How to Increase the Quality and Impact of Environmental Audits
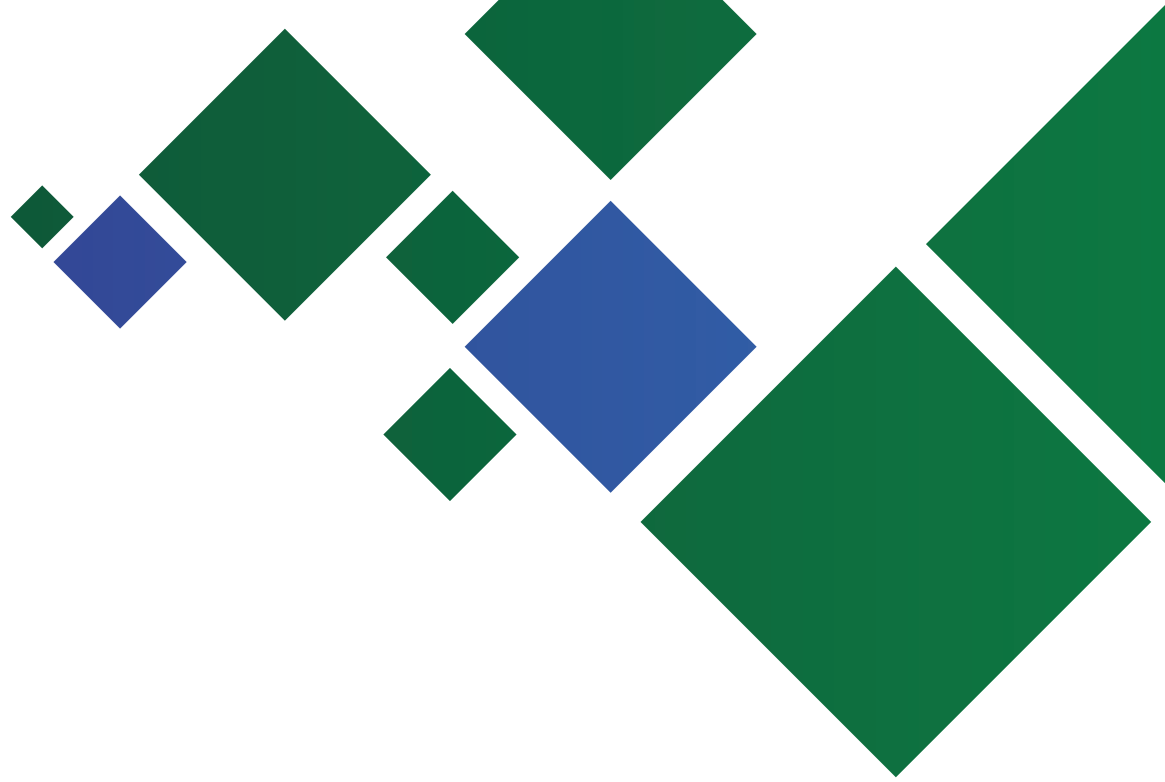
INTOSAI
Working Group
on Environmental
Auditing

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How to Increase the Quality and Impact of Environmental Audits

The Audit Board of The Republic of Indonesia

How to Increase the Quality and Impact of Environmental Audits

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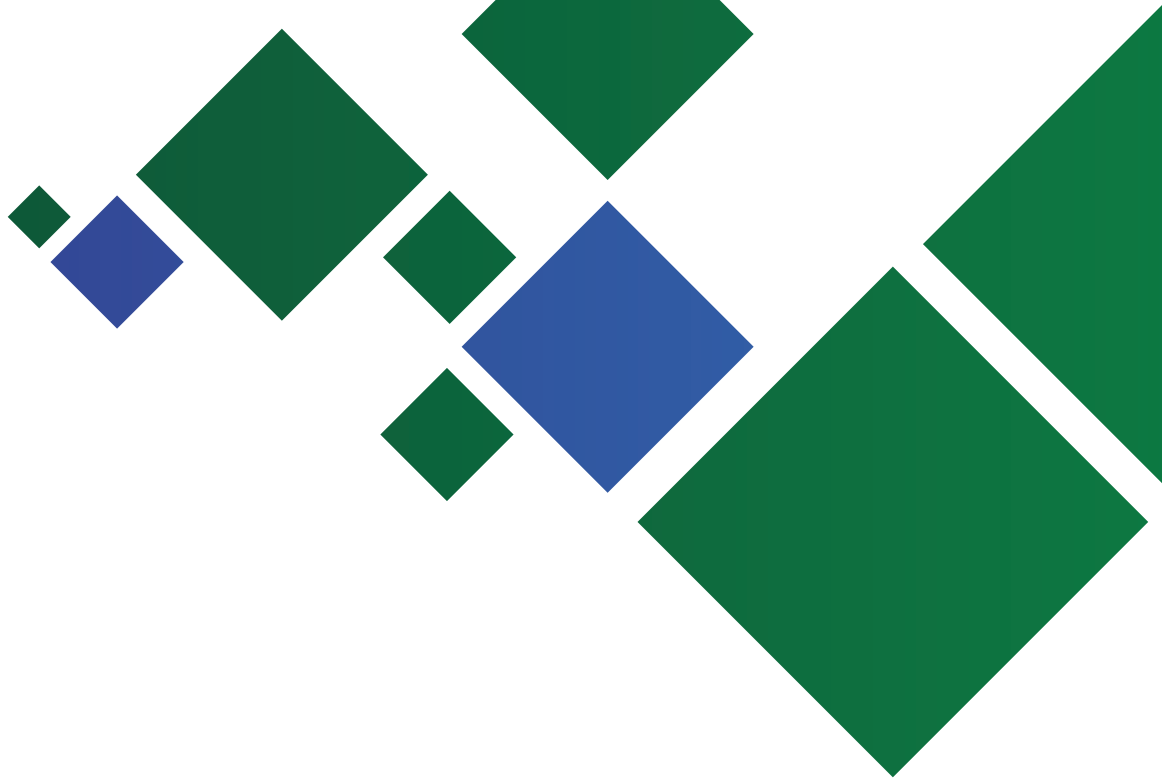
This publication was prepared by the INTOSAI Working Group on Environmental Auditing (WGEA). The WGEA aims to improve the use of audit mandate and audit instruments in the field of environmental protection policies, by both members of the Working Group and non-member Supreme Audit Institutions (SAIs). The WGEA has the mandate to

- Assists supreme audit institutions (SAIs) in acquiring a better understanding of the specific issues involved in environmental auditing;

- Facilitates exchange of information and experience among SAIs; and

- Publishes guidelines and other informative material for their use.

Foreword

In June 2013, during the 15th INTOSAI WGEA Assembly in Tallinn Estonia, the research topic on "How to improve the quality and impact of environmental audits" was introduced as one of the research projects to be undertaken during the 2014-2016 period of the work plan. The countries that volunteered to undertake the research were Lesotho as a project leader, and Cameroon as a project co-leader. While Indonesia, Ecuador, Botswana, Burkina Faso, Chad, Estonia, Egypt, Ethiopia, Iran and Ivory Coast serve as research project members.

In a context of continuous environmental degradation, Supreme Audit Institutions (SAIs) have been executing environmental audits for decades. The objective of these audits is to help at ascertaining the implementation of environmental goals and objectives, including those enshrined in multilateral environmental agreements as well as national enactments. Audit reports have continuously been delivered in this regard and recommendations have been made to address environmental issues, with mitigated results the world over.

As the SAIs are strengthening their capacities and conducting more environmental audits, there is a need to identify and share means of improving the quality and to give these activities a significant impact. This paper focuses on **how the quality and impact of the conducted environmental audit may be increased**. Specifically the paper aims at referring the environmental audit on performance audit perspective and methodology used, results of the audit, success stories and lessons learned. It suggests that it is possible to increase the impact of environmental performance audits and to improve environmental quality through careful audit topic selection, planning, execution, reporting, and communication.

This document was led by the SAIs of Lesotho and Cameroon. In particular, we would like to thank the following authors for their hard and excellent work in preparing the document: Mrs.'Manako Ramonate and Mrs.'Mamahooana Leisanyane, from the SAI of Lesotho as well as Mr. Celestin Ankamtsene Mbgoa, Mr. Francois Bekemen Moukoko and Mr.Valentine Onya, from the SAI of Cameroon.
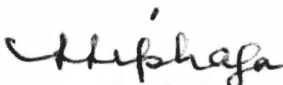
This work was done with the special help of the Canadian Comprehensive Auditing Foundation (FCVI-CCAF), whose experts have provided significant advice. We are particularly grateful to the following: Mr. John Reed, Vice President, Performance Audit, Canadian Comprehensive Auditing Foundation (CCAF-FCVI Inc.) and Mr. Jean Cinq-Mars, Commissioner of Sustainable Development at the Office of the Auditor General of Québec.

We would also like to acknowledge the contributions made by the SAIs of Botswana, Estonia, Ethiopia, Indonesia, Norway, Thailand, Tanzania and Uganda to this project. Special thanks to the INTOSAI WGEA Steering Committee and the Secretariat for their valuable inputs and support in various stages of the project.

We hope you will find this research paper useful

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Abbreviations & Acronyms

INTOSAI	International Organisation of Supreme Audit Institutions
SAI	Supreme Audit Institution
WGEA	Working group on Environmental Auditing
CCAF- FCVI	Canadian Comprehensive Auditing Foundation
GIS	Geographic Information System
UNEP	United Nations Environment Programme
OECD	Organisation for Economic Co-operation and Development
ISSAI	International Standards for Supreme Audit Institutions
ISA	International Standards on Auditing
DPSIR	Drivers-Pressure-State-Impacts-Responses
FTA	Fault Tree Analysis
CBC	Capacity Building Committee
AFROSAI	African Organisation of Supreme Audit Institution
EUROSAI	European Organisation of Supreme Audit Institutions
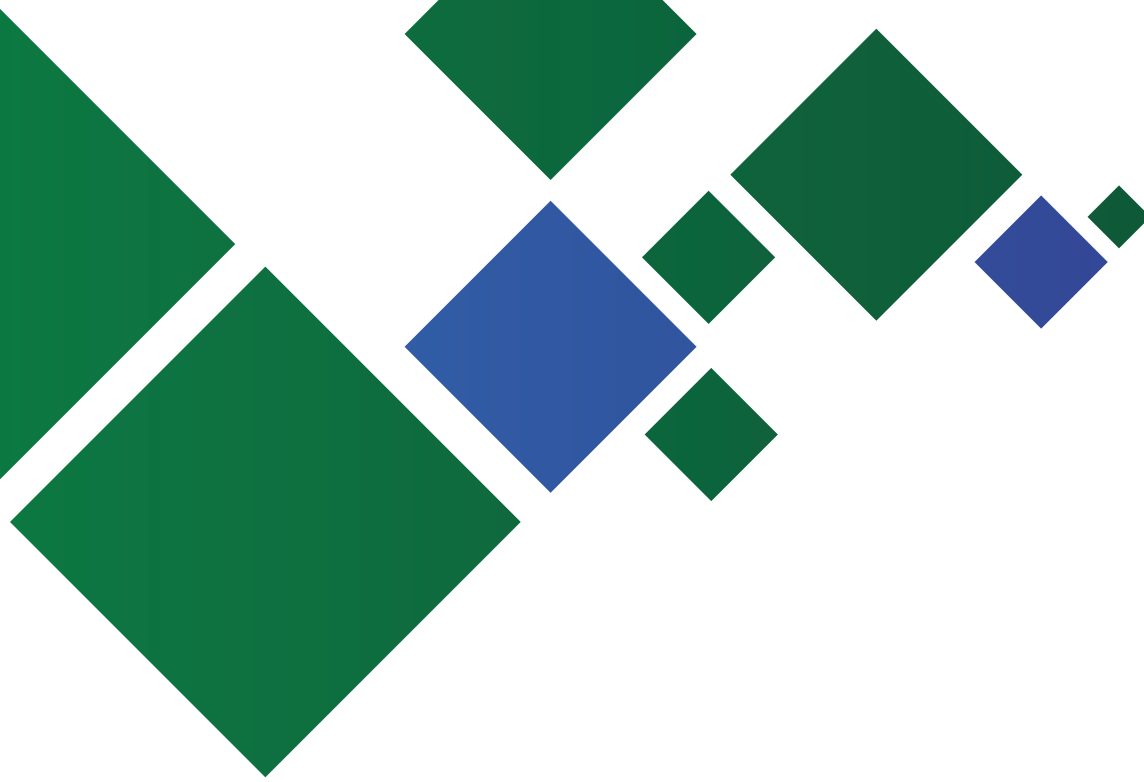
PACs	Public Accounts Committees
UN	United Nations
ACT	Australian Capital Territory
ESA	Emergency Services Agency
DOM	Department of Mines
DGM	Department of Geology and Mines
BKK	Suvamabhumi Airport in Bangkok, Thailand
BMA	Bangkok Metropolitan Administration
OAG	Office of the Auditor General
SCBA	Social Cost Benefit Analysis
NEMA	National Environment Management Agency
WCA	Waste Consolidation Areas
TANROADS	Tanzania National Roads Agency
PMO-DMD	Prime Minister's Office-Disaster Management Department
MRS	Manyara Regional Secretariat

Executive Summary

As the world is presently and increasingly experiencing environmental mutations that unfortunately have negative consequences on men and animals living, Supreme Audit Institutions (SAIs) are gradually getting involved in activities that are meant to redress and reverse the present trends and threats on the environment. SAIs engagement through environmental audits is wide spreading in every continent.

As environmental audits are now being regularly conducted, SAIs are facing the challenge of bringing about change. Such impact can be achieved when quality is attached to auditing. Therefore, as other types of audits, increasing the quality and impact of environmental audits is becoming a major concern for SAIs.

Inspired by a Canadian discussion paper, the present research project document presents tips and information on how SAIs world-wide can overcome the challenges relating to conducting high quality environmental audits that can also a have significant impact. It provides information on how SAIs tackle issues pertaining to their quest for quality and performance in the entire audit process, which are developed in chapters on the planning, audit execution, reporting and audit follow-up phases.
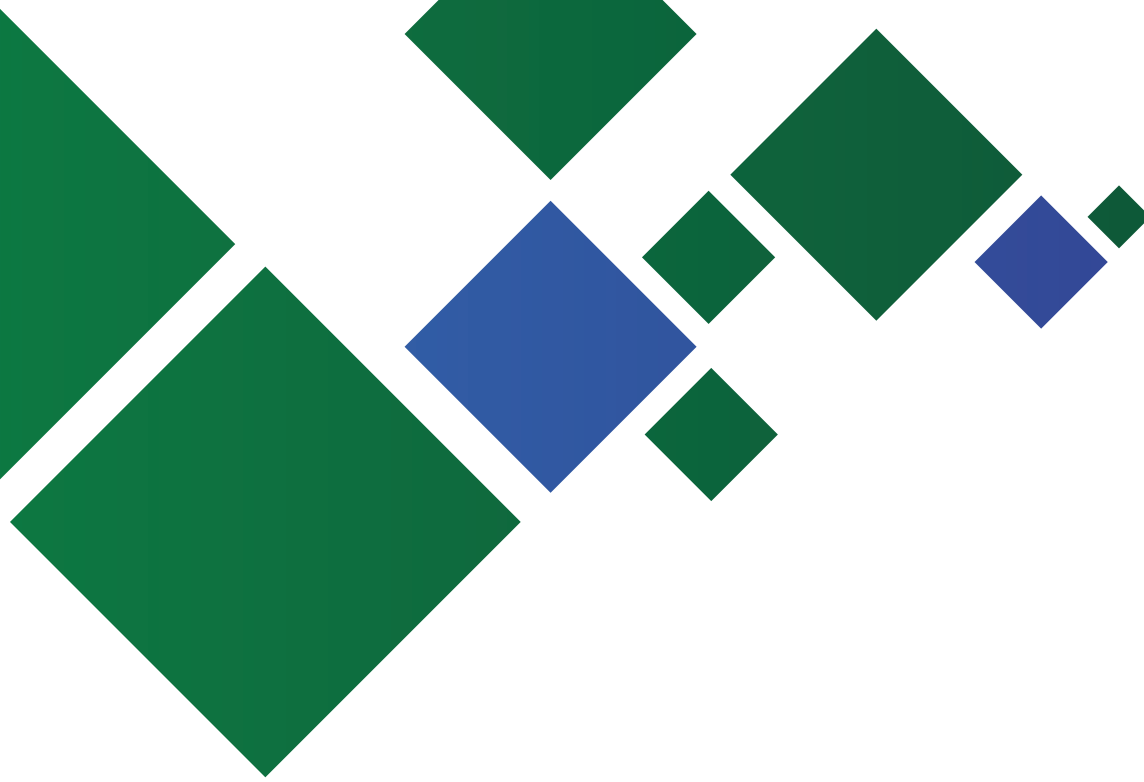
While not being a guidance document, this research paper wishes to provide some insight on good practices, standards and activities developed by SAIs that have resulted in increasing the quality and impact of their performance environmental audits. The document therefore, includes case studies of audits that have had a significant impact and bringing about change and assist Governments to protect the environment from adverse environmental impacts and promote sustainable development for current and future generations.

The Research Project was undertaken through research on the internet and especially going through documents already available on the INTOSAI WGEA website. A mini-survey was also administered through the INTOSAI WGEA Secretariat and a total of 53 SAIs around the world provided very useful information.

Chapter 1
Introduction

1.1 IMPORTANCE OF ENVIRONMENTAL AUDITS

According to P. Gisbert[1], "Environment is anything immediately surrounding an object and exerting a direct influence on it." It refers to those surroundings that surrounds living beings from all sides and affect their lives in total. It consists of atmosphere, hydrosphere, lithosphere and biosphere. Its chief components are soil, water, air, organisms and solar energy. With the ever increasing development by modern man, large scale degradation of natural resources have occurred. People have to be educated about the fact that if we are degrading our environment, we are actually harming ourselves. To encourage meaningful public participation and environment, it is necessary to create awareness about environment pollution and related adverse effects. The United Nations Conference on Environment and Development held in Rio-de-Janeiro, followed by Earth Summit on Sustainable Development have highlighted the key issues of global environmental concern and have attracted the general public towards the deteriorating environment. Governments have an obligation to make their entire population environmentally educated and create environmental awareness on:

- Improving the quality of environment.

- Creating an awareness among people on environmental problems and conservation.

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1   Yourarticlelibrary.com/environment/meaning-definition

- Creating such an atmosphere as people find themselves fit enough to participate in decision making process of environmental development programmes[2].

Supreme Audit Institutions (SAIs) have also responded and continually worked to keep pace with the increased amount and increased complexities in environmental governance; thus, taking seriously auditing of environmental activities and programmes.

The term "**environmental auditing**" is used in the context of the independent external audit. Environmental auditing therefore refers to an independent and objective oriented examination of whether the practice complies with expected standards. Environmental audit means a check on some aspects of environmental management, and implies some kind of testing and verification. SAIs 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 being financial, compliance or performance audits. For SAIs, environmental auditing is used in the context of the independent, external, public sector audit. From a scholar's perspective[3], it is a process of environmental assessment and review, involving analyzes, tests and confirmations to verify to what extent an entity, as a whole or certain structure components, comply with legal environment. Sought and used to making decisions as well as to enable public accountability in the environmental domain, environmental audits consist of a systematic, documented and regularly measure the organization, management, infrastructure and environmental equipment safety requirements or environmental protection standards.

Therefore, 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. As emphasized by the INTOSAI Working Group on Environmental Auditing (WGEA) in its document on *Evolutions and Trends in Environmental Auditing*[4]; 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 (2007).

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2   Newagepublishers.com/samplechapter/001773.pdf
3   LadarCalin in Environmental audit, concept and significance, Annals of the University of Oradea in Romania, 2013, p. 617.
4   INTOSAI WGEA (2007), "Evolution and Trends in Environmental Auditing", http://www. environmental-auditing.org

Table 1: **Different Descriptions of Environmental Audit**

Control activities related to environment	Contents	Objectives	Positioning
Environmental management audit	Assessment of any organization's operations compared with audit criteria such as regulations or management practices, which work to benefit the environment	To provide information about the organization's operational status compared to management's expectations of environmental performance. Reveal what specific measures are required to address this shortcoming.	Internal to the organization
Product certification	A verified and registered process that communicates transparent and comparable information about the life-cycle environmental impact of products re	To have a certification document	Independent
Environmental impact assessment	Process of assessing the likely environmental impacts of a proposal and identifying options to minimize environmental damage of project and policies.	To inform decision makers of the likely impacts of a proposal before a decision is made. To provide an opportunity to identify key issues and stakeholders early in the life of a proposal so that potentially adverse impacts can be addressed before final approval decisions are made.	Independent

Governments have a responsibility 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 International Environmental Agreements (IEAs) at home.

SAIs can play a major role in overseeing that their government's public policy tools will produce their intended results. SAI audits help to improve government's management of environmental issues and in the long run improve social prosperity and economic development in a country. Globally, the United Nations Environment Programme (UNEP) recognizes that environmental audits, such as those conducted by national audit offices, can and do play a crucial and vital role in the implementation of environmental goals and objectives, including those enshrined in multilateral environmental agreements.

While environmental audits are designed to identify environmental problems, SAI's objective is to audit the government's or public sector's responses to such problems. SAI has understood the main biological resources in the country and the threats to those resources. It needs to be understood that what the government is doing is to mitigate or prevent problems related to these resources (what programs exist and which policy tools are used) and who is responsible. Through public audit, assurance is provided to the stakeholders as to whether government's programs relating to environment are being implemented in an efficient and effective manner with due regard to economy, efficiency and effectiveness.

Environmental Challenges

At the beginning of the 21st century, there is no doubt that the natural systems on which all life depends are severely impacted by human activities. During the past decade, these systems have borne the stresses imposed by increasing demands and activities of growing economies combined with a world population of over six billion that are exceeding the productive and regenerative capacity of these systems. In such context, UNEP's Global Environment Outlook 2005 (GEO-5 Report)[5] identified population growth and economic development as the two major drivers of environmental challenges and changes for the world, with particular facets such as:

- migration and human settlement;

- energy needs in quantity and quality;

- increasing needs for materials;

- transport needs;

- change in values and beliefs;

- technology level.

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5 Global Environmental Outlook (GEO5), United Nations Environmental Program (UNEP), 2012, Chapter 1.

Similarly, the Organisation for Economic Co-operation and Development (OECD) in its Environmental Outlook to 2030 (2008), has identified a number of key global challenges, including:

- climate change (for example, global greenhouse gas emissions);

- biodiversity and renewable natural resources (for example, ecosystem quality, species loss, tropical forests, and ecosystem fragmentation);

- water (for example, water scarcity and groundwater quality);

- air quality (for example, urban air quality); and

- waste and hazardous chemicals (for example, hazardous waste management and transportation, and chemicals in the environment and in products)

- marine environment (for example, ocean acidification and the rise in sea levels, etc.)

There are important environmental concerns: from a loss of fisheries, to contaminated drinking water, from the impacts of climate change to urban smog, from threatened aquifers to invasive species, communities and ecosystems. The following graphic gives an overview of these environmental challenges and their consequences for the planet.

Figure 1:   Environmental Challenges and Their Consequences
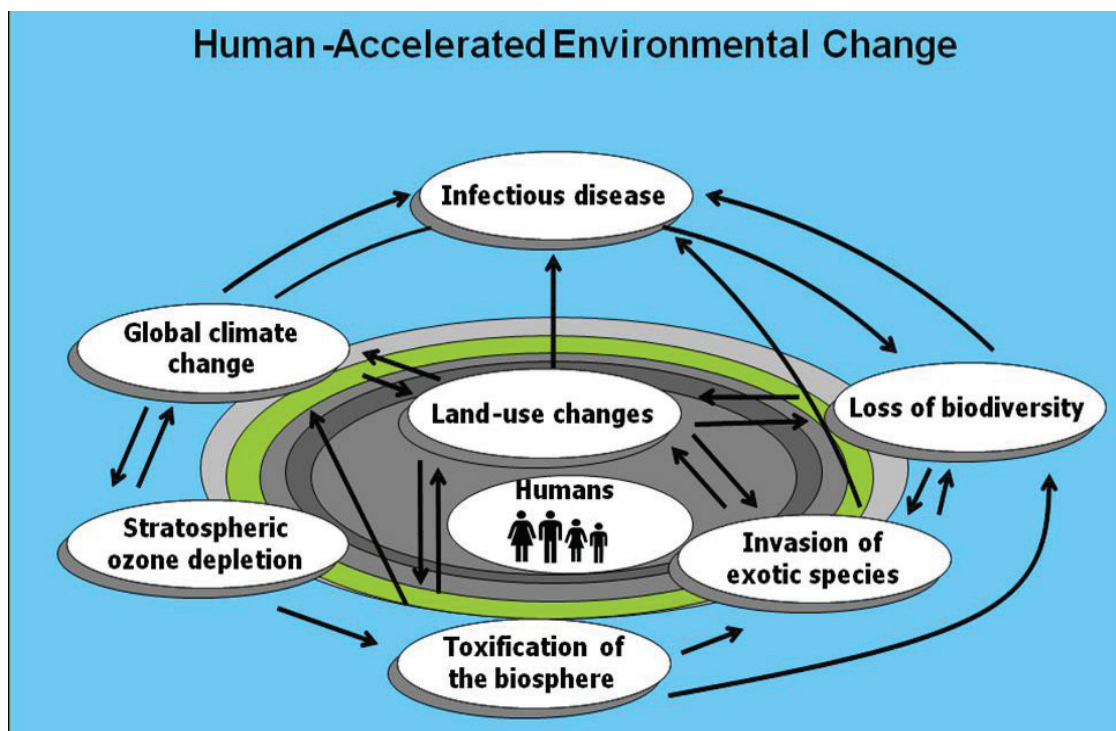
Source: Likens, 2003

Benefits for the Environment and for Governments

SAIs are driven by a common goal: to ensure that they improve on their audit activities and that their audit findings have an impact. They have been working towards realizing audits that significantly improved a specific environmental situation and audits whose results improved government processes and public policy tools more generally. Therefore, as stated in one of its discussion papers[6], "*a system of governance, the process of making decisions and determining whether or not to implement them, is required in managing all national and international environmental programmes. Good governance, characterized by aspects such as the transparency of institutions and processes, accountability, and the efficient and effective use of public resources, is essential to ensuring that promises on environmental protection and sustainable development produce credible results. It is a key requirement for an effective institutional framework for sustainable development…*"

A review of environmental audits by SAIs (Evolutions and Trends, 2007)[7] shows that their audit findings have been linked to the following positive environmental results:

- improved water quality of rivers and watersheds.

- action taken to protect against invasive species.

- increased protection for plants, animals, and ecosystems.

- improved management of natural resources.

- decreased environmental degradation from construction.

- decreased environmental pollution.

- reduced desertification of land.

6   Improving National Performance: Environmental Auditing Supports Better Governance and Management, Contribution of the INTOSAI WGEA to the United Nations Conference on Sustainable Development, INTOSAI WGEA, June 2012, http://www.environmental-auditing.org
7   INTOSAI WGEA (2007), "Evolution and Trends in Environmental Auditing", http://www.environmental-auditing.org

1.2 HAVING A POSITIVE EFFECT ON THE QUALITY AND IMPACT OF AUDITS

The process of performance auditing is, in some respects, relatively straightforward. What is more difficult, but possible, is to bring about a change, to have an impact, and to add a value. Moreover, the credibility and effectiveness of SAIs is highly influenced by the extent an SAI can establish and maintain a high level of quality in its audit products. Indeed, in some ways the arguments for achieving excellence are more compelling for SAIs than for other institutions because of the nature of their work: judging the actions of others. The reputation of SAIs is based on the quality of their outputs. Therefore, achieving quality in auditing appears to be a must for every SAI in order to accomplish its central mission of improving accountability and performance in the state sector.

Framework for Quality Environmental Audits

INTOSAI has an important influence on the culture within SAIs and the values, ethics and attitudes of audit managers and other members of the engagement team. INTOSAI has issued International Standards that SAIs need to adhere to in order to ensure quality audit is undertaken.

Quality refers to the standard of something as measured against other things of a similar kind; the degree of excellence of something; or a distinctive attribute or characteristic possessed by someone or something. This perception is derived from an implied idea that regulations and standards prescribe the norms of basic principles and practices needed. Environmental auditing does not depart from this perspective.

Indeed, environmental and performance auditing Standards (ISSAI 300, 3000, 3100 and 5110 to 5140) prescribe the norms of principles and practices, which the environmental auditors are expected to follow in the conduct of audits. They provide minimum guidance to the auditors that helps determine the extent of auditing steps and procedures that should be applied in the audit, and constitute the criteria or yardstick against which the quality of audit results are evaluated. Therefore, auditing standards provide the framework for performing high quality audit. Compliance with these standards is expected to ensure that a high quality of audit is performed for achieving the audit objectives and the overall mission and perception of the entire SAI activities.

In order to ensure quality audits, auditors are expected to:

- exhibit appropriate values, ethics and attitudes;

- have sufficient knowledge, skills, and experiences; and

- have sufficient times allocated to perform the audit work.

These are called inputs factors. Within these inputs factors, quality attributes are further organized between those that apply directly at the audit engagement level, individual SAI level and to all SAIs as good practices.

At the engagement level, the engagement team is required to recognize that the audit is performed in the wider public interest; and the importance of complying with ethical requirements. They are also required to exhibit objectivity and integrity, independence, professional competence, due care, and professional scepticism. The SAI's culture has an important influence on the values, ethics and attitudes of top management and other members of the engagement team. Key attributes in relation to creating a culture where audit quality is valued are:

- governance arrangements aim to safeguard the SAI's independence;

- necessary personal characteristics are promoted through appraisal and reward systems supporting audit quality;

- SAI emphasizes the importance of providing staff with continuing professional development opportunities and access to high-quality technical support; and

- SAIs promote a culture of consultation on difficult issues.

Quality audits involve auditors applying a rigorous audit process and quality control procedures that comply with laws, regulations and applicable standards. These are process factors. The quality audit depends on the methodology used in conducting the audit, the quality of the people forming an audit team and the knowledge of the subject matter. Audit methodology that complies with professional standards, adopts best practices, and reflects key principles of quality assurance and quality control enhance the value and help to bring about improvements.

To apply audit methodology as intended and complete audits in a timely manner requires strong audit teams, consisting of the right people with the right skills for each project. The most effective performance auditors usually possess a combination of key skills, particularly professional judgment, critical thinking, creativity and innovation, and the ability to lead and supervise, and to manage relationships and communications, both internally and externally. Different stakeholders receive different outputs from an audit. These outputs are likely to be evaluated in terms of their usefulness and timeliness, and be seen as aspects of audit quality. As such, in discussing the work of a SAI, the term "quality" will involve several attributes, inter-alia:

- *Significance* – How important is the matter that was examined in the audit?

- *Reliability*– Are the audit findings and conclusions an accurate reflection of actual environmental conditions with respect to the matter being examined? Are all assertions in the audit report or other products fully supported by accurate and

reliable data gathered in the audit? Is all material evidence that was gathered in the audit properly reflected in the opinion or findings and conclusions?

- *Objectivity* – Was the audit carried out in an objective and fair manner, without favour or prejudice?

- *Scope* – Did the audit task plan properly address all elements needed for a successful audit of the program/activity/entity? Did execution of the audit satisfactorily complete all the needed elements of the task plan?

- *Timeliness* – Were the audit results delivered at an appropriate time, that is meeting a legal or statutory deadline, or delivering audit results when they are needed for a policy decision or when they will be most useful in correcting management weaknesses?

- *Clarity* – Was the audit report clear, concise and understandable in presenting the results of the audit? Can the scope, findings and any recommendations be readily understood by busy executives and parliamentarians who may not be experts in the matters that are addressed but may need to act in response to the report?

- *Efficiency* – Were the resources assigned to the audit reasonable in light of the significance and complexity of the audit?

- *Effectiveness* – Did the findings, conclusions and recommendations get an appropriate response from the auditees, the government and/or parliament?

The benefits accrued from the improved quality of environmental audit is that, SAIs will be responsive to changing environments and emerging risks and also communicating effectively with stakeholders. A quality environmental audit will effectively provide an indication to an institution's management about how the environmental organization system and equipment are performing hence safeguard the environment. The objective of safeguarding the environment and arresting its degradation cannot be achieved in isolation, and without the whole -hearted and close cooperation of the entire world community. This means that SAIs should continuously:

- adhere to professional standards of approach and evidence;

- achieve their objectives in the most efficient and effective way; and

- be seen as a well-run organisation, operating to the highest administrative and financial management standards.

Quality is rarely achieved spontaneously but needs to be managed into the organization, with the aim of seeking continuous improvement. Specific procedures are usually put in place and applied at all levels using a quality management system based on appropriate objectives, principles and strategy. The ultimate responsibility for establishing and ensuring the running of the quality management system within an organisation lies with its leadership. Most of the time, this system covers all aspects of SAI activities, taking into account both the professional work of the SAI (i.e. auditing), and its administration or governance.

How to Increase the Impact of Environmental Audits

There is no single answer as to what does "impact" mean in performance auditing. Different actors and stakeholders (legislators, departmental officials, media, non-governmental organizations, lobbyists, the public, and so on) will have different perspectives on this question. Some will focus on short-term issues, others on long-term effects; some on local consequences, others on national questions. While perspectives vary, environmental auditors usually think about audit impact in terms of improved program management, which tends to happen within a year or two, and in terms of improved environmental quality, which usually takes place over many years. Following are potential examples for both.

Table 2: Examples of the Types of Impact that Can Result from

Environmental Performance Audits

Improved Program Management (output)	Improved Environmental Quality (outcome)
Reduced risks and better mitigation measures	Reduced emission levels, cleaner effluents, reduction of waste production
Increased oversight, better governance, clearer roles and responsibilities	More sustainable usage of natural resources (for example, water, energy, fish stocks)
Improved compliance with laws and regulations	Improved ecosystem health, increased biodiversity, better control of invasive species
Savings and increased program efficiency	Recovery of endangered species

Beyond improving program management and environmental quality, environmental audits can also have a positive impact by raising the profile of an environmental issue. Audits can achieve this through sharing independent information, stimulating public debates, and prompting legislators, the media, and other key stakeholders to pay more attention to a specific environmental issue.

Having an impact is not something that can be taken for granted. It requires, among other elements, careful planning, professional judgment, innovation, consideration of government priorities, and good communications. Numerous factors will influence the impact that auditors will have with their reports. Some of these are under the control of audit offices, like the choice of audit topics, the publishing dates, and the nature of recommendations. Other factors are not, such as the interest of the media and parliamentarians in a given topic, the will of audited entities to make changes, and the competing news stories occurring on publishing dates. Generally, a high impact in performance auditing will bring about:

- cost savings and efficiencies ;

- improved service delivery ;

- better compliance ;

- improved governance and oversight ;

- reduced risk ;

- knowledge sharing ;

- public, media and legislative attention.

Over and above, if it is an environmental audit, a high impact will also be seen in:

- increased quality of the environment, biodiversity and health of ecosystems, short and/or long term;

- reduced emissions, effluents, waste ;

- reduced usage of limited resources e.g water and energy.

To have an impact, auditors therefore must select the right issues to audit, prepare a report that addresses the main questions convincingly, and communicate their conclusions effectively—all of which require a sound knowledge of the subject matter. For environmental auditors, this generally means having a good understanding of current environmental issues and of relevant environmental laws, regulations, policies, standards, and international agreements (such as those involving climate change, protection of endangered species, and waste management). It may also involve consulting advisors and specialists who have related experience with the audit topic.

Auditors also 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: parliament, civil society and the public interest, financial, economic and social 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; it also considers a glossary of technical terms where appropriate.

- Graphics are used 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 does not only remind audited agencies that their efforts are being tracked, it also helps the SAI 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.
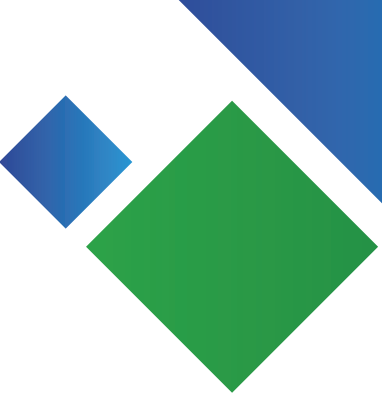
Audits are more readily accepted by government departments when they:

- **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.

Quality and impact are linked, in the sense that credibility is the foundation for the reliability of all what is written in the report. The survey carried out by the development team revealed the following responses from SAIs as some innovative measures they have used to ensure impact of audit reports:

- Liaise closely with Parliament.

- Audits address key public interests.

- Focus recommendations on significant matters.

- Discuss preliminary findings with auditees, relevant stakeholders and government.

- Produce objective report.

- Improved audit planning.

- Use Audit Logic Matrix.

- Use Root Cause Analysis.

- Engaging with stakeholders and external specialists and academics.

- Use mass media.

- Establish Environmental Audit Unit.

- Vast distribution of reports.

- Develop web-based surveys.

- Follow-up all reports.

- Develop audit guidelines.

- Continuous capacity building through training, workshops, conferences etc.

- Enhance supervision.

- Issue special reports.

- Put electronic reports on SAI website.

- Provide articles regarding audit reports to media.

- Provide articles to academic forums.

- Ensure high financial impact.

- Choose manageable topics.

- Easy to read reports.

- Agree on criteria with auditees before starting of the audit.

- Conduct more audits addressing public concerns.

- Insert visual elements to communicate results in a more attractive way.

- Use social media.

- Cooperative audits.

- Liaise with Civil Society Organisations (CSOs) for citizens' participation.

- Use Fact Sheet.

- Influence plan.

Chapter 2
The Foundations of a Successful Environmental Performance Audit

Performance and environmental audits are diverse and focus on a wide variety of topics. One audit will focus on a single question in a single departmental program, while another will look at several complex issues in a number of programs managed by many departments. Some audits focus on economy or effectiveness, while others focus on efficiency. Many audits are about compliance with policies, laws, and regulations while others focus on the management systems and controls that support such compliance. Most look at results. While environmental performance audits deal with a specialized subject matter, they also fall in the categories listed above, according to their focus and scope. Whatever the audits' form, extent, or focus, the success of all performance audits rest on the same necessary foundations: a solid methodology; qualified people, and a sound knowledge of the subject matter.

2.1 SOLID METHODOLOGY

Methodology is the major foundation of the quality of the audit. As such, Audit Offices recognize the importance of solid methodology. Indeed, methodology that complies with professional standards, adopts best practices, and reflects key principles of quality assurance and quality control will enhance the capacity of auditors to add value and to bring about changes through their audits. The audit methodologies used by SAIs are mostly based on the auditing standards of the International Organisation of Supreme Audit

Institutions (INTOSAI), the ISSAIs. Some SAIs have been applying the methodology of the International Standard on Auditing (ISA). Others, for instance SAI of Canada, are applying specific domestic standards. The audit methodologies used in Canadian legislative Audit Offices are based on the Chartered Professional Accountant Canada (formerly Canadian Institute of Chartered Accountants) auditing and assurance standards.

To be more effective, SAIs usually ensure that their respective State audit legislation is in line with the Lima Declaration of Auditing Precepts and other INTOSAI Auditing Standards applicable to environmental or performance auditing. Where cases of inconsistencies exist, SAIs should encourage the undertaking of the necessary legislative amendments by parliament or other relevant authorities. This requirement is helpful to enable that SAIs should only carry out audits for which they have legal authority. Many SAIs have even gone further in applying manuals and guidance materials based on the applicable standards. These documents give precise indications on how to plan, execute, report or follow up audits.

2.2 QUALIFIED PERSONNEL

To apply audit methodology as intended and complete audits in a timely manner, strong audit teams are required. These teams must consist of the right people with the right skills for each particular project. The most effective performance auditors usually possess a combination of key skills that they apply during all phases of an audit, particularly:

- professional judgment;

- critical thinking;

- creativity and innovation;

- ability to lead and supervise, and

- ability to manage relationships and communications, both internally and externally (with departments and agencies).

For many SAIs, persons with suitable qualifications, skills, competence and aptitude for audit work are being recruited according to their needs. SAIs that are applying such measures have also set up professional recruitment procedures to ensure that the right staff are engaged. But for most of the SAIs, having a qualified staff for environmental audits comes as a result of in-SAI (both formal and on-the-job) training or out-sourced training, regular benchmarking through study tours to other SAIs, regular cooperation with specialized organizations, or even networking with other experienced environmental auditors.

Whatever the chosen solution, SAIs have to be careful about ensuring that:

- their auditors have skills developed to enable them to perform their duties effectively and to develop professionally throughout their careers;

- acquired abilities and experience bring about the possibility for their auditors to advance within the audit organisation, in line with standing SAI procedures;

- a sufficient number of people, with the appropriate skills and competence, are assigned to an audit;

- gaps in skills and competence are identified in order to rightfully plan for specific audits, including possible use of external experts.

All these practices work together to increase the quality of environmental audits, by increasing auditors' abilities to conduct successful audits. SAIs that responded to the survey mentioned the following initiatives they had used or believed to be able to enhance auditor's capabilities to carry out environmental audits:

- Training through workshops, seminars, conferences etc.

- Subscribing to reputable environmental websites and journals. Also self-training through browsing the mass media, internet, articles, books etc.

- Knowledge-sharing and benchmarking with other SAIs.

- INTOSAI WGEA guidance materials.

- Joint audits and internships.

- Collaboration with local environmental organizations and other stakeholders.

- Recruiting staff with relevant professional expertise.

- Having a unit solely dedicated to environmental auditing.

- Use of experts.

2.3 SOUND KNOWLEDGE OF THE SUBJECT MATTER

Finally, to achieve success, to have an impact and quality, auditors must select the right issues to audit, prepare a report that addresses the main questions convincingly, and communicate their conclusions in an effective manner – all of which require a sound knowledge of the subject matter. For environmental auditors, this generally means having a good understanding of current environmental issues and of relevant environmental laws, regulations, policies, standards, and international agreements (such as climate change, the ozone layer, protection of

endangered species, fisheries management, chemicals, and waste management). It includes strengthening of the SAIs' internal processes of knowledge building and ensuring the availability of in-house environmental related news, audit information and data collecting tools.

For many SAIs this is done through increasing activity in the environmental domain or in environmental auditing; promoting regular research activities on environmental concerns in the country; setting a special unit in charge of collecting and providing regular updated information to staff on various environmental issues; organizing regular discussions activities where scholars and environmental researchers are invited or involved. As almost all SAIs expressed it, regional Working groups on environmental auditing currently play a significant role in promoting networking as well as knowledge, information and experience sharing among SAIs. Increasing cooperative audits appear to be adding value activities, challenging experiences, very effective knowledge transfer opportunities and useful good practices dissemination tools in environmental matter, both for auditors and the SAIs involved.

Sound knowledge of the subject matter may also involve getting the support of advisors and specialists that have related background and experience with the topic being audited. In this perspective, SAIs have various practices. As a good number of SAIs are experiencing, regular contacts with experts and scholars are meaningful in building auditors' awareness or sensitivity towards major environmental matters. These SAIs are currently experiencing knowledge exchange activities with Public Universities, Research Institutes and SAIs that have developed best practices. Such contacts have been very useful in helping some SAIs conduct prospective studies meant to determine the extent of their knowledge and staff needs.

Chapter 3
Planning Phase

3.1 TOPIC SELECTION: CHOOSE TOPICS THAT PEOPLE CONNECT WITH

All performance audits start by selecting a topic. This is the most important decision in the process and it is often the most difficult task. Choosing the right topic is one of the main determinants of the quality and impact that an audit office can have through its reports. Selecting good topics for performance audits generally requires a sound knowledge of the subject matter, a thorough risk analysis, lots of discussions among team members and with subject matter experts as well as stakeholders, and a large dose of professional judgment.

Beyond these fundamental elements, auditors can increase the possibility of producing high-impact and high-quality environmental audits by choosing topics that legislators and the public care about. Individuals need to be able to connect with the audit topic easily. A topic can be chosen based on several factors, such as the economic or social importance and impact of environmental issues on the nation or selected communities. It is suggested to choose topics and support case studies that people can connect with. Topics that do not address why the reader should care are unlikely to make for a high-impact or high-quality audit.

In line with this requirement, it is a good practice for many environmental auditors to pay close attention to the interests of the Parliament and also matters that are raised on the media. Some SAIs even invite stakeholders to discuss issues of concern with respect to the domain under review.   This enables the audit team to gain a better understanding of the issues at stake and consequently, be able to choose a relevant topic, to design and scope the audit, and to maximize its added-value. Another practice is organizing a meeting with government representatives, environmental organizations, media and other interested parties. In the discussion, the auditors manage to identify some issues aimed at the audit topic. Some SAIs have added the urgency of the issues and the financial added value of the audit to other elements leading to the choice of a topic.

Choosing 'local' issues can be a good way to connect with people. Selecting topics based on issues people are facing in the nearby will provide interests from members of parliaments and other representatives as well as increase people and media's attention to audit findings. Issues like "drinking water supply, polluted rivers, smog and air pollution, garbage dumps", can show up locally. It is up to SAIs to identify the major local issues that can focus general attention. An old expression in the environmental area that says: 'Think globally. Act Locally", may apply here with much effectiveness. From the experience shared by the SAI of India, the following people and stakeholders might be usefully consulted when choosing people-centric topics. They are governments, citizens, monitoring agencies, regulatory agencies, implementation agencies, citizens groups, civil society organizations, etc.

In the 6th and 7th INTOSAI WGEA Surveys on Environmental Auditing, SAIs gave indications about topics or domain they had considered as being the most suitable for audits to be carried out. The following graphs present what were SAIs' views with regards to the choice of the most relevant topics.

Figure 2: Most Relevant Environmental Audit Topics

What does your SAI consider to be the five most important environmental issues facing your country?

(deliberated average of responses, all responses to questions being 100%)
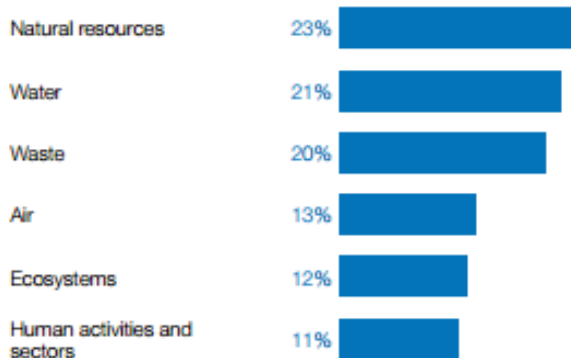
Natural resources	23%
Water	21%
Waste	20%
Air	13%
Ecosystems	12%
Human activities and sectors	11%

What does your SAI consider to be the five most important environmental issues facing your country?
(% reflects proportion of SAIs that marked issue as being among five most important, n=112)

Drinking water - quality and supply	38%
Municipal, solid and non-hazardous waste	31%
Forestry and timber	30%
Minerals, such as mining, gas and oil	26%
Climate change mitigation	24%
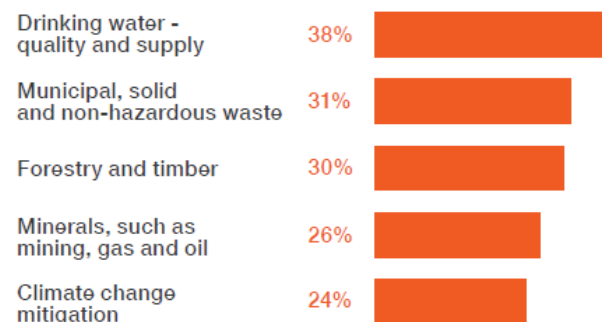
Source: 6th Survey on Environmental Auditing, INTOSAI WGEA, 2009.

Following are some practical examples of topics that SAIs have chosen to audit that are directly related to the issues above:

- Bushfire preparedness – SAI of Australia

- Management of sand and gravel mining operations – SAI of Botswana

- Leasing of Government and Government Reserved Forests Land – SAI of Bhutan

- Mitigating climate change – SAI of Canada

- Air Quality Control Measures – SAI of Thailand

- Water Pollution Management – SAI of Indonesia

Some SAIs, at times, turn to external experts to provide more in-depth analysis at specific and complicated topics related to audit. But caution should be exercised in turning to experts' advice, as there are positive and less beneficial results from this practice. But after learning from mistakes and making sure that auditors keep on conducting audit activities on the basis of professional standards and judgment, it can be undoubtedly a promising practice.

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 Parliamentarians. They 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. 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.

Therefore, for quality purposes, these innovative practices should be linked to the standardized risk analysis tools prescribed by professional audit standards. This serves to ensure that the area selected for auditing is manageable yet topical and provide for early communication of audit criteria to the auditees, suitable for a better understanding of the audit objective and scope, as well as share criteria, while being assured of the public interest on the topic.

3.2 AUDIT OBJECTIVES: FOCUS ON RESULTS

Government decision-making processes, management systems, and internal controls are important, in the long run, for achieving environmental results. And yet, these systems do not usually matter that people really care about or connect with. Environmental audits that focus (partially or exclusively) on tangible outcomes and results achieved are more likely to attract attention than audits that focus solely on systems and procedures. This could include the extent to which governments have solved existing environmental problems. By including one or more sections on results in their audits, audit teams can more easily link their work to environmental quality and the concerns or citizens. This will facilitate communicating audit findings to parliamentarians, the media and the public.

For many SAIs in developing countries, performance audit is of greater interest to the Legislature as it addresses the question of value received. Therefore, the audit practice is bringing greater accountability when it focuses on results, less on systems. And since the report of the auditor is intended for the governing bodies of the audited entities, he has to encourage these entities' managements to work with him in order to develop objectives that will be meaningful to the governing body, thus preparing the way for high impact. In addition, that is also why the auditor usually has to confirm with management the suitability of the criteria relative to the objectives, reducing risks of none or less relevance.

In the 7th Survey on Environmental Auditing, published in 2012, SAIs identified audit objectives that they have often been using since 2012. These objectives are indicated in the graph below.

Figure 3: Relevant Audit Objectives

Please rate the potential objectives of environmental audits listed below according to how they have been used by your SAI since 1 January 2009 in the following way:
3 – objective always considered;
2 – objective often considered;
1 – objective rarely considered;
0 – objective not considered.
(avarage rating, n=112)

Objective	Rating
Compliance with domestic environmental legislation	2.6
Compliance with domestic environmental policies	2.5
Compliance with international environmental agreements and treaties	2.2
Performance of government environmetal policies	2.2
Performance of government environmental programs	2.2
Fair presentation of financial statements and expenditures	1.7
Environmental impacts of non-environmental government programs	1.2
Evaluation of environmental impacts of proposed environmental policies and programs	1.2

Some practical examples of audit objectives developed by SAIs that deal with compliance with applicable laws and regulations and also performance compliant with set standards are given below:

- *The objective of this performance audit was to provide an independent opinion to the Legislative Assembly on the effectiveness of the Australian Capital Territory (ACT) Government's approach to bushfire preparedness.* **Australia**

- *To determine mechanisms employed to curb detrimental mining methods and ensure that sand and gravel mining operations were appropriately managed for sustainable use of the resources.* **Botswana**

- *To determine whether Environment Canada, working with others, is tracking, assessing, and reporting on funding under Canada's fast-start financing initiative and the results achieved, including reductions in greenhouse gas emissions.* **Canada**

- *The primary objective of the audit is the assessment of the effectiveness of the watershed management to maintain the water quality to meet the water standards. **Indonesia***

3.3 CRITERIA: GO BEYOND COMPLIANCE

For all auditors, one of the main challenges in performance auditing is to select appropriate criteria to assess an entity's performance in relation to the audit objective(s). Performance indicators, serving a measurement of effectiveness, efficiency and economy, are usually prescribed by law or in the official governmental policy. As such, they are mandatory on the entity and easily accessible to the auditor. But government environmental regulations are often based on minimum requirements. So, when auditors use minimum requirements as audit criteria, they are tacitly promoting minimum measures and are unlikely to bring about positive changes.

In contrast, high-impact audits are those that:

- use best practices as expectations against which to assess programs and departments;

- compare the performance of audited entities with similar organizations in other jurisdictions, and,

- expect to observe constant improvements over time.

Therefore, auditors are advised to go beyond compliance, when looking for criteria. Generally accepted standards issued by a recognized body and codes of professional practice might be very useful. Sometimes, SAIs decide to use standards developed within the framework of the International Organisation for Standardization (ISO), as is the case for Brazil. This SAI even suggested the use of best practices from the private sector to develop criteria when there seems to be a vacuum in the public sector. Auditors can also improve their audit plans and have clues for their audit objectives and criteria by consulting with internal or external subject matter experts. By doing so, audit teams can identify more relevant criteria or simply gain assurance that they have selected the right audit objective(s) and criteria for their audit. As said before, these experts also provide additional sources of experience to rely on in cases where the auditor's environmental background is not strong enough.

In addition, SAIs may sometimes take the auditee's opinion on the audit criteria before starting. This practice evades the possibility of using inappropriate and inapplicable criteria or criteria that are based on biases. It also minimizes certain risks in undertaking environment audit. Examples of such audits are as follows:

- In an audit issued in 2015 on Regulation and Monitoring of Environmental Impact Assessments, the SAI of Uganda noted that although National Environment Management Authority

(NEMA) sometimes completed reviews in time, the general opinion of both upstream and downstream stakeholders was that the reviews took too long. In order to assess whether these concerns were reasonable, SAI Uganda compared the stipulated review times in Uganda with those of neighbouring countries of Rwanda and Kenya. They found out that the review time for EIAs in Uganda were three times longer than the time stipulated in Rwanda and twice that in Kenya.

▪ On the same audit, the national Environment Act gave complete discretionary powers to NEMA Board to decide what to utilise EIA fees for. This posed a risk of EIA fees being allocated to other purposes rather than the review and monitoring of EIAs submitted. SAI Uganda then compared this with other countries' legislations. Their findings revealed NEMA only used 8% of the fees for EIA purposes. They also found out that in Ghana, EIA fees contributed to the monitoring of projects following approval and the regulatory body is required to commit at least 25% of the fees to cater for processing and monitoring of approved projects. In Norway and South Africa, the fees were exclusively used for review, verification and approval of the EIAs.

3.4 TIMING: EXPLOIT "PIVOT POINTS" IN ISSUE LIFE CYCLE

Regarding timing, it can be very productive for auditors to exploit "pivot points" in the issue's life cycle. Indeed, environmental performance auditors can take advantage of the fact that many environmental issues operate on long-term cycles that include a number of key moments when decisions need to be taken that will influence future actions and events, which are called "pivot points".

Auditors can identify pivot points and attempt to time the conduct and reporting of an audit so that it influences the decisions that will be taken, such as before formal "meetings of parties" to consider international issues like climate change and ozone protection. Other pivot points can be the periodic review of key environmental legislation and the end of the first phase of a departmental program. It is also better to audit a potential risk area before it becomes a major disaster, such as assessing the preparedness to respond to an oil spill at sea before a large spill actually occurs. Samples of SAI audits that considered the right timing of audits are as following:

▪ The report by the SAI of Norway whereby they investigated the Ministry of Climate and Environment and the Ministry of Transport and Communications' efforts to ensure good air

quality in urban areas. This report was published shortly after Norway was convicted by the EFTA Court[8] for surpassing the limits of nitrogen dioxide (NO_2), particulate matter (PM10) and sulphur dioxide (SO_2) in urban areas; and not having established adequate air quality plans. Air quality was also frequently subject to debate at the time of the publication of the report.

- The SAI of Uganda carried out an audit to assess efforts of National Environment Management Authority (NEMA) in securing effective and environmentally sound mechanisms for handling drilling waste in the Albertine Region. The audit was undertaken at the time NEMA was reviewing waste management legislation and had directed that all drilling waste be contained in Waste Consolidation Areas (WCAs), since they had not yet decided on the best way to dispose the waste. The audit report attracted so much media attention, that both NEMA and the oil companies made significant efforts to implement the audit recommendations, with major improvements in the management of waste.

3.5 SCOPE: CONSIDER LINKAGES

When setting the scope of the audit, environmental auditors are advised to consider linkages. Auditors should consider doing multiple audits on one topic in one year or over a period of years. Many environmental issues have various dimensions and are interconnected. So, multiple audits on a single large topic like climate change or biodiversity may be a sound approach if the intent is to increase an issue's profile and provide comprehensive coverage, which is more likely to foster debates and bring about comprehensive solutions than a narrowly focused audit.

Auditors should also consider linkages to sustainable development and its three aspects (economy, environment, and society); if these can be demonstrated concretely, the resulting audit reports will appeal to a broader public and won't be easily dismissed as supporting impractical, one-sided visions. When such linkages are rightfully made, auditors are likely to make their SAIs achieve one of the major goals of environmental auditing, that is helping the government to formulate legislations, policies, or programs; evaluate capacity, improve the function of policies and programs as well as generate indicators, system and reporting.

Another type of linkage to consider involves understanding the connections between different policies and economic sectors. For example, in some communities, the absence of potable drinking

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8   http://www.eftacourt.int/uploads/tx_nvcases/7_15_judgement.pdf

water is not related to a lack of water infrastructure, but rather to a lack of electrical energy to run the infrastructure. Tools such as policy mapping and understanding cycles and systems can help to shed light on such linkages. Some SAIs have carried out such audits as in the following examples:

- The report by the SAI of Norway whereby they investigated the Ministry of Climate and Environment and the Ministry of Transport and Communications' efforts to ensure good air quality in urban areas. The report did not encompass environmental policies, but also transport policy instruments. The findings show that methods for pricing air quality and environmentally-friendly means of transport, concept and feasibility studies largely fail to capture the impacts on air quality. In the report, the SAI recommends that the authorities review the division of tasks and responsibilities between relevant sectors and levels of government with a view to more efficient use of policies and goal achievement.

- The SAI of Uganda carried out an audit on the Environmental Management Activities of the National Environment Management Authority (NEMA) in 2013. They did a general overview of EIAs, only considering the timeliness of the review and approval process for EIAs, collection of EIA fees, and submission of Environmental Audit reports by developers after approval. They later on noticed performance gaps in this area and decided to conduct a detailed audit, specifically focusing on Regulation and Monitoring of EIAs, hence another audit on Regulation and Monitoring of Environmental Impact Assessments by NEMA that was published in 2015. The audit focused on the Petroleum Sector given the high potential environmental risks posed by the sector. Though the audit looked at many of the same areas as in the previous audit, the level of analysis was much more detailed, comparing performance in the upstream versus the downstream. It also included questions on whether all developers conduct EIAs and Environmental Audits as required, the quality of EIAs and Environmental Audits, Feedback to developers following monitoring, and Regulation of the Certified Environmental Practitioners to promote quality. By so doing, the SAI was better able to identify the root causes of weaknesses in regulation and monitoring of EIAs, and make more specific recommendations to improve performance. While the audit only covered the Petroleum Sector, implementing the recommendations will improve overall management of the EIA review, approval and monitoring process even in other sectors.

3.6 FOCUS: TACKLE THE DRIVERS OF DEGRADATION

When determining the focus, performance auditors can tackle the drivers of environmental degradation. To achieve this, the *Drivers Pressures State Impacts Responses (DPSIR)* analytical framework can be a useful tool to increase the impact of environmental audits by tackling the underlying forces behind environmental degradation and impacts on people. The DPSIR framework has been used for decades as a means to understand the causes and effects of environmental problems. It encompasses the elements as described below.

- **Drivers**: Drivers are the overarching socio-economic forces that exert pressures on the state of the environment. Population growth, globalization, economic development, energy use, and transport are seen as particularly significant environmental drivers.

  A good example could be an audit on Air Quality Control Measures by the SAI of Thailand that was driven by air pollution as a result of rapid growth in number of motor vehicles on the roads.

- **Pressures**: Drivers in turn produce "pressures" on the environment, essentially stresses resulting from human activity. These include land use change, resource extraction, use of external inputs such as chemical fertilizers, emissions of pollutants and wastes, and the movement of organisms.

  For an example, the audit on Water Pollution Management by the SAI of Indonesia was a result of the development of large cities through which the Brantas river flows, resulting in increased demand for clean water and raw water. The high concentration of population and industry in urban areas raised issues such as the emergence of slums on the banks of the river. The river water quality and flood caused by disruption of the flow of water, either because of the waste, as well as reduction of the width of the river silting

- **State**: Pressures in turn affect, usually negatively, the condition or "state" of the environment, which consequently impacts human well-being and ecosystems. For example, pressures can lead to ozone depletion, climate change, pollution, and loss of biodiversity.

  The audit on Management of sand and gravel mining operations by the SAI of Botswana was driven by the fact that the Department of Mines was unable to assist all companies and individuals in getting mining licenses and mineral permits for it due to this resource constraint. This situation led the individuals and companies to illegally mine sand which led to serious damage, in some cases irreparable damage to the environment.

▪ **Impacts:** The "impacts" ultimately lead to government interventions, or responses.

In an audit on Bushfire Preparedness, the SAI of Australia wanted to assess the Australian Capital Territory Government's approach to managing bushfire hazards, its work to support the community's preparedness and its progress in developing its capacities since the January, 2003 bushfires.
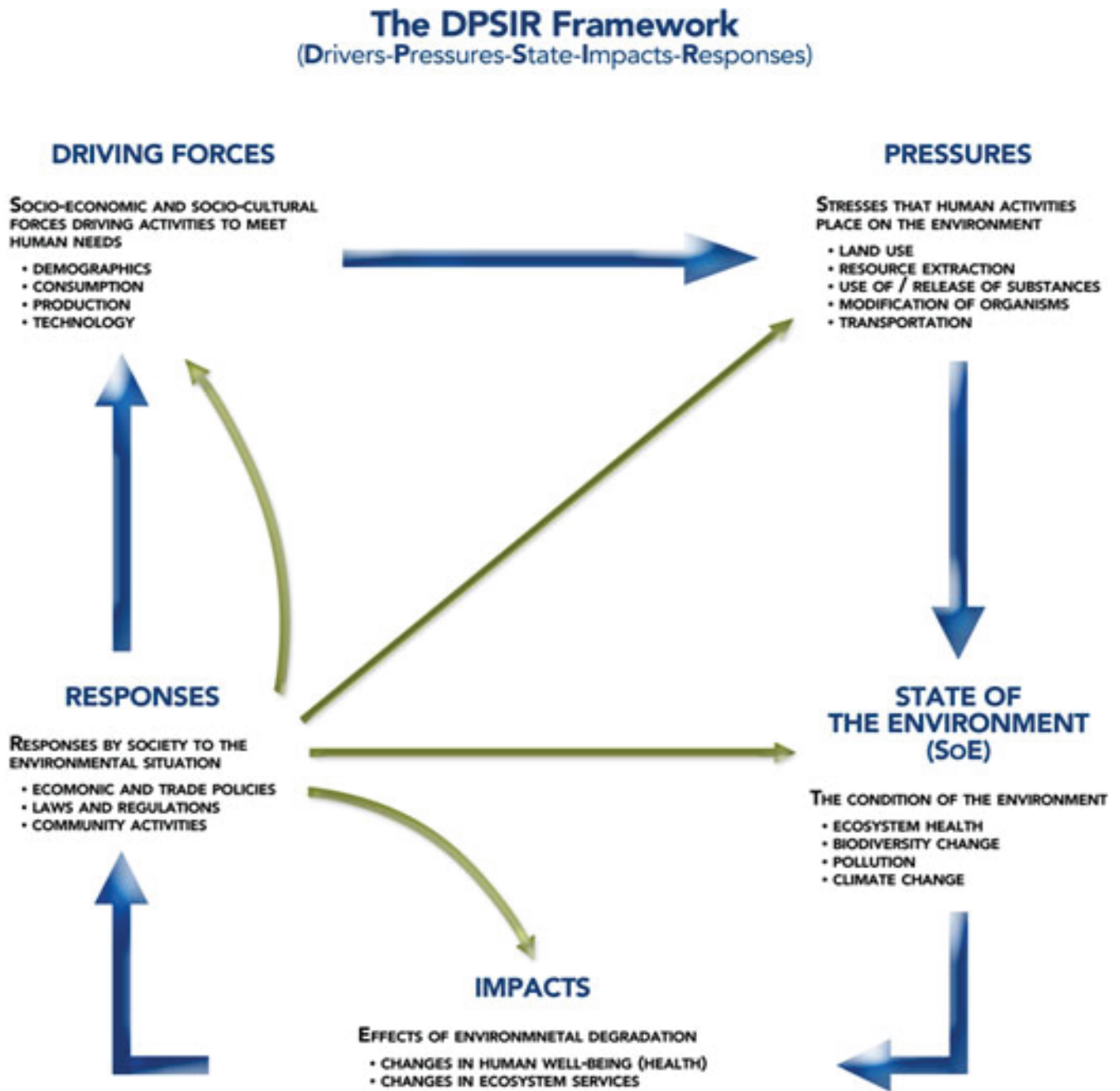
▪ **Responses:** Auditors need to understand how the government has responded to a given environmental issue by identifying, for example, what international treaties have been signed; what policies, laws, and regulations have been enacted; and what controls and processes have been put in place. Auditors typically use these as a starting point for developing audit objectives and criteria and for auditing results achieved.

For example, the audit on Mitigating Climate Change by the SAI of Canada was seeking to determine whether Environment Canada, working with others, has made satisfactory progress in addressing four key issues from the SAI's 2012 audit. They wanted to know whether:

- the federal government has put in place emission reduction measures, following good practices for regulatory development;

- the federal measures currently in place have been assessed in terms of their success;

- Environment Canada has mechanisms for working with the provinces and territories to reduce emissions; and

- the Department has an implementation plan that describes how federal departments and agencies will contribute to achieving Canada's emission reduction target.

The DPSIR framework can enhance both the quality and impact of audits, as it helps environmental auditors to understand and diagnose what is happening to the environment and why; what the consequences are; and what measures the government has put in place. More importantly, using the framework may help focus the audit on the measures taken by government to address the drivers and pressures that cause the degradation in the first place, not just on the measures to deal with the degradation. For example, an audit of drinking water quality could focus on the measures in place to treat and distribute safe drinking water and on the measures to prevent water supplies from being contaminated. The graphic below presents the DPSIR framework.

Figure 4:   The DPSIR Framework

The DPSIR Framework
(**D**rivers-**P**ressures-**S**tate-**I**mpacts-**R**esponses)

DRIVING FORCES

Socio-economic and socio-cultural forces driving activities to meet human needs

- Demographics
- Consumption
- Production
- Technology

PRESSURES

Stresses that human activities place on the environment

- Land use
- Resource extraction
- Use of / release of substances
- Modification of organisms
- Transportation

RESPONSES

Responses by society to the environmental situation

- Ecomonic and trade policies
- Laws and regulations
- Community activities

STATE OF THE ENVIRONMENT (SoE)

The condition of the environment

- Ecosystem health
- Biodiversity change
- Pollution
- Climate change

IMPACTS

Effects of environmnetal degradation

- Changes in human well-being (health)
- Changes in ecosystem services

3.7 WORKING WITH OTHERS: CONDUCT COLLABORATIVE AUDITS AND LEARN FROM OTHERS

Environmental issues often cross borders. By collaborating with audit offices in other jurisdictions and releasing joint reports or separate reports around the same time, auditors can multiply their impact, raise the profile of an issue, and bring about new collaborative initiatives between concerned administrations to tackle common environmental problems. In addition, cooperative audits set an opportunity for SAIs to exchange information, train each other, build capacity, and also compare audit findings and results with other countries. Such benchmarking can be very effective in enriching the quality of the report and making it more powerful. As it is known, benchmarking is particularly useful for parliamentarians, who like to know how they perform compared to other countries. Furthermore, the conduct of collaborative audits gives an opportunity to learn from others and benefit, at minimum costs, from diverse experts. It also promotes the highest standards in environmental auditing, the proper conduct of environmental issues, and beneficial change in the provision of national public services related to this area. Such cooperation equally builds a cooperative spirit among SAIs, integrity, open communication, and professional excellence.

Going forward, SAI's could take advantage of these types of audit by referring to the INTOSAI WGEA's *How SAIs may cooperate on the audit of international environmental accords* 1998, describing three types of cooperation as:

- *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.

It further highlights that these 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).

- ▪ ***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.

- ▪ ***Environmental program funding is shared between two or more countries.***

Chapter 4
Audit Execution and Examination

4.1 DATA: ANTICIPATE AND CONTINUALLY ASSESS DATA NEEDS

A key step in audit execution and examination is to anticipate and continually assess data needs. In the planning phase, the types, sources, and limitations of evidence and data are identified. At this stage, auditors should also try to determine the types of qualitative and quantitative data analysis they will carry out on the evidence and how it may be presented. In the examination phase, auditors need to continually assess whether the anticipated type of data and evidence is available and still relevant and if not, make any necessary adjustments to the audit plan.

Before using environmental data from any source, however, SAIs must assess whether the data are sufficient and appropriate for the purpose of an audit. After assessing the quality of data from a particular source, SAIs may find that the data are not of sufficient quality for the audit. Many SAIs in both developing and developed countries have reported challenges in planning and conducting audits when they lack high-quality environmental data. Several options are available in such a situation.

When SAIs lack high-quality environmental data, they may use alternative types of data that relate to, or help estimate unavailable data[9]. SAIs may use models to combine related environmental data to evaluate how effective programs are. Models tend to be more complex than estimates and can be used to represent complex relationships among factors, as well as to integrate data to evaluate environmental programs. For example, aerial photographs could become the basis for developing a spatial model that illustrates changes in land use over time. SAIs can use computer models to compare data from several sources to determine whether the data maintained by the audited entity are reliable.

One of the tools that could be used in collecting relevant and most reliable data is *Geographic Information System (GIS)*. GIS is a system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or geographical data. In a general sense, the term describes any information system that integrates, stores, edits, analyzes, shares, and displays geographic information. GIS applications are tools that allow users to create interactive queries (user-created searches), analyze spatial information, edit data in maps, and present the results of all these operations. Geographic information science is the science underlying geographic concepts, applications, and systems.

A geographic information system (GIS) lets us visualize, question, analyze, and interpret data to understand relationships, patterns, and trends. GIS benefits organizations of all sizes and in almost every industry. There is a growing interest in and awareness of the economic and strategic value of GIS.

Using Geographic Information System (GIS) to Determine the Audit Sample.

The SAI of Indonesia used GIS to determine the "high possible" area where the chance to find the water pollutant problem happened. Due to the vast area of Brantas watershed, they had a massive challenge to find the area where the water pollutants have become a problem. The SAI analysed the monthly pattern of the concentration of BOD, COD, and DO in the average and categorized them accordingly into 5 ranges as depicted on the Figure 5.

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9   Environmental Data: Resources and options for Supreme Audit Institutions, INTOSAI WGEA, June 2013, p.14.

Figure 5:   GIS on Audit Sampling
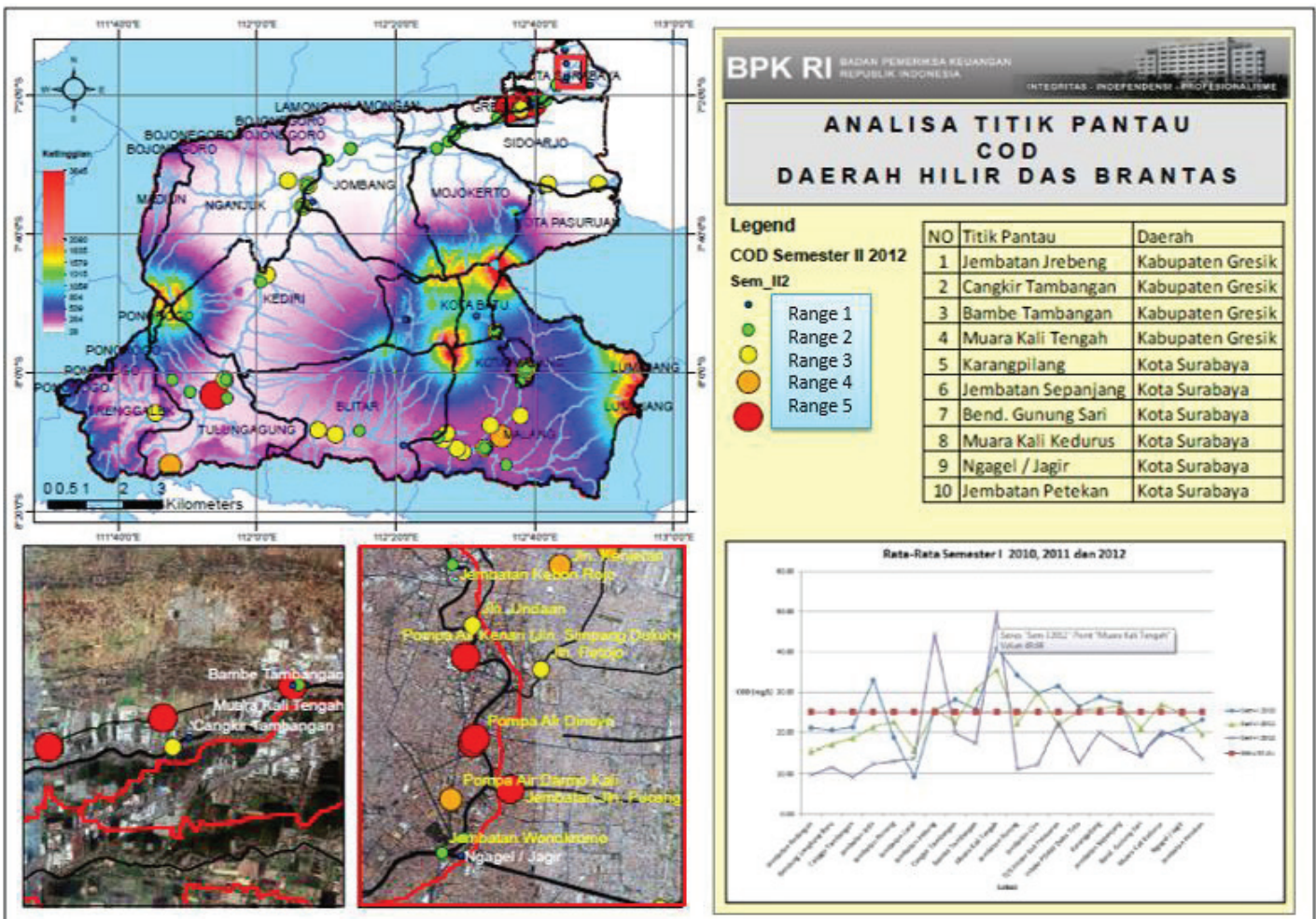
4.2 OBSERVATIONS: IDENTIFY ROOT CAUSES

The data and evidence found during the examination phase lead to observations. Performance audits, like all audits, compare a situation that exists with the way it should be, based on suitable criteria. The gaps between the two result in audit "findings" or "observations." Examples of common audit findings include:

- lack of compliance with rules or policies,

- results not being achieved as intended,

- risks not being evaluated and managed,

- strategies not being developed or followed,

- activities and actions of key players being poorly coordinated or having unclear roles,

- missing data or information to measure program results or to support decisions, and

- inadequate monitoring and supervision.

To answer the burning question, "Why do these deficiencies occur?" auditors should perform *root cause analysis*, which can support effective recommendations that lead to solutions that prevent the problem from recurring. In fact, such recommendations are likely to truly improve on the situation by providing orientations for performing corrective action that eliminate the actual cause of the problem. Environmental auditors now increasingly seek to recommend an action or a series of actions that, if implemented, would be effective and eliminate the actual cause of the problem, thereby eliminating also the possibility of recurrence. The challenge here is to avoid recommending corrective action responses that are focused on the incident or current situation itself, rather than the larger issue of what caused things to happen.

There are many types of Root Cause Analysis tools available to SAIs[10], including: "5 Why?", Fault Tree Analysis (FTA), Interrelation Diagrams, Ishikawa Diagrams (Fishbone, Cause and Effect), etc. Perhaps one of the easiest to implement is the "the 5 Why?" method[11]. Starting with the incident, a corrective action team should keep asking "Why did this happen?" until they arrive at the root cause. This method is now commonly increasingly been used by SAIs in conducting performance audits. However, environmental auditors should be cautious about one aspect: root causes that are traced to the merits of policy, availability of resources, or partisanship can be difficult for legislative auditors to address.

One method that could be used to give most appropriate evidence is by taking pictures of the situation as it is. It is commonly said that "*a picture is worth a thousand words*" and also "*seeing is believing,*" and so forth. The photograph, in particular, has long been perceived to have a special power of persuasion, grounded both in the life like quality of its depictions and in its claim to mechanical objectivity. Seeing a photograph almost functions as a substitute for seeing the real thing. Something we hear about, but doubt, seems proven when we are shown a photograph of it. The use of photographs and other kinds of machine-produced visual images has become a routine evidentiary technique in courtrooms around the world. They are a taken-for-granted form of proof in many civil and criminal cases. Given the power of the photograph to provide strong representations--vivid displays that seem almost to compel belief-its frequent and growing use as evidence may not seem at all surprising.

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10 Mini-guide to Root Cause Analysis, Quality Management and Training Ltd, 2008, http://www.root-cause-analysis.co.uk/
11 Better Integrating Root Cause Analysis into Legislative Performance Auditing, CCAF-FCVI Performance Auditing discussion paper, December 2014.

4.3 PEER-REVIEW (FOR QUALITY ASSURANCE)

Quality and excellence are an outstanding requirement for SAIs, but they are rarely achieved spontaneously. They need to be managed into the organization and should be based on continuous improvement. It is vital that a SAI operates at high, even excellent quality. The SAIs reputation is based on the quality of their output. SAIs can only achieve respect and authority if they can demonstrate that they are managed on high standards. This is also the case when SAIs conduct an environmental audit, especially on controversial or highly sensitive topics. Therefore, one of the tools SAIs are encouraged to use is peer review, for the sake of its balanced and continuous development and quality process assessment. Peer reviews provide indeed benefits to all participants, as they help to hold a mirror to the SAI audit processes and overall activities. Peer review brings changes and improvement, while also promoting the best practices and quality assurance needed for environmental auditing.

So far, indications from a survey carried by the CBC Subcommittee on Peer Reviews[12] (2015) under the leadership of SAI Slovakia, show that 85 peer reviews have been conducted of SAIs since 1999. The peer reviews were welcomed by both the SAI under review and the SAIs on the peer review team. And there even seems to be an imbalance in both SAIs which subject themselves to peer reviews and SAIs which participate in the review teams, as 34 of the 85 reported reviews were carried out in EUROSAI, followed by 14 in AFROSAI. SAIs from the six regions have equally indicated their willingness to participate in broader peer review activities in the future.

The following table containing the 2015 Peer review survey of INTOSAI Capacity Building Committee shows the evolution of SAIs peer review activities around the world in the recent years.

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12   Peer review survey 2015 – results and assessment, INTOSAI CBC, May 2015.

Table 3: Participation in Peer Review

Participation as peer reviewer	SAI	engagement sub total
22	Sweden	22
21	Netherland	21
20	Norway	20
16	United Kingdom	16
11	Denmark	11
9	ECA	9
8	Canada, Germany	16
7	France, RSA	14
6	Australia	6
5	Poland, Chile, Peru	15
4	Austria, USA, Finland	12
3	New Zealand, Portugal	6
2	Costa Rica, Slovenia, Zimbabwe, Tanzania, Uganda, India	12
1	Ireland, Luxembourg, Scotland, Belgium, Puerto Rico, Spain, Switzerland, Estonia, Latvia, Kenya, Lithuania, Malawi, Vietnam, Russia, Rwanda, Bahamas, Morocco, Kosrae, Honduras, Namibia, American Samoa, Guam, Slovakia, Eritrea	24
reviewing SAIs total		49
total engagement		204

4.4 COMMUNICATION WITH RELATED PARTIES

Experience has shown, and practitioners agree, that auditors cannot function without communicating. The ability to communicate plays an indispensible role in assuring auditors' success and managing a successful SAI. For environmental or performance audit, good communication is even more essential. A proper understanding of the audited entity and its context and that of the specific audit topic is important; particularly as environmental performance auditing uses various kinds of audit approaches and data collection methods.

Auditors should seek to maintain good professional relationships with all stakeholders, promote a free and frank flow of information in so far as confidentiality requirements permit, and conduct discussions in an atmosphere of mutual respect and understanding. Good external relations is important not only with the short term perspective of getting access to information and getting better understanding of the subject matter; but it is also equally important with the long term perspective for SAIs to gain trust, respect and credibility with stakeholders. SAIs that are known to listen to various, relevant views and arguments; recognized as making assessments based on rational and independent grounds; and which publish their findings and recommendations, will find it easier to safeguard their reliability, integrity and objectivity.

The main purpose of good communication with the auditees is to enhance the understanding of the role and function of the SAIs and the purposes, designs and findings of the specific audit. One must keep in mind that it is the SAI that seeks access to sources, data and arguments in an audit. Without good communication it may prove difficult to create an atmosphere that will serve that interest.

Besides having meetings with senior managers or other government officials, another good practice is to carry out focus group meetings, in which various stakeholders and experts are invited to discuss preliminary findings, conclusions and recommendations. Being able to discuss various issues when all vital stakeholders are present will add value to the audit process. Before publishing the report the authorities concerned should always be given the opportunity to comment on the audit findings, conclusions and recommendations; and all comments need to be carefully considered.

Effective communication between auditors and Members of Parliament and other authorities to whom the report is addressed is equally a requirement to promoting awareness of the SAIs and Public Accounts Committees (PACs) activities in the environmental domain and their impact on society. PACs' main role is to ensure public management accountability and monitor implementation of recommendations. As a great number of SAIs pointed out, misunderstanding of the audit report and insufficient knowledge of SAIs practices by Parliament, might lead to less interest from the latter. SAIs identified delay in Parliament discussions on the report as one of the main challenges to high impact, by reference to timeliness.

Some SAIs have realized the necessity of having performance auditors skilled in effective communication strategies so as to improve on the quality and impact of their reports. They have therefore set up training programs to build these skills. Indeed, auditors trained in communication skills conduct audits more efficiently and effectively and they are more productive. Significantly, such training help SAIs conserve human and financial resources and better serve their stakeholders, while enhancing the participation of the auditees in the audit process.

Chapter 5
Reporting Audit Findings and Recommendations

5.1 ROLL-UP FINDINGS

After gathering a lot of evidence from different sources at the end of the execution phase of an audit, auditors confront the major problem of how the message should be communicated and how it should be presented. Though the approach may vary from one audit institution to another, what is however recommended is for the report to address the following questions:

- What? This should identify the problems that have been observed in the audit.

- So what? This should explain why the person reading the report should be interested in the findings or observations

- Why so? Identifies the root causes of the problems or observations

- What next? This highlights the recommendations or solutions proposed to reverse the situation

Auditors are cautioned to strike the right tone and communicate a balance of positive and negative findings that reflect the evidence gathered. This balance serves to increase audit credibility but should not be forced.

The "**roll-up**" technique is commonly used for developing good audit reports. This technique involves various considerations that help to filter information and prioritize messages for inclusion in the report. For example, as one moves from the bottom to

the top, the technique involves examining the large amounts of information normally collected in the course of an audit in order to identify usable evidence. This technique also suggests that what should be included in the report are only those facts, observations and conclusions that are material, significant, and/or of high risk. In the environmental domain, significance and the risk can and should relate to human, ecosystem functioning, and the financial consequences of environmental degradation.

Figure 6:   The Roll–up Technique for Performance Audit Report
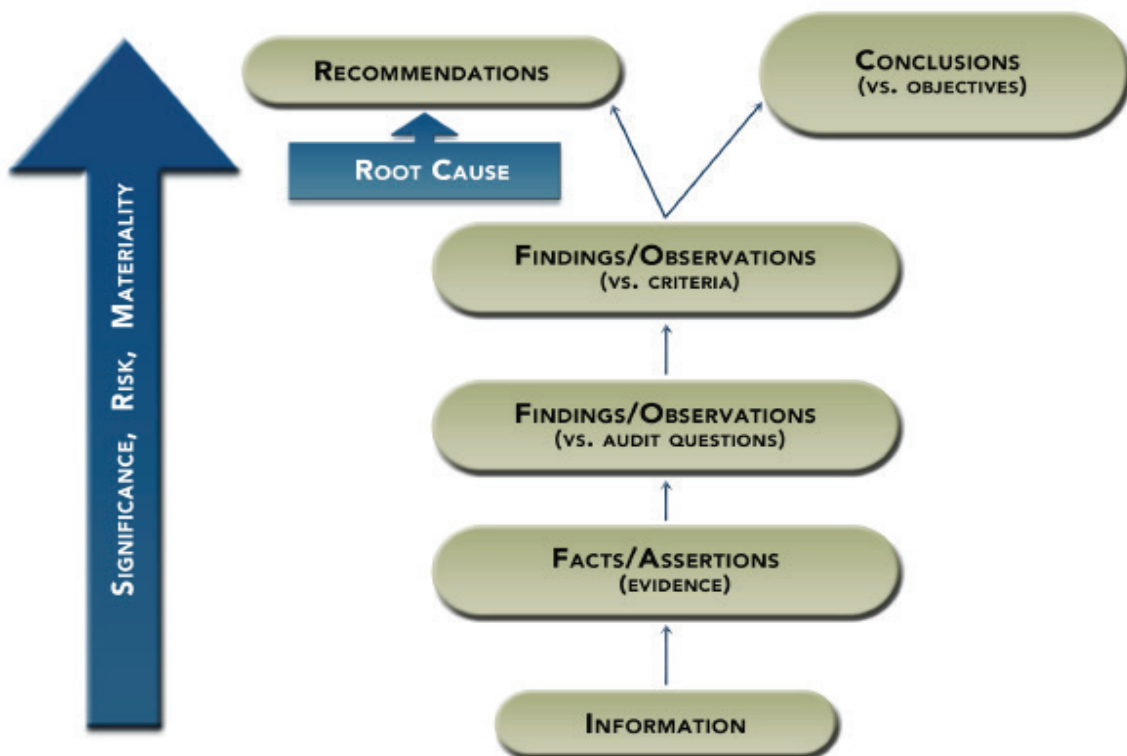
5.2 USE REPORTS TO EDUCATE

Considering the complex nature of environmental questions, auditors are advised to explain important concepts at the introductory phase of their reports. By doing so, the readers, will fully understand the findings and their significance. To educate readers more, relevant environmental issues, basic concepts and background information should be found at the front end of the report. The use of plain and simple language is highly recommended. Similarly reports that help readers identify with the topic and care about the audit findings will have more influence. This can be achieved by using concrete case studies in the report.

For example case studies about environmental quality in urban areas can be very effective, especially if they provide information about potential health impacts.

5.3 RECOMMENDATIONS: STRIVE TO HAVE A DOMINO EFFECT

If environmental performance audit intends to have quality and an impact, it is suggested that it should require much thought and professional judgment. Generally, these recommendations are prepared at the end of the audit whereas if auditors want to make meaningful recommendations, the reflection process should begin at the start of the audit. Environmental auditors will likely add value if recommendations prepared:

- are strategic and not operational in nature;

- address the root cause of the problems and not the symptoms;

- focus on the expected results and achievement, not on the means of getting there

- are cost-effective recommendations.

Auditors can make strategic recommendations by creating a **"domino-effect".** The domino effect refers to a situation in which changes to one element of the system triggers changes in other elements of the same system; the effect is greater when system elements are closely interlinked. For example, introducing a carbon tax will create a domino effect in the society and in the economy since the tax is likely to lead to a reduction in the consumption of carbon-intensive products, lower greenhouse gas emissions, increased use of public transport, better air quality, improved health for citizens, and a lower health care cost. To maximize the domino effect, the recommendations have to be targeted at a key point in the decision-making process- a trigger point that will generate a cascade of impacts onto many elements of the process or system

Recommendations that are superficial (for example, "the entity does not have a strategy, so we recommend it develops a strategy") or superfluous (for example, "the entity should continue to …" are unlikely to lead to significant changes. In some cases, they may be required as a first step, but to be effective, recommendations should address the root cause of identified problems, not their symptoms.

However, recommendations that focus on expected results or outcome are known to be more effective. Auditors are expected not to prescribe but give the latitude, flexibility and liberty for entities to express their creativity in solving problems with the limits of their operational constrain. Lastly, when making recommendations, auditors should think out of the box but remain

realistic by considering the views of the audited entity on the proposed recommendations and their capacity to address them.

Achieving recommendations with a domino effect involves adopting a "mindset" throughout *all* phases of the audit process. This mindset involves looking for opportunities from the very beginning of the audit process through to the very end.

A key element of this mindset is to have early and frequent discussions with senior managers in audited entities. These discussions could cover

▪ constraints hindering progress on the file, and how to remove these

▪ other reviews or events which present the opportunity to combine impacts

▪ the interests and agendas of influential internal and external players

▪ policy shifts under consideration that affect the audit.

A key process element in developing recommendations with a domino effect is to undertake a broader and deeper "contextual analysis" than might otherwise occur in the planning stage of a particular audit. We suggest using the following analytic tools to develop and document additional perspectives on "knowledge of business":

▪ Policy Landscaping

▪ Stakeholder Mapping

▪ Cycles and Systems Framing

Policy Landscaping involves identifying the public "policies" and policy instruments that affect – directly and indirectly - a given issue or program area. "Policies" in this context could include international treaties, domestic legislation and regulations, taxes and user fees, government Directives and Policies, etc.. In developing this policy landscape, auditors should identify the relationships between various policies as well whether intended policy objectives are coherent and congruent, or overlap or contradict each other. Auditors should pay particular attention to potential conflicts between polices with a social versus economic versus environmental orientation. For example, economic development policies may conflict with environmental protection policies and create additional complexities for the auditor to consider.

Stakeholder Mapping builds on policy mapping. It involves identifying the primary and secondary organizations or groups that are likely to be impacted by a proposed recommendation. Stakeholders in this context could include government Ministries, Departments or Agencies, NGOs, Academics, etc. Stakeholder mapping can be community-based (on geography) or interest-based (supportive vs. resistant). By also classifying stakeholders

based on their relative degree of impact and power of influence, auditors can determine potential "resistors" and "supporters" of recommendations and the degree of influence they may have on implementation of recommendations.

Framing Cycles and Systems help to situate the audit topic within a broader context by considering the natural and/or man-made cycles and systems at play. Ecology teaches us that the natural world is founded on ecological systems (ecosystems), that these systems are both interdependent and "nested" (from local to global), and that various elements, nutrients, and energy flow through these systems (e.g. the "water cycle", the "carbon cycle"). For example, an audit that starts with a focus on urban water pollution might benefit from framing the urban area in the context of the broader watershed it sits within, causing the auditor to look at integrated watershed management and land-use planning, not just urban water pollution.

Equally important, in the environmental domain, there are a number of "management" cycles and systems that can also be used to frame an audit topic within a broader context. For example, operation of an individual mine site can be looked at in the context of the "mining life cycle", which starts with exploration and ends with site reclamation. Similarly, disposal of hazardous waste sits within the "waste management cycle" which also includes source reduction, recycling, segregation, and disposal. Finally, enforcement of regulations sits within a broader process of policy-making and compliance promotion.

5.4 AUDIENCES: REACH OUT BEYOND THE USUAL SUSPECTS

No matter how professional or accurate an audit is, the SAI has not served its auditees, key stakeholders, and other audiences if it does not communicate the results clearly and effectively. Good communication is essential if the SAI is to fulfill its mandate. When reports are done well, the messages are understood. As a result:

- the audited organizations accept the findings and implement the recommendations;

- legislative assembly committees hold hearings or briefings on issues reported and endorse the recommendations;

- legislators and other key stakeholders support the SAI's role and work;

- members of the media report the findings accurately;

Communicating audit report may vary from one audit office to another; its purpose is the same. The purpose of an audit is to identify the inherent problems that affect the effective and efficient realization of set out objectives. If an audit identifies this and the

information is not adequately communicated to stakeholders, then it must have fallen short of one of its missions. The report of an audit is primarily destined to the auditees but in addition, the following are equally informed of the report: Parliament, concerned Ministerial departments, political leaders, decision markers, regional organizations that focus on environmental issues, academicians, Non-Governmental Organizations whose activities are related to the environment, Civil Society, Organizations and International Organizations.

Special attention must to be paid to legislators, who are one of the main target audiences. For some SAIs, before a report is released to the public or the media, the Head of the SAI needs to inform legislators and their research team about the report. In most cases, SAIs host a confidential briefing for legislators. The Head of the SAI delivers a short opening statement and then answers questions. Some SAIs find it useful to set up a separate unit to coordinate contact and liaison with legislatures.

Towards the auditees and other stakeholders, communication has to be straightforward and clear, from the beginning to the end of the process. At the beginning of an audit, an entry conference is organized for all the stakeholders involved in the audit and most especially those of the audited entity. This forum provides among several things, an explanation of the audit mission, what they intend to do, how it has to be done and the collaboration expected from them. The exit conference is therefore, organized, to inform them of the pertinent findings and observations noticed during the mission. The recommendations proposed are made known to them and probably how to get about the implementation. It is the best forum for exchange of ideas and opinions.

As a feedback to the report, SAIs need to obtain a commitment of the auditees that they will take action on the recommendations of the reports. Upon the transmission of the audit report to the auditees, the management of the entity is expected to provide an action plan, which states among other things, the structure in their entity and officials responsible for implementing the recommendations and the period needed for such an activity to be accomplished. The above information will be necessary for the auditors to plan the follow-up audit.

5.5 CHOICE OF MEDIA AND FORM

Because of the diversity of the audiences, communicating audit results should go beyond the regular official transmission, parliament discussions or news release, news conference, interview with the media and encouraging journalists to write articles on the report for a wider dissemination. Indeed, different audiences prefer different media.

Therefore, in addition to the above mentioned channels (such as specialized media, journals, blogs, twitter, facebook), academics,

members of civil society should be used to reach out to a greater number of people. In fact, as one of the measures highlighted at the 21st UN/INTOSAI Symposium on effective practices of cooperation between supreme audit institutions and citizens to enhance public accountability, it was recommended that SAIs should increase public knowledge of the work and role of SAIs as well as their added value for the state and the public at large through continuous media coverage, public campaigns, use of social media and other awareness-raising activities in the local languages if needed.

To be effective in this domain, SAIs have to monitor the external environment. This constant monitoring and analysis of the external environment will help to identify opportunities, challenges, and risks that may influence how effective their communications are. In so doing, there is a need to take into account circumstances that may affect how the target audiences interpret audit reports. For example, news reports about labour unrest or conflict on the board of directors may undermine or contradict an audit report that concludes that an organisation is well managed.

SAIs often have access to information about the external environment through the following sources:

- comments about reports or recommendations from parliamentarians;

- media coverage of current events;

- communications (letters, email, or phone calls) from members of the general public; comments from government entities;

- published or broadcast opinions about the SAI by academics or other experts; and

- public opinion surveys.

In so doing, SAIs will promote effective citizen participation to public accountability. Citizens might then commonly work with SAIs that will also have the responsibility of receiving and monitoring complaints for non-compliance and maladministration as well as suggestions for improved public administration or services being delivered, with the aim of informing future audit focus.

One of the most important vehicles for publicizing audit work is the mass media. Specialist publications are one way to get more detailed pieces on audit work in to the media and this can be a significant route for environmental work as there are now a number of specialist environmental and sustainable development publications. In many cases there will also be pressure groups or taskforces who can take forward our recommendations. SAIs should consider ways that could ensure that audit results would be communicated as widely as possible. They should consider the use of modern forms of communication such as social media like blogs, twitter, facebook and others, as they can reach a lot of people at minimal costs. However, caution should be applied as sensitive information could be blown out of proportion and

to protect the credibility of the information. Social media could be used just to get attention of the public but communicating only headlines and the full stories still communicated through traditional media such as newspapers, television and radio.

SAIs have been facing a lot of challenges in communicating audit reports and seeking commitment from the auditees and the government in general. The survey carried out highlighted the following issues as hindrances to communicating audit results:

- Inadequate data on state of the environment.

- Low reliability of raw data.

- Lack of awareness on environmental issues.

- Lack of resources for implementation of recommendations by auditees.

- Not following up some reports.

- Environmental expectations remain in conflict with the industry and local communities.

- Lack of awareness on Environmental Auditing among government bodies.

- Delay to discuss reports by Parliament.

- Defensive auditees.

- No power to enforce implementation.

- Lack of skilled personnel.

- Impact can be observed on longer term.

- Limited resources to undertake follow-ups.

- Legal limitations.

- Lack of professional expertise.

- Lot of resources needed to follow-up rather than starting new audits.

- Objections by auditees to change legislation.

- Multiple laws and regulations as well as complexity of environmental issues for implementation to take place.

- Inconsistencies across policy areas.

- Selective coverage of audit reports by media.

They further mentioned some practical ways they engaged to overcome the challenges and ensure that their reports are received and acted upon by all consent. Those initiatives are as follows:

- Ensure simple to understand reports.

- Focused recommendations.

- Entity conducts self-assessment of their implementation.

- Conduct "hybrid" audits – part follow-up and part new audit.

- Follow-up of previous reports.

- PAC requires all auditees called before them to present Action Plans for implementation of recommendations.

- Regular meetings and discussions with auditees.

- Present follow-up results before Parliament.

- Develop a progress monitoring/tracking system.

- Table reports before Parliament.

- Special unit for relations with civil society and other institutional state bodies.

- Discuss draft with auditees.

Chapter 6
Follow-up

When and how often

It has been ascertained that the more audits are conducted, the greater the quality and the impact. Thus conducting a series of environmental audits and later on carrying out a follow-up audits is an effective means of ensuring that the shortcomings registered have been resolved or the recommendations proposed have been applied and therefore an impact on the community and people ensured. In fact, when the audited entities are aware of the fact that a follow-up audit will be conducted, they do everything possible to implement the recommendations of the previous one.

Audit follow-up has two purposes. One is to encourage an appropriate response to the audit findings on the part of the auditees or other responsible entities. If an auditee has acted to overcome problems found during the audit, it is appropriate for the SAI to recognize the fact. If, on the other hand, the auditee has not acted in response to the audit, it is also appropriate for the SAI to disclose that the problems still persist. The SAI might even clarify the reasons why it was not possible to apply the recommendations so as to overcome eventual challenges in the future. The other purpose of the audit follow-up is to lay the foundation for future audit work. If previously disclosed problems are believed to have been resolved, subsequent audit work in that area may require only minimal testing to confirm that the problem no longer exist. If the problem has not been overcome, further audit work may be needed to confirm the nature and significance of the problem, with the purpose of evoking a more appropriate response from the auditees.

Actions required for serious and effective follow-up may vary from one situation to another. In some situations, a simple inquiry directed to the managers of the audited entity may be sufficient. In some cases, more substantive examination and testing may be required. The choice therefore depends in part on the nature of the issue, but also on relations between the SAI and the audited entity. If those relations are aligned towards the same vision, the auditees may be more willing to address the shortcomings identified by the SAI.

It is advised that follow-up audit come up a few years after the original one has been conducted, and the time-frame provided by the entity to implement the recommendations has elapsed. This will provide enough time for the entity to review its system and implement the recommendations. Establishing Audit Report Follow-up Departments in SAIs is another measure that can guarantee the quality and impact of environmental audits. Such a department will ensure that actions to be taken by stakeholders as spelled out in the report are effectively implemented.

Another tool could be a ***Social Cost Benefit Analysis.*** So, to reflect the real value of a project to society, we must consider the impact of the project on society, like Impact Positive Negative (Social Benefit) (Social Cost). Thus, when we evaluate a project from the view point of the society (or economy) as a whole, it is called Social Cost Benefit Analysis (SCBA)/Economic Analysis.

SCBA can be applied to both public and private investments.

- ***In Public Investment***: SCBA is important especially for the developing countries where government plays a significant role in the economic development.

- ***In Private Investment***: Here, SCBA is also important as the private investments are to be approved by various governmental & quasi governmental agencies.

The main focus of Social Cost Benefit Analysis is to determine:

- Economic benefits of the project in terms of shadow prices;

- The impact of the project on the level of savings and investments in the society;

- The impact of the project on the distribution of income in the society;

- The contribution of the project towards the fulfilment of certain merit wants (self-sufficiency, employment etc.).

The SAI of Indonesia in their audit "Water Pollution Management" used Social Cost approach to measure the impact of the water pollution in Brantas watershed. The model described the relationship of the degree of water pollutants in the water bodies with the cost of production from water Company who uses that water body as their raw material. The SAI found out that, the higher level of water pollution has a positive relation with the increase of the cost of water production. The increase of the cost in turn could lead to the increase of the water tariff. The following figure illustrates what they did.

Figure 7:   Economic Analysis Framework
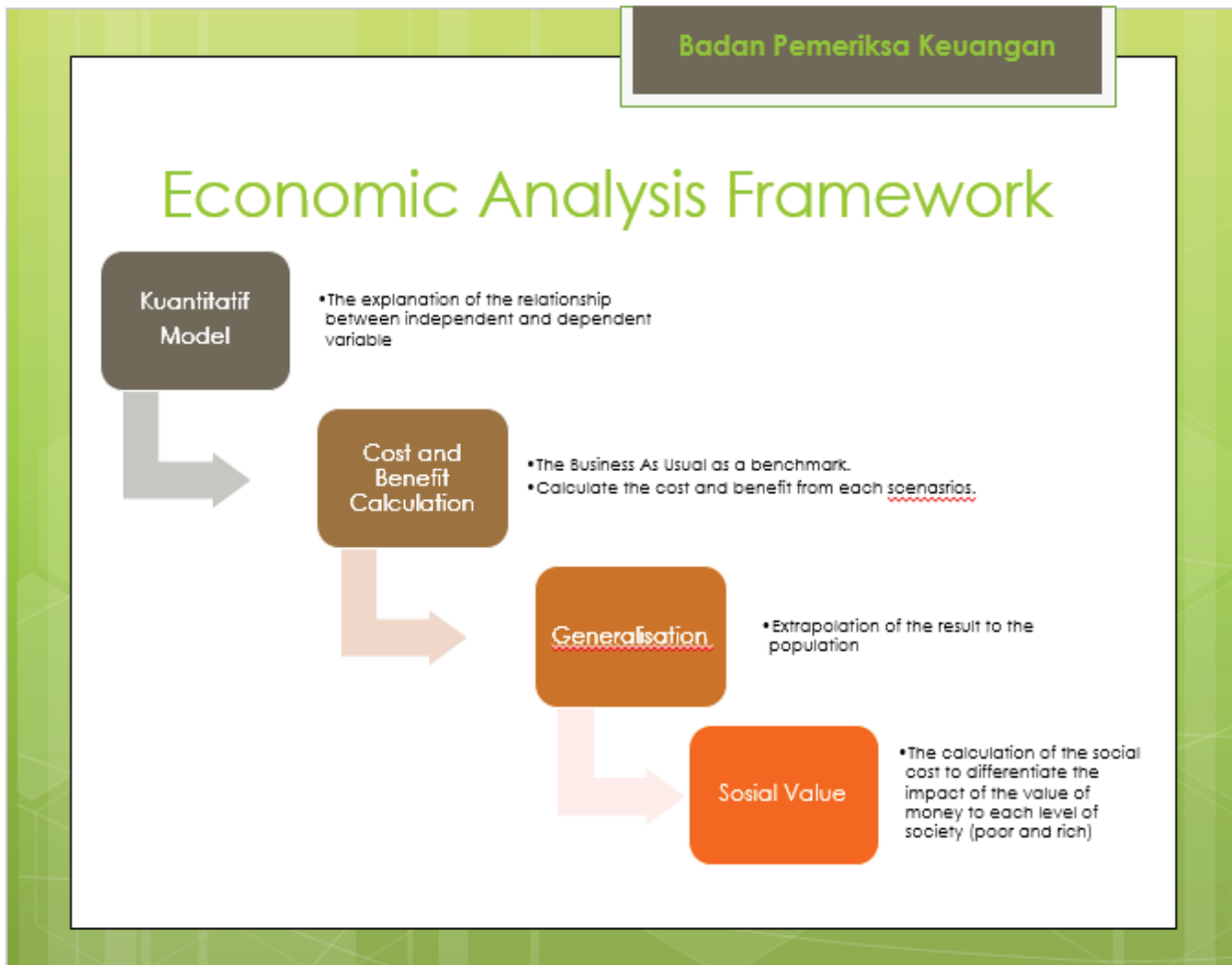
The SAI of Indonesia on the same audit used GIS to monitor impact of the recommendations. They used the web GIS to monitor the data from the water quality sample station each semester since the performance audit report has been delivered. This was an effort to ensure that SAI's recommendations could solve the water pollutant management problem.The figure below depicts that.

Figure 8:   Monitoring Impact of Recommendations
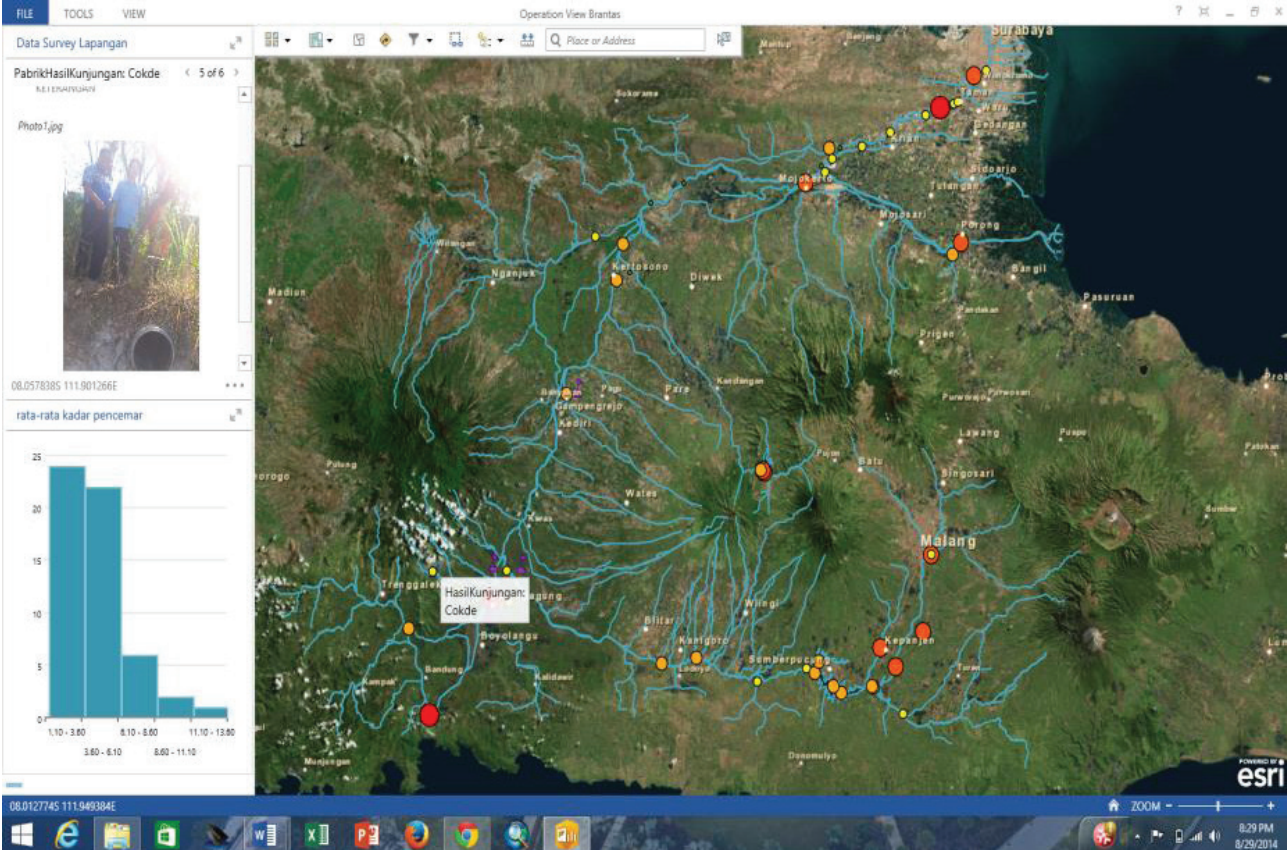
Chapter 7
Case Studies

The following case studies are some examples of audits that have been able to bring about changes, as measures to improve on the defaulted situation were taken after the report had been tabled. They confirm what has been done so far by SAIs in ensuring impact of their audits and are available in the INTOSAI WGEA website.

SAIS EXPERIENCES FROM EXECUTED AUDITS

AUSTRALIA

TITLE OF AUDIT

Bushfire preparedness

BACKGROUND

In 2002-03 Australia experienced a severe bushfire season, during which the 2003 Canberra bushfires occurred. The McLeod Report stated:

"On Saturday 18 January 2003 the bushfires, which had been burning in the hills to the west and south-west of Canberra for more than a week, reached the perimeter of the city. The result was widespread damage to rural properties, parks and forests, houses and urban infrastructure, estimated at approximately $300 million. Tragically, four people died".

AUDIT OBJECTIVE

SCOPE

This audit is focused on prevention and preparedness. In particular, the Audit Office has considered the ACT Government's approach to managing bushfire hazards, its work to support the community's preparedness, and its progress in developing its capabilities since the January 2003 bushfires.

CRITERIA

1. Emergencies Act 2004 which defines responsibilities and sets the context for key plans, the whole-of-government five-year Strategic Bushfire Management Plan, Regional Fire Management Plans and bushfire operational plans for individual land managers.

2. The management of the threat of bushfires is a shared responsibility, involving community members and the ACT Government.

AUDIT FINDINGS

1. Regional fire management plan has not been reviewed on a regular basis since its approval in 2009 as provided .

2. The Emergency Services Agency has not monitored compliance with bushfire operational plans, except the Bushfire Operations Plan of the Territory and Municipal Services Directorate. This Directorate's Bushfire Operations Plan, is updated and submitted for approval on an annual basis, and is monitored by the Emergency Services Agency.

3. The annual Bushfire Awareness Campaign (Prepare. Act. Survive.) is consistent with a national approach to bushfire information and awareness-raising that was implemented after the 2009 Victorian bushfires. The campaign involves the production of a number of brochures and publications, as well as a media and events campaign that is implemented in late October each year, in time for the coming bushfire season.

RECOMMENDATIONS

1. The Emergency Services Agency (ESA) should annually review fire management zones and the Territory and Municipal Services Directorate should subsequently update the Regional Fire Management Plans.

2. The Emergency Services Agency should develop and test administrative procedures for the communications systems used for the distribution of public warning and emergency alerts.

FOLLOW UP BY SAI AND GOVERNMENT

The ESA has a standard operating procedure dated 27 May 2013 called "Testing of the ESA public alert, update and warning information distribution system". The ESA agrees that a schedule for regular testing should be in place and this has now been developed and implemented.

BOTSWANA

TITLE OF AUDIT

Management of Sand and Gravel Mining Operations by the Department of Mines.

BACKGROUND

Department of Mines (DOM) is unable to assist all companies and individuals in getting mining licenses and mineral permits for it due to this resource constraint. This situation has led the individuals and companies to illegal sand mining which has caused serious damage, in some cases irreparable damage to the environment.

AUDIT OBJECTIVE

To determine mechanisms employed to curb detrimental mining methods and ensure that sand and gravel mining operations were appropriately managed for sustainable use of the resources.

SCOPE

The audit covered financial years 2009/2010 to 2011/2012.

LINES OF INQUIRY & METHODS

1. Legislation and Regulatory framework,

2. Demarcation of Lease/Concession areas,

3. Rehabilitation of affected areas,

4. Stakeholders Collaboration,

5. Public Awareness and Monitoring,

6. Illegal Sand and Gravel Mining Strategies and Departmental Capacity.

CRITERIA

Mines and Minerals Act (1999), Environmental Impact Assessment Act (2005) as amended in 2011 and Mines, Quarries, Works and Machinery (Cap 44:02) 1978. These legislative frameworks provide regulatory controls and measures to manage sand and gravel mining operations.

OVERALL AUDIT FINDING

The legislative frameworks were limited as they had not holistically addressed the sand and gravel mining issues.

RECOMMENDATIONS

DOM should initiate and liaise with stakeholders to streamline and strengthen the legal framework such that enforceable standards are comprehensive for effective regulation of the sand and gravel mining operations, thus producing the desired results in the long run.

FOLLOW UP BY SAI OR GOVERNMENT

1. The issue of fines being too low is correct and this has been taken into consideration on the outgoing drafting of the Bill to amend Mines and Minerals Act.

2. The issue of streamlining of Acts is noted, however, since each Act was put in place for a purpose, the Ministerial Committee has agreed on a process to be followed which now requires every applicant to acquire a Prospecting License first and do all the necessary evaluations and studies for approval after the mineral resources has been qualified.

INDONESIA

TITLE OF AUDIT

The Water Pollution Management in Brantas Watershed

BACKGROUND

With the development of large cities through which the Brantas river flows, resulting in increased demand for clean water and raw water. In addition, the high concentration of population and industry in urban areas raises issued such as the emergence of slums on the banks of the river. The river water quality and floods caused by disruption of the flow of water, either because of the waste, as well as reduction of the width of the river silting. Dominant pollutant sources that pollute rivers Brantas are *industrial waste, Domestic waste and Agricultural waste.*

AUDIT SCOPE

The scope examination covers the activities of the Central Government and Local Government and other relevant agencies in the Brantas river basin management which includes conservation efforts of water resources for the period 2010-2013.

AUDIT TARGETS

In this audit, there are two topics that BPK asseses:

1. Inter-agency coordination in efforts to integrate water resources management in the Brantas river basin; and

2. Water quality management and water pollution control in the Brantas River.

AUDIT OBJECTIVE

The primary objective of the audit is the assessment of the effectiveness of the watershed management to maintain the water quality to meet the water standards.

CRITERIA

Output criteria: The level of the water pollution has to comply with the water standards usage.

Process criteria: The regulation has to be established; the human resources and the funding have to be sufficient; and the monitoring process and evaluation have to be done in a regular basis.

FINDINGS

The inventory of pollutant sources is not accurate and less reliable as a reference, and the Ministry of Environment have not determined the maximum load capacity of the river.

For industrial waste, there are still weaknesses in the process of licensing and oversight for the businesses that could potentially produce wastewater.

For domestic waste, ineffectiveness of sanitation pilot program of the Central Government in the absence of awareness of the Government of Regency / City to make the construction of sanitation facilities for domestic waste water as a priority program.

THE RECOMMENDATIONS

The Ministry of Environment to pay more attention to the mandate government regulation number 82 of 2001 article 20 to immediately establish the threshold of the pollutant load capacity in the Brantas river basin.

The Ministry of Environment to coordinate with city / county environmental agency to further raise awareness of the need PPLHD (Special Force of government official who has the capability to investigate the activities for breaking the environmental law).

The Ministry of Environment to coordinate with the government of the District / City to continue to pay attention to the applicable provisions of relevant laws enforcing environmental permits.

The Minister of Public Works to create an integrated program in implementing sanitation projects and encourage Local Government / Municipalities, which has not yet City Sanitation Strategic Plan, to immediately prepare it. The sanitation programs should be carried out by large-scale approach and comprehensive. It is necessary to provide incentives and disincentives to encourage the local government to build the city scale proper sanitation in accordance with the Minimum Service Standards.

The Minister of Environment to develop an integrated control program of domestic waste in the Brantas river basin together with the Government of Regency/City.

FOLLOW UP BY SAI OR GOVERNMENT

The response from the Ministry of Environmental was positive. The department responsible for the regulator has responded immediately by proposing a comprehensive program. The program starts with the calculation of the current source of water pollution load in every region/city. Then they determine which area has gone too far from the maximum load capacity of the Brantas river and which area still had room for development since they were still under the maximum load capacity allowance. The program also consists of the detail of the activities and source of funding to deliver the activities within the program.

CANADA

TITLE OF AUDIT

Mitigating climate change

BACKGROUND

The Government of Canada has recognized the need to urgently combat climate change and has made commitments and allocated funds to reduce emissions.

AUDIT OBJECTIVE

1. To determine whether Environment Canada, working with others, has made satisfactory progress in addressing four key issues from our 2012 audit. We wanted to know whether:

   - the federal government has put in place emission reduction measures, following good practices for regulatory development;

   - the federal measures currently in place have been assessed in terms of their success;

   - Environment Canada has mechanisms for working with the provinces and territories to reduce emissions; and

   - the Department has an implementation plan that describes how federal departments and agencies will

   - the federal government contributes to achieving Canada's emission reduction target.

2. To determine whether Environment Canada, working with others, has used sound methods for estimating and reporting Canada's future greenhouse gas emissions.

3. To determine whether Environment Canada, working with others, is tracking, assessing, and reporting on funding under Canada's fast-start financing initiative and the results achieved, including reductions in greenhouse gas emissions.

SCOPE

The audit focused on the actions of three federal entities: Environment Canada, Natural Resources Canada, and Transport Canada.

We also spoke with other federal organizations to obtain their perspectives. The audit covered the period between January 2011 and July 2014.

AUDIT FINDING

Overall, we found that federal departments have made unsatisfactory progress in each of the four areas examined. Despite some advances since our 2012 audit, timelines for putting measures in place to reduce greenhouse gas emissions have not been met and departments are not yet able to assess whether measures in place are reducing emissions as expected. We also found that Environment Canada lacks an approach for coordinating actions with the provinces and territories to achieve the national target, and an effective planning process for how the federal government will contribute to achieving the Copenhagen target.

RECOMMENDATIONS

1. Given its commitment to be a world class regulator, Environment Canada should publish its plans for future regulations to reduce greenhouse gas emissions, such as the oil and gas regulations, with sufficient detail and lead time, so that consultations with interested and affected parties can be transparent and broadly based, and the parties can plan effectively.

2. Environment Canada, working with Natural Resources Canada, should improve the value to decision makers of its climate change reports by describing the key assumptions, separately indicating the impact of federal and provincial measures as far as possible, communicating the uncertainty associated with its estimates, and more appropriately and consistently describing the future emissions from Canada's forests.

3. In addition to the information currently provided, Environment Canada, with its partners for the fast start Financing initiative, should regularly publish a consistent, full summary of the project disbursements and the actual amounts repaid to Canada, subject to commercial confidentiality constraints. It should also describe the risks associated with the repayable contributions, indicate the extent to which concessionary terms and conditions apply, and provide an estimate of the impact of these risks on the amount that will ultimately be repaid to Canada.

FOLLOW UP BY SAI OR GOVERNMENT

▪   New regulations are being put in place slowly relative to the 2020 target, and the federal government has yet to act in sectors other than transportation and electricity

▪   Environment Canada has a strong commitment to the external review of its modelling framework and projections. Not only does it submit Canada's Emissions Trends report and its underlying projections for peer review, Environment Canada participates in the internationally-recognized Stanford University Energy Modelling Forum.

▪   Environment Canada is committed to providing transparent information to Canadians and our international partners on Canada's climate financing and its results, notably through Canada's climate finance website, Canada's National Communications, and Biennial Reports to the United Nations Framework Convention on Climate Change, and through other relevant reporting on Canada's international assistance.

TITLE OF AUDIT

Air Quality Control Measures : Bangkok Metropolitan Administration (BMA)

BACKGROUND

Air pollution is one of major environmental issues in Bangkok mainly related to rapid growth in number of motor vehicles. This, in turn, causes direct environmental impacts and serious effects on public health.

LINES OF INQUIRY/METHODOLOGY

Review of documents, Questionnaire, Interviews and Observations.

Lines of inquiry:

1. Smoke detection data;

2. Road dust control, regular dust vacuuming and cleaning on road and footpaths;

3. Dust and dirt control at construction areas. Law enforcement dust and dirt control at construction sites.

AUDIT FINDINGS

1. According to the observation of 44 construction sites in 5 districts located in BKK inner area, it was found that most construction sites had not complied with the regulations.

2. BMA has not set up criteria for district offices to define the proper frequency of road cleaning in any areas. As a result, some district offices had the identical targeted frequency number of road cleaning even though the seriousness of the problem was not the same.

3. There were only one out of 48 district offices was found to report the smoke detection result through the BMA data link system.

RECOMMENDATIONS

1. BKK needs to assign staff to closely observe, survey and monitor the construction sites in the area to assure of compliance of the regulations.

2. BMA needs to prepare and launch a document that determine the criteria the district offices will use for setting their appropriate targeted number of road cleaning regarding their different level of problem.

3. BMA needs to corporate and consult with traffic police to determine the implementation guideline for smoke detection and to instruct the district offices to focus on the evaluation of smoke detection in order to take the evaluation result to improve their working performance.

FOLLOW UP BY SAI OR GOVERNMENT

1. BKK has already taken actions regarding the recommendations;

   - BKK launched a meeting with Department of land transport and Pollution Control Department on 17th August 2011 to reach agreements on problem solutions and improvement of effectiveness and efficiency in black smoke detection plan in 50 districts of Bangkok.

   - BKK enforces staff to input results in the BMA's data link system. The district offices also have to regularly use such results to determine and improve performance.

2. The air control management of BMA is slightly better after the audit. Though BMA has implemented in accordance with OAG's recommendations, it does not have much effect on overall air quality in BKK. This is because there are so many factors and many related entities effecting the effectiveness and efficiency of air control.

UGANDA

TITLE OF AUDIT

Regulation and Monitoring of Drilling Waste Management in the Albertine Graben by National Environment Management Authority (NEMA).

BACKGROUND

There was a major problem whereby instead of treating and disposing of the waste, it was being held in Waste Consolidation Areas (WCAs). The practice exposed the Albertine Graben to more potential environmental risks since a larger area of land in this sensitive eco-system was cleared, dug up and compressed as a methodology to handling the waste in the short run, than if waste was treated and disposed of at once. The so called waste management practices also created a double cost in terms of time, labour and money since the waste would have to be re-transported to a final waste treatment and disposal site. NEMA had directed that all drilling waste be contained in Waste Consolidation Areas (WCAs), since the Authority had not yet decided on the best way to dispose of the waste. Also, the Authority was reviewing waste management legislation.

AUDIT OBJECTIVE

The purpose of the audit was to assess the efforts of NEMA in securing effective and environmentally sound mechanisms for handling drilling waste in the Albertine Region.

OVERALL AUDIT FINDINGS

- Continued storage of waste at the sites also involved a recurrent cost to government since the monies for maintaining these sites was charged by the oil companies as part of the recoverable expenditure.

- By the end of the audit, NEMA had licensed four companies to treat waste generated by the three oil companies. However, none of these waste treatment companies had been engaged by the oil companies, as they felt they did not satisfy international standards.

- Oil exploration and production companies did not prepare and submit self-monitoring reports against set parameters as per requirement. A review of their self-monitoring reports revealed that out of the expected twelve (12) self-monitoring reports, Tullow (TUOP) had submitted 7 reports (58%) while Total (TEP) and CNOOC were each expected to have submitted six (6) self-monitoring reports but Total (TEP) submitted 3 (50%) and CNOOC none (0%) respectively.

- The relevant stakeholders were not consulted while formulating the Operational Guidelines on Waste Management for oil and gas in the Albertine Graben issued in 2012, and as a result, the guidelines had several gaps that hampered their adoption and/implementation.

RECOMMENDATIONS

- NEMA should as far as possible engage the Oil companies to address their concerns and enable treatment and disposal of waste by the licensed companies.

- NEMA should ensure that the Oil and Exploration companies carry out Self-Monitoring and report the findings to it as required and where necessary, use available sanctions in the Law to compel their compliance.

- NEMA should involve stakeholders in formulation of any policies, legislation or guidelines, and seek their input.

FOLLOW UP BY SAI OR GOVERNMENT

The Audit report attracted media attention, and both NEMA and the oil companies have made significant efforts to implement some of the Audit recommendations, with major improvements in the management of the waste. The following are changes observed:

- NEMA engaged the oil companies extensively to understand their concerns.

- Together with the oil companies, NEMA also worked with the Waste Treatment and disposal firms to ensure their treatment plants satisfied international standards.

- To date, two of the waste treatment companies have managed to raise their plants to international standards. The oil companies have finished transferring the waste from the WCAs, and the waste has been treated and disposed of.

- The previous costs on maintenance of the waste are no longer incurred, and the sites are currently undergoing restoration. This has significantly reduced the risk to the environment, and lowered the overall cost of waste management.

- NEMA engaged the companies on this. In the latest audit (2015), this parameter was assessed; performance in this area was noted to have improved significantly. Tullow's performance rose from 58% to 100%, while Total's and CNOOC's rose from 50% to 100% and from 0% to 77% respectively.

- NEMA is currently reviewing Waste Management legislation, and is conducting widespread consultation. Though the review is behind schedule, the draft legislation is much more comprehensive than the previous ones.

TANZANIA

TITLE OF AUDIT

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.

AUDIT OBJECTIVE

The main objective of the audit was to examine how the Prime Minister's Office – Disaster Management Department (PMO-DMD), Manyara Regional Secretariat (MRS), Babati Town, District Councils and Tanzania National Roads Agency (TANROADS) - Manyara have implemented laws, regulations, policies and national strategic guidelines on floods management.

SCOPE

The audit covers the responsibilities to be carried out by the head of the PMO-DMD down to and including the focal officers at Manyara Regional Secretariat and Babati District and Town Councils levels, in terms of flood prevention and mitigation/rehabilitation. It is based on physical structures to prevent and mitigate floods.

OVERALL AUDIT FINDING

In the audit it was found that there were continued risks for further preventable damage from floods in Babati. This was due to inadequate and deteriorating preventive structures, inappropriate location of residential areas, inadequate maintenance and design of Minjingu – Dodoma trunk road and unpreparedness of those responsible for disaster management.

RECOMMENDATIONS

- Babati Town and District Councils had to improve on the failure to monitor and control growth of the grass barrier which prevented the flow of water into the Kigongoni outlet and allowing cattle grazing in the prohibited area around the Lake Babati.

- Manyara Region and Babati Councils to consult soil conservation experts on alternative ways forward considering the investments made, the huge gully formed, the lowering of the channel bed at the embankment; and to avoid further excavation of easily erodible soil.

- Town Planners in Babati Town Council should take into account the flood risks when allocating land. Efforts should be made to ensure that preventive structures/measures are installed in flood prone areas which have been allocated for various purposes.

- Babati Town and TANROADS-Manyara to decrease the risk of floods though as a short term measure by replacing the small culverts in the Kigongoni embankment with bigger ones.

- TANROADS to design culverts at the Kigongoni embankment that will adequately accommodate enough water flow to avoid lake water flooding through Babati town.

- TANROADS to ensure that rehabilitation works on flood mitigation structures is done much earlier to prevent roads from probable closure due to further potential damage by future floods; and consult experienced Bridge Engineers/Soil Engineers when considering the further designing of the retaining wall to give it optimum structure and the necessary dimensions for preventing the road bank from damage in the most favourable way.

- TANROADS should use the experiences gathered from previous floods to be communicated sufficiently to the consultancy firm that is doing the design for the rehabilitation of the Dodoma – Babati road and the Singida – Babati – Minjingu road.

FOLLOW UP BY SAI OR GOVERNMENT

Follow-up on the implementation of recommendations discovered that total of 19 recommendations were given to PMO-DMD, RS, Babati Town Council, and TANROADS-Manyara. 10 out of 19 recommendations (53%) were fully implemented; 6 out of 19 recommendations (31%) were partially implemented and the remaining 3 out of 19 recommendations (16%) were not implemented. The follow-up results follows:

Grass barrier has been cleared which can prevent the flow of water into the Kigongoni outlet.

The established stable canal with strong embankment was preventing further increase of the gully; stop order has been placed and trees have not been planted.

Town Planning Drawings consider area prone to flood. Even though Interim land use plan has not been reviewed to accommodate flood disaster at Babati District and Town Councils.

The newly constructed box culvert with four cells at Kigongoni has been constructed.

TANROADS had used experienced Bridge Engineers who designed the Kiongozi Bridge and came out with a piled foundation bridge with two spans.

TANROADS informed the consultant who designed Singida-Babati-Minjingu upgrading road project to take into account the flood problem of Babati town which was mainly caused by overflow of Lake Babati. Major structures constructed for the purpose of solving floods included the completed Box Culvert with four cells at Kigongoni which provide outlet of the lake Babati at the time when the lake is overflowing. The road in Babati town is raised and wide open drains have been constructed to provide free flow of flood water.

Chapter 8
Conclusion

The ultimate goal of Environmental Auditing is to increase the impact of environmental performance audits and to improve environmental quality in a way that is wise for the taxpayers. Like all other auditors, environmental auditors have a duty to bring about positive impact on the programs and entities they audit. There are many factors that can influence the extent to which a given audit has an impact. Some of these are within the control of the audit office; for example, the selection of the audit topic, the timeliness of the report, and the nature of the recommendations made. Other factors are perhaps beyond the control of the office, including for example, pressure from the media and parliamentarians as well as the willingness of audited entities to make changes.

Choosing audit topics relies on acquiring a solid "knowledge of business" and exercising professional judgment in assessing risk and significance. The state of the environment impacts human well-being and ecosystems. It is, therefore, important to pick subjects that people care about; focus on concrete subjects related to health, children, or local issues. Environmental Audits have to be pre-emptive, not after the fact so as to prompt governments' interventions, or responses.

The key point in all of these is that it is possible to increase the impact of environmental audits by tackling the underlying forces behind environmental degradation and impacts on people. Undertaking a root cause analysis during the examination phase of the audit is the foundation for strong recommendations. Recommendations should be focused on the desired outcome, not the means to get there. It is important to make recommendations that will trigger actions beyond the immediate action of the entity and have to be inserted at the appropriate location in the decision making process to trigger an impact onto many elements of the system.

Finally, it goes to the famous saying *'so, don't let the audit gather dust'*. All environmental performance audits need to be followed up at least twice, to determine progress in resolving deficiencies and implementing recommendations as it is always an important means of ensuring a sustainable impact. On the other hand, auditors need to consider use of innovative methods and tools to enhance quality and thus increase impact.

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