

Guidance

on Environmental Auditing

INTOSAI WGEA 2025



WGEA GUIDANCE –
KSC QA level 3 merge of
GUIDs 5200, 5201 and 5203

Table of Contents

1. INTRODUCTION	3
2. AUDITING THE ENVIRONMENT	4
2.1. Performance audit of the environment	7
2.2. Compliance audit of the environment	7
2.3. Environment in the context of financial audit	8
2.4. Sustainability reporting	9
2.5. Audit of international accords	9
3. PLANNING ENVIRONMENTAL AUDITS	12
3.1. Obtaining knowledge of environmental matters	13
3.2. Selecting environmental audit topics	14
3.3. Risk assessment	15
3.3.1. Risk assessment in performance audit	15
3.3.2. Risk assessment in compliance and financial audit	16
3.4. Designing environmental audits	17
3.4.1 Environmental audit objectives	18
3.4.2. Environmental audit methodology	18
3.4.3. Environmental audit questions	18
3.4.4. Audit criteria for environmental audits	19
3.4.5. Sources of audit criteria	20
4. CONDUCTING AN ENVIRONMENTAL AUDIT	21
5. REPORTING AND FOLLOW-UP	22
Annex 1: Glossary	23
Annex 2: Abbreviations	25
Annex 3: Some of the current Multilateral Environmental Agreements (MEAs)	26

1. INTRODUCTION

This guidance pertains to conducting audits with an environmental perspective and serves as an overarching document developed by the INTOSAI Working Group on Environmental Auditing (WGEA). This document merges and updates the content of GUID 5200: "Activities with an Environmental Perspective," GUID 5201: "Environmental Auditing in the Context of Financial and Compliance Audits", and GUID 5203: "Cooperation on Audits of International Environmental Accords."

The guidance is accompanied by a practical handbook that provides good practices and audit examples. This document provides the fundamental aspects of environmental auditing. However, environmental auditing is an evolving area. Thus, the handbook can be updated more frequently, providing more detailed examples and addressing emerging issues more thoroughly than this principle-based guidance, which is intended to be more long-standing.

In this guidance, the term "environmental audit" refers broadly to the audit of various topics related to environmental policies and their impacts - both intended and unintended. These topics include, but are not limited to, nature and biodiversity protection, water and waste management, natural resource governance (such as mining, fisheries and agriculture), the impact of infrastructure projects, sustainable development, and climate action.

Although environmental audit does not constitute a separate audit type, it has been recognised as a distinct and established concept since 1992. It is important not to confuse it with a specific category of audit. This guidance should be applied in accordance with the mandate and responsibilities of each respective Supreme Audit Institution (SAI), recognising that the scope and approaches may vary based on national legal frameworks and institutional competencies.

Consequently, all guidance, methodologies, and practices outlined for environmental audits might be equally applicable to audits focused on climate action and sustainable development, and associated social aspects - areas that are dynamic and constantly evolving. By integrating climate action into the broader scope of environmental audits, we ensure a comprehensive approach to assessing the responses to the environmental challenges facing our planet.

While auditing environmental topics is fundamentally similar to auditing any other policy area, the environmental issues involve some elements that require specific guidance. The objective of this guidance document is to address the key elements that are specific to environmental topics. The document seeks to enhance the quality and impacts of audits in addressing environmental risks and high-impact environmental issues. Additionally, it highlights cross-cutting themes to ensure relevance and applicability across diverse contexts and environmental challenges.

The guidance covers the main audit phases (planning, conducting, reporting, and follow-up) of an environmental audit. The guidance emphasises incorporating environmental considerations into all types of audits, addressing long-term impacts, sustainability, risks and cross-sector linkages. It is recommended to integrate Quality Management into environmental audits to promote compliance with professional standards and enhance the credibility and reliability of audit findings in line with the principles of ISSAI 140¹.

Target audience:

- Audit teams specialising in performance, compliance, or financial audits that seek to include environmental perspectives in audits in any policy area.
- SAIs collaborating on joint or coordinated audits on common environmental issues or implementing the international environmental agreements.

1 ISSAI – 140 – Quality Management for SAIs

Types of audit:

- Performance Audits: assessing the efficiency, effectiveness, and economy of environmental programmes and policies.
- Compliance Audits: ensuring adherence to environmental laws, regulations, and international treaties.
- Financial Audits: addressing environment in the context of financial reporting.

Environmental audits can be designed to address financial, performance, and/or compliance aspects. While it is challenging to integrate all three aspects within a single audit, combining different aspects can ensure a more comprehensive evaluation of the subject matter. The guidance also supports cross-cutting audits, as environmental issues often span multiple sectors, including areas such as sustainable development, national capacity for environmental governance, planning and budgeting, climate mainstreaming, and policies related to water, energy, procurement, and resource allocation.

In addition, the guidance supports:

- Cooperative Audits between Supreme Audit Institutions (SAIs) on common environmental issues, following the definition in GUID 9000, according to which cooperative audits can be categorised into three types: parallel/concurrent audits, coordinated audits, and joint audits. For details, see GUID 9000¹.
- Auditing the national implementation of international environmental agreements.

2. AUDITING THE ENVIRONMENT

Audit of environmental topics can be conducted as a compliance, financial or performance audit that examines and assesses how responsible bodies, such as governments and public authorities, manage, oversee, and safeguard the environment and natural resources.

Environmental audits are essential for ensuring compliance with environmental laws, identifying and mitigating risks, and promoting sustainability. They protect public health, prevent environmental degradation, and encourage responsible use of natural resources. By serving the public interest, these audits help conserve resources for future generations.

Environmental audits may focus on specific environmental issues, policies, or programmes and can involve agencies with direct environmental mandates but also others whose activities have a significant environmental impact.

Governments can have a big impact on the environment, for example via procurement policies and implementation of environmental schemes. In addition, environmental audits can address the mainstreaming of environmental issues across the government. Consequently, an environmental perspective can be integrated into any audit.

For instance, an audit of public health issues might reveal a clear link to environmental pollution and planetary health. Reducing pollution can significantly benefit citizens by increasing the well-being of society and leading to considerable economic savings.

One of the key challenges in environmental governance is the presence of market failures. The costs associated with environmental degradation are often not fully reflected in market transactions, leading to negative externalities, such as pollution, resource depletion, and biodiversity loss. To mitigate these effects, governments have implemented various policy instruments, including environmental taxes, charges, and subsidies, as well as cap-and-trade schemes, such as those targeting carbon dioxide emissions.

¹ GUID9000 Cooperative Audits between SAIs

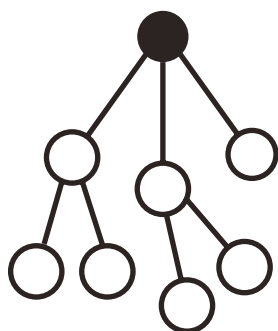
Given these policy mechanisms, auditors play a critical role in assessing their effectiveness, efficiency, and compliance with various standards, including legislation and international agreements. Auditing environmental policies and financial instruments provides valuable insights into whether these measures achieve their intended goals, whether they are properly implemented, and whether public funds are used efficiently.

Environmental auditing can involve technical aspects that may require deeper analysis and a thorough understanding of the issue under audit.

Some of the specific characteristics in environmental auditing



Environmental topics are often challenging to monetise. Assigning a monetary value to, for example, biodiversity or clear air is difficult. However, methods are being developed. One example in the climate policy area is carbon markets. Despite this, actions related, for example, to climate change adaptation, aimed to prevent future costs, can still be hard to measure and price. Economic valuation of ecosystem services is another field with various innovations but also challenges related to developing adequate metrics.



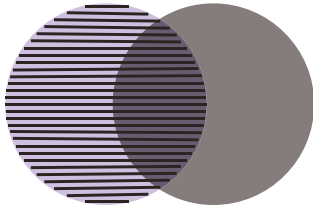
Non-financial information, such as tonnes of greenhouse gas emissions, cubic metres of water consumption, or the proportion of eco-labelled products, can be material to the audit tests carried out. This type of information can be more difficult to understand and interpret due to the lack of generally accepted reporting principles or authoritative criteria, or because of its qualitative nature. Despite these challenges, non-financial information is often highly relevant for audits related to environmental issues. In addition, the development of metrics is progressing fast.



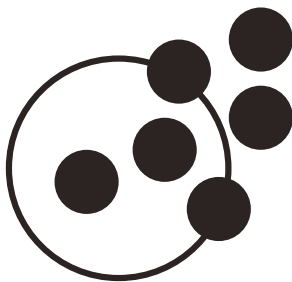
The timespan of environmental issues tends to be long, and auditors might not be accustomed to evaluating government actions or making their own recommendations with a long-term perspective. Furthermore, the long timespan makes it challenging to assess the impact of specific policies or programmes among other factors affecting development.



Environmental risks can be specific and rapid. For example, the concept of a tipping point refers to a situation where a series of small changes leads to sudden, dramatic, radical change.



The cross-sectoral nature of effective environmental policies. Addressing environmental problems typically requires the involvement of multiple government sectors. For example, the effectiveness of climate policies is influenced by energy, transport, and agriculture sector as well as various fiscal policy tools. In a similar way, air pollution and microplastics are not only harmful for the environment but also pose significant public health risks.



The cross-border nature of environmental problems. Environmental issues do not respect national borders and can have cascading impacts across borders. Therefore, effective management of environmental issues often requires cooperation with neighbouring countries (e.g. protecting a border river) or global efforts (e.g. ocean plastics, CO2 emissions or environmental Sustainable Development Goals).



Environmental auditing can be connected with assessing sustainable development. Sustainable development, defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs", is a key concept in environmental audits. It involves integrating social, environmental, and economic objectives, scrutinising issues from both national and global perspectives, and extending the timescale to consider future generations. The 2030 Agenda is a current global framework for sustainable development and includes 17 Sustainable Development Goals, but the concept of sustainable development is older.

2.1. Performance audit of the environment

A performance audit evaluates the economy, efficiency, and effectiveness – often referred to as the three 'E's' – of public spending in the environmental management sector. Additionally, the environment itself has sometimes been regarded as the fourth 'E'. For general guidance on performance audit, please refer to ISSAI 300: Performance Audit Principles and ISSAI 3000 – Performance Audit Standard.

Economy means minimising the cost of resources – whether financial, human, or material – while taking into account time and quality considerations. In the context of environmental audit, this could refer, for example, to cost-savings achieved by energy-efficiency measures, or to the waste of financial resources resulting from poor water management.

Efficiency means whether the resources have been put to optimal use: getting most from the available resources. An example of an environmental audit could be assessing whether climate policy targets have been achieved cost-effectively, by prioritizing the implementation of the most cost-efficient actions before considering more expensive measures.

Effectiveness means meeting the objectives and achieving the intended results. It is the relationship between the intended and actual results of public spending. An example in the environmental audit sphere could be whether the intended targets of water protection (e.g. good status of water) have been reached. Sometimes audits can find that the preconditions for assessing effectiveness are missing if, for example, there are no strategies or implementation plans in place.

In the context of performance auditing, the scope of an environmental audit may include, for example:

- assessment of the governance and performance of implemented environmental projects, programmes, and policies, focusing on the degree to which their objectives have been achieved;
- the environmental impact of other sectoral programmes and policies;
- environmental management systems, environmental indicators, and environmental reporting;
- evaluations of proposed environmental and fiscal policies, including assessments of their potential effectiveness in meeting environmental targets;
- policy coherence of government actions from an environmental perspective; and
- addressing cross-cutting environmental issues (e.g. climate change and biodiversity loss).

2.2. Compliance audit of the environment

Compliance auditing in the context of environmental issues involves providing assurance that the auditee's activities are conducted in accordance with relevant environmental laws, standards and policies, both at national and, where relevant, international levels. Additionally, it encompasses other general laws, regulations, and international treaties that have environmental relevance, as environmental considerations can be embedded within a broader legal and regulatory framework. For general guidance on compliance audit, please refer to the ISSAI 400: Compliance Audit Principles and ISSAI 4000 – Compliance Audit Standard.

This type of audit allows Supreme Audit Institutions (SAIs) to assess whether entities are following the required regulations and guidelines. It helps auditees ensure that their activities are conducted in accordance with established environmental objectives and legal requirements. These can be, for example, wastewater treatment or air pollution standards established in law.

A compliance environmental audit can:

- promote compliance or provide increased assurance about compliance with existing and impending environmental policy and legislation;

- reduce the risks and costs associated with non-compliance with regulations; and
- identify liabilities and risks.

It is important to understand environmental laws and regulations that could lead to material misstatements in the financial statements or significantly impact an entity's operations.

When planning and performing an audit, it is crucial to evaluate compliance with applicable laws and regulations, especially where non-compliance could significantly impact the entity's adherence to environmental standards.

2.3. Environment in the context of financial audit

Environment in the context of financial audit involves collecting audit evidence to determine whether the environmental costs, obligations, impacts, and outcomes which have a material effect on the entity's financial statements are presented in accordance with the applicable financial reporting and regulatory framework. For general guidance on financial audit, please refer to ISSAI 200: Financial Audit Principles and ISA250: Consideration of Laws and Regulations in an Audit of Financial Statements, and the ISSAI 2000 series.

The audit of financial statements may require the auditor to consider environmental regulations as part of the audit, particularly environmental issues and risks, if they have a material effect on the financial statements. The financial audits in the context of environment should follow/consider the same basis of accounting (cash or accrual) as the financial statements of the audited entity.

In environmental auditing, assessing materiality requires a broader perspective than in financial auditing, considering environmental, social, and economic impacts, as well as stakeholder concerns and the potential nature and extent of environmental damage. Auditors could consider factors such as the scale of the environmental impact, the sensitivity of the affected environment, risks to public health and safety, compliance with environmental regulations, stakeholder concerns, and the reversibility of damage.

The concept of double materiality encompasses two dimensions in assessing materiality:

1. Financial materiality traditionally focuses on the significance of financial information for investors and stakeholders in decision-making processes.
2. Impact materiality extends beyond financial considerations, encompassing broader societal and environmental impacts. Impact materiality recognises the organisation's impact on the environment and society (and similarly, the environmental impact on the organisation), and is of greater relevance when assessing the activities of public entities.

Environment in the context of financial audit can also address risks arising from potential negative impacts of environmental issues, such as severe weather-related disasters exacerbated by climate change. These uncertainties, while unpredictable, can have significant adverse effects on societies and economies.

Another environmental focus in the context of financial audit can be environmental liabilities. For example, while an organisation's financial statements may include land assets, attention is also given to "environmental assets" – natural assets that do not provide resource inputs but offer ecosystem services, such as habitat provision, flood and climate control, and other non-economic functions, such as aesthetic or health benefits. There are frameworks, such as the System of Environmental-Economic Accounting, that have been developed to integrate economic and environmental data to provide a more comprehensive and multipurpose view of the interrelationships between the economy and the environment. Financial accounting systems are not designed to take into account the risks associated with climate change, biodiversity loss, or pollution. The degradation of ecosystem services, however, poses serious risks to societies and their economies, potentially leading to increased costs.

2.4. Sustainability reporting

The disclosure of environmental, sustainability, and climate information through sustainability reporting has been primarily driven by the private sector. In the public sector, Supreme Audit Institution (SAI) auditors may play a crucial role in providing assurance for these reports, either as part of financial audits or as a separate exercise.

Providing assurance on sustainability reporting as part of a financial audit is essential because it enhances the credibility and reliability of the information presented. By integrating sustainability assurance into financial audits, auditors can ensure that sustainability information is subject to the same rigorous standards and scrutiny as financial data, thereby providing stakeholders with a comprehensive view of an organisation's overall performance and risks.

The International Standard on Sustainability Assurance (ISSA) 5000 is a comprehensive standard developed by the International Auditing and Assurance Standards Board (IAASB). It provides general requirements for conducting sustainability assurance engagements. This standard is applicable across various sustainability topics and frameworks and can be used by both professional accountants and non-accountant assurance practitioners. It aims to ensure the reliability and transparency of sustainability reports, making it adaptable to different regional regulatory requirements and suitable for organisations of all sizes.

2.5. Audit of international accords

Given the nature of environmental audits, cooperation between auditors in two or more countries may be beneficial. This can include exchanging information, methodologies, and best practices to ensure the effectiveness of the audit. Coordinated audits of specific matters can be fruitful, as environmental problems are often cross-border in nature. Additionally, many international agreements to which governments are signatories can provide a useful framework for a common audit approach and a common basis for formulating audit criteria.

This approach aligns with the guidelines provided in GUID 9000, which emphasise the importance of cooperative audits in addressing global challenges effectively. While GUID 9000 is not specific to environmental audits, it can be particularly useful in this context, as it offers a structured approach to addressing transboundary environmental issues and leveraging international agreements for a unified audit framework.

International environmental accords are agreements between countries designed to address global environmental challenges, such as climate change, biodiversity loss, and pollution. These accords set forth commitments and obligations for the participating nations to implement measures that protect and preserve the environment.

Multilateral environmental agreements (MEA) are global accords, such as the Paris Agreement on Climate Change, or Kunming–Montreal Global Biodiversity Framework. Furthermore, there are regional agreements, such as those concerning regional seas, and bilateral agreements between two countries to address specific environmental issues.

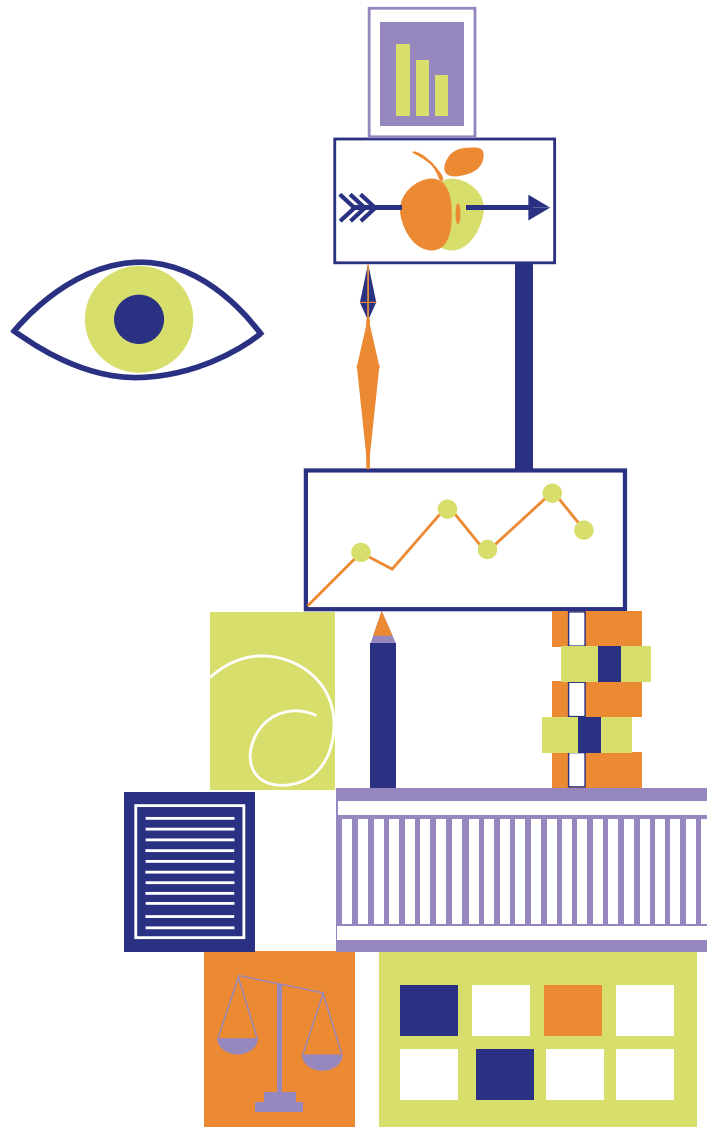
Auditing international environmental accords involves evaluating whether countries are meeting their commitments and effectively implementing the required policies and measures. In addition, these audits foster cooperation between the SAIs and benefit from the transboundary nature of international agreements.

Key features include:

- International environmental accords can provide a common audit framework and a source of audit criteria.
- Audits assess compliance with the obligations of the accord and the effectiveness of implementation.
- SAls may collaborate to reduce operational costs and enhance the audit's effectiveness.
- It may be necessary to handle findings with appropriate sensitivity due to their international implications.
- In the context of regional conventions, audits often involve countries within specific geographic areas covered by the accord.

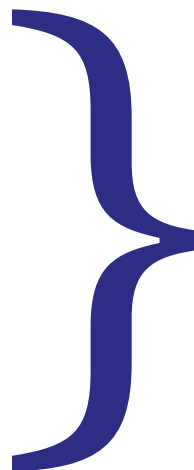
Despite these special features, the audit process itself follows the standard steps of any environmental audit, including planning, conducting, reporting, and follow-up.

Environmental auditing

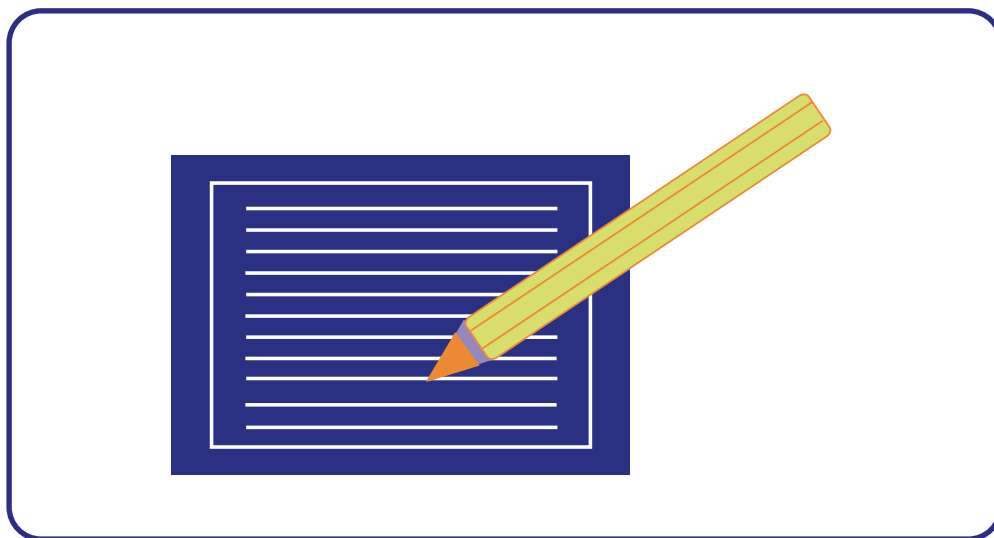


STEPS

- Planning
- Understanding the audit area
- Selecting topics
- Assessing risk
- Designing audit
- Establishing criteria
- Conducting the audit
- Reporting and follow up



Insights



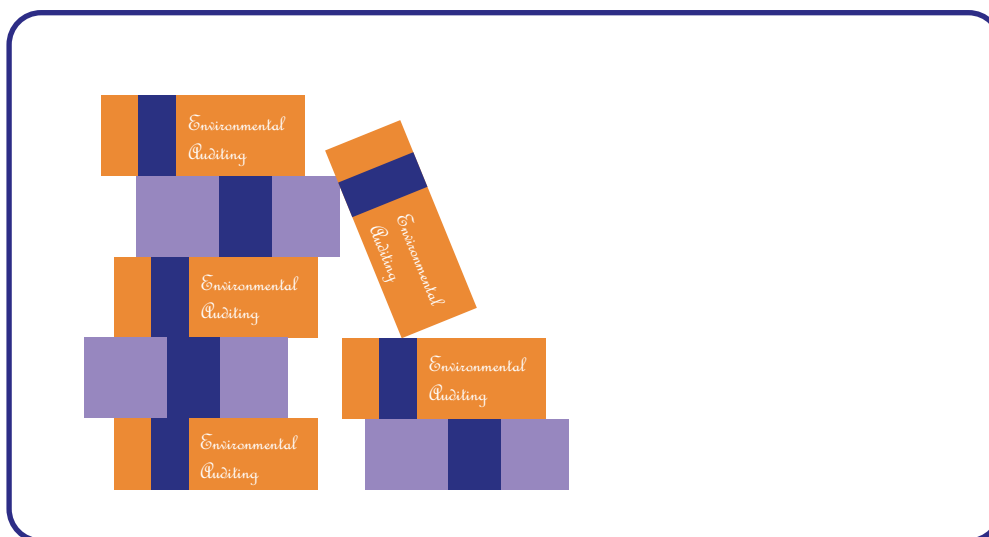
3. PLANNING ENVIRONMENTAL AUDITS

Effective planning of environmental audits involves engaging relevant stakeholders to understand their perspectives and identify audit priorities. Auditors should adhere to the principles outlined in ISSAI 100, with specific attention to the environmental context.

ISSAI 100 requires that when planning an audit, auditors should apply the following principles:

- establish the terms of the audit clearly;
- obtain an understanding of the nature of the entity/programme to be audited;
- conduct a risk assessment or problem analysis and revise this as necessary in response to the audit findings;
- identify and assess the risk of fraud relevant to the audit objectives; and
- develop an audit plan to ensure that the audit is conducted in an effective and efficient manner.

All of these elements require understanding of the specific nature of the environmental issue that a policy or programme is targeting. Moreover, among these principles, the analysis of risks includes specific elements unique to environmental auditing. Given the complexity of environmental issues, SAs can leverage innovative methods and techniques developed in other disciplines in order to plan and carry out high-quality audits.



3.1. Obtaining knowledge of environmental matters

In all audits, it is essential to have sufficient knowledge of the subject matter and the significant risks involved to identify and understand matters that may significantly impact the audit process and the audit report.

Sufficient knowledge of environmental matters in the context of auditing does not mean auditors have to be environmental scientists — but it does mean they should have enough understanding to recognise environmental risks, assess compliance, and evaluate the implications for the entity's financial position and operations. The INTOSAI WGEA Audit Database is a valuable source of previous environmental audits conducted by SAIs, offering insights, methodologies, and lessons learned to support risk assessment and audit planning.

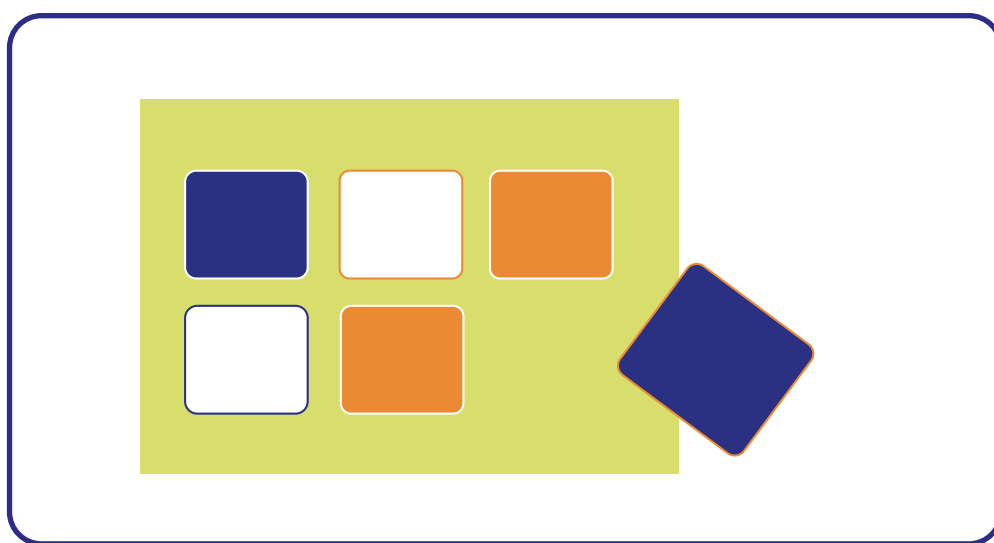
It is important to understand the main purpose of the audited policy or programme and the field or sector in which the entity operates and to identify any material environmental risks. Equally important is assessing how the policy or programme aligns with, or affects, broader environmental goals and other related policy objectives. Environmental auditing is inherently interdisciplinary, requiring the integration of knowledge and expertise from various fields. Collaboration with experts in, for example, environmental science, economics, and sociology ensures that audits are comprehensive and address multiple dimensions effectively.

In addition, numerous reports issued by civil society organisations (NGOs) working in specific fields often provide in-depth analyses of potential risks and impacts of government policies. However, auditors should assess the evidential value of such reports to mitigate possible bias.

When expertise in a particular environmental field is lacking, external experts' assistance should be sought. This can be achieved through expert panels, focus groups, or by consulting independent expert(s) for their assessment. The nature and quality of the data, opinions, and judgements obtained from these parties need to be appropriately assessed by the auditor for their evidential value to avoid biased assessments.

If the entity has an internal auditing function that examines environmental aspects of its operations, the auditor should consider utilising that work, provided that it can be relied upon. In some cases, environmental experts may have contributed to the information reported in the financial statements. For example, they may have assessed the level of contamination and its extent or evaluated different approaches for restoring a site. In such cases, the auditor should consider the impact of the expert's work on the financial statements and the professional competence, independence, and objectivity of the environmental expert.

Effectively requesting and understanding expert advice requires, nonetheless, a fundamental understanding of the relevant environmental subject matter. This ensures that the audit team can accurately frame their questions and fully comprehend the expert's contributions.



3.2. Selecting environmental audit topics

When selecting audit topics, it is useful to review government policies and map risks from the perspective of environmental performance. This risk-based approach, which involves identifying and prioritising areas based on their potential impact, helps identify audit topics with the most significant environmental, social, and economic risks, ensuring focus on the most impactful issues. By prioritising these high-risk areas, auditors can allocate resources more effectively and drive meaningful improvements.

Since environmental risks extend across multiple policy areas and organisations, auditors should assess their direct or indirect impact on the environment. This includes evaluating both positive externalities, such as the many benefits of urban green spaces, and negative externalities, such as pollution or resource depletion caused by economic activity.

Timing is crucial in maximising the effectiveness of an environmental audit, as in any other audit. The planning process must consider the potential impact of the report on upcoming legislation or strategic documents and take political agendas into account. Aligning the audit timeline with legislative cycles ensures that findings are delivered at the most opportune moments, thereby increasing their influence on policy decisions and regulatory improvements.



3.3. Risk assessment

During the planning phase of an environmental audit, risk assessment aims to ensure that the audit identifies and prioritises the most significant environmental threads, thereby maximising its value. This assessment involves identifying potential hazards, evaluating the likelihood of their occurrence, and estimating the severity of their impacts.

Environmental risks are typically defined by the probability that an activity will cause environmental damage along with its potential economic, social, and environmental consequences. These consequences can be assessed using multi-criteria analysis that incorporates environmental, economic, and social dimensions, as well as the probability of occurrence, and the current level of risk management. Given their often long-term nature, environmental risks require careful and forward-looking assessment.

3.3.1. Risk assessment in performance audit

When planning an audit of an environmental policy or programme, an SAI should consider the performance of an environmental policy or programme and potential risks from the perspective of economy, efficiency, and effectiveness. The audit will examine specific issues related to the 3E's, or a combination of them, based on the significant environmental risks being addressed, as well as their materiality, relevance, and auditability.

In public auditing, environmental risks often stem from public authorities' efforts to identify and reduce negative consequences through environmental management actions and policies. The concern is that these actions may be insufficient, failing to deliver an environmental policy or programme in an economical, efficient, or effective manner. The severity of these risks is assessed based on their potential negative economic, social, and environmental impact. Importantly, while many initiatives focus on prevention and mitigation, there are also programmes centred on recovery. It is essential to recognise that both types of efforts play a vital role in achieving sustainable environmental outcomes.

Environmental risk assessment should be based on the knowledge acquired from the audit area and guide the formulation of audit questions and scope. When assessing the nature and likelihood of potential environmental effects, it is important to consider governments' responsibilities and how environmental policy instruments influence these potential effects. The effectiveness of these instruments plays a crucial role in determining the likelihood of potential environmental effects.

Common challenges in using risk assessments include the availability and reliability of environmental data and indicators. Environmental data often comes from multiple sources, which use different methodologies, units of measurement, and levels of precision. Additionally, environmental conditions can change due to seasonal variations, regulatory updates, or unforeseen environmental events, making it difficult to establish reliable baselines and trends. The absence of quality data—or any data at all—can be an audit finding in itself, as well as a common challenge in most audits.

When high-quality data is available, using key visual aids, such as maps and graphs, can enhance understanding and help identify gaps more effectively.

3.3.2. Risk assessment in compliance and financial audit

Once sufficient knowledge of the business has been acquired, the standard procedure is to assess the risk of compliance with relevant regulations and the risk of material misstatement in the financial statements.

In addition to evaluating traditional financial risks, auditors must consider impact materiality, especially as it relates to environmental issues. Impact materiality refers to the significance of an entity's activities or omissions from the perspective of stakeholders beyond financial investors, including the broader public, regulators, and environmental groups. The environmental impacts—such as pollution, emissions, and biodiversity loss—can have material consequences for financial performance and public trust.

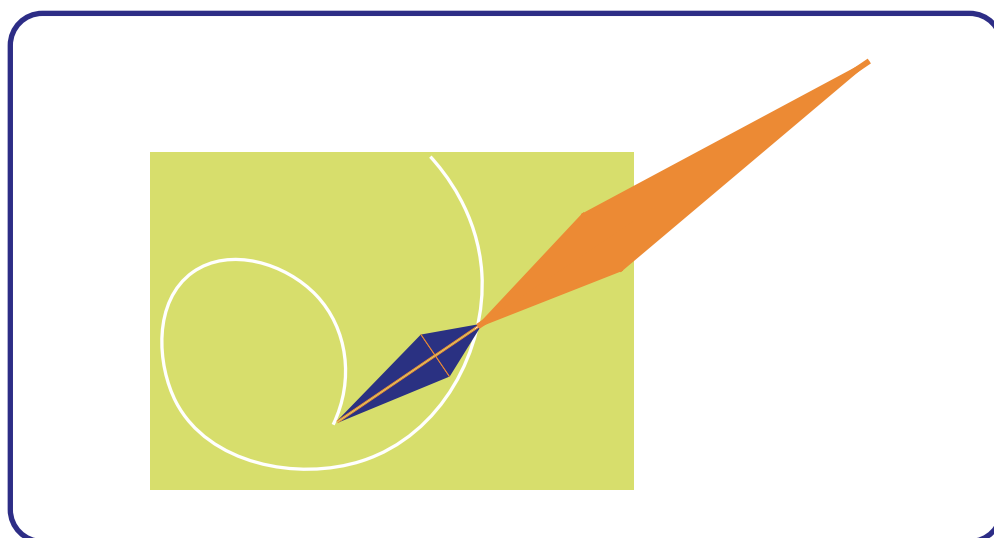
Examples of such risks include:

- non-compliance with legislation, such as pollutant emissions exceeding legal limits or unauthorised use of natural resources, which may result in fines, compensation payments, or mandatory environmental restoration;
- non-compliance with environmental laws, regulations and international accords, potentially leading to reputational damage, legal consequences, and increased regulatory scrutiny;
- significant economic or regulatory changes affecting the operations of a particular public entity;
- environmental/climate litigation liabilities and costs, including costs associated with legal actions related to environmental harm or failure to meet climate-related obligations;
- fraud risk related to, for example, false claims related to carbon offset or the issuance of illegal logging permits;
- greenwashing risks, including misleading financial statements about environmental performance or sustainability initiatives;
- economic or regulatory changes, which can significantly impact the operations and compliance obligations of public entities;
- insurance costs, which may rise in response to increased environmental risks or exposure to climate-related hazards;
- inadequate internal control systems, particularly those related to monitoring and ensuring compliance with environmental and financial regulations;
- financial reporting risks, such as:
 - material misstatements due to failure to recognise liabilities (e.g. for contaminated site remediation or omission of environment-related expenses)
 - non-compliance with financial reporting frameworks, including the failure to provision for environmental liabilities, depreciation of environmentally impaired assets, or disclosure of potential environmental risks and obligations;
- long-term environmental impacts, such as natural resource degradation, that may create future legal, financial, or operational obligations.

The audited entity can adopt various approaches to manage environmental matters. Small entities or those with low exposure to environmental risk may integrate environmental control systems into their regular internal control systems. Entities with high exposure to environmental risk may design and operate a separate internal control sub-system, for example an environmental management system (EMS).

It is also crucial to understand the control environment for environmental matters. This includes examining the governing body's attitude, awareness, and actions toward internal control.

If there is a risk of non-compliance with regulations or of material misstatement in the financial statements, specific procedures must be designed and performed to address this risk. This ensures that the potential environmental risks are adequately managed and reported.



3.4. Designing environmental audits

Environmental audits require a structured and strategic design process that aligns with the audit mandate and addresses the complexity of environmental issues. A well-formulated audit design sets a clear direction, ensuring the audit is focused, relevant, and capable of producing actionable insights.

Through a well-structured audit design, SAs can contribute to improved environmental governance, accountability, and policy effectiveness.

3.4.1 Environmental audit objectives

Audit objectives are the foundation of audit design. They guide the scope, questions, criteria, and methods to be used. Objectives should be clearly linked to the audit mandate and reflect the specific environmental issue or policy under review.

To ensure relevance and effectiveness, they must:

- address significant environmental risks and challenges;
- reflect the economic, social, and environmental dimensions of sustainability;
- consider interdependencies across sectors, levels of government, and institutions;
- align with broader governmental strategies and sustainability frameworks, such as national development plans or the Sustainable Development Goals (SDGs).

Well-crafted objectives help focus the audit on areas of greatest impact and ensure that the audit contributes to improved governance and environmental outcomes.

3.4.2. Environmental audit methodology

Environmental audits often require a multidisciplinary approach due to the complexity and interrelated nature of environmental issues. Methods may involve the use of environmental indicators, geospatial data, model-based projections, or scientific benchmarks to assess environmental performance and impacts.

The chosen methodology should also account for data availability and reliability, as well as the dynamic nature of environmental systems and policies.

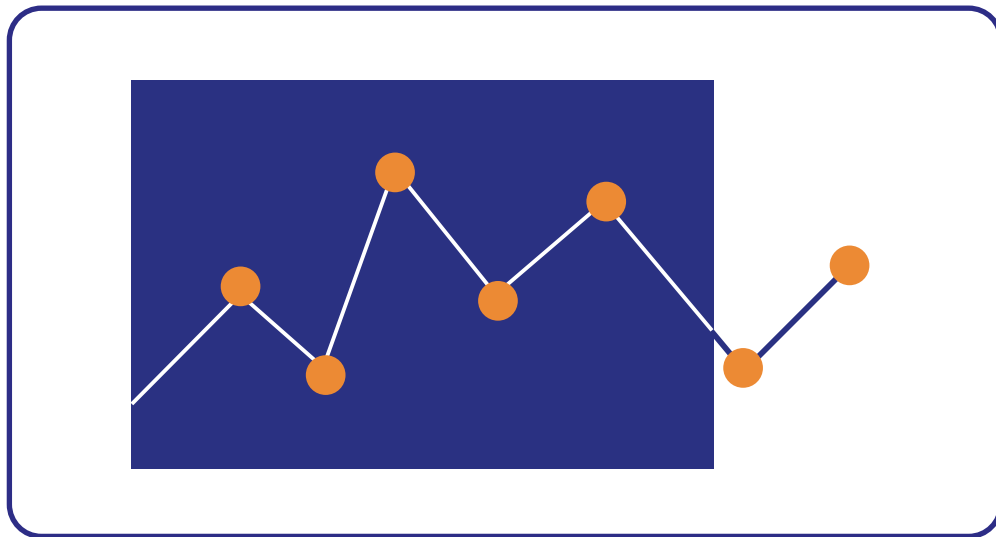
3.4.3. Environmental audit questions

Audit questions translate the objectives into specific, answerable lines of inquiry. They play a central role in shaping the audit and must be evidence-based, forward-looking, and policy-relevant.

Effective environmental audit questions:

- explore the causal relationships between policies and outcomes;
- evaluate the coherence and effectiveness of policy implementation across sectors;
- consider the roles and responsibilities of various stakeholders, including public institutions, the private sector, and civil society;
- address long-term sustainability, including environmental justice and intergenerational equity.

Audit questions should be designed to uncover whether environmental goals are being met, as well as how and why progress is or is not occurring—supporting learning and improvement in public sector performance.



3.4.4. Audit criteria for environmental audits

In the planning of an environmental audit, it is essential to deduct suitable audit criteria, against which the conclusions will be drawn.

In an **environmental performance audit**, the criteria can be qualitative or quantitative and should define the criteria against which the audited entity will be assessed.

The criteria may be general or specific, focusing on:

- what should be, according to laws, regulations, or objectives;
- what is expected, based on sound principles, scientific knowledge, and best practices; or
- what could be, given better conditions.

The purpose of the criteria for an **environmental compliance audit** is to determine whether an entity has conducted its environmental activities in compliance with applicable obligations. In this context, “obligation” refers to any requirement the audited entity must adhere to, whether it is a direct legal obligation or a duty to comply with the policies set by a higher executive authority.

For the **environmental aspects of a financial audit**, the criteria help establish whether the reporting entity has appropriately recognised, valued, and reported environmental costs, liabilities (including contingent liabilities), and assets.

Audit criteria vary between environmental audits, and they are usually selected and formulated with considerable discretion by the auditor .

The criteria used to assess the subject matter should be agreed with the auditee and clearly identified in the audit report. In environmental audits, the criteria may vary significantly from one audit to another. Therefore, it is crucial to clearly specify the criteria in the report to ensure that users understand the basis for the audit work and the conclusions drawn.

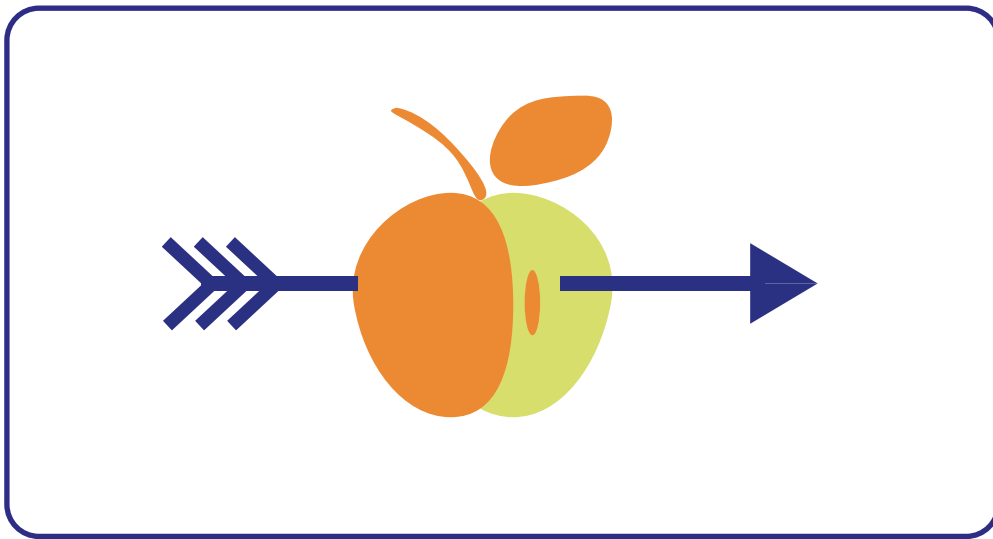
3.4.5. Sources of audit criteria

Authoritative sources include:

- national laws – acts of the legislature and any regulations, rules, orders, etc., made under an act and having the force of law;
- supranational laws – such as legislation enacted by the European Union;
- international agreements – such as treaties with other jurisdictions and United Nations Conventions, such as the Paris Agreement under the UNFCCC;
- mandatory standards issued by an authoritative standard-setting body, standards issued by some other recognised body, and international standards issued by a recognised body;
- strategic documents;
- contracts;
- policy directives;
- programmes adopted by the audited entity, including specific targets or requirements set by the relevant authorities;
- environmental principles, such as the precautionary principle, prevention principle, and the polluter-pays principle.

If the entity has adopted specific measures, such as Environmental Impact Assessments, Strategic Environmental Assessments, Life Cycle Assessments, or environmental performance indicators, they should be reviewed to ensure that they are reasonable and complete. Generally accepted criteria can also be obtained from professional associations, recognised bodies of experts, and academic literature.

If criteria are not available from these sources, the auditor can focus on the performance achieved in comparable organisations, best practices identified through benchmarking or consultation, or develop criteria through analysis of the audited activities. Benchmarking can also be conducted on peer institutions' audits to establish relevant criteria. A good source of audits is the INTOSAI WGEA audit database.



4. CONDUCTING AN ENVIRONMENTAL AUDIT

The data needed to formulate audit findings is often collected from various sources, including documents, data analysis, literature reviews, interviews, and field observations, like benchmarking. In environmental audits, financial aspects can be addressed by using techniques such as vouching, tracing, and recalculating; validating the reliability and reasonableness of models and assumptions; and assessing data gaps, the quality of data and a potential scope limitation.

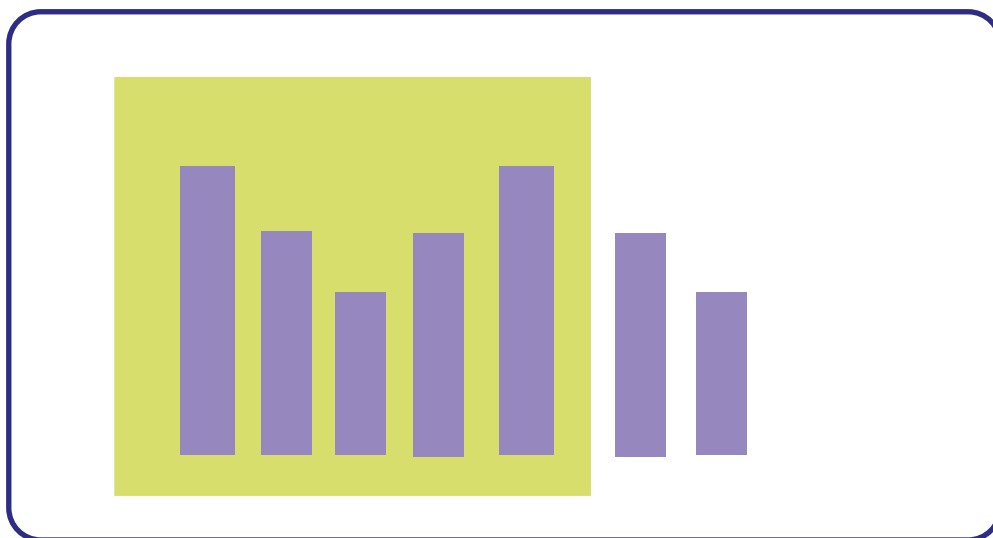
Environmental auditing is typically a field where SAIs can experiment with new and innovative technologies, such as satellite analysis, geographic information systems (GIS), the use of drones, and geo-tagging, to name a few. Moreover, engaging with citizens, for example via citizen surveys or citizen participatory auditing, can be a valuable approach, as people often care about their environment and are experts in local environmental matters.

Concerning data, such as greenhouse gas emissions or water quality assessments, auditors tend to rely on government databases. Any conclusions drawn from databases are only as reliable as the quality of the information itself. The audited entity has the primary responsibility for ensuring that it has information management systems and quality controls in place to collect data on its operations and performance.

Audits can detect flaws in the information systems used to monitor environmental compliance. It is therefore essential to understand and, if possible, to establish the reliability of the data used for testing compliance. An SAI can disclose in its reports the extent to which the accuracy of the databases has been independently verified. In this case, the flawed information system itself could become a subject of the audit. The lack of quality and completeness of data on environmental conditions, such as pollutant levels in water bodies or trends in fish populations, may be problematic.

While gathering data on environmental conditions is the responsibility of the audited entity, the SAI may still need this information to understand the extent of the problem and the effectiveness of the measures to control it.

Incomplete or poor-quality data can be an important audit finding.



5. REPORTING AND FOLLOW-UP

Effective communication with various groups will increase the visibility of and interest in audit results, thereby strengthening the impact of the audit. Additionally, effective communication provides a well-considered perspective for public discussions, which is crucial for countering the frequent disputes and misinformation surrounding environmental issues. Therefore, it is essential to incorporate the independent assessment of the SAI into these discussions.

Reporting and communicating the audit results is critical to maximising the audit's impact. There is a tendency for shorter and more visual reporting, which can enhance the effectiveness of audits. Environmental audits often benefit from the abundance of visually appealing materials, such as photographs and maps. However, it is important that these materials are of high quality and adhere to methodological scrutiny.

Audit results should be made public and communicated through appropriate media channels. The audience includes responsible ministries and agencies, researchers, NGOs, as well as the general public. Environmental audits often include recommendations with long-term targets. When the audited entities are aware that follow-up audits will be conducted, they are more likely to implement audit recommendations. However, seeing the results of environmental audits in the short term is a challenge due to the long timespan required for significant changes to take effect.

Short-term recommendations typically focus on immediate actions that entities can take to address compliance issues, improve data collection, or enhance monitoring systems. These may include ensuring proper implementation of protected area regulations, improving environmental data reporting, or increasing staff training. Medium-term recommendations, on the other hand, often involve structural or policy-related changes, such as improving disaster risk reduction strategies, enhancing climate adaptation plans, or developing national strategies for plastic waste reduction.

While short- and medium-term recommendations help lay the groundwork for improvements, the true impact of environmental audits often becomes evident in the long term. Significant environmental changes, such as pollution reduction, ecosystem restoration, or climate adaptation measures, require sustained efforts over years or even decades to achieve. As a result, auditors and stakeholders must recognise that meaningful environmental progress often unfolds gradually and depends on continuous monitoring and policy commitment.

Annex 1: Glossary

Carbon Markets: Systems for trading carbon emission allowances or credits.

Circular Economy: Economic system aimed at eliminating waste and extending the life-cycle of products.

Climate Change: Long-term alteration of temperature and typical weather patterns, primarily caused by increased greenhouse gas emissions from human activities.

Climate Change Adaptation: Actions that reduce vulnerability to climate change impacts by enhancing resilience in communities and ecosystems.

Climate Change Mitigation: Human measures aimed at reducing or preventing the emission of greenhouse gases, including renewable energy, energy efficiency, and sustainable land use.

Cooperative Audits: These can be divided into three types.

Parallel/Concurrent Audits: Similar audits conducted simultaneously by autonomous bodies.

Coordinated Audits: Joint audits with separate or combined reports.

Joint Audits: Audits by a single team from multiple SAIs, resulting in a joint report.

Double Materiality: Captures both financial and environmental/social impacts.

Ecosystem Services: Benefits humans derive from ecosystems (e.g., clean air, water, pollination).

Environmental Assets: Natural resources or ecosystem components that provide environmental goods and services—such as clean air, water regulation, climate moderation, and biodiversity—often without direct market value but essential for ecological and human well-being.

Environmental Impact Assessments (EIA): Evaluations of potential environmental effects of projects.

Environmental Liabilities: Legal or constructive obligations arising from past or ongoing activities that may require an entity to take remedial action for environmental damage, such as contamination cleanup, restoration, or payment of fines and penalties.

Environmental Management Systems (EMS): Systems to manage and improve environmental performance.

Environmental Performance Indicator (EPI): Metrics used to evaluate environmental performance.

Geotagging: Attaching geographic coordinates to data or media.

GIS (Geographic Information Systems): Systems for capturing, storing, analyzing, and visualizing spatial or geographic data.

Greenwashing: The practice of conveying a false or misleading impression about the environmental performance or sustainability of an organization, product, or policy.

Life Cycle Assessments (LCA): Evaluations of environmental impacts across a product's or service's life cycle.

Nature-Based Solutions: Actions that use and are inspired by natural processes to address societal and environmental challenges.

Polluter-Pays Principle: Principle that the polluter bears the cost of environmental damage.

Precautionary Principle: Encourages preventive action in the face of uncertainty.

Prevention Principle: Calls for proactive measures to avoid environmental harm.

Risk-Based Audit Planning: Prioritization of audits based on environmental risk levels.

Strategic Environmental Assessments (SEA): Evaluation of effects of proposed in policies, plans, and programs on environment.

Sustainable Development Goals (SDGs): 17 global goals and 169 targets to promote prosperity while protecting the planet.

Transboundary Issues: Environmental challenges that cross national borders.

Whole-of-Government Approach: Coordinated approach involving all relevant sectors of government.

Annex 2: Abbreviations

EU: European Union

IAASB: International Auditing and Assurance Standards Board

INTOSAI: International Organization of Supreme Audit Institutions

ISA: International Standards on Auditing

ISSAI: International Standards of Supreme Audit Institutions

MEA: Multilateral Environmental Agreement

NGO: Non-Governmental Organization

SAI: Supreme Audit Institution

UNFCCC: United Nations Framework Convention on Climate Change

WGEA: Working Group on Environmental Auditing

Annex 3: Some of the current Multilateral Environmental Agreements (MEAs)

Convention on Biological Diversity (CBD) and Kunming-Montreal Global Biodiversity Framework

United Nations Framework Convention on Climate Change and Paris Agreement

United Nations Convention to Combat Desertification (UNCCD)

Montreal Protocol on Substances that Deplete the Ozone Layer

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal

Stockholm Convention on Persistent Organic Pollutants (POPs)

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

Ramsar Convention on Wetlands

Cartagena Protocol on Biosafety (under CBD)

CITES – Convention on International Trade in Endangered Species of Wild Fauna and Flora

Minamata Convention on Mercury

Espoo Convention (on Environmental Impact Assessment in a Transboundary Context)

Aarhus Convention (on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters)

Bamako Convention (on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa)

Annex

Quality Assurance Certificate of the Chair of the Working Group/Subcommittee/Work Stream

This is to certify that publication **WGEA GUIDANCE on Environmental Auditing** which is placed at level **level three of Quality Assurance** according to the paper on Quality Assurance on Public goods developed outside the Due Process of Quality Assurance as defined in the paper on “Quality Assurance on Public goods developed outside Due Process” approved by the INTOSAI Governing Board in November 2017 has been developed by following the Quality Assurance processes as detailed below:

- (i) *The need to update outdated GUID documents and merge them to a streamlined product has been discussed in several INTOSAI WGEA Steering Committee Meetings. A project plan was developed in January 2025 and distributed to the INTOSAI WGEA Steering Committee Members.*
- (ii) *A drafting group was created of SAls of Egypt, Estonia, Finland, Thailand and the European Court of Auditors.*
- (iii) *An exposure draft of the document was sent to INTOSAI WGEA Members in 17 March 2025. 196 comments from 24 SAls were received and they were discussed in the drafting group. The endorsement version was published in the meeting materials to be approved at the 23rd WGEA Assembly.*
- (iv) *The final product was adopted at the 23rd INTOSAI WGEA Assembly in 3 July 2025.*

The product developed is consistent with relevant INTOSAI Principles and Standards. The structure of the product is in line with the drafting convention of non-IFPP documents.

The product is valid till **30 September 2031** and if it is not reviewed and updated by that date, it will cease to be a public good of INTOSAI developed outside the Due Process.

Helsinki, 8 July 2025



Dr Sami Yläoutinen
Auditor General of Finland
Chair of the INTOSAI Working Group on Environmental Auditing (WGEA)



INTOSAI

Goal Chairs
Collaboration
PSC – CBC – KSC

Quality Assurance Certificate of the Goal Chair

Based on the assurance provided by the **INTOSAI Working group on Environmental Auditing (WGEA)** and the assessment by the Goal Chair, it is certified that “**WGEA GUIDANCE on Environmental Auditing**”, which is placed at level **3 (three)** of Quality Assurance as defined in the paper on “Quality Assurance on Public goods developed outside Due Process” approved by the INTOSAI Governing Board in November 2017 has been developed by following the Quality Assurance processes as detailed in the quality Assurance Certificate given by the Working Group Chair.

The product is valid till **30 September 2031** and if it is not reviewed and updated by that date, it will cease to be a public good of INTOSAI developed outside the Due Process.

K. Sanjay Murthy
Chair of INTOSAI Knowledge Sharing and
Knowledge Service Committee