INTOSAI
Working Group on
Environmental Auditing

Results of the Fourth Survey on Environmental Auditing (2003)

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Executive Summary: Results of the Fourth Survey on Environmental Auditing (2003)[1]

Since 1992, INTOSAI's Working Group on Environmental Auditing (WGEA) has promoted the development of environmental auditing techniques and their widespread application by audit institutions. It has conducted four surveys over 10 years (1993, 1997, 2000, and 2003) to track progress on this work and identify areas where it can improve.

The report describes the results of the survey conducted in June 2003. It also analyses how environmental auditing has changed since the last survey in 2000, and presents the main changes that have taken place since the first survey in 1993.

Response to the survey

The survey on environmental auditing was sent to all 185 supreme audit institutions (SAIs) that are members of INTOSAI. We received responses from 114 audit institutions—a response rate of 61 percent.

As in previous surveys

- The EUROSAI and ASOSAI regions are the best represented; 88 percent of EUROSAI members and 82 percent ASOSAI members answered our survey. The rate of response from ARABOSAI and AFROSAI members was below that in 2000.
- High-income countries are the best represented; 88 percent answered the survey. Compared with the 2000 survey, we have a higher representation of low-income countries (although at 39 percent, they are under represented).

The mandates of the supreme audit institutions

Ninety-four percent of SAIs have a legislative mandate to carry out regularity audits and 82 percent have a mandate to carry out performance audits. Yet only 17 percent have a specific mandate to carry out environmental audits. The absence of such a mandate, however, does not prevent SAIs from conducting environmental audits.

Some SAIs also advise their country on environmental governance. This has remained relatively consistent since the 2000 survey, with about one fifth of SAIs advising on environmental legislation, policies and programs, capacity development, and performance tracking. However, SAIs are playing less of a "hands-on" role with government departments in developing environmental management systems and producing environmental reports (four to five percent less than in 2000).

Environmental policies

For an SAI to audit its government's actions on environmental issues, the government needs to have environmental policies in place against which it can be evaluated (for example, a comprehensive green plan, environmental or sustainable development policies and programs, or laws and regulations on the environment). As in 2000, 93 percent of countries have an environmental policy. Some countries have a single national policy; others have numerous policies under various laws. Eighty-eight percent of the

[1] The executive summary is available in all INTOSAI languages (Arabic, English, French, German, and Spanish). These summaries and the full report (in English) are posted on the WGEA Web site: www.environmental-auditing.org or can be ordered by e-mail: environmental.auditing@oag-bvg.gc.ca.

countries state the objectives to be achieved and 81 percent state the instruments to be used in their policies.

Eighty-five percent of the countries' policies are implemented by the national government; sixty-one percent are implemented by local, regional, provincial, or federal state governments.

Environmental auditing activities

The survey results indicate that environmental auditing has been relatively stable since 1994. Sixty-two percent of SAIs said that they had completed at least one environmental audit since 2000.

Sixty-nine SAIs have produced 518 audits between 2000 and 2002. The Working Group on Environmental Auditing (WGEA) has posted on its Web site (www.environmental-auditing.org) those audits and summaries that SAIs have provided. They are available in one or more of the INTOSAI languages (Arabic, English, French, German, and Spanish).

Types of environmental audits

Performance audits (including combined regularity and performance audits) have looked at a range of government responsibilities. Between 2000 and 2002, 232 audits were produced on compliance with environmental laws and regulations and 206 reports on the implementation of environmental programs.

The most common issues in environmental audits during the last three years were internal environmental management by public authorities or departments (148 reports), freshwater (130 reports), and waste (116).

Audit capacity

We evaluated the environmental audit capacity of the SAIs that have experience with environmental audits (74 SAIs). Fifty-six percent (40 SAIs) have specific personnel dedicated to environmental auditing. Fourteen SAIs have less than one percent of their staff dedicated to environmental audits, and most of the others have between one and seven percent. Twenty-one of the 40 SAIs spend 2.5 percent of their budget on environmental auditing. However, 44 percent of SAIs have experience with environmental auditing but do not have specific personnel dedicated to environmental audit.

Planned audits in the next three years

In the coming three years, 63 percent of SAIs are planning environmental audits. The audits are in the following areas: waste (48 SAIs); freshwater (37 SAIs); agriculture, pesticides, land development, and forestry (26 SAIs); ecosystems (21 SAIs); and nature and recreation (19 SAIs). Of the 72 SAIs, 13 SAIs are planning an environmental audit for the first time.

Barriers to environmental auditing

Twenty-six percent of the 114 SAIs said that they are not experiencing any barriers to conducting environmental audits. Fifty-one percent of SAIs from EUROSAI indicate that they do not experience barriers to conducting environmental audits. However, all SAIs from OLACEFS and AFROSAI indicated that they are experiencing at least one barrier.

Some of the barriers identified by SAIs are the following:

- **Lack of skills or expertise in the SAI.** This is the most important barrier (58 percent). It was also the most important one in 2000 (50 percent). AFROSAI and SPASAI countries see lack of expertise as a main barrier (82 and 88 percent). For all the regions, the lack of expertise is one of the main issues (over 50 percent), except for the EUROSAI region (31 percent). Analysis by income level indicates

that lack of skills or expertise is the main barrier for the low- and mid-income countries (78 and 65 percent) and even for high-income countries (33 percent).

- **Insufficient government norms and standards, data on the state of the environment, and monitoring.** Forty percent of SAIs indicated that they were experiencing these barriers while conducting environmental audits.

Of the 114 respondents, 40 do not conduct environmental audits. For these SAIs, 83 percent said that the lack of skills or expertise is a very important barrier. These countries identified two key things that would help them start doing environmental audits: training or trained staff, and the availability of guidance and environmental standards.

Concurrent, joint, or co-ordinated environmental audits and audits of international environmental accords

Much co-operation is already taking place between SAIs. Forty percent of the SAIs have exchanged audit information or audit experiences on environmental auditing with other SAIs. Co-operation between SAIs in environmental auditing has increased since the last survey. The percentage of co-operation has

- more than doubled for audits of international environmental accords, and
- almost doubled for co-operation on audits of environmental issues that are not an accord.

Twenty-eight percent of SAIs are co-operating on audits of compliance with international environmental accords, and 18 percent of SAIs are co-operating on other environmental audits. Some of the audits include the RAMSAR Convention and the MARPOL Convention. There has also been several regional assessments of common natural resources, such as the Danube River Protection Convention and the Helsinki Convention (Baltic Sea).

SAIs are interested in conducting co-operative audits in the future. Similar to the 2000 survey, 19 audit offices do not have, or do not anticipate having, any barriers to doing co-operative audits. None of the SAIs indicated a lack of interest in co-operating with other countries.

Audit offices also talked about the barriers preventing them from expanding their audit practice to include joint, collaborative, or co-operative environmental audits. The barriers include the following:

- lack of resources,
- lack of expertise within the audit office,
- difficulty in finding other partners,
- competing demands,
- problems with timing,
- compatibility of language, and
- compatibility in auditing systems.

Participation in regional working groups on environmental auditing

The regional working groups on environmental auditing (RWGEA) offer a means to share expertise and find partners. Of the 74 SAIs doing environmental audits, 53 participate in regional working group, 8 want to become members, and 6 want to participate in some of the regional groups' activities on environmental auditing.

Access to WGEA and SAI resources on the Internet

The Internet is an important tool: it provides access to WGEA resources and allows SAIs to access each others' work. The last two surveys have asked SAIs about their access to the Internet. Ninety-six percent of SAIs have Internet access—a significant increase over the past three years and 90 percent have an e-mail address.

The number of SAIs with a Web site has grown from 56 percent in 2000 to 68 percent in 2003.

Governments in the SAIs countries have also increased their use of the Internet: 71 percent in 2003 compared to 55 percent in 2000. The majority of information on environmental policies or programs are posted on the Internet, which facilitates access for SAIs. Computers are being used more by governments; a net progress over the last three years.

Access to environmental reports

Of the 74 SAIs that are doing environmental audits, 50 percent make their reports available through the Internet, 38 percent make them available in paper only, and 11 percent do not make them available publicly.

WGEA tools: Awareness and usefulness

We asked three questions about awareness and the use of the ten WGEA products and compared the answers to those from the 2000 survey.

The working group still has some work to do to advertise its products. Awareness ranged from 41 percent for the "Green Auditing: A Global Challenge" video to 70 percent for the WGEA home page.

In general, SAIs used WGEA products less than during the last survey. However, those who are aware of the products find them very useful or somewhat useful. Eighty percent of them found the WGEA home page very useful and 65 percent found the booklet “How to Co-operate on the Audits of International Accords with Environmental Perspective” very useful.

The WGEA’s role in addressing barriers with its products

SAIs had specific comments on how WGEA products could be more useful. Some said the information was interesting but needed to be informed on what was available. Most suggested additional tools, such as guidance to cover a range of environmental issues and environmental auditing guidelines.

Audit organizations are looking for more support from the WGEA in the following areas:

- Seventy-five percent (85 of 114) were interested in more INTOSAI guidance on environmental auditing. Ninety-one percent of SAIs from low- and medium-income countries, 100 percent from the CAROSAI and SPASAI regions, 93 percent from the AFROSAI region, and 91 percent from the OLACEFS region were interested in more guidance.

- Seventy-six percent (87 of 114) were interested in training in auditing water issues. Ninety-six percent of SAIs from low-income countries and 88 percent from AFROSAI and SPASAI regions were interested in training in water.

- Seventy-eight percent (89 of 114) were interested in training in auditing waste issues. Ninety-one percent of SAIs from low-income countries, 88 percent from the CAROSAI and SPASAI regions, 86 percent from the OLACEFS region, and 84 percent from the ASOSAI region were interested in training in waste.

SAIs are also interested in conducting audits on water and waste (80 percent and 83 percent). SAIs from low-income countries were particularly interested (91 percent for water and 87 percent for waste).

SAIs are also interested in training activities in other environmental areas. Seventy-three percent of countries (83 of 114) are looking for training in other areas such as land use planning, pesticides, atmospheric and industrial pollution, agriculture, forestry, and biodiversity.

Environmental issues facing countries

In developing tools for the SAIs, it is important to look at what environmental issues are facing countries. According to SAIs in 2003, waste is the main issue followed by freshwater; air pollution; agriculture, pesticides, land development, and forestry; ecosystems; and nature and recreation. These environmental issues are similar to the ones that SAIs are planning to audit in the next three years; the one exception is air pollution. The top four issues are the same as in 2000, except that their order has changed. Waste has become even more important in 2003.

What should the WGEA do in the future?

The main barrier to environmental auditing is a lack of skill and experience. SAIs are looking for training to improve their skills and gain experience; they are also looking for guidelines. This is where the WGEA can help.

The results of this survey match the actions proposed in the work plan for the Working Group, which covers 2005–07.

1. Introduction

1.1 About INTOSAI, the WGEA, and the RWGEA

The International Organization of Supreme Audit Institutions (INTOSAI) http://www.intosai.org/, the professional organization of supreme audit institutions in countries that belong to the United Nations or its specialized agencies, has several working groups to develop different aspects of audit practice.

One of these is the Working Group on Environmental Auditing (WGEA) http://www.environmental-auditing.org/. The WGEA has been in place since 1992, promoting the development of environmental auditing techniques and the more widely spread application of these techniques within audit institutions. It has conducted a series of four surveys over the past 10 years (1993, 1997, 2000, 2003) to track progress on this work, and to identify things that the Working Group can do to support the development of environmental auditing techniques and its practices by INTOSAI members.

Within INTOSAI there are sub-organizations of supreme audit institutions representing seven regions: Africa (AFROSAI), the Arabic countries (ARABOSAI), Asia (ASOSAI), Caribbean (CAROSAI), Europe (EUROSAI), Latin American and Caribbean (OLACEFS), and the South Pacific (SPASAI). A regional working group on environmental auditing (RWGEA) was established in each of the INTOSAI regions except CAROSAI. The WGEA is working closely with the RWGEAs.

1.2 About this report

This report describes the results of the survey conducted in June 2003. It also analyses the trends on how environmental auditing has changed since the previous survey report, completed in 2001, and presents some changes that have taken place over the 10 years since the first survey was conducted.

Most of our results are presented as percentages. The tables include the number of respondents for each question (N=) to indicate how the percentage has been calculated. We have also included the question asked during the 2003 survey at the bottom of each table.

The survey was sent to all 185 supreme audit institutions (SAIs) participating in INTOSAI. We received responses from the audit institutions of 114 countries—a response rate of 61 percent (114 of 186)[2].

After discussing what environmental auditing is in section 2, the remainder of the report is divided into four main sections. Section 3 describes the methods we used to conduct the survey and analyze the survey results. Section 4 describes the state of environmental auditing by national audit offices worldwide. Section 5 details the feedback we received on the support for environmental auditing provided by the WGEA. Finally, section 6 rolls up the suggestions respondents had for further WGEA work that could respond to the needs of audit institutions as they develop their capacity for environmental auditing. When available, we included in the different tables the results of the previous surveys.

2. What is environmental auditing?

At the XV[e] International Congress of Supreme Audit Institutions (INCOSAI) meeting, it was agreed that environmental auditing is, in principle, not different from the audit approach as practised by SAIs. Environmental auditing can encompass all types of audit: regularity (financial, compliance) and performance audits.

[2] We also sent the questionnaire to other SAIs that are not member of INTOSAI but may be member of an INTOSAI region. One of them responded to our questionnaire and has been included in our statistics.

During an audit of financial statements, environmental issues may include the following:

- initiatives to prevent, abate, or remedy damage to the environment;
- the conservation of renewable and non-renewable resources;
- the consequences of violating environmental laws and regulations; and
- the consequences of vicarious liability imposed by the state.

Compliance auditing with regard to environmental issues may relate to providing assurance that governmental activities are conducted according to relevant environmental laws, standards, and policies, both at national and (where relevant) international levels.

Performance auditing of environmental activities may include the following:

- ensuring that the indicators of environment-related performance (where contained in public accountability reports) fairly reflect the performance of the audited entity; and
- ensuring that environmental programs are conducted in an economical, efficient, and effective manner.[3]

3. Methodology and response rate

3.1 Methodology

Some of the survey questions have remained the same over the past 10 years—giving us the opportunity to track the changes that have occurred over this time period. These questions include: the number of countries that have formulated an environmental policy, the roles and responsibilities of the audit institutions with respect to environmental audit, and the number of audit institutions that have done environmental audits.

Because the survey is such a valuable tool for learning about SAIs' activities and needs in the area of environmental audit, additional questions have been added. New questions include:

- Does your SAI have specific personnel dedicated to environmental audits?
- Water and waste are the central themes of the Working Group on Environmental Auditing (WGEA) work plan. We are now developing guidance and training activities in those fields. Would you be interested in conducting audits in this field and in receiving training in this area?

Two versions of the questionnaire were produced. A *short questionnaire* collected information from SAIs not involved in environmental auditing, to reduce the time they had to spend on filling out the survey and in this way, increase their participation. A better understanding of their requirements will help the WGEA to gear some of its products to their specific needs. A *long questionnaire* asked the same initial questions,

[3] INTOSAI Working Group on Environmental Auditing, Guidance on Conducting Audits of Activities with an Environmental Perspective, 124-127. See our Web site: www.environmental-auditing.org under WGEA publications.

but also collected information on the types of environmental audits conducted, countries' experiences in doing these audits, and what supports were needed.

Because not all questions were applicable to all countries, all surveys were not completed in full. Therefore, the number of responses to the questions varies.

The surveys were distributed by mail to all 185[4] INTOSAI members in June of 2003. Follow-up was done in cases where responses were incomplete or required clarification. Follow-up was done by e-mail or by fax. The regional co-ordinators from the INTOSAI regional working groups on environmental auditing also sent reminders to their members.

3.2 Response rate

Forty (40) SAIs are not involved in environmental auditing and have responded to our short questionnaire. Seventy-four (74) SAIs, with experience in environmental auditing have answered our long questionnaire. A total of 114 SAIs have answered one of the two questionnaires. Appendix A gives more details on who answered the questionnaires. Sixteen new (15) countries responded for the first time to the survey. A total of 86 countries responded to both the 2000 and the 2003 questionnaires.

As in the other surveys, the EUROSAI and ASOSAI regions remain the two regions that are the best represented; 88 percent of the members of EUROSAI and 82 percent of the members of ASOSAI have answered our questionnaire. We can assume that we have a fair picture of what these two regions do and about their needs in environmental auditing.

Table 1 shows the responding rate by INTOSAI region. The responding rate of the 2003 questionnaire of 61 percent was the same as the 2000 questionnaire (61 percent). The responding rate of ARABOSAI and AFROSAI was clearly lower than in 2000 but higher for EUROSAI and ASOSAI.

Table 1 Response rate per INTOSAI region*

	Number of respondents				Response rates			
					2000		2003	
INTOSAI region	**1993**	**1997**	**2000**	**2003**	**INTOSAI population**	**Percent response**	**INTOSAI population**	**Percent response**
EUROSAI	27	30	34	39	41	83	45	88
ASOSAI	24	23	25	31	49	78	38	82
AFROSAI	10	14	21	17	19	43	51	33
OLACEFS	11	12	13	14	14	65	21	67
ARABOSAI	11	12	17	9	20	90	20	45
CAROSAI	3	3	8	8	32	57	14	57
SPASAI	5	6	6	8	13	46	15	53
Other	3	3	4	2	12	33	4	50
All regions	**83**	**88**	**110**	**114**	**180**	**61**	**186****	**61**

* Based on the actual membership of regions in 2003. Some INTOSAI members are affiliated to two regions; therefore, the numbers do not add up.
**Includes one SAI that is not a member of INTOSAI but who responded to the 2003 questionnaire.

[4] We also sent the questionnaire to other SAIs that are not member of INTOSAI but may be member of an INTOSAI region. One of them responded to our questionnaire and has been included in our statistics.

Table 2 contains an analysis of the response rate by level of income of the country. As in the previous surveys, the high income countries are the ones that are the best represented in the results; 88 percent of them answered the questionnaire. If we compare our results to the survey results of 2000, we have a higher representation of the low income countries (although at 39 percent, they are still less represented than the other levels of income). It is important to keep in mind this information while analyzing the results of the 2003 survey. In order to better analyze the needs of the lower income countries, where appropriate, we tried to analyse the results with information relating to their level of income.

Table 2 Response rate per income level*

Income level	Number of respondents				Response rates			
					2000		2003	
	1993	1997	2000	2003	INTOSAI population	Percent response	INTOSAI population	Percent response
Low	14	14	18	14	57	32	59	39
Middle	42	51	63	42	87	72	81	67
High	27	23	29	27	35	83	41	88
Unknown	0	0	0	0	1	0	5	40
All regions	**83**	**88**	**110**	**114**	**180**	**61**	**186**	**61**

* World Bank classification in the year the questionnaire was held.

4. State of environmental auditing worldwide

4.1 Types of mandate of supreme audit institutions (SAIs)

The majority of SAIs (94 percent) have the legislative mandate to carry out regularity audits. Many (82 percent) also have the mandate to carry out a performance audit and some to conduct a *priori* audit[5] (33 percent) or provide a *priori* expertise[6] (24 percent).

Though the majority of SAIs carry out financial and performance audits, only 17 percent of the SAIs have a legislative mandate referring specifically to environmental auditing. This percentage has remained relatively unchanged over the past six years (see Table 3). As we will see further, an absence of a specific audit mandate referring to environmental auditing does not prevent SAIs from conducting environmental audits.

[5] Audit in advance of expenditure is an example of a *priori* audit.
[6] Expert advice during the preparation of environmental laws or regulation is an example of a *priori* expertise.

Table 3 Mandate of SAIs that specifically includes environmental auditing			
Mandate of SAI includes environmental auditing	**Percentage of SAIs**		
	1997 (N=77)	**2000 (N=105)**	**2003 (N=109)***
Yes	16	14	17
No	84	86	84
(Does the legislative mandate of your SAIs specifically refer to environmental auditing? Question 2.b)			

* N=Total number of respondents for this question.

Some SAIs also play a role in advising their country on environmental governance. Their role has remained relatively consistent compared to the 2000 survey, with approximately one fifth of SAIs advising on the formulation of environmental legislation, policies and programs, capacity development, and performance tracking (see Table 4).

Table 4 Areas that the SAI advises the government on		
	Percentage of SAIs	
SAI advises government departments on the following*:	**2000 (N=108)**	**2003 (N=114)**
No (SAI does not advise government on any aspect of environmental issues)**	—	57
The formulation of environmental legislation or environmental policy and/or programs	23	24
The capacity needed to develop and implement environmental policy or programs	18	20
Environmental indicators, performance measures, monitoring-systems, or other kinds of policy-information to evaluate environmental policy	23	20
Other subjects	19	7
(Does your SAI advise government departments on one or more of the following aspects? Question 5.a)		

* An SAI may advise government on more than one aspect.
** In the 2000 survey, this option was not presented.

However, SAIs are playing less of a "hands-on" role in assisting government departments. SAIs are assisting in developing environmental management systems and the production of environmental reports four to five percent less than in 2000. Assistance with performance tracking has increased slightly (see Table 5).

Table 5 Areas that SAI assists government departments with		
	Percentage of SAIs	
SAI assists government departments in the following*:	**2000 (N=108)**	**2003 (N=114)**
No (SAI does not assist government on any aspect of environmental issues)**	—	64
Developing environmental indicators, performance measures, monitoring-systems or other kinds of policy-information	16	18
Other respects	15	11
Producing environmental reports	15	10
Developing environmental management systems	13	9
(Does your SAI actively assist government departments in one or more of the following aspects? Question 5.b)		

* An SAI may assist government on more than one aspect.
** In the 2000 survey, this option was not presented.

4.2 Environmental policies

In order for an SAI to be able to audit its government's actions on environmental issues, the government needs to have established environmental policies (for example, a comprehensive green plan, environmental or sustainable development policy, programs, or selection of laws and regulations governing the environment) against which this action can be evaluated. As in 2000, the majority of the participating countries have an environmental policy (93 percent of the respondents) (see Table 6).

Table 6 Percentage of responding SAIs whose countries have environmental policies				
Environmental policy formulated?	**Percentage of SAIs**			
	1993 (N=58)	**1997 (N=78)**	**2000 (N=107)**	**2003 (N=111)**
Yes	83	95	93	93
No	17	5	8	7
(Does your national government have an environmental policy? Question 1.a)				

Some countries have a single national policy. Others have numerous policies under various laws. Eighty-eight percent of the countries state the objectives to be achieved and 81 percent state the instruments to be used in their policies. However, Table 7 shows that less of these policies contain specific targets to be met in specified years (61 percent), or explain how the achievements will be monitored and reported (63 percent). As we mentioned earlier it is not the same group of SAIs who have answered the survey in 2000 and in 2003. Therefore, we have to be careful in interpreting these results. As we have seen, we have a higher representation of low-income countries than in 2000. It is likely that the governments of these countries do not have the specific information mentioned here in Table 7.

Table 7 Type of information included in the governmental policies

Does the environmental policy of your government describe any of the following:	Percentage of SAIs		
	1997 (N=73)	2000 (N=104)	2003 (N=114)
The objectives to be achieved?	92	90	88
The instruments to be used?	79	78	81
How achievements will be monitored and reported?	71	67	63
The targets to be met in specified years?	66	68	61

(Which of the following are contained in your government's environmental policy? [Choose as many categories as necessary] Question 1.b)

Most of the countries' policies are implemented by the national government (85 percent). Compared to the previous surveys, the percentage of environmental policies by national government has dropped. This may be due to the population of the fourth survey, where more low-income countries have answered our questionnaire. Others are implemented by local, regional, provincial or federal state governments (61 percent). This indicates that SAIs have to take into account a more complex system of policies (see Table 8), and they may not have the mandate to audit certain levels of government.

Table 8 Bodies that make decisions on environmental policies

Entities that make decisions on environmental policies in respective SAI's countries	Percentage of SAIs		
	1997 (N=79)	2000 (N=107)	2003 (N=114)
National government	97	99	85
Local, regional, provincial, or federal state governments	53	61	61
Non-governmental public bodies (including semi-governmental organisations and quasi-autonomous non-governmental organisations or quasi and environmental regulators)	22	28	29
A shared responsibility*	-	-	26
Others	6	12	4

(Jurisdiction over environmental policy is exercised by: [Choose as many categories as necessary] Question 1.c)

*In the 1997 and 2000 surveys, this option was not presented.

4.3 SAIs' environmental auditing activity

The survey results indicate that environmental auditing activity has been relatively stable since 1994. Of the SAIs that responded, 62 percent said that they had completed at least one environmental audit since 2000 (see Table 9). Sixty-nine (69) SAIs have produced 518 audits between 2000 and 2002 (see Table 10). It should be noted that even though some SAIs have answered that they have conducted an environmental audit since 2000, they did not provide a list of their reports. In addition, the lower number of reports for this survey does not necessarily mean that SAIs are less productive. Some SAIs that previously produced many reports did not answer this survey. Finally, we did not analyse the breadth of these reports.

Table 9 Percentage of SAIs that have completed one or more environmental audits

SAIs who have completed one or more environmental audits	Percentage of SAIs			
	1989–93 (N=58)	1994–96 (N=78)	1997–99 (N=110)	2000–02 (N=114)
Yes	42	60	57	62
No	58	40	43	38

(Has your SAI conducted any environment audits since 1 January 2000? Question 4.a)

Table 10 Volume of environmental audit work

Volume of environmental audit work completed	1989–93* (N=83)	1994–96 (N=88)	1997–99 (N=109)	2000–02 (N= 118**)
Total number of reports published by SAIs in the past three years	306	589	564	518
Average number of reports per SAI that produced reports for the period	7.8	9.8	9.1	7.5

(Please list your reports on environmental issues, completed since 1 January 2000. Question 4.c)

* The first survey covered more than three years.
** We included data from 4 SAIs that did not answer the fourth questionnaire, but had included reports in the third questionnaire for the year 2000.

The number of environmental audits being done by the countries varies. In the periods covered by the last two surveys, most SAIs doing environmental audits produced from 1 to 10 reports. However, one SAI produced as many as 49 reports over a three-year period. Note that we did not evaluate the breadth of coverage of these audits (see Table 11).

Table 11 Number of environmental audits conducted

Number of environmental audits conducted:	Number of SAIs	
	1997–99	2000–02*
1 report	12	13
2-5 reports	18	26
6-10 reports	12	18
11-15 reports	11	2
16-20 reports	4	2
21-25 reports	2	6
26-30 reports	3	1
31-35 reports	1	-
36-40 reports	1	-
46-50		1

(Please list your reports on environmental issues, completed since 1 January 2000. Question 4.c)

* We included data from 4 SAIs that did not answer the fourth questionnaire, but had included reports in the third questionnaire for the year 2000.

The Working Group on Environmental Auditing (WGEA) has posted on its Web site (www.environmental-auditing.org) those audits and summaries that SAIs have provided. They are available in one or more of the INTOSAI languages (Arabic, English, French, German, and Spanish).

4.4 What kinds of environmental audits are SAIs doing?

Most environmental audits for the last survey period are either performance audits or a combination of a regularity and performance audits. The number of strictly regularity audits covering environmental issues has dropped over the period from 1994–96 to 2000–02 (see Table 12).

It is interesting to note that the number of combination audits (that is, both types combined) has increased since the last survey. However, for 52 audit reports completed from 2000 to 2002, information about the type of environmental audits was not provided.

Table 12 Types of environmental audits

Type of environmental audit	Number of reports		
	1994–96	1997–99	2000–02*
Regularity audits	117	87	74
Performance audits	257	304	181
Combination of both	215	169	211
Total of reports	**589**	**560**	**466****
(List your reports and check the type of audit. Question 4.c)			

* We included data from 4 SAIs that did not answer the fourth questionnaire, but had included reports in the third questionnaire for the year 2000.
**Note that for 52 audit reports completed between 2000 and 2002, information about the type of environmental audit was not provided: the total should be 518 reports.

Performance audits (including combined regularity and performance audits) have looked at a range of government responsibilities. The emphasis has consistently been placed on auditing compliance with environmental laws and regulations and auditing the implementation of environmental programs. Since 1994 the focus has changed for some types of performance audit (see Table 13).

Table 13 Types of performance environmental audits

Special type of performance audits (including audit reports in which regularity and performance audits are combined)	Number of reports		
	1994–96	1997–99	2000–02*
Audit compliance with national environmental laws and regulations by government departments, ministries, and/ or other bodies to which your mandate gives access	167	212	232
Audit the implementation of environmental programs	247	264	206
Audit government environmental management systems	117	156	157
Evaluate impact or effects of existing national environmental programs	108	108	93
Audit compliance by the government with international obligations and commitments agreed to by the government	104	57	75

Table 13 Types of performance environmental audits **(cont'd)**			
Special type of performance audits (including audit reports in which regularity and performance audits are combined)	**Number of reports**		
	1994–96	**1997–99**	**2000–02***
Audit environmental policies	61	63	62
Audit environmental effects of non-environmental programs	64	94	48
Evaluate impact or effects of proposed national environmental programs	43	28	22
(Special type of performance audit. Question 4.c)			

* We included data from 4 SAIs that did not answer the fourth questionnaire, but had included reports in the third questionnaire for the year 2000.

The most common issues in environmental audits during the last three years were internal environmental management by public authorities or departments (148 reports), freshwater (130 reports) and waste (116). See Table 14 for the other environmental issues audited.

Table 14 Types of environmental issues audited by SAIs, for the period 1994–96, 1997–99 and in 2000–02*

	Number of reports		
Environmental issue	**1994–96**	**1997–99**	**2000–02****
Internal environmental management by public authorities or departments	81	162	148
Freshwater: drinking water, water quality, rivers, lakes	147	131	130
Waste: waste in general, hazardous waste, non-hazardous waste, waste processing, and landfills	126	103	116
Pollution prevention	73	74	72
Agriculture, pesticides, land development, forestry	85	85	75
Ecosystems: biodiversity, ecological infrastructure, eco-systems management	57	57	67
Nature and recreation (including conservation and improvement of natural and/or cultural heritage, management of national parks and forests, recreation and tourism)	83	102	62
Environment and human health	110	72	58
Salt water, marine pollution	29	25	43
Air pollution	65	72	42
Other subjects	72	38	35
Industrial pollution	70	81	35

Table 14 Types of environmental issues audited by SAIs, for the period 1994–96, 1997–99 and in 2000–02* **(cont'd)**

Environmental issue	Number of reports		
	1994–96	**1997–99**	**2000–02****
Soil pollution, contaminated sites	74	59	33
Disaster management and emergency preparedness	30	33	30
Energy	29	25	27
Traffic, mobility, transport	61	32	23
Minerals and natural resources such as mining, gas, oil, etc.	64	40	20
Fish	32	31	18
Noise reduction	23	18	16
Climate change and ozone-layer depletion	20	16	13
Radioactivity	21	15	11
Acidification	72	18	9

(Environmental issues audited. Question 4.c)

*A report may be listed in more than one category.
** We included data from 4 SAIs that did not answer the fourth questionnaire, but had included reports in the third questionnaire for the year 2000.

4.5 Audit capacity

We evaluated the environmental audit capacity of the SAIs that have experience with environmental audits (74 SAIs). Of them, 56 percent have specific personnel dedicated to environmental audits. Of the 40 SAIs who have personnel dedicated to environmental audits, fourteen SAIs have less than one percent of their staff dedicated to environmental audits, and most of the others have between one and seven percent. However, there are four SAIs that have more than 15 percent of their staff dedicated to environmental auditing. Twenty–one of the 40 SAIs indicated that, on average, 2.5 percent of their budget is directed to environmental auditing.

However, it should be noted that even if an SAI does not have dedicated personnel, it is possible for an SAI to conduct an audit as demonstrated by the 44 percent of SAIs who have experience with environmental auditing but do not have specific personnel dedicated to environmental audits.

4.6 Areas of interest for planned audits in the next three years

In the coming three years, 63 percent of SAIs are planning environmental audits. The audits planned are in the main following areas: waste (48 SAIs); freshwater (37 SAIs); agriculture, pesticides, land development, forestry (26 SAIs), ecosystems (21 SAIs); and nature and recreation (19 SAIs) (see Table 15). Of the 72 SAIs that are planning to do an audit, 13 SAIs will do it for the first time mainly on the first three areas listed above.

Table 15 The most frequent topics planned to be covered by SAIs in the next three years (2004–07) in environmental auditing

Environmental audits planned in the next three years	Percentage of SAIs	
	2000 (N=100)	2003 (N=109)
Yes	57	63
No	43	36
Audits are planned on the following environmental issues	**Number of SAIs**	
	(N=98)	**(N=66)**
Waste: waste in general, hazardous waste, non-hazardous waste, waste processing and landfills	20	48
Freshwater: drinking water, water quality, rivers, lakes	22	37
Agriculture, pesticides, land development, forestry	13	26
Ecosystems: biodiversity, ecological infrastructure, eco-systems management	6	21
Nature and recreation (including conservation and improvement of natural and/or cultural heritage, management of national parks and forests, recreation, and tourism)	14	19
Air pollution	11	16
Pollution prevention	5	16
Soil pollution, contaminated sites	6	16
Industrial pollution	8	15
Environment and human health	6	14
Internal environmental management by public authorities or departments	14	13
Other subjects	4	13
Salt water, marine pollution	9	11
Disaster management and emergency preparedness	7	10
Traffic, mobility, transport	10	9
Climate change and ozone-layer depletion	3	8
Energy	6	8
Minerals and natural resources such as mining, gas, oil, etc.	10	7
Fish	4	6
Radioactivity	6	5
Acidification	3	2
Noise reduction	5	2

(Are there any environmental audits planned for the next three years? List the issues being addressed by any planned audits. Questions 6.a and 6.b)

4.7 Barriers to environmental auditing

A relatively small percentage of the 114 SAIs that responded to the questionnaire (26 percent) said that they are not experiencing any barriers to conducting environmental audits (see Table 16). For this question, we analysed the data by regions. Fifty-one percent of SAIs from EUROSAI indicate that they do not experience barriers to conducting environmental audits. However, all SAIs from OLACEFS and AFROSAI indicated that they are experiencing at least one barrier. Among the barriers identified by the SAIs, the lack of skills or expertise within the SAI is the most important one (58 percent). This barrier was also the most important one in 2000 (50 percent). AFROSAI and SPASAI countries are the ones for whom lack of expertise is a main barrier (82 and 88 percent respectively). For all regions, the lack of expertise is one of the main issues (more than 50 percent); except for the EUROSAI region (31 percent). The other barriers that the SAIs have to face are related to insufficient government norms and standards, data on the state of the environment, and monitoring. Some countries (6 percent) have also indicated that the lack of financial resources was also a barrier to conducting environmental audits. Analysis by income level indicates that the lack of skills or expertise is the main barrier for the low - and mid-income countries (78 and 65 percent) and even for high-income countries (33 percent) compared to the other barriers.

Table 16 The most frequent barriers that countries are experiencing—both countries that do and do not conduct environmental audits

Barriers (SAIs checked all appropriate responses)	Percentage of SAIs		
	1997 (N=62–72)	2000 (N=106)	2003 (N=109–114)
Lack of skills or expertise within the SAI	N/A	50	58
Insufficiently established environmental norms and standards	49	35	40
Insufficient data on the state of the environment	41	37	40
Insufficient monitoring and reporting system	51	39	40
Insufficient formulation of governmental environmental policy, such as goals not measurable, absence of a strategy, insufficient regulatory framework	N/A	26	31
No barriers experienced	18	15	26
The mandate of the SAI is not adequate	22	26	25
Other barrier(s)	30	11	9

(What barriers, if any, does your SAI experience in developing and executing environmental audits? [Choose as many categories as necessary] Question 4.f)

Of the 114 respondents in the 2003 questionnaire, 40 do not conduct environmental audits. In analyzing the data only for these SAIs, the lack of skills or expertise is a very important barrier with 83 percent of the SAIs who have mentioned it (see Table 17).

Table 17 The most frequent barriers, which countries that do not conduct environmental audits are experiencing

Barriers (SAIs checked all appropriate responses)	Percentage of SAIs 2003 (N=37–40)
Lack of skills or expertise within the SAI	83
Insufficiently established environmental norms and standards	53
Insufficient monitoring and reporting system	48
Insufficient data on the state of the environment	40
The mandate of the SAI is not adequate	38
Insufficient formulation of governmental environmental policy, such as goals not measurable, absence of a strategy, insufficient regulatory framework	35
No barriers experienced	16
Other barrier(s)	8

([Short questionnaire] What barriers, if any, does your SAI experience in developing and executing environmental audits? [Choose as many categories as necessary] Question 3.a)

These countries identified two key things that would help them start doing environmental audits: training or the presence of trained staff, and the availability of guidance and environmental standards (see Table 18).

Table 18 Key conditions that would help SAIs that are not doing environmental audits to undertake these audits

Key conditions that would help SAIs who are not doing environmental audit, to be able to develop and execute them	Number of countries 2003 (N=36)
Training, or the presence of trained staff	27
Availability of guidance and environmental standards	10
A mandate to conduct environmental audits	6
Environmental policies and/or legislation in place against which audits can be conducted	6

([Short questionnaire] What would help you to develop and execute environmental audits? Question 3.c)

4.8 Concurrent, joint, or co-ordinated environmental audits and auditing international accords

Co-operation between SAIs has increased substantially since the last survey. In particular, we can see in Table 19 that the percentage of co-operation has more than doubled for auditing international environmental accords and almost doubled for co-operation on an environmental issue topic without being on an international accord.

Table 19 Experience of SAIs regarding specific types of environmental audits or co-operation

SAIs that have experience with:	Percentage of SAIs	
	2000 (N=104–105)	2003 (N=114*)
The exchange of audit information or audit experiences with regard to environmental auditing between SAIs	38	40
Co-operation with another SAI on an audit of compliance by the government(s) with an international environmental accord (including treaties, international agreements, obligations or commitments, etc.)	11	28
Co-operation with another SAI on an audit about an environmental subject but not an accord	10	18
Audit of compliance by the government with an international environmental accord, but independent of other SAIs	12	18

(Does your SAI have experience with one or more of the following particular types of environmental audits or co-operation? Question 9.b)

*This question was not asked in the short questionnaire. However, for the SAIs that received the short questionnaire, it was assumed that their answer would be a "no" because they were not involved in environmental auditing.

Much co-operative activity is already taking place, including auditing compliance with international environmental accords (28 percent) and auditing other environmental subjects (18 percent). Some of the key audits done in co-operation with other SAIs include audits on the RAMSAR Convention and the MARPOL Convention. There have also been several regional assessments focussing on common natural resources, such as the Danube River Protection Convention and the Helsinki Convention (Baltic Sea). SAIs are exchanging audit information and methods with other SAIs (40 percent of SAIs).

SAIs are interested in conducting co-operative audits in the future. The results of the 2003 survey are quite similar to the previous one, although we have to be careful because the population that completed the two surveys is quite different (see Table 20).

Table 20 SAIs interested in conducting a co-operative audit in the future

SAIs indicating interest in the following types of co-operative activity:	Percentage of SAIs	
	2000 (N=98–102)	2003 (N=74*)
Co-operation with another SAI on an audit of an environmental subject	79	77
Co-operation with another SAI on an audit of an international environmental accord	76	72
Audit of an international environmental accord, but working independently of other SAIs	53	50

(Would you be interested in performing one or more of the following particular types of environmental audits in the near future? Question 9.d)

* This question was not asked in the short questionnaire.

A total of 19 audit offices are not experiencing or do not anticipate any barriers to doing co-operative audits, and none of the respondents indicated a lack of interest in co-operating with other countries (see Table 21). Audit offices also talked about the barriers they have faced in expanding their audit practice to include joint, collaborative, or co-operative environmental audits. The main problem is a lack of resources, followed by a lack of expertise within the audit office, and difficulty in finding other partners (see Table 21). Other factors included competing demands, problems with timing, and a lack of language compatibility and auditing systems compatibility.

Table 21 The most common barriers to performing joint, collaborative, or co-operative environmental audits

Barriers to performing joint, collaborative, or co-operative environmental audits*	**Number of countries (N=74)**
Lack of resources	36
Lack of skill or expertise within the SAI	22
No barriers	19
Finding other partners [SAI partners]	15
The mandate of the SAI is not adequate	13
Other factors	8
No interest	0

(What are the major barriers preventing your SAI from performing joint, collaborative, or co-operative environmental audits? [Choose as many categories as necessary] Question 9.c)

* An SAI may have chosen more than one barrier.

4.9 Participation in regional working groups on environmental auditing

The regional working groups on environmental auditing (RWGEA) offer a means to share expertise and find partners. Of the 74 respondents doing environmental audits, 53 already participate in such a group, 8 are interested in becoming members, and 6 are interested in participating in some of the groups' activities on environmental auditing.

4.10 Access to the WGEA Web-based resources and the other resources on the Internet

The Internet is an important tool: it provides access to WGEA resources and allows SAIs to access each others' work. The last two surveys have asked SAIs about their access to the Internet. The percentage of participating SAIs that do have Internet access increased significantly over the past three years, and almost all of them (96 percent) are now on-line (see Table 22). Ninety percent of our respondents have an e-mail address while 79 percent of the overall INTOSAI members have e-mail according to the INTOSAI Web site.

Table 22 Percentage of SAIs that have an e-mail address and have access to the Internet

SAI have an e-mail address	Percent of SAIs		
	1997 (N=80)	2000 (N=110)	2003 (N=114)*
Yes	47	90	90
No	53	10	10

SAI has access to the Internet	Percent of SAIs	
	2000 (N=107)	2003 (N=114)
Yes	84	96
No	16	4

(Does your SAI have access to the Internet? Question 7.b)

* For 2003 survey, information comes from INTOSAI Web site for e-mail address.

The number of SAIs with a Web site has been growing (see Table 23). Sixty-eight (68) percent of our respondents have a Web site while 42 percent of the overall INTOSAI members have a Web site according to the INTOSAI Web site.

Table 23 Percentage of SAIs that have a Web site

SAIs have a Web site	Percent of SAIs		
	1997 (N=80)	2000 (N=110)	2003 (N=114)
Yes	12	56	68
No	89	44	33

(Does your SAI have an Internet Web site? Question 7.c)

Generally, governments in most countries are also using the Internet more. The majority of the information on environmental policy or program are posted on the Internet, which facilitates access to the information for SAIs (see Table 24). This shows that computers are being used more by governments; overall, progress has occurred during the last three years.

Table 24 Information about government's environmental policy or program on Internet

Information on environmental policy or program on the Internet	Percent of SAIs	
	2000 (N=101)	2003 (N=103)
Yes	55	71
No or unknown	37	18
Our government has not (as yet) formulated an environmental policy or program	9	11

(What are the titles of your government's environmental policies? Indicate the main ones and the Web site addresses when available. Question 1.d)

4.11 Access to environmental audit reports

Of the 74 SAIs that are doing environmental audits, 50 percent mentioned that their reports are available through the Internet while 38 percent of these SAIs make their audits available to the public in paper format only. For 11 percent of the SAIs, audit reports are not available publicly.

5. Services offered by the WGEA: What's working—what's not working?

The WGEA is promoting environmental auditing and methodology development through a variety of means, including research papers, training, and conferences. It is also disseminating information on environmental auditing and audit techniques through its Web site and CD-ROM. The Web site also includes a bibliography of studies and guidelines. Further, the WGEA is developing a database of environmental audits that have been completed worldwide, allowing countries to learn from each other about environmental issues that they hold in common.

5.1 WGEA tools—awareness and utility

We asked three questions about awareness and the use of WGEA products. We compared these to the answers to the same questions in the 2000 survey. A summary of the questions and findings is presented below in tables 25, 26, and 27.

The Working Group still has some work to do in advertising its products. The awareness of products ranged from 41 percent (for the "Green Auditing: A Global Challenge" video) to 70 percent (for the WGEA home page) (see Table 25).

Table 25 WGEA products that SAIs are aware of, from most aware to least aware in 2003

WGEA product name	Percentage of SAIs 2000 (N=99–102) Aware	2000 (N=99–102) Not Aware	2003 (N=114) Aware	2003 (N=114) Not Aware
Home page of the Working Group on the Internet (www.environmental-auditing.ca)	69	31	70	30
Booklet: "Guidance on Conducting Audits of Activities with an Environmental Perspective"	N/A	N/A	68	32
Paper: "Sustainable Development: The Role of Supreme Audit Institutions"	N/A	N/A	67	33
Bibliography of environmental audit reports of SAIs on the Internet	63	37	63	37
CD-ROM of the INTOSAI Working Group on Environmental Auditing: "Environmental Auditing at Work"	N/A	N/A	61	40
Paper: "The Audit of International Environmental Accords"	N/A	N/A	60	40
Report on the "Third INTOSAI Survey on Environmental Auditing"	N/A [62]*	N/A [38]*	58	42
Booklet: "How to Co-operate on the Audit of International Accords with an Environmental Perspective"	72	28	52	48
Study: "Natural Resource Accounting"	61	39	41	59
Video: "Green Auditing: A Global Challenge"	66	34	41	59

(Which of the following INTOSAI products on environmental auditing are you aware of? Question 8.a)

* Report on the “Second Survey on environmental auditing (1997)”.

In general, SAIs used a bit less WGEA products than during the period of our last survey. However, those who are accessing the products are finding them either very, or somewhat useful (see tables 26 and 27).

Table 26 WGEA products that SAIs have used (from most used to least used in 2003) or intend to use in near future

WGEA product name	Percentage of SAIs				Percentage of those SAIs that did not use product
	2000 (N= 52–70)		2003 (N=113–114)		2003 (N=52–97)
	Used product (yes)	Did not use product (no)	Used product (yes)	Did not use product (no)	Intend to use the product* (yes)
Home page of the Working Group on the Internet (www.environmental-auditing.ca)	59	9	54	46	29
Bibliography of environmental audit reports of SAIs on the Internet	49	46	41	59	36
Booklet: "Guidance on Conducting Audits of Activities with an Environmental Perspective"	N/A	N/A	38	62	43
Paper: "The Audit of International Environmental Accords"	N/A	N/A	27	73	35
Paper: "Sustainable Development: The Role of Supreme Audit Institutions"	N/A	N/A	27	73	40
CD-ROM of the INTOSAI Working Group on Environmental Auditing: "Environmental Auditing at Work"	N/A	N/A	27	73	33
Booklet: "How to Co-operate on the Audit of International Accords with an Environmental Perspective"	29	16	27	73	26
Report on the "Third INTOSAI Survey on Environmental Auditing"	N/A [40]**	N/A [19]**	25	75	30
Video: "Green Auditing: A Global Challenge"	41	17	19	81	29
Study: "Natural Resource Accounting"	17	20	14	86	31

(Which of the following INTOSAI products on environmental auditing do you use? Question 8.a)

* Data from the 2000 survey for this column is not presented because it was not comparable with the way the question was asked in 2003.
** Report on the “Second Survey on environmental auditing (1997)”.

Table 27 WGEA products that SAIs have used, from most useful to least useful in 2003

Name of Product	Percentage of those SAIs that were aware of WGEA product					
	2000*			2003*		
	Very much useful	Much/ a little useful	Not at all useful	Very much useful	Somewhat useful	Not useful
Home page of the Working Group on the Internet (www.environmental-auditing.ca)	20	77	3	80	20	0
Booklet: "How to Co-operate on the Audit of International Accords with an Environmental Perspective"	20	74	6	65	30	5
Bibliography of environmental audit reports of SAIs on the Internet	13	83	4	62	38	0
Booklet: "Guidance on Conducting Audits of Activities with an Environmental Perspective"	N/A	N/A	N/A	61	38	2
Paper: "The Audit of International Environmental Accords"	N/A	N/A	N/A	56	40	4
Paper: "Sustainable Development: The Role of Supreme Audit Institutions"	N/A	N/A	N/A	52	44	4
Report on the "Third INTOSAI Survey on Environmental Auditing"	N/A	N/A	N/A	49	44	8
Video: "Green Auditing: A Global Challenge"	9	84	7	43	43	14
CD-ROM of the INTOSAI Working Group on Environmental Auditing: "Environmental Auditing at Work"	N/A	N/A	N/A	36	57	7
Study: "Natural Resource Accounting"	4	89	8	31	54	14

(Which of the following INTOSAI products on environmental auditing did you find useful? Question 8.a)

*There were 51 to 65 responses to this question in 2000 and 37 to 66 in 2003.

5.2 The WGEA's role in addressing barriers with its products

After commenting on their awareness of WGEA products, their frequency of use, and their usefulness, SAIs also had some specific comments about how these products could be made more useful. Some said that the information was of interest to them, but that they needed to be made more aware of what was

available. This was linked with technical issues around accessing the products. Some SAIs suggested the level of information in the product did not match their needs: they were either too beginner-oriented or too advanced. Most of the comments were suggestions for additional tools, such as guidance to cover a full range of environmental issues and environmental auditing guidelines.

Audit organizations are looking for more support from the WGEA in all of the areas suggested in the survey:

- 75 percent (85 of 114) of respondents were interested in more INTOSAI guidance on environmental auditing. The SAIs of low and medium-income countries were particularly interested (91 percent of them). The CAROSAI and SPASAI regions (100 percent of each of them) were the most interested in more guidance. The AFROSAI and OLACEFS are, as well, interested in more guidance (respectively 93 percent and 91 percent);

- 76 percent (87 of 114) of respondents were interested in training in how to audit water-related issues. SAIs coming from low income countries are particularly interested in training on water-related issues (96 percent of them). AFROSAI and SPASAI regions (88 percent of each of them) are the main interested in training on water-related issues; and

- 78 percent (89 of 114) of respondents were interested in training in audits on waste-related issues. SAIs coming from low income countries are particularly interested in training on waste-related issues (91 percent of them). The CAROSAI and SPASAI regions (88 percent of each of them), as well as the OLACEFS region (86 percent of them) and ASOSAI region (84 percent of them), were particularly interested by training on waste-related issues.

SAIs are also interested in conducting audits on water and waste (80 percent and 83 percent respectively). SAIs coming from low income countries were particularly interested (91 percent for water and 87 percent for waste).

The breadth of interest in environmental areas is expanding. The majority of countries (73 percent — 83 of 114) are looking for training in other areas, including:

- land-use planning, including flood control (11 countries);
- pesticides (9 countries);
- atmospheric and industrial pollution (8 countries);
- biodiversity (8 countries);
- agriculture (8 countries);
- forestry (8 countries);
- environment and human health (6 countries);
- sustainable development (6 countries);
- marine pollution (4 countries);
- transportation (4 countries);
- tourism and recreation (4 countries);
- fisheries (3 countries);
- energy (3 countries);
- urban pollution (3 countries);
- construction (3 countries);
- mining (2 countries); and
- climate change (1 country).

SPASAI and CAROSAI are the two regions that are particularly interested in more guidance and training on environmental auditing. Respondents from ARABOSAI indicated less interest in WGEA products.

5.3 Environmental issues facing countries

In developing tools for the SAIs, it is also interesting to look at what environmental issues are facing countries (see Table 28). Waste is the main issue facing countries, according to SAIs in 2003, followed by freshwater, air pollution, agriculture/pesticides/land development/forestry, ecosystems, and nature and recreation. The results are quite similar to the environmental issues SAIs are planning to audit in the next three years; the only exception is air pollution that is rated high here and not in the list of planned audits for the next three years (see section 4.6). The top four main issues are the same as in 2000, except that the order is slightly different. The waste issue is even more important in 2003 than in 2000.

Table 28 The most frequent environmental issues faced by countries

Environmental issues	Percentage of SAIs	
	2000 (N=102)	2003 (N=114)
Waste: waste in general, hazardous waste, non-hazardous waste, waste processing and landfills	65	79
Freshwater: drinking water, water quality, rivers, lakes	65	67
Air pollution	45	51
Agriculture, pesticides, land development, forestry	56	46
Ecosystems: biodiversity, ecological infrastructure, eco-systems management	36	39
Nature and recreation (including conservation and improvement of natural and/or cultural heritage, management of national parks and forests, recreation and tourism)	28	39
Salt water, marine pollution	37	33
Industrial pollution	25	26
Soil pollution, contaminated sites	25	26
Traffic, mobility, transport	33	26
Disaster management and emergency preparedness	16	24
Environment and human health	28	21
Internal environmental management by public authorities or departments	15	21
Energy	10	20
Pollution prevention	24	19
Climate change and ozone-layer depletion	11	18
Fish	11	16

Table 28 The most frequent environmental issues faced by countries **(cont'd)**		
Environmental issues	**Percentage of SAIs**	
	2000 (N=102)	**2003 (N=114)**
Noise reduction	11	16
Minerals and natural resources such as mining, gas, oil, etc.	8	13
Other subjects	6	10
Acidification	8	6
Radioactivity	5	6
(What are the main environmental issues facing your country? Question 10.b)		

6. What should the WGEA do in the future?

The main barriers to the expansion of environmental auditing have to do with lack of skills and experience. SAIs are looking for training to help them improve their skills and gain experience. They are also looking for guidelines. The following table shows how the WGEA can help SAIs to overcome their barriers.

Table 29 Correlation with WGEA work plan 2005–07			
WGEA products and services	**Finding**	**Actions**	**Section of work plan where finding is addressed**
Awareness of WGEA products	Awareness ranged from 40 percent to 68 percent. Of those aware of the WGEA Web site, 54 percent are using it. WGEA could continue to emphasize the Web site as a marketing tool.	Implement the communication plan 2005–07. Develop and implement Web site improvements. Explore the use of information technology for distributing and exchanging information on environmental auditing.	2.5.4 (a), (c) and (d)
Guidance	There is a great interest in expanded guidance to cover a range of environmental issues. The key issues appear to be land-use planning, pesticides, atmospheric and industrial pollution, biodiversity, agriculture, and forestry.	Publish summary of audits. Publish paper on auditing biodiversity. Prepare tools on auditing water and waste.	2.5.1 (a), (b) and (c)

Table 29 Correlation with WGEA work plan 2005–07 **(cont'd)**			
WGEA products and services	**Finding**	**Actions**	**Section of work plan where finding is addressed**
Concurrent, joint or co-ordinated audits	SAIs are interested in concurrent work, incl. World Summit on Sustainable Development; some are already involved in joint work.	WGEA to prepare a long-term plan for concurrent, joint or co-ordinated audit work. Publish a report capturing lessons learned and experiences in planning and conducting such audits.	2.5.3 (a) and (b)
Lack of skills or expertise	Lack of skills or expertise is a major barrier for an SAI in conducting environmental auditing. SAIs are interested in training.	Encourage and support the adaptation and use of the training material in two additional INTOSAI regions. Hold an information exchange workshop/seminar at the 2005, 2006 and 2007 WGEA assembly meetings.	2.5.2 (a) and (b)

The results of this survey are very well aligned with the actions proposed in the work plan for the Working Group—covering the period from 2005–07.

Appendix A: SAIs that answered our fourth questionnaire and previous questionnaires

The fourth questionnaire was sent to 186 SAIs and we received responses from 114 SAIs. For the first survey, in 1993, the total response was 83 SAIs. In 1997 (the second survey), the total response was 88 SAIs. In 2000 (the third survey), 110 SAIs responded.

Country	Questionnaire			
	1	2	3	4
Albania		●	●	●
Algeria	●	●	●	●
Angola				●
Antigua and Barbuda		●	●	●
Andorra				●
Argentina		●	●	
Australia	●		●	●
Austria	●	●	●	●
Azerbaijan			●	●
Bahamas				●
Bahrain	●	●	●	
Bangladesh	●	●	●	●
Barbados			●	
Belarus				●
Belgium	●	●	●	●
Belize			●	●
Bhutan				●
Bolivia		●	●	●
Brazil	●	●	●	●
Brunei Darussalam	●			●
Bulgaria	●			●
Burkina Faso		●		
Cameroon	●		●	
Canada	●	●	●	●
Cape Verde	●	●	●	
Chile	●	●	●	●
China	●			●
Colombia	●	●	●	●
Cook Islands				●
Costa Rica	●	●	●	
Croatia		●	●	●
Cuba	●			
Cyprus	●	●	●	●
Czech Republic	●	●	●	●
Denmark	●	●	●	●
Ecuador	●			●
Egypt	●		●	●
El Salvador			●	●
Eritrea			●	
Estonia	●	●	●	●
Ethiopia	●	●	●	●

Country	Questionnaire			
	1	2	3	4
European Union	●	●	●	
Fiji		●	●	●
Finland	●	●	●	●
France	●		●	●
Germany	●	●	●	●
Ghana		●	●	●
Greece	●	●	●	●
Guatemala	●			
Grenada			●	●
Guyana		●	●	
Honduras	●		●	
Hungary	●	●	●	●
Iceland	●	●		●
India	●			●
Indonesia	●	●	●	●
Iran			●	●
Iraq	●	●	●	
Ireland	●	●	●	●
Israel	●	●	●	●
Italy	●	●	●	●
Jamaica				●
Japan	●	●	●	●
Jordan		●	●	●
Kiribati		●		
Korea, Republic of	●	●	●	●
Kuwait	●	●	●	●
Kyrgyrzstan				●
Lao				●
Latvia		●	●	●
Lebanon			●	
Leshoto			●	●
Libyan Arab Jamahiriy			●	
Liechtenstein			●	
Lithuania		●	●	●
Luxemburg	●			●
Macedonia		●		●
Malaysia	●	●		●
Maldives			●	●
Malta	●	●	●	●
Marshall Islands	●			

Country	Questionnaire			
	1	2	3	4
Mauritius		●	●	●
Mexico	●		●	●
Micronesia, Federated States of	●			●
Mongolia				●
Myanmar	●			
Morocco	●	●	●	
Namibia		●	●	●
Nepal	●	●	●	●
Netherlands, The	●	●	●	●
Netherlands Antilles, The		●		●
New Zealand	●	●	●	●
Nicaragua		●		●
Northern Mariana Islands				●
Norway	●	●	●	●
Oman, Sultanate of	●	●	●	●
Pakistan	●	●	●	●
Palau				●
Panama		●		●
Papua New Guinea	●	●	●	●
Paraguay		●	●	●
Peru	●	●	●	●
Philippines	●	●	●	●
Poland	●	●	●	●
Portugal		●	●	●
Puerto Rico			●	
Qatar	●	●	●	●
Romania	●		●	●
Rwanda				●
Russian Federation		●	●	●
Saint Lucia	●		●	●
Saint Kitt and Nevis				●
Saint Vincent and the Grenadines	●			

Country	Questionnaire			
	1	2	3	4
Saudi Arabia	●	●	●	
Seychelles			●	
Slovak Republic	●	●	●	●
Slovenia		●	●	●
South Africa	●	●	●	●
Spain			●	●
Sri Lanka			●	●
Sudan			●	●
Suriname	●		●	
Swaziland	●	●	●	●
Sweden	●	●	●	●
Switzerland	●	●	●	●
Syrian Arab Republic			●	
Tanzania				●
Thailand		●	●	
Togo		●	●	
Tonga		●	●	●
Trinidad and Tobago		●	●	●
Tunisia		●	●	●
Turkey	●	●	●	●
Tuvalu	●	●	●	
Uganda	●		●	●
Ukraine			●	●
United Arab Emirates	●	●	●	●
United Kingdom	●	●	●	●
United States of America	●	●	●	●
Uruguay		●	●	●
Vanuatu	●			
Venezuela	●		●	●
Viet Nam		●	●	●
Yemen	●	●	●	
Zambia	●	●	●	●
Zimbabwe	●	●	●	●