INTOSAI
Working Group on
Environmental Auditing

Compendium of Workshop Papers

Ninth Meeting of the Working Group on Environmental Auditing

Brasilia, Brazil

30 May – 2 June 2004

TABLE OF CONTENTS

ENVIRONMENTAL AUDITING AND BIOLOGICAL DIVERSITY

Audit Report No. 38, 2002-03, Referrals, Assessments and Approvals under the Environment Protection and Biodiversity Conservation Act 1999 (Australia)

Theme: **Environmental Auditing and Biological Diversity**

Author: **Peter McVay**

Summary, challenges and lessons learned

Introduction

In 1999 the federal government introduced new comprehensive legislation through the *Environment Protection and Biodiversity Conservation Act 1999* (The Act). The Act codified the powers of the federal government in environment and sustainable development at the national level. A key part of the legislation was the requirement for national environmental impact assessment in Australia as well as strengthened requirements for federal agencies in managing sensitive environmental matters. Audit report No 38 2002-03 focussed on providing Parliament with a review of performance in implementing these aspects of the new legislation after the first two years. This paper summarises the report and provides information on some of the challenges and lessons learned.

Audit objectives and scope

The audit objective was to report on the quality and timeliness of environmental referrals, assessments and approvals under the Act as well as compliance by Commonwealth agencies with the provisions of the Act. The scope of the audit was focussed on the role of the Department of Environment and Heritage (DEH) in administering the Act. For completeness, the ANAO also examined compliance with the Act by 17 other federal agencies.

Methodology

The ANAO interviewed DEH staff and examined files and records relevant to development referrals, assessments and approvals covered by chapters three and four of the Act. Of the 603 referrals made between the Act being introduced and 30 June 2002, the ANAO examined 70 actions (11.6 per cent) that included:

- 34 controlled actions that have been approved at all stages of the process;
- 28 referrals determined to be ‘not a controlled action’ (i.e. 8.1 per cent of the 357 referrals in this category);
- eight referrals determined to be ‘not a controlled action if done in a particular manner’ (17 per cent of the 47 referrals in this category); and
- two referrals that were reconsidered (these are included in the above categories).

The ANAO also invited submissions from relevant stakeholders. Thirty-one submissions were received from a range of stakeholders such as environment groups, industry and government. Consultations were also conducted directly with stakeholders including major relevant federal agencies as well as environment groups, industry, local and state government officials.

Audit findings and impacts

The ANAO concluded that the referral, assessment and approval processes under the Act are generally thorough and well documented. They are also improving as more experience is gained with the operation of the legislation. DEH had established and implemented rigorous processes that provide an assurance that the matters required to be considered under the Act are taken into account in a comprehensive manner.

The ANAO was satisfied that in the overwhelming majority of cases examined, the reasons for decisions by the Minister or delegate were documented and were consistent with the Prime Minister's *Guide on Key Elements of Ministerial Responsibility* and the principles of administrative law. In those 22 cases on referrals where the former Minister took a different view from DEH as to whether the Act was triggered, the majority of examples were well documented and provided an explanation as to the reasons for decisions. However, in four cases, the reasons for decision did not clearly show how the specific provisions of the Act were taken into account. Better documentation in these cases would have provided greater transparency and placed the Department in a better position to consider the issues raised in future cases.

Staff in DEH have been active in assisting organisations undertaking an action to determine whether their action is likely to have a 'significant impact', and would need approval under the Act. However, over the first two years of the Act's operation the vast majority of referrals (some 71 per cent) were determined not to be 'controlled actions'—i.e. the federal government did not need to consider the matter further than the referral phase required under the Act. At the same time, relatively few referrals have been made from some industries such as agriculture, as well as from federal agencies.

More specific guidance and promotion of the Act in relation to what constitutes a 'significant impact'—especially within industry sectors or regions—would assist in encouraging relevant referrals from key industry groups. This is important as 30 per cent of referrals were estimated to have inadequate information particularly in regard to the accuracy and completeness of fauna or flora surveys used to support the referral and the potential for controlling actions. Drawing attention to specific responsibilities of federal agencies under the Act would also assist in this area.

The timeliness of decision-making was generally in accordance with the time frames specified in the Act. The timeliness of decision-making in 2001–02 was an improvement on that of the previous year with more than 90 per cent of the statutory decisions made on time. Timeliness compared favourably with similar processes at the State and Territory level but there are opportunities for further improvement. Where required time frames have not been met, the reasons are documented and reported to Parliament as required by the Act. However, while the reports to Parliament are accurate, there have been difficulties associated with generating accurate timeliness statistics from the Department's management information system.

Improvements to the system would enable DEH to generate statistics more cost effectively than is currently the case.

Monitoring and enforcing compliance with the provisions of the Act is crucial to the effective operation of the Act. As part of its compliance strategy, Environment Australia has been building awareness of the requirements of the Act by informing stakeholders of their obligations. While plans have been put in place for monitoring actions approved under the Act and, in particular, for auditing any conditions attached to approvals, implementation is still at an early stage. Inadequate monitoring was also an issue identified as a shortcoming with the implementation of the previous legislation. Finalising compliance and enforcement guidelines and strengthening compliance networks with other levels of government and non-government organisations, together with a more timely and effective approach to potential breaches of the Act, would assist in enhancing compliance and enforcement action.

A number of case studies highlighted the importance of prompt action by the Department. In one case, 500 hectares had been cleared near a national park without approval. While seven listed threatened floras or fauna species were potentially present at the site that was cleared, the disposal of the cleared vegetation made it unlikely that a prosecution would be successful. A further case study highlighted the importance of other federal agencies and their contractors being made aware of the provisions of the Act. In this case a contractor working for a federal agency had cleared a track through a rehabilitation area for an endangered species. This is illustrated as follows in figure 1.

Figure 1.

Greater attention to publicly reporting emerging trends and changes over time would strengthen the quality of reporting and provide a better overall picture of achievements and outstanding challenges in relation to protecting matters of national environmental significance.

Recommendations

Six recommendations were made by the ANAO to:

- improve the consistency and quality of referrals made under the Act by improving guidance to proponents and setting standards for referral information;
- address the risks from proponents submitting 'staged' referrals through improved disclosure requirements;
- improving the awareness of the requirements of the Act – especially in federal agencies;
- strengthening monitoring of conditions of approval;
- finalising compliance and enforcement procedures;
- enhancing the quality of public reporting by including challenges, risks and priorities as well as progress towards the achievement of the objectives of the Act.

Agency Response

DEH considered that the report provides a valuable review of the way it undertakes its responsibilities in administering the Act, and makes a significant contribution to work DEH has been undertaking to improve its performance. DEH also welcomed the ANAO's overall conclusions. While the primary focus of the audit was on Environment Australia, a total of six agencies were involved to various degrees. Other agencies included, Defence, Immigration and Multicultural and Indigenous Affairs, AusAID, Transport and Regional Services and AirServices Australia. All agencies generally agreed with the findings. All recommendations were directed to DEH. DEH agreed with all recommendations.

Challenges and lessons learned

There were three key challenges facing the audit team in conducting the audit. These were:

- What standard do you use to measure and report on the quality of the assessments?
- On what basis can you make a judgment on timeliness?
- What is an adequate level of compliance and enforcement and how do you measure the consequences of minimal action vs. legal action?

Quality measures can be difficult to judge because of the high degree of variation in referrals by sector, scale and technical complexity. For example, a referral involving land clearing for urban development in Sydney has little in common with a referral for oil exploration in the Tasman Sea. The likely impacts on environmental values and the ways to avoid or ameliorate these impacts will necessarily be different in each case.

The Act itself specified some quality measures in terms of what must (and must not) be considered at different stages of approval. For example, the Minister must consider all adverse impacts of a proposal, take into account the precautionary principle and consider public comments. We used these provisions as the basis of the criteria and test program in conjunction with the adequacy of guidelines provided to applicants. Comments provided by

stakeholders surveyed during the audit, formal complaints and the number of times an application had to be reconsidered or referred back to the proponent were indications of the adequacy of the guidelines and the quality of the proposals coming forward for a decision. The fact that 30 per cent of referrals had inadequate documentation highlighted shortcomings in this area.

Timeliness was also a consideration specified in the Act that made this a relatively straightforward exercise. However, we also compared the times for decisions with those being made by state authorities to obtain data on whether the federal agency was generally comparable with other Australian authorities. This helped to provide an assurance to Parliament that current practices were complying with the legislation and that these standards were consistent with practices elsewhere in Australia.

In examining compliance and enforcement, the ANAO recognised that while crucial to the effective operation of the legislation, compliance and enforcement should encompass a graded approach or hierarchy that would extend from information dissemination, education and awareness raising through to monitoring conditions and auditing of actual performance and ultimately legal action. Our findings showed that DEH were focussed on the education and awareness raising aspects of compliance and enforcement at the expense of other actions. Consequently, investigation procedures and guidelines and compliance and enforcement policy had not been put in place. A useful point for international comparison was that a study in the USA noted that of the impacts foreshadowed in environmental impact statements, only 30 per cent were similar to the ultimate outcomes. This highlighted the importance of monitoring compliance with terms and conditions of approvals that had not been progressed at the time of the audit.

It was also a concern that no prosecutions had been commenced even where there was prima facie evidence of damage to a wetland of international importance. One of the positive impacts of the audit has been a significant strengthening of the actions being taken by DEH and legal action has been taken to stop the destruction of the particular wetland concerned. Overall, the audit provided the DEH with a framework for strengthening compliance with the provisions of the Act as well as an assurance to Parliament as to the effectiveness of the implementation of the Act after the first two years.

Audits Concerning Biodiversity (Austria)

Theme: **Environmental Auditing and Biological Diversity**

Author: **Dr. Heinrich Lang**

A) The Austrian Court of Audit

The Court of Audit is the only institution in Austria, including the audit institutions of the provinces (Länder), which is able and allowed to audit all levels of government from national down to local communities, enterprises which are 50% or more state-owned and all grants given by Austrian administrations to private enterprises or persons.

Reports are forwarded to the competent legislative body (federal or provincial parliament). These reports are condensed versions of the original reports, which were forwarded to the auditees, which have a constitutional period of three months to give comments on the findings and recommendations. The reports must not be published before they are forwarded to the legislative body.

The department "Comprehensive Environmental Protection" has to audit everything concerning environmental protection (nature protection, waste, water management, international accords, air pollution, sustainable development, biodiversity etc.) all over Austria, including the administration (all ministries) at all levels (federal, provincial, local) and state owned enterprises dealing with environmental affairs.

B) The audits of the implementation of the Ramsar

What were the main reasons for choosing this topic?

We wanted to assess, if the federal and provincial juridical frameworks are appropriate to the commitments of the convention. Furthermore we were interested in the financial dimension of the implementation of the convention and we wanted to see, if there is a detectable ecological output concerning biological trends at species and habitats.

What was the scope of the audit?

- Achieving the goals of the convention, especially article 2, 3, 4 and 5 (nomination, wise use, protection, scientific research, international co-operation).
- Definition of Ramsar sites (which areas are exactly concerned).
- What is the basis for decisions concerning wetlands (biological inventory), are there management plans implemented?
- Comparison of possibilities for the administration for the safeguarding of areas.
- National and international funding (especially with the European Union).

The nine different audits covered all eleven Austrian Ramsar sites (1180 km2) in eight States (Länder with own legislation concerning nature protection), at the federal ministry and a national park.

Main findings

Not all Ramsar sites were protected areas.

In some States there was no legal protection for wetlands.

There were different ways to safeguard areas, from public ownership to contracting systems with widely varying costs.

No comprehensive research concept was in place.

At some sites the borders were not clearly defined, there was no comprehensive biological inventory to assist decision-makers.

Due to the splitting of legislative competences there were no standards for protection, which were valid for the whole country.

There were conflicts of use with agriculture, hunting, fishery and tourism, these were different from State to State.

Main recommendations and results

An amendment to the Austrian constitution is needed to enable national standards.

Ramsar sites should at least be nature protection zones.

In the opinion of the Austrian Court of Audit it is better to protect habitats using the legal framework than by contracting. If contracting, t is better to buy the areas than to lease them, because protection and management should be long-term issues.

Six new sites are projected, one of them is already nominated to the Ramsar Bureau.

Several new nature protection zones were implemented.

Many legal and ecological measures were taken in order to improve the condition of Austrian wetlands.

Projects partly funded by the EU were initiated.

Concepts for ”wise use” were implemented in many sites.

Restrictions on fishery and hunting were put into effect.

C) The audit of the ecosystem lake Neusiedl/Fertö

What were the main reasons for choosing this topic?

We wanted to carry out an audit including all influences on this site and get a comprehensive impression about the national and international efforts on this area. Furthermore it was a co-operation project with the Hungarian State Audit Office.

What was the scope of the audit?

The audit should evaluate the organisation and financing of the measures necessary to maintain the area, including the national park, measures concerning biodiversity, water quality, water management of the lake, traffic systems, waste water management, scientific research, conflicts in use and co-operation with Hungary.

Main findings

There was no exact definition by the exact borders of the pieces of land of the various protected zones.

For safeguarding land 2.47 Mill. EUR were spent annually.

The natural water management of Lake Neusiedl/Fertö is mostly depending on precipitation and evaporation. The largest Austrian surface water discharging into the lake (river Wulka) showed water quality level II to III.

The number as well as the area of the characteristic salty ponds (Lacken) decreased dramatically due to economic use of the Lacken. Consequences were disruption of the natural water management, losses of typical plants and endangering of the typical fauna.

Three exotic species of fish were dramatically pushing away the indigenous species.

Conflicts of use were existing with agriculture, hunting, fishery and tourism.

Drainage in the interest of agriculture is responsible for the creeping degradation of soil and Lacken due to the continuous loss of salt.

In 2000 two waste water treatment facilities did not correspond to the state of art concerning their technical equipment.

Main recommendations and results

Due to recommended measures concerning the Lacken, there are no more disturbances of their natural water management.

The problem of illegal wells was solved in form of an inquiry of all wells in the region.

In the whole “natural zone” of the national park hunting was ceased.

Measures concerning the two waste water treatment facilities in the river Wulka catchment area were implemented, the adjustment to the state of the art was prioritised.

The Austrian Court of Audit recommended to develop a concept for research, nature protection and measures of development and to make up a ranking of the planned measures.

The structure of the fishery concerning the lake was changed.

Measures for agricultural downgrading, as implemented in the national park, were extended.

The reports are on the Austrian homepage (www.rechnungshof.gv.at) in German and in a short English version on the homepages of the INTOSAI and the EUROSAI working groups for environmental auditing (www.environmental-auditing.org, www.nik.gov.pl/intosai).

Contact: www.rechnungshof.gv.at, wg.environment@rechnungshof.gv.at, lang@rechnungshof.gv.at

Invasive Species—2002 Report of the Commissioner of the Environment and Sustainable Development (Canada)

Theme: **Environmental Auditing and Biological Diversity**

Author: **Eimer Sim**

About the Audit

In 1992, Canada and 167 other countries signed the United Nations Convention on Biological Diversity and pledged to prevent the introduction of or to control or eradicate alien species that threaten ecosystems, habitats, or other species. The Canadian Biodiversity Office was established at Environment Canada to co-ordinate a Canadian response; it produced the Canadian Biodiversity Strategy in 1995.

Invasive Species

Fish, plants, insects, bacteria, viruses, and other organisms found in an area beyond their native range are alien to that area. Not all alien species cause harm; in fact, many including a variety of plant and animal species, have been introduced intentionally to provide economic benefits. But some, including some that have been introduced intentionally, can cause disease in native plants and animals or prey upon them; change native habitat, making it inhospitable to native species; or simply reproduce faster than native plants and animals and crowd them out by inhabiting their space and eating their food. We refer to these as invasive species.

Invasive species can also affect services that the native biology provides, such as soil retention, maintenance of water quality, and consumption of carbon dioxide by growing plants. And unlike most chemical pollutants that degrade over time, invasive species—which some scientists have termed biological pollution—have the potential to multiply, spread, and persist in the environment. Their impacts can ripple through the entire food chain

Objective

The objective of this audit was to determine whether the federal government has mounted an effective response to the invasive species problem since signing the Convention, and particularly since finalizing the Canadian Biodiversity Strategy. We set out to determine to what extent Canada's 1992 commitment and its 1995 strategy triggered a change in the federal government's approach to managing invasive species and the impact of any changes on prevailing trends.

Scope and approach

In our view, to assure Canadians that it is responding effectively to the problem of invasive species that threaten Canada's environment and to determine whether programs are working

or whether corrective measures are required, the federal government must answer these questions:

- What invaders pose the greatest risks to Canadian ecosystems, habitats, and species, and what are the major pathways by which they arrive?
- Who is taking what action to respond to major risks?
- How effective are those actions in eliminating or reducing adverse effects to acceptable levels?

Because it is the lead department for Canada's biodiversity strategy, we looked to see whether Environment Canada, on behalf of the federal government, has that information or has put in place the basic tools it needs to acquire it. Since ship ballast water (see text box below) is the most important source of unintentional introductions of aquatic invaders, we also examined how the federal government is managing those species and that particular pathway. We looked at whether Fisheries and Oceans Canada has acquired the basic information it needs to manage aquatic invaders and whether Transport Canada has ensured that there is adequate legislation and enforcement to control their introduction or escape into Canadian waters from ship ballast.

Ship ballast water

Ships take on and pump out ballast water for stability and safety (such as when they take on cargo). When they do, their ballast tanks also take on a wide variety of aquatic species, including micro-organisms, algae, plants, small fish, and invertebrates. Over time, a layer of sediment accumulates in the tanks which can also contain alien species. A recent study estimated that 3,000 species of aquatic organisms are transported around the world every day in the ballast tanks of ships.

To provide context for the government's commitment and for our observations and findings, the chapter presents case examples illustrating the nature and magnitude of the risks that invasive species pose to Canada.

Zebra mussels

Zebra mussels have already caused damage in Canadian lakes and they continue to expand their range. Our chapter provides several examples of damage that has been inflicted by Zebra mussels—such as the annihilation of 13 native species in one lake and the near extinction of 10 species in another.

Zebra mussels are also a major fouler of industrial, municipal, and hydroelectric water intakes and outfalls. We illustrate the costs that have been incurred by power generation companies—costs that could be passed on to homeowners and consumers.

Audit Findings

The federal government has not responded effectively to invasive species that threaten Canada's ecosystems, habitats, and other species. Ten years after the federal commitment to prevent their introduction or to control or eradicate them, the number of invasive species in Canada continues to grow. We found that neither the United Nations Convention on Biological Diversity nor the Canadian Biodiversity Strategy has triggered an identifiable change in the government's approach:

- The federal government has not identified the invasive species that threaten Canada's ecosystems or the pathways by which they arrive.
- The human and financial resources to deal with invasive species are spread across several federal departments and agencies as well as outside organizations, and they are not co-ordinated. There is no consensus on priorities and no clear understanding among federal departments or between the federal government and other jurisdictions of who will do what to respond.
- The federal government has not established the capability to gauge progress on its commitment to deal with invasive species.

No federal department sees the big picture or has overarching authority to ensure that federal priorities are established and action is taken. There is a bias toward continuing dialogue and consensus building and a lack of practical action to prevent invasive species from harming Canada's ecosystems, habitats, or native species.

Since invasive species frequently travel along as stowaways with people, goods, and vehicles moving between regions with different ecosystems, increases in trade and the gross national product—clearly a key economic goal—will almost certainly lead to further invasions unless the federal government takes concrete steps to prevent them. If action is not taken, costs will mount; and because invasive species are a leading cause of biodiversity loss, our storehouse of biological resources will continue to be depleted.

Prevention is recognized by experts and the government as the best response to invasive species. Preventive measures would not be cost-free, or stop all invaders, but they are generally considered more practical than reacting to a succession of crises and repairing damage after invaders have become established. Prevention can also reduce the cost and ecological impacts of chemical controls and biodiversity loss associated with invasive species.

Approach and Methodology

We looked to existing action plans for benchmarks. In addition to the United Nations Convention on Biological Diversity and the Canadian Biodiversity Strategy, we examined the United States Management Plan. We also reviewed the Global Strategy on Invasive Alien Species, produced in 2001 by the Global Invasive Species Program. That program was established in collaboration with many international environmental organizations, including the World Conservation Union with initial support from the United Nations Environment Program.

The plans and strategies we reviewed propose in common a number of criteria for an effective response to invasive alien species, including

- risk assessment, to understand what species and pathways pose the greatest threats and need to be managed under the plan;
- leadership and co-ordination, to understand who will take what actions to respond to key risks; and
- monitoring, to understand whether prevention and control measures are working or whether corrective action is required.

The plans consistently refer to prevention as the principal objective.

Thus, we focussed on three key criteria. In our view, to assure Canadians that it is responding effectively to the problem of invasive species that threaten Canada's environment, the federal government needs to know

- what invaders pose the greatest risks to Canadian ecosystems, habitats, or species and by what major pathways they arrive;
- who is taking what action to respond to major risks; and
- how effective those actions have been at eliminating or reducing adverse effects to acceptable levels so the government can determine whether programs are working or whether corrective measures are required.

We looked at whether Environment Canada has that information or has established the basic tools it needs to acquire it.

Two other high profile organizations were conducting their own studies on invasive species as we were doing ours. The report by the United States General Accounting Office also discusses ballast water and regulation and enforcement by U.S. authorities (the report number is GAO-03-1 and it is available at www.gao.gov).

In addition, the International Joint Commission, in its 11th Biennial Report on the Great Lakes Water Quality Agreement—also released in September 2002—raised concerns about the introduction of aquatic invaders into the Great Lakes from ship ballast water and sediment in ship ballast tanks (see www.ijc.org). The International Joint Commission is an independent binational organization that was created in 1909 by Canada and the United States because they recognized that each country is affected by the other's actions in lake and river systems along the border.

Impact of the Audit (post tabling)

Our audit reinforces the momentum that is building on the invasive species issue and strengthens the case for an effective and timely Canadian response.

We believe we have contributed to accelerating progress toward an effective response from the federal government by:

- highlighting the large and growing cost to Canadians resulting from invasive species and the potential threat to trading relationships, and

- contrasting the dramatic increase in those costs and risks with the lack of effective action over the past decade.

In particular, we believe that our report, together with those of the International Joint Commission and the United States General Accounting Office, has drawn attention to the need for the federal government to take action to effectively control ballast water, a major pathway for invasive species that clearly falls under federal jurisdiction.

We believe the report will influence the content of Canada's forthcoming Draft national plan (for achieving the objectives established in article 8h of the Canadian Biodiversity Strategy) by exposing the absence of

- good risk analysis,

- a national registry for invasive species,

- monitoring systems for tracking and reporting results,

- clearly defined federal roles, responsibilities, results expectations and resources.

Since the tabling of our report on 22 October 2002, committee hearings have been held by both Houses of Parliament – the House of Commons and the Senate. On 11 February 2003, the House Of Commons Standing Committee on Fisheries and Oceans issued the report entitled "Aquatic Invasive Species: Uninvited Guests". This report was supportive of our findings and recommendations and requested a formal response from the Government of Canada.

As we have not yet performed any formal follow-up work on this audit, we do not have anything specific to report. However, in preparing for the government committee hearings held after the tabling of our Report, we obtained updates from all three government departments included in the scope of our audit. As of October 2003, the government was moving ahead, if perhaps slowly, on a national plan to address the issue of invasive species. This work was being co-ordinated by Environment Canada with the participation of the Department of Fisheries and Oceans and Transport Canada.

Challenges and Lessons Learned

In 2001 our Office published a large report on the Canadian Great Lakes which was tabled in Parliament. One of the many issues examined in this report was the problem of invasive species in the Great Lakes. Because of the importance of this issue, and because we felt it deserved more extensive work, we decided to build on the work done in 2001 and devote an entire chapter to the issue of invasive species in our 2002 report.

This audit re-affirmed the importance of crystallizing audit objectives and criteria early. Invasive species is a very broad subject area. It includes, for example, aquatic and terrestrial species as well as intentional and unintentional introductions. We used examples of specific invasive species to illustrate our story but examined what we thought the federal government needed to do to manage this issue.

We also used these examples of specific invasive species to highlight the actual and potential costs of these invaders to Canadians. We hired an academic to pull together the information available on the financial costs of invasive species and on the specific species highlighted in our report.

Because invasive species is such a broad issue and we had a relatively small audit team, we scoped our audit relatively narrowly and ensured that our plan for the detailed audit work was achievable within the human and financial resources available. We stuck to this plan and did not venture into the scientific research on individual species.

The complete report is available at:

www.oag-bvg.gc.ca/domino/reports.nsf/html/c2002menu_e.html

Biological Diversity in the Czech Republic as an Audit Subject for the Supreme Audit Office (Czech Republic)

Theme: **Environmental Auditing and Biological Diversity**

Author: **Miroslav Kruchina**

1. Introduction

Over the past three years, the protection of nature, the landscape and biological diversity has become a major priority towards which SAO is turning its attention in selecting areas for audit of measures in protection and improvement of the environment. This trend follows logically from updating of the State Environmental Policy of the Czech Republic, which was carried out particularly in connection with the 6th Action Programme for the Environment of the European Communities, the OECD environmental strategy for the first decade of the 21st century and in accord with the EU Strategy for Sustainable Development. Specification of top-priority areas of the State Environmental Policy simultaneously respected targets in the sector operational programs financed from sources of the European Communities and the medium-term targets of implementation of Acquis Communautaire.

2. Current conditions and targets for stopping the decrease in biodiversity

2.1 Protection of nature, the landscape and biological diversity

Biodiversity in the Czech Republic is endangered in some locations by intensive agricultural and forestry production and, in some areas, on the other hand, by abandoning of agricultural areas, unsuitable urbanisation and fragmentation of the landscape by transport infrastructure. This leads to disappearance of transition areas, which have a stabilising function and simultaneously are characterised by high biological diversity. Simultaneously, the interconnection of the landscape is decreased as a consequence of construction of transportation structures. Another negative factor consists in the impact on local species of flora and fauna by invasive species, which can be introduced intentionally (intensification of fish breeding) or can spread spontaneously.

Forest ecosystems are of basic importance for conservation of biodiversity, as forests constitute practically a third of the area of the entire country. Their biological diversity was decreased in the past by high levels of sulphur oxide emissions and attempts to meet the demand for selected wood species. Consequently, at the present time, there is a predominance of undesirable ratios of narrow-leaved compared to broad-leaved species. This state of affairs is negatively manifested in a decrease in the ecological stability of forests with an increase in salvage wood harvesting as a consequence of natural catastrophes.

The basic targets and measures consist primarily in:

- declaration of locations of the NATURA 2000 system with creation of the relevant state administrative system and functional interconnection with the existing system of specially protected territories

- implementation of rescue programs of care for the individual endangered species of plants and animals and creation of preconditions for the creation of substitute biotopes of specially protected plants

- improvement of the territorial system of ecological stability with set limits for development of the territory and territorial reservations in relation to protection of the natural and landscape environment and incorporation into the instruments of land-use planning

- provision for the creation of bio corridors for existing and newly created roadways on migration routes.

2.2 Care for aquatic ecosystems and restoration of aquatic biotopes

As unique natural systems with high biodiversity, aquatic systems and wetlands are very vulnerable to changes in the hydrological regime and insensitive anthropogenic interventions, such as regulation of river courses, pollution caused by intense agricultural activity and intensive fish breeding.

The targets are concerned mainly with increasing the natural retention ability of the landscape and restoration and stabilisation of the natural water regime in the landscape. For this purpose, it is necessary to:

- implement protection and sustainable use of water sources and wetlands in the context of economic pressures and global changes

- adopt the principles of sustainable management in the landscape for the area of water policy and incorporate them into sectoral policies

- prepare a methodology for selection of aquatic biotopes suitable for renewal or restoration.

3. Initial audit experience in the area of biodiversity

The subject of audit of expenditures from the state budget, intended to stop the decrease in biological diversity, was included in the plan of audit activities of SAO in 2001. The audit concentrated on two basic areas, the area of implementation of the State Program of Care for the Landscape and the area of creation of the NATURA 2000 system. The primary target of the audit was formulated as evaluation of the usefulness and economy of expenditure of funds in relation to the environmental benefits achieved. From a methodological point of view, the manner of carrying out the audit consisted in a combination of an efficiency audit and a legality audit. The entities audited consisted in the Ministry of the Environment (hereinafter "ME"), organisations founded by ME from the standpoint of their participation in organisational provision for the State Program of Care for the Landscape (hereinafter the "Program") and selected recipients of financial funds implementing the individual projects in the framework of the Program.

3.1 Audit of the State Program of Care for the Landscape

Projects included in the Program were concerned with conservation and improvement of natural values, especially in relation to specially protected territories and with maintenance of the overall ecological balance in the landscape. The financing of protective and landscape measures was subject to a special Directive issued by ME and a total of 14 mil. € was expended over the audit period of 2 years.

The audit demonstrated that all the suitable preconditions were not created for effective and economic use of budgetary means. This was true, for example, in that ME did not create complex and exact rules for withdrawal of special-purpose funds, provision was not made for demonstrative evaluation of environmental benefits and there was a lack of the necessary coordination of the targets of the sector that have the greatest impact on nature and the landscape. A positive outcome of the audit consisted in a significant increase in the activities of the intersectoral commission consisting of representatives of the Ministry of the Environment, Ministry of Agriculture, Ministry of Industry and Ministry for Regional Development, manifested in a complex approach to dealing with the individual locations.

3.2 Audit of the NATURA 2000 system

Protection of biological diversity is also declared in the framework of the NATURA 2000 system through specification of target species and types of natural habitats and provision for their mutual territorial interconnection.

In 1999, the Government of CR adopted an approximation strategy in the area of the environment, in which the NATURA 2000 system was related particularly to the Directives of the Council of the European Communities "on the conservation of wild birds", and "on the conservation of natural habitats of wild fauna and flora". The Government Resolution lay down the obligation to create the NATURA 2000 system, which will be part of the system of protected territories of the European Communities and, according to preliminary estimates, will correspond to approximately 15% of the area of CR.

It was found in the audit that financial means were released from the ME budget to authorised organisations for preparation of a national list of territories of special protection, but that the actual use of these funds was not further regularly regulated. Thus, part of the allocated financial means were employed to increase the number of employees at ME, utilized partly also for projects that were not connected with the NATURA 2000 system. The results of the SAO audit led to adjustment by ME of budgetary expenditures for the relevant organisations in the following year.

4. The current approach to biodiversity audits

Gradual obtaining and evaluating of information on the state of preparation and implementation of measures for conservation of biological diversity indicated that landscape projects connected, e.g., with "leaving agricultural land fallow", are provided for satisfactorily from the standpoint of allocation of financial means and the necessary coordination between the responsible ministries. Consequently, projects concerned mainly with aquatic ecosystems and renewal of aquatic biotopes predominate as suitable subjects for the audit. In accordance

with this decision, 2 audits were included in the plan of audit activities of SAO for 2003 and 2004:

- audit of the River System Restoration Program
- audit of Environmental projects and measures in the river basin of the Dyje River

4.1 The River System Restoration Program

The River System Restoration Program was initiated and submitted to the Government by the Minister of the Environment in 1992. The program is concerned with renewal of the natural environment disturbed by human activity. Implementation of the Program is intended to compensate for the detrimental impact of this activity on the water regime in the landscape, to stabilise and systematically increase biological diversity and to permanently secure the high natural and cultural value of the landscape.

The program is intended to support and increase the retention ability of the landscape, leading to an increase in the instantaneous volume of water in the territory. Further, it is intended to remedy the detrimental consequences of previous land-use measures, unsuitable means of managing the land and extensive drainage systems. The final target of the proposed measures consists in the creation of environmentally stable elements in the landscape—biocentres, bio corridors, important landscape features, etc. Thus, the program is intended to contribute to conservation and/or renewal of the diversity of species of flora and fauna.

Over the audit period of 1999–2003, measures in the framework of the Program received subsidies of almost 1.3 bil. CZK (more than 420 mil. €) from the state budget, where the value of the works created is about 20% higher because of financial participation by investors.

The audit commenced in January of this year was intended to determine whether use of the financial means expended for implementation of the Program achieved the above environmental targets. For this purpose, relatively simple quantitative indicators can be used, e.g. the number of length units of water courses that were returned to a regime close to nature, the amount of water retained in new or renewed reservoirs, the area of new or renewed wetlands, the number of obstacles removed from water courses, etc., all in connection with the usefulness and economy of use of the financial means.

A more difficult but simultaneously more important target of the audit consists in an attempt to achieve a complex evaluation of the results of the individual projects and of the whole Program in the sense of environmental benefits. Consideration is given to the degree of necessity of the individual projects carried out over the particular period and the extent in relation to the priorities of the Program. The criterion employed consists primarily in the degree of achieving the targets and plans laid down in the conceptual documents for the complex territories, such as, e.g., studies for landscape programs or studies of the restoration of river systems. Finally, an evaluation is made of the creation of preconditions for return of organisms in the original quality and biological diversity.

The final report on the audit will be prepared by August 30 of this year for submission to the Government and the Chamber of Deputies of the Parliament of CR.

4.2 Environmental projects and measures in the river basin of the Dyje River

The audit commenced in December of last year was intended to obtain and evaluate information on the objective determination of environmental priorities in the territory delimited by the river basin of the Dyje River and on the system of financing measures to improve the environment. The audit is being carried out as a parallel audit with SAI Austria, amongst other things because part of the joint state border between CR and Austria follows the river basin of the Dyje River, which also separates the Podyjí National Park and the Thayatal National Park.

The audit was concerned with projects to improve water quality and for conservation of nature. These projects were financed from the state budget, State Environmental Fund of the Czech Republic and means provided by the European Union in the framework of CBC PHARE and ISPA projects. The Government of Austria also participated in cofinancing some projects. The basic target of the audit consisted in evaluation of the usefulness and economy of use of financial means invested into the affected territories in connection with the need to improve the quality of surface and ground waters and conservation of biological diversity. At least 1.4 bil. CZK (460 mil €) were invested in environmental projects in the territory of interest in the audited period of 1999 to 2003.

SAO CR and SAI Austria agreed to carry out an audit of three subject areas, specifically:

- Water Protection—includes audit of monitoring of water quality in the individual profiles of the water courses, for important point polluters and extensive pollution sources, evaluation of the usefulness and economy of the implemented and planned measures for improving the environment, encompassing particularly construction and reconstruction of waste water treatment plants, sewer systems, maintenance of critical values for existing waste water treatment plants and control of compliance with the relevant EU Directives;

- Nature conservation—encompasses audit of the economy, usefulness and effectiveness of the use of financial means expended for conservation of nature, implementation of international agreements related to biodiversity, including protection of natural habitats and species, implementation of projects carried out on the basis of the Agreement on joint goals, fundamentals and principles of management of the Podyjí and Thayatal National Parks and the Memorandum of Agreement between the Ministries of the Environment between the Austrian, Slovak and Czech Republics for establishing the "Morava—Dyje Flood Plain" Ramsar platforms (association of institutions and associations in this environmentally very valuable area for the purpose of protection and sustainable development of the territory and attempts to gradually prepare trilateral Ramsar locations, including preparation of a model care plan);

- International cooperation between the Czech Republic and the Republic of Austria—encompasses audit of the economy, usefulness and effectiveness of use of financial means expended for the work of the relevant commissions and especially for projects implemented in the framework of implementation of the Agreement between the two countries, dealing with aspects of water management on border waters, the Agreement on cooperation in the area of protection of the environment and the Memorandum of Agreement on establishment of an office for preparation of projects between the Ministry of the Environment of the Czech Republic and the Federal

Ministry of Agriculture, Forestry, the Environment and Water Management of the Republic of Austria.

The final report on the results of the SAO audit will be completed in July of this year. On the basis of the agreement between the presidents of SAO and BRH, a joint report will also be issued on the parallel control, probably in June 2005.

5. Conclusions

The conservation of biological diversity for future generations is a subject that must be dealt with at a national level. I am of the opinion that the supreme audit institutions (SAI) demonstrate this very well, as auditing of biodiversity is one of the central subjects of the plan of audit work of the Working Group on Environmental Auditing of INTOSAI and EUROSAI for the 2005–2007 period.

Report of the CAG of India on "Ganga Action Plan" with the Recommendations of the Public Accounts Committee Submitted to Parliament in February 2004 (India)

Theme: **Environmental Auditing and Biological Diversity**

Author: **K. P. Sasidharan**

Introduction

India is the seventh largest country in the world with an area of 3.29 million square kilometers inhabited by more than a billion people. The country has veritable terrain and diverse natural ecosystems with different climatic zones.

Indian constitution contains specific provisions for environmental protection and improvement. India has a federal system of government; both the central and the provincial governments have authority and powers for legislating on different subjects pertaining to environment and sustainable development. India participated in all major UN Conferences on environment and enacted various legislations to control pollution and protect environment. Ministry of Environment and Forest was constituted to frame policy, establish regulatory framework and implementation bodies and agencies. The Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Forest (Conversation) Act, 1980, the all encompassing the Environment (Protection) Act, 1986, the National Environmental Tribunal Act, 1995, the National Environment Appellate Authority Act, 1997 are some of the important legislations.

Overview of SAI India Experience on Environmental Auditing

SAI, India has clear mandate and jurisdiction for Regularity Audit (Financial and Compliance) and Performance Audit under the Comptrollers & Auditor General's (Duties, Powers and Conditions of service) Act, 1971. SAI, India has been conducting Environmental Audits (EA) on biodiversity, pollution of air, water and noise, waste management including hazardous industrial and bio-medical waste and submitting its reports to the Central and States legislatures. During the last 3 years from 2001–03, SAI India had conducted 77 Environmental Audits; though figure for 2003 is not complete as reports are in the process of finalization.

Rationale for selection of Ganga Action Plan for EA

According to a World Bank estimate, India loses about $80 billion annually on account of sickness and death from pollution and economic costs attributable to resource degradation. Ganga Action Plan (GAP) is a major environmental project with an estimated outlay of approximately US $550 million.

Ganga originates from Gangotri glacier in the Himalayas at an altitude of 4100 meters and traverses 2525 km before it joins the Bay of Bengal. The river along with its tributaries is the largest river basin in the country, supporting lifeline of 40% of India's population. Its water is used for drinking, irrigation, navigation and development of flora and fauna. Cities and towns have come up on the banks, which pollute the river system with sewage and industrial waste.

Consequently the river water has become unusable, non-drinkable and even unsuitable for irrigation. The objective of GAP is to improve water quality of the river to make it suitable for bathing by undertaking pollution abatement works. GAP envisaged execution of core and non-core schemes: laying of interception and diversion of sewer lines; construction of sewage treatment plants; low cost sanitation; river front development and construction of electric crematoria.

Audit Objectives and Scope

Audit objectives were:

- Were projects/schemes under GAP framed with a view to translating the policy intent within the given time frame and given cost

- Had the programme been undertaken to contain pollution of river Ganga and its tributaries delivered the desired results within the time and cost

Sub-objectives included examination of all relevant aspects of pollution control and sustainable development measures to tackle both industrial and domestic effluents; adequacy of procedures adopted for identification of the polluting towns; parameters adopted to classify a particular industry as polluting; nature of pollutants discharged by the industrial units and their toxic impact; operational performance and maintenances of commissioned schemes and effectiveness of monitoring mechanism; and water quality monitoring by analyzing test reports over 10 years. Sub-objectives also covered scrutiny of funding pattern, utilization of funds along with execution of work with a view to frame an opinion on funds flow mechanism, accounting procedure and possible financial mismanagement.

As federal and 6 provincial governments, regulatory bodies, urban/local/municipal authorities had specific responsibilities in implementation of GAP, audit was extended to all the concerned. Starting point was evaluation of the current status of implementation and to form an opinion as to how far GAP could achieve the stated objectives. The review covered GAP 1 and 11 for the period 1993 to 2000, accounting for funds to the extent of US $ 146 million.

Audit Plan

At the outset, SAI conducted a workshop to discuss relevant audit issues, scope, methodology, time frame, field visits, and reporting style. Date for midterm appraisal of the progress of audit was fixed so that emerging issues could be sorted out in time and audit completed as per the schedule. SAI issued detailed guidelines, stipulating audit areas to be examined along with audit checkpoints, emphasizing the necessity of conducting simultaneous audits of federal and provincial governments as well as implementing agencies coordinating with audit teams responsible for audit of central and provincial levels within the specified time frame.

Audit Results

GAP met only 39 % of its primary target of sewage treatment. There were heavy shortfalls in the achievement of targets of creation of assets and facilities under the plan. Even those

achievements were poor indicators of the extent of success of the plan, as most of them did not function either fully or partially for a variety of reasons.

The ministry left to the states the crucial determinants of sewage characteristics and downstream water quality for selection of towns. It had no mechanism to evaluate the estimations of sewage generated in each province. The Ministry did not fix any time frame for submission of Detailed Project Reports. GAP 1 was not fully complete even after delay of 10 years. GAP 11 was behind its schedule. Some provincial governments did not submit DPR for the Core Schemes—Interception and Diversion and could not get any sanction for GAP 11. Provincial governments could not obtain sanction from the Federal government for any Sewage Treatment Plant in GAP 11 because of unsatisfactory operation and maintenance of assets created in GAP 1 and non-confirmation of availability of land for construction.

Audit did not find any evidence of any significant initiative taken by Federal or Provincial governments in promoting public participation. Government discontinued monitoring of water quality and also did not act on the recommendations of the expert committee. Only about 45% of the grossly polluting industrial units had installed Effluent Treatment Plants, out of them over 18% did not function properly, meeting the technical parameters.

Audit found many instances of financial mismanagement such as funds diversion to unauthorized activities, incorrect reporting, and parking of funds in personal account, and unutilized funds with the implementing agencies.

Impact of Audit

(a) Action Taken by the Government

SAI submitted the report to the Parliament in December 2000. Government was asked to report back its comments along with action taken. Government in its reply (2001) admitted system deficiencies and attributed them to lack of experience on the part of the implementing agencies, delay in land acquisition, litigation, contractual disputes, unsatisfactory funding pattern, diversion of funds by provincial governments, erratic supply of electricity for operating assets, conventional technology etc. Federal government issued instructions for corrective and preventive action to provincial governments; insisted land acquisition before approval of the schemes; strengthened monitoring of release of central grant and its utilization; withheld grants to defaulting provincial governments; directed to ensure continuous power supply; to adopt land based technologies for sewage treatment wherever feasible and to utilize the treated waste water for irrigation purposes.

Subsequently, the federal government established the National River Conservation Authority (NRCA) mainly to focus on all river-cleaning programmes. NRCA held its Xth Meeting under the chairmanship of the Prime Minister and adopted various resolutions for the River Cleaning Programme emphasizing:

- Operation and maintenance of assets under river cleaning projects/schemes
- Holistic and integrated approach to address river pollution

- Cost sharing by federal states local bodies and the public
- Detailed plan for recovery/operation and maintenance cost
- Launching of Environment education campaign

(b) Recommendations of the Public Accounts Committee

PAC selected SAI report on GAP and made on the spot study visits to a number of places to have first hand knowledge of GAP implementation. PAC submitted its report to the Parliament in February 2004 recommending:

- Monitoring committee should be set up at every level starting from Citizen Monitoring Committee to the apex Monitoring Committee and there should be periodical monitoring of all schemes of GAP. They should fix responsibility for any diversion of funds of GAP or unnecessary delay in execution of its work.
- There should be a river regulation zone under an autonomous body with NGOs and panchayats/local bodies executing its target based plans and programmes.
- Government should take concrete measures to prevent soil erosion
- Government should take up the non-core schemes also on priority basis
- NRCD should be vested with powers to take punitive action against the violators; defaulting industrial units should either be closed down or allowed to function only after compliance.
- The committee found that the pollution studies assessed the health of the river mainly on the basis of one parameter—Biochemical Oxygen Demand (BOD). Government should take coordinate action with all the concerned authorities to achieve zero toxic discharge in to waterways.
- The committee endorsed the proposal to introduce “beneficiaries pay” and “polluters pay” principles and other collective fine system to bear the cost of river cleaning programmes. Further provisions may be made to accept donations from willing contributors to boost the resources of GAP. Ministry should streamline the mechanism of earning revenues by utilizing the manure rich treated sewage water and other byproducts for irrigation purposes on payment basis.

Approach & Methodology

SAI India used Regularity and Performance Audit methodology for GAP audit. Salient features include:

- Conducted simultaneously audits of federal and 6 provincial governments, regulatory and implementing agencies concerned to form an opinion

- Compliance audit with reference to applicable statutes, agreements, standards, norms, criteria

- Examination of funding pattern along with budget provision, execution of works, operation and maintenance

- Documents review, field visits, discussion, interviews, laboratory reports, research studies, expert opinion

Lessons Learned

EA of GAP has facilitated in gaining technical competence and capacity building in conducting audit of complex environmental projects. Effective planning, adoption of appropriate methodology and techniques combined with monitoring and review meetings helped in successful completion of the audit in time. Role of effective coordination, teamwork, and communication for conducting audit of mega environmental programme involving multiple authorities and agencies became evident from this experience. Selection of a sensitive and significant environmental project for EA has helped in getting prompt response from the government.

Challenges

Some important challenges and constraints for EA are:

- Inadequate resources, lack of trained manpower, inadequate knowledge, skills and expertise

- Need for incorporating Environmental Perspectives in Accounting and Auditing Standards for effective financial audit

- Making EA as an instrument for sustainable development by getting better response from the public, social activists, media and the government

- Need to innovate and adapt EA methodology and techniques for specific projects and schemes

Possible Contribution of WGEA—Support to SAI

WGEA has contributed substantially towards mainstreaming environmental concerns in SAI audits by exchange of INTOSAI experience and expertise. INTOSAI Standards and guidelines on audit of EA have helped in increasing the effectiveness of EA and its impact on sustainable development. WGEA continues to have a prominent role in achieving this objective by:

- Mutual exchange of experience and learning from each other to evolve uniform practice
- Guidelines, standards, methodology and techniques for integrated environmental auditing of river, lake and coastal and marine conservation/prevention and abatement of pollution

- Bringing environmental perspective in all INTOSAI audits which may not be directly related to environment but has impact on environmental protection
- More seminars workshops training for capacity building and knowledge sharing

Final Report "Conservation, Use and Management of Defensores del Chaco National Park", CGR Resolutions 873 and 1040 of 2002, Asunción, Paraguay, 2003 (Paraguay)

Theme: **Environmental Auditing and Biological Diversity**

Authors: **A. Federico Palacios Ch., Blas A. Knoop D., Roger A. Monte Domecq, Sara Rojas and Octavio A. Airaldi B.**

CGR Resolution 873 of 2002

PROVIDING THAT A SPECIAL AUDIT BE CONDUCTED TO REVIEW THE ACTIONS TAKEN BY THE MINISTRY OF THE ENVIRONMENT, THE RURAL WELFARE INSTITUTE AND THE OFFICE OF THE ATTORNEY GENERAL OF THE REPUBLIC WITH REGARD TO THE CONSOLIDATION, CONSERVATION, USE AND MANAGEMENT OF DEFENSORES DEL CHACO NATIONAL PARK.

CGR Resolution 1040 of 2002

PROVIDING AN ON-SITE INSPECTION OF THE AREA OF DEFENSORES DEL CHACO NATIONAL PARK.

Introduction

Defensores del Chaco National Park (DCNP) is located in the Departments of Alto Paraguay and Boquerón, between 19º50' and 20º45' S and 59º30' and 61º15' W, according to the management plan; the park's surface, according to the 2001–2005 plan and the National System of Protected Wilderness Areas (SINASIP, Law 352 of 1994), is 780,000 ha; at present, the Ministry of the Environment is responsible for managing it, under Law 1561 of 2000, in accordance with Law 352 of 1994 on Protected Wilderness Areas.

In Resolution 873 of 2002, the CGR decided to audit the operation of the following institutions: the Ministry of the Environment (SEAM), the Institute of Rural Welfare (IBR) and the Office of the Attorney General of the Republic (PGR), in terms of their respective roles.

- SEAM is to create, administer, manage, monitor and control protected wilderness areas (PWAs), wooded or not, which are public property; to develop strategies for the use and conservation of biodiversity, including hunting, breeding, trafficking and marketing of flora and fauna, and implement SINASIP, with the involvement of public authorities so as to safeguard the rational use of natural resources as part of the country's natural heritage.

- IBR is to comply with Decree 16806 of 1975, establishing the DCNP.

- PGR is to represent and defend the patrimonial interests of the Republic, either in court or out of court.

Reason for the audit

- To review SEAM's performance in discharging its mandate to safeguard the correct use of DCNP as a protected wilderness area, part of the country's natural heritage.
- To verify implementation of the Strategic Plan for the National System of Protected Wilderness Areas of Paraguay (SINASIP) insofar as DCNP is concerned.
- To review the actions taken by the IBR with regard to DCNP's charter and its compliance with the recommendations made by the CGR.
- To ascertain the present patrimonial status of the lands in DCNP.

Objective

To review the performance of the enforcement authorities in complying with the procedures specified in the laws which regulate the manner in which they operate, and compliance with the mandate to safeguard the proper use of Defensores del Chaco National Park as a protected wilderness area.

Scope

- Expert's report on how the institutions audited are being managed within the legal framework regulating their operation and the environmental regulations in force.
- Expert's report on the legal status of the lands in DCNP.
- Expert's report on the condition of DCNP's western strip, according to the results of the on-site inspection (a tentative timetable for the trip is attached).
- Description of the present condition of the DCNP in terms of its conservation, use and administration.

The Auditor's report was prepared on the basis of the auditing standards established by OLACEFS and INTOSAL. Due to the huge volume of information involved, it had to be drafted in two parts, the first one as an initial approach on DCNP's ownership status, and the second one on its administration, use and conservation.

Results

1. The authority responsible for enforcement of Law 352 of 1994 at that time, the National Parks and Wilderness Directorate, and now SEAM, pursuant to Law 1561 of 2000, have exercised their right of possession of DCNP through physical presence and administration of the Park; however, this audit concluded that SEAM, as environmental authority and holder of the right to possess the property in question, has failed to fully exercise its rights through the relevant legal actions to take actual ownership of the property.

2. It has been found that the IBR, subsequent to the creation of the Park, subdivided and irregularly assigned titles to rural plots in official communities authorized within the Park boundaries, thus breaching article 18 of Law 854 of 1963 which provides that: *Said fractions shall not be transferable and can only be exploited for scientific, cultural and tourism purposes.*

3. The Office of the Attorney General of the Republic (PGR) has failed to provide the Auditors with the reports requested in memos CGR 2678 of 2002, filed at said institution under No. 000606, CGR 3587 of 2002 (R1), filed at said institution under No. 000748, and DGCRNA No. 97 (R2), dated October 24, 2002.

4. International requirements on biological reserves call for at least 10 per cent of the territory of any given country to be protected. In our country, 4 per cent of the territory is protected on paper, and only 2 per cent is protected in fact. This is because most PWAs, regardless of the management categories they fall into, are located on private property whose owners have no interest in their protection and conservation, and those plots which are still considered state-owned and whose titles were not assigned to the enforcement authority, as is the case of DCNP, are being subdivided by the government through the Institute of Rural Welfare.

5. As a result of action taken by DCNP, without judicial approval, the surface area is smaller than specified both in the Park's management plan and in SINASIP; to date, there has been no official statement by the enforcement authority in this respect.

6. SEAM has failed to fully meet the goals set forth in Law 3527 of 1994, thereby causing the degradation not only of DCNP but of other state-owned PWAs as well.

7. The budget law is not a suitable planning tool, since the goals pursued are not properly structured or supported by an appropriate planning mechanism comprising essential elements needed in such a plan, including implementation schedules and the necessary human and material resources.

8. SEAM does not effectively follow up and supervise the accomplishment of the goals pursued, so that they are in fact achieved in a reasonable time, as is the case with SINASIP.

9. SEAM has not implemented the mechanisms necessary for drafting the regulations under Law 352 of 1994.

10. During the period analyzed, SEAM has not put forward any proposal for consolidating potential PWAs to be added to DCNP's territory.

11. SEAM has not determined the amount of fees, taxes, penalties and other payments for DCNP.

12. SEAM has not submitted to the relevant entities, on time and in the proper form, reports on irregularities found in DCNP, even though it is well aware of them.

13. DCNP park wardens received little training between 2000 and 2002. In addition, no operations manuals for dealing with contingencies at DCNP were produced.

14. SEAM has failed to introduce appropriate mechanisms to establish the special heritage fund for the promotion of PWAs. Instead, SEAM has administered funds which it is using for its own purposes, outside the special fund.

Conclusion and General Recommendation

Based on the documents available for conducting this audit, there are sufficient grounds to declare that the performance of the Ministry of the Environment (SEAM) with regard to the Protected Wilderness Area (PWA) covered by Defensores del Chaco National Park (DCNP) is **highly inefficient and negligent**.

Although the mechanisms necessary to consolidate the area are in place, SEAM has failed to use them or manage them appropriately.

In view of this situation, it is imperative to totally redefine the management criteria and the specific actions to consolidate DCNP. The investments in studies have been costly and their conclusions have been ignored, to say the least. Therefore, this audit recommends that the enforcement authority deal with this issue transparently, at an institutional level, to obtain a true diagnosis of the situation with respect to the consolidation, conservation, use and administration of DCNP, and consequently, it urges the relevant bodies (civil society, political groups, armed forces and international organizations) to carry out specific actions for the sustainable use of DCNP, consistent with the significance of this asset, space and/or resource, which is presently being managed in a very dubious manner.

The overall purpose of national park management should be to preserve the natural surroundings as they were before humans began to interact with the environment. The aim should be to preserve the largest possible diversity of native species of wild plants and animals and to keep them in reasonable numbers. Special efforts should be made at DCNP to maintain the diversity of animals and plant species that can still be found in their intact habitat, despite the intervention now occurring. We should ask ourselves what will happen to national parks in the future, given accelerated population growth and hence the greater pressure to which the earth will be subject.

To avoid a harmful impact on national parks, the enforcement authority must ensure that they provide specific environmental services. The main question is therefore: How can this objective be achieved, keeping in mind park management policy, without damaging the parks' living resources?

This is an issue which we should all reflect upon, not only the authorities in charge of the use, management and conservation of the area, but the population as a whole, who should become aware of the benefits of owning a national park, and then appreciate how important it is to preserve these areas for present and future generations. Therefore, it is the duty of SEAM to educate the public on the role that national parks play.

The lack of clearly defined national policies to guide the goals and objectives pursued by the national parks' management is quite unfortunate. It will be extremely difficult for those in

charge of the conservation of national parks to fulfill their duties effectively and efficiently if said policies are not clearly defined, and the population at large will also find it difficult to value this asset.

This is our report, based on the documents reviewed, as of August, 2003.

NIK Audits in the Area of Biological Diversity Protection (Poland)

Theme: **Environmental Auditing and Biological Diversity**

Authors: **Ewa Borkowska-Domańska and Małgorzata Romanowicz**

Nature, with its biological diversity, is a crucial component of the environment. The quality of its resources depends on the natural conditions determined by the morphological, hydrographic and metheorological factors. It is also determined both by physical and geographic conditions as well as by human activity, including environment protection measures.

The rapidly developing world economy with its globalisation, resulting in increasing threat to the natural environment, has made it impossible to protect the whole natural richness of the Earth. The principle of the sustainable development and the need to protect the World's cultural and natural heritage oblige us to undertake comprehensive and focused activities aiming at the protection of selected areas and ecosystems of the highest priority.

'Biological diversity' (or 'biodiversity') is a new concept. It was first introduced in official documents at the international conference "Environment and Development", generally known as the Earth Summit. During the Summit, which was held in 1992 in Rio de Janeiro, the Convention on Biological Diversity was adopted and presented.

"Biological diversity" means variability among all living organisms occurring on the Earth in terrestrial, marine and fresh-water ecosystems and the ecological complexes of which they are part. This includes diversity within species, between species and of ecosystems and the need to treat them in a way that guarantees its durability and renewability.

Traditional reasons for nature conservation reinforced by the idea of biodiversity conservation should not be limited solely to the areas protected by law. These principles should be applied to the whole territory of the country. It is important to develop and demonstrate ways of preserving or restoring biological diversity in the areas used for economic activities as well as in the areas degraded as a result of economic activity. Nature conservation, therefore, deals with the entire natural wealth present in the environment. According to the concept of the sustainable development, protective measures should be integrated with socio-economic policy.

The current Polish legal regulations as well as strategic documents adopted by the Government and Parliament create a framework for the effective implementation of the tasks related to the protection of biological diversity and sustainable use of natural resources.

In terms of biological diversity, Poland is one of the richest countries in Europe. It is a result of favourable natural conditions (location in the central part of the continent, its moderate climate, diversified geological structure and variable relief types), as well as due to certain economy related factors (irregular industrialisation, relatively low urbanisation, traditional agriculture and large forest areas.

At the end of 2003 the network of protected areas and objects in Poland included: 23 national parks, over 1.300 nature reserves, 120 landscape parks. It also covered other areas protected by law, such as: areas of protected landscape, ecological arable lands, as well as nature and landscape complexes etc.

Forest areas play an essential role in shaping the natural environment and contribute to its ecological safety. They perform diverse non-productive, water-protecting, climate- and environment-creating functions. In Poland forests constitute a vital part of the country's areas under the legal protection and occupy the majority of their total surface.

Recently Poland joined the European ecological network NATURA 2000. Our contribution to this project is one of the priority goals arising from the state policy and forthcoming Poland's accession to the EU. As a result, protecting measures have been applied to over 40% of the country's area.

There is something that distinguishes Poland from other countries and something we can be proud of. It is our natural and cultural heritage, which does not need to be restored or renewed, but it just has to be preserved and maintained in an existing form. It can make our work little easier, but does not mean it will be very simple. The scope and the range of our activity is usually limited by the amount of the financial resources available.

Tasks performed in the area of biodiversity are financed from many different sources, such as the State Budget, environmental funds, foreign funds and private donations. Available financial resources are too scarce to cover the costs of protecting all the nature's resources. This is the reason why they should be managed carefully.

Government and local-government administration has been taking more and more responsibility for the conservation and sustainable use of biological diversity, both on regional and local level. In recent years, non-governmental organisations, both local, national and international, have become important partners of the public administration in implementing tasks aiming at the conservation of biological diversity.

Acknowledging the importance of maintaining and preserving invaluable natural heritage of Poland for future generations, the Supreme Chamber of Control (the NIK) has recently carried out several audits in this area from its own initiative. During the 5 past years the NIK finalised:

- 3 whole-country audits in the area of biodiversity conservation,
- several *ad hoc* audits concerning nature conservation in the local scale and
- a parallel audit of Pieniny National Park located on both sides of the Polish-Slovak border, which was carried out in co-operation with the SAI of Slovakia.

Most recently an audit of a great importance for the assessment of the Polish system of nature conservation and its performance was carried out. It was the audit of Poland's preparation to implement the provisions of the Convention on biological diversity. The Convention was signed up in Rio de Janeiro in 1992 and ratified in 1996. This audit was preceded by two other audits concerning the functioning of the National Parks and landscape parks, completed in

2001 and 2002 respectively. These two audits were carried out in order to examine the functioning of the most important elements of the national system of protected areas.

The main goal of the above mentioned audits was to examine the public administration's performance in the area of nature conservation, in terms of sufficiency and regularity. The audits paid special attention to the government administration bodies performing their responsibilities as required by law, aiming at biodiversity conservation in the areas protected by law. In order to achieve these audit goals it was necessary to examine the regularity of the management and the effectiveness of the use of financial resources assigned for the implementation of the above mentioned tasks. Each of these audits carried out by the NIK was a performance audit with elements of regularity audit.

The appropriate selection of a sample of audited units was important in order to obtain representative results. In the case of the National Parks, their whole population has been examined together with the supervising authority, that is the Ministry of Environment. As to the landscape parks, the audit covered 60% of their population as well as their supervising voivods (regional governors). Another audit covered, among others, one new National Park established in 2001, a complex of landscape parks consisting of 12 parks, which had not been audited before. The NIK auditors examined also the supervising voivod, the Ministry of Environment and two organisational units performing tasks assigned by the Ministry, aiming at the implementation of the Convention on Biological Diversity.

On the basis of findings of the audit of Poland's preparation to the implementation of the Rio de Janeiro Convention, the NIK has stated that Polish legal regulations and documents adopted by the Parliament and the Government establish a favourable framework for the implementation of the Convention. As a result of the implementation of the recommendations of previous NIK audits, a base document titled "National Strategy for the Protection and Rational Use of Biological Diversity" was adopted in 2003. In the period covered by the audit, that is, in the years 2001–2003, the audited bodies undertook activities aiming at the implementation of the obligations arising from the Convention. At the same time a number of negative events occurred. Some of them were found already during the previous audits of national and landscape parks. Let me mention the following:

- the main goals concerning nature conservation in the protected areas had not been fully achieved; some activities aiming at the protection of biological diversity had not always been carried out properly;

- protection programmes had not been developed for a number of protected areas; a protection programme is a base document defining goals, tasks and detailed instructions on how to carry out protective activities;

- due to inadequate co-ordination some activities had been taken purposelessly; in some cases it also led to inefficient management of financial resources.

As a result of the above-mentioned audit, the NIK, apart from making recommendations to the audited bodies, formulated also some general conclusions. Those conclusions were addressed to the relevant public administration bodies, such as the Ministry of Environment, the Ministry of Agriculture and voivods, and aimed at a better implementation of the provisions of the Convention on the Biological Diversity.

As the NIK's experience shows, audits in the area of nature conservation and preservation of biological diversity pay an essential role in reinforcing the implementation of law. The NIK's audit activity in this area has also its social dimension. It supports the efforts of numerous environmental activists gathered in various non-governmental organisations, who are integral and indispensable part of the system of nature conservation.

Auditing Biodiversity at the United States General Accounting Office (United States)

Theme: **Environmental Auditing and Biological Diversity**

Author: **General Accounting Office**

Biodiversity was a little known concept and a virtually unknown term as recently as fifteen years ago. Today, however, it is one of the most commonly used expressions not only in the biological sciences, but also in ordinary conversations about environmental matters. Biodiversity is defined, by one U.S. government research agency, as "the variety and variability among living organisms and the ecological complexes in which they occur," or more simply, the sum of all the different kinds of organisms inhabiting a particular space.

A simple definition, however, does not reflect the importance of biodiversity to humankind. For this, consider the remarks of a leading international official on biodiversity who said that—"biodiversity is the resource upon which families, communities, nations, and future generations depend…[it is] the very web of life." Because biodiversity is such a broad concept, it is difficult to understand and evaluate. What is clear, though, is that we depend on biodiversity for virtually everything we need to live—food, shelter, water, and energy. Biodiversity is also important to humans in ways that are not as easy to measure, but are no less important, such as its moral and aesthetic significance.

Despite its importance, biodiversity is currently threatened by human activity on every continent, in every country on the planet. In the past century, the world's population has grown four-fold, creating substantial pressures on plant and animal life, and the ecosystems upon which they depend. When people think of the loss of biodiversity, images of tigers, elephants, pandas, and other large charismatic animals may come to mind. However, species extinction is much more widespread across the web of life—with the loss of thousands of plant, animal, and insect species. Scientists estimate that the loss of individual species has increased 50 or 100 times the natural rate, and is expected to rise even further. It is, of course, the loss of habitat through fragmentation, degradation, or destruction that poses the most serious threat to biodiversity. Indeed, threats to forests, wetlands, coral reefs, and other ecosystems are setting the stage for the extinction of many individual species that depend on these habitats.

Governments around the world are clearly concerned about the threats to biodiversity. In 1973, more than 80 nations agreed to the Convention on International Trade in Endangered Species of Wild Fauna and Flora to curb the international trade of wild animals and plants that threatened their survival. Heightened attention was brought to the issue of biodiversity at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, when the Convention on Biological Diversity was opened for signature. There are also other multi-nation agreements addressing issues related to biodiversity.

Why the United States Congress Asks GAO to Audit Biodiversity Protections

The United States Congress recognized the importance of species and the threats posed to them in the U.S. in 1973 by passing the Endangered Species Act. This Act is the primary legal tool that the United States federal government has developed for protecting biodiversity and it

focuses both on preventing the extinction of individual species and promoting their recovery. Two agencies in the federal government, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, administer this law. The key provisions of the Endangered Species Act are to:

- Maintain a list of both threatened or endangered species,
- Identify specific areas of habitat deemed essential for these species,
- Develop recovery plans for these species,
- Prohibit the "take" of listed species, that is, endangered species may not be harassed, harmed, pursued, shot, wounded, killed, trapped, captured, or collected, and
- Ensure that activities carried out by the U.S. federal government do not jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat.

As of April 2004, there were 519 animals and 746 plants listed as threatened or endangered in the United States. In 2000, federal and state government agencies spent more than $610 million to protect these species.

The Endangered Species Act provides the broadest protection for species and habitat in the United States, while several other federal laws help to protect biodiversity in a less comprehensive manner. Some laws focus on specific types of species. For example, the Marine Mammal Protection Act prohibits the taking of marine mammals in U.S. waters and by U.S. citizens on the high seas. The Migratory Bird Treaty Act makes it illegal to possess or kill migratory birds. Other laws are aimed at specific ecosystems. For example, the Clean Water Act protects wetlands from degradation by requiring developers to avoid, minimize, and/or mitigate the adverse impacts of their activities on these habitats.

Auditing Biodiversity is a Complicated Challenge

While the U.S. government has acted to protect species for several decades, there is much controversy and debate over how well the government is implementing laws and whether the investment made in protecting species and habitat is appropriate…hence GAO's involvement in the issue. Auditing programs related to biodiversity, however, is unlike many of the other government programs that GAO evaluates.

Issues like biodiversity, and ecological questions in general, often do not produce absolute, or concrete conclusions; they are often inconclusive, tentative, or conditional. The amount of research needed to truly understand species' biological and habitat needs can be considerable and take a long time to develop. Consequently, scientific research often does not keep pace with governmental decision-making. Not surprisingly, there are often disagreements about what species really need protection and what types of protections are necessary. Sometimes the scientific research is not yet conclusive, and decisions must therefore be made on the basis of incomplete information.

Given the broad authority of the Endangered Species Act, protecting species can be costly in terms of direct expenditures (such as for the purchase of land for habitat) or impacts on local economies (such as in reduced timber harvests or restrictions on development). As a result, implementing this law often creates controversy among opponents who claim that the federal government enforces its provisions too strictly, to the detriment of local economies and private landowners, and proponents of the law who claim that the federal government fails to act swiftly and comprehensively enough, to the detriment of plant and animal species. Seen in this context, auditing government performance on matters related to biodiversity and habitat protection can be particularly challenging.

Thus, while audit organizations like GAO are familiar with conducting performance audits of government programs, auditing biodiversity programs presents unique challenges because of the scientific issues underlying program implementation. How does an organization committed to objective, fact-based criteria, like GAO, audit biodiversity and what some call "soft science?"

GAO's Approach to Meeting These Challenges

GAO strives to meet these challenges in a number of ways. First, our analysts are trained and experienced in the field of performance audits. While the science surrounding issues of biodiversity may be inconclusive or changing, evaluations of scientific programs and decisions must nevertheless be grounded in specific criteria. In the case of biodiversity, we look to the purpose of the Endangered Species Act and other federal laws or mandates that the government must to follow to protect species and their habitats, and the programs that the government has developed to do so.

Second, our analysts develop a high level of familiarity and expertise with the science programs they evaluate. While most GAO analysts are not scientists, we have a diverse staff with varying levels of scientific training and expertise. For example, many of our staff have advanced degrees in environmental science and policy, and while other staff have undergraduate degrees in the biological sciences. We also pursue continuing education opportunities in related areas. We are fortunate to have a federal training center for natural resource issues just an hour outside of Washington, D.C. Several staff have attended week-long training courses on endangered species and science related disciplines, such as conservation biology, and many regularly attend professional conferences and seminars on issues related to biodiversity.

Third, we tailor our audit methodologies to the specific situations that we are auditing with an eye to enhancing our scientific credibility. Two recent reports illustrate how we do this.

The Mojave Desert Tortoise—The U.S. Congress asked GAO to determine whether the decision to identify the Mojave Desert tortoise as endangered was based on sound science. Given that we did not have the specific scientific expertise to evaluate all the information that was available to the biologists making this decision, we contracted with the National Academy of Sciences to provide us with independent scientific expertise. (The National Academy of Sciences is a private, nonprofit society of distinguished scholars engaged in scientific and engineering research. It was created by Congress in 1863 to advise the federal government on scientific and technical matters. The Academy has expertise in a wide array of disciplines

and has over 2,000 scientists as members. GAO has a contract to obtain access to this expertise when needed.)

Based on criteria we provided for the type of expertise needed, the Academy convened a panel of 7 experts to review the scientific information and come to their own conclusions about whether the tortoise should have been identified as endangered. We conducted other audit work to answer additional audit questions, and became intimately familiar with the scientific studies on the condition of the tortoise and its habitat that were used to make these key decisions. We also interviewed virtually all the scientists involved in tortoise research in the United States. While the decision to identify the tortoise as endangered had always been debated, the results of our panel—which concluded that the tortoise is endangered—have seemingly silenced much of the debate.

Identifying Species for Protection Under the Endangered Species Act—In a study that expanded the scope of the previous report to include all the species currently protected under the Endangered Species Act, Congress asked GAO to determine, overall, whether the Fish and Wildlife Service was making sound scientific decisions about what species to identify as endangered. Again, we did not have the specific scientific expertise to evaluate these decisions on our own. Additionally, because there are over 1,260 species protected under the Act, it was not practical to use the National Academy of Sciences to evaluate each and every decision. We therefore identified surrogate measures that could be used as indicators of how good the decisions were:

- We first looked at the procedures the Fish and Wildlife Service used when making listing decisions under the Act—in what was essentially an internal control evaluation. The Service's procedures included several steps for conducting internal and external reviews. While simply following the procedures will not necessarily guarantee a good scientific decision, compliance with the procedures is an important step to arriving at a good decision. We found that the Fish and Wildlife Service followed its procedures closely.

- We then took a closer look at the external reviews solicited by the agency—not just whether an external review occurred. We identified the results of the external reviews to determine whether they generally concurred with the Fish and Wildlife Service's proposed decisions; we found that in the vast majority of cases, the reviewers agreed with the Service's proposals.

- We also spoke with other experts involved on the subject of endangered species—both those who are typically in favor of the federal government's implementation of the Act and those who are opposed to it. We found that most of these experts agreed that the Service's decisions to place species on the list were scientifically supported, and that those species needed the protection of the Endangered Species Act.

- A fourth surrogate measure we examined was the outcome of legal decisions related to listing decisions. The Endangered Species Act is the source of frequent legal disputes, and many challenges surround the federal government's decision to place a particular species on the list. However, we identified only two cases in which a court overturned the government's decision to list a species because the decision was not

adequately supported by scientific evidence (recall that there are more than 1,260 species listed for protection under the Act).

- Finally, we evaluated how the Fish and Wildlife Service makes decisions to remove species from the list of endangered species. Under the Endangered Species Act, species are removed from the list, or "delisted," when they have recovered or gone extinct, or if new information reveals that the species is no longer endangered and does not need the protection under the Act. We found that only 10 species have been delisted because new information had shown the species to be more widespread or abundant than believed at the time it was listed, or because they were not valid species (i.e., that they were not unique species or they were hybrid species, and therefore not eligible for protection under the Act).

Based on our analysis of these 5 surrogate measures, we felt confident in concluding that the Fish and Wildlife Service is making sound decisions about listing species for protection under the Endangered Species Act.

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In general, GAO staff members strive to acquire the technical expertise that would facilitate their audits of this complex issue. To supplement our own expertise, we also outreach to organizations like the National Academy of Sciences, professional scientific bodies, academia, and nongovernmental organizations that represent both sides of the issues we audit. Our staff members develop and maintain an extensive network of contacts with experts and other knowledgeable individuals in such organizations to help us keep a finger on the pulse of public and scientific opinions and perceptions of government programs. We believe this allows us to go beyond the administrative questions of how well a program is implemented, to the deeper questions of whether federal agencies are focused on the right issues and whether they are approaching problems in a reasonable manner.

CONCURRENT, JOINT OR CO-ORDINATED AUDITS

Co-ordinated Audits (Austria)

Theme: **Concurrent, Joint or Co-ordinated Audits**

Author: **Dr. Heinrich Lang**

A) The Austrian Court of Audit

The Court of Audit is the only institution in Austria, including the audit institutions of the provinces (Länder), which is able and allowed to audit all levels of government from national down to local communities, enterprises which are 50% or more state-owned and all grants given by Austrian administrations to private enterprises or persons.

Reports are forwarded to the competent legislative body (federal or provincial parliament). These reports are condensed versions of the original reports, which were forwarded to the auditees, which have a constitutional period of three months to give comments on the findings and recommendations. The reports must not be published before they are forwarded to the legislative body.

The department "Comprehensive Environmental Protection" has to audit everything concerning environmental protection (nature protection, waste, water management, international accords, air pollution, sustainable development, biodiversity etc.) all over Austria, including the administration (all ministries) at all levels (federal, provincial, local) and state owned enterprises dealing with environmental affairs.

B) Environmental grants abroad (co-operation with Hungary)

What were the main reasons for choosing this topic?

- Environmental effects for Austria from grants for projects in the neighbourhood?
- Comparison of the costs of avoiding one ton CO_2 in Austria and abroad to be able to judge effectiveness of the coming flexible Kyoto instruments (Clean Development Mechanism and Joint Implementation).
- In co-operation with our Hungarian colleagues we wanted to know if Austrian money was spent effectively in Hungary.

What was the scope of the audit?

- Organisation and financing of the system.
- Co-operation with governments and/or organisations in the receiving countries.
- Are there concrete projects with environmental effects on Austria or are there just studies with no operational outcome?

Main results

There were differences between the balances of the bank allocating the funds and the federal balances (2 mill EUR). Average costs for avoiding are 103 EUR/t CO_2 in Austria, 52 EUR/t CO_2 abroad. A new law concerning the organisation and co-operation in locating funds abroad including new processes concerning the flexible Kyoto mechanisms was created. The implementation of grants will be organised by the receiving countries in future (contacts with Hungary, Poland and Slovakia)

In Hungary, from 41 tasks, six were already finished, six were under construction, eleven planned, and four called necessary (in sum 27, = 65%), statements on the environmental effects were not possible.

C) The audit of the ecosystem lake Neusiedl/Fertö (co-operation with Hungary)

What were the main reasons for choosing this topic?

We wanted to carry out an audit including all influences on this site and get a comprehensive impression about the national and international efforts on this area on both sides of the border.

What was the scope of the audit?

The audit should evaluate the organisation, financing and measures taken in both countries, including the two national parks, for the protection of the cross-border area on local level as well as compare the Austrian and the Hungarian systems.

Main findings

In Austria some nominations or borders, like the Biosphere Reserve of the UNESCO and the European Biogenetic Reserve, could not be empathised.

The number as well as the area of the characteristic salty ponds (Lacken) decreased dramatically due to economic use of the Lacken. Consequences were disruption of the natural water management, losses of typical plants and endangering of the typical fauna.

Three exotic species of fish were dramatically pushing away the indigenous species.

Conflicts of use were existing with agriculture, hunting, fishery and tourism.

On both sides of the border problems with waste water treatment facilities were found out. The safeguarding of land was solved by buying-up in Hungary and by renting land in Austria.

In Hungary the list of protected zones was not published in legal regulations.

Not all expenditures for the areas could be demonstrated separately.

There were problems with the quality of the reed.

The bilateral co-operation was successful on all levels of administration.

Main recommendations and results

The borders of the protected areas were updated.

Due to recommended measures concerning the Lacken, there are no more disturbances of their natural water management.

The structure of the fishery in the Austrian part of the lake was changed, hunting was partly ceased.

Measures concerning the waste water treatment facilities were implemented.

D) The audit of the ecosystem river Thaya/Dye (co-operation with the Czech Republic)

What were the main reasons for choosing this topic?

The cross-border region between Austria and the Czech Republic is a conjunction of national parks, energy plants and water and waste water treatment facilities. Occurring problems and conflicts have to be solved together by the two neighbouring countries.

What was the scope of the audit?

Topics of the audit are measures and investments to achieve biological water quality level II in the river Thaya and the contributaries, the state of the groundwater body, the implementation of the EU Directive on nitrate in ground water, the state of the waste water treatment systems and measures concerning the ecological demands of the EU Water Directive.

Furthermore, the implementation of international agreements concerning biodiversity and the protection of habitats and species, the involvement of the national parks, the impact of the Vranov power plant and the international co-operation shall be evaluated.

Main findings, recommendations and results s

At the time of the preparation of this paper the audits were ongoing respectively not yet begun. They will be finished till the end of May 2004, so findings and recommendations will be presented during the meeting.

The reports are on the Austrian homepage (www.rechnungshof.gv.at) in German and in a short English version on the homepages of the INTOSAI and the EUROSAI working groups for environmental auditing (www.environmental-auditing.org, www.nik.gov.pl/intosai).

Contact: www.rechnungshof.gv.at, wg.environment@rechnungshof.gv.at, lang@rechnungshof.gv.at

Contraloría General de la República del Paraguay Medio Ambiente – DGCRNMA/CGR (Paraguay)

Dirección General de Control de los Recursos Naturales y

Proponente:

Antecedentes:

A partir de 1997, la DGCRNMA ha desarrollado trabajos de auditoría de gestión a instituciones del Estado paraguayo, en el ámbito del control de cumplimiento de funciones y competencias vinculadas con la protección y preservación de los recursos naturales y el medio ambiente, como parte del patrimonio público nacional.

En ese contexto, se ha efectuado, entre otras, dos auditorías de gestión vinculadas con la problemática ambiental del río Pilcomayo y su cuenca cuya superficie total asciende a 272.000 km^2, de los cuales 79.000 km^2 corresponde a la Argentina, 96.000 km^2 a Bolivia y 95.000 km^2 al Paraguay.

Un primer informe (1996), se relacionó con el derrame de subproductos mineros ante la falla de una presa de relave en la cuenca alta del Pilcomayo de Bolivia y los posibles efectos sobre el cauce hídrico y los usuarios del agua afectados. Los resultados del estudio fueron remitidos en su oportunidad a las EFS de Argentina y Bolivia.

Un segundo Informe (2001), titulado “Auditoría de Gestión a instituciones nacionales vinculadas con la problemática del río Pilcomayo: Ministerio de Obras Públicas y Comunicaciones, Comisión Nacional de Regulación y Aprovechamiento Múltiple de la Cuenca del Río Pilcomayo, Ministerio de Relaciones Exteriores, parte nacional de la Comisión Binacional (Argentina - Paraguay), parte nacional de la Comisión Trinacional del Pilcomayo (Argentina, Bolivia y Paraguay) y a la Secretaría del Ambiente”, se relacionó con la ausencia de aguas en territorio nacional proveniente del río Pilcomayo y los efectos ambientales sobre el ecosistema de la región afectada.

Por la Ley N° 543/95 el Paraguay ratifica el acuerdo para la creación de la Comisión Binacional Administradora de la Cuenca Inferior del Río Pilcomayo entre Argentina y Paraguay.

Por la Ley N° 580/95 el Paraguay ratifica el acuerdo para la creación de la Comisión Trinacional para el Desarrollo de la Cuenca del Río Pilcomayo entre Argentina y Bolivia y Paraguay.

La Comisión Trinacional gestionó y obtuvo apoyo económico y técnico de la Unión Europea para la ejecución de un plan maestro de gestión integral de la cuenca del río Pilcomayo.

2. Objetivos:

Auditoría de gestión a las comisiones (a) Trinacional, Argentina, Bolivia y Paraguay; y (b) Binacional, Argentino – Paraguaya, en los aspectos ambiental, financiero de los programas implementados y a implementarse y una revisión de los programas nacionales de desarrollo local, específicamente en el aprovechamiento y manejo del agua. También serán analizados la normativa legal y marco institucional vigente en cada país.

3. Plan de trabajo Preliminar:

Fase I	Planificación de las auditorías.
Fase II	Ejecución de las auditorías en cada país.
Fase III	Evaluación de las auditorías.
Fase IV	Elaboración de un informe de los tres países.

En todo caso, de acuerdo al carácter de la auditoria que se consensúe en definitiva.

4. Plan de Concreción:

a- Las EFS involucradas deberán analizar la presente propuesta en el marco del Grupo de Trabajo sobre Auditoría del Medio Ambiente de OLACEFS/INTOSAI.

b- Solicitud de colaboración de: Grupo de Trabajo sobre Auditoría del Medio Ambiente y del Fridtjof Nansen Institute de Noruega (Green Globe Yearbook).

c- Gestión ante INTOSAI a fin de identificar una EFS intemediaria para colaborar en el marco de la presente propuesta.

Environmental Auditing—Supreme Chamber of Control (Poland)

Theme: **Concurrent, Joint or Co-ordinated Audits**

Author: **The Supreme Chamber of Control**

The Supreme Chamber of Control (SCC) of Poland has been dealing with environmental auditing issues for over 35 years. As the ecological awareness of the public has been growing and more extensive legal regulations in the field of environment protection have come into force, the SCC has adjusted its audit programs to new public and legal requirements and international obligations.

Environmental awareness has increased over the years. It is obvious that the environmental issues can not be solved only by one country. The growing number of environmental agreements and international conventions created the base for the co-operation in international auditing.

The history of joint parallel audits carried out by the SCC dates back to the last decade.

- In 1995 the SCC and the SAI of Belarus studied on protection of the Puszcza Białowieska primeval forest. The Puszcza Białowieska is a dense forest complex of undisturbed substance, unique in Europe situated on the territory of both countries. The audit findings allowed to point out existing irregularities in the Puszcza Białowieska protection from the perspective of regulations being in force in both countries, and the necessity to start close co-operation between the two forest administration.

- The implementation of the tasks imposed by international treaties on co-operation on border waters was the subject of two parallel audits conducted by the SCC together with the SAIs of the Czech Republic, Lithuania and Belarus in 1996. As a result of the audit, it was stated that the plans for co-operation on border waters approved by both sides were implemented to a limited extend.

- Poland, the Czech Republic and Lithuania conducted an audit of atmospheric air protection in 1999 and in the following year, Germany. The audit finding point out that in order to achieve the goals aiming at the protection of air against pollution, it is necessary to consider closer co-operation among neighbouring countries and unification of standards for air emission and fuel quality.

- The Helsinki Convention audit was carried out in 2001 by the Supreme Audit Institutions of the countries—signatories of the Helsinki Convention: Denmark, Estonia, Finland, Latvia, Lithuania, Poland, the Russian Federation and Sweden. The Supreme Chamber of Control of Poland co-ordinated that audit. The objective of the audits were to assess the implementation of the Helsinki Convention provisions related to the protection of the Baltic Sea against land-originating pollution. The Co-operating Parties conducted the audits according to their competencies and abilities based on the Common Position on Co-operation and Programme Assumptions. Each SAI was responsible for its own audit and for the way its results were presented in the general

part of the report. The summaries of national reports served as a basis for preparation of the Joint Final Report.

The widening sphere of an international co-operation among SAIs in the environmental auditing field sometimes entails some difficulties due to different mandates of particular SAIs and inequality in their potential. The general rule of international co-operation should be the search for common areas of competencies, and not registering differences.

Studying the implementation of conventions' and international agreements' provisions is a very important tool in conducting international audits. It allows SAIs to examine the same issue in one environmental area in accordance with SAIs competencies and abilities and, in the case of joint co-ordinated audits, in the same time period. The Common Position on Co-operation and the Assumptions of the Audit Program enables SAIs to adjust audit objectives to their mandates and to compare audit findings in joint audit reports.

International or regional environmental audits mainly focused on fulfilment and efficiency of environmental treaties commitments have become a daily routine of the activities of the EUROSAI Working Group on Environmental Auditing that may be exemplified by the second edition of the Helsinki Convention audit. This audit is being co-ordinated by the National Audit Office of Denmark. Eight Baltic States expressed their willingness to participate in this audit. The audit subjects include, among other things, issues related to pollution from ships. Auditing the implementation of the Conventions and international agreements provisions appear as a common interest in the pollution prevention and protection of environment and also leads to the establishment of new environmental legislation or to the improvement of the existing legislation.

Conducting international audits allows SAIs to accomplish intended audit aims and offers benchmarking opportunities. The SCC's experience clearly shows that international audits offer the only way to obtain comprehensive data on issues related to environmental auditing and broader knowledge about activities performed by SAIs in this area. The SCC has shared the experience gained from environmental audits with other SAIs in order to explore the possibilities for joint initiatives in environmental auditing. The SCC has learned that international audits help to develop competencies and ways that SAIs can share methodologies and audit approaches. They also provide incentives for SAIs to carry out audits of international accords and to work closely with other SAIs.

The SCC's vision is to promote 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 builds a cooperative spirit among SAIs, integrity, open communication, and professional excellence.

ENVIRONMENTAL AUDIT AND REGULARITY AUDITING

Potable Water for Human Consumption in Rural Localities—Office of the Comptroller General of Chile—Regular Environmental Auditing, 2003 (Chile)

Theme: **Environmental Audit and Regularity Auditing**

Author: **Ximena Mura Alvarez and Peter Balazs Zilcz**

I. Subject

Potable water used by the rural population is obtained from underground sources and is at high risk of being polluted by fertilizers, pesticides, insecticides and sewage.

II. Objectives

To verify the quality of rural water for human consumption in the metropolitan region of Santiago from the chemical, physical and bacteriological and health standpoints, through a systematic, critical and selective evaluation of the procedures and actions that the Environmental Health Service of the Metropolitan Region (SESMA) should carry out to protect the environment.

To verify the oversight and monitoring performed by SESMA with respect to the quality of drinking water in rural areas.

To verify compliance with the rural potable water program by the Sanitation Department and the Regional Water Works Directorate of the Ministry of Public Works.

III. Scope

Revision and analysis of water problems and the rural drinking water system; identification of vulnerable zones; sampling and testing; compliance with the legislation regulating this area.

IV. Methodology

After a study of the universe and the users, a sample of 31 localities in the metropolitan region (9.3% of the total), covering 30% and 40% of the population served by the Rural Potable Water Services (APR) of the Ministry of Public Works and by makeshift private systems, respectively.

Fifteen APR services, two private recreational areas and 14 makeshift private systems were considered in low-income localities classified by SESMA as being at high health risk.

Background was obtained on rural water systems in the municipalities of the metropolitan region: types of uses, sources of supply. Executives from the Metropolitan Region's Health Service and the Water Works Directorate were interviewed.

Surveys and interviews were conducted of users and managers of water treatment plants; the control exercised by SESMA was verified.

Samples of water were taken for chemical, physical and bacteriological testing to determine whether the parameters established in Chilean Standard No. 409 of 1984 on water for human consumption were being complied with.

V. Results of the Audit

- Poor sanitary conditions were found in 93% of the wells and pumping systems of makeshift private systems.
- Fifty-two percent of the total visited presented problems such as the presence of fecal coliforms.
- Pockets of contamination from pesticides used in farming, poultry operations, hog farms, fish culture, sanitary landfills, affect 45% of the localities visited, causing damage to the region's ecosystems.
- Seventy-one percent of makeshift private systems present problems of bad smells rarefied air, turbidity in the drinking water, problems with water intake, and others.
- Problems in the makeshift systems and in the formal piped systems include contamination by sulphates, iron, filterable solids, ammonia, chlorides, manganese, lead, cadmium, turbidity.
- Thirty-one of the services sampled had parameters above the maximum limits established in Standard 409/84 for the elements mentioned in the preceding point.
- One hundred percent have at least one parameter that is above the maximum limits established in Standard 409/84.
- Lack of specialized staff for monitoring.
- Frequent changes in the structure of SESMA teams.

VI. Recommendations

- There needs to be an improvement in the quality and timeliness of oversight by SESMA and the National Environment Commission (CONAMA), which is responsible for overseeing compliance with the constitutional guarantee of the right to live in an environment free from pollution, environmental protection, conservation of nature and of the environmental heritage.
- Maintenance and permanent updating of the inspection records and fiches of the APR's systems.

- SESMA needs to spend enough money to support a team of duly trained professionals to perform monitoring and inspection of the piped water services and makeshift systems.

- Standard 409 of 1984 needs to be updated and adapted to the international standards defined by the World Health Organization.

- The penalties established by law for infractions should be applied.

- A national cadastre of rural localities in doubtful sanitary condition should be prepared.

VII. Experience

Application of the new technologies has been very positive in most aspects of social and economic development. However, obsolete laws and regulations need to be updated, since they have impeded efficient and effective oversight and coordination of the standards regulating this area by the public agencies, SESMA and CONAMA. Duly programmed and effective and timely procedures need to be established.

SESMA is studying the different situations that affect the public water supply in rural zones in order to prepare a health risk index and a regional cadastre of makeshift systems.

The administration needs to take steps to establish programs with specialized human and financial resources for due and timely control, so that adequate preventive measures can be taken and users' health can be protected from the impacts of the current situation.

Program for the Protection of the Ozone Layer—Office of the Comptroller General of Chile—Regular Environmental Auditing, 2002 (Chile)

Theme: **Environmental Audit and Regularity Auditing**

Authors: **Milton Gómez Sanhueza, Roxana Núñez González and Peter Balazs Zilcz**

I. Subject

Depletion of the ozone layer prevents the filtering out of most of the sun's ultraviolet radiation, causing damage to human health and the ecosystem that can have a negative impact on sustainable development.

A hole in the ozone layer in the Antarctic was discovered about three decades ago and gradual and sustained depletion of the ozone layer is taking place all over the planet.

II. Objective

To verify compliance with the 1987 Montreal Protocol promulgated in Chile under Decree 238 of 1990 of the Ministry of Foreign Relations, with respect to the commitments made by the Government of Chile to reduce, freeze and eliminate ozone depleting substances (ODS) and to duly invest the international financial resources provided under the Ozone Projects Trust Fund (OTF) Grant 21916-CH for compliance with the obligations assumed by the Chilean government under the Montreal Protocol.

It should be noted that Chile is an importer of ODS and not a producer and therefore verification of the obligations by this audit is related to consumption in the country of the substances in question.

III. Scope

Review of imports of substances regulated by the Montreal Protocol between 1995 and 1999. Compliance with their commitments by companies that obtained subsidies to adapt process and convert technologies in industries that use ODS.

The main commercial uses of chlorofluorocarbon is in the manufacture of commercial and residential refrigeration and air conditioning equipment and in rigid polyurethane foam.

In 2001, the actions of the National Customs Service and the National Environment Commission (CONAMA), the first responsible for overseeing imports of the products in question and the second for applying environmental standards and programs in this area, were audited in light of the fact that since July 1999, Chile has not been able to import more than 835 tonnes a year of CFCs, and has not been able to import those substances or products that include them from countries that are not members of the Protocol.

IV. Methodology

- The procedure for control and reporting of imports of ODS by the National Customs Service was studied, as was its coordination with CONAMA, which is responsible for overseeing compliance with the program in the country.

- The use of resources from OTF Grant 21916-CH was verified.

V. Results

- The customs coding system does not include specific tariff codes for the ODS listed in Annex A, Group I, of the Protocol.

- Information in the database on imports is not precise with regard to products such as trichlorofluoromethane (CFC-11) or diichlorofluoromethane (CFC-12) as far as their chemical identification is concerned; exact identification of the imported substance, since it only mentions the brand; there are errors in customs reporting.

- Difference in import declarations regarding quantity, specific identification of the imported product, and inconsistencies in the documentation attached to import declarations, which leads to errors in customs determination of the nature of the imported product.

- Error in determining average consumption of CFCs. According to Article 5 (c) of the Protocol, the maximum that Chile can import is 835 tonnes after July 1999. We detected a difference of about eight tonnes. Also, CONAMA failed to report to the Ozone Secretariat on 47.7 tonnes of CFC-115, since they were considered to be a mixture of the substance R-502. They should have been considered in the determination of the average consumption of ODS, in accordance with Article 5, paragraph 1, of the Protocol.

- Lack of follow-up by CONAMA after the subsidy obtained by projects that applied for financing for technological conversion was paid.

- Just one company asked to be granted the Ozone Seal for a product that did not use ODS in any stage of processing.

- The National Customs Service does not have a system of control or effective reporting of ODS imported from countries that are not parties to the Protocol.

- In 1996, 11 technology-conversion projects were accepted; a total of US$426,452 was granted for the elimination of 118.4 tonnes of ozone depletion potential (ODP). Subsequently incentives were granted to 17 companies for a total of US$2,232,829 to eliminate 332.28 tonnes of ODP annually.

- In general, the companies abided by the commitments of their technology conversion agreements and specific projects, except for a small number of companies that did not comply fully with their commitments related to buying products. This situation was investigated by CONAMA and the pertinent legal action has been taken.

VI. Recommendations

- The National Customs Service should implement an internal control system specifically for imports of ODS.

- Coordination between the National Customs Service and CONAMA should be improved in reviewing and effectively and efficiently updating the list of pure substances and mixtures that contain ODS.

- Analyze and determine the features that allow substances that are imported as mixtures and which contain ODS to be precisely individualized for the purpose of determining average consumption.

- Prepare an official document that accredits and supports the monitoring of technology conversion projects.

- Monitor technology conversion projects after the incentives are paid to the beneficiary companies, which should also appear in an official supporting document.

Legality and Compliance Audit on the Household Waste Management in the Republic of Latvia in the Ministry of Environment and its Subordinate Institutions (Latvia)

Theme: **Environmental Audit and Regularity Auditing**

Author: **Jevgenijs Mezals**

The tasks of audit was to examine:

- does the Household Waste Management legislation in Latvia is in line with European Union regulations;
- does the Ministry of Environment and its subordinate institutions sufficiently control the implementation of the Household Waste Management Policy;
- does the audit units use allocated resources legally, correctly, economically and effectively.

1. National Environment Policy

In order to help adopt the EU legislation in Latvia, the following documents were developed:

- Environment Protection Policy Plan (accepted in April 1995);
- Household Waste Management National Strategy for 1998–2010 (accepted in 1997);
- Waste Management Country Plan for 2003–2012 (accepted in 2002).

Latvia is a democratic parliamentary country. Its territory is divided into 26 regions, 7 main cities, 561 rural municipalities and towns. According to the current legislation, waste management is the responsibility of the state, cities, towns and municipalities. The regions do not take part in waste management at the moment, because their administrative institution functions will end soon due to the administrative territorial reform being performed in the state.

Participation of different levels of government in household waste management (HWM) is described in the Law on Local Governments, Law on Environment Protection and Territorial Planning Regulations. Both the Laws and Regulations foresee that waste management tasks in the context of environment protection are included in the responsibilities of regional and municipal institutions. The Ministry of Environment also plays an important role. The Regional Environment Boards that are subordinate to the Ministry, control the work of the municipalities, including HWM.

The National Strategy sets out the overall policy for developing the household waste management in the state till the year 2010. It is compulsory for all the parties involved in the HWM, waste producers, regional and state government institutions and waste management organizations. The Strategy is only the first step towards a better HWM system. The Strategy foresees a regional approach to waste management, building 10–12 new regional household

waste utilization plants, improving the quality of household waste management services, closing all the existing dumping-grounds.

In 1999 the Hazardous Waste Management Strategy for 1999–2004 was approved. The objective of this Strategy is to ensure developing an environment-friendly hazardous waste management system on a national level that would meet the EU requirements. The Waste Management Country Plan for 2003–2012 is based on the Household Waste Management National Strategy for 1998–2010 and the Hazardous Waste Management Strategy for 1999–2004 as well as on the current and planned requirements of Latvian and EU legislation. The Plan ensures implementation of the requirements of the following EU Directives:

- Waste Framework Directive (75/442/EEC, as amended 91/156/EEC),
- Hazardous Waste Directive (91/689/EEC, as amended 94/31/EEC),
- Packaging Waste Directive (94/62/EEC),
- Landfill of Waste Directive (1999/31/EC).

2. Compliance with the National Environment Policy

During the past 5 years a set of legislative documents has been developed in Latvia in order to control waste utilization and burying and to stop uncontrolled actions. The legislation meets international and EU principles and requirements in the sphere of waste management. The following issues are included in the subordinate legislative acts, regulations and guidelines:

- choice of the location for sanitary dumping-grounds,
- building and managing sanitary dumping-grounds,
- closing, sanitation and re-cultivation of the currently existing dumping-grounds.

Realization of HWM projects in regions is based on mutual agreements among municipalities. The household waste management regions on the slide are shown taking into account the economic analysis that was carried out while developing the Household Waste Management Strategy and are indicative. Thus the borders of the regions have not been detected yet, those will be decided upon by the municipalities, taking into consideration the market economy development trends in the HWM sphere.

3. Functioning of the Household Waste Management System

About 600 000–700 000 tons of household waste is produced in Latvia every year, and approximately half of it is biologically degradable. Organizing the household waste management in the administrative territory is the responsibility of the local governments (municipalities). Collecting and burying of the household waste in Latvia is mostly done by commercial companies, 95% of which belong to the local governments. The private commercial companies serve about 50% of the Latvian population. These commercial companies work in Riga, Jelgava, Liepaja, and other cities. In 1998 there were 558 functioning dumping-grounds in the state. 77% of those were smaller than 2 hectares, and less than 1000

m^3 of household waste per year was buried there. 55 dumping-grounds were closed and re-cultivated by the end of 2000. Closing of the dumping-grounds will continue as a more sustainable waste management system will develop. During the audit it was found that information about the waste management in the state is collected by the Latvian Environment Agency. Information about the household waste since 2001 is being prepared according to the Law on State Statistics. Statistical reports are distributed to the waste producers and managers through the Regional Environment Boards, which carry out the initial quality control of the submitted data. On 7 February 2002 it was decided that the dumping-ground operators have to submit annual reports, and this requirement refers to the year 2003. Due to the technical and recording disorder in the household waste dumping-grounds, reliable statistical information about waste management in the state is missing. Both in 2001 and 2002, the figures depicting produced waste are smaller than the figures depicting collected waste. This illogical difference proves that not all the waste producers report the correct amount of the produced waste.

The data summarized by the Latvian Environment Agency about the situation in regions is based on ~ 5-15% of the total number of waste producers / collectors / buriers. In 2002 a "Manual on applying factors to household waste recording switching from volume to weight units" was developed. Unified requirements for report information have to be developed that would correspond with international requirements. Developing the household waste management system for the period of 1995–2012 costs 340 million EUR. It includes building a waste burying-ground, waste collecting system (costs covered by the private sector), building composting facilities inside the burying-ground, and closing the currently existing dumping-grounds, followed by after-care. The main source of the state financing is the state budget donation from the overall revenue and environment resources tax. It is expected that in 2006 the input in environment protection will equal 1.3% of the GNP (it was 0.8% in 2000). The total cost of the household waste management projects in the period of 1995–2012 is planned to be 33 million EUR.

Bilateral and other irrevocable financial aid mostly goes to the preparation of the technically—economical basis of the project, tender documentation for investment projects and financing of co-operation. The main financial aid to the household waste projects in Latvia come from the Environment Protection Agency of Denmark, the Ministry of Environment of Finland, the International Development Agency of Sweden (SIDA). It is planned that in the period of 1995–2012, 105 179 million EUR will be received in form of irrevocable financial aid, for implementation of the waste management strategy, including ISPA financing from the EU. ISPA has been a big support for achieving the EU requirements in the waste sector. ISPA is financing the environment and transportation sector. In the period of 7 years (2000–2006) the amount of ISPA financing for environment projects in Latvia (both water and waste sectors) is approximately 164 million EUR.

The total financing of the waste management sector can be significantly increased by credits. The Ministry of Environment encourages the municipalities to increase their part of financing by taking loans. A loan is usually approximately 10% of the total financing, and it can be increased. Credits from several financial sources can be combined.

Financing source	Investment distribution (%)
State Budget & Special Budget	12
Credits	13
Foreign financial aid (e.g. ISPA)	65
Own resources	10
TOTAL	100

As for the private sector taking part in the household waste management, there are several options. On the one hand, local governments or state institutions are responsible for waste management, finances and risk, but on the other hand, the private sector is also involved in this sphere. The main investment from the private sector into household waste management will go to the development of the waste collecting system. Just to implement the Landfill of Waste Directive (1999/31/EC), an investment of 65 million EUR is needed from the private sector.

4. Audit Results

During the audit we found out that the EU legislation adoption process was started in 1997. The state legislation in the sphere of waste management has been harmonized. The EU accession covenant foresees a few differences regarding waste transported for utilization, packing recycling and waste burying-grounds. We expect the Used Vehicles Directive and Electric and Electronic Waste Directive to be fully transposed in 2004. According to the Waste Management Country Plan for 2003–2012, 10 regional waste burying-grounds have to be built by 2009. The building will most likely be delayed due to the lack of resources and their late allocation to these projects. Out of the 558 dumping-grounds that were functioning in 1997, only 245 are being used in 2003. The Ministry of Environment did not show the closed household waste dumping-grounds' re-cultivation plans coordinated with the Ministry of Regional Development nor the financing sources for closing and re-cultivating the existing dumping-grounds. All types of household waste are not being sorted in the state, but waste sorting is being implemented step by step, taking into account the limited recycling possibilities and the low solvency of the population. During the 12 years of the renewed independence of the state, a concrete action plan to stimulate the development of waste utilization as an industry still hasn't been developed. There is a lack of interest and initiative from the municipalities to use waste utilization as a possible solution for the unemployment problem. Municipalities are not looking for ways to cover the costs of modernizing and expanding the currently existing utilization plants.

At the time of the performed check, the Investment Department of the Ministry of Environment was administering 32 environment related projects, including 15 projects co-financed by the EU structural funds with the planned costs of 207.8 MEUR. There is no distribution of supervision tasks for certain projects' realization among staff members, and there are drawbacks in the control of economic and effective use of funds in the preparation phases of the projects. The capacity of the Regional Environment Boards does not ensure a good quality performance of their functions. According to the estimates of the Danish Environment Protection Agency consultants, the number of environment inspectors in the state has to be

doubled. Considering the wide spectrum of activities, the inspectors' work in supervising household waste management is insufficient.

Conclusions:

1. Legislation of the Republic of Latvia in the area of waste management has been harmonized with the EU Directives, however, the implementation is not fully coordinated and controlled. The capacity of Regional Environmental Boards does not provide for full execution of their duties.

2. Deficiencies in technical exploitation of household waste dumping grounds do not reflect the actual situation in the state.

3. Most local governments do not observe the provisions of Waste Management Country Plan 2003–2012 regarding development of household waste management plans and binding regulations and agreeing them with the regional environmental boards.

4. There is not financially secured system of collecting dangerous household waste established in the state, as well as support to household waste sorting.

5. The Ministry of Environment has not developed and agreed with the Ministry of Regional Development plans for recultivation and sources of funding for closed household waste dumping grounds.

6. Deficiencies in monitoring of environmental projects have been found at the Ministry of Environment which complicate the control of the use of funding for a concrete project.

Recommendations:

The State Audit Office considers it necessary to:

- introduce changes in laws and regulations laying down the responsibility of the Ministry of Environment for the control of waste movement, qualitative recording, development of waste processing and sorting system in the state;

- ensure development of regional waste management plans which include time schedules of closed dumping grounds re-cultivation and funding agreed with the Ministry of Regional Development;

- develop system of information exchange between the Ministry of Environment, Customs and Border Guard regarding issues within their competence that would confirm the coming of waste in the destination and report on its flow across the state borders;

- review the provision of subordinate bodies with environmental inspectors;

- ensure analytical accounting of measures, sources and utilization of funding of environmental projects administered by the Ministry of Environment.

ENVIRONMENTAL AUDITING: FACING NEW CHALLENGES

SAI Bangladesh faces new challenges; outcome of a wastes audit (Bangladesh)

Theme: **Environmental Auditing: Facing New Challenges**

Author: **Ahsan Abdullah**

1. Background, audit objectives and scope

SAI, Bangladesh has been consistently thriving to get into environmental audit, particularly after the very successful IDI-WGEA international workshop on environmental auditing, held at Antalya, Turkey. Participation in the workshop has resulted in clear awareness building of our SAI and skill formation to some extent.

Waste is now focussed as the second key theme, next to water, for environmental auditing. Rapid urbanization and industrialization process in general and the phenomenal growth of Dhaka city has necessitated our SAI, to emphasize wastes management. Dhaka City Corporation (DCC) is the only formal organization responsible for management of wastes, including solid wastes of Dhaka City, spends annual budget of around 400 Million TK (1 USD=59 TK).

A population of 12 million within 36 sq KM of area generates around 3000-4000 tons of wastes everyday.

It was therefore imperative that the audit had to concentrate on the activities of DCC, for evaluating wastes management of the city.

Audit objectives:

The audit has been aimed at the following objectives:

- To assess effectiveness of Dhaka City Corporation, in professionally managing wastes of the city
- To evaluate adequacy of budgets, manpower and equipment, of the corporation, in professionally managing wastes
- To examine adequacy of regularity instruments, including empowerment of DCC
- To evaluate adequacy and appropriateness of national wastes policy, within the national environmental plan
- To examine the effectiveness of industrial and clinical wastes in the city.

Scope of the audit

The scope of this particular audit covers the following areas and entities:

- Dhaka City Corporation, the only formal organisation for wastes management of Dhaka
- Department of Environment, the government agency, responsible for assisting the government in framing national environmental policy/plan, including policy for wastes management and monitoring implementation of such policy/plan.
- Ministry of Environment, the apex government body, responsible for environmental policy planning, preparation and issuance of necessary guidelines.
- Selected health-care centres, as major generators of clinical wastes
- Selected industrial units, as important generators of industrial wastes

Approach and methodology

The audit has followed performance auditing techniques. We took recourse of:

- review and examination of documents of DCC,
- testimonials/interviews of concerned officials of DCC, Department of Environment (DOE),
- physical inspection of waste sites/dumping sites,
- analysis of researches/ papers prepared by NGOs, Universities and research institutes and
- opinion of cross-section of citizens.

2. Summary of the major audit results

Finding 1: There is no detailed policy/procedure for wastes management. Dhaka City Corporation (DCC), responsible for wastes management of Dhaka, does not maintain any detailed and written procedure for wastes management.

Audit recommendation: DCC should develop a written and well-documented policy/procedure for wastes management, showing:

- clear responsibility of DCC,
- detailed work-plan (procedure) for each stage of the waste stream,
- written safety procedures for collection and transportation of wastes, and

- written safety procedures for dumping.

Impact: It is expected that DCC would now try to develop a detailed and documented wastes management policy, leading to more controlled and improved wastes management.

Finding 2: The DCC ordinance is not adequate to facilitate wastes management of Dhaka City. The DCC ordinance of 1993 does not cover waste stream, a basic concept in waste management. Such important aspects like classification of wastes and prevention of wastes are not covered. Disposal of industrial and clinical wastes is also not mentioned in the ordinance.

Audit recommendation: Audit has strongly recommended, that the ordinance should be updated, taking into account the present needs.

Impact: The proposed changes would need a parliamentary processing and would take some time to frame it. However, the proposed changes in the ordinance, when come into offing, would give the necessary legal and policy instruments, to significantly reduce the present environmental and public hazards.

Finding 3: DCC does not maintain separate collection and disposal of hazardous wastes. As there is no classification of wastes, all wastes, irrespective of their differences in properties and risks, are collected and land-filled indifferently.

Audit recommendation: DCC should immediately decide to separate, the collection and disposal of hazardous wastes. It is imperative that it should first identify the hazardous wastes and develop a separate and written procedure for management of hazardous clinical wastes.

Impact: The wastes management authority is already seriously thinking to separate, collection and disposal of hazardous clinical wastes. Complying the audit suggestions (separately treating hazardous wastes) would lead to reduce risks of contamination of diseases, public health hazards and environmental pollution.

Finding 4: No pre-treatment of hazardous wastes including hazardous clinical wastes. The failure of DCC to pre-treat the hazardous wastes has resulted from:

- Lack of classification of wastes,
- Indifferent treatment of hazardous wastes,
- lack of pre-treatment facilities and
- illegal deposit and land filling of wastes.

Audit recommendation: Audit has recommended that DCC should immediately classify hazardous wastes and go for appropriate pre-treatment procedures. The wastes management body should take strong measures for necessary funding and /or tax policy, right type of pre-treatment procedures etc.

Impact: Earlier the authority goes for the required pre-treatment of hazardous wastes, earlier the city-dwellers can have the benefits of lesser growth of microorganisms/carcinogenic elements and the associated risks.

Audit finding 5: Management of industrial and clinical wastes not adequately covered in national environmental policy. No specific rules/regulations are available now, nor there is sufficient monitoring/monitoring policy of such wastes management.

Audit recommendation**:** Audit has strongly suggested that wastes in general and industrial and clinical wastes in particular, should be adequately covered in national environmental plan and that specific rules/regulations should be framed.

Impact: The results from the proposed amendments in the national environmental plan are estimated to give new guidelines for management of industrial and clinical wastes, leading to more controlled situation and better monitoring.

Audit Finding 6: Poor-quality dumping/land-filling in the form of,

- land-filling in the residential areas,
- open and scattering landfilling sites,
- haphazard burning and
- illegal landfilling sites.

Audit recommendation: Audit has suggested that the corporation should seriously try to develop modern and safe land-filling sites and should target to develop those, far from the city. The corporation should decide on an optimum solution.

Impact: Development of modern land-filling sites, away from the city and locality, will quickly reduce the running risks of environmental and health hazards.

Audit Finding 7: Poor management of waste sites exist in the form of,

- open, deformed bins,
- overflow of wastes,
- large volume remains uncollected.

Audit recommendation: Audit has recommended for proper maintenance of the bins, exploring the possibility of providing lids/covers for the bins and gradually replacing the existing bins with covered and moveable ones and increasing number of bins and the command area.

Impact: A better management of waste sites as per the audit suggestions, may lead to a major improvement in water and air quality in the city and reduce risks of contamination of diseases/epidemics through rodents/insects.

Audit Finding 8: Illegal waste sites were seriously endangering environmental quality of the locality. Deposits of most of the illegal wastes are not usually collected and remain on the streets/drains and greatly contribute to pollution of surface and ground water and river pollution.

Audit recommendations: Audit has suggested for identifying the illegal waste sites, particularly those in and around government residential areas/ markets and impose penalties/taxes for the inhabitants, necessary empowerment of DCC, close all illegal markets or impose high taxes on the traders and increase number of waste sites.

Impact: The stoppage of growth of illegal wastes sites and illegal waste generators is expected to reduce the probability of unsafe deposits, scattering of wastes.

The audit results discussed hitherto, have covered three major areas,

- operational issues of wastes management,
- management issues of wastes management and
- regulatory issues of wastes management.

3. Challenges faced

(1) Data

(a) Data consistency: Data available in DCC and in other published sources vary. For example, data on volume of solid wastes, industrial and clinical wastes differ in DCC documents and in other researches/surveys. Besides, audit does not have its own mechanism of data verification.

Comments: This did not have impact on our audit findings. Although, the differences in data on volume, would lead to differences in risk involvement and management capability needs. Audit has worked on data on wastes volume, supplied by DCC, but has also assumed that a significant portion of the wastes remain uncollected (survey paper of Asia Pacific University).

(b) Data availability: Some important data are not available. The corporation does not maintain data, needed for policy decisions. It does not have data on unit cost/collection, transportation, land-filling etc. It does not also have data on average generation of different types of wastes.

Comments: The lack of policy data did not have impact on audit findings. This would however, constrain the corporation in finding an optimum solution.

(2) Manpower

Lack of professionally skilled manpower in the corporation and in the concerned government agencies.

Comments: The Corporation has a good number of experienced conservancy staff, who are however, not much aware of different aspects of modern wastes management. Audit has gone

for physical inspection and interviewing of experienced conservancy staff as supplementary tools.

Expertise not yet developed in the SAI.

Comments: No separate wing has yet been established, nor any group has been developed for environmental auditing. Our SAI does not have the required manpower as yet. Ahsan Abdullah, a graduate of the IDI-WGEA international workshop, held at Antalya, Turkey, has led the audit.

(3) Regularity instruments

- No regularity instruments available for prevention of wastes.
- No regulatory instruments available for management of industrial and clinical wastes.
- The corporation does not have the necessary empowerment.

Comments: Revisions and updating of existing rules/regulations are needed to facilitate a modern wastes management, operate professionally. Suggestions have been put forward to the government for seriously undertaking the proposed amendments.

(4) No requirements study has been made, so adequacy of manpower and equipment, cannot be assessed.

Comments: No study has been made for calculation of manpower and equipment requirement corresponding to the volume and variety of wastes. Audit therefore could not comment on the adequacy of them.

4. Potential areas for SAI-SAI co-operation

SAI, Bangladesh has initiated environmental auditing. A maiden audit has been conducted in the field of wastes management. This SAI feels that there can be mutual co-operation between SAI, Bangladesh and other SAIs (who are well-marched in environmental auditing). The following areas have been identified for future co-operation:

- Framing a long-term environmental audit plan, within the given country situation.
- Prioritizing areas for future audit.
- Joint audit in some selected areas, like audit of bio-diversity and quality of air.
- Requirements of manpower and equipment study.

Contending With Change in Environmental Auditing (Chile)

Theme: **Environmental Auditing: Facing New Challenges**

Author: **María Argentina Guevara Weber**

The Office of the Comptroller General of Chile is developing a project for institutional modernization, partially financed with funds from Inter-American Development Bank Loan 1391/OC-CH to the government.

Among other specific objectives, the project includes improvements in management systems and, consequently, in the efficiency and effectiveness of the government's senior oversight body, which will allow it to participate in and contribute to the process of modernization of the State in Chile.

The project includes the development of environmental audits, the applicable rules, methodology and technical guidelines for carrying out the work and studies.

Multidisciplinary technical teams will be established composed of professionals from the different areas of the Comptroller General's Office involved in public and private activities related to the implementation of programs approved by the administration with an impact on the environment, such as public works, transportation, housing, agriculture, fisheries, aquaculture, mining, etc.

Training for professionals in these areas is required, which could be provided by auditors who have attended and participated in environmental auditing programs abroad – Canada, Brazil, Colombia, Peru—and advisory services could be obtained from international agencies and specialized consulting firms.

In this context, the Office of the Comptroller General of Chile will be in an optimum position to provide effective, efficient and timely control over the proper application of legislation on the environment, its protection and conservation, to permit sustainable economic and social development, due compliance with the international agreements signed by Chile, government programs, and the proper investment of resources for their execution, in accordance with the mandate conferred under Law 10336, which is its organizational act.

Auditing Creation and Expansion of Urban Sanitation System Plan (Iran)

Theme: **Environmental Auditing: Facing New Challenges**

Author: **Supreme Court of Audit**

Background

The negative environmental impacts caused by inappropriate disposal of urban and industrial wastewater on one hand and the need to reuse water in agriculture on the other are to such an extent that nowadays the implementation of sanitation plans in urban, rural and industrial regions of the country is considered as a necessary and essential affair. The collection and treatment of wastewater in our country is significant from many perspectives including:

- Increasing urban population density and consequently increased wastewater generation, and the inadequacy of absorption wells and other similar solutions;
- The deteriorating environmental conditions in coastal areas and those lacking a suitable site for wastewater disposal in a traditional method;
- Increasing incidence of diseases, especially the infectious diseases;
- Need to prevent the pollution of existing ground and surface water resources;
- The need for reuse of wastewater in agriculture, especially to grow vegetables.

The creation of a wastewater collection and treatment system in our country first began in Isfahan and in period between 1975 – 1976; In some Iranian towns, where groundwater tables were high and the soil did not have the appropriate texture, absorption wells could not be considered for discharging the generated wastewater, and some sort of traditional network or other conventional methods were used for wastewater collection. Examples of such systems can be seen in Rasht, Kermanshah, Sanandaj, Khoramabad and Ahwaz. However in Isfahan due to soil impermeability there was no solution except to constantly empty the wells and pouring the wastewater in special vessels to be transported on pushcarts from alleys and streets to the site of landfill. Increased health problems, the spread of feces in living environment and urban roads, offensive odors and insect nuisance were among the consequence of such a disposal system. In the period of 1957 – 1961, the first phase of Isfahan Wastewater Collection Network Plan was implemented.

Studies undertaken before the Islamic Revolution (1979) did not leave an impact in most towns and due to the complexity of wastewater plans and a lack of national official body for the sector, none of the plans were implemented. Due to the special conditions of the country and the general preoccupation of the Government, they remained dormant during the imposed war and until the year 1989, i.e. the beginning of the First Five-Years Development Plan there were only 5 wastewater plans on the Government Agenda, which were also for all practical purposes inactive. At the beginning of the First Development Plan in 1989, the studies for wastewater systems in 75 towns were included in the programme, increasing gradually to 90 towns and finally by the end of the Plan in 1994, they reached the figure of 164 projects. From

this total 83 projects are being executed and the rest were undergoing the final stages of studies. At the end of the First Development Plan, there were 8167 km of traditional and modern wastewater collection network with 617,639 domestic connections, providing service to a population of 3.2 million or equivalent to 10.5% of the urban population.

By March 1998, the population coverage of wastewater collection, treatment and discharge networks in 140 towns and through 873,000 house connections, reached the figure of 4.5 million or equivalent to 12% of the country's urban population. The number of urban population benefiting from wastewater services in March 2000 (end of Second Development Plan) reached the figure of 5.5 million in the form of approximately 1,270,000 subscribers.

According to the Urban Water and Wastewater sector strategies defined in the Third Development Plan, by March 2005, 30% of the urban population will be covered by wastewater collection services, through 1,307,000 connections.

Audit Objective

Taking into account the environmental significance of the wastewater plans, the following objective was defined following the preliminary studies:

Have the wastewater plans been effective in achieving the projected environmental goals, including the collection, transfer, treatment and reuse of urban wastewater to prevent the pollution of surface and ground water resources?

It should be noted that other objectives such as profitability or enhancing sanitation and environmental health are also considered for wastewater plans, which are not subject to this audit.

Line of Enquiry

From our understanding about the subject, it was observed that the most important parameter for the success of wastewater plans was "*connection to the network*", and therefore it was chosen as the only line of enquiry. Since in the absence of the connection we would still have the wastewater left to go out of the networks.

Methodology of Audit

Taking into account that wastewater plans are implemented within the frame of creating and expanding urban wastewater systems, and each of these plans consists of a number of projects in different provincial towns, many of which are still either under study or execution and have not reached the operation stage, it is not possible to assess their effectiveness. Therefore from among all the projects, in which at least a module is operative (20 projects), we selected three projects, for which the studies to construct treatment plant as well as the main, laterals and transmission lines were completed according to the Contract exchanged with the Management and Planning Organization; we took advantage of interview, site visits and documentary techniques to collect sufficient evidences.

Audit Findings

The studies showed the trend of connecting subscribers to network after the operation of different modules to be very slow. The most important reason for this is the high costs to be borne by the subscriber to modify the wastewater pipes inside his/her home on top of the connection fee. Moreover delays caused by lengthy process of coordination with municipal officials to execute main lines and laterals in public roads and streets, as well as the financial restrictions in different years have resulted in urban expansion to be far ahead of predictions in studies. Therefore new urban sections created during the project execution are practically deprived of wastewater services, and the lack of wastewater connections has resulted in the collection and transmission network as well as the treatment plant to operate far below their nominal capacity. This situation in turn has made the objective of reusing the treated effluent in agriculture as unattainable.

Recommendations

The following solutions are recommended and proposed to accelerate the rate of wastewater connections:

1- Implementing public training programmers to emphasize the environmental significance of wastewater connections to the clients.
2- Publishing a guideline for all the municipalities and engineering associations on accumulating all the domestic wastewaters in a single point in new building to facilitate network connection.
3- Revision of wastewater connection fee.
4- Providing loans for those who cannot afford the whole connection fee through the banks.

New Challenges, 2004 to 2006 (Paraguay)

Theme: **Environmental Auditing: Facing New Challenges**

Author: **Office of the Comptroller General of the Republic**
Natural Resources and Environmental Control Branch

Institutions subject to auditing:

1. Ministry of the Environment (SEAM):

- **Type of Audit: Special Review of Environmental Management**
- Emphasis on the following aspects:
- Management of hospital waste;
- Contamination of water resources;
- Territorial planning;
- Environmental impact of mining exploration;
- National Parks (environmental, legal, budgetary compliance status);
- Management of the Cateura municipal waste dump and plans to close it;
- Compliance with Mercosur standards on entry of pesticides and their impact on health and the environment;
- Use of wild flora and fauna.

2. *Paraguay's Health Services Entity (ESSAP):*

- **Type of Audit: Special Review of Environmental Management**
- **Emphasis on the following aspects:**

Sanitary sewer system in the city of Asunción, Paraguay (tunnel at First President Avenue).

3. Ministry of Agriculture and Livestock (MAG):

- **Type of Audit: Special Review of Environmental Management**
- **Emphasis on the following aspects:**
- Management of the National Forest Service Directorate (NFS);

- Management of the Plant Protection Directorate (PPD);
- Management of the National Project Coordination and Administration Directorate (NPCAD);
- Management of the Small Cotton Farms Development Program (PRODESAL);
- Use of plant health products;
- Entry of pesticides across the border;
- Forest products guide books;
- Reforestation for energy purposes;
- Check compliance with Mercosur standards on entry/exit of pesticides and their impact on health and the environment.

4. National Institute of Indigenous Affairs (INDI):

- **Type of Audit: Special Review of Environmental Management**
- **Emphasis on the following aspects:**
- Condition of native lands in Cerro Guazú (Amambay) and in the territory of San Rafael National Park.

5. Ministry of Public Works and Communications (MOPC):

- **Type of Audit: Special Review of Environmental Management**
- **Emphasis on the following aspects:**
- Permits for mineral prospecting and exploration;
- Maintenance and use of Special Mining Account funds.

6. Ministry of Education and Culture (MEC):

- **Type of Audit: Special Review of Environmental Management**
- **Emphasis on the following aspects:**
- National Library and Archives
- Conservation policy for urban, environmental, cultural and natural heritage.

7. MINISTRY OF PUBLIC HEALTH AND SOCIAL WELFARE (MSPyBS)

- **Type of Audit: Special Review of Environmental Management**
- **Emphasis on the following aspects:**
- Management of hospital and radioactive waste:
- Contamination of water resources;
- Management of plant health products;
- Check compliance with Mercosur standards on entry of pesticides and their impact on health and the environment.

8. CUSTOMS BRANCH:

- **Type of Audit: Special Review of Environmental Management**
- **Emphasis on the following aspects:**
- Control of pesticides entering and leaving the country;
- Check compliance with Mercosur standards on entry of pesticides and their impact on health and the environment.

9. Institute of Rural Welfare (IBR):

- **Type of Audit: Special Review of Environmental Management**
- **Emphasis on the following aspects:**
- Legal status of the lands in national parks;
- Status of native lands in San Rafael National Park and in the Department of Alto Paraguay.

10. DEPARTMENTAL GOVERNMENTS:

- **Type of Audit: Special Review of Environmental Management**
- **Departmental Governments of:**
- Guairá

- Amambay
- Concepción
- Caazapá

- **Emphasis on the following aspect:**
- Check compliance with environmental regulations regarding environmental impact assessment of projects to be implemented in their territories.

11. MUNICIPALITIES

- **Type of Audit: Special Review of Environmental Management**
- **Municipalities of:**
- Asuncion;
- Lambaré.

- **Emphasis on the following aspects:**
- Zoning
- Land-use planning

- **Parallel, Joint or Coordinated Audits**

- **Problems with Pilcomayo River**

Audit with the Supreme Audit Institutes of Argentina and Bolivia

- **Trade in Species listed in the Appendices of the CITES Convention**

Audit with the SAIs of Argentina and Brazil

- **Paraguay Paraná Waterway**

Audit with the SAIs of Argentina, Bolivia, Brazil and Uruguay

Environmental Auditing—Facing New Challenges (Poland)

Theme: **Environmental Auditing: Facing New Challenges**

Author: **Supreme Chamber of Control**

The starting point for discussion on environmental auditing challenges faced by the INTOSAI Working Group should be recalling the Group's mission. It's mission is *to encourage the use of audit mandate and audit instruments in the field of environmental protection by both members of the Working Group and non members SAIs" Concurrent, joint or co-ordinated auditing by SAIs of cross border environmental issues and policies and the audit of international environmental accords has the Working Group's special attention.*

The Group's achievements are undoubtedly:

- the increasing number of SAIs dealing with the environmental auditing and increasing number of SAIs conducting international audits,

- the growing number of auditors taking part in environmental seminars, willing to exchange the experiences and information on environmental auditing,

- increasing openness in presentation of environmental audit findings, which reflects the awareness that all the countries face similar issues of meeting environmental standards and commitments, as well as the understanding that revealing on international scale the irregularities which have been found can result in making more efforts by states' government for the execution of the legislation being in force and towards the implementation of environmental tasks

On the basis of achievements of the Group new challenges are emerging:

- assurance that the selection of environmental audit topics will guarantee the greatest effectiveness of searching the weakest points of environmental protection management on the global, regional and local level,

- guaranteeing wider international dissemination of the results of parallel and joint audits conducted by the Group's members and this way the development of the circumstances for more effective implementation of the audit findings,

- strengthening the international position of the INTOSAI and the regional WGEA by launching closer and permanent co-operation with international organisations dealing with environmental management

The co-operation between the international organisations and the EUROSAI Working Group co-ordinated by the SCC has been expressed so far by the presence of the organisations' representatives at the Group' seminars. Representatives of the HELCOM and OSPAR Convention Secretariat took part in the Water Management Seminar taking place in Poland in 2002. A representative of the UNEP was invited to the EUROSAI Waste Seminar organised last year in The Hague. To the coming seminar on the nature and biodiversity auditing in Sofia

this autumn we are planning to invite a representative of the EU DG XI as well as a representative of the Secretariat of the Biological Diversity Convention.

Inviting representatives of the international environmental organisations and asking for delivering presentations related to seminars' topics and taking part in discussions is only one form of co-operation.

It seems that at present stage there is a need to develop new more creative ways of co-operation.

The essential turning point in the possible future co-operation between SAIs and international organisations in the environmental auditing field was the Earth Summit in Johannesburg in 2002. and later the participation of the Chair of the INTOSAI WGEA Office of the Auditor General of Canada in the 11th session of the UN Sustainable Development Committee. The role of the SAIs in the implementation of the Summit commitments was presented there.

An open question is the need to develop long term strategy for co-operation with the UNEP as well as with environmental organisations working outside the UN structures like for example the European Environmental Agency.

At the end I would like to draw your attention to the specific challenges to be faced the SCC in the near future. These challenges are strictly related the Polish accession to the EU .

The SCC has been carrying out environmental audits for many years. The Polish accession to the EU structures brings new auditing areas in environmental field.

In 1999 the Council of the European Union established the ISPA financial support programme for environmental and transport facilities implemented by the candidate countries to achieve UE standards. In the framework of the Programme the EU earmarked for Poland 156–192,4 mln euro yearly in the period of 2000–2006.

In 2003 the SCC performed an audit of "State administration activities for getting and making use of EU financial support" The audit revealed that state administration has not been properly prepared for winning and making use of financial funds from the ISPA Programme which have been earmarked for Poland since the beginning of the year 2000.

The audit findings pointed out delays at each stage of the implementation of the Programme in environmental sector and as a result low use of funds earmarked from ISPA Programme for investments in this field.

There is necessity for the SCC to continue such audits aiming at the proper use of cohesion and structural EU funds for environmental protection.

Before the accession Poland negotiated transitional periods in the environmental field covering 3 to 10 years periods. Execution of tasks for which Poland has received transitions periods is related to expensive investments like for example—modernisation of existing and construction of new landfills and waste combustion plants, building sewage systems in the cities and towns over 2000 inhabitants. Not meeting the commitments will result in penalties for delays or for not full implementation of tasks.

In such circumstances auditing of the implementation of the Polish Government commitments towards the EU is undoubtedly a challenge for the SCC in the coming years. The same challenges are going to face the other European countries that joined the EU in May. This gives the opportunity for conducting joint parallel audits by those countries.

Ninth Meeting of the INTOSAI Working Group on Environmental Auditing Country Paper – Facing New Challenges (Turks & Caicos Islands)

Theme: **Environmental Auditing: Facing New Challenges**

Author: **Ian Fuller**

Introduction

The TCI economy is heavily reliant on tourism and therefore by extension on the maintenance of its until now unspoilt environment. However, the notion that the SAI might have an explicit role to play in environmental issues is a new one. The objective of this brief paper is therefore to outline the approach being taken by the TCI Audit Office in establishing a new long-term strategy with regard to environmental auditing and how we hope to conquer some of the challenges that we may initially face.

The Turks and Caicos Islands

The Turks and Caicos Islands (TCI) are an internal self-governing British Overseas Territory with a ministerial form of government, including a Chief Minister, Executive Council and Legislative Council. Elections are held every four years under a separate TCI Constitution.

The TCI form the southeastern extremity of the Bahamas chain and lie 90 miles north of Haiti and the Dominican Republic. The TCI comprises some 40 islands and cays with a total land area of 193 square miles, and a resident population of approximately 25,000.

The TCI has seen a major expansion in tourism over the last ten years and is now to all extents and purposes financially independent of the UK. The principal form of industry is tourism, and it is fair to say that most other income generating activities, such as real estate, are also directly tourism related.

The TCI Audit Office

The TCI Audit Office is an independent body financed from the Consolidated Fund with a Chief Auditor (or Auditor General) appointed by the Governor and reporting to the Public Accounts Committee (a sub-committee of the Legislative Council). The Government Internal Audit Department also reports through the TCI Audit Office.

The Audit Office has an established statutory financial and performance auditing programme, but has to date never undertaken or planned an explicit environmental audit programme.

The Environmental Context

The TCI has in recent years taken concrete steps to address environmental issues so far as they relate immediately to the tourism industry and to the domestic fishing. An independent National Trust organsiation has been instituted; Ordinances have been passed to establish and protect national parks, coastal areas and fishing rights; and land planning and use regulations have been put in place.

In order to facilitate the establishment and protection of national parks a separate Conservation Fund has been established by Ordinance. This special fund receives a ring-fenced hypothecation from tourist related taxation in order to ensure a degree of protection for such activity from central government.

The importance of environmental issues and the potential impact on a tourism or 'eco-reliant' economy is a well-rehearsed topic and I do not need to repeat such considerations here. In itself such considerations could no doubt justify the allocation of scarce audit resource to an environmental audit programme. However, in common with many developing nations the TCI has to juggle the need for environmentally friendly activity with the often-conflicting needs to develop local industry, employment, infrastructure development or social requirements such as hospitals etc. As a developing country these are genuine concerns and governments come under intense pressure from within the country and from external developers to undertake often-conflicting courses of action.

Such problems are not helped by a geography that results in separated and small communities, and an environment where economies of scale (or rather the lack of such) mean that 'green' solutions to issues may simply be beyond the public budget.

The TCI Audit Approach

Our intended approach is to begin by concentrating audit resource on two areas. The first is compliance with and the effectiveness of current regulatory systems as imposed by relevant legislation, and in particular on the operation of the Conservation Fund. By concentrating on financial and regularity issues concerning the Conservation Fund we hope to raise the profile of the fund and make environmental matters more transparent. The second area concerns the completeness and quality of data available to decision makers and the public concerning the financial consequences of the environmental impact of development decisions.

Both areas are a logical extension of existing financial and regulatory audit work. We do not intend at present to launch into operational environmental audits, not least because we lack the resource to do so in a credible manner. Nevertheless, I hope to come away from this workshop with valuable information on how other SAIs have developed a more explicit environmental auditing role, and in particular how SAIs have managed the interaction of such a programme with other relevant regulatory bodies. I am also keen to learn from others' experience concerning the balancing of financial, economic, social and other factors when approaching explicit environmental audits.

The UK Emissions Trading Scheme: A New Way to Combat Climate Change (United Kingdom)

Theme: **Environmental Auditing: Facing New Challenges**

Author: **National Audit Office**

This paper sets out:

1. Background to the UK Emissions Trading Scheme
2. The rationale for carrying out the work
3. The results of the audit
4. The approach taken (and lessons)

1. Background to the UK Emissions Trading Scheme

The UK is a signatory to the 1997 Kyoto Protocol to reduce emissions of greenhouse gases. The UK aims to go beyond the reductions required under the Protocol through its own Climate Change Programme. The UK Emissions Trading Scheme is part of this Programme. The Scheme is run by the Department for Environment, Food and Rural Affairs.

The Emissions Trading Scheme began with an auction in March 2002. In the auction, companies bid emission reductions over the five years 2002 to 2006 in return for a share of £215 million ($390 million) incentive funding from the Government. From April 2002 the companies taking part could trade their emissions "allowances" - the emissions allowed *after* the promised reductions. Each year, participants are issued with allowances equal to their target emissions for the year. At the end of each year, each must hold enough allowances to cover its actual emissions for that year. Participants can choose to:

- reduce their actual emissions below their target (releasing emissions allowances to sell to other companies or to save for use in future years);
- meet their target;
- buy allowances to cover any emissions in excess of its target.

The Emissions Trading Scheme's aims are:

- to secure significant reductions in UK greenhouse gas emissions - 3.96 million tonnes in 2006, or about 6 per cent of the 65.8 million tonnes reduction it was estimated that the policies and measures in the Climate Change Programme might deliver by 2010;
- to help UK firms to learn about emissions trading and prepare for international emissions trading;

- to establish the City of London and the UK as an international centre for emissions trading.

The Scheme is also intended to lower the cost to the UK of reducing emissions, compared to more traditional methods of regulation, because companies with lower-cost ways of making emissions reductions will tend to sell allowances to organisations facing higher costs.

2. The rationale for carrying out the work

The UK Emissions Trading Scheme is the first greenhouse gas trading scheme in the world to allow many companies to participate. We sought to examine the Scheme's origins, its impact on emissions reductions and its wider benefits. We wanted to see whether the auction and subsequent trading had maximised value for money for the taxpayer, and the extent to which the Government could be satisfied that the Scheme had secured real and sustainable emissions reductions.

3. The results of the audit

Our report was published in April 2004.1 The main findings were:

- The Department had successfully set up a novel and working emissions trading scheme, with the potential to benefit the UK economy.
- The Department had to work hard to attract enough participants, but eventually secured 34, more than enough to make the auction viable.
- The auction resulted in promised reductions from the baseline of 3.96 million tonnes in 2006, in line with predictions.
- Taking into account the need to meet the targets for 2002 to 2005 as well as 2006, over the five years participants will be required to deliver reductions from baseline totalling 11.9 million tonnes, at a price of £17.80 ($32) a tonne.
- Companies' performance against their targets is measured and verified each year.
- Emissions reductions for the first year of the scheme were almost six times the total target for that year - 4.64 million tonnes, compared to a target of 0.79 million tonnes.
- The reported reductions in the first year exceeded the required target for the whole period 2002 - 2006 (3.96 million tonnes) by 17% (0.68 million tonnes).
- In some cases, participants' levels of emissions in the years immediately before the start of the Scheme were substantially below their baselines. The result of this was that for some participants, their targets to reduce emissions had been achieved even before the Scheme started.
- Of the four participants in the scheme who exceeded their targets by the widest margin, 66% of their reductions were the result of action taken in response to the

[1] The UK Emissions Trading Scheme: A New Way to Combat Climate Change, NAO Report, HC 517, 2003-04, http://www.nao.org.uk/publications/nao_reports/03-04/0304517.pdf

Scheme (such as changes in operating methods and capital investment) and 34% would have happened without the Scheme.

- Many of the issues identified (the difficulty in attracting participants, limitations in the auction design and undemanding targets) stem from the voluntary nature of the Scheme and the consequent need for an incentive payment. In a mandatory trading scheme, these issues either would not occur or, in the case of target-setting, would not give rise to an incentive payment.

We recommended that for the UK Scheme, where some participants have gained unduly from the way in which baselines were set, the Department should consider ways to improve the value of incentives. This could be done by, for example, agreeing with these participants further emissions reductions or voluntary limits on the sale of surplus allowances. In developing new trading schemes, such as for waste and for sulphur dioxide, we suggested the Department should:

- Take early advice from technical experts on the industries concerned when designing the rules for new schemes.
- Fully inform participants about plans to introduce trading and provide enough time for them to prepare.
- Consider using a small scale pilot auction to test scheme design, especially where knowledge of the market is limited.
- Consider using a “sealed-bid” system to give better information on which to decide how much to spend in the auction; while requiring participants to provide information on their costs to inform future policy development.
- share the good practices developed with other parts of the Department and other government departments.

4. The approach taken (and lessons)

We examined two issues:

A. Has the incentive and auction achieved the primary aim of delivering greenhouse gas emissions reductions at reasonable cost?

B. Is the market achieving the expected benefits?

The focus of the report was on the participants in the Scheme (those who took part in the auction of incentive money in March 2002) and their achievements against targets. The ways in which the participants used the emissions market was examined but not the Climate Change Agreements themselves which were established before the launch of the Scheme.

We used the following methods in collecting evidence for the report:

Method	Coverage
1. Interviews with those who designed and operated the Scheme	Staff from the Department for Environment, Food and Rural Affairs, the public relations firm which marketed the Scheme to potential participants, brokers working in the UK emissions market and the United Kingdom Accreditation Service (which accredits verifiers under the Scheme).
2. Interviews with other Government officials	Staff from the Department for Trade and Industry and the Treasury.
3. Interviews with Scheme participants	All participants, to identify their views of the Scheme and experiences of its first year of operation.
4. Interviews with stakeholders outside Government	Members of the UK Emissions Trading Group (an industry association), the Corporation of London, the United States Environmental Protection Agency, the Chicago Climate Exchange and specialist consulting firms.
5. Interviews with the European Commission	The Environment Directorate General to discuss the development of the European Scheme and its differences from the UK Scheme.
6. Expert advice	Commissioned an advisory panel, made up from consultants and academics specialising in emissions trading, to help us develop the study issues and to review our report. In addition, commissioned two specialist firms to examine: • the design of the incentive auction; • the emissions reduction targets and achievements of the four participants with the largest achievements in the first year of the Scheme • the functioning of the market subsequent to the auction.
7. Review of documents	Reviewed documentation from the Department's files on key decisions during the Scheme's development.
8. Assessment of verification of emission levels	Accompanied a verifier for the UK Scheme on visits to a leading participant's sites.

Lessons:

1. Reviewing a new and complex subject area is difficult. It was therefore very helpful to have advice from relevant experts in identifying the right issues to examine and the appropriate audit approach.

2. One problem with the audit came from our lack of a statutory right of access to the private companies' data. SAIs may therefore need to consider ensuring adequate access rights are built in to new schemes.

3. The complexity of the subject made it difficult to write a report which reflected our work and findings at the right level of detail for its different audiences (i.e. Parliament, the public, the Department and experts in the subject).

SAI APPROACHES TO THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT

Action Underway in Australia to Implement Sustainable Development (Australia)

Theme: **SAI Approaches to the World Summit on Sustainable Development**

Author: **Peter McVay**

1. Introduction

Australia is a continent of 7.6 million km^2 of land that is geologically old, weathered, flat and generally dry and with highly variable rainfall patterns. In addition, Australia is surrounded by some 16 million km^2 of marine areas inhabited by 4 000 fish types of the 22 000 species known worldwide, and 30 of the world's 58 seagrass species. They include the largest area of coral reefs in the world. Much of Australia's flora and fauna is unique but species have suffered from the pressures induced by extensive landscape transformation and pressures from resource exploitation over the last two hundred years.

Measures to address concerns about the environment and sustainable development received a particular impetus following the Earth Summit in Rio de Janeiro in 1992. It is impossible to document all of the initiatives in such a short paper. However, Australia has made progress in assimilating sustainable development into the decision-making processes of government, in industry and in the wider community. As a nation with three levels of government - all with environmental/sustainable development roles and responsibilities - this process has been central to the reform agenda. This paper sets out some of the most significant steps we have taken to implement sustainable development and the role of the Australian National Audit Office (ANAO) in providing an assurance to Parliament as to the veracity of this progress in key areas relevant to the role of the federal government.

2. The National Strategy for Ecologically Sustainable Development (ESD)

In 1992 the federal, state and local governments of Australia endorsed a National Strategy for Ecologically Sustainable Development. The prefix "ecologically" was added to the normal international usage ("sustainable development") in recognition of the very great importance of protecting ecosystems in the context of a continent in which many unique ecosystems were under threat.

The National Strategy, had a set of core objectives and guiding principles for the Strategy as a whole, and to specific objectives and broad strategies for eight sectoral issues and for 22 cross-sectoral issues.

The National Strategy identifies seven guiding principles that can be summarised as:

- integrating short and long term environmental, economic and social considerations in decision making;

- taking measures to prevent environmental degradation even in the absence of scientific certainty (the precautionary principle); and

- broad community involvement in decisions and actions which affect them.

The National Strategy has provided a broad national agenda for sustainable development in Australia. As an illustration of the principles in action, the Regional Forests Agreement process developed within the context of ESD, engaged all interested parties to reach decisions on the logging and other uses of native forests on a region by region basis. This approach has enabled Australia to add more than 2.8 million hectares to forest reserves through ten separate agreements covering four States.

3. Legislation integrating Ecologically Sustainable Development

Federal legislation is increasingly written with a much greater appreciation of sustainable development imperatives. For example, the Environment Protection and Biodiversity Conservation Act 1999 (the Act) in particular is written with explicit reference to the objectives or principles of sustainable development. The Act provides an overarching legislative framework for biodiversity conservation and environmental impact assessment in Australia. It explicitly includes as one of its objectives “to promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources”.

In addition to specific pieces of legislation that refer to ESD principles, Australia has changed the processes of regulatory impact assessment to explicitly take account of ESD. In Australia, any new federal regulation or proposed change to an existing regulation that has a direct effect on business requires a regulation impact statement. A Regulation Impact Statement must provide an analysis of the problem the regulation is designed to address, the objectives of the regulation, options for meeting the objectives, and the impact of the costs and benefits of each option on consumers, business, government and the community. The analysis of the costs and benefits includes an assessment of the economic, environmental, financial, health and safety, and other non-monetary impacts of the proposed regulation. The need for ESD impacts reflects a number of recognised market failures associated with sustainable development including public goods and externalities, common property issues and scientific uncertainties.

The ANAO has provided both an assurance of progress in this area and identified areas for improvement through performance audits conducted. For example, an audit on the implementation of the Environment Protection and Biodiversity Conservation Act 1999 conducted in 2002-03 made recommendations which aimed to improve the consistency and quality of referrals made under the Act, improving disclosure provisions in referrals to better manage risks, strengthening the monitoring and enforcement procedures and guidelines, ensuring that there are timely and effective responses to all potential breaches of the Act and enhancing the quality of public reporting on the administration of the Act.

4. Institutional reform

In order to move down the path towards genuine sustainable development, Australia has introduced a range of institutional reforms and improved governance arrangements designed to bring different levels of government and different agencies within levels of government

closer together. Australia has three levels of government with constitutional responsibilities split between the Commonwealth and the State levels. The private sector and community organisations also have significant impacts on the success or otherwise of the process of sustainable development. Consequently, Australia has introduced institutional reforms that include:

- an intergovernmental agreement on the environment that sets out the roles of the parties to the agreement, and establishes ground rules under which the signatory governments would interact on the environment;

- the establishment of Councils with federal and state Ministerial representations to oversee policy changes in line with the National Strategy for Ecologically Sustainable Development as well as ensuring nationally consistent levels of environmental protection in all states and territories of Australia[2];

- opportunities for the public to contribute to environmental impact assessments and their enforcement; the making and enforcing of bilateral agreements; the making of conservation agreements; the declaration and management of protected areas; and the enforcement of the biodiversity protection. For example, interested persons can apply to the Federal Court for an injunction to halt an activity which may constitute an offence under the Environment Protection and Biodiversity Conservation Act 1999;

- new organisational structures such as the Australian Greenhouse Office (AGO) and the National Oceans Office to oversee policy and programs on a whole of government basis (ie recognising explicitly the significance of sustainable development and, in the case of the AGO financial assistance to industry and other eligible organisations to reduce greenhouse gas emissions and encourage renewable energy).

While conducting audits of Ministerial Councils is not within the ANAO mandate, the ANAO has examined the performance of the new organisational structures. Audit Report No 34. 2003-04, examined the administration of major programs in the Australian Greenhouse Office valued at $1 billion. While noting the innovative renewable energy projects supported through the programs, the ANAO found significant shortcomings in the design and risk assessment of some of the programs examined. As a consequence, there was significant underspending in the programs and in some cases projects had not contributed to expected reductions in greenhouse gas emissions. Performance measurement and reporting was also inadequate and did not give an assurance as to what progress was being made towards program goals. The audit provided the framework for refocussing programs to achieve better value for money results, and for improved accountability to the Parliament.

In recognition of the challenges in environmental auditing and the closer interrelationships between levels of government in Australia, the ANAO has also been working with the audit offices of the States and Territories in Australia along with the SAIs of New Zealand and South

[2] Ministerial Councils comprising Ministers from the federal and State/Territory Governments meet on sectoral policy matters such as water reform or biodiversity conservation. If a matter is deemed to be particularly complex or sensitive, the Council of Australian Governments chaired by the Prime Minister and involving State Premiers and Chief Ministers form the Territories takes responsibility. Responsibility for national consistent levels of environmental protection and the integration of social and economic considerations is handles through the National Environment Protection Council that has a specific legal mandate to introduce new measures across Australia at the national, state and territory levels.

Pacific Countries to share information and experiences in environmental auditing. In 2003 representatives discussed some of the challenges, lessons learned and emerging issues facing respective audit offices.

5. Progress towards sustainable development

One of the major constraints for any country seeking to achieve sustainable development has been the lack of comprehensive information on the state of the environment, and, in particular the state of land, water and biodiversity. If there is no objective baseline data on the status of natural resources and no indicators of sustainability then it is difficult to establish priorities and next to impossible to measure the impacts of any interventions or programs designed to correct the problems.

Australia has established 24 headline sustainability indicators used to measure and report on our national sustainability. These indicators relate to some 21 values that are considered to reflect the core objectives of the National Strategy for Ecologically Sustainable Development. The indicators have been selected as being sufficiently representative of these values to give, over time, a manageable and comprehensible picture of whether Australia is sustaining its way of life.

Progress has been made on national standards for data collection, access and use and a range of data sets and information is publicly available or planned in the near future. For example:

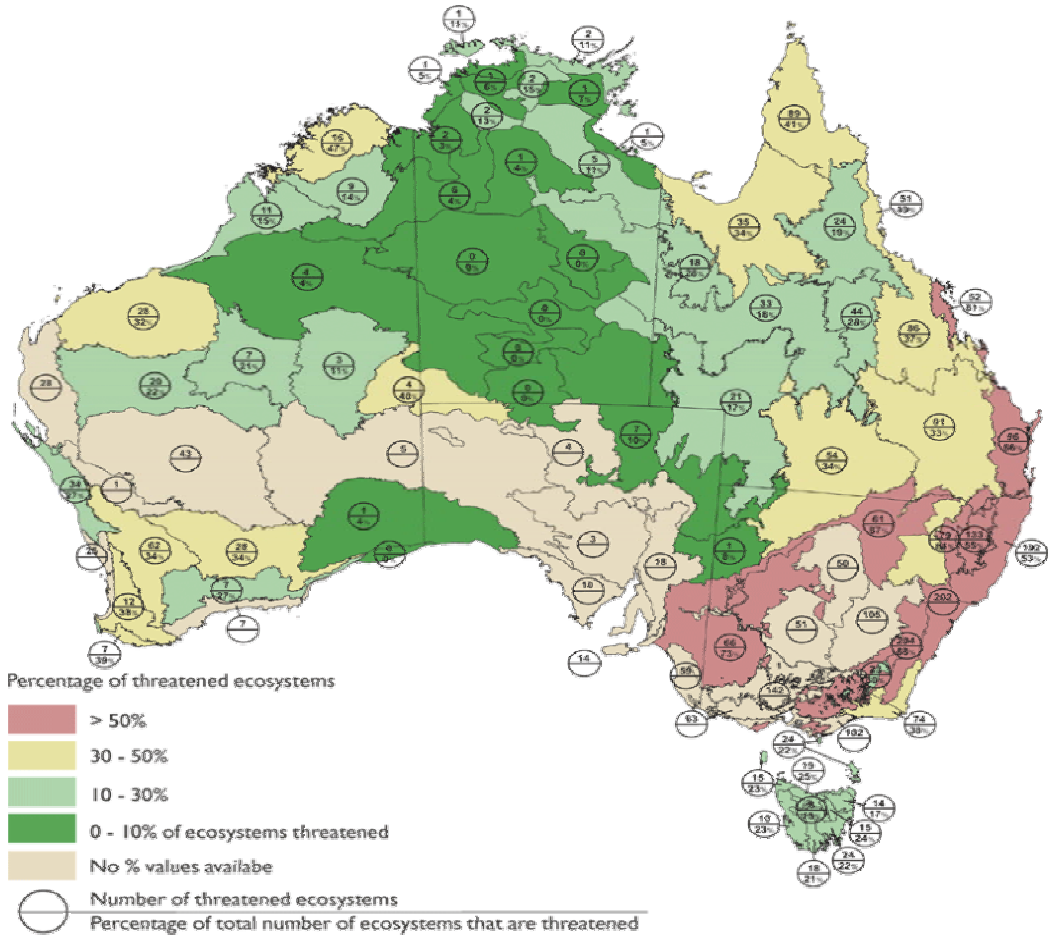
- the Australian and New Zealand Land Information Council is developing an Australian Spatial Data Infrastructure to provide better access to essential spatial data;

- decision-making tools such as the collaborative database on protected areas, a directory of important wetlands and a database of nationally significant threatened and migratory species have been developed;

- the Australian Biological Resources Study has continued to document Australian flora and fauna and the Australian Virtual Herbarium is a promising new database on the distribution of species;

- Australia has produce two national state of the environment reports (1996 and 2000) which document changes in natural resource condition and a National Land and Water Resources Audit has provided an assessment of the extent of natural resource degradation as well as an economic analysis of each problem such as land clearing or salinity. See figure 1 as an illustration

Figure 1: The number and percentage of threatened ecosystems and other ecological communities identified across bioregions. [3]



Map Data Source: National Land and Water Resources Audit, Assessment of Terrestrial Biodiversity 2002 Database

While there are still gaps in the data and further refinement is need to enhance the scale at which the information can be applied, progress is being made towards establishing nationally consistent and integrated data sets that will enable clear priorities to be set and changes in resource condition to be measured over time. This information is crucial to guiding financial assistance programs such as the Natural Heritage Trust[4] ($1.1 billion) and the ($1.4 billion) National Action Plan for Salinity and Water Quality[5] that have provided financial assistance to local and regional organisations to accelerate remediation through resourcing the efforts of

[3] In some bioregions, the total number of ecosystems has not yet been determined to enable a percentage to be derived.
[4] The Natural Heritage Trust provides financial assistance to local and regional organisations as well as landholders for projects to address land degradation, native vegetation management, rivers, coasts and marine environments and biodiversity conservation. Achieving more sustainable development is explicitly part of the Natural Heritage Trust.
[5] The National Action Plan for Salinity and Water Quality has the goal to motivate and enable regional communities to use coordinated and targeted action to prevent, stabilise and start to reverse trends in dryland salinity affecting the sustainability of agricultural production, the conservation of biological diversity and the viability of infrastructure and improve water quality in 21 priority regions.

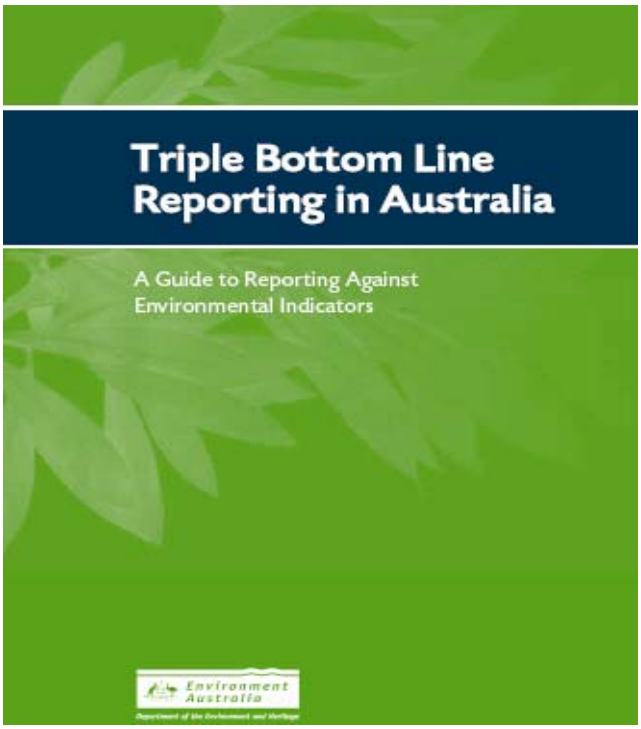
local communities and landholders. The audit focus has been on the application of this information to financial assistance programs.

Audit Report No 34; 2000-01 performance information for federal financial assistance under the Natural Heritage Trust provided a review of how effectively data was being used to guide the performance of the program of grants to local organisations. The audit provided recommendations designed to improve the use of targets and intermediate outcomes where lead times for results were spread over many years. The importance of having a consistent approach to validating data to ensure its accuracy of results reported was also an important part of the audit along with the focus on a core set of indicators for performance measurement.

6. Reporting on Sustainable Development

Internalising the principles of sustainable development in government decision-making is of little consequence unless it can be demonstrated that such reform is actually making a difference. Under the Environment Protection and Biodiversity Conservation Act 1999, all federal government agencies must report annually on: how their activities have had an effect on the environment, how their activities have accorded with the principles of sustainable development, how their administration of legislation accords with these principles and how the outcomes of their appropriations contribute to sustainable development. They must also report on measures for minimising environmental impact and mechanisms for increasing the effectiveness of these measures. Agencies have also been encouraged to implement accredited Environmental Management Systems to assist with the reporting requirements under the Environment Protection and Biodiversity Conservation Act.

Audit Report No 41. 2002-03 – annual reporting by Australian Government agencies on ecologically sustainable development – provided the benchmark for progress in implementing these provisions. A key conclusion was that even after ten years of commitments from the Government to ESD, many agencies were still focussed solely on the impact of their operations on the natural environment, and had not come to terms with the broader implications of ESD and its relevance to their operations. Since this audit was tabled, two federal agencies have commissioned Triple Bottom Line reports and have requested the ANAO to provide verification.



Verifying triple bottom line reports is itself a challenge given the complexities of reviewing performance across an agency with diverse functions and work places and sites spread across a continent the size of Australia. It also requires highly specialist skills to interpret and analyse the performance indicators and data obtained. Currently the ANAO uses private consultants on a cost recovery basis to provide the technical assessment of the reports. An expansion of the function in the future will require careful consideration of how we conduct this type work.

In the private sector, there is a requirement since 1998 for reporting annually on emissions of listed substances being emitted into the air or water. The National Pollutant Inventory provides public information on industrial emissions and enables local communities to access this information. It also enables industry to be aware of their emissions and provides an incentive to reduce the emission of toxic or hazardous substances. Voluntary public environmental reporting by industry is also increasing in Australia—especially for larger publicly listed companies. A small number of companies have also gone further and produced triple bottom line reports that provide information on economic and social impacts as well as the environment. Such approaches are being increasingly regarded as important aspects of good corporate governance and ethical management practice.

More recently, public environmental and sustainability reporting by the private sector has expanded to include the financial sector with the Financial Services Reform Act 2001. This Act requires fund managers and superannuation trustees to disclose in their Product Disclosure Statements 'the extent, if any, to which labour standards, environmental, social or ethical considerations are taken into account in the selection, retention or realisation of the investment.'

7. Conclusions

Despite the legal and institutional reforms implemented in Australia to progress sustainability, we face a wide range of difficult ongoing challenges. While Australia is at the forefront of international research and development in renewable energy, our country remains dependent on fossil fuels for both electricity and for transport. Measures to reduce greenhouse gas emissions have not, as yet, made a significant impact. Progress in biodiversity conservation is being made but land clearing for urban development and agriculture in particular continues to deplete and endanger native species and ecosystems.

Positive steps are being taken to change unsustainable agricultural practices, but salinity (caused by land clearing and irrigation), threatens plants, animals and ecosystems but also the future of agriculture in many parts of Australia. Water reform that specifically recognises environmental flows in major river systems such as the Murray-Darling Basin has been a major priority in recent years for Governments in Australia. Nevertheless, declining fresh water quality due to over-allocation and pollution currently affects inland as well as estuarine and marine biodiversity particularly at the end point of river systems. For example, the quality of water entering the Great Barrier Reef lagoon threatens the viability of both the reef as a functioning ecosystem and the industries that depend on it.

The Natural Heritage Trust has provided resources for local remedial and preventative actions to improve the environment and the sustainable use of natural resources. A National Action Plan on Salinity and Water Quality is in place to address water quality and salinity issues. Measures to control land clearing have recently been announced at the State level. However, it will take at least several decades to undo the damage already done. The ANAO is currently examining the planning and corporate governance arrangements for this program as part of a major performance audit.

There is no doubt that Australia has made positive steps towards sustainable development. Environmental governance arrangements including national policies, strategies, Ministerial Councils and programs have been significantly expanded with improved data sets, measurement and reporting requirements.

As noted by the Secretary-General of the United Nations, Mr Kofi Annan,

> 'The [global] environmental crises we confront have many causes. They include poverty, negligence and greed – but above all, failures of governance. Promoting effective environmental governance at the national level is therefore a United Nations Environment Program priority.'[6]

Governance has been a key focus for the Australian National Audit Office and I would suggest it is also a crucial role for Supreme Audit Institutions. Parliaments and communities need an assurance that progress is being made and that the claims of agencies are verifiable, accurate and complete. The task can be challenging and complex. However, independent audit reports

[6] Annan K (2002) United Nations Environment Program, Annual Report Page 7

on performance can give confidence to the public in the quality of the governance arrangements and provide a mechanism for reflection and consideration of the pathways to achieve the results as cost effectively as possible. The journey towards sustainable development is still a long one with many traps and pitfalls along the way. However, if we can learn from each other and from the lessons of history we will not be destined to repeat the mistakes of the past.

Performance Audit of the Sustainable Development Objectives as Reflected in the National Strategies and Programmes Involving the Integration of Economic, Social and Environmental Aspects (Republic of Bulgaria)

Theme: **SAI Approaches to the World Summit on Sustainable Development**

Author: **National Audit Office**

For more than a decade now, Bulgaria has been going through a process of fundamental changes accompanied by problems and challenges in all spheres of social life.

In the early 1990's, for a number of objective reasons, the Bulgarian economy turned out to be unprepared for the transition from the central planning mechanism to market regulation. The lengthy process of economic restructuring in the context of lack of "fresh" money led to loss of external markets, drastic shrinkage of production, high unemployment rates, and environmental problems. As a result, the macroeconomic stability was drastically tilted in the country. The introduction of the currency board arrangements in July 1997 brought about macroeconomic stabilization and created preconditions to start preparations for the country's accession to the EC.

Notwithstanding the substantial progress in the negotiations with the EC, the structural changes in the economy and the changed external situation, Bulgaria is faced with the challenge to overcome its lagging behind most of the Central and Eastern European countries within relatively short span of time. The high level of harmonisation of the national legislation with the *acquis communautaire* is not a sufficient precondition for success on its own. It is necessary to build the institutional capacity and to achieve high efficiency in the enforcement, monitoring and control. What is needed is a comprehensive and balanced approach to the issues related to ensuring stable economic growth that will provide high quality of life and social stability, while conserving and restoring the quality of the environment.

The plan of the National Audit Office for 2003 provides for a performance audit aimed at reviewing what the government has achieved with regard to the commitments under the U.N. Resolution and Action Plan adopted at the Johannesburg Summit in 2002.

The timing of the audit coincides with the government's efforts to introduce a new approach to the drafting of the state budget on the basis of strategies and programmes. Over the last few months, substantial progress has been achieved in the preparations for the updating of the National Economic Development Plan until 2006 and the drafting of the National Development Plan from 2007 to 2013. This calls for review and analysis of the existing strategies, programmes and plans developed by ministries and agencies in the public sector. The preliminary study has established that the audited ministries have developed more than 50 strategies and over 80 programmes.

Besides, for the last few years with the assistance of UNDP and other donors Bulgaria has gained experience and developed good practice in the implementation of the initiatives Local Agenda 21 and Opportunities 21st Century.

The broad understanding of the sustainable development concept implies that auditors should analyze the way in which ministries and agencies in the public sector administer their activities in this sphere.

Therefore the audit has evoked the interest of the Council of Ministers and the administration of the executive power.

The pursuit of a consistent policy to achieve sustainable development necessitates the development of an integrated framework, within which public institutions will plan and implement their activities.

At present, Bulgaria has insufficient legal framework and methodological guidance on the development of strategic programmatic documents in the field of sustainable development. The development of practical experience calls for further efforts to integrate the structure and to balance and streamline the process of identifying objectives in the documents to be drafted, as well as to ensure consistency among them.

Therefore the major objective of auditors is to assess the extent to which the attainment of sustainable development is reflected in the strategies and programmes developed by the ministries and the opportunities for the drafting of a National Sustainable Development Strategy by 2005.

Auditors put forward the following basic questions in order to achieve their major objective:

- Is there a framework in place to draft strategies, programmes and plans for sustainable development, which will ensure concerted and coordinated institutional activities at the nationwide level?

- To what extent do the national strategies, programmes and plans build an integrated and comprehensive planning system in the short-, medium-, and long-term perspective?

- Are there mechanisms and conditions for effective implementation of the existing strategies and programmes?

The audit is intended to make an analysis and shape an opinion on:

- the compliance of the objectives set out in the national strategies and programmes with the international commitments, legislation, objectives and priorities laid down by the Council of Ministers in its Government Programme;

- the legitimacy of the actions undertaken by the ministries and agencies in the drafting of national strategies and programmes related to sustainable development;

- the prerequisites and conditions created for a well-targeted and efficient planning process as part and parcel of the managerial process at ministries and agencies;

- the prerequisites and conditions for the effective implementation of the existing strategies and programmes related to sustainable development.

The broader understanding of sustainable development and the attainment of the objectives set out in the Government's political programme need the concerted efforts of society as a whole. In practice, this means that each institution in the public sector should be involved in the subject-matter of the audit. Therefore the auditors limit their study to the authorities that are directly involved in the attainment of the sustainable development objectives in the most important spheres of social life and, for that matter, the audit covers 11 ministries.

The scope of the audit is influenced by the following factors and constraints:

- ministries and agencies lack attitudes, experience and methodology to integrate all aspects of their activity related to sustainable development;
- some ministries and agencies have no experience in drafting detailed written internal rules and procedures for selection, evaluation, monitoring and control;
- some ministries and agencies lack information system to underpin the development of reliable forecasts and estimated in the respective sphere on a long-term basis;
- some ministries and agencies lack attitudes for regular accountability to the public, for self-assessment and fair identification of the reasons generating problems in the sphere of their competence.

The following factors have been taken into consideration in the choice of the audited period:

- the term of office of the new Government started and its government programme built on the sustainable development concept;
- the negotiations on the EU accession started in 2000 and 27 out of the total of 31 negotiation chapters were provisionally closed in 2004;
- the preparation for and participation in the Johannesburg Summit of 2002 and the main bulk of the accession negotiations took place during the term of office of this Government;
- over the last two years, substantial changes have been witnessed in the legislation, approaches and methodology of planning the activities of the public sector, a new approach has been introduced to the budgeting process and the relationship between the central government budget, local budgets and other budgets approved by Parliament;
- 2003 and the three years to come before the EU accession are associated with a number of deadlines and requirements that pose a challenge and their implementation should be planned carefully.

The assessment criteria selected by the auditors are adjusted to the questions to be examined and co-ordinated with all ministers of the audited ministries.

The audit covers a large volume of information from diverse sources. Hence the approach that has been chosen is to collect information through questionnaires adapted to the specificity of each ministry but structured in a way that will make it easier to summarize them.

- The preliminary study has identified risks related to the effective implementation of the audit:
- the relevant legislation is rather extensive and dynamic;
- the legislative provisions are dispersed in a great number of diverse legal instruments at different levels and some issues are not regulated at all;
- the audited objects are quite numerous and have complicated systems and interrelations;
- there exist many strategies, programmes and plans that have interrelations and interdependencies;
- there is lack of clear rules, procedures and criteria at some ministries and agencies;
- the huge amount of non-systematic information does not warrant completeness and reliability;
- the issues are relatively new and there is no uniform set of concepts and terminology.

The auditors expect as a result of the analysis and assessment to reach the following general conclusions:

- The objectives set out in the existing national strategies and plans are expected to largely comply with the international commitments undertaken in the field of sustainable development.
- Practices for the drafting of programmatic and planning documents are expected to run ahead of the existing legislation.
- Substantial progress is expected to have been achieved in the process of drafting programmatic and planning documents due to the EU accession process and the preparations for participation in the EU Structural Funds and the Cohesion Fund.
- Notwithstanding the large number of national strategies and programmes geared to the attainment of sustainable development, it is expected that the lack of uniform requirements to their structure and drafting methodology, the weaknesses in the horizontal coordination among ministries and the insufficient capacity will impede the drafting of an integrated sustainable development strategy of the Republic of Bulgaria.
- Most of the existing national strategies and programmes may well lack a system for monitoring and control of performance, adequate systems for providing information on performance indicators, and sufficient resources to implement them. All these factors are expected to impede the effective and efficient attainment of the objectives set out

in the existing national strategies and programmes in the field of sustainable development.

- The public awareness is expected to be insufficient.

Overview of the United Nations World Summit on Sustainable Development—Submission by Canada for the WSSD Presentation in Brazil, June 3, 2004 (Canada)

Theme: **SAI Approaches to the World Summit on Sustainable Development**

Author: **Rebecca Aird and John Reed**

Introduction

The World Summit on Sustainable Development (the WSSD or the Johannesburg Summit) was held from August 26 to September 4, 2002 in Johannesburg, South Africa. This summit was the most significant global environment and sustainable development event since the 1992 United Nations Rio Conference on Environment and Development (UNCED or the Rio Conference). Over 21,000 people from all regions and sectors participated. Delegations from almost all of the 195 eligible nations attended—many of which included the heads of state and government—as well as representatives from a wide range of intergovernmental organizations. The purpose of the Summit was to review progress in implementing the outcomes of UNCED and reinvigorate the global commitment to sustainable development. Its outcomes are intended to guide the international sustainable development (SD) agenda for the next decade and beyond.

Novel aspects of the WSSD

The Summit was billed as a significant departure from previous UN conferences; in part because it was an "implementation conference," with a focus not so much on developing new treaties or agreements, but rather on actions to implement Rio commitments[7]. It was also another step in expanding the number of actors in global SD summits. Following a direction first set in Agenda 21,[8] the Summit engaged not only national governmental delegations and intergovernmental organizations, but also representatives from the so-called major groups (e.g., women, youth, indigenous people, and members of trade unions). In addition, some felt that the most dynamic aspect of the Summit flowed from the decision to promote voluntary multi-stakeholder initiatives (type-2 partnerships) to complement the inter-governmental dimensions. Six plenary sessions on these partnerships were held at the Summit, and more than 200 partnerships were announced during the event. These partnerships, along with the key document that emerged from the summit—the Johannesburg Plan of Implementation (JPOI)—herald an increased focus on the contribution of the private sector to sustainable development. Views vary on the merits of this new focus. Ongoing impartial assessment will be important to ensuring real benefits in relation to JPOI targets.

[7] Nitin Desai, the Summit Secretary-General, in The Johannesburg Summit Test: What Will Change?, Feature Story of the UN's publication Johannesburg Summit 2002 http://www.johannesburgsummit.org/html/whats_new/feature_story41.html

[8] Agenda 21 is the program of action adopted at Rio in June 1992. It was a key outcome of UNCED.

The Plan of Implementation

The central outcome of the Summit was the Johannesburg Plan of Implementation, which is the negotiated intergovernmental document on how to move forward. The JPOI establishes or reaffirms, within the broad context of sustainable development, key goals and requirements to do the following:

- improve conditions for those living in poverty;
- address environmental deterioration through changes in production, consumption and the management and use of natural resources; and
- reform and improve institutions and governance at the national, regional, and international levels.

There are varying perspectives on the value of the Summit and the JPOI. On the downside, the Plan is replete with fuzzy language (Summit-ese) and contains fewer measurable targets than many had hoped. At the same time, commitments in the JPOI fill some important gaps in UNCED's Agenda 21, and targets, timelines, and responsibilities in some areas are more specific.

Ultimately, although the JPOI is not legally binding, it does form the current global agenda for achieving sustainable development. Participating states committed themselves to the JPOI as a whole, and to "expediting the achievement of the time-bound, socio-economic and environmental targets contained therein." The United Nations General Assembly (Resolution 57/523) also endorsed the JPOI as a key element of the overarching framework for UN activities.

Some examples of JPOI commitments

Some key development goals concerning poverty:
- By 2015, halve the proportion of the world's people who have incomes under 1 dollar a day, suffer from hunger, and do not have access to safe drinking water and basic sanitation.
- By 2020, significantly improve the lives of at least 100 million slum dwellers.
- By 2015, ensure that boys and girls everywhere can complete primary schooling.
- By 2015, reduce infant and child mortality rates by two thirds (and eliminate disproportionate mortality of girls) and maternal mortality rates by three quarters.

Key goals in production, consumption, and resource management
- Substantially increase the proportion of renewable energy.
- Significantly reduce the rate of loss of species by 2015.
- Make substantial progress by 2006 in protecting the marine environment from land-based activities.
- Maintain or restore fish stocks by 2015.
- Develop integrated water resources management and efficiency plans by 2005.
- Promote corporate responsibility and accountability.
- Internalize environmental costs and use economic instruments.

Key goals for institutions and in governance:
- Develop and begin implementing national SD strategies by 2005.
- Negotiate a regime for fair sharing of benefits from use of genetic resources.

- Improve the capacity of and circumstances for developing countries to benefit from trade.

Role and structure of the Commission on Sustainable Development

In the end, of course, the success of the Summit will depend on follow-through on commitments. In this context, the role of the UN Commission on Sustainable Development (CSD) is important[9]. The CSD was formally established and mandated by the United Nations General Assembly (UNGA), based on recommendations in Agenda 21. It comprises 53 representatives from UN member states, elected by the UN's Economic and Social Council (EcoSoc)[10] on a regionally proportionate basis. The membership term is three years. The CSD does not have any direct decision-making powers. It reports to EcoSoc; and through EcoSoc, to the UNGA.

The CSD is tasked to review national, regional, and international progress and ensure effective follow-up to Agenda 21 (and now JPOI) commitments and recommendations; develop policy guidance and options for future activities; and promote dialogue and partnerships among governments, the international community, and the major groups. The JPOI also specified an enhanced role for the CSD in reviewing and monitoring progress in implementation.

The core event of the CSD process is an annual high-level meeting in April or May at UN headquarters in New York. A variety of interim planning and information-gathering meetings are also held. For example, in preparation for CSD's 12th Session (CSD-12, the most recent high-level meeting) there was a series of regional implementation meetings. To plan and manage the work of the CSD, a bureau, comprising a chair and 5 co-chairs, is elected each year by the membership. There is also a CSD Secretariat, which provides strategic and organizational support and carries out most of the ongoing work.

Based on guidance in the JPOI, the CSD has adopted a new multi-year program work for 2004-17. It will be organized as a series of two-year implementation cycles, with a review session and a policy session in each cycle. Each two-year cycle will address a thematic cluster of issues, and a suite of cross-cutting issues. The current (first) cycle, for 2004-05, focusses on water, sanitation, and human settlements. The 2006-07 cycle will focus on energy, industrial development, air pollution, and atmosphere and climate change.

Accountability and reporting

The CSD Secretariat prepares guidelines for, and analyzes, reports relevant to the work program of the CSD. Countries are supposed to regularly submit national progress reports on implementation; but reporting to the CSD is voluntary. For the Johannesburg Summit, countries were asked to prepare national assessments of efforts to implement Agenda 21 over the preceding ten years. Ninety countries submitted a national assessment—less than half the

[9] Debate in recent years on whether a strengthened United Nations Environment Programme should take charge of the sustainable development agenda reflects frustration with the CSD's level of effectiveness. It remains to be seen whether the CSD has been sufficiently revitalized through the Johannesburg process to deliver on its mandate.

[10] EcoSoc is the central mechanism for coordinating the UN system and its specialized agencies, and for supervising subsidiary bodies, including functional commissions such as the CSD.

number participating at the Summit[11]. Revisions to requirements for reporting to the CSD was an area of considerable dispute among delegations at the 11th Session of the Commission (CSD-11) However, the negotiated text noted that an effective system of reporting is essential for reviewing, evaluating, and monitoring progress in implementation.

The CSD Secretariat has responded in several ways to the need for more streamlined and strategic reporting. For CSD-12, countries were asked to submit brief reports on the status of national sustainable development strategies and national indicators. As well, they were to produce profiles on the three themes of the current cycle based on a simplified template that will continue to be used for reporting on future themes. For these thematic profiles, countries were expected only to edit and update drafts prepared by the Secretariat[12]. Despite efforts to ease the reporting burden, the reporting record for the current cycle is very uneven.

The potential role of supreme audit institutions

As summarized above, the CSD lacks a consistent, verified basis for assessing progress. Some CSD members have strongly resisted efforts to establish a requirement to report and attempts to promote some measure of verification and assurance on submitted national reports (e.g., peer reviews).

Against this backdrop, the value of involving supreme audit institutions (SAIs) in auditing compliance with JPOI and associated commitments is potentially high. A meaningful plan of action by national governments would more sharply define the context for audit work[13]. However, efforts by SAIs to hold governments accountable for important commitments made in Johannesburg, Rio, and points in-between should not wait on such a plan. (In fact, an expressed intention to undertake audit work against commitments might spur more coordinated attention.)

SAIs could also track their national government's reporting to the CSD and review the quality of reporting from an auditor's perspective.

Status of implementation by Canada's federal government

Some key federal actions after Rio

A new focus for Canada's national audit office

Since the Rio Conference, the Canadian federal government has taken many actions in support of sustainable development, and a broad range of federal policy and legislative initiatives reflect the concept to varying degrees . One of the most prominent responses of the government to the rising tide of sustainable development was to amend the *Auditor General*

[11] In addition, 140 countries submitted profiles—drafted by the Secretariat and given to each country to verify and update.

[12] Also for CSD-12, the Secretariat prepared a range of Secretary-General reports on the overall status of implementation, drawing on the work it had done to prepare the draft thematic profiles.

[13] According to a paper tabled at last year's meeting in Poland of the Working Group on Environmental Auditing, national governments should establish and interpret priority commitments from the JPOI, identify existing and new actions to meet commitments, set concrete performance expectations and indicators of progress, monitor and review progress made, and report to the public regularly and in a transparent way.

Act to establish the position of Commissioner of the Environment and Sustainable Development in the Office of the Auditor General of Canada. A key related legislative requirement was that each federal minister have their department prepare a sustainable development strategy (SDS) and update it every three years.

The Commissioner and her team monitor the extent to which departments have implemented the action plans and met the objectives of their strategies. In addition, the Commissioner's annual reports to Parliament include chapters on audits, special studies, and since 2001, the Office's environmental petitions process. After the annual reports are tabled, parliamentary standing committees—most commonly the Standing Committee on Environment and Sustainable Development—have continued to pursue some of the issues raised with relevant departments and agencies. Following on the Commissioner's 2002 recommendation for concerted federal planning to address JPOI commitments, the Standing Committee has been actively investigating the status of federal actions on the JPOI.

Status of a national sustainable development strategy

The call for a national sustainable development strategy has continued to echo in Canada and abroad since it was first made in UNCED's Agenda 21. (And once again, one of the most widely referenced commitments in the JPOI is the formulation of a national strategy, with implementation to begin by 2005.) The sustainable development strategies of federal departments were intended as a partial response to this call, especially in light of the substantial inter-jurisdictional consultation and coordination that would be required to produce a national strategy.

However, the federal government has acknowledged "the need for stronger coordination between its federal departmental SDSs" and has indicated that "work is underway to develop a government-wide vision and set of priorities on sustainable development."[14] While some work has taken place (for example, a draft document *Progress towards a SDS for the Government of Canada* was produced before the WSSD), the government has not formally adopted a position.

Federal action specific to the JPOI

In her 2002 report, the Commissioner called on the federal government to produce a concrete plan of action to fulfill its commitment to the implementation of Agenda 21 and the JPOI. In fact, the creation of such a plan began under the leadership of the Canada's Earth Summit Secretariat (ESS)—the body that coordinated Canada's preparations for the Johannesburg Summit. By early 2003, a short list of priority commitments from the JPOI and departmental assignments had been drafted. The list was meant to provide "a manageable set of issues that can be regularly monitored and reported on."

However, shortly after the list was produced, the ESS was disbanded. Responsibility for developing a coherent federal response to the JPOI was handed over to the Deputy Ministers' Environment and Sustainable Development Coordinating Committee (ESDCC). To date, the

[14] From Canada's *2003 Status Report* in response to the *CSD Guidelines for Reporting on National Sustainable Development Strategies*. Also, in response to one of the Commissioner's recommendations in 2002 Chapter 5 (para 5.69), the Privy Council Office indicated that a federal sustainable development strategy was being developed.

ESDCC has not produced an action plan; nor has the ESS shortlist been reviewed or approved.

The ESDCC did approve a document that directs departments to treat the JPOI commitments as one of three Government of Canada priorities in the 2003-06 round of departmental SDSs. However, without any formal decisions on key commitments or overall expectations, departments have varied widely in how they have responded to this direction. Some have reflected specific commitments from the JPOI in their SDS. Others have made only general references or have said nothing at all about the Johannesburg Summit or the JPOI.

A national SDS, responsibility for which now also rests with the ESDCC, could help set the context for responding to JPOI commitments. The co-chairs of the ESDCC acknowledged this relationship by noting that a short list of priority commitments from the JPOI would "significantly inform the federal sustainable development strategy."

Planned approach by the Office of the Auditor General of Canada

Ongoing audit work on JPOI commitments

The Commissioner of the Environment and sustainable Development intends to continue to monitor federal coordination in implementing JPOI commitments and progress in developing a national SDS. And despite the absence of a federal strategy or plan, the Commissioner has indicated that the Office of the Auditor General of Canada intends to track progress through its annual audits beginning with those in 2005.

This means making relevant JPOI commitments inherent to future audits. In other words, during overview and survey work, one of the factors shaping the scope of an audit will be the intention to investigate progress of one or more relevant JPOI commitments. Early discussions with interested departments will help us interpret commitments and understand relevant programs so that we can set clear audit objectives and criteria in our audit plan.

The scope of an audit may be legitimately driven by other considerations and no key JPOI commitments may fit within that scope. In that case, the audit team will ask departments, early in the audit, to report on implementation actions on one or more commitments directly related to the audit. This option would follow a management assertion approach (like that used for the Office's follow-up audits).

While audit teams will be able to address any commitments in the JPOI that they feel are relevant to an audit, the Office has prepared a list of some of the most important commitments to Canada. The criteria for this list reflect the Office's mandate and activities, and a particular interest in commitments that expand on, strengthen, integrate, or address gaps in existing federal commitments. Given that much of the JPOI targets needs and conditions in developing countries, it is widely agreed that many aspects do not constitute much of a challenge for developed countries like Canada. Therefore, a focus on those commitments will require real attention and action is necessary if the JPOI is to influence the move toward sustainable development in Canada.

The Commissioner's upcoming report

To set the ground for the Office's approach, the Commissioner's September 2004 Report will:

- summarize the current status of high-level federal coordination of action on JPOI commitments,
- summarize progress against the specific JPOI commitment related to developing and implementing a national SDS,
- provide a brief comparison of the above with a few other countries or regions,
- provide examples of JPOI commitments relevant to Canada15, and
- indicate the Office's intention to use ongoing audit work to track progress on JPOI commitments.

In relation to this last point, the Office intends to

- indicate which JPOI commitments it will address in its audit work of 2005 and 2006
- give examples from previous audits of findings that are relevant to JPOI commitments.

[15] In addition to JPOI commitments referred to under "production, consumption, and resource management" in the text box on page two of this document.

Sustainable Development the Role of Libyan SAI (Libyan Arab Jamahiriya)

Theme: **SAI Approaches to the World Summit on Sustainable Development**

Author: **The general secretary people's committee of Institution for Auditing and Technical Supervision**

Background

The beginning of the Institution of Auditing and Technical Supervision, was under the denomination of State Audit Bureau , this was in virtue of the law No. 21 dated 1955, amended with law no. 22 dated 1962 and later amended with law issued on 1966. While the effective start of the Auditing work was with the issue of the law no. 79 dated 1975 regarding the State Audit Bureau and this continued until merging the Auditing and supervision boards with their different competencies (Audit, administrative, technical) in 1988, under the denomination of the Popular Board for control, which became denominated the general People's Committee For Popular control until 13/6/2003, as the law no. 13 dated 2003 was issued , which separated the Auditing and supervision boards and established in virtue thereof, the actual (Institution of Auditing and Technical Supervision), to perform the Auditing and technical supervision competency on the entities depending from it, according to the norms of the indicated laws

The Institution of Auditing and Technical Supervision while performing his controlling role in the filed of sustainable development, is departing from the controlling role charged to it, which doesn't authorize him to participate in the executive jobs, but only to control the extent of commitment in application of such jobs and commitment to the planed applicable policy.

Led by the draft of sustainable development the role of SAI's issued by INTOSAI, therefore it must define the role of Libyan SAI in the filed on sustainable development, throughout the six steps mentioned in that minute, as follows:

Step One: Clarify Mandate:

Its can be said that the Libyan project secured enough competencies to Audit most sustainable development aspects, as submitted to the control of the Libyan SAI all the entities depending from the government's public budget, or those partially or totally sponsored by it, furthermore the control, was extended to include the activity of foreign companies branches, executing contracts on behalf of those entities undergoing the control of the Libyan SAI in the limit of the works performed in Libya, and from the competencies aspect, the Libyan SAI benefits of two:

- Auditing and all what relates to it regarding expenditure or collection, starting from financial close-ups and general budgets of companies, until the final account of the government, which gives a general view of the country's performance during the closing year.

- Technical Supervision and all what relates to it regarding the follow-up of the technical performance of the entities undergoing the control, as the Libyan SAI is competent in

auditing and inspecting the projects listed in the transaction plan, as soon as the estimations of the foreseen projects are prepared. The Libyan SAI shall study the project and handover its observations to the competent side within a deadline not exceeding three months from the date of receiving the plan, from another side in the technical supervision sector, the Libyan SAI performs a pre-control on all types of contracts, which one of the entities undergoing the control is part in and the contract shall not be stipulated unless after obtaining its approval and all this is done according to law, as for the minimum value of the contract undergoing the control and the type of such control, also the Libyan SAI follows the initial stages of execution for the projects stipulated to ensure the correctness of the procedures adopted and their conformity to the technical specifications and conditions upon which contract was stipulated, also periodical follow-up of the executed projects, to ensue the correctness of operation and maintenance, and the achievement of the purposes established for.

Step Two: The develop strategy:

The strategy of the Institution of Auditing and Technical Supervision in Libya regarding the sustainable development agenda, is made on two main axes, the first to merge the control jobs regarding the sustainable development within the work plan and routine programs of the Libyan SAI, this is made through examination and auditing of the budgets and financial accounts, or through the control on projects and contracts, while the second axe regards the choosing of special subjects outside the routine programs of the Libyan SAI, as annually some subjects are defined regarding the control work on the sustainable development and defining the extent of availability of suitable expertise inside the Libyan SAI to deal with such subjects, or if the subjects requires the resorting to foreign expertise, then competent work groups are formed to perform such control work and most relevant of such groups or committees formed by the Libyan SAI in such sector are:

1. Great Man Made River Auditing and Follow-up Committee
2. Oil and Energy Sector Auditing and follow-up Committee.
3. Railways Auditing and follow-up Committee
4. Cement Factories Auditing and follow-up committee

Step Three: Build capacity and expertise within the Libyan SAI:

In the frame of building the capacity of the Libyan SAI to face the control jobs regarding the sustainable development, the accredited training plans of the Libyan SAI includes the focusing on the formation in the filed of the control jobs on the sustainable development, as the categories or subjects or causes in relation with the work of sustainable development has been defined and the focus is on developing the performance in it, also the reinforce the capacities of the Libyan SAI by the transfer and delegation of some specialists in the matters of sustainable development to work with the Libyan SAI.

From another side, the Libyan SAI is participating in most meetings, conferences and congresses, local, and international, held for such purpose.

Also the Libyan SAI is member in the Working group on environment Auditing on the level of AFROSAI and ARBOSAI, and actually is participating in the works of INTOSAI.

Step fourth: Conducting Audits:

As for principle, Audits for sustainable development held by the Libyan SAI, doesn't differentiate from the other control jobs held by the Libyan SAI as for planning, execution and preparation of the report and what relates to that as from control procedures relative to the reinforcement and realization of transparency in performance.

In this filed we must point out that the Libyan SAI exposes its annual reports in a public manner and published directly on air during the meetings of the General Peoples Congress.

Step Five: Learn from Libyan SAI own experience and from other SAI's

The Libyan SAI, in the frame of his membership in ARBOSAI and undertaking the control of the Executive Council of AFROSAI and his membership in INTOSAI, exchanges experience, thoughts and suggestions, and view the experiences regarding the matters of sustainable development.

He also benefited much from his membership in the WGEA and a number of members attended a series of training programs, held on a regional basis, within the ARABOSAI.

Step six: Have an impact

The Libyan SAI is following a system to follow-up the recommendations and observations mentioned in its reports and correspondence regarding his Auditing, as his structural organization includes a competent administration to follow-up what the reports issued by the Libyan SAI and it has closely connected with the Media, to reinforce creating the required impact.

As previously mentioned that the reports of the Libyan SAI are published directly through the different Media channels, but also are distributed to all the Basic Peoples Congresses and finally the relation between some works to obtain the previous approval by the Libyan SAI, may create the direct impact by being committed to the observation made by the Libyan SAI.

One of the most important matters dealt in by the Libyan SAI in his last report, the following:

1. Oblige the cement factories to use a modern system for air filters.

2. Oblige the oil and gas refining factories with the necessity to exploit the gas in stead of burning it in the air.

3. Strengthen the control on the regional waters to struggle against the vessels oil exchange in the open sea.

4. Close up of the garbage offices depending on collecting garbage to eliminate it, and exchange it with a Garbage Recycling Factory.

Norway's implementation of the Johannesburg decisions (Norway)

Theme: **SAI Approaches to the World Summit on Sustainable Development**

Author: **Office of the Auditor General of Norway**

1. Introduction

The purpose of this paper is fourfould:

First, it briefly describes the key policy documents that lays the basis for the Norwegian government's follow up the decisions from the World Summit on Sustainable Development in Johannesburg 2002. Second, it presents an overview of the priority areas, key objectives and targets as formulated by the Norwegian government. Third it presents some facts about trends in each of the priority areas in a national action plan, including an overview of the development in indicators that have been selected by the government for the follow up of the action plan. Lastly it presents some preliminary thoughts on challenges for SAI's in terms of auditing sustainable development, as well as a recent legal mandate for the Norwegian SAI with regard to performance audits of sustainable development. It concludes with short presentation of two recent performance audits carried out by the Norwegian SAI that has attempted to deal with both the ecological, social and economic dimensions of sustainable development.

2. Key policy documents

The Norwegian Government prepared the first National Strategy for Sustainable Development (hereafter NSSD) previous to and in connection with the WSSD in Johannesburg. The National Strategy builds partly on "New Bearings for the Nordic Countries", a strategy document prepared in cooperation by the Nordic Prime Ministers for the Nordic countries and the neighboring areas. The process that led to the National Strategy was broad-based including, besides the governmental level, local authorities, the business sector, the voluntary sector and individuals. The Prime Minister expressed that the strategy "marks the beginning of a long-term process of cooperation, the process of creating and realizing our common vision of a sustainable society."[16]

The expressed overriding objective for Norway and the international community is to make development ecologically, economically and socially sustainable, and this is seen as an expression of a sustainable development based on solidarity in time and space.

When the National Strategy was presented, the Prime Minister announced that a national action plan would follow, and that this plan would be a national Agenda 21 and it would be a part of the National Budget for 2004. This schedule has been followed and accomplished. The action plan is thus now a part of one of the most important national policy documents.

In the introduction to the action plan, the government has emphasized some international lessons learnt from elaborating plans for sustainable development:

[16] National Strategy for Sustainable Development, published by the Royal Ministry of Foreign Affairs, Norway (English version); Foreword by the Prime Minister.

- the objectives of the plan should be as concrete as possible, responsibilities and follow-up mechanisms should be clear in order to avoid large, long, comprehensive processes with insufficient focus.

- It is important to focus on a few selected main issues in sustainable development

- Efforts to achieve and implement sustainable development should be related to central policy documents and decisions so that sustainability and environmental policy does not live its own life more or less isolated from these processes.

A strong emphasis is put on the integration of sustainable development with key political and budgetary processes. All ministries should follow up the plan within their sectors and responsibilities. The Ministry of Finance heads the inter-ministerial council of deputy ministers which has a special responsibility in coordinating the work of the various ministries.

When the action plan was presented, the government stated that a strong emphasis had been put on the need for clear and concrete objectives as well as for indicators that facilitate evaluation of progress. These indicators are presented later in this paper. The government has signaled its intention to prepare annual reports where development in the indicators are presented and compared with the goals set.

3. Priority areas

The National Action Plan is more focused on selected areas than the strategy that preceeded it. The National Action Plan focus on measures in seven different areas:

1. International cooperation to achieve sustainable development and the fight against poverty
2. Climate change, ozone level and long-range air pollution
3. Biological diversity and cultural heritage
4. Natural resources
5. Hazardous chemicals
6. Sustainable economic development
7. Sami perspectives in environmental and resource management.

In the following, we will take a closer look into main areas of the governments action plan. Although the government has intended to adopt a global perspective on sustainable development, the following will focus on targets and measures which primarily are intended to achieves changes within Norway.

4. Key objectives and indicators

4.1 Sustainable development and fight against poverty
The government will contribute actively to strengthen the international cooperation to achieve the international goals for environment and development. This general objective is further elaborated and specified under several headings such as improving national and international conditions for development, peace and security, the amount and quality of development aid, etc.. It is not presented in any further detail here, as the focus of this paper primarily is on policies to change the state-of-affairs in Norway, except the indicators that have been identified so far:

a. Official Norwegian aid as percent of national gross income

b. Percentage of gross Norwegian bilateral aid given to the less developed countries (LDC)

c. Developing countries' share of Norway's total imports

4.2 Climate change, ozone level and long-range air pollution
The government will present new national measures in order to achieve clear progress by 2005 in relation to the Kyoto protocol. It will contribute to stabilize the concentration of GHG at a level which prevents negative man-made effects of the climate system. It will implement a quota system which includes CO_2-emissions that are presently not already covered by the CO_2 tax. The indicators chosen so far for this area are the following:

- Greenhouse gases (in mill. tons. CO_2 equivalents)
- NOx emissions (thousand tons)
- SO_2 (thousand tons)
- VOC (thousand tons)
- NH_3 (thousand tons)
- Emissions pr NGP-unit (index 1990=100) greenhouse gasses
- Percentage of Norwegian surface where critical load is exceeded

4.3 Biological diversity and cultural heritage
The main objective with respect to biological diversity is to manage the nature so that species that belong naturally to the environment can maintain sustainable populations, as well as efforts to maintain diversity in nature and landscape. With regard to cultural heritage the key objective is to reduce the current annual loss of cultural valuables and cultural environment of approximately 1 percent.

The indicators are

- Percentage of the Norwegian surface that is protected
- Total of endangered species in Norway

4.4 Natural resources
The energy policy should promote economic efficiency and be based on the objective of sustainable development. Exploration of petroleum resources should be done in an environmentally sound manner. The fisheries resources management should secure sustainable yields and be based upon scientific advise. The policies regarding agriculture, forestry and reindeer-farming should promote long term resources management guaranteeing e.g. employment, and contribute to the production of environmental goods such as biological diversity, historical values, "cultural landscape", etc.

No indicators have been formulated in this area so far.

4.5 Hazardous chemicals
Emissions and use of hazardous chemicals should not damage health or the nature's own ability to produce and renew itself. The concentrations of the most dangerous chemicals should be brought down to levels of background concentration for natural substances and to zero for human made substances. The general objective is specified in more concrete targets such as A. intensify the efforts of reducing the emissions of priority list substances, B. finalise the work with a programme for cleaning up 100 polluted sites by 2005, C. implement measures that reduce the exposure of workers to dangerous chemicals.

As was the case with natural resources management, no indicators have been formulated in this area either.

4.6 Sustainable development
The government will seek to encourage sustainable production and consumption through international cooperation and through economic and other policy instruments. It will adopt a budgetary policy that builds up reserves to finance future expenditure. Income from the petroleum sector will be phased in according to a broad political consensus from 2000/2001. Furthermore the government will remove or reform environmentally harmful subsidies and develop the system of taxes and charges to achieve economically correct prices and internalize external costs.

4.7 Sámi perspectives
The main objective of the government in this area is to integrate Sámi aspects in the policy for sustainable development. Furthermore, the government will seek constructive forms of cooperation between the Sámi parliament, environmental NGOs and regional authorities.

5. Trends and progress

The government recognises its national and international responsibility concerning efforts to counter act *climae change*. Emissions of CO_2 increased by 21 percent from 1987 to 2002, while the total increase of GHG was 3 percent in the same period. It is estimated that future Norwegian emissions will increase from 52 million tons in 1990 to 61 million tons in 2010 without any new measures. In order to fulfil our commitment emissions should be cut by 8-9 million tons by 2010. Reaching the CO2 target will thus be a major challenge in the next few years. In terms of long-range air pollutants, Norway is on track with regard to its international commitments on reduction of SO_2, and it is expected that its commitment on VOC will be met. The sharp reduction of future VOC emissions (see table below) is primarily related to lower activity in petroleum exploration and new technology which will be installed. The target for NOx, however, is expected to be more difficult, and emissions should be reduced by 17 percent in 2010.

The global loss of *biological diversity* is considered to be caused by de-forestation, over utilisation, caudation, hazardous substances, changes in the land-use and introduction of imported species. In 1998 the Norwegian "red list" concerning endangered species included one fifth of about 14 600 species investigated in Norway. The red list includes species that are either extinguished already or threatened to be extinguished, or species that need monitoring due to low numbers. A survey carried out by the authorities in 1996 indicated systematic

weaknesses in the management of national parks and protected areas with negative consequences for biologivcal diversity in the areas. The OAG of Norway is planning to carry out a new survey in order to get updated data on the management of national parks/protected areas and whether management is in conflict with the stated purpose for the areas.

Within the area of *natural resources management*, some of the fish stocks, particularly in the North Sea like the North Sea cod, are over-exploited and outside biologically safe limits. The economically most important stocks however, are in relatively good conditions. Further details are provided in a separate section below. Fish-stocks like the herring collapsed due to over-fishing in the late 60s, but have been managed carefully the last few decades and have now recuperated and producing substantial yields. Deforestation is currently not considered to be any major problem in Norway, net annual increase in the forests is estimated to be approximately 15 million m^3. The energy resources of Norway are partly renewable such as the considerable amount of hydro-electricity, partly non-renewable such as the petroleum resources. It has been an objective to increase energy efficiency and increase the share of new renewable energy supply and heat. However, there are signs that the results of these efforts have been rather limited.

With regard to *hazardous chemicals*, the emissions of some of the most dangerous substances have been brought down, but the total use of chemicals has increased. It is estimated that approximately 50 000 substances are in use in Europe today. Lack of information and knowledge is a major problem in this area. A performance audit that was finalized two years ago showed serious weaknesses in the relevant authorities' management and control activities, particularly within the agricultural sector and within the labour inspectorate. The state pollution control agency performed better in this respect.

6. Development in selected indicators

As already mentioned, it is the government's intention to develop relevant indicators for sustainable development and to develop scenarios for their development. A working group has been assigned this task. An annual report will show the development in the indicators. The table above shows the set of indicators that so far has been selected so far and their development.

Policy area	Indicator	Yearly data					Target/ obligation
		1993	1997	2000	2002	2003[2]	
International Cooperation for a Sustainable Development and Poverty Eradication	- Official Norwegian Aid as % of National Gross Income (OECD)	0,89	0,86	0,80	0,89	0,93	1% within 2005
	- Percentage of gross Norwegian bilateral aid given to the less developed countries (LDC)	Year	2000	2001	2002		40% of total aid to LDC
			34,9	35,2	39,7		
	- Developing countries' percent of Norway's import[3]	Year:	1990	1995	2000	2001	2002
			8,2	9,4	11,2	10,7	11,3
	- The least development countries percent of Norway's import [2] (OECD)		0,63	0,48	0,43	0,40	0,41
		1985	1990	1995[3]	2002[3]	2010	
Climate and long range air pollutants	- Emission level of: Greenhouse gasses (in mill. tons. CO2 equivalents)	53[5]	52	52	55	61	52,5 (mean for period 2008-2012)
	NOx (thousand tons)	213	224	221	214	187	156 within 2010
	SO_2 (thousand tons)	98	52	33	23	268	22 within 2010
	VOC (thousand tons)	231	294	367	334	160	195 within 2010
	NH_3 (thousand tons) (OECD and NC. EU utilizes change percentage based in 1990 figures for emissions)	235	23	26	25[6]		
	- Emissions pr NGP-unit (index 1990=100): Greenhouse gasses (NC)	1035	100	83	71	70	
	NOx,	107	100	82	64	50	
	SO_2,	212	100	53	30	30	
	VOC,	88	100	103	77	32	
	NH_3	1035	100	94	746	--	
	- Percent of the Norwegian surface where nature's tolerance degree is overridden	30		20		7-8	
		1990	1993	1996	2002	2003	
Biological diversity	- Percent of the Norwegian surface that is protected (NC) EU utilizes the protected percentage in regard to both EU's habitat directive and EU's Bird directive)	5,4	6,3	6,4	8,0	9,8	
	- Total of endangered species in Norway[7]; in brackets percentage of registered species)	Year	1992		1998		
			1839 (18)		3062 (21)		

[2] Preliminary figures
[3] Excludes import of ships and oil platforms
[4] Preliminary figures
[5] Calculated figures based on supposition that no new initiatives are carried out
[6] Figures for 2001
[7] In 1992, over 10 000 species were analysed, over 15 000 in 1998. It is estimated that the total of species in Norway is about 60 000. This is why either total figures or percentage figures will be comparable in time, but the indicator may anyway be an approximation to the real state and the development.
[8] The calculated figures do not take into consideration reductions that may occur as a consequence of non-obligatory agreements. The authorities agreement with The Federation of Norwegian Process Industries assumes that the SO2-emissions will be brought down under the national agreed figure of 22 000 tons.

-- Non existent data

		1995	1996	1997	1998	1999	2000	2001	
Sustainable economic development	-Average retirement age (OECD and EU)	58,3	58,5	58,5	58,4	57,8	58,2	58,4	
	-Expected duration of life at birth (Norwegian Statistics middle alternative)	Year	1950	1970	1990	2003	2020	2050	
		Men	69,9	71,0	73,4	77,0	79,8	84,7	
		Women	73,2	77,3	79,8	82,3	84,6	88,6	
	-Public expenses for retirement and disablement benefits (percentage of continental Norway's GNP) (OECD)	Year	2002	2010	2020	2030	2040	2050	
			9.2	10.8	13,6	16,5	18,8	19,7	
	-Employment frequency (age 16-74)	Year	1972	1980	1990	2000	2002	2007	
		Men	78,1	79,3	76,0	77,9	77,4	---	
		Women	44,7	55,1	62,4	68,8	69,6	---	
		Total	61,4	67,2	69,2	73,4	73,5	71,7	

7. Auditing sustainable development

"Sustainable development" and sustainability are not very clear or well defined concepts, their use is often rather vague, a vagueness that at times might be intended, at times not. Vague concepts are inherently difficult to handle for auditors. However, as we believe our audit of the fisheries resource management, to which we will revert below, illustrates, the concept is gradually becoming more concrete and operational. This will facilitate future performance audits with clearer audit criteria than has been feasible so far.

A large number of policy documents and action plans aiming at sustainable development could be said to indicate that little real progress has been made in this area so far and that sustainable development is a "business" marked more by words than by actions. There are many plausible explanations for this, not the least the complexity of the issue, the cross-sectoral nature of SD and the conflicting objectives that often arise. If this is the case, audits of action plans and policies for sustainable development will highlight the shortcomings and help increase effective implementation of principles and policies.

7.1 Legal competence

The Norwegian parliament has recently approved a new law that regulates the activity of the Norwegian OAG. In a corresponding regulation also approved by the parliament, it is stipulated that the OAG should carry out performance audits in order to provide relevant information to the parliament on the implementation and effects of public measures. The regulation specifies different objectives of performance auditing and specifically mentions that the OAG should report on whether the government implements approved environmental policy so that the principle of sustainable development and sound management of natural resources is respected. Sustainable development and natural resource management is the only "policy area" that is specifically mentioned in this regard. We believe this reflects that performance auditing is seen by the parliamentarians as one instrument that could be contribute to the more effective implementation of the principles of sustainable development.

7.2 Sustainable development audits – some recent experiences

The Office of the Auditor General of Norway has very recently finalised two performance audits which have focused on sustainable resource management. One performance audits

has dealt with the management of the fishery resources, the other audit focused on the management of the reindeer grazing land.

A. Management of the fishery resources.
This was the first audit in which audit criteria relating to ecological or biological sustainability was applied. This meant that our office needed to recruit new auditors with the necessary professional background. It also involved competence building of our existing staff.

The scope of the audit includes the following:

1. The management of the six economically most important fish stocks
2. Control of compliance with fisheries regulations
3. Distribution of licenses, rights and quotas geographically and between different vessels categories
4. The ministry's management of the fisheries directorate and other subordinate units

The purpose of the audit was to evaluate whether the government's management of the fisheries resources is in accordance with the objective of securing the conditions for a sustainable and profitable fishery sector. The audit mainly covers the period from 1998 to 2002/2003. The main research questions asked were the following:

- Is the resource management in accordance with the objective of maintaining sustainable stocks and large long term profits from the exploitation of the resources.

- To what extent are the policy instruments chosen contributing to the objective of a profitable, mixed and geographically distributed fleet of fishing vessels?

- To what extent have the activities on resource control contributed to the achievement of the objective of a more effective resource management?

- Has the formulated objectives and targets and collected reports on achieved results and effects within the areas of resource management, resource control and distribution?

The aim of the audit was thus to include biological, social and economic aspects of sustainability.

The audit criteria relating to the resource management can be summarised as follows:

- The authorities should facilitate sustainable resource exploitation.

- The resource management should be based on scientific advice and recommendations

- The precautionary principle should be implemented. The management model should be based on an eco-system model (multiple stocks analysis).

- International cooperation is critically important to achieve sustainable resource management and to control the total catch.

The point of departure was that an *economically optimal* resource utilization will coincide with *sustainable* resource utilization in the long term. However, it is acknowledged that a major short term challenge is to balance protection and resource utilization.

The main findings are:

A comparison of the quotas biological recommendations from ICES regarding the six most important stocks leaves a mixed picture: The quotas have been set higher than the biological recommendations for three of the stocks (arctic cod, arctic haddock, coalfish/pollack) during all or most of the years covered by the audit. With respect to the three other stocks quotas have followed the recommendations.

All six stocks are considered to be within secure biological limits. Stocks are generally being managed according to the precautionary principle since spawning stock biomass is above levels associated with the precautionary principle (Bpa), a level where a stock with a high degree of probability (90-95 per cent) is above the lower level of sustainability (B_{lim}). The spawning stock biomass for arctic cod has declined several years, indicating that the total catch exceeded recruitment, but the picture is more positive and quite stable for other stocks.

The target of implementing an eco-system approach where it is taken into account that stocks affects each other has not been reached. Four of six stocks are managed on the basis of single stock analysis. Norway has to a large degree followed up on the UN convention's obligations to establish binding international cooperation on management of shared stocks. Common management strategies and allocation criteria have been agreed upon.

The investigations also show that there are no clear relationships between catch volumes and business income. Quotas are to a large degree decided upon without analysing how quotas affect business income. Therefore it is difficult to evaluate whether the objective with regard to profits are achieved.

The main finding with regard to resource control was that the fishery directorate does not base its control activities on a documented, systematic risk based system. There are no common criteria for risk evaluation. Risk assessment is mainly undertaken as a non-formal process without any degree of written documentation. There are no procedures for handling risks when risks are disclosed. The system for risk assessment is rather based on previous experience rather on a systematic analysis of risk. Accordingly, resource allocation does not follow a risk based approach.

A major challenge in the fishery policy the last two decade has been to reduce surplus capacity in the fleet and thus achieve a better balance between the resource base and the fleet. The audit found that the policy of adjusting the fleet to the resource base by of reducing total number of vessels has not succeeded in reducing the total technical capacity of the fleet. While the number of vessels has been reduced by 30 percent between 1990 and 2002, the technical capacity actually increased by 70 percent in the same period. There is a clear tendency to larger and more capital intensive vessels which again could increase the pressure on the various stocks. This is the key challenge or threat to sustainable exploitation of the fishery resources.

The audit also studied the geographical distribution of total catch volumes and found a rather high degree of concentration to certain regions. Furthermore, the quite substantial increase in catch volumes that took place from 1990 to 2002 was unevenly distributed due to the fact that the distribution of quotas follows the composition of the fleet in the coastal regions. Hence a region with predominantly smaller vessels intended for coastal fisheries, will receive a smaller part when the total quota is increased than a region with many large vessels. It was also discerned a certain tendency that licenses and other forms for admission rights to regulated fisheries are transferred from the northernmost regions to regions further south. This could conflict with an objective stated by the relevant parliamentary committee.

B. Reindeer grazing land

An analysis of existing scientific studies, interviews with scientists and with representatives of the relevant authorities was used to establish the fact that the grazing resources in Finnmark, the northernmost region of Norway, are not in a sustainable condition. Documentation and existing research of the resource situation is considered sufficient by the government to use the precautionary principle. Satellite photos from the period of 1970-2000 were used to show the decline in lichen cover (the most important reindeer forage during winter) due to reindeer overgrazing. The main reason for the overgrazing is the high amount of reindeers in comparison with the resources, and wrong use of grazing periods. The audit revealed that several provisions are not in place as prescribed by the law, such as maximum numbers of reindeers per area unit, etc. More precise provisions are required to allow grazing resources to be used in a manner adapted to the ecology.

To illustrate how reindeer husbandry is regarded in the national, regional and the local authorities management of land-use, there was an analysis of a total 965 area cases. The analysis indicates that there is a considerable amount of area intervention at the expense of grazing resources. The direct consequence of each intervention is unknown to the government.

Supreme Audit Institution approaches to sustainable development and the World Summit on Sustainable Development (United Kingdom)

Theme: **SAI Approaches to the World Summit on Sustainable Development**

Author: **Marcus Popplewell**

This paper sets out:

1. The broad aims of the United Kingdom's Sustainable Development Strategy
2. Who is responsible for promoting sustainable development in the United Kingdom
3. How sustainable development is being integrated into policy making
4. How the United Kingdom is seeking to implement the goals of the World Summit on Sustainable Development
5. What the United Kingdom's Sustainable Development Strategy has achieved to date
6. The National Audit Office's plans to review progress in achieving sustainable development

1. The broad aims of the United Kingdom's sustainable development strategy

In May 1999 the United Kingdom Government published its first Sustainable Development Strategy.[17] The Strategy set out how sustainable development was to be achieved, including the arrangements within central government bodies. The Strategy recognised that for sustainable development to be successful, it must be integrated into central and local policy making and the behaviour of individuals and private companies. The main aims of the Strategy are:

- social progress which recognises the needs of everyone;
- effective protection of the environment;
- prudent use of natural resources;
- high and stable levels of economic growth and employment.

2. Responsibilities for sustainable development in the United Kingdom

The Department for Environment, Food and Rural Affairs has the key role in promoting sustainable development across government and society, and internationally by:

- ensuring that policies across Government address sustainable development issues;
- acting as an advocate for sustainable development;
- monitoring and reporting on progress;

A better quality of life: a strategy for sustainable development for the United Kingdom, Cm 4345, The Stationery Office, London, ISBN 0-10-143452-9, http://www.sustainable-development.gov.uk/uk_strategy/content.htm

- leading on sustainable development policy internationally.

In addition, there is:

- A committee of government ministers to co-ordinate sustainable development policy, which produces a progress report each year.

- A Parliamentary Environmental Audit Committee which monitors Government progress in meeting environmental protection and sustainable development targets.

- A Sustainable Development Commission, a Government sponsored body which reviews progress in achieving sustainable development; recommends action to reverse unsustainable trends; and raises awareness and stimulates good practice.[18]

- Regional and local sustainable development strategies. There are 29 local sustainable development indicators to monitor the performance of local authorities.

3. Integrating sustainable development into policy making

The Government's Sustainable Development Strategy, launched in 1999, identified 10 guiding principles and approaches which policies should follow:

1. Putting people at the centre.
2. Taking a long term perspective.
3. Taking account of costs and benefits.
4. Creating an open and supportive economic system.
5. Combating poverty and social exclusion.
6. Respecting environmental limits.
7. The precautionary principle.
8. Using scientific knowledge.
9. Transparency, information, participation and access to justice.
10. Making the polluter pay.

The Government has developed a Policy Makers Checklist to provide officials with helpful information and contact points on statutory requirements (e.g. Human Rights Act), good practice (e.g. on consultation) and a full range of impact assessment and appraisal tools (e.g. Environmental Impact Assessments, Regulatory Impact assessment). The Department for Environment, Food and Rural Affairs has developed an Integrated Policy Appraisal tool to improve the integration of environmental and other sustainable development objectives.[19] The tool provides a framework for a standard assessment of policy proposals against a series of environmental, social and economic impacts. The Government also uses fiscal measures to encourage more sustainable development, such as a low fuel duty for "ultra-low sulphur diesel" and an above inflation increase in petrol duty each year.

[18] http://www.sd-commission.gov.uk/
[19] www.defra.gov.uk/ebus/enabling/procurement/susdev-ipas.pdf

4. Adapting sustainable development strategy to reflect the World Summit

In 2003, the Government set out its 17 main commitments from the 2002 World Summit on Sustainable Development, along with related objectives, actions and follow-up process.[20] The areas where commitments have been made are: sustainable consumption and production patterns; renewable energy and energy efficiency; biodiversity; fisheries; oceans; integration of environmental issues into country-led poverty reduction processes; water and sanitation; access to energy; finance; corporate social responsibility; trade; agriculture; international sustainable development governance; co-ordinated World Summit on Sustainable Development/Monterrey follow-up; partnerships; human rights; chemicals.

5. The United Kingdom's progress to date

Each year since 2000, the United Kingdom Government has produced a report on national progress using 19 "Headline" indicators.[21] Since the Sustainable Development Strategy was launched in 1999, ten headline indicators show improvements towards meeting targets (economic output, employment, poverty and social exclusion, education, housing conditions, crime (theft of, or from, vehicles and domestic burglary), climate change, road traffic intensity, river water quality and land use). Four indicators have deteriorated significantly: robbery, air quality, road traffic volumes and household waste.

The Sustainable Development Commission recently produced its own assessment of the Government's reported progress on sustainable development since 1999. The Commission concluded that the Strategy and the subsequent assessment of progress have been a valuable means of keeping sustainability on the agenda, and showing where progress is being made and where it is lagging. However, the Commission also suggested that the commitment given so far is too generalised and too patchy to deliver the changes needed.

The Government itself produces a report each year on the sustainability of its operations – the Sustainable Development in Government Report 2003.[22] The Report gives performance data in nine areas (overarching commitments, travel, water, waste, energy, procurement, estates management, biodiversity and social impacts).

6. The approach being taken the United Kingdom National Audit Office

In developing our review of the progress in achieving the objectives of the World Summit on Sustainable Development, we intend to start by identifying each department's strategy for delivering the various Government commitments in the areas listed in section 4 above. This may not be straightforward, but once done we should then be able to identify and review the delivery mechanisms, the adequacy of objectives and targets, and consider how we review progress against targets.

In terms of future plans, we have identified a number of areas of potential interest for the United Kingdom Parliament and taxpayer. We think these areas might include: sustainable

[20] http://www.sustainable-development.gov.uk/eac-wssd/commitments.htm
[21] Review of progress towards sustainable development: Government annual report 2003, http://www.sustainable-development.gov.uk/ar2003/index.htm
[22] Sustainable Development in Government: Second Annual Report 2003, http://www.sustainable-development.gov.uk/sdig/reports/ar2003/index.htm

consumption and production – "decoupling" economic growth from environmental degradation; energy – increasing the use of renewable energy sources and access to affordable energy; oceans – building sustainable fisheries; biodiversity – significantly reducing the current rate of loss of biodiversity; chemicals – international processes for managing potentially hazardous chemicals; or corporate accountability – actively promoting corporate accountability and encouraging improvements in social and environmental performance in industry.

In a separate but related development, we produced a briefing in April 2004 on sustainable development in government operations, in response to a request from the Parliamentary Environmental Audit Committee. The briefing reviewed the Sustainable Development in Government Report 2003. In carrying out the work, we developed a framework of key questions which drew on our previous experience and data validation guidelines from recognised sources. The questions were designed to investigate four broad issues:

- Targets: The quality (e.g. appropriateness, clarity and coverage) of the sustainable development targets that departments are being asked to achieve;

- Data: The completeness and quality of the data included in the Report (including comprehensiveness, internal consistency and whether or not it had been validated);

- Performance: Departments' achievements, according to the data available;

- Narrative: The quality of the narrative which accompanies each section of the report and interprets the data (e.g. whether it draws accurate conclusions from the data and provides helpful illustrative examples).

Our analysis was based primarily on review of the published data and narrative, combined with detailed discussion with the Department for Environment, Food and Rural Affairs team and other contacts where necessary. We did not directly research departments' inputs to the Sustainable Development in Government Report 2003. This primary research will be an important element of further work we will carry out on specific areas of sustainable development in government.