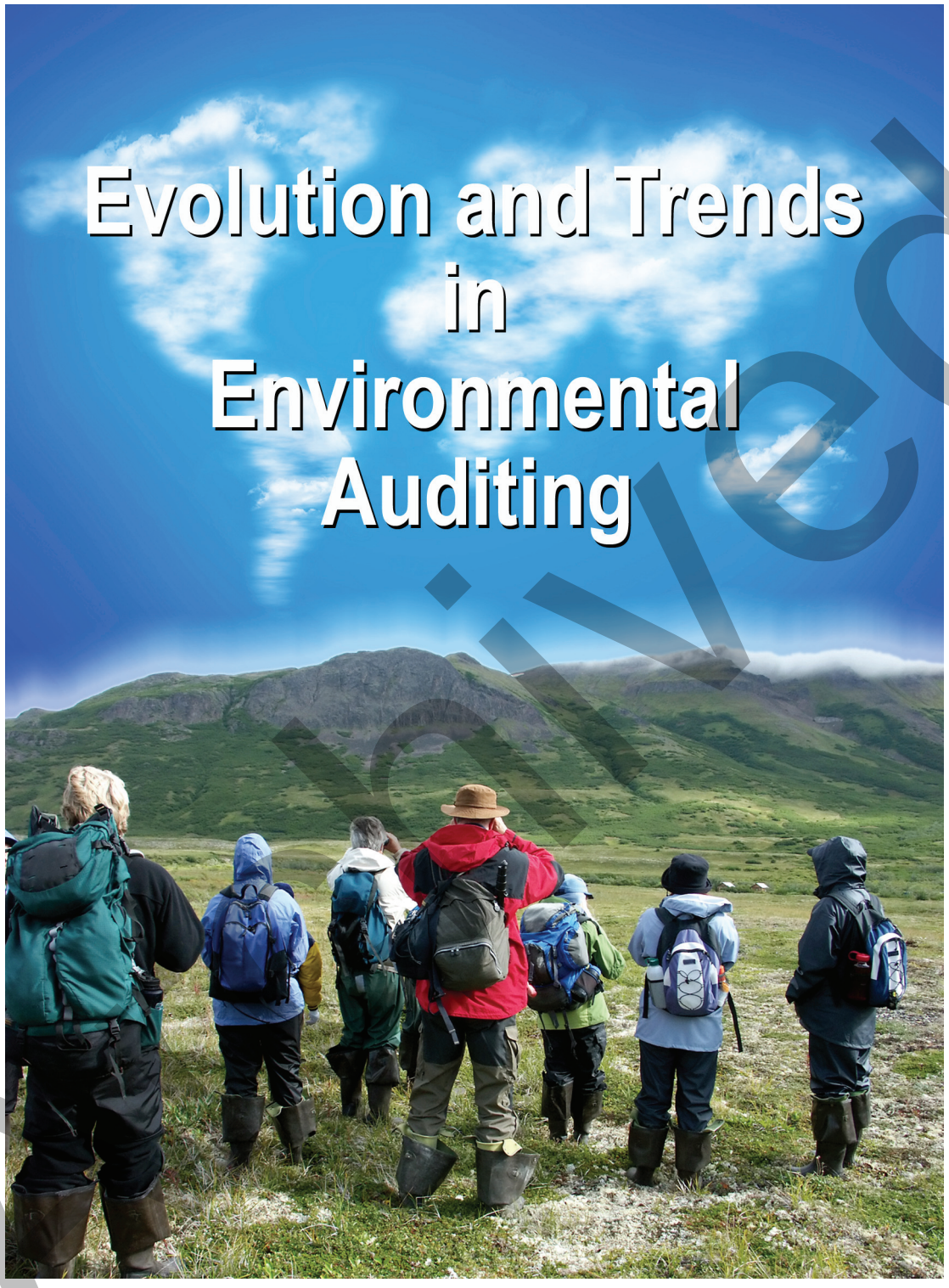
Evolution and Trends in Environmental Auditing



INTOSAI
Working Group on
Environmental Auditing

Evolution and Trends in Environmental Auditing

November 2007

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This publication was prepared by the INTOSAI Working Group on Environmental Auditing (WGEA). The WGEA aims to encourage the use of audit mandates and audit methods in the field of environmental protection and sustainable development by Supreme Audit Institutions (SAIs). The WGEA has the mandate to

- help SAIs gain a better understanding of the specific environmental auditing issues,
- facilitate exchange of information and experiences among SAIs, and
- publish guidelines and other informative material.

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Special thanks to the steering committee members and subcommittee members that provided thoughtful and detailed comments on the paper. Their comments were often the only opportunity to have this paper peer reviewed with much thought-provoking observations.

Lastly, the Office of the Auditor General of Canada has contributed numerous staff to support the development of this paper, including master's degree students, editors, and graphic designers. In particular, I'd like to thank Rose Hum from the Publications and Graphics Design Unit for working closely with me on the graphic details of a highly complex and abstract subject matter.

The idea for this piece was originally envisioned by John Reed. Without his guidance and leadership, this paper would not exist.

Vivien Lo, Office of the Auditor General of Canada

November 2007

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Acronyms and Abbreviations

CITIES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
EU	European Union
GEF	Global Environmental Facility
IDI	INTOSAI Development Initiative
IEA	International Environmental Agreement
INTOSAI	International Organization of Supreme Audit Institutions
INTOSAI WGEA	INTOSAI Working Group on Environmental Auditing
LRAP	Convention on Long Range Transboundary Air Pollution
OECD	Organization for Economic Co-operation and Development
MARPOL	International Convention for the Prevention of Pollution from Ships
MDG	Millennium Development Goals*
RAMSAR	Convention on Wetlands of International Importance especially as Waterfowl Habitat
RWGEA	Regional Working Groups on Environmental Auditing
SAI	Supreme Audit Institution
UNCSD	United Nations Commission on Sustainable Development
UNEP	United Nations Environment Program*

UNFCCC United Nations Framework Convention on Climate Change*

WSSD World Summit on Sustainable Development*

*definitions available for these items in the glossary

Foreword

Environmental auditing is now a mainstream activity in many Supreme Audit Institutions (SAIs): Over 2,000 environmental audits have been conducted—close to 400 in the past 3 years alone—on topics as wide-ranging as river basin management, pesticide regulation, sustainable development reporting, biosecurity, climate change, waste incineration, and international environmental agreements. These audits are having a significant impact on many governments' management of environment and sustainable development issues around the world and can be directly linked to positive environmental results.

The INTOSAI Working Group on Environmental Auditing (WGEA) was established almost 15 years ago, and since then it has experienced considerable growth and change. So too has the practice of environmental auditing. Over the years, practitioners have gained a great deal of experience in undertaking environmental audits and in confronting the challenges inherent in any new area of practice. This paper is an investigation of what SAIs are doing to build their environmental auditing capacity and practices, and, thereby, to protect our environment and ensure sustainable development now and in the future.

The paper entitled *Evolution and Trends in Environmental Auditing* is meant for a diverse audience. For Supreme Audit Institutions and environmental auditing practitioners, the paper provides a wealth of information, examples, and real-life experiences that describe

- changes in the practice of environmental auditing over time, and the reasons for the changes, actions that SAIs are taking to carry out successful environmental audits;
- trends inside and outside the SAI community that could influence environmental auditing in the future; and
- answers to "Frequently Asked Questions" on a range of topics.

For others, the paper provides a perspective on the role that SAIs play in the domain of environmental governance and the important contribution that this community can make.

The paper was led by the Office of the Auditor General of Canada. I would like to thank Vivien Lo for authoring the paper, Chris Valiquet for developing the "Frequently Asked Questions" (FAQs), and John Reed as the responsible Principal. My thanks also go to the many other organizations and individuals who contributed to this paper (see Acknowledgments).

Evolution and Trends in Environmental Auditing is one of four guidance papers developed by the INTOSAI Working Group on Environmental Auditing in the Work Plan period 2005–2007. The other three papers are

- *Auditing Biodiversity: Guidance for Supreme Audit Institutions*;
- *The World Summit on Sustainable Development: An Audit Guide for Supreme Audit Institutions*; and
- *Cooperation Between Supreme Audit Institutions: Tips and Examples for Cooperative Audits*.

Readers are encouraged to consult these papers as well as Appendix 2 of this paper for information on other WGEA products and services.

Enjoy!

Sheila Fraser
INTOSAI WGEA Chair

Executive Summary

Evolution and Trends in Environmental Auditing describes the body of environmental audits conducted by Supreme Audit Institutions (SAIs). The report illustrates SAIs' environmental audit efforts, their successes, and their challenges. The objective of this report is three-fold:

- to improve and increase environmental auditing practice in the SAI community by demonstrating SAIs' insights and the benefit of environmental audits completed by SAIs;
- to promote awareness of SAIs' work outside of the SAI community, thereby laying a foundation for external relationships between the individual SAIs and the Working Group on Environmental Auditing (WGEA);
- to describe SAIs' possible future work in environmental auditing that is largely based on evolution and trends in governance.

SAIs are autonomous, independent, and non-political organizations that audit governments to ensure accountability. SAIs form working groups devoted to specific topics and issues, including the WGEA, which promotes and supports environmental auditing for public sector auditors. For SAIs, environmental auditing is used in the context of the independent, external, public sector audit. These environmental audits may be devoted to the disclosure of environmental assets and liabilities, to compliance with legislation, and conventions—both national and international. As well, audits may be devoted to measure, and to promote economy, efficiency, and effectiveness.

Much of the information gathered for this report is based on interviews with auditors in SAIs who have conducted environmental audits. Overall, the research relies on auditors' recounting of their experiences through interviews, questionnaires, papers, and presentations, rather than on empirical evidence.

SAIs do not need to have an environmental mandate to conduct audits on environmental matters. SAIs have diverse mandates, their structures differ, and every SAI has its own national and regional context. As part of good governance and accountability, SAIs audit their governments' environmental activities. SAIs have collectively completed more than 2,000 audits on the environment that have led to improvements in governments' management of the environment and to improvements in the environment itself.

It is clear that, over the past 30 years, governments have increased their management of the environment and spent more funds on the environment. Some of the notable observations include: a plethora of international environmental agreement (IEAs); the creation of government departments of environment; environmental regulations where infractions are punishable by law; broadening the scope of "environment" to include a larger number of issues that involve more departments; and increased sophistication in public policy tools to manage the environment.

SAIs have followed suit; auditors have responded and continually worked to keep pace with the increased amount and increased complexities in environmental governance. Not only have more audits been conducted, teams of environmental auditors have been created. Some SAIs have restructured their office, so that environmental audits include a wider range of issues. New and revised manuals and training programs incorporate environmental issues into audit methods.

Moreover, SAIs have even taken measures to decrease their own offices' impact on the environment.

SAIs take the subject of auditing the environment seriously. One highlight of the growth of environmental audits is audits on international environmental agreements (IEAs), particularly as more governments sign on and implement them. Many audits on IEAs, especially regional agreements, have been audited cooperatively with neighbouring SAIs, adding to the value of SAIs environmental audits. Other environmental audits on the forefront of governance include audits on sustainability, climate change, and decision-making. SAIs balance the need to audit complex issues such as sustainable development strategies and emissions trading with audits on waste, water, and protected areas. Waste and water are the overall highest environmental priorities for developing countries. SAIs that conduct environmental audits are as diverse as the topics covered in environmental audits.

The WGEA has been successfully nurturing and facilitating the growth of environmental auditing since 1992. Its membership, its activities, and its network have grown significantly in the last 15 years. SAIs are developing appropriate audit tools to match public policy tools. Yet, as SAIs have various levels of capacity to conduct environmental audits, the WGEA's role of facilitating exchange of knowledge and building capacity is evermore essential to the continued expansion of environmental audits.

SAIs' commitment to auditing the environment is further demonstrated by their collaborative efforts and their scope of knowledge. Auditors in SAIs not only work with each other, they are aware of trends in the private sector, trends in international governance, trends in foreign aid, and trends in auditing and accounting that integrate environment and accountability. Furthermore, auditors in SAIs are aware of the critical state of the planet and the urgent need to verify genuine results from public policy tools. SAIs understand the complexities in environmental public policy, and they are often the only ones who thoroughly examine most of the policy tools. SAIs are aware of priorities and actions in international and domestic environmental governance. Thus, as a global community of public sector auditors, SAIs can expect climate change and energy, and poverty reduction, including the results-based millennium development goals, to influence their future work.

Public sector auditors know that environmental audits have traits common to other professionals working on matters of the environment. That is why demystifying who SAIs are, what they do, and the difference SAIs make is important, as collaboration among SAIs will be the key to making a difference for decades to come.

Introduction

Evolution and Trends in Environmental Auditing describes the body of environmental audits conducted by Supreme Audit Institutions (SAIs). This report illustrates the ability of SAIs to contribute to developing a more sustainable environment. It presents a portrait of SAIs' environmental audit efforts, their successes, and the challenges. The report also presents signposts indicating potential areas for future work and collaboration.

What is environmental auditing?

- The term "environmental auditing" is used in the context of the independent external audit. Supreme audit institutions agree that environmental auditing is, in principle, not very different from the audit approach as practised by SAIs, and it could encompass all types of audit. For SAIs, audit attention may be devoted to, for example, the disclosure of environmental assets and liabilities, compliance with legislation and conventions—both national and international—as well as to measures instituted by the audited entity to promote economy, efficiency, and effectiveness.
- Generally speaking, "environmental auditing" is also a convenient label used to describe a variety of activities, including management audits, product certification, governmental control measures, and many other activities, which bear little or no relation to an external audit.

SAIs have specialized expertise in, and knowledge of, environmental auditing that can aid various levels of government including the United Nations and its agencies. Such cooperation is important to bridge the gaps in protecting the earth's natural resources. Audit findings can contribute to more accurate decision-making to facilitate the sustainable use of natural resources.

SAIs are autonomous, independent, non-political organizations that can audit governments to ensure

- the proper and effective use of public funds,
- the development of sound financial management,
- the proper execution of administrative activities, and
- the communication of information to public authorities and the general public through the publication of objective reports.

SAIs are members of the International Organization of Supreme Audit Institutions (INTOSAI). INTOSAI is an autonomous, independent, non-political organization with special consultative status with the Economic and Social Council of the United Nations (ECOSOC). INTOSAI is the internationally recognized leader in public sector auditing; its SAIs make up the Panel of External Auditors of the United Nations, specialized agencies, and the International Atomic Energy Agency.

INTOSAI has committees and working groups devoted to specific topics and issues. One of these is the Working Group on Environmental Auditing (WGEA), which promotes and supports environmental auditing within the INTOSAI community. The WGEA was created in 1992, the same year that the UN Earth Summit was held in Rio de Janeiro.

This report builds upon an earlier INTOSAI document, *Guidance on Conducting Audits of Activities with an Environmental Perspective*, 2001. This earlier document introduced environmental auditing to financial and performance auditors in the INTOSAI community. *Evolution and Trends in Environmental Auditing* reflects upon the history of environmental auditing among INTOSAI members and the 15-year history of the WGEA. It examines the past, present, and future of environmental auditing by SAIs.

Much of the information gathered for this report is based on interviews with auditors who have conducted environmental audits. Some auditors who were interviewed had only recently completed their first environmental audit, while others were experienced enough to reflect on how such audits have helped improve environmental management in government and the environmental auditing capacity of SAIs. To encourage as many responses as possible, two separate questionnaires were sent to SAIs. One went to as many SAIs as possible to encourage broad participation, and a second one with more in-depth questions was sent to selected SAIs. WGEA meetings were excellent venues for collecting representative data. Overall, the research relies on auditors' recounting of their experiences through interviews, questionnaires, papers, and presentations, rather than on empirical evidence. Interviews and research were also conducted among international environmental organizations. Some of these organizations have sent keynote speakers or observers to WGEA meetings.

The report's roadmap

This report has five chapters.

The first chapter, The Foundations of Environmental Auditing in SAIs, emphasizes the role that SAIs can play in making an impact on environmental and sustainable development issues. Six case studies are used to illustrate how audits have improved a specific environmental situation or a government's environmental mechanisms. It provides background information about SAIs, the types of audits SAIs conduct, and examples of the benefits of environmental audits. Common audit findings from SAIs' environmental audits include gaps in government action, challenges in the complexities of environmental management, reliability of data, and the long-term nature of environmental results.

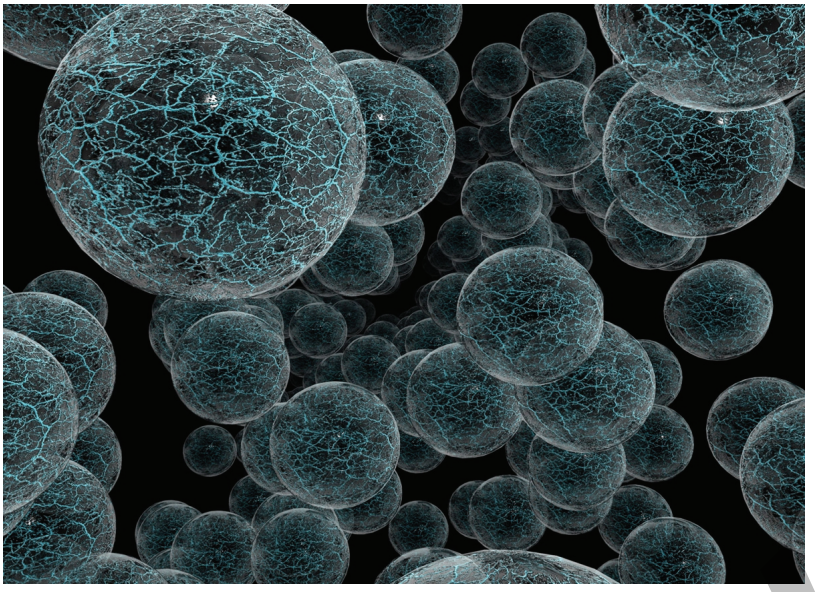
The second chapter begins with the evolution of environmental governance and environmental auditing from the 1970s onwards. This evolution is important to explain the growth of environmental audits among SAIs, the approaches they take, and the creation of the WGEA. The WGEA has played an important role in building a body of knowledge, demystifying environmental auditing, and building an environmental network for SAIs.

The third chapter, The State of Environmental Auditing in SAIs presents SAIs' know-how in environmental auditing through four themes: building capacity and methods for, and knowledge of, environmental auditing; emerging areas in environmentally related audits; a special role in auditing international environmental agreements; and cooperating and building relationships. The four themes and case studies used throughout this chapter help audit and environment professionals understand how SAIs tackle environmental audits.

The fourth chapter, Future Directions, presents current trends in three areas of concern for SAIs: current environmental conditions and development pressures, trends in environmental governance, and SAIs' own trends in environmental auditing practice. These trends are the backdrop of the themes that will influence SAIs' work in the future and the reasons for strengthening external relationships.

Chapter 5 concludes the report by highlighting that the common themes of public sector environmental auditing are also common to all environmental professionals. SAIs understand the gravity of the planet's current condition, and this is the reason SAIs are interested in external collaboration and communication.

In the appendices, 10 Frequently Asked Questions address topics commonly raised by auditors when addressing environmental topics. The appendices also contain a list of relevant WGEA documents and a list of environmental topics that have been discussed in WGEA meetings and are useful to readers.



Chapter 1: The Foundations of Environmental Auditing in SAIs

Globally and regionally, governments have made commitments to address environmental issues and sustainable development. International leadership has contributed direction and facilitated cooperation on numerous environmental issues. International environmental agreements (IEAs) are important for facilitating international cooperation. IEAs refer to agreements, declarations, accords, treaties, and conventions with an environmental focus that have been signed by more than one country.

Meanwhile, governments work to protect the environment in their countries. Issues such as waste management, contaminated sites, and national park management often fall within national boundaries. Domestic action can involve a variety of public policy tools including legislation, taxes, enforcement, market incentives, regulations, and policies. These tools are necessary for nations to implement domestic environmental protection and IEAs at home.

Supreme Audit Institutions (SAIs) can play a major role in overseeing that their government's public policy tools will produce their intended results. As expressed by Dr. Genaro Matute Mejia, Comptroller General of the Republic of Peru:

> *Our audits help to improve government's management of environmental issues and in the long run improve social prosperity and economic development in each and every one of our countries.*

1.1 Benefits for the environment and for government

SAIs are driven by a common goal: to ensure that their audit findings have an impact. The following six examples of environmental audits, which were conducted on a variety of environmental topics and public policy tools, provide a glimpse of their benefits. The examples are divided into two categories: audits that significantly improved a specific environmental situation and audits whose results improved government processes and public policy tools more generally.

A review of environmental audits by SAIs shows that their audit findings have been linked to the following positive environmental results:

- The water quality of rivers and watersheds has improved.
- Action has been taken to protect against invasive species.
- There has been increased protection for plants, animals, and ecosystems.
- Management of natural resources has improved.
- Environmental degradation from construction has decreased.
- Environmental pollution has decreased.
- Desertification of land has been reduced.

The following text box lists three examples (audits conducted by the SAIs of Japan, Korea, and Paraguay) to illustrate the first category of environmental audits: those whose findings directly improve an environmental situation.

Audits that directly improved the environment

Japan

Better Use of Natural Resources

In 2001, an audit of safety fences used along park borders recommended changing the fence material from plastic and cement to forest-thinning material. This material is gathered by thinning lush forested areas so that trees have greater access to sunshine. This material is readily available; durable, and economical, compared with plastic and cement. Thus, the forest material will remain in its natural environment, and fewer resources and less energy will be needed to construct the safety fences. Furthermore, the Board of Audit of Japan concluded that 65.4 million yen (US$550,000) was saved.

Performance mandate: Yes
Specific environmental mandate: No

Korea

Improved Water Quality

Between 1993 and 2000, although the Korean government spent US$15 billion to improve water quality in four major rivers, there were no noticeable improvements. In 2001, an audit was conducted to identify why water conditions had not improved. Based on the audit findings and recommendations, the Ministry of Environment carried out a post-project examination and set up a feedback review system. They adjusted the size of the sewage treatment plants, and shifted their emphasis from simply treating livestock sewage to producing organic fertilizers. The audit and its recommendations have resulted in steadily improving water quality.

Performance mandate: Yes
Specific environmental mandate: No

Paraguay

Poverty Decreased, Water and Land Quality Increased in a Tri-Nation Watershed

The Pilcomaya River flows from Bolivia to the borders of Paraguay and Argentina, covering a tri-nation basin of about 270,000 km^2. For many years, insufficient water flowed to Paraguay, resulting in prolonged drought, loss of cattle and wildlife, and damage to wetlands and other ecosystems. Ranchers often built small dams to retain any scarce water. In 2002, the Controller General of Paraguay conducted an audit of the Government of Paraguay's 10-year environmental management of the tri-national development of the Pilcomayo River. The following are some of the impacts from the audit's conclusions and recommendations:

- The Government of Paraguay produced the required human and economic resources and logistical support to open a new canal and to clean the streams where water had previously flowed.
- As a result, the former Estero Patiño wetlands in Tinfunqué National Park, a RAMSAR site measuring about 280,000 hectares, was once again covered in water.
- The government appropriated land and destroyed all dams built for downstream drainage, rendering additional dam construction that would have caused more environmental damage unnecessary.

The audit owes its success to a multi-disciplinary audit team that conducted on-site verification including interviews with ranchers, local settlements, and the aboriginal population.

Performance mandate: Yes
Specific environmental mandate: No

- As well, environmental audits by SAIs have resulted in the following improvements to public policy tools and government processes and systems.
- Laws, legislation, and regulations have either been revised or new ones have been introduced to protect the environment.
- The environmental impact assessment process has been strengthened.
- Changes have been made to funding environmental plans, programs, and projects.
- Improvements were made to disaster management and preparedness.
- Improvements were made for more environmentally sound program delivery.
- Compliance with national laws, regulations, and international agreements was strengthened.
- Systems of accountability related to governing the environment were installed or increased.
- Increased emphasis was placed on performance measurement and reporting on environmental objectives.
- More environment-related training for public servants was made available.
- Improvements were made to gathering and monitoring of environmental data.

The next text box lists three examples (SAIs of Australia, the United States, and Panama and Costa Rica) to demonstrate audits that primarily had an impact on government mechanisms.

Audits that primarily improved government process

Australia

Improved Environmental Management of Toxic Sites

In 1996, an audit on Contaminated Sites and Pollution Prevention gave considerable impetus for the Australian Government to adopt environmental management systems and to examine the ISO 14001 system. The audit forced the clean-up of a number of contaminated sites and resulted in the allocation of resources to prevent pollution. As a result of the audit, a new evaluation unit with an improved framework was created within the department.

Performance mandate: Yes
Specific environmental mandate: No

Panama and Costa Rica

Strengthened Biosphere Reserve Protection

The 400,000 hectare La Amistad International Park, one of the world's largest unaltered tropical forests, has been declared a Biosphere Reserve and a World Heritage Site by UNESCO. Situated in both Costa Rica and Panama, their SAIs jointly evaluated the park's management in 2003. The audit focused on the core area of the Biosphere Reserve. As a result of this audit, a bi-national commission of ministries of environment and foreign affairs was created to take social, economic, and environmental measures to enhance the park. The two governments will set up a management system with indicators to monitor progress on the coordination of shared objectives.

Performance mandate: Yes, for both countries
Specific environmental mandate: No, for both countries

United States

Price Tag Placed on Environmental Risk to Soya Bean Crops

In 2005, the Government Accountability Office audited efforts to prevent the spread of a potentially devastating agricultural disease—Asian soybean rust—threatening a US$16 billion–per–year soybean crop. As a result of audit recommendations, the Agriculture Department

- developed a coordinated federal-state plan to manage the disease.
- helped soybean producers file Asian soybean rust claims.
- authorized the use of a $1.2 million contingency fund to monitor, report, and manage the disease.
- agreed to revise its insurance data system to collect data on the number and dollar amounts of claims submitted and paid.

The audit enabled the GAO to put a price tag on the potential impact of failing to be prepared.

Performance mandate: Yes
Specific environmental mandate: No

These six examples demonstrate environmental audits are rarely limited to environmental issues. They touch on other government responsibilities including tourism, agriculture, construction and poverty. Second, it is not necessary for a SAI to have an environmental mandate in order to conduct audits on the environment.

1.2 Tools for auditing the environment

The following discussion elaborates on the diversity among SAIs and explains some important terminology within public sector auditing that is useful for the rest of the report. There are many differences between SAIs. Their structures, their mandates, and the types of audits they conduct are grounded in diverse political origins.

Types of Supreme Audit Institutions

There are three common models for SAIs or national audit offices that reflect their political origins. One is the Westminster or Anglo-Saxon model. In this instance, SAIs are often called the "Audit Office." Another is the Judicial or Napoleonic model. These SAIs are often called "Courts of Audit" or "Courts of Accounts." Those SAIs that follow the Board or Collegiate model are called "Board of Audit." The models differ in structure rather than function. SAIs may also be called chambers, comptrollers, or tribunals.

"Audit Offices" tend to be inherently linked to their elected assemblies (for example, parliaments). Other characteristics include strong safeguards for independence, an active Public Accounts Committee in their elected assembly, and a strong, single, senior head who is often called the Auditor General. For Audit Offices, strategic communication to the public and elected assemblies is important.

In the "Court" model, the SAI is an integral part of the judicial system and has less of a relationship with the elected assembly than Audit Offices. Government officials can be held liable for sums of money, with improper action potentially leading to fines that are returned to the government, not to the Court. These "courts" are often independent and deal only with financial matters. The top members are judges, one of whom is the President. Staff at the Courts often have legal rather than accounting backgrounds. Traditionally, courts concentrate on compliance with detailed rules. Courts can provide reports that highlight matters of interest to elected assemblies.

The Collegiate or "Board" model is part of the elected assembly's system of accountability. The SAI is headed by Board members, one of whom is the President. Boards are often structured similarly to courts, but without their judicial nature. Each Board member has a portfolio of audit responsibility with diverse audit approaches and significant autonomy.

It is not uncommon for SAIs to be a blend of these three types or to have the judicial functions and relations to elected assemblies in varying degrees. For instance, SAIs of developing countries may have been founded under a colonial model, but have subsequently been influenced by other models preferred by subsequent donors.

The differences between SAI models are reflected in how an audit is used and in how the head of the SAI communicates to government, to its elected assembly, and to the public. However, these differences should not be overemphasized since all SAIs, regardless of the model they follow, contribute to good governance by holding governments to account and share the ability to conduct successful environmental audits.

Types of mandates and audits

Generally, three broad types of audits are used in public sector auditing. All three types of audits—financial, compliance, and performance—can address environmental, natural resource, and sustainable development issues.

Financial audits can assess whether a government's financial statements reflect its environmental costs and liabilities. Compliance audits can assess compliance with spending authorities, and with environmental laws, treaties, and policies. Financial and compliance audits are known collectively as regularity audits. The third type of audit, performance audits, assesses whether a government meets its environmental objectives, is effective in producing environmental results, and operates efficiently and economically. It is not uncommon for SAIs to conduct environmental audits that combine some or all aspects of financial, compliance, and performance audits. A combination of two or more of these three types of audits is often described as a comprehensive audit.

A SAI's mandate usually specifies the types of audits that can be conducted, gives the auditor the tools with which to audit, and provides the auditor access to information from government bodies. In practice, the mandates of SAIs differ, which affects the types of audits they can conduct, and the institutions and types of government activities that they can audit.

Some SAIs have mandates that make specific references to auditing environmental issues. SAIs' environmental mandates can vary widely. The following text box provides three examples of SAIs' environmental mandates.

SAIs' mandates with specific reference to the environment

Iceland

National Audit Act
(Act no. 86)
Article 9

The National Audit Office may call for reports regarding the use of financial support and other governmental financial transfers and assess the actual results in relation to what was intended. Moreover, the National Audit Office may examine to what extent government implements plans, legal instructions, and obligations within the scope of environmental affairs.

Cameroon

Excerpt from Decree no. 97-47 to organize the Supreme State Audit Services.

2. (1) The Supreme State Audit Services shall be responsible for:

auditing, at the highest level, public services, regional and local authorities, public and semi-public enterprises, as well as religious and lay private bodies, establishments and associations which receive State subsidies or are guaranteed by the State or by other public corporate bodies, at the administrative, financial, and accounting levels. In this respect, the Supreme State Audit Service shall make

- conformity and regularity control;
- financial control;
- performance control
- programme evaluation;
- environmental control; and specific controls.

Ecuador

ORGANIC LAW OF THE OFFICE OF THE COMPTROLLER GENERAL

Title II. On the system of public control, inspection, and auditing
Chapter 3. On the external control system
Section 1. Scope and modalities of government audits

Article 21. Management audits… may be performed of: the administrative process, support, financial and operational activities; efficiency, effectiveness, and economy in the use of human, material, financial, environment and technological resources and time; and compliance with institutional mandates, objectives, and goals.

Article 22. Environmental audits. The Office of the Comptroller General may, at any time, audit the procedures used to conduct and approve environmental studies and environmental impact assessments, in the terms established in the *Environmental Management Act*, published in Official Gazette No. 245 on 30 July 1999, and Article 91 of the Constitution.

Section 3.
Environmental Standard

Article 27. Environmental Control Standards. The study and evaluation of environmental aspects form part of the inspections or external audits of an institution that executes projects and programs with environmental impacts to which, in consequence, the technical standards that govern this type of audits are applicable, supplemented with specific environmental standards.

ENVIRONMENTAL MANAGEMENT ACT

Title III. Environmental Management Instruments
Chapter II. Environmental impact assessment and environmental control.

Article 25. The Office of the Comptroller General may, at any time, audit the procedures used to conduct and approve environmental studies and environmental impact assessments, determining their validity and effectiveness in accordance with the Act and Special Regulations thereto. It will do the same with respect to the efficiency, effectiveness, and economy of plans for the prevention, control, and mitigation of the negative impacts of projects, works, or activities. It may also contract private or corporate parties to perform audit of studies of environmental impact.

Even so, it is not necessary to have an explicit environmental mandate to audit environmental issues. In fact, many SAIs with different mandates have demonstrated how environmental auditing can be incorporated into their work. The WGEA guidance paper, *Environmental Audit and Regularity Auditing*, provides guidance and strategies for auditors in SAIs that are mandated to conduct regularity audits. It explains why SAIs do not require a performance audit mandate or a specific environmental mandate to be able to conduct audit work with an environmental focus.

Furthermore, the WGEA survey also revealed that 68 SAIs extend their traditional audit role to include helping their government on environmental matters. For example a SAI may be asked to advise on whether current legislation is adequate for addressing an environmental issue, or it may be asked to review its government's environmental performance. Of the 119 SAIs that responded to the WGEA's 2006 survey, 22 SAIs acknowledge that they help government formulate policies, and 20 SAIs help government generate environmental indicators and other performance measures. Some SAIs are even mandated to conduct priori audits—audits that are completed in advance of expenditures. SAIs understand the importance of remaining independent. They continue to practice objectivity and impartiality in these circumstances.

The following text box illustrates the number of SAIs conducting environmental audits and helping their government on environmental issues in addition to auditing under a range of audit mandates.

Of the 119 SAIs that completed the WGEA 2006 Fifth Survey on Environmental Auditing:

- 5 have only a compliance mandate
- 20 have an explicit environmental auditing mandate
- 68 help government departments with environmental issues in addition to auditing
- 106 have a performance mandate
- **88 have conducted environmental audits**

1.3 Audit findings

Environmental audits, like all other audits, essentially examine the current situation against what the situation should be. For the public sector auditors of the environment, what the situation should be is derived from multi-jurisdictional agreements, legislation and regulations, policies, programs, enforcement requirements, and departments and agencies. Other criteria to conduct audits in the public sector are grounded on rules of good management and accountability (for example, sound financial management, a solid management process, and a clear process for payment). Audit findings are at the heart of each SAI's efforts. They are important for building rationale for further action.

After more than 2,000 environmental audits by SAIs, auditors in SAIs reflect on environmental audit findings and observations. These audit findings are frequent to environmental auditing, but are not unique to environment.

Gaps and weaknesses in government action are frequently highlighted in audit findings. For instance, there are often significant gaps in implementation, legislation, and allocation of resources. In the implementation gap, auditors noted that while much is said about the environment, it is not always clear what is actually being done. Some audits found gaps between policy on paper and policy in practice. In the initial stages of planning programs and projects, findings have included weaknesses and gaps in determining environmental risk. There are also legislative gaps. Auditors have pointed to gaps in the details of environmental regulations after a broader environmental mandate is created, while other findings pertain to the need to clarify existing laws and regulations. Gaps in resources have been linked to lack of reliable data, and inadequate enforcement and inspection.

The **complexities of, and cooperation required** in, environmental governance are continuous themes in this report. As environmental issues tend to address more than one department or agency, it is not surprising that findings include the need to harmonize issues among departments, to increase coordination and cooperation among them, and to ensure adequate communication.

Within departmental **functions and operations**, findings include inadequate enforcement and inspection, internal control weaknesses, and low compliance with standards.

Financial management weaknesses are also identified in findings of environmental audits. These include improper funding of environmental programs, shortages of administrative requirements, the lack of proper conditions of funds, and beneficiaries receiving funds without following the proper process. Audits have identified funds that were not used efficiently or economically to ensure the best results for the environment, and funds that were used in a manner that did not correspond to the priorities of the environmental program.

Findings and recommendations concerning the **reliability of data and the lack of detailed information** are not uncommon. Data weaknesses from government sources are a common challenge in environmental audits. Audit reports have identified data deficiencies in their findings.

Every audit that can help point to, and identify weaknesses in, specific government action can contribute to overall improvements in government management systems, informed decision-making, and improved accountability and reporting. SAIs can play a role in validating results, and ensuring governments report accurately, while building public confidence in the results.

Chapter 2: The Evolution of Envirenment in Governance and in Auditing

Since the 1970s, environmental governance has broadened in responsibility, and more policy tools and processes have been created to manage environmental problems. As a result, Supreme Audit Institutions (SAIs) have had to expand the number of topics to audit and the methods used for these audits. Chapter 2 explains why and how environmental auditing responsibilities have increased for SAIs over time.

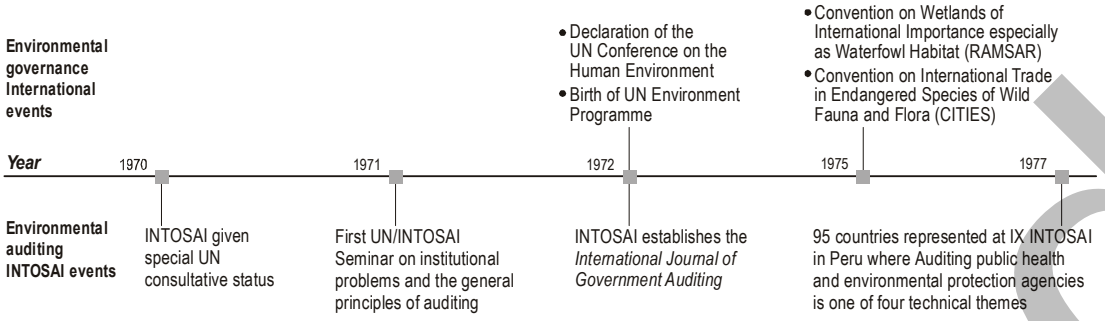
The discussion focuses on two key areas. The international activities that led to global environmental actions and the creation of organizations for environmental governance (for example, the United Nations Environment Programme) and the activities in the INTOSAI community, including its Working Group on Environmental Auditing (WGEA). The following four sections that are divided into decade-long timelines which help set the stage for the discussion. The timelines start from the 1970s to the first decade of 2000. Each timeline denotes significant developments in the environmental governance community and in the INTOSAI community.

The global evolution of environmental activity influences how sovereign nations understand and implement mechanisms to protect the environment. SAIs do not audit international environment issues unless the governments of sovereign nations commit themselves to addressing the issue at home.

2.1 Historical overview

SAIs' formal involvement in the international community began in 1953 when INTOSAI was founded with 34 countries. By 1967, INTOSAI was given United Nations' non-governmental organization status.

1970s timeline



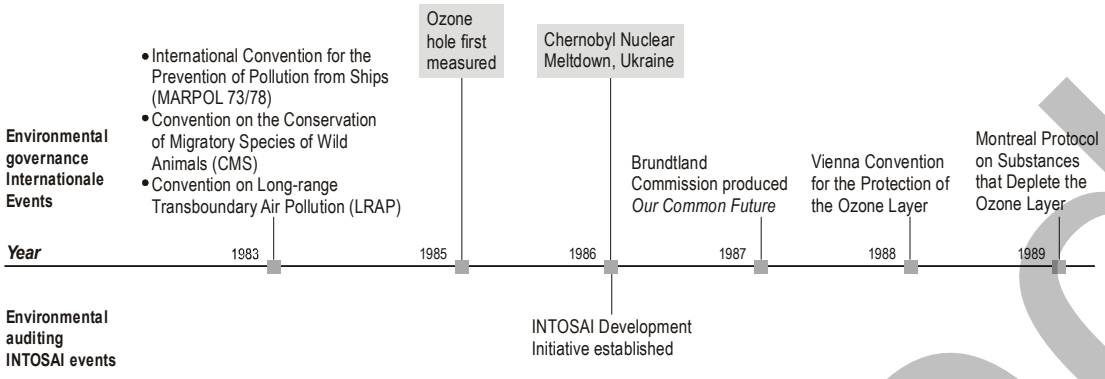
All dates for IEAs reflect entry into force

In 1972, the United Nations Conference on the Human Environment held in Stockholm, Sweden, and the creation of the United Nations Environmental Programme (UNEP) were both landmark actions of global environmental leadership. These activities at the international level were important to the development of environmental governance in sovereign states.

- The environment was brought much nearer to the top of many regional and national agendas. Before the Stockholm conference, there were about 10 ministries of environment; by 1982 some 110 countries had such ministries or departments.
- Between 1971 and 1975, 31 major national environmental laws were passed in countries of the Organization for Economic Co-operation and Development (OECD), compared to just 4 between 1956 and 1960, 10 between 1960 and 1965, and 18 between 1966 and 1970.
- About 50 governments have adopted instruments or national constitutions that recognize the environment as a fundamental human right.

Growth of performance auditing in the INTOSAI community. The 1970s was also a time of significant change in the auditing world. More SAIs were taking on the responsibility of performance auditing. That is, in addition to evaluating the financial records and expressing opinions on financial statements, SAIs were mandated to audit the economy, efficiency, and effectiveness (value-for-money) with which governments carried out their responsibilities. For instance, SAIs audited government programs to determine whether or not they produced their intended results. As governments increased their environmental activities, SAIs increased their audit coverage. SAIs that took on performance auditing were responsible for obtaining the knowledge, expertise, and methods that were appropriate for understanding the efficiency and effectiveness of their governments' environmental activities.

1980s timeline



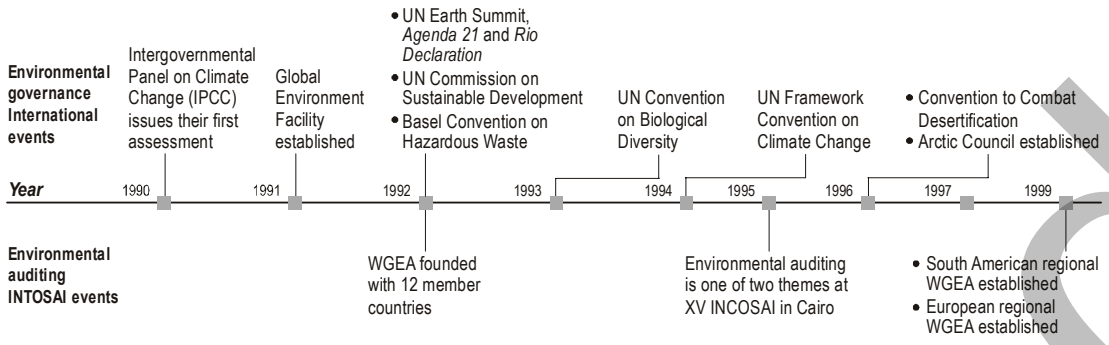
All dates for IEAs reflect entry into force

The 1980s brought environment and development issues together under one term: "sustainable development." In 1987, the World Commission on the Environment and Development (the Bruntland Commission) released *Our Common Future*, which set direction for comprehensive global solutions and gave prominence to sustainable development. Twenty years later, *Our Common Future* is still a defining document and a reference point for environmental cooperation. Governments, as well as professionals and academics accepted the responsibility that development had consequences for future generations and had an impact on the environment, societies, and economies. Global actions reflected the transboundary nature of environmental problems. The first major International environmental agreement (IEA) negotiated in the 1980s included the Vienna Convention for Protection of the Ozone Layer, the Montreal Protocol on Substances that Deplete the Ozone Layer, and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. The Chernobyl nuclear meltdown requested international cooperation which eventually had an impact on SAIs work.

By the end of the 1980s, many governments had increased their environmental activities by committing themselves to IEAs and by improving and expanding their environmental departments, agencies, laws, and regulations.

Expansion of environmental audits in the INTOSAI community: The proliferation and expansion of international and domestic environmental policy tools increased the amount of government processes and government funds that SAIs were obliged to audit in the area of the environment. For SAIs, environmental audits in the 1980s were mainly focused on environmental departments' and ministries' domestic responsibilities.

1990s timeline



All dates for IEAs reflect entry into force

> *The 1990s were characterized by the search for increased understanding of the concept and significance of sustainable development. This was accompanied by accelerating trends toward globalization, particularly with regard to trade and technology. The conviction grew that there were an increasing number of global environmental problems that required international solutions.*
>
> *Global Environmental Outlook 3*, Chapter 1

The 1990s was a period of increased globalization. There was a shift from actions intended solely to protect the environment to actions that attempted to implement sustainable development. The 1992 Earth Summit in Rio De Janeiro guided future development by creating *Agenda 21*, a "blueprint" for action to make development economically, socially, and environmentally sustainable for the 21st century. *Agenda 21* was adopted by more than 178 countries. The United Nations Commission on Sustainable Development (UNCSD-http://www.un.org/esa/sustdev/) was established in 1992 to oversee review and implementation of *Agenda 21*, the Rio Declaration on Environment and Development.

An example of how to apply sustainable development, contained in Chapter 8 of *Agenda 21*, calls upon countries to adopt National Sustainable Development Strategies. Since 1992, more than 20 national governments have developed some form of national sustainable development strategy, and more than 40 other countries are in the process of developing such strategies. These strategies are an important method to ensure environment and sustainable development is addressed across ministries and departments that do not have this topic as their main focus. These strategies raise awareness of sustainable development within government, inform stakeholders, address sustainable development at higher decision-making levels, and are used to identify areas that require more effort.

With increased awareness of the threats to the world's environment, the responsibility of all levels of government to address environmental issues increased. Non-governmental organizations, lower levels of government, and research institutes also began to translate sustainable development and IEAs into policies, devising methods of implementation *Agenda 21* that address their specific situations. The 1990s pushed environmental and sustainable development actions

beyond government and into private industry and research organizations. The examples in the following text box include measuring and reporting of standards, industry certifications, and industry standards to meet environment and sustainable development.

Examples of increased measuring and reporting on environment in the private sector

- 1989: **CERES Principles** developed a 10-point code of corporate environmental conduct leading to the widespread adoption of environmental principles by companies worldwide, including McDonald's, Dell, GM, and over 65 others.
- 1990: **Forest Stewardship Council** was established. The FSC has certified over 73 million hectares of forestry operations as sustainable in over 72 countries.
- 1990: **Global Environmental Management Initiative** was formed to develop standards and strategies for corporate environmental performance. Created the Total Quality Environmental Management method in 1993.
- 1995: **World Business Council for Sustainable Development** was established by a merger of the Business Council on Sustainable Development and the World Industry Council for the Environment. The WBCSD now has over 180 corporate members in more than 30 countries, representing 20 major industries.
- 1997: **Global Reporting Initiative** was established. Currently used by over 700 companies, the GRI has become the de facto international standard for corporate reporting on economic, social, and environmental performance.
- 1998: **The World Green Building Council** was established. Presently coordinates eight national Green Building Councils to advance sustainable building practices, and is working with several other countries to develop Green Building Councils.
- 1998: **Triple Bottom Line** was introduced as a method of reporting corporate social responsibility. Triple Bottom Line reporting is rapidly gaining recognition as a tool for incorporating environmental and social performance into business performance measurement.
- 1999: **Dow-Jones Sustainability Indexes** was launched as the world's first global sustainability benchmark tracking the financial performance of leading sustainability-driven companies.
- 2000: **International Standards Organization** develops '14020' standard for 'Eco-labelling' products, helping standardize sustainability claims made on product labels.

In disciplines that are more closely tied to auditing and accounting, there was also an increase in environmental and sustainable development activity. The following text box highlights some of the activities that took place over the 1990s and into the early years of the 2000s.

Environmental auditing and accounting around the world:

- **Internal Auditing:** The Institute of Internal Auditors established the Board of Environmental Auditor Certifications, which issues professional certifications relating to environmental, health, and safety auditing.
- **Environmental Management System Auditing:** The International Organization for Standardization developed the ISO 14000 series of Environmental Management Systems in 1996, as well as the ISO 19011 EMS auditing principles. ISO 14001 certification is in widespread use worldwide.
- **Social Accountability:** Social Accountability International (formerly CEPAA The Council on Economic Priorities Accreditation Agency) developed the SA8000 standard in 2000, the first standard with specific performance standards for socially responsible employment practices.
- **Country Peer Review:** The OECD began conducting peer reviews of the environmental performance of member countries in 1992, and has developed a set of "Core Environmental Indicators" against which to measure progress.
- **EU Eco-Management and Audit Scheme:** EMAS was developed in 1993, as a management tool for companies and other organizations to evaluate, report and improve their environmental performance.
- **Environmental accounts:** The UN *Integrated Environmental and Economic Accounting* 2003 is a satellite system of the System of National Accounts. It brings together economic and environmental information in a common framework to measure the contribution of the environment to the economy and the impact of the economy on the environment. At least 24 countries regularly use one or more of the four main components of environmental accounts addressed in the handbook.

SAIs began to audit environmental topics cooperatively and to audits IEAs: The second half of the 1990s saw SAIs increase cooperation with each other to conduct audits. Cross-border environmental issues were some of the first topics cooperatively audited. As noted in the following text box, SAIs' first cooperative environmental audit was by the SAIs of Poland and Belarus.

Poland and Belarus

The first cooperative environmental audit by SAIs

The Biaowieża Forest, a UNESCO natural heritage site, is located in Poland and Belarus. In 1995, the two SAIs conducted parallel audits of the impact of economic activities on the forest. The audit focused on

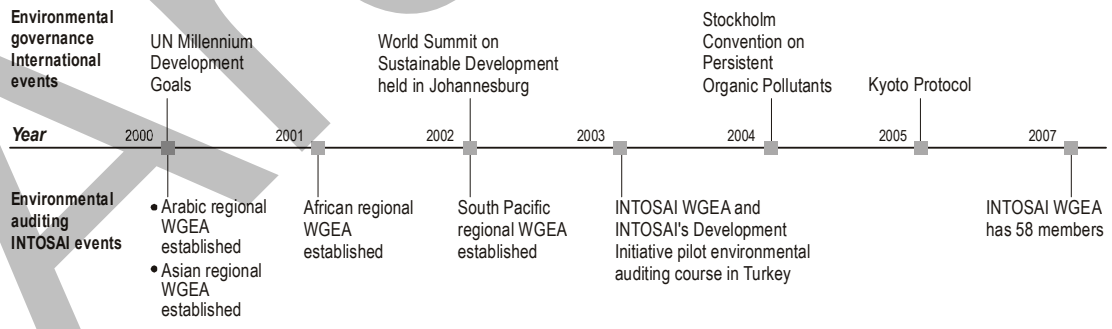
- compliance with the principles of protection;
- logging, deforestation, and the state of reforestation;
- wild animal populations and game management;
- the impact of investments, especially on land drainage; and
- threats posed to the forest by transport and human settlements.

Significant audit findings include the following:

- The methods to estimate game populations differed in the two countries and were not comparable. For example, the wolf is a protected species in Poland, while it is a game animal in Belarus.
- There were no long-term scientific research programs or protection plans. Closer cooperation is needed between forestry authorities to develop a uniform and coherent protection and management system.
- Draining of some wetlands and regulation of the neighbouring rivers and forest decreased the area of swamp forest in the heritage forest.
- There was a lack of comprehensive activities aimed at developing tourism and environmental infrastructure in villages and towns located around the forest.

Furthermore, some SAIs were beginning to conduct audits of IEAs. The Office of the Auditor General of Canada's audited Canada's commitments to the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity in 1998. As well, the Netherlands Court of Audit conducted an audit of wetlands based on the Ramsar Convention and two directives issued by the European Union—the Bird Directive and the Habitat Directive in 1999.

2000- timeline



All dates for IEAs reflect entry into force

The UN Millennium Declaration, the World Summit on Sustainable Development (WSSD), and the Kyoto Protocol are significant events of global environmental governance that have occurred thus far in the first decade of the 21st century. These three events and the impact they have on SAIs' work are discussed below in chronological order.

With the new millennium, the importance of development for the poorest of the poor was re-emphasized with the UN Millennium Declaration and its associated **Millennium Development Goals** (MDGs-http://www.un.org/millenniumgoals/). The MDGs are the commonly accepted framework for measuring the progress of development with eight overarching goals (see following text box), 18 targets, and 48 indicators. The MDGs were part of a global transition to more measurable results. There is a renewed appetite to examine activities for end results, which is an important aspect of SAIs work in performance auditing.

United Nations Millennium Development Goals

In 2000, 191 countries adopted the UN Millennium Development Goals, a set of specific targets for poverty reduction, health, education, gender equality, environmental sustainability, and global partnerships to be reached by 2015.

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria, and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

SAIs can use WGEA's ***Sustainable Development: The Role of Supreme Audit Institutions*** 2004 or ***The World Summit in Sustainable Development: An Audit Guide for Supreme Audit Institutions*** 2007

In 2002, the **WSSD** was held in Johannesburg, South Africa, as a 10-year follow-up to the Rio Earth Summit of 1992. The WSSD made it clearer than ever that the environment was intertwined with sustainable development. The WSSD's Johannesburg Plan of Implementation also emphasized partnerships, highlighting the fact that governments cannot do it alone (http://www.un.org/esa/sustdev/).

SAIs move towards auditing sustainable development. The WGEA has published two guides in relation to sustainable development and the WSSD. Furthermore, SAIs are aware that the growth of partnerships in sustainable development has implications for their work. More collaboration affects the extent to which SAIs can audit their government's new partners in sustainable development.

> *Simply put, sustainable development cannot be achieved without good governance, and good governance, in turn, is greatly furthered by the valuable work of SAIs. Therefore, SAIs can play a vital role in informing and supporting efforts to achieve sustainable development.*
>
> Klaus Toepfer, Former Executive Director of UNEP, *International Journal of Government Auditing*. Vol. 32 (2) April 2004.

The entry into force of the **Kyoto Protocol** represents one of the most urgent issues in the first decade of 2000. Recognizing that a lone country or a small group of countries could not address the root causes of human-induced climate change alone, nations established the UN Framework Convention on Climate Change (UNFCCC). The subsequent Kyoto Protocol (http://www.unfccc.int/kyoto_protocol/items/2830.php), with significant, legally binding targets to limit or reduce greenhouse gas emissions, came into force in 2005. Some SAIs have started to audit their country's obligations to implement UNFCCC and the Kyoto Protocol.

In addition to these three international events, other trends are taking place in environmental governance that interest SAIs. The increase of pooled funds to support environmental governance and the proliferation of IEAs are affecting SAIs' work.

Large sums, including pooled funds, have been spent to implement IEAs. Pooled funds are some of the largest sources of assistance, with contributions from many countries and international financial institutions. In the area of the environment, the largest single provider of grant funds to developing countries is the Global Environment Facility (GEF-http://www.gefweb.org). Every four years, 32 donor countries pledge billions in US dollars to replenish GEF operations. The GEF provides funds for six focal areas concerned with complex global environmental issues—biodiversity, climate change, international waters, land degradation, ozone-depleting substances, and persistent organic pollutants. The GEF is the designated financial mechanism for three IEAs on biological diversity, climate change, and persistent organic pollutants. During the first 15 years of the GEF, it approved more than US$6.2 billion in grants. For every dollar of this amount spent, there was an additional amount of almost US$1.70 from co-financing, mostly from the World Bank Group.

SAI are starting to audit pooled funding sources. With increasingly more pooled funds, there has also been rising interest throughout the international community to ensure that these funds are used effectively. SAIs have responded. After the tsunami of 2004, the Netherlands Court of Audit led an international taskforce to audit the efficiency and effectiveness of aid from numerous organizations to the affected region. In the regional WGEA of Europe, a special subgroup was established in 2006, which will look into auditing natural and man-made disasters, including radioactive waste elimination. The subgroup's first task is to audit foreign funds earmarked for recovery from the Ukraine Chernobyl disaster. As a result of increased global governance on environment, auditors have completed more audits driven by international sources, foreign funds, or co-funded projects.

By the late 1990s–early 2000s, there had been a growth of supra-national policy and law in environment. Some of the activity was truly global while other environmental agreements were designed to resolve regional environmental problems. Enough time had passed that several IEAs that had been implemented were expected to have produced results.

To assist SAIs' work in this area, the WGEA published ***How SAIs may Co-operate on Audit of International Accords*** in 1998 and ***The Audit of International Environmental Accords*** in 2001.

Growing number of IEAs audited by SAIs. Audits of environmental performance include more IEAs. The following are some of the agreements that were audited:

- Helsinki Convention,
- Convention for the Protection of the Marine Environment of the North-East Atlantic (the "OSPAR Convention"),

- RAMSAR Convention on Wetlands,
- Montreal Protocol on Ozone,
- International Convention for the Prevention of Pollution from Ships (MARPOL),
- United Nations Fish Stocks Agreement,
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITIES),
- UN Framework Convention on Climate Change, and
- UN Convention to Combat Desertification.

The multifaceted growth of environmental governance keeps environmental auditors on their toes. SAIs have responded accordingly by adjusting the scope and subject matter of their audits. SAIs are adjusting to complex environmental issues and to examine sophisticated public policy tools. As SAIs need to learn from each other to keep pace with global environmental developments, the next part of this chapter explains how SAIs have created a formal network to improve environmental auditing in the public sector.

2.2 Collective efforts on environmental auditing: INTOSAI WGEA

By the 1990s, INTOSAI was already a strong and independent organization with more than 40 years of experience sharing and learning about public sector auditing. The number of environmental audits and knowledge of environmental auditing had already significantly grown among its members. In 1992, 12 SAIs formed the WGEA that was chaired by the Netherlands Court of Audit. The WGEA became the formal means by which SAIs collectively support environmental auditing. The WGEA aims to improve the use of audit mandates and audit instruments that are used to audit topics relevant to the environment.

In 1995, 185 SAIs met with the intention of increasing their knowledge of environmental auditing during the 15th triennial meeting of the entire INTOSAI membership. The particular topics addressed included the overall framework for environmental auditing, expansion of legislative mandates to include environmental auditing, creation of environmental awareness in government, and cooperation between SAIs auditing IEAs.

By the end of the 1990s, the WGEA had formalized three-year work plans with goals and actions assigned to specific SAIs. Regional WGEAs are established in the regions of Africa, South America, Asia, Europe, the Arabic countries, and the South Pacific. The following text box is a list of some of the main accomplishments by the WGEA for its members.

WGEA activities for its members have included

- conducting five triennial surveys of environmental auditing among INTOSAI's members;
- providing a two-week environmental audit training course designed with the INTOSAI Development Institute;
- drafting nine guidelines to assist legislative auditors in examining specific environmental topics (water, waste, IEAs, and more);
- ensuring regular publishing and distributing of *Greenlines*, an electronic newsletter of the WGEA since 1996;
- posting all environmental audits that SAIs are able to share on a website for public access; and,
- holding regular international meetings to share and discuss environmental audit findings, challenges, and solutions.

See Appendix 2—WGEA resources for SAIs, for further details.

The WGEA was led by the Netherlands Court of Audit for almost a decade before the Chairmanship was passed to the Office of the Auditor General of Canada in 2001. At the time of printing, the WGEA has 60 member countries. In 2007, the Chairmanship was transferred to the National Audit Office of Estonia.

For the WGEA, meeting the needs of its members means striking a balance between addressing audits of global and domestic environmental governance. At least 2,000 environmentally-themed audits have been reported on the INTOSAI-WGEA website. The most commonly covered topics are waste and fresh water. Also common are audits of environmental management by public authorities or departments, which focus on government administration of a variety of issues, including compliance with IEAs and enforcement of existing domestic regulations. As shown in the following text box, WGEA also makes an effort to communicate with externally with relevant organizations.

WGEA's activities to build external relationships:

- The SAIs of South Africa and Canada hosted two separate Side Events during the World Summit on Sustainable Development in 2002.
- The Brazilian Court of Audit organized the International Conference on Environmental Auditing with a presentation by Professor Ignacy Sachs “From Concept to Action—from Stockholm to Johannesburg” in 2004.
- The WGEA is a contributor for Global Environmental Outlook-4 prior to its 2007 release.
- The WGEA has taken steps to establish closer cooperation with UNEP, OECD, UNFCCC, UNCSD, and the World Bank. Several representatives of those bodies have attended WGEA meetings and particpated in discussions with auditors.

2.3 The regional and national context of individual SAIs

The Introduction and Chapter 1 explained SAIs' autonomy and their diversity in structure and mandate. Not withstanding INTOSAI's collective growth in environmental auditing, there are reasons for the environmental audit choices of individual SAIs. It is an ongoing challenge for SAIs to balance their choice of an audit subject among climate change, sustainable development strategy, sewage infrastructure, or bridge construction. Each SAI must respond to its country's national and regional circumstances and priorities. SAIs' environmental audit activities range in size and in complexity. Individual SAI's environmental audit decisions could be attributed to some (or any) of the following factors:

- the natural geography of the country;
- influences of neighbouring countries;
- other national interests (for example, security, poverty eradication, economic development);
- the strong presence of specific industries, including natural resource extraction;
- urgent environmental problems, which may vary from basic needs such as sanitation and water supply to climate-change mitigation;
- the need in smaller developed and lower income countries to involve more external support to build governance and accountability;
- varying levels of capacity of the national government, including the role of an independent audit institution;
- a perception that environmental protection and management can only occur after a country becomes more prosperous; and,
- the various states of security or political stability.

It is not uncommon to find SAIs starting environmental auditing are from developing countries with varying histories and levels of capacity. The low-income countries that responded to WGEA's 2006 Survey on Environmental Auditing, indicated their highest priority environmental issues were water and waste.

The geopolitical context of a country can also affect SAIs. In Eastern Europe, some countries are auditing environmental programs because they must be audited before a country can fully enter the European Union (EU). The priority of the National Audit Office of Bulgaria is to conduct environmental audits on the government's preparation for EU membership, including funds that are available for candidate countries to improve environmental governance to meet EU standards. The Supreme Audit Office of the Czech Republic also audits the environmental commitments arising from membership in the EU. One of its priorities originates from the Action Programme for the Environment of the EU, while some of its other audits use criteria from the EU strategy for sustainable development.

Chapter 3: The State of Environmental Auditing in SAIs

The purpose of this chapter is to describe in a manner that is practical and useful to evaluators, auditors, and environmental professionals, how Supreme Audit Institutions (SAIs) go about conducting the variety of audits on environment. The details are presented in terms of four themes that recur when public sector auditors discuss environmental auditing. The themes are as follows:

1. Building methods, capacity and knowledge in SAIs,
2. Emerging areas of environmentally-related audits,
3. SAI's special role in auditing international environmental agreements, and
4 Cooperating and building relationships.

There are several reasons for discussing the current state of environmental auditing in terms of these themes. First, exploring the range of knowledge, methods, and opportunities will help SAIs learn from each other's experiences. Second, for readers outside the auditing domain, examples that illustrate each of these themes will help demonstrate the extent to which SAIs are serious about auditing governments' environmental responsibilities, including auditors' successes and challenges.

FAQ 1 provides additional guidance on building the capacity, skills, and knowledge to conduct environmental audits.
See Appendix 1

3.1 Building methods, capacity and knowledge in SAIs

Environmental issues can be quite broad and can be integrated with other issues. Even experienced auditors may be challenged and overwhelmed with new knowledge, new public policy tools, and more stakeholders. Therefore, continuous training on environment and auditing is important for all auditors, from the least to the most experienced. The material in Chapter 3.1

illustrates a range of efforts to build capacity and knowledge, from adjustments to audit methods that require less effort to significantly larger efforts such as building a team of dedicated environmental auditors.

Tips on Methods for Environmental Audits

Veteran environmental auditors and experienced SAIs state that their approach to, and understanding of, environmental issues has gained more depth over the years. The following are some of their observations.

- Auditors are more confident about dealing with critical environmental issues.
- Environmental issues have become more complex.
- The topics being audited have become more diverse.
- There is a need to integrate environment into audit guidance.
- The government mechanisms being audited may address a very specific aspect of an environmental issue.

Veteran environmental auditors noted that their increased knowledge, increased confidence, and improved methods often only come with practice. As SAIs began environmental auditing at different times and have a wide variety of environmental topics from which to select, it is not possible to categorically list trends in methodology. However, the following tips on how to overcome some common challenges were offered.

- Emphasize audit planning.
- Break down the audit into specific questions for a better focus.
- Obtain adequate data.
- Use external experts.
- Use international standards as audit objectives and criteria.
- Conduct physical site inspections.
- Use photographic evidence.
- Use results-based observations.

Emphasizing audit planning breaks down the challenge of where to start. Related to scoping, efforts at the planning stage can focus on aspects that are the highest risk and more suitable for audit. The advice from experienced auditors is to start at a manageable scale. Keeping the audit scope narrow helps auditors accumulate knowledge, and identify more complex audit topics for subsequent audits. For instance, the Office of the Auditor-General of South Africa narrowed the topic of waste audit to hospital waste audits only. What they learned from their audit of hospital waste can now be applied to future waste audits that can address health, education, and waste water.

Breaking audit topics into specific questions is tied to developing the audit objectives and criteria. Although the criteria and objectives of environmental audits are often not standardized, there are methods to develop criteria and objectives that are manageable. The Working Group on Environmental Auditing (WGEA's) 2001 paper, *Guidance on Conducting Audits of Activities with an Environmental Perspective*, provides guidance on establishing criteria for financial, compliance, and performance audits, as well as a discussion of the purpose and sources of criteria.

Another tactic in audit planning is to **select environmental criteria and objectives that are logical extensions of existing audit work**. This was the case for the Government of the Turks and Caicos Islands Audit Office. This Audit Office focused on two particular areas. The first area was the compliance with, and effectiveness of regulatory systems as imposed by relevant legislation to the "Conservation Fund." The second area of focus concerned the completeness and quality of data available to decision-makers and the public about the financial consequences of the environmental impact from development decisions. The Audit Office felt both areas were logical extensions of existing financial and regulatory audit work.

Environmental audits often have challenges related to **obtaining adequate data** to support their conclusions. Data requirements are often a feature of audits that tackle scientific issues. It can be challenging to obtain and rely on environmental data collected by government bodies. Auditors have experienced problems in data access, timeliness, quality, and accuracy. The issue of reliability of secondary data is therefore often an issue during an audit. The lack of adequate data can often become the main finding of an audit. In some cases, auditors have either hired external experts or collected their own primary data—even water and soil samples. Environmental data issues continue to be a challenge for new and veteran auditors.

Environmental audits often address issues that are physical in nature and specific to a particular site. Auditors conducting environmental audits stressed **the importance of field observations.** They found **photographic evidence** and **site inspections** important to their audit observations. In the Controller General of Paraguay, highlighted field inspections contributed to better audit results in their audits of the administrative procedures for permits and licenses for the use, storage, hunts, transfers, holding, and commercialization of the wild fauna.

The issues covered under the umbrella of the environment are vast, making it almost impossible for a SAI to possess all the subject matter expertise internally. Auditors, no matter whether they are experienced or new to environmental auditing, may benefit from the use of **external experts.** External experts can build or compensate knowledge gaps. Some auditors pointed out potential audit risks if experts do not agree. Another challenge is whether to select specialist or generalist experts. Expertise combined with independence is the ideal qualifications for public sector auditors.

FAQ 4 provides various approaches to using external experts.
See Appendix 1

The tips in this chapter and the FAQs are undoubtedly useful in auditing non-environmental topics. However, the advice is particularly relevant to environmental audits. A key message is that environmental audits do not need to be overly sophisticated.

Creating audit-friendly environmental knowledge and enhancing audit methods

The increase in audits on the environment has affected audit guidance in two ways. First, pertinent environmental knowledge is being transformed into useful guidance for understanding environmental issues and how to audit them. Second, existing audit methodology guidance is being updated to support audits on environmental topics. The two can complement each other in training and in audit guidance. The WGEA has developed numerous guidance documents to support auditing specific environmental topics and to improve audit methodology (see Appendix 2—WGEA Resources for SAIs).

SAI-specific guidance has been diverse to match the needs of individual SAIs and their context. A number of SAIs developed internal environmental auditing manuals or internal training sessions that are suited to their domestic situation. For example, the Office of the Auditor General of Norway arranged for its first full-day seminar on environmental auditing in 1996. Some SAIs' internal environmental guidance is derived from the WGEA/INTOSAI Development Initiative two-week course for auditors new to environmental auditing. The following text box shows how three SAIs took different approaches to build environmental auditing capacity.

SAIs' internal environmental audit training

Mongolia

Training material on Environmental Auditing

The material provided is based on the training material developed jointly by IDI and the INTOSAI WGEA. Material was adapted to local circumstances and translated into Mongolian. This material is used to train all government auditors and is used as a reference manual when they conduct audits on environment-related topics, especially on the topics related to waste, water, air, and biodiversity.

Iceland

Environmental Auditing in a Nutshell—The Role of the Icelandic National Audit Office in Environmental Auditing

This report describes how other countries have implemented environmental auditing and related projects. Emphasis is placed on countries that are instrumental in the development of the environmental discipline, and are geographically closest to Iceland. The report also provides a list of Icelandic laws and regulations concerning the environment, environmental standards, the international environmental agreements to which Iceland is a party, and important international conventions.

India

Three-Day Course on Environmental Auditing

This three-day course exposes Indian auditors to a breadth of environmental tools and knowledge. The first day covers general INTOSAI audit guidelines, and INTOSAI WGEA case studies in environment and sustainable development. The second day covers the Comptroller and Auditor General (CAG) of India's mandate and jurisdiction under the scope of environment, major IEAs audited by SAIs thus far, and background on significant conferences and international initiatives *Agenda 21* that have impacted India's audit of legislative compliance. The third day is focused on specific issues including India's regulatory framework, water issues in urban areas, biodiversity, air and noise, environmental management, and municipal and hazardous wastes. The day ends with a panel discussion of environmental auditing techniques and methodology.

Building Dedicated Environmental Audit Teams in SAIs

A commonly posed question among SAIs is whether or not to build dedicated environmental audit teams or to integrate environmental audit practice throughout the audit office. In reality, there is no clear answer. Some SAIs have decided to select one or the other, while a few SAIs are trying to do both. In the following text box, three SAIs with environmental audit teams had significant support and direction at senior levels including support for changes that affected strategic planning and long-term activities. Thus, the capacity of these SAIs to incorporate environment and sustainable development in with traditionally non-environmental matter is extensive. For the Austrian Court of Audit, the original direction came from strategic policy from senior management. In the case of the Auditor General of Canada, the direction came from legal channels, while the Brazilian Court of Audit's decision to emphasize the environment was based on internally training. The point at which environment becomes a priority for each SAI differs; however all three SAIs used the initial impetus to build internal environmental expertise (see following textbox).

Institutional changes which increased environmental audits

Austria

- In 1997 Environment was one of three topics in the Austrian Court of Audit's strategy. However, the office lacked knowledgeable specialists. A specialist was brought in to focus on waste-water management at local levels of government.
- In 2001 the Court reorganized, founding a department to deal with environmental issues. Environmental auditing competencies were developed in all levels of government. This allowed conducting environmental audits of lower levels of government in addition to the federal level. This also allowed for auditing horizontal or cross-cutting issues and conducting benchmark studies. Environmental experts in this department are lawyers, economists, accountants, and technicians of different specializations. They cooperate greatly with EUROSAI Regional WGEA and the INTOSAI WGEA. This department is considered one of the most knowledgeable and innovative.
- In 2006 another significant step to integrate sustainable development in their audit work was taken. The audit departments of Social Affairs, Hospitals, Health Care, Energy and Spatial Planning were incorporated in one division with the Department of Comprehensive Environmental Protection.

Canada

- In 1977 the *Auditor General Act* was was amended, adding performance audit to the existing financial audit mandate of the office.
- In 1995 the *Auditor General Act* was amended to strengthen the federal government's performance in protecting the environment and promoting sustainable development. In addition to creating the position of Commissioner of the Environment and Sustainable Development, a number of federal departments and agencies were required to prepare and submit a "sustainable development strategy" to Parliament. The Commissioner was mandated to audit their performance. The Office's environmental team was strengthen to meet these responsibilities.
- In 2005 the 4th E Practice Guide was completed to guide the integration of environmental considerations into all performance audit work. A course was developed in 2006 to support the new practice guide.

Brazil

According to Brazilian Court of Audit, environmental auditing is an ever-changing discipline that requires training to ensure better comprehensive oversight of external controls on environmental issues.

- In 1997 the Court first added environmental issues to its work. A small group inside the Court initiated discussions on environmental auditing to study ways to effectively carry out environmental audits. A strategy was created with guidelines and lines of actions to allow the Court to effectively audit environmental management. An Internet training course was designed that trained auditors and involved several areas of public administration. Another important step was the development of an environmental audit manual.
- In 2003 the environmental area became a separate auditing division with more duties and employees to strategically plan environmental audits. A list of audits was planned for 2004–05. The division was able to evaluate environmental issues with greater risks.

3.2 Emerging areas of environmentally related audits

As more knowledge of human interaction with the environment is uncovered, it becomes more difficult to segregate environment and human development topics from one another. Sustainable development and its pillars of environment, economy, and social harmony exemplify integrated knowledge of the environment. Since the term's introduction, there have been decades of research on the foundations of sustainable development. A few examples are provided in the following text box.

Examples of Research Activities in Sustainable Development

- 1990: Local Governments for Sustainability was founded (as ICLEI). The organization brings together over 475 local governments to collaborate on local approaches to environmental issues.
- 1993: Ecological Footprint Network was established. The network is currently working with 10 national governments towards making Ecological Footprint Analysis as prominent a measure as GDP.
- 2002: Compendium of Indicator Initiatives was relaunched by IISD and the International Sustainability Indicators Network. The Compendium contains over 600 sustainability indicator initiatives.

Led by the global governance community, sustainable development requires more work from governments in order to integrate the three pillars of sustainable development—economy, society, and environment. Governments have adapted by creating more integration among departments and agencies, and among programs and projects. This integration was partly fuelled by the Rio Declaration in 1992 and the World Summit on Sustainable Development in 2002, both of which called upon countries to develop national sustainable development strategies and to begin implementing them by 2005. Implementing sustainable development is challenging and varies in every country. Governments have created more sophisticated policy tools and systems to govern environment and sustainable development (for example, international environmental agreement (IEAs), emissions trading schemes, tax incentives, and natural resource accounting).

Of course, government actions affect what SAIs need to audit. The following audit topics, beginning with sustainability present aspects of auditing that are more challenging and more experimental, and that are typically considered by SAIs experienced in environmental audits. They are also areas in which SAIs have recently requested assistance from the WGEA and more knowledge sharing amongst their colleagues.

More SAIs are **auditing various aspects of sustainability**. The Office of the Auditor General of Canada audits departmental Sustainable Development Strategies annually. The Australian National Audit Office audits several departments' "triple bottom line" reports. Triple bottom line reporting involves reporting on economic, environmental, and social performance. The National Audit Office of Denmark audited the topic of green accounts and environmental management. The Office of the Auditor General of Norway examined the topic of sustainable use of reindeer grazing resources.

Not surprisingly, SAIs have also taken steps to audit the other pillars of sustainable development from an environmental standpoint. Environmental auditing has expanded to **examine programs and projects that are not designated as primarily environmental**. For the SAIs of Brazil and New Zealand, audits on security now include biosecurity. For some SAIs, disaster preparedness includes consideration of climate change. SAIs of developed countries have conducted environmental audits on their foreign aid to developing countries.

Another aspect has been to **use environmental information earlier, in a more timely fashion in the decision-making process.** Some governments have created policy tools to ensure more timely consideration of environmental aspects before large sums are committed to a program or project. SAIs are also auditing this level of government process. The Office of the Auditor General of Canada assessed whether departments provided sufficient environmental information to government decision-makers under their strategic environmental assessment requirements. The National Audit Office of the United Kingdom has reviewed how sustainable development concerns were handled in the government's high-level regulatory impact assessments. This is a process that is intended to cover all major policy development at all stages from the initial idea through to implementation in the UK.

Climate change is an issue unlike any other. Preparing to adapt to, and to mitigate against climate change extends beyond traditional mandates usually given to departments of environment. The burden of responsibility has fallen to the entire government, not only its environmental body.

As a result, SAIs have begun to audit a broad range of government activity on climate change. The SAIs of Netherlands and Canada have audited various aspects of greenhouse gas policy preparation, policy implementation, program performance, and results. The Netherlands Court of Audit focused mainly on social-economic sectors affected by their climate change policy: industry, energy, transport, agriculture, and households. The Office of the Auditor General of Canada looked into the overall federal approach to managing climate change. This included auditing central agencies of the federal government. SAIs from countries that are not parties to the Kyoto Protocol have also audited climate change. The Australian National Audit Office audited the efficiency and effectiveness of their government's program to reduce greenhouse gases in the trucking industry. The United States Government Accountability Office examined several aspects of climate change, including: the adaptability of Alaska's native villagers to the warming threats of climate change such as flooding and erosion; the potential effects of climate change on federal lands and to federal disaster costs; and the adequacy of reporting the effects of climate change.

Public sector auditors are committed to understanding the complexities inherent in environmental issues, and to foresee the direction that environmental audits will take them. The broadening perspective of government on environment has demanded improved public policy tools and processes. Governments have spent significant funds to manage the environment. SAIs are busily auditing an increasing number of environmentally related public policy tools.

In the following text box, auditors in SAIs reflected on the complexities inherent to environmental auditing.

SAIs' responses to Evolution and Trends in Environmental Auditing's first questionnaire

3.3 SAIs' special role in auditing International Environmental Agreements

International Environmental Agreements (IEAs) may be legally binding or voluntary. Environmental problems such as air pollutants, use or withdrawal of shared waters, and the trade and transport of endangered species, need to be resolved through agreements that involve countries in more than one continent. IEAs have a special role to play in managing shared resources. IEAs rely on mutual agreement, and are often an effective means of bilateral, regional, and global cooperation to solve environmental problems.

We have an obligation to cultivate and care for our planet—it must be our common duty. Our environmental failures and successes are not only ours—they affect people in other countries.

Mr. Miroslaw Sekula, Former President of the Supreme Chamber of Control of Poland

SAIs Role in Auditing IEAs and the Benefits

Governments around the world sign IEAs and implement them at home. Domestic implementation of the IEA may require legal instruments and regulatory powers. National governments are central to devising and implementing domestic public policy tools required to enforce the IEA. Success of an IEA depends on action initiated at the national level.

One method to know more about IEA implementation and compliance is to have SAIs audit them. In most countries, only SAIs have the mandate and access to audit a government's IEA progress. Various aspects audited include the capability of the country's institutions, the reporting material provided to international bodies, and the effectiveness and efficiency of the programs and projects created to meet the environmental commitments.

WGEA has produced two guidance documents to help audit IEAs.

How SAIs may co-operate on audit of international accords 1998

The Audit of International Environmental Accords 2001

From an auditing perspective, IEAs pose some common challenges. They are not always easy to examine. In some cases, the language in agreements is not "audit friendly:" ambiguous phrases such as "do as appropriate" or "in as far as possible" do not provide clear expectations for auditors. This makes it challenging for SAIs to audit results and compliance. As well, the agreements are applied inconsistently so implementation, reporting, and monitoring are not equally robust in each country.

SAIs take on the auditing of IEAs as either compliance or performance audits. In selecting and IEA to audit, SAIs consider the availability of relevant information by government, signs of non-compliance, and environmental risks underlying the IEA. In terms of auditable attributes of the IEA, obligation to comply, period of implementation, and date of entry into force are important. Overall, SAIs also factor in the topicality and timeliness of audit reports in their decision. IEAs often have international mechanism such as a secretariat or a commission with useful background information including updates on implementation. Even if the government has not signed an IEA, it can be an important source of audit criteria. SAIs have audited governments' domestic environmental policies that were, in part, influenced by international environmental leadership.

Sovereign nations are the recognized parties in international negotiations and agreements on environment. Governments sign environmental agreements for good reasons and with good intentions. Membership in an agreement can help countries obtain technical transfer funds and recognition in various political arenas. However, auditing can point out that delivering the results may require an extensive amount of unanticipated funds, planning, and operation.

The following text box is an example of a regional international environmental agreement of a shared water system audited by the Romanian Court of Accounts.

Romania

The Danube River and the Black Sea: A Cooperative Audit of an International Environmental Agreement

The Danube River has long been part of European history. It passes through four national capitals: Vienna, Bratislava, Budapest, and Belgrade. It flows into the Black Sea through the second largest wetland delta in Europe. By the mid-1980s, it was apparent that the Danube had issues more serious than just transportation. In particular, the issue of water quality was urgent. Many large cities, including the four capitals, discharge the waste of millions of people, their agriculture, and their industries into the Danube. In addition, thirty of its significant tributaries have been identified as highly polluted.

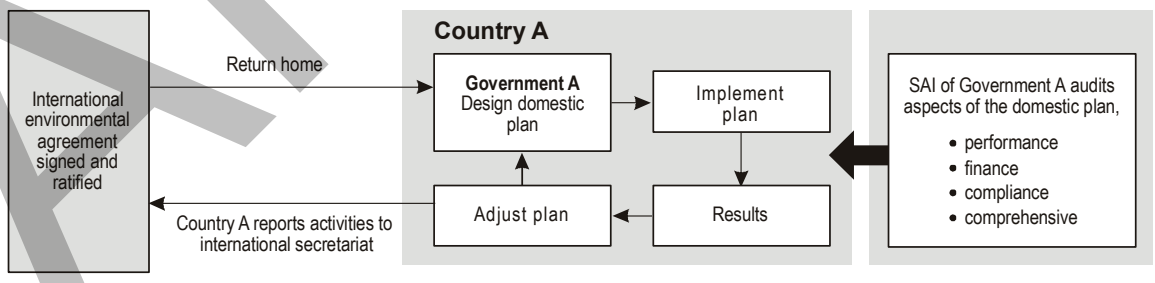
The ratification of two international environmental agreements gave the Romanian Court of Accounts an opportunity to conduct its first environmental audit cooperatively. The Convention for the Protection of the Black Sea against Pollution (1992) and the Convention on Cooperation for the Protection and Sustainable Use of the Danube River (1994) were audited to ensure the provisions of the agreement were fulfilled. Some of the significant findings in the 2002 audit included a need to establish a clear and coherent legal framework that was fair to polluters and beneficiaries. The auditors also pointed out that a balance of incentives and penalties would be necessary for progress on the Convention. The Romanian Court of Accounts acknowledges that they are in the midst of modernization and institutional strengthening. It looks to the European WGEA and the INTOSAI WGEA to continuously improve its environmental audit practice.

Performance mandate: No
Specific environmental mandate: Yes

Individual and cooperative audits of IEAs

SAIs can audit public policy tools used to implement an IEA. Differing logistics and mandates may discourage cooperation between SAIs on an IEA audit. Individual audits contribute to collective aspects of IEAs. As Exhibit 1 shows, governments can use the audit recommendations to improve their domestic actions and report back to the IEA Secretariat with improved results.

Exhibit 1: One SAI auditing one international environmental agreement



In the following text box, the SAIs of Chile and Austria conducted successful individual audits on their countries implementation of the Ramsar Convention.

Audits of the Implementation of an International Environmental Agreement

Chile

Ramsar Convention

Under the Ramsar Convention, the Comptroller General of Chile audited the management of one of its nine wetlands. El Yali Wetland is the most important wetland in central and northern Chile because of its rich diversity of aquatic bird life. A total of 115 species have been recorded, representing 25% of all bird life in Chile. The 2005 audit found that the government was successful in designating an area as a Ramsar site. However much remains to be done to ensure that the site can maintain its integrity. The Comptroller General of Chile concluded that the government needed a National Wetlands Committee to coordinate action, a national wetlands strategy, a coherent national policy, and planning on wetlands, and financial resources among others. The auditor observed pressures on El Yali wetlands from illegal draining, extension of urban and industrial development, and discharge of contaminants. The audit also concluded that the penalties for protecting the area and the rules for conservation were ineffective.

Performance mandate: Yes
Specific environmental mandate: No

Austria

Ramsar Convention

In Austria, environmental protection requires that provincial and federal jurisdictions work together. In 2003, the Austrian Court of Audit conducted a mixed audit of performance, legality, and finance on both the federal and provincial jurisdictional frameworks to ensure that they were appropriate to the commitments of the Ramsar Convention. The audit covered all eleven Austrian Ramsar sites or 1180 km^2 of protected lands. The audit found that not all sites were protected, and protection used a mix of legal frameworks and contracts. Overall, the Court recommended using legal methods rather than contracts, since environmental protection is a long-term issue. The lack of a comprehensive research concept affected different aspects of the Ramsar sites. For instance, borders in some areas were not clearly defined; decision–makers were not making decisions with a comprehensive biological inventory; and, as a result of using mixed tools for protecting sites, there were no standards for protection. The audit had significant impacts. Five new sites were nominated to the Ramsar Bureau with another expected. Many legal and ecological measures have been put in place to improve the condition of Austrian wetlands.

Performance mandate: Yes
Specific environmental mandate: No

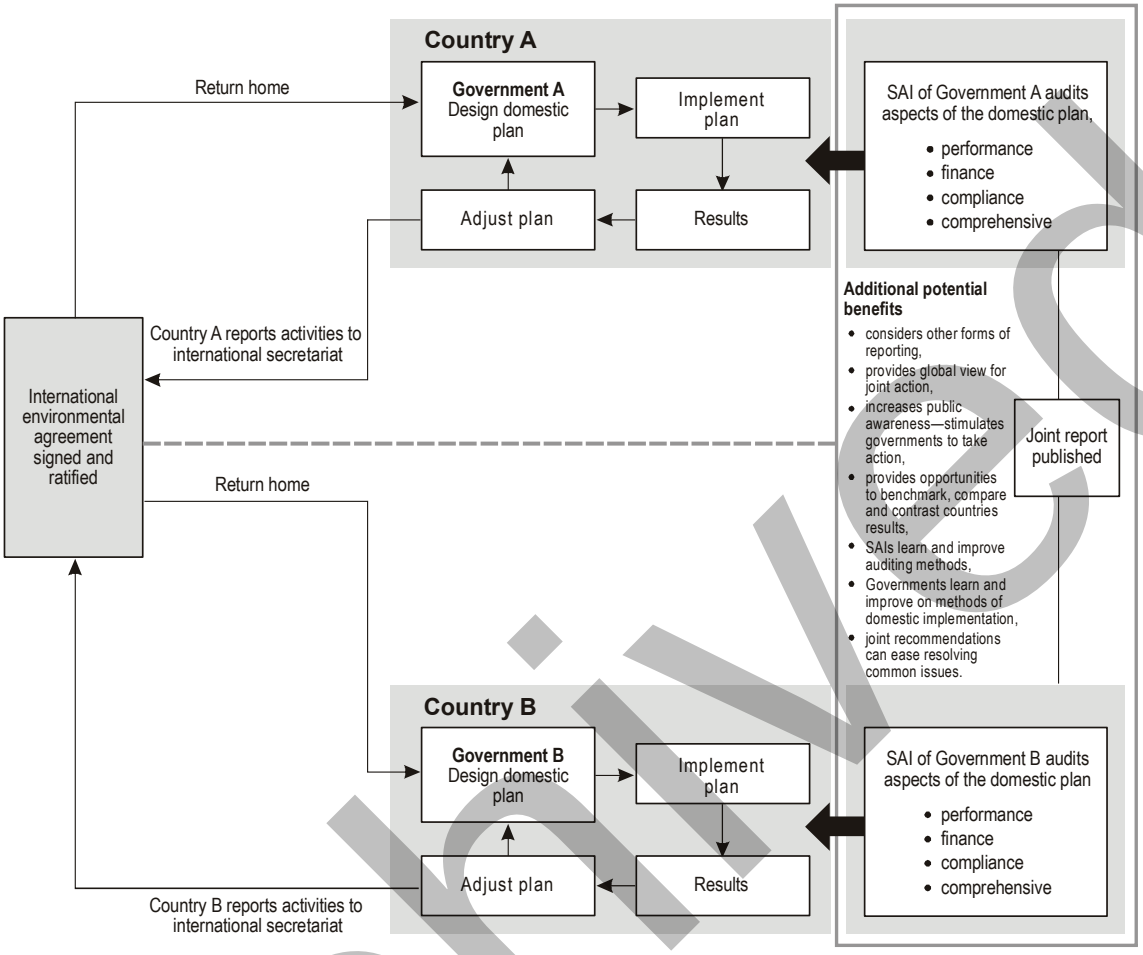
WGEA's ***Cooperation Between SAIs: Tips and Examples for Cooperative Audits*** can help SAIs plan, conduct, and report audits cooperatively.

FAQ 3 provides more reasons for SAIs to audit cooperatively.

See Appendix 1

SAIs have found additional benefits from working together to audit IEAs. As seen in Exhibit 2, additional benefits include benchmarks to compare country results, a common report that can be easily distributed internally and internationally, joint recommendations that may make it easier to resolve common issues, and a mutual exchange of methods.

Exhibit 2: More than one SAI auditing one international environmental agreement brings additional benefit



IEAs have been a motivator for SAIs' cooperation in several ways:

- IEAs have been the impetus for SAIs to work together and are the reason some SAIs conduct environmental audits. Auditors can increase their competencies in environmental audits through conducting coordinated, concurrent, or joint audits.
- Cooperative audits of IEAs can encourage cooperation with SAIs' respective national governments by establishing common terms of reference to audit transboundary environmental issues, as well as establish realistic benchmarks against which to measure countries' performances.

The following text box illustrates a cooperative audit of an IEA that involved eight SAIs. A cooperative audit was appropriate in this case, since the objectives of the agreement were based on joint decisions and cooperation.

Eight SAIs: Denmark, Estonia, Finland, Latvia, Lithuania, Poland, Russia, and Sweden audit the Helsinki Convention

The Helsinki Convention was drawn up in 1974 and signed by countries bordering the Baltic Sea to protect against pollution. In recent years, the Baltic Sea has seen a dramatic increase in oil shipping and the transportation of other hazardous substances. This general growth of traffic is a cause for concern, as it inherently increases the risk of collision and damage to marine ecosystems. The objectives of the Helsinki Convention are pursued on the basis of jointly made decisions and agreements, joint declarations, recommendations, and broad cooperation in environmental protection. Good environmental protection depends on thorough coordination of preventive, contingency, and combatting measures, and requires fast and effective action by the responsible national authorities and international cooperation.

Given the increased traffic on the Baltic Sea and the collaborative nature of the Helsinki Convention, it was appropriate for eight SAIs (Denmark, Estonia, Finland, Latvia, Lithuania, Poland, Russia, and Sweden) to participate in a parallel audit with agreed upon terms of reference, scope, audit objectives, criteria, and methods.

Conducted in 2004, the audit looked at the level of implementation of the Convention in each country. The audit found that all countries have taken necessary measures to implement the Convention. However auditors found that there was an urgent need for comprehensive risk assessment due to dramatic increases in oil shipments and a need for more cooperation, and exchange of information on research and on good practices. This audit ensured that the spirit of international cooperation that created the convention was applicable to the dynamic conditions on the Baltic Sea.

The joint audit report of the eight countries was shared with HELCOM (www.helcom.fi - the Helsinki Convention governing body). HELCOM endorsed the SAIs' findings and recommendations, in which the governments of the contracting parties must act on their national program and legislations.

Performance mandate: Yes for all 8 countries
Specific environmental mandate: Yes for Lithuania, Russia.
No for Denmark, Estonia, Finland, Latvia, Poland, and Sweden

In section 3.3, the importance and unique link between the international environmental community and public sector auditing was described. Beneficial outcomes of SAIs' audits on IEAs include international and regional acceptance of the results and the audit methods, and improvements that are made more quickly in response to an audit.

> *We appreciate the international coordinated audits and joint studies. It has been very useful to us to learn from our counterparts, to share the best practices and to share our mutual concerns. We hope this international collaboration and solidarity will continue.*
>
> Turkey, Compendium of Workshop Papers of the Tenth Meeting of the INTOSAI WGEA, p. 7

3.4 Cooperating and building relationships

Supreme Audit Institutions build relationships to increase the impact of their audits. Within their basic structure and established relationships, SAIs can further relationships with their elected assembly, governments, their colleagues, and external stakeholders.

SAIs' mandated relationships

This discussion focuses on SAIs' three established relationships: to their client, to the audited departments of government, and to the public. Among the 186 SAIs, their clients will vary. The client could be the executive government, elected assemblies, or central government bodies). As described in section 1.2, a SAI's relationship to its client is generally well entrenched in the country's law and history.

The three types of SAI as described in Chapter 1 showed one way in which a SAI's relationships to its client is developed, particularly with regard to how SAIs report their audit findings.

SAIs that follow the "Westminster" model of "Offices of the Auditor General" tend to build relationships with the entire elected assembly, including those forming the government and those forming the opposition. For these SAIs, success depends on a knowledgeable and active elected assembly which would follow up with the reports and opinions produced by the Auditor General. These SAIs can brief members of elected assemblies and suggest appropriate questions to assembly committees to ask the government in power. These SAIs can also inform assembly committees of any failures to implement changes. In this way, good communication of audit reports, audit results, and main points are critical to the proper functioning of this governing system. The general public is also interested in the SAIs' reports and can use the information to lobby elected members to act.

The "Collegiate" or "Board" model is often part of the elected assembly system of accountability. Similar to the "Westminster" model, the interested, knowledgeable, and active involvement of the country's elected assembly is necessary. SAIs in this model can use approaches that are similar to those described in the "Westminster" model.

In the "Judicial" model of "Courts of Audit or Accounts," the pressure or impetus to build relationships with elected assemblies is less, as the government is held directly accountable. There is less debate on issues by elected assemblies. Audits are not always openly discussed. However, cases that identify wrong-doing and are corrected by the SAI can be published. These are opportunities for SAIs to highlight the value of their work.

In addition to SAIs' relationship with their clients, SAIs definitely have a relationship with the **government departments and agencies audited.** One of the keys to ensuring that audits have impacts is building relationships with audited government departments; before, during, and after the audit. Sometimes auditors experience "invisible" results during the development of the report when audited government departments react to preliminary findings and take measures to meet the auditors' concerns before they are even published. For immediate reaction to audits, some SAIs look for a government response to the audit report or for debates and discussions in elected assemblies. On the other hand, some results are hard to identify, as they tend to be a catalyst for

future plans and activities. Audits often report information for decision-makers where information is lacking. These types of findings produce impacts that are less immediately evident.

There are other **diversities in SAIs mandate** and historical limitations that affect SAIs' mandated relationship to its client. Some SAIs may be expected to include recommendations and even policy solutions in an audit report, while other SAIs, like the Office of the Auditor General of Norway, are limited to providing observations in the audit report. More details are provided in the subsequent two text boxes.

Norway

One SAI's method of moving audit results into action

The Office of the Auditor General (OAG) of Norway provides assessments, observations, and statements in their audits. The OAG of Norway does not make recommendations. Once the report is sent to Parliament, the OAG of Norway plays a very limited role. Rather the Parliament submits the audit to the Standing Committee on Scrutiny and Constitutional Affairs for consideration. The Committee submits recommendations, which, along with the audit report, are debated in Parliament. The Parliament's resolution and the recommendations seldom contain direct instructions, but rather a message that some important areas need improvements.

FAQ 9 shows how some SAIs use communication to increase the impact of their audits.
See Appendix 1

Furthermore, not all SAIs can communicate their audits publicly. As a result of these limitations, SAIs develop other ways to ensure that their audits have an impact including better relations with audited government departments. Without stepping outside their mandate, some SAIs produce studies and research papers, and develop communication strategy with their reports. Some SAIs have followed up on whether the government has addressed observations and recommendations of their audit reports.

Norway

Following up on government response to an audit

To ensure the charges laid down by the Norwegian Parliament have been carried out, all performance audits that are reported to the Norwegian Parliament are followed up. Normally, the follow-up occurs three years after the audit matter has been considered in Parliament. After an audit is completed and debated in Parliament, a follow-up plan is formulated as quickly as possible. The goal of the follow-up plan is to transfer key knowledge from the completed audit to the subsequent follow-up activities. It forms a sound basis for monitoring the intentions of Parliament and the OAG of Norway's statements and assessments.

The actual follow-up is integrated in the annual performance plan of the OAG of Norway. The government agency is invited to give an account of the measures implemented to address the audit report. Auditors must take into account any changes that have occurred in the sector over the three-year period. Auditors assess the government's statements and decide whether the government's actions are satisfactory. If satisfactory, the case is closed. If not, a decision is made about whether to continue the follow-up by requesting that the government agency produce a new account or by conducting new investigations.

Building relationships among SAIs

SAIs benefit by working with each other. Chapter 2 illustrated that SAIs are increasingly using international networks to share information about environmental auditing among themselves. The WGEA meetings, its website, and its online newsletter, *Greenlines*, are good avenues to share audit findings, the "behind the scenes" details of audits (for example, challenges, success, and lessons learned), and pertinent knowledge of environmental topics. There has been better benchmarking of audit findings and improved audit practices through sharing audit knowledge. There is enough environmental audit experience documented within SAIs to create a body of knowledge.

> *We are still new to the area of environmental auditing. The WGEA gave us a big hand to stand up and get started. Sharing experiences is a very meaningful step and one way to do this is through on-the-job training with more experienced SAIs. We have learned that our audits are beneficial to the betterment of future generations.*
>
> Mr. Sarath Chandrasiri Mayadunne, former Auditor General of Sri Lanka

FAQ 2 suggests several methods for newcomers to prepare for their first audit.
See Appendix 1

There is increased cooperation to conduct audits on the same topics (some audits even use common audit guidelines). The latest WGEA survey results showed that interest in cooperative audits is up from the last survey, from 77 percent in 2003 to 82 percent in 2006. Veteran environmental auditors have partnered with newcomers to help them gain practical experience. For example, the Office of the Auditor-General of South Africa led a five-country audit on waste to develop environmental audit capacity with the SAIs of Ghana, Kenya, Mauritius, and Ethiopia. To develop the capacity of auditors, the National Audit Office of Bulgaria twinned with the National Audit Office of UK to audit municipal solid waste.

Building external relationships

In order to increase the impact of their audits, SAIs build external relationships to overcome communication challenges; to obtain better knowledge while conducting an audit; and, to obtain broader environmental advice from knowledgeable organizations. These three reasons are elaborated below.

First, SAIs build external relationships to **overcome communication challenges**. For auditors, some of the challenges include: communicating the long-term nature of environmental problems; competing with the short-term interest of politicians, the public, and media; and explaining the complexities between the environmental cause and effect relationships.

Several SAIs noted that with more environmental audits and greater public interest, public access to findings and recommendations of their audits is easier. This allows citizens to pressure their governments. In the following text box, the Brazilian Court of Audit was able to communicate its audit findings to the media and demonstrate the value of their environmental audit staff.

Brazil

The impact of media coverage on water audits

An audit was conducted on water shortages in Brazilian cities. Among the cities audited was Sao Paulo, with a population of over 16 million. Inspections as part of the audit examination process were critical to the impact this audit had on the media. Several newspapers announced the main conclusions and repercussions of the audit. The audit intended to show society that environmental problems already exist. It also demonstrated that the audit office was capable of dealing with not only legal-administrative issues, but also with environmental issues. It was a landmark for the office, as it demonstrated that environmental issues have great social appeal. The result for the Brazilian Court of Audit was better recognition of the office's newly instituted environmental section.

Performance mandate: Yes
Specific environmental mandate: No

In Brazil, as environmental issues appeared more frequently in the media, the public demanded more public protection of its environmental assets, making the SAI's environmental audits more important. Its audits are not just a corrective tool for government, but also a source of public information on environmental issues. In the case of Brazil's water audits, media attention to audit reports demonstrated that the public is genuinely concerned about the issues involved and can relate to them.

FAQ 4 External experts are also a way to build relationships and work together.
See Appendix 1

Secondly, external relations with stakeholders and experts can directly contribute to **better knowledge while conducting an audit.** Environmental auditing can involve more stakeholders and experts, who understand different aspects of the audited issue. External relationships can be built with non-governmental organizations, industry associations, experts, research organizations, elected government committees, and even individual citizens. They can provide insight into the audit's background information, intended beneficiaries of a program, unexpected side effects, or downstream effects of an environmental issue.

Another objective of building external relationships is to obtain **broader environmental advice from knowledgeable organizations**. Some communication activities are undertaken for a specific audit while others benefit the SAI more generally. Building relationships with universities, non-governmental institutions, and with government and elected assemblies is a good long-term strategy for SAIs. Some SAIs provide educational workshops to elected officials on environmental issues. Other institutions may be better linked to different aspects of governance and the environment than SAIs and are equally critical. The goal is to develop win-win situations in which other organizations can generate some attention as well. In universities, SAIs' reports have had an impact for many years beyond the immediate recognition that politicians and media give them.

Ultimately SAIs cannot act to remedy their audit findings. However, in the drive to promote accountability and good governance, SAIs can reach out to their colleagues, elected assemblies, governments, and the public, using appropriate means.

Chapter 4: Future Directions

4.1 Current environmental conditions and development pressures

Changes in nature tell us human development is on an unsustainable path. Human-induced change to our planet is altering our climate, and destroying fish stocks, coral reefs, fresh water supply, and land-based ecosystems. The structure of the world's ecosystems changed more rapidly in the second half of the twentieth century than at any time in recorded human history. Virtually all of the earth's ecosystems have now been significantly transformed through human actions. Studies suggest that the number of weather-related disasters have increased three-fold in the past 30 years.

Population growth, poverty reduction, and progress in development are placing pressures on the very resources that keep humans alive. As the UN's 2005 *Millennium Ecosystem Assessment* states:

> *Nearly two thirds of the services provided by nature to human kind are found to be in decline worldwide. In effect, the benefits reaped from our engineering of the planet have been achieved by running down natural capital assets.*

Two conditions differ from any other time in history; human impacts on the environment are now ubiquitous and of greater intensity. In most cases, citizens of the planet can no longer plead ignorance about their effects.

Human interventions on earth are gigantic, and the impacts are never equally dispersed. Poverty reduction requires food and energy, which is gathered from the planet's lands and oceans.

Water: The amount of water held behind dams has quadrupled since 1960, and three-to-six-times as much water is held in reservoirs, as in natural rivers. Water withdrawals from rivers and lakes has doubled since 1960 with most of it being used (70 percent worldwide) for agriculture. The supply of fresh water is already inadequate to meet human and ecosystem needs in large areas of the world, and the gap between supply and demand will continue to widen if current patterns of water use continue. More than 800 million people currently live in locations so dry that there is no more appreciable recharge of groundwater or year-round contribution by the landscape to runoff rivers.

Land: More land was converted to cropland in the 30 years after 1950 than in the 150 years between 1700 and 1850, and one-quarter of Earth's terrestrial surface is now occupied by cultivated systems. Forests have effectively disappeared in 25 countries, and more than 90 percent of the former forest cover has been lost in a further 29 countries. Approximately 350 million people, most of whom live in poverty, depend substantially for their subsistence and survival on local forests. The oversupply of nutrients is an increasingly widespread cause of undesirable ecosystem change, particularly in rivers, lakes, and coastal systems.

Marine: In the oceans, all species of wild seafood are expected to collapse within 50 years unless fundamental changes are made to the management of the oceans and unless all species are treated as interdependent ecosystems. Acidification of the ocean caused by climate change threatens to soften the hard shells of marine organisms, including the structure of coral reefs. Meanwhile, the shrinking and early melting of the Arctic Ocean sea ice is eliminating critical habitat for large Arctic mammals such as the polar bear.

Of the trends that are expected for the first half this century, climate change and nutrient loading are two drivers that will become more severe. The predicted rise in sea levels and of sea-surface temperatures is expected to lead to a change in the intensity and frequency of tropical storms.

Climate change and energy is a challenge for developing and developed countries. The responsibilities vary depending on a country's income status and its vulnerability to adverse impacts of climate change. For instance, industrialized countries and countries with economies in transition (listed in Annex 1 of the UN Framework Convention on Climate Change that have also

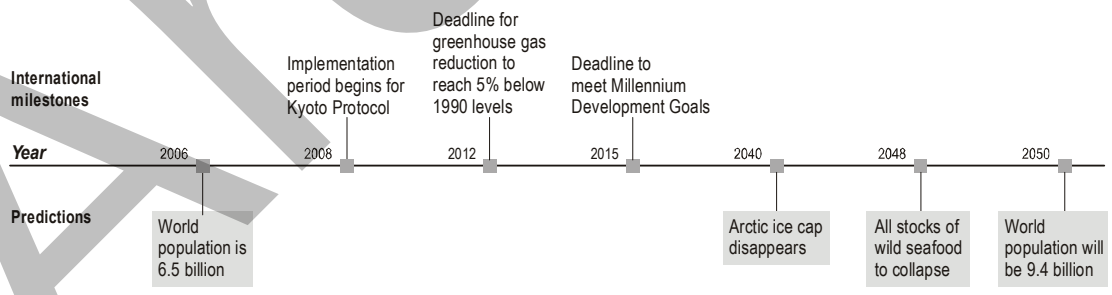
signed on to the Kyoto Protocol are obligated to meet legally binding targets in reducing greenhouse gas emissions. At the same time, the least developed countries rely on cooperative support for capacity building, education and outreach, and transfer of technology from other countries. Financial assistance is available from industrialized countries and from pooled funds such as the Global Environment Facility to help developing countries mitigate—to reduce or avoid greenhouse gas emissions—and to adapt—increase resilience to the adverse impacts of climate change. Issues of climate change and energy will continue to place significant responsibility on governments of all countries, as they will need to manage adverse impacts on human health, food security, economic activity, natural resources, and physical infrastructure.

Meanwhile, there are still many people in numerous parts of the world who can not fulfill their most basic needs, in large part because of the continued degradation of the ecosystems upon which they depend. Actions in one ecosystem service often cause the degradation of other services. Among plants and vertebrates, the great majority of species are declining in distribution, abundance, or both, while only a small number are expanding. Meanwhile wood and charcoal remain the primary source of energy for heating and cooking for 2.6 billion people.

To alleviate poverty collectively, the international community has established the **Millennium Development Goals (MDGs).** The MDGs are driving research, policy formation, and reporting. MDGs require a commitment to good governance and accountability structures. Those regions that cannot reach MDGs will be the same regions facing significant problems of ecological degradation. With globally agreed-upon targets and indicators, the MDGs focus on measurable results. Meanwhile there is global interest in "following the dollar" and ensuring that development funds reach those who most need them.

The future will continue to be an interplay between human progress and managing our diminishing natural resources. It has been 20 years since the Bruntland Report *Our Common Future*, and 15 years since the Earth Summit in Rio de Janeiro. What has improved or worsened since these two significant events? And what can we expect in the future? The following timeline shows some stark predictions of the planet for the current generation.

Expectations for the future



All grey boxes are based on 2006 research

With these trends as the backdrop, the following discussions present trends in global environmental governance and in environmental auditing for Supreme Audit Institutions (SAIs). All the trends are based on current knowledge and context.

4.2 Trends for SAIs to watch in global environmental governance

Given the growth of environmental governance both domestically and internationally (see Chapter 2), and SAIs' development of suitable audit techniques and approaches (see Chapter 3), the following issues were selected because they may pose implications to SAIs' future work. By and large, these issues require SAIs to work closer with each other as well as strengthen external relationships.

There has, and will continue to be, **expansion and experiment of public policy tools used to manage the environment**. More governments are trying different types of policy mechanisms from the government tool box. Government management of the environment has traditionally been managed by expenditures, and compliance with, and enforcement of laws and regulations. Some governments are trying less traditional approaches to affect public behaviour including environmental taxes and emissions trading schemes. Auditors will need to keep pace by having the appropriate audit tools.

There is a **need to improve integration and coordination** between governance institutions. This is a common finding in environmental auditing and in the global environmental governance community. Existing institutions are not well designed to deal with common pools of resources or shared ecosystems. One area to improve is international environmental agreement (IEA) coordination, including reporting requirements among more than one IEA. The broader perspective is useful for these supra-national policy tools. Other aspects of global environmental governance that require improvement include better integration with economic and social institutions, particularly within the broader development planning frameworks. This common finding suggests there will be more initiatives for governments to move in a more integrated and coordinated direction. SAIs will observe this trend and work towards developing the best method of assuring its accountability.

More work has been done to **incorporate environment and sustainable development into accounting practices**. Work completed includes accounting for environmental liabilities, risk assessments, sustainability accounting, and reporting on the triple bottom line. Much of this work was originally led by the private sector. However, some countries have government bodies that also use some aspect of environmental and sustainability accounting. Often, departments with higher environmental risks are measuring and accounting for environmental liabilities first.

FAQ 7 describes several SAIs' efforts to verify government's sustainability reports. See Appendix 1

There is also a trend toward more **reporting and measuring of sustainability**. In the absence of good information on progress towards sustainable development, numerous indicators have been developed by the private and public sectors (see sections 2.1 and 3.2). As measuring sustainability moves from the private to the public sector, governments will be under pressure to report their progress. Governments will have their own challenges reporting, while SAIs will also be challenged in verifying the reports.

Even as more knowledge is learned about the environment and people's relationship to it, **continuous gaps in obtaining and using good information remain.** There continues to be an overall lack of knowledge and information about various aspects of ecosystems and a failure to

adequately use the existing information to support management decision. Members of the global environmental community have stressed the current information gaps as follows:

- Extremely poor information on land degradation.
- A lack of replicable data that can be tracked over time on global forests.
- A lack of accurate global map of wetlands exists.
- Regionally and across different scales, gaps of information in the nature of interactions among drivers of environmental change.
- A lack of quantifiable and predictable relationships between biodiversity changes and changes in ecosystem services for particular places and times.

Insufficient data on the state of the environment is cited as one of the main barriers that keep SAIs from conducting environmental audits. The state of environmental data is important for audits of domestic problems and for audits on IEAs.

Current observations from international environmental experts and SAIs noted gaps in implementation that are due, in part, to a lack of knowledge and, in part, to the lower priority placed on the environment. Often institutional weaknesses prevent existing scientific information from being made available to decision-makers, which, in turn, contribute to a failure to incorporate other forms of knowledge and information.

Combining information of the types listed above with effective monitoring, assessment, and reporting is key to successfully understanding natural resources and the ecosystems that support them, and the institutions through which natural resources are managed.

SAIs are watching for trends in the area of **increased international collaboration that may create further accountability risks.** Several developments in the international governance have played a contributing role. From the World Summit and Sustainable Development in 2002, there has been a **push for more partnerships** to implement sustainable development. This means that more parties are responsible for delivering a program or a project. Looking at it from the opposite perspective, it also means each party is less than 100 percent accountable for the delivery and the results. Furthermore, the partnerships in sustainable development may originate from businesses that are not held to account in the same manner as government departments or agencies. Businesses may be held to account by their shareholders, rather then by the beneficiaries of a given project. Therefore, the risk is at least two-fold. First, accountability is dispersed among more parties, and each party is no longer 100 percent accountable. Second, a robust system of accountability to partners in delivering results may not be established through existing channels. For SAIs, it may create mandate challenges to follow the funds outside of auditable government organizations.

There are also trends in aid assistance that will affect accountability of environmental funding in developing countries. The 2005 Paris Declaration pressed donors to **harmonize aid**, to decrease the paper work expected of developing countries, and to give aid that meets developing countries' priorities, not the donors' priorities. Results at the country level and cooperation at the international level are emphasized. There is also a push to strengthen developing countries' own institutions and systems, and for this strengthening to be supported by donors. Actions are expected to streamline—to simplify procedures, collaboration, accountability, and transparency

among governments and donors. In an era of poverty reduction under constrained natural resources, the potential environmental risks in aid and development need to be assessed accurately, transparently, and in a timely fashion. It may be more difficult for donor countries and their SAIs to track how their money has directly contributed to specific results, as the trend is to pool more money together. There is a responsibility to increase accountability in the institutions of a developing country, including in its SAI.

4.3 Implications for SAIs' environmental audit practice

Trends in environmental auditing also exist due to each SAI's own course of development. Some of the trends below may differ because of a country's developing status, its mandate, and regional and domestic political interests among others factors.

Environmental auditing will continue to be ever present in SAIs' work. SAIs will continue to make additional progress in auditing sustainable development policy, sustainability reporting, other complex issues, high-level audits of cross-cutting themes and foreign funds.

For some SAIs, the combination of natural and man-made disasters, disaster preparedness, environmental threats, and safety issues are becoming a higher priority. And it is certain that new environmental topics will continue to arise. Less certain however, is how these environmental topics will be audited. Some of the following trends are more certain than others:

- SAIs will continue to conduct traditional audits such as regularity and compliance audits of environmental departments and programs.
- SAIs will also continue to conduct smaller focused audits, such as audits of the environmental impact of physical projects.
- SAIs' environmental audits will continue to encompass audits on performance and results, as well as on the management process.
- SAIs will continue to support one another. Newcomers to environmental auditing can receive support through experienced SAIs, INTOSAI Working Group on Environmental Auditing (WGEA), and regional WGEAs. There may also be an increase in environmental auditing training for SAIs.
- SAIs can expect increases in performance audits and cooperative audits with each other.
- SAIs may also find themselves working more with stakeholders outside of the government.

From all previous discussions, it is clear that SAIs will continue to have a myriad of environmental issues to audit, both individually and cooperatively. Climate change and energy, and poverty reduction following the MDG goals stand out among the various issues that require significant collaborative efforts in sharing audits methods and audit findings. These issues are the sustainable development challenges of the time; they require decision-makers to cut across comparatively more non-traditional environmental topics and organizations than most other environmental issues.

The MDGs focus on measurable results, while the shift in delivering aid assistance has raised the importance of following the dollar. Both these changes are activities familiar to SAIs. They can provide a neutral, non-politicized perspective on development by ensuring that funding used to alleviate poverty is spent correctly and that projects are examined for their intended results.

SAIs do not predict global, climate change issues and impacts. However, SAIs can contribute concrete audit findings of successful national programs that include measurable results. Signatory countries will have a more accurate understanding of their domestic activities and foreign funding of climate change projects through SAIs' audit findings. Debates could be more accurate if audited policy tools were part of the discussion of better solutions. Governments are planning to build elaborate systems to manage, measure, monitor, and decrease greenhouse gases. SAIs' involvement could be take the form of oversight audits of the planned emissions trading of greenhouse gases, including aspects of the Kyoto Protocol.

Emerging changes within SAIs

The following trends address how SAIs do business.

FAQ 8 explains how SAIs can integrate environment into audit guidance. See Appendix 1

The future for SAIs seems greener. They are building **greener audit methods**. More SAIs are integrating environment and sustainable development into their audit practice. Through training, the use of internal specialists, the revision or creation of audit manuals, and the setting of suitable audit scopes for strategic planning, environment and sustainable development considerations are being incorporated into more audit topics. Some SAIs are building teams of environmental auditors, while others are taking the environment into consideration in all or some of their audit planning. Still other SAIs are doing both of these activities.

SAIs' operations are becoming greener as well. More SAIs have started to decrease their impact on the environment by reducing office waste, reducing energy consumption, holding greener internal events, implementing sustainable publishing practices, selecting greener methods of travel, and even composting office material. Some SAIs are able to measure the reductions in their ecological footprints and the cost savings as well. This is a growing asset, as more SAIs are required to audit government departments' environmental office procurement responsibilities. The WGEA, an international volunteer organization, will be challenged and will work towards greening its own activities.

Some auditors would like to have audit tools that could demonstrate the **cost-benefits** to the environmental. Cost-benefit analysis could possibly be applied to demonstrate the potential environmental benefits of a particular action or place a price tag on environmental degradation due to action or inaction. Meanwhile, some auditors are taking steps to learn about and understand natural resources and environmental accounting.

Perhaps the topics presented are opportunities to **forge relationships with institutions** sharing the same interests. SAIs and international institutions have observed a growing gap between commitment and action on the environment. More effort is required to ensure comprehensive oversight of government mechanisms on environmental issues. Auditors stress that there is still a need to raise awareness of environmental auditing internally in their SAI and externally as well.

Some collaboration with international institutions has already begun. The UN Division for Public Administration and Development Management is exploring how results-based audit techniques could be applied to areas such as the Millennium Development Goals (MDGs). This Division sees opportunities for SAIs to ensure the highest accountability mechanism for a country's commitment to an international agreement such as the MDGs. It has engaged in some joint ventures with the

SAIs of Morocco, Argentina, South Africa, and Brazil. The objective of such joint ventures is to make the audit function more central to the achievement of the MDGs and the processes involved.

The SAIs' role in promoting good governance of, and accountability for, environmental issues and sustainable development will continue to grow. Ideally, this future growth is better integrated with activities and roles of other global environmental governance institutions. By sharing audits with accurate information for decision-makers and the public, there can be long-term interest for collaboration.

4.4 Strengthening external relations

There is no plan mapped out on how SAIs or the WGEA should communicate or collaborate with external institutions. The global environmental governance community and SAIs have inherently different roles and mandates. The following suggestions are less explicit and provide some approaches for mutual benefit.

Improved information sharing between specific UN Divisions and the WGEA could be sought. The UN is the official forum for sovereign nations' international environmental governance obligations. Therefore, the UN and its specialized organizations including the Food and Agriculture Organization, World Health Organization can provide a natural avenue to strengthen external relations. Organizations such as the United Nations Environment Program (UNEP) are powerful sources of information with an extensive network beyond SAIs' reach. UNEP has divisions that may be logical for SAIs to build regular communication with, including the Division of Early Warning and Assessment (http://www.unep.org/DEWA) and Division on Environmental Conventions (http://www.unep.org/dec). With modest volunteer and in-kind support, the WGEA's external communication would need to have clear strategic benefits.

Challenges in enforcing and complying with international environmental agreements (IEAs) are a common challenge identified by UNEP. SAIs can audit IEAs to demonstrate areas of compliance and enforcement that require more rigour. For the countries that have ratified specific IEAs, if SAIs could share their audit reports of domestic implementation with the IEA Secretariat, then IEA implementation results could be shared more expeditiously. Of course, each country government that is a party to the IEA would need to agree to this. Moreover, such audit findings may be beneficial as background information in developing the next generation of environmental agreements.

Countries that have completed audits on topics covered in *Agenda 21* and the World Summit on Sustainable Development may see potential benefits in strengthen relationships with the UN Commission on Sustainable Development (UNCSD). The UNCSD sets out two-year thematic clusters for reporting and policy development. In 2006, the UNCSD focused on country reporting for the thematic clusters of energy, industrial development, atmosphere/air pollution, and climate change. In the second year, 2007, the plan is to take policy decisions on practical measures and options to expedite implementation of these same issues. SAIs could benefit from timely and strategic communication of audit topics that addressed the UNCSD's thematic clusters.

Whether they are part of the UN or stand as their own regional governing body, regional commissions are organisations that SAIs can contact and strengthen relationships with. For instance, SAIs of countries in the Mekong Delta could build links to the UN Economic and Social Commission for Asia and the Pacific (http://www.unescap.org). Since 1995, the Mekong River Commission (http://www.mrcmekong.org) has had an agreement between the governments of Cambodia, Lao PDR, Thailand, and Viet Nam on the cooperation for sustainable development and joint management of their shared water resources, and development of the economic potential of the river. There may be topics of inter-regional interest worth auditing. SAIs of the same region can share their findings with their regional organizations, their public, and their elected assemblies.

The WGEA's current steering committee of 20 SAI-members meets regularly, as does the entire assembly of over 50 SAIs. The WGEA has three-year work plans that address a thematic environmental topic and goals to share information, build capacity, and strengthen relationships. Meanwhile regional WGEAs hold their own regional meetings. These venues are opportunities for the global governance community to observe, participate, and speak to public sector environmental auditors. Where appropriate, SAIs should consider invitations to selective leaders in the global environmental governance community. SAIs need to show that their auditors understand the complexities in environmental government mechanism and that these mechanisms are often only thoroughly examined by SAIs.

Chapter 5: Conclusion

This report has illustrated how Supreme Audit Institutions (SAIs) play a vital and growing role in effective environmental governance and accountability. SAIs are not homogenous in their mandates, structure, or methods of communicating audit results. Furthermore, their reasons for conducting environmental audits may differ. However, all environmental audit findings help government meet their environmental objectives.

> *We as SAIs have a particularly important role to play to ensure that our governments are accountable, responsible and responsive to ensure that issues of environmental sustainability are at the centre of our development initiatives.*
>
> Mr. Terence Nombembe, Auditor General of the Republic of South Africa

SAIs also have a part in global environmental governance. SAIs' work responds to the domestic and global growth of environmental governance. Within INTOSAI, SAIs' support of each other on environmental auditing is well formalized. The Working Group on Environmental Auditing's aim is to improve the use of audit mandate and audit instruments in the field of environmental protection policies for SAIs.

Several themes have emerged in this report on the successes and challenges of environmental auditing:

- Environmental issues are long term.
- Sustainable development is part of the challenge and the solution.
- Cooperation with others is important.
- Environmental issues are complex.
- Awareness and education are key.
- A balance between global and local actions is necessary.

Reflecting on the greater challenge, these themes are common to all professionals working on matters of the environment. It is with this understanding that SAIs look forward to learning, sharing, and working with other professionals on environmental issues and on environmental governance. Externally, cooperation has improved in recent years, and more global environmental problems are addressed through multilateral solutions.

All activities are intertwined: population growth is increasing pressure for food. Some auditors just beginning environmental audits are seeing links between natural resource use and poverty reduction. By 2020, farmers around the world will need to produce 40 percent more grain to feed everyone. Better understanding of climate change, an assessment of available water resources, and early warning of natural disasters will be vital to sustainable agriculture.

For those who are unfamiliar with SAIs, auditing, or environmental auditing, this report has attempted to demystify environmental auditing and to explain its benefits. Recognizing that our planet is under significant duress, SAIs are committed to good environmental governance and accountability. SAIs and the Working Group on Environmental Auditing extend an invitation to all organizations with a similar commitment to begin collaborative actions.

Appendix 1—Frequently Asked Questions—A Quick Guide for Practitioners

Many of the auditors who contributed information to this paper asked for solutions to problems. The following ten FAQs help resolve some common challenges in environmental audits.

FAQ 1: How can SAIs build the capacity, skills, and knowledge to execute successful environmental audits?

FAQ 2: What does a SAI need to know in order to conduct its first environmental audit?

FAQ 3: When and why are cooperative environmental audits appropriate?

FAQ 4: How can SAIs use external experts?

FAQ 5: What are some typical obstacles faced in SAI's audits, and how can they be managed?

FAQ 6: What government actions can be audited, and what approach should SAIs use?

FAQ 7: How are SAIs involved in verifying and learning about aspects of sustainable development?

FAQ 8: How are SAIs incorporating environmental auditing into their work?

FAQ 9: How can SAIs increase the impact of environmental audits?

FAQ 10: How can SAIs and environmental non-governmental organizations work together?

At the end of each FAQ, a list of Additional Resources is provided. The majority of the resources can be found on the WGEA website: http://www.environmental-auditing.org.

The information for the FAQs was collected from SAIs and auditors that contributed their experiences to this report and from material previously published by the WGEA. Overall, the research relies on environmental audit practitioners recounting their experiences through interviews, questionnaires, papers, and presentations. As in most research, this report has limitations in providing a comprehensive picture of environmentally auditing in the INTOSAI community.

FAQ 1: How can SAIs build the capacity, skills, and knowledge to execute successful environmental audits?

Get commitment from the top—Central leadership within the SAI helps environmental auditing grow. If, for example, the head of the SAI has an interest in environmental issues or expresses concern over the problems caused by unsustainable patterns of development, this can help increase the profile of environmental auditing within the SAI.

Strategies for the corporate level:

- **Participate in your INTOSAI community!**—Find out what other SAIs are doing. Nationally and internationally, there are opportunities for SAIs to learn from the work of others. In the INTOSAI WGEA, regional working groups on environmental auditing have assisted with learning and information sharing. SAIs regularly share best practices, lessons learned, and benchmarking.
- **Develop and maintain a network of experts and organizations**—Building and consulting a network of experts and organizations is important not just for the first environmental audit, but should be an ongoing activity. Some SAIs supplement their own environmental knowledge by maintaining a network of experts that address specific environmental topics. This can help auditors extend their work beyond administrative questions to address the other meaningful questions of whether government departments and agencies are focused on the right issues, and whether they are approaching problems in a reasonable manner.
- **Developing a strategy for environmental auditing**—SAIs can build capacity by considering their strategic response to the sustainable development agenda. The attention given to different issues is likely to vary among SAIs. However, a strategic plan serves as a guide for future audits and allows a SAI to determine the amount of time, personnel, and other resources needed.
- **Be aware of the sources of environmental information and the circumstances of environmental issues**—Environmental legislation, scientific data, and statistics are some of the important sources of environmental information for auditors. In addition, information that can be used to describe the state of the environment at a given time can provide valuable direction to a SAI trying to identify issues worth auditing. In order to better understand the circumstances of environmental issues, it is advisable to consult with government entities or organizations involved in managing and regulating relevant issues or programs. Furthermore, if possible, consult with external experts in the strategic planning process, as they may provide insight into environmental issues and programs.

Training options:

- **WGEA-IDI Training**—In collaboration with the INTOSAI Development Initiative, the WGEA has offered training to SAIs interested in getting started in environmental auditing. The two-week course, available in English and Spanish, has been delivered in several regions. This training programme has triggered other initiatives: SAIs are developing their own environmental auditing guidance materials; SAIs initiated their first environmental audits. In addition, they are using the WGEA-IDI course as the basis for additional staff training. The WGEA-IDI course materials, including Instructor's Guide, are available on CD-ROM in English. SAIs can request it by contacting IDI (http://www.idi.no/listof_courses_details.php?pid=3, else-karin.kristensen@idi.no).
- **Twinning or exchange programs with more experienced SAIs**—Contact SAIs with environmental auditing experience. Auditors can gain valuable knowledge through working on an audit with veteran environmental auditors.

- **Sharing experiences in Regional Working Groups on Environmental Auditing**—Regional WGEAs are established in six of the seven INTOSAI regions. The regional co-ordinators are South Africa for English speaking AFROSAI, Egypt for ARABOSAI, China for ASOSAI, Poland for EUROSAI, Brazil for South American countries (OLACEFS), and New Zealand for South Pacific countries (ACAG/SPASAI).

Additional Resources:

- *An Effective Coordination Mechanism, a Strong Guarantee for Building and Managing Environmental Auditing* (China), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Auditing Biodiversity at the United States General Accounting Office* (United States), INTOSAI WGEA 9th Meeting Workshop Paper, 2004
- *Audit on Medical Waste Management* (South Africa), INTOSAI WGEA 8th Meeting Workshop Paper, 2003
- *Facing New Challenges* (Turks and Caicos Islands), INTOSAI WGEA 9th Meeting Workshop Paper, 2004
- *4th E Integration* (Canada), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Results of the Fourth Survey on Environmental Auditing*, INTOSAI WGEA Publication, 2003
- *KENAO's Approach to Building and Managing Environmental Audit* (Kenya), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *SAI's Experience on Domestic Environmental Issues* (Lesotho), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- SPASAI and ACAG Regional Working Group on Environmental Audit Webpage: http://www.spasai.org/acag-spasai-rwgea/
- *Sustainable Development: the Role of Supreme Audit Institutions*, INTOSAI, 2004
- *The Role of SAI's in Environmental Governance: What can SAI's do? The Experience of the Turkish Court of Accounts and Some Suggestions* (Turkey), INTOSAI WGEA 11th Meeting Workshop Paper, 2007

FAQ 2: What does a SAI need to know in order to conduct its first environmental audit?

Use the existing mandate—A specific mandate for environmental auditing is not necessary. Financial, compliance, regularity, and performance auditing are all potentially applicable to environmental auditing. Environmental auditing is like any other audit completed by SAIs on a specific subject area.

Keep the audit scope narrow—For a first environmental audit, it may be helpful to keep the scope narrow. This approach is useful because it allows the auditors to accumulate knowledge, and identify similar, but more complex audit topics for future audits. Also keep in mind tips identified in FAQ 1, find areas that are logical extensions of current work, and crystallize audit objectives early.

Consult with experts—Using environmental experts can be helpful when auditing a new issue area. (For more information about using experts, see FAQ 4.)

Collaborate with another SAI—SAIs can gain experience in environmental auditing by collaborating with another SAI. One example is the Solid Waste Audit done by Kenya, Ethiopia, Ghana, Mauritius, and South Africa in 2005.

Make use of resources in the international community of environmental auditors—Several SAIs have noted that WGEA resources provide valuable assistance. For example, *Guidance on Conducting Audits of Activities with an Environmental Perspective* (2001) contains an annex on establishing technical criteria for environmental audits.

Decide on the best approach to audit government actions—This can be challenging and depends on the SAIs' capacity and mandate. FAQ 6 provides examples of how different SAIs approach the same topic differently.

Additional Resources:

- *Accountability Arrangements Regarding Solid Waste – A Pilot Cooperative Audit* (Kenya/South Africa), INTOSAI WGEA 10th Meeting Workshop Paper
- *Audit on Medical Waste Management* (South Africa), INTOSAI WGEA 8th Meeting Workshop Paper, 2003
- *Environmental Auditing, the Ugandan experience* (Uganda), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Guidance on Conducting Audits of Activities with an Environmental Perspective*, INTOSAI WGEA Publication, 2001, p.57
- *KENAO's Approach to Building and Managing Environmental Audit* (Kenya), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Report of Environmental Audit on Medical Waste Management* (Ethiopia), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *SAI's Experience on Domestic Environmental Issues* (Lesotho), INTOSAI WGEA 11th Meeting Workshop Paper, 2007

FAQ 3: When and why are cooperative environmental audits appropriate?

There are different types of cooperation between SAIs—INTOSAI WGEA's *How SAIs may cooperate on the audit of international environmental accords* 1998, described three types of cooperation:

- **Joint audits**—conducted by one audit team composed of auditors from two or more SAIs, who prepare a single audit report for publishing in all participating countries.
- **Coordinated audits**—either a joint audit with separate reports, or a concurrent audit with a single report in addition to separate national reports.
- **Concurrent audits**—Also known as parallel audits, they are conducted simultaneously by two or more SAIs. They use separate audit teams. They report only to their own elected assemblies or government and only on the observations pertaining to their own country.

Cooperative audits are appropriate for the following situations:

- **Transboundary environmental issue or transboundary policy tool**—Neighbouring protected areas, animal migration paths, and air pollutants are examples of environmental issues that are transboundary. A river that separates two countries often requires both countries' cooperation in governing transportation, agriculture, and fisheries. Some transboundary problems such as air pollutants and endangered species are global and need to be resolved through international policy tools that are agreed to, by countries across almost all continents. Cooperative audits on international policy tools are generally termed International Environmental Agreements (IEA). Characteristics that would enhance cooperative audits on IEAs include the following: the objectives of the IEA are based on joint countries' decisions and cooperation, commonly agreed upon audit criteria, similar approaches and timelines for domestic implementation, and the transboundary nature of the environmental problem.
- **Help SAIs learn from each other's experience**—By sharing audit methodology, approaches, and skills between auditors, SAIs can use cooperative audits to build environmental auditing capacity. British auditors supported the National Audit Office of Bulgaria with their audit on the implementation of municipal solid waste management activities.
- **Environmental program funding is shared between two or more countries.**

Additional Resources:

- *A Performance Audit of the Management of Prevention and Mitigation of Floods at Central, Regional and Local Levels of the Government of Tanzania—A Case Study of—Floods in Babati District* (Tanzania), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Accountability Arrangements Regarding Solid Waste – A Pilot Cooperative Audit* (Kenya/South Africa), INTOSAI WGEA 10th Meeting Workshop Paper, 2005
- *Audit of Implementation of Provisions of the Convention on the Protection of the Marine Environment of the Baltic Sea Area — The Helsinki Convention* (Denmark), INTOSAI WGEA 10th Meeting Workshop Paper, 2005
- *Auditing Activity of the Accounts Chamber of the Russian Federation in the Field of Natural Resources Utilisation and Environment Protection* (Russian Federation), INTOSAI WGEA 11th Meeting Workshop Paper, 2007

- *Auditing Chernobyl-related Aid* (Ukraine), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Cooperation between Supreme Audit Institutions: Tips and Examples for Cooperative Audits*, INTOSAI WGEA Publication, 2007
- *Coordinated Audit on the Basel Convention* (Czech Republic), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Environmental Auditing and the Hellenic Court of Audit* (Greece), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *How SAIs May Cooperate on the Audit of International Environmental Accords*, INTOSAI WGEA Publication, 1998
- *LIFE – the Financial Instrument for the Environment* (European Union), INTOSAI WGEA 10th Meeting Workshop Paper, 2005
- *Nature Protection at Lake Neusiedl*, Austrian Court of Audit Report, 2003
- *On the Implementation of Municipal Solid Waste Management Activities and Programmes by the Ministry of Environment and Waters and the Local Authorities* (Bulgaria), INTOSAI WGEA 8th Meeting Workshop Paper, 2003

FAQ 4: How can SAIs use external experts?

External experts can be useful at various stages of an environmental audit. SAIs use external experts for the following purposes:

- **Identifying specific issues or audit topics**—External experts can provide advice on current or potential issues or identify major work for a SAI. Experts can identify issues to be raised to elected assemblies. Experts can also identify emerging environmental and sustainable development issues for SAIs to consider. Some SAIs have a "panel of advisors" made up of leading governance and policy thinkers on topics including the environment. They can meet regularly (semi-annually or annually) to discuss issues and potential audit topics. Experts can identify the most important aspects of a large environmental topic for audit. With respect to guidance on a specific audit or environmental topic, external experts can help auditors scope audits into a manageable scale, provide guidance on audit objectives, and identify areas of higher risk or weaker areas of management.
- **Providing expert opinions against which to compare government performance**—Expert opinions can be gathered for a specific audit, a specific environmental assessment, or a specific environmental topic. Experts have been used to assess the sustainable use of a natural resource examined within an audit. Experts are often affiliated with universities, and the opinions presented by the experts can be included in appendices to the audit report.
- **Cooperating with carrying out the audit or completing specific work on behalf of the SAI**—Experts may directly assist with the examination of certain types of audit work. For example, the Netherlands Court of Audit had the assistance of an environmental research institute in an audit of the national ecological network. The institute analyzed geographical information systems (GIS) to assess the environmental conditions and the coherence of the national ecological network.
- **Reviewing and communicating reports after they have been published**—Experts may be consulted after an audit has been published. Experts can be used to advise on technical details when quantifying the impacts of their audits.

Risks associated with using external experts—The SAI remains responsible for ensuring that the auditing standards are applied. This means that the auditor should obtain reasonable assurance about the expert's reputation and competence. In addition, it is necessary to ensure that experts do not have close relationships to the auditees. This can be challenging in a smaller country.

Additional Resources:

- *A Performance Audit on Biodiversity — Some Lessons Learned* (Norway), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Auditing the Hot Mud Eruption in Sidoarjo, East Java* (Indonesia), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *National ecological network*, Netherlands Court of Audit Report, 2006
- *Exploitation of Peat Resources* (Estonia), INTOSAI WGEA 10th Meeting Workshop Paper, 2005
- *Guidance on Conducting Audits of Activities with an Environmental Perspective*, INTOSAI WGEA Publication, 2001
- *Increasing the Impact of Environmental Audits* (Norway), INTOSAI WGEA 10th Meeting Workshop Paper, 2005

FAQ 5: What are some typical obstacles faced in SAIs' audits and how can they be managed?

Many findings from environmental audits point to deficiencies in the availability, consistency, and reliability of information—Deficiencies in information held by, or produced by, government agencies can make gathering evidence much more challenging. To help decrease some of the deficiencies, the WGEA's guidance documents and its website (Focus of waste, Focus on water) can direct auditors to external databases on various environmental statistics from international organizations. Electronic surveys have been used to gather information and test the validity of key audit findings by sending results to the auditees. A simple survey is inexpensive to conduct and can generate useful additional evidence. As a last resort, SAIs can report the lack of information as one of their findings.

Environmental topics can be large issues, and they may be "moving targets"—It may be difficult to be fair to some complex environmental subject areas in a single audit report. Climate change is a good example of a complex subject matter. In addition, they may be "moving targets," that is, new advancements to environmental standards or new scientific information may evolve during the audit. The National Audit Office of UK dealt with a large issue in its audit of waste regulation by concentrating on those key operational roles of the Environment Agency for which they knew there was a problem or about which there was a high level of public concern. The advantage of this approach is that operational matters are less likely to be subject to move than the policy superstructure.

Overlapping responsibility for environmental issues may create challenges—Responsibility for environmental issues is sometimes shared by several levels of government, and perhaps even private sector actors. If a SAI does not have the mandate to audit those different actors, then it may be difficult to identify the causes of unsatisfactory performance and make specific recommendations for improvement. An example of this challenge occurred in the Office of the Auditor General of Canada's audit of biodiversity. In Canada, biodiversity is the responsibility of multiple levels of government. However, the Office of the Auditor General of Canada was limited to auditing federal responsibilities. The audit of the *Canadian Biodiversity Strategy* examined aspects that required arrangements with lower levels of government, including: federal-provincial-territorial coordination, biodiversity science and information, and stewardship planning. Other options are to audit the accountability arrangements or the adequacy of access rights built into programs.

Additional Resources:

- *Auditing Climate Change—The Canadian Experience* (Canada), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Auditing Biodiversity: Guidance for Supreme Audit Institutions*, INTOSAI WGEA, 2007
- *Canada's Experience in Auditing Biological Diversity* (Canada), INTOSAI WGEA 10th Meeting Workshop Paper, 2005
- *Management of Hazardous Wastes in New Zealand* (New Zealand), INTOSAI WGEA 8th Meeting Workshop Paper, 2003
- *Protecting the Public from Waste* (UK), INTOSAI WGEA 8th Meeting Workshop Paper, 2003
- *Management of Clinical Waste at Referral Hospitals* (Botswana), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *The UK Emissions Trading Scheme: A New Way to Combat Climate Change*, INTOSAI WGEA 9th Meeting Workshop Paper, 2004
- http://www.environmental-auditing.org (WGEA publications, Focus on Water, Focus on Waste)
- *UK Climate Change Policy—Use of Analysis* (United Kingdom), INTOSAI WGEA 11th Meeting Workshop Paper, 2007

FAQ 6: What government actions can be audited, and what approach should SAIs use?

There are many ways to audit the same subject. Depending on the capacity and mandate of a SAI, one or more of these approaches as part of audit lines of inquiry, researchable questions, or audit objectives may be appropriate:

- accurate accounting for all environmental funds and liabilities;
- gaps or inconsistency in environmental legislation;
- impacts of government activities on environmental outcomes;
- coordination or inconsistency between agency activities;
- quality of performance indicators;
- quality of reporting;
- performance of environmental agencies and departments;
- departmental accountability; and
- compliance with rules, legislation, regulations, and internal and external policies.

Examine the responsibilities of a particular government body—This approach works best when the role of the particular department or agency is defined. For challenging large environmental issues or programs that are the responsibility of more than one government body, SAIs could look for defined roles as a strategic leader, financier, coordinator, collaborator, researcher, or implementer. SAIs could examine the government body's role from financial, compliance, and performance perspectives.

Coordinate the audits of an issue—Several SAIs may decide that they are all interested in auditing a particular issue. The common issue may come from an international environmental agreement to which all countries are party. For example, for the topic of oil pollution from ships, there is both an IEA (MARPOL—the International Convention for the Prevention of Pollution from Ships), and a regional agreement, (the Helsinki Convention—the Convention on the Protection of the Marine Environment of the Baltic Sea Area). The following are four different approaches to auditing oil pollution from ships:

- **Seven SAIs collaborated to conduct parallel audits on marine pollution from ships**—From 2000–2003, SAIs from the countries of Cyprus, Greece, Italy, Malta, the Netherlands, Turkey, and the United Kingdom conducted parallel audit of marine pollution from ships. The seven countries' audit criteria was based on the International Convention for the Prevention of Pollution from Ships to Sea, better known as Marpol 73/78. This convention is binding for all countries involved in the audit, as well as for some 130 other countries. The SAIs decided on an audit criteria scheme covering the most important aspects of preventing and dealing with pollution from ships. Each SAI made its own decision on which aspects to audit. The joint report provided findings regarding the quality of the seven countries' inspections of ships, port reception facilities for ships' wastes, preparedness for incidences (contingency plans), and prosecution of offenders. The joint report also included a unique section to express the findings of the group of seven SAIs. A fictitious country, Maretopia, was used to illustrate the application of the better practices found in the seven-country audit.
- **National Audit Office of Malta audited implementation of national policy on preventing and dealing with pollution (MARPOL 73/78)**—One of the seven parallel audits on MARPOL 73/78 was the Maltese performance audit, which assessed whether the national policy regarding preventing and dealing with pollution was being implemented and enforced; government measures to prevent pollution from ships were efficient and effective; and government measures to deal with pollution from ships were timely and effective. The audit found that measures to prevent and deal with pollution from ships

were generally in place. However, a range of deficiencies was identified, principally at the management level, which diminished their efficiency. The report highlighted a number of weaknesses regarding implementation of government policy to prevent pollution from ships. Some operational policies and procedures were not documented, and insufficient management information was available.

- **A Danish audit looked at the effectiveness of measures taken to discover oil pollution, and to identify and prosecute oil polluters**—The audit office assessed whether the surveillance effort was organized, the pollution source was identified, and the offenders were penalized. The audit found that the overall effort to fight oil pollution at sea was ineffective; the surveillance effort was not able to ensure discovery of oil spills; the source of pollution was only identified in very few cases; and the number of penalized oil polluters had not increased.
- **A Canadian audit examined the "lead department"—**The Office of the Auditor General of Canada conducted a performance audit on the lead department for the MARPOL agreement in 2004. The purpose was to determine whether the lead department, Transport Canada, knew to what extent specific key objectives of MARPOL were being achieved. The audit observed that there was limited evidence that the department had analyzed the problem, assessed the effectiveness of existing prevention and surveillance programs, or clearly defined what environmental results could be expected from those programs. Transport Canada accepted the recommendation to define the environmental performance and the results expectations that ocean oil pollution prevention and surveillance programs can reasonably achieve.

Additional Resources:

- ACAG/SPASAI Regional Working Group on Environmental Auditing Meeting Minutes, 2002 http://www.spasai.org/minutes-of-meetings/
- *Audit of Implementation of Provisions of the Convention on the Protection of the Marine Environment of the Baltic Sea Area — The Helsinki Convention* (Denmark), INTOSAI WGEA 10th Meeting Workshop Paper, 2005
- *International Environmental Agreements (Canada)*, Report of the Commissioner of the Environment and Sustainable Development, 2004, Chapter 1 http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c20041001ce.html#ch1hd4c
- *Marine Pollution from Ships (Turkey)*, ASOSAI Seminar on Environmental Auditing Paper, 2005
- *Marine pollution from ships (Joint report based on national audits 2000–2003)*, The Netherlands Court of Audit
- *Preventing and Dealing with Pollution from Ships at Sea and in Ports (Malta)*, Report by the Auditor General, July 2003
- *Surveillance of oil pollution on the sea (Denmark)*, Summary Report of the National Audit Office of Denmark, 2001
- *The State Audit Bureau Experience in the Management and Development of Environmental Auditing* (Kuwait), INTOSAI WGEA 11th Meeting Workshop Paper, 2007

FAQ 7: How are SAIs involved in verifying and learning about aspects of sustainable development?

This is an emerging area for SAIs. Some have experience, while others are making a commitment to learn about current practices.

Sustainability measuring and reporting—At its narrowest, this type of reporting describes the framework for measuring and reporting organizational performance against economic, social, and environmental indicators. A broader definition captures the full set of values, issues, and processes; that organizations must address to create economic, social, and environmental values, and to minimize any harm resulting from their activities. The approach a SAI chooses to carry out a verification of "Sustainability Reporting" depends on its country's circumstances.

The following are some examples of the audit work SAIs are beginning to encounter:

- **Auditing "triple bottom line" reports**—the Australian National Audit Office has conducted independent verification of several departments "triple bottom line" reports. Triple bottom line reporting involves reporting on economic, environmental, and social performance. Auditors faced some common challenges in verifying sustainability information, including the following:
    - lack of mandated standards and evaluation criteria,
    - lack of available information to assess performance,
    - lack of clarity of information presented,
    - need to develop a sound basis for materiality decisions,
    - need to resolve audit issues relating to publication of the sustainability report, and
    - need to develop specialist skills required to verify sustainability information.

- **Auditing "green accounts"**—in Denmark, green accounts are required in heavily polluting industries. They contain information on what goes into a company's production such as raw materials, energy, water, and the kind and amount of polluting toxics that are part of the production process, as well as discharges into the air, water, and soil. Due to the nature of some public institutions, green accounts are also part of their requirements. The National Audit Office of Denmark reviewed and assessed the form and content of the government's green accounts and examined the extent to which they were being included in the management process. The audit found that the green accounts in public institutions varied in form and content, but that the majority of selected institutions were able to show positive environmental effects because of the accounts. Auditors also found a need for strengthening of green accounts and environmental management in the state, and that the accounts should be based on fixed concepts, standards, and methodology. Finally, the audit found that there is a need to simplify the process of reporting environmental information.

SAIs are looking at the accounting of natural resources

- **Building SAIs capacity in natural resource accounting**—Some SAIs have examined how natural resource accounting can be used in audits. The Comptroller and Auditor General of India, along with the Indian government's department of statistics, held a workshop that educated auditors on how to value natural resources. Issues discussed include natural resource depreciation, green GDP, environmental indicators, and non-market and market linkages to natural resources. Natural resource accounting is a means of creating linkages between the environment and economy by compiling data in

an accounting framework. Natural resource accounting can be appropriate for the following:

- demonstrating accountability for the management and protection of natural resources,
- identifying environmental problems such as resource depletion,
- analyzing government policy,
- monitoring sustainable development,
- drawing up (macro-economic) indicators for environmental performance or prosperity, and
- improving benchmarks for measuring a country's national product.

- **Measuring the cost of a natural resource**—The Controller General of Colombia carried out a study that attached economic value to the soil in the river basin of Rio Blanco. This method helped to calculate the soil's value by deducting the agricultural production and other methods of loss of nutrients. This method also helped to forecast environmental problems for the river.

Valuation—There is a growing effort to quantifying the risks and costs from human activities on our natural environment. Valuation is the process of expressing a value for a particular good or service in a certain context that usually can be counted, including ecological and social measures.

Additional Resources:

- *Annual Reporting on Ecologically Sustainable Development* (Australia), Audit Report of the Australian National Audit Office, 2002–03
- *Compendium of Workshop on Natural Resources Accounting* (India), 2006
- *Green accounts and environmental management* (Denmark), Summary Report of the National Audit Office of Denmark, 2002
- *Natural Resource Accounting*, INTOSAI WGEA, 1998
- *State of Environment in Bhutan* (Bhutan), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Sustainability Reporting—The Role of Auditors*, Presentation to Commonwealth Auditors-General Conference, New Zealand, 2005
- *Sustainable Development: The Role of Supreme Audit Institution*, INTOSAI WGEA 2004
- *The World Summit on Sustainable Development: An Audit Guide for Supreme Audit Institutions*, INTOSAI WGEA 2007

FAQ 8: How are SAIs incorporating environmental auditing into their work?

Enhance existing audit methodology—Because environmental auditing is not a new type of audit, the key to success is to build on existing audit practices. Some SAIs have created guidance material for auditors to use. In other SAIs, the guidance is further supported by staff who have expertise in specialized environmental audits. Some approaches to methodology include the following:

- Build a template in the SAIs' auditing manual dedicated to assessing environmental risks within an audit.
- Provide guidance on assessing environmental risks when conducting long-range planning exercises, as well as in the planning and preparation phase of audits. This exercise helps plan and scope individual audits.
- Develop a training course to help auditors apply methodology that incorporates the environment.
- Create an audit manual to guide auditors on how to consider and examine issues of environment through the course of planning, examination, and report writing.
- Produce a guidance document that provides historical and scientific material on environment, combined with various environmental auditing methodologies, projects, and audits, with environmental characteristics. Include relevant national and international laws and regional and international audit examples.

Techniques to use within an audit:

- **Narrowing the scope of the audit to make it manageable**—Environmental topics can be quite broad, so start with a small-scale audit and a limited scope. Address a smaller environmental issue, instead of a larger environmental topic. For example, audit medical waste management, instead of trying to tackle the entire topic of waste management. Audit invasive species under the broader topic of biological diversity.
- **Finding areas that are logical extensions of existing audit work**—The Government of Turks and Caicos Islands Audit Office set out to focus on two areas. The first was on compliance with, and effectiveness of, regulatory systems, including the "Conservation Fund." For the second one, they examined the completeness and quality of data available to decision makers and the public, in the context of the financial consequences of the environmental impact of development decisions. The Audit Office described both areas as a logical extension of existing financial and regulatory audit work.

Some SAIs are making environmental auditing a strategic priority—Setting environmental goals demonstrates to stakeholders the SAIs' commitment. Some SAIs have set their audit direction for the medium and long term. Direction provides focus for the future audits. Formal direction can enforce established themes such as transparency and accountability, while incorporating topics of significant public concern and government responsibility, such as environment, health, climate change, and sustainable development.

Build a specialized team of environmental auditors—Some SAIs have established environmental audit teams. In some cases, it is done in support the SAI's strategic priorities. In most cases, the team of environmental auditors helps to bridge gaps in environmental knowledge. Environmental audit teams can consist of professionals in auditing, accounting, legal, engineering, urban planning, biology, medicine, and economics among others.

Some SAIs are leading by example—SAIs note that as they become more involved in environmental auditing, they themselves must be seen to be demonstrating a commitment to the

principles of sustainable development. Some SAI's have examined their own policies and procedures. They have identified where to improve their own economic, environmental, and social performance.

Additional Resources:

- *2005 Audit Directions*, The Board of Audit and Inspection of Korea, January 2005
- *4th E Practice Guide—Integrating environmental considerations into performance audit work*, Office of the Auditor General of Canada, December 2005
- *Cross-portfolio Performance Audit of Green Office Procurement in Australian Government Agencies* (Australia), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Environmental Auditing in a Nutshell—The Role of the Icelandic National Audit Office in Environmental Auditing*, Icelandic National Audit Office, January 2004 http://rikisendurskodun.is/index.php?module=news&action=show&news_id=13&highlight=environmental%20auditing%20in%20a%20nutshell&language=en
- *Environmental Auditing and Regularity Auditing*, INTOSAI WGEA 2004
- *Guidance on Conducting Audits of Activities with an Environmental Perspective*, INTOSAI WGEA 2001
- *KENAO's Approach to Building and Managing Environmental Audit* (Kenya), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Sustainable Development and the Role of the New Zealand Office of the Controller and Auditor-General* (New Zealand), INTOSAI WGEA 8th Meeting Workshop Paper, 2003
- *A Sustainable Development Strategy for Office of the Auditor General 2003–2006*, Office of the Auditor General of Canada, 2002
- *The Role of SAI's in Environmental Governance: What can SAI's do? The Experience of the Turkish Court of Accounts and Some Suggestions* (Turkey), INTOSAI WGEA 11th Meeting Workshop Paper, 2007

FAQ 9: How can SAIs increase the impact of environmental audits?

Auditors need to know the beneficial impacts of their audits—At a broad level, audits provide assurance that public money is spent properly, and the intended results are achieved. Audits can also raise awareness of areas that government needs to improve. In addition, audits have an impact by contributing evidence and analysis to ongoing debates. Many environmental issues have strong links to health. Stating these links clearly in an audit can increase the impact. If there are health risks to a population, for instance, air quality to asthma, water quality to diarrhea and skin rashes, or toxic chemicals to cancer, these issues need to be raised in a clear and objective manner.

Increase impacts at every stage of the audit—Increasing the impact of an environmental audit begins with identifying the right topics to audit. Factors to consider can include: elected assembly interest, financial impact, risks to value for money, materiality, and timeliness.

Clearly communicate audit reports—An audit can be filled with meaningful findings and recommendations, but will only be useful if its message is communicated clearly and convincingly. SAIs take numerous measures to ensure that their audit results can be clearly understood:

- Communications analysts assist audit teams before and after drafting reports.
- A "Highlights" page at the beginning of each report, summarizes all key findings, main points, and recommendations.
- A "Background" section provides information regarding a complex or less familiar topic; also consider a glossary of technical terms where appropriate.
- Use graphics for each audit to enhance the report's message and readability, and therefore its potential for impact.
- Effective recommendations and findings will offer constructive solutions to government's future actions.
- A process that reviews risk-based reports helps to ensure that each audit undergoes the appropriate amount of review to ensure that its audit findings are supportable and convincingly presented.
- A government's comments on all audits help to ensure fairness and to ensure that possible problems with a report are identified before it is finalized.

Follow-up audits provide assurance that audit findings have been addressed—As with other forms of performance audit, SAIs should have a system in place to follow up on their recommendations and to record their impacts. This practice not only reminds audited agencies that their efforts are being tracked, it also helps the SAI to determine whether additional audit work is needed.

Reflect on lessons learned—There is always room for improvement in audits of environmental and sustainable development. In addition to learning from the SAI's own experience, exchanging experiences with other SAIs can also help share ideas and keep abreast of recent developments.

The impacts of environmental audits may often be difficult to measure for a number of reasons:

- **Auditors do not take action after an audit:** Auditors' mandated responsibilities are generally limited to providing audit results, while governments take the decision to act on the audit results.
- **Longer-term impacts:** Environmental impacts may not materialize for many years, or they may have an impact that lasts for several years. This can pose problems for calculation and monitoring.

- **Quantification:** It is difficult to attribute monetary values to environmental impacts; many natural resources will need some assessment of intrinsic value.
- **Inherent uncertainties:** There may be many inherent uncertainties as to what will happen in the future in government and in nature. Furthermore, it is difficult to prove what would happen if the audit had not taken place, or if appropriate changes were not made.

Audits are more readily accepted by government departments when they

- **add new knowledge about an area**: For example, audits may provide empirical data in a more thorough way than previous studies, or they may cast light on causal chains of which management have been unaware.
- **increase focus on an important, but possibly neglected area**: Attention to poorly functioning areas may be a source of embarrassment to a ministry. However, some ministries appreciate having an audit shed light on difficult areas. In any case, media coverage gives publicity to audits to attract public and political attention to the environmental area audited.
- **provide guidance on improved management by objectives and reporting**: Ministries and departments find the guidance provided by audits valuable when deficient management or reporting practices are discovered.

Audits may also have financial impacts—Some SAIs have set targets and are measuring the financial impacts of their audits. For example, the National Audit Office of UK has set a target of saving the taxpayer at least £8 for every £1 spent running the office. This financial impact is achieved when a department reduces resource use, increases revenue, or improves the efficiency of its activities.

Additional Resources:

- *A Performance Audit on Biodiversity—Some Lessons Learned* (Norway), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Are YOU Making an Impact? A Guide to Planning for, Measuring and Recording the Financial Impact of Audit Work* (UK), National Audit Office Publication
- *Impact of GAO's Environmental Audits: Seeking the Highest Return on the US Taxpayer's Dollar* (United States), INTOSAI WGEA 10th Meeting Workshop Paper, 2005
- *Sustainable Development: The Role of Supreme Audit Institutions*, INTOSAI WGEA Publication, 2004
- *The Impact of Environmental Audits in Norway – Lessons Learned* (Norway), INTOSAI WGEA 10th Meeting Workshop Paper, 2005

FAQ 10: How can SAIs and environmental non-governmental organizations work together?

Many non-governmental organizations have an environmental focus to their work, and it is quite common for SAIs to encounter them at different phases of an environmental audit.

Non-governmental organizations are recognized in the United Nations' *Agenda 21* as "partners for sustainable development." Chapter 27 of *Agenda 21* notes that non-governmental organizations "possess well-established and diverse experience, expertise, and capacity in fields. These will be of particular importance to the implementation and review of environmentally sound and socially responsible sustainable development, as envisaged throughout *Agenda 21*. The community of non-governmental organizations, therefore, offers a global network that should be tapped, enabled, and strengthened in support of efforts to achieve these common goals."

Consulting with environmental non-governmental organizations (ENGOs)—When planning the subject and/or approach of an environmental audit, ENGOs may be consulted in a number of capacities. For example, they may be able to assist a SAI in identifying high-risk environmental issues worthy of audit. Once an audit has been initiated, ENGOs can be a valuable source of information on a topic of which the SAI lacks knowledge and to gage public response to audit findings and recommendations. ENGOs may also be consulted during the course of an audit as stakeholders of the entity being audited.

ENGOs may draw on the work of SAIs—If a SAI has done audit work on an area of interest to an ENGO, it is not uncommon for the ENGO to use this work for its own purposes.

Sensitivities for SAIs—If research or information from an ENGO is being used as audit evidence, the same level of due care should be exercised, as is exercised with external experts. Auditors should consider the background of the ENGO, its experience, its objectivity, and the risk that this may be impaired. (See FAQ 4 on how to use external experts)

Additional Resources:

- *A Performance Audit on Biodiversity—Some Lessons Learned* (Norway), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Handling of Issues Related to Rape-seed and Bio-diesel Fuel by the Government* (Estonia), INTOSAI WGEA 11th Meeting Workshop Paper, 2007
- *Strengthening the Role of Non-Governmental Organizations: Partners for Sustainable Development*, *Agenda 21*, Chapter 27, UNCED 1992

Appendix 2—WGEA Resources for SAIs

All the documents referred to in this appendix are available at:
http://www.environmental-auditing.org

WGEA meetings and compendia themes

For the past several WGEA meetings, a call for papers has been issued to all SAIs prior to the meeting. From these papers, a compendium is compiled to facilitate information sharing. This list provides the themes of the papers for each year.

11th Meeting of the WGEA—Arusha, Tanzania (25 to 29 June 2007)

- Audits of Global and Regional Environmental Issues
- Audits of Domestic Environmental Issues
- Emerging Topics in Environmental Auditing
- Supreme Audit Institutions' Approaches to Building and Managing Environmental Auditing

10th Meeting of the WGEA—Moscow, Russian Federation (27 October to 1 November 2005)

- Auditing Biological Diversity
- Auditing Climate Change
- Increasing the Impact of Environmental Audits
- Environmental Auditing: Facing the Challenges

9th Meeting of the WGEA—Brasilia, Brazil (30 May to 2 June 2004)

- Environmental Auditing and Biological Diversity
- Concurrent, Joint or Co-ordinated Audits
- Environmental Audit and Regularity Auditing
- Environmental Auditing: Facing New Challenges
- Supreme Audit Institution Approaches to the World Summit on Sustainable Development

8th Meeting of the WGEA—Warsaw, Poland (24 to 27 June 2003)

- Environmental Audit and Regulatory Auditing
- Sustainable Development: The Role of Supreme Audit Institutions
- Water Issues, Policies, and the Role of Supreme Audit Institutions
- Towards Auditing Waste Management

WGEA studies and guidelines

- *Auditing Water Issues: Experiences of Supreme Audit Institutions* (2004)—English, French, German, Arabic
- *Auditing Biodiversity: Guidance for Supreme Audit Institutions* (2007)—English
- *Cooperation Between Supreme Audit Institutions: Tips and Examples for Cooperative Audits* (2007)—English

- *Environmental Audit & Regularity Auditing* (2004)—English, French, Spanish, German, Arabic
- *Evolution and Trends in Environmental Auditing* (2007)—English
- *Guidance on Conducting Audits of Activities with an Environmental Perspective* (2001)—English, French, Spanish, German, Arabic
- *How SAIs May Co-operate on the Audit of International Environmental Accords* (1998)—English, French, Spanish, German, Arabic
- *Sustainable Development: The Role of Supreme Audit Institutions* (2004)—English, French, Spanish, German, Arabic
- *Study on Natural Resource Accounting* (1998)—English, French, Spanish, German
- *The World Summit on Sustainable Development: An Audit Guide for Supreme Audit Institutions* (2007)—English
- *The Audit of International Environmental Accords* (2001)—English, Spanish
- *Towards Auditing Waste Management* (2004)—English, French, German, Arabic

Audits related to environment

Audits and audit summaries from SAIs are available on the WGEA website (in the section "Environmental Audits Worldwide"), listed by environmental issue and by country. Many are available only in their national language.

WGEA / IDI environmental auditing training program

In partnership with the INTOSAI Development Initiative, a two-week training course was created for SAIs. The course was designed by IDI training specialists, has a learner-centred participatory approach, and reflects regional needs. It includes a standardized design for course materials and detailed instructor manuals.

WGEA work plan summaries

2005–2007
Activities and projects focussed on providing guidance, facilitating information exchange and building relationships, and were organized under the following six goals:

1. To expand the number and breadth of environmental auditing tools available to SAIs.
2. To increase information exchange among SAIs and to expand their training in the techniques of environmental auditing.
3. To increase the number of concurrent, joint, or coordinated audits by SAIs.
4. To increase communication of WGEA activities.
5. To increase cooperation between the WGEA and other international organizations.
6. To explore the potential for external funding for the WGEA activities.

Biological diversity was the central theme.

2002–2004
Activities carried out included developing training materials and providing courses in environmental auditing, coordinating environmental audits with other Supreme Audit Institutions (SAIs) related to commitments under the World Summit on Sustainable Development, exchanging information with other SAIs, and preparing environmental auditing papers on such topics as water policy and waste management. Waste management was the central theme.

1999–2001
The “fresh water” theme, first adopted in 1995, continued to be a focus of the Working Group through this period. One of the key issues of this work plan was to emphasize cooperation with the INTOSAI regions in order to effectively cope with environmental issues that are transboundary in nature. Other activities included developing an inventory of international environmental accords and increasing the dissemination of information.

1996–1998
Two specific issues were addressed: audits or coordinated audits of international environmental accords and natural resource accounting. There was also a focus on institutional learning—facilitating the exchange of information and experience between audit institutions, and developing guidelines, methods, and techniques for environmental auditing. “Fresh water” was first chosen as a theme in an attempt to concentrate activities on an issue considered relevant for all countries in all stages of development.

Appendix 3—Contributing Countries

AFROSAI

South Africa*
Swaziland
Tanzania
Zambia
Zimbabwe*

ARABOSAI

Egypt
Iran
Kuwait
Yemen

ASOSAI

Bhutan
China*
India
Japan
Korea
Malaysia
Mongolia
Pakistan*
Philippines
Sri Lanka
Thailand

SPASAI

Australia*
New Zealand

EUROSAI

Austria
Bulgaria
Cyprus
Czech Republic
Denmark
Estonia
Hungary
Lithuania
Netherlands
Norway
Poland*
Slovak Republic
Slovenia
Sweden
Switzerland
Ukraine
United Kingdom*

OLACEFS

Bolivia
Brazil
Chile*
Costa Rica
Paraguay
Peru

OTHERS

Canada
Montserrat
United States*

* Subcommittee members

Appendix 4—Audits

The following list of audits was used in the development of the report. Some audits can be found at **http://www.environmental-auditing.org/intosai/wgea.nsf/viewAuditsIssue1**

Australia (Australian National Audit Office)

- The Administration of Major Programs (Australian Greenhouse Office (2004)
- Annual Reporting on Ecologically Sustainable Development (2002)
- Australian Maritime Authority: Is Australia Ready to Respond to a Major Oil Spill? (1996)
- Environmental management of commonwealth land: site contamination and pollution prevention (1996)

Austria (Austrian Court of Audit)

- Implementation of the Ramsar Convention in Upper Austria (2004)
- Nature Protection at Lake Neusiedl (2003)
- Implementation of the Ramsar Convention (2003)

Brazil (Brazilian Court of Audit)

- Government Actions to protect biodiversity (2005)
- Audit to Evaluate the Environmental Impacts of Water Works (2003)

Bulgaria (National Audit Office of Bulgaria)

- Municipal Solid Waste Management (2003)
- Municipal Waste Fee (2002)

Canada (Office of the Auditor General of Canada)

- *Report of the Commissioner of the Environment and Sustainable Development*. (2006)
    - Chapter 1 Managing the Federal Approach to Climate Change
- *Report of the Commissioner of the Environment and Sustainable Development*. (2005)
    - Chapter 2 Ecological Integrity in Canada's National Parks
    - Chapter 6 Green Procurement
- *Report of the Commissioner of the Environment and Sustainable Development*. (2004)
    - Chapter 4 Assessing the Environmental Impact of Policies, Plans, and Programs
- *Report of the Commissioner of the Environment and Sustainable Development*. (1998)
    - Chapter 3 Responding to climate change—Time to Rethink Canada's Implementation Strategy
    - Chapter 4 Canada's Biodiversity Clock Is Ticking

Chile (Controller General of Chile)

- Environmental Audit of Ramsar Agreement, El Yali National Reserve (2005)

Costa Rica (Controller General of Chile)

- Parque Internacional La Amistad. Contralorías de Costa Rica y Panamá. Informe binacional No. DFOE-AM-26/2003 (2003)

Cyprus (Audit Office of the Republic of Cyprus)

- Pollution from Ships at Sea and in Ports (2002)

Czech Republic (Supreme Audit Office of Czech Republic)

- The National Programme for a Preparation for Accession of the Czech Republic to the European Union in the Area of the Environment (2003)

Denmark (National Audit Office of Denmark)

- Joint Audit Report-Implementation of the Provisions of the Helsinki Convention (2005)
- Green Accounts and Environmental Management (2002)
- Surveillance of Oil Pollution at Sea (2001)

Estonia (National Audit Office of Estonia)

- Exploitation of peat resources (2005)
- Management of Sea Pollution Incidents and Recovery of Pollution (2004)
- Organization of Ship Waste Management in Ports (2004)

Greece (Court of Audit of Greece)

- MARPOL Audit Report Preventing and Dealing with Marine Pollution from Ships (2003)

Italy (Italian Corte dei conti)

- Prevention and Treatment of the Sea Pollution Caused by Oil Dumping from Ship (2003)

Japan (Board of Audit of Japan)

- Safety Fences Around the Parks Using the Forest Thinnings (2001)

Korea (Board of Audit and Inspection of Korea)

- Summary of the Audit Report: Status of Water Quality Management Around Major Four Rivers (2002)

Malta (National Audit Office of Malta)

- Preventing and Dealing with Pollution from Ships at Sea and in Ports (2003)

Netherlands (Netherlands Court of Audit)

- National ecological network (2006)
- Marine pollution from ships: Joint report based on national audits 2000–2003 (2006)
- Renewable Electricity (2004)

- Abatement of greenhouse gases (2003)
- Effectiveness of Energy Saving Policy in Greenhouse Horticulture (2002)
- Marine Pollution from Ships (2001)
- Compliance with international agreements on wetlands, parliamentary paper no. 26 490 (1999)

New Zealand (Office of the Controller and Auditor-General New Zealand)

- Ministry of Agriculture and Forestry: Managing Biosecurity Risks Associated with High-Risk Sea Containers (2006)
- Management of Biosecurity Risks—Case Studies (2002)

Norway (Office of the Auditor General of Norway)

- Survey of the Sustainable Use of Reindeer Grazing Resources in Finnmark County Document no. 3:12 (2003–2004)

Paraguay (Controller General of Paraguay)

- Special Audit of Environment Ministry to verify compliance with environmental and administrative standards and authorizations of wildlife use in 2001, 2002, and until August 15, 2003 (2004)
- Audit of Pilcomaya River (2003)

Poland (Supreme Chamber Control of Poland)

- Audit of the impact of economic activities in the environment of the Białowieża Forest (1995)

Romania (Court of Accounts of Romania)

- Report on Compliance by Romanian Government with Provisions of Convention on Cooperation and Sustainable Use of the Danube River (Sophia Convention) (2001) (2002)

South Africa (Office of the Auditor-General of South Africa)

- Report of the Auditor-General on a Sustainable Development Audit of the Handling, Storage, Disposal and Transportation of Medical Waste at the Department of Health of the Eastern Cape Provincial Administration (2005)
- Audits of Medical Waste. Conducted at Provinces such as: 1. Eastern Cape 2. Free State 3. Mpumalanga (2002)

Turkey (Turkish Court of Accounts)

- Preventing and Dealing with Pollution from Ships (2002)

United Kingdom (National Audit Office of United Kingdom)

- The UK Emissions Trading Scheme: A New Way to Combat Climate Change (2004)
- Dealing with Pollution from Ships (2002)

United States (Government Accountability Office)

- Agriculture Production: USDA's Preparation for Asian Soybean Rust, GAO-05-668R (2005)
- Alaska Native Villages: Most are Affected by Flood and Erosion, but Few Qualify for Federal Assistance, GAO-04-142 (2003)
- Federal Reports on Climate Change Funding Should Be Clearer and More Complete, GAO-05-461(2005)
- Climate Change Assessment: Administration Did Not Meet Reporting Deadline, GAO-05-338R (2005)
- Climate Change: Preliminary Observations on the Administration's February 2002 Climate Initiative, GAO-04-131T (2003)

Glossary

Agenda 21	The 1992 Earth Summit in Rio de Janeiro, Brazil, resulted in *Agenda 21*, an action plan adopted by 178 governments, to jointly address environment and development issues. This action plan promotes sustainable development and requires a substantial flow of new and additional financial resources to developing countries. *Agenda 21* is comprehensive, covering many aspects of the sustainable development field. See also Rio Declaration on Environment and Development, Earth Summit.
audit scope	The framework or limits, and subjects of the audit
audit objective	A precise statement of what the audit intends to accomplish and/or the question the audit will answer. This may include financial, regularity, or performance issues.
audit criteria	Audit criteria are benchmarks against which the subject matter can be assessed. Criteria are connected to audit objectives because, when applied, they can provide a basis for assessing how well the objectives are met.
Brundtland Commission	See World Commission on Environment and Development
compliance audit	With regard to environmental issues, compliance auditing may relate to providing assurance that government activities are conducted in accordance with relevant environmental laws, standards, and policies, both nationally and internationally. (See also regularity audit.)
comprehensive audit	A combination of two or more of financial, compliance, or performance type audit is often described as a comprehensive audit.
concurrent audit	An audit conducted more or less simultaneously by two or more SAIs, but with a separate audit team from each SAI reporting only to its own elected assembly or government, and reporting only the observations and/or conclusions pertaining to its own country.
Convention on Biological Diversity	The CBD was signed at the 1992 Earth Summit in Rio de Janeiro. Since ratification by 190 countries as of 2007, this convention obliges countries to protect plant and animal species through habitat preservation and other means.
coordinated audit	Any form of cooperation from joint to concurrent audits. This can be either a joint audit with separate reports, or a concurrent audit with a single, international audit report, in addition to separate national reports.

Earth Summit	Formally known as the UN Conference on the Environment and Development (UNCED), held in Rio de Janeiro in 1992. This conference was a major milestone in a global effort to deal with global environmental problems: 105 countries endorsed the Rio Declaration and adopted *Agenda 21*.
ecosystem	A dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit
environmental audit	It is an audit of an environmental subject, for example environmental policies or programs, environmental aspects of other government policies and public money related to environmental measures. Environmental auditing can encompass all types of audit: financial, compliance, and performance audits.
Environmental Impact Assessment	A method of analysis that attempts to predict the likely repercussions of a proposed major development on the social and physical environment of the surrounding area
Environmental Management System	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 an environmental policy
financial audit	An audit of financial statements allows the auditor to express an opinion on whether financial statements are prepared, in all material respects, in accordance with an identified financial reporting framework. (See also regularity audit.)
governance	The exercise of political, economic, and administrative authority in the management of a country's affairs at all levels. It is a neutral concept comprising the complex mechanisms, processes, relationships, and institutions through which citizens and groups articulate their interests, exercise their rights and obligations, and mediate their differences.
invasive species	Organisms that enter, through deliberate or inadvertent actions by humans, an ecosystem in which they are not naturally known to exist, and thereby pose a threat to native species. Invasive species are also known as alien or exotic species.
ISO 14001	A comprehensive set of standards for environmental management developed by the International Standards Organization, which cover environmental management systems, auditing, performance evaluation, labelling, life-cycle assessment, and product standards.
Johannesburg Plan of Implementation	The JPOI was agreed to, at the World Summit on Sustainable Development in 2002. It outlines actions to be taken in specific areas of sustainable development.
joint audit	An audit conducted by one audit team, which is composed of auditors from two or more SAIs, that prepares a single audit report for publishing in all participating countries.

Kyoto Protocol

The treaty resulting from the United Nations Framework Convention on Climate Change (UNFCCC), signed by 166 nations that committed themselves to prepare national programs to contain and reduce greenhouse gas emissions. The Kyoto Protocol shares UNFCCC's objective, principles, and institutions, but significantly strengthens the Convention by committing Annex I Parties to individual, legally-binding targets to limit or reduce their greenhouse gas emissions. The Annex adds up to a total cut in greenhouse-gas emissions of at least five percent from 1990 levels in the commitment period 2008–2012.

Millennium Ecosystem Assessment

The MA was a "multi-scale" assessment, consisting of interlinked assessments undertaken at local, watershed, national, regional, and global levels. It was carried out between 2001 and 2004 with the objective of using existing data to assess the consequences of ecosystem change for human well-being and to establish a scientific basis for action. The MA was coordinated by UNEP. The process was governed by a multi-stakeholder group of international institutions, government, business, NGOs, and indigenous peoples.

Millennium Development Goals

In September 2000, 191 countries adopted the United Nations Millennium Declaration, which led to the MDGs. The MDGs are a set of specific targets for poverty reduction, health, education, gender equality, environmental sustainability, and global partnerships to be reached by 2015. The eight goals are:

1. Eradicate extreme poverty and hunger.
2. Achieve universal primary education.
3. Promote gender equality and empower women.
4. Reduce child mortality.
5. Improve maternal health.
6. Combat HIV/AIDS, malaria, and other diseases.
7. Ensure environmental sustainability.
8. Develop a global partnership for development.

performance audit

An audit of the economy, efficiency, and effectiveness with which the audited entity uses its resources in carrying out its responsibilities.

public sector auditing

The provision of objective information, advice, and assurance that elected assemblies can draw on, in their scrutiny of government spending and performance. Elected representatives need this independent reporting, so they can effectively question or challenge the government on its actions.

regularity audit

This type of audit includes attestation of financial accountability of accountable entities, involving examination and evaluation of financial records and expression of opinions on financial statements; attestation of financial accountability of the government administration as a whole; audit of financial systems and transactions, including an evaluation of compliance with applicable statutes and regulations; audit of internal control and internal audit functions; audit of the probity and propriety of administrative decisions taken within the audited entity; and reporting of any other matters arising from or relating to the audit that the SAI considers should be disclosed.

Rio Declaration on Environment and Development	A set of 27 principles that 105 signing nations agreed to are pre-requisites for achieving sustainable development. It was adopted at the Earth Summit in 1992. The Rio Declaration states that the only way to have long-term economic progress is to link it with environmental protection. One of the key agreements adopted in Rio was the Convention on Biological Diversity. (See also *Agenda 21*.)
Strategic Environmental Assessment	A systematic, proactive process for evaluating the environmental consequences of policy, plan, or program proposals to ensure that they are fully considered and addressed at the earliest appropriate stage of decision making, and that they are addressed on a par with economic and social considerations.
sustainable development	Sustainable development is most commonly defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development encompasses intertwined social, environmental, and economic development; and emphasizes the need to simultaneously reduce poverty, and, maintain or improve the quality of natural resources. See also World Commission on Environment and Development.
triple bottom line	TBL refers to the equal consideration of social, environmental, and economic impacts.
United Nations Environment Programme	Established in 1972, UNEP is the branch of the United Nations responsible for environment and sustainable development.
United Nations Framework Convention on Climate Change	UNFCCC led to the Kyoto Protocol. It sets an ultimate objective of stabilizing greenhouse gas emissions "at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system."
World Commission on Environment and Development	The WCED was commissioned by the UN and chaired by the then Prime Minister of Norway, Gro Harlem Brundtland. The WCED released a seminal report on sustainable development in 1987, entitled *Our Common Future*. The document established a definition of sustainable development, still in wide use today, as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”
World Summit on Sustainable Development	The WSSD, otherwise known as Rio+10 was an international summit held in 2002. This summit was the most significant global event of its kind since the Rio Earth Summit 10 years before. The purpose of the WSSD was to review progress in implementing the outcomes of *Agenda 21* and to reinvigorate global commitments to sustainable development. The WSSD produced a comprehensive Johannesburg Plan of Implementation, which reaffirmed *Agenda 21* and affirmed the Millennium Development Goals.

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