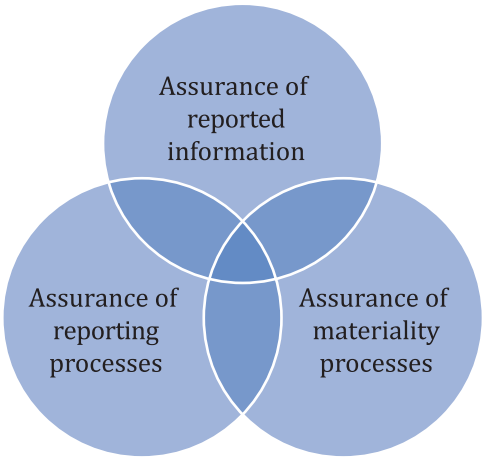


Figure 1 — Components of assurance

© ISO 2020 – All rights reserved

This document is intended to support reporting about an organization's environmental performance and is neutral regarding the environmental framework being used as the basis for reporting. This document is intended to be of use to organizations seeking assurance, providing assurance and relying on assurance of environmental reports, including:

— external assurance providers;

— organizations involved in developing environmental reports;

— organizations internally assuring their environmental reports;

— organizations involved in training relating to the assurance of environmental reports;

— voluntary and mandatory environmental reporting programme administrators, regulators, investors, finance and insurance communities and stock exchanges;

— other interested parties who wish to read environmental reports.

© ISO 2020 – All rights reserved

Environmental management — Guidelines on the assurance of environmental reports

1 Scope

This document gives principles and guidelines for assuring the environmental information an organization includes in its environmental reports.

This document is applicable to assuring other types of reports in principle provided that special consideration is paid to identifying the competence needed by the assurance provider.

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 assurance

3.1.1
assurance
result of a process of *validation* (3.1.12) and/or *verification* (3.1.13) to provide confidence as to the degree of reliance that can be placed on an *environmental report* (3.3.1)

3.1.2
assurance engagement
arrangements made by an *assurance client* (3.1.4) and an *assurance provider* (3.1.7) to provide *assurance* (3.1.1) of an *environmental report* (3.3.1)

Note 1 to entry: In this document, the term “arrangement” includes contractual agreements as well as activities carried out to provide assurance.

3.1.3
level of assurance
degree of confidence that can be placed by the *intended user* (3.3.3) on the content of the *environmental report* (3.3.1)

Note 1 to entry: The level of assurance may be expressed in qualitative or quantitative terms.

3.1.4
assurance client
organization (3.4.1) or person requesting *assurance* (3.1.1)

Note 1 to entry: The assurance client can be the reporting organization or any other organization that has the regulatory or contractual right to request assurance.

© ISO 2020 – All rights reserved

3.1.5
assurance criteria
standards, protocols or requirements used as a reference against which *assurance evidence* (3.1.6) is compared

Note 1 to entry: The requirements can be voluntary, contractual or legal.

[SOURCE: ISO 9000:2015, 3.13.7, modified — Adapted from "audit criteria" and Note 1 to entry has been added.]

3.1.6
assurance evidence
information, including data, records or statements of fact, that is verifiable, or other information relevant to the *assurance criteria* (3.1.5)

Note 1 to entry: Assurance evidence can be qualitative or quantitative.

3.1.7
assurance provider
organization (3.4.1) undertaking *assurance engagements* (3.1.2)

Note 1 to entry: An assurer is an individual participating in assurance engagements.

3.1.8
assurance report
document that describes the *assurance engagement* (3.1.2) and the results

3.1.9
assurance statement
declaration by the *assurance provider* (3.1.7) of the outcome of the *assurance engagement* (3.1.2)

Note 1 to entry: The assurance statement provides a summary description of the assurance activities undertaken and an opinion as to the *level of assurance* (3.1.3) that can be placed on the *organization's* (3.4.1) *environmental report* (3.3.1).

Note 2 to entry: The assurance statement does not, of itself, afford contractual or other legal guarantees.

3.1.10
claim
information declared by the reporting *organization* (3.4.1)

Note 1 to entry: For the purpose of this document, "claim" relates to *environmental information* (3.2.4) provided in the *environmental report* (3.3.1).

Note 2 to entry: The claim can represent a situation at a point in time or could cover a period of time.

Note 3 to entry: The claim should be clearly identifiable and capable of consistent evaluation or measurement against specified requirements by an *assurance provider* (3.1.7).

[SOURCE: ISO/IEC 17029:2019, 3.1 modified — "reporting organization" has replaced "client", Notes 1 and 4 to entry have been deleted and a new Note 1 to entry has been added. Note 3 modified by replacing "a validation body/verification body" with "an assurance provider".]

3.1.11
competence
ability to apply knowledge and skills to achieve intended results

[SOURCE: ISO 9000:2015, 3.10.4, modified — Notes 1 and 2 to entry have been deleted.]

© ISO 2020 – All rights reserved

3.1.12
validation
confirmation of a *claim* (3.1.10), through the provision of objective evidence, that the requirements for a specific intended future use or application have been fulfilled

Note 1 to entry: Objective evidence can come from real or simulated sources.

Note 2 to entry: Validation is considered to be a process to evaluate the reasonableness of the assumptions, limitations, and methods that support a claim about the outcome of future activities.

Note 3 to entry: Validation is applied to claims regarding an intended future use based on projected information (confirmation of plausibility).

[SOURCE: ISO/IEC 17029:2019, 3.2, modified — Note 4 to entry has been deleted.]

3.1.13
verification
confirmation of a *claim* (3.1.10), through the provision of objective evidence, that specified requirements have been fulfilled

Note 1 to entry: For this document, a claim relates to data or other information in an *environmental report* (3.3.1).

Note 2 to entry: Verification includes processes to determine whether historical data or other information in an environmental report are/is materially correct.

[SOURCE: ISO/IEC 17029:2019, 3.3, modified — Notes 1 and 2 to entry have been replaced and Note 3 to entry has been deleted.]

3.1.14
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, 3.6.1.3) of occurrence.

3.2 Terms related to environmental sustainability

3.2.1
environment
surroundings in which an *organization* (3.4.1) 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* (3.4.1) activities or products or services that interacts or can interact with the *environment* (3.2.1)

[SOURCE: ISO 14001:2015, 3.2.2, modified — Notes 1 and 2 to entry have been deleted.]

© ISO 2020 – All rights reserved

3.2.3
environmental impact
change to the *environment* (3.2.1), whether adverse or beneficial, wholly or partially resulting from an *organization's* (3.4.1) *environmental aspects* (3.2.2)

[SOURCE: ISO 14001:2015, 3.2.4]

3.2.4
environmental information
facts provided or learned related to the *organization's* (3.4.1) *environmental performance* (3.2.5)

Note 1 to entry: The term "environmental information" is a type of *claim* (3.1.10)

3.2.5
environmental performance
measurable results related to the management of *environmental aspects* (3.2.2)

Note 1 to entry: Results can be measured against the *organization's* (3.4.1) environmental policy, environmental objectives or other criteria, using indicators.

[SOURCE: ISO 14001:2015, 3.4.11, modified — "measurable results" has replaced "performance" and "For an environmental management system" has been removed from the Note 1 to entry.]

3.2.6
sustainability
state of the global system, including environmental, social and economic aspects, in which the needs of the present are met without compromising the ability of future generations to meet their own needs

Note 1 to entry: The environmental, social and economic aspects interact, are interdependent and are often referred to as the three dimensions of sustainability.

Note 2 to entry: Sustainability is the goal of *sustainable development* (3.2.7).

[SOURCE: ISO Guide 82:2019, 3.1]

3.2.7
sustainable development
development that meets the environmental, social and economic needs of the present without compromising the ability of future generations to meet their own needs

Note 1 to entry: Derived from the Brundtland Report[13].

[SOURCE: ISO Guide 82:2019, 3.2]

3.3 Terms related to reporting

3.3.1
environmental report
information on the *environmental performance* (3.2.5) of an *organization* (3.4.1) over a specified period of time

Note 1 to entry: The environmental report may also include information on the organization's management of other related matters.

Note 2 to entry: The information may take the form of a standalone environmental report or may be included in a *sustainability* (3.2.6) or integrated report.

Note 3 to entry: The environmental report may contain information on the past performance of the organization, including its environmental impacts, and information related to initiatives, challenges and future directions.

© ISO 2020 – All rights reserved

3.3.2
interested party
person or *organization* (3.4.1) 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: Interested parties can also be referred to as "stakeholders".

[SOURCE: ISO 14001:2015, 3.1.6, modified — Note 1 to entry has been replaced.]

3.3.3
intended user
person or *organization* (3.4.1) that relies on the assured *environmental report* (3.3.1) to make decisions

Note 1 to entry: The intended user can be the *assurance client* (3.1.3), regulators, the financial community or other *interested parties* (3.3.2), such as local communities, government departments or non-governmental organizations.

3.3.4
material, adj
significant to *intended users* (3.3.3)

Note 1 to entry: Material applies to issues or matters that the *environmental report* (3.3.1) addresses that may influence the decisions of the intended users, including misstatements or the aggregation of misstatements or omissions in the environmental report.

3.3.5
materiality process
process used by the reporting *organization* (3.4.1) to determine what is *material* (3.3.4)

Note 1 to entry: In the context of this document, the materiality process is used to determine what is relevant to include in the *environmental report* (3.3.1).

3.3.6
reporting boundary
extent of *environmental information* (3.2.4) reported from within the *organizational boundary* (3.4.2) as well as any *material* (3.3.4) environmental information related to operations and activities outside the organizational boundary

3.3.7
reporting process
methods and processes used to obtain information for inclusion in an *environmental report* (3.3.1)

3.4 Terms related to organizations

3.4.1
organization
person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives

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, including (an) operating unit(s), whether incorporated or not, public or private.

Note 2 to entry: An organization that is the subject of an *environmental report* (3.3.1) that is being assured is referred to as "the reporting organization".

[SOURCE: ISO 14001:2015, 3.1.4, modified — "including (an) operating unit(s)" and Note 2 to entry have been added.]

© ISO 2020 – All rights reserved