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Report of the  
**Commissioner of the  
Environment and  
Sustainable Development**  
to the House of Commons

**Chapter 3**  
Canadian Biodiversity Strategy: A Follow-Up Audit



Office of the Auditor General of Canada

*The 2005 Report of the Commissioner of the Environment and Sustainable Development comprises eight chapters, and The Commissioner's Perspective—2005 and Main Points. The main table of contents is found at the end of this publication.*

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Chapter

# 3

**Canadian Biodiversity Strategy**  
A Follow-Up Audit

*The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies, and practices of the Office of the Auditor General of Canada. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants.*

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# Canadian Biodiversity Strategy

## A Follow-Up Audit

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### Main Points

#### What we examined

The Canadian Biodiversity Strategy was intended to be a framework for action to, among other things, conserve and sustainably use biological diversity or “biodiversity.” The strategy was endorsed in 1996 by federal, provincial, and territorial ministers. This follow-up audit is our third audit since 1998 of the federal government’s implementation of the strategy.

#### Why it’s important

Biological diversity—or biodiversity—refers to the variety of life in all its forms; it includes ecosystem diversity, species diversity, and genetic diversity. Biodiversity is essential to the health of the planet and the well-being of its inhabitants. It allows for and promotes healthy vegetation (including crops), clean air and clean water, and directly benefits Canadians’ health and economic prosperity. Biodiversity faces a number of threats, including loss of habitat, invasive species that threaten native species, and overexploitation of plants and animals. Canada has made domestic and international commitments to conserve and sustainably use this country’s biological diversity, using the Canadian Biodiversity Strategy as the basis for action.

#### What we found

- Overall, the federal government’s progress in implementing key aspects of the Canadian Biodiversity Strategy is unsatisfactory. Nearly 10 years after endorsement of the strategy, momentum has stalled on several fronts. Problems identified in our previous two audits of the strategy persist, and several commitments to deliver on biodiversity priority areas have not been met.
- The federal government still lacks a coherent plan for implementing the strategy, and while it has made implementation efforts, the government does not know how well these are meeting the strategy’s goals.
- Commitments to improve Canada’s capacity to understand its biodiversity and manage biodiversity information have not been fulfilled, despite numerous calls to improve these areas.

- There is no consolidated, comprehensive report on the state of biodiversity in Canada. While the government is working toward such reporting and reporting is taking place in various sectors, this is the third audit in which we have pointed out that there is no overall picture of the state of biodiversity in Canada or how it is changing over time. This lack of information limits the federal government's ability to help conserve biodiversity, use it sustainably, and reduce its loss.

**Environment Canada has responded.** Environment Canada has accepted our recommendation and indicated the actions it intends to take to address the recommendation. Its detailed response follows the recommendation included in the chapter.



## Introduction

### What is biodiversity?

**3.1** Biological diversity, or biodiversity, is the variety among living things. It includes diversity within species (such as the genetic diversity that makes each human unique), diversity between species (polar bears and black bears), and diversity of ecosystems (prairie grasslands and Arctic tundra). In short, biodiversity is the complex web of life.

**3.2** Many factors threaten biodiversity—in Canada and globally—including loss of habitat, invasive species that threaten native species, overexploitation of plants and animals, and climate change.

### Why is biodiversity important to Canada?

**3.3** Biodiversity is important for the intrinsic value of life and for the essential goods and services provided by a biologically diverse natural environment. These goods and services include purification of air and water, pest control, flood control, ingredients for medicines, and pollination of crops (see Examples of goods and services provided by biodiversity, page 5).

### The international biodiversity imperative and Canada's response

**3.4** When Canada signed and ratified the Convention on Biological Diversity in 1992, Canada committed to conserve biodiversity and to use its biological resources sustainably. Canada was the first major industrialized country to ratify the convention. In June 2005, 188 countries were parties to the convention.

**3.5** Exhibit 3.1 shows a timeline with key biodiversity events internationally and in Canada.

### Responsibility for biodiversity in Canada is shared

**3.6** Responsibility for biodiversity in Canada is shared among federal departments and agencies, including Environment Canada, Fisheries and Oceans Canada, Agriculture and Agri-Food Canada, Natural Resources Canada, and the Parks Canada Agency; and between federal, provincial, and territorial governments. Significant roles are also played by citizens, industry, and non-governmental organizations.

**3.7** Federal co-ordination of the Canadian Biodiversity Strategy and of Canada's response to the convention is through the Biodiversity Convention Office (BCO), which is housed within Environment



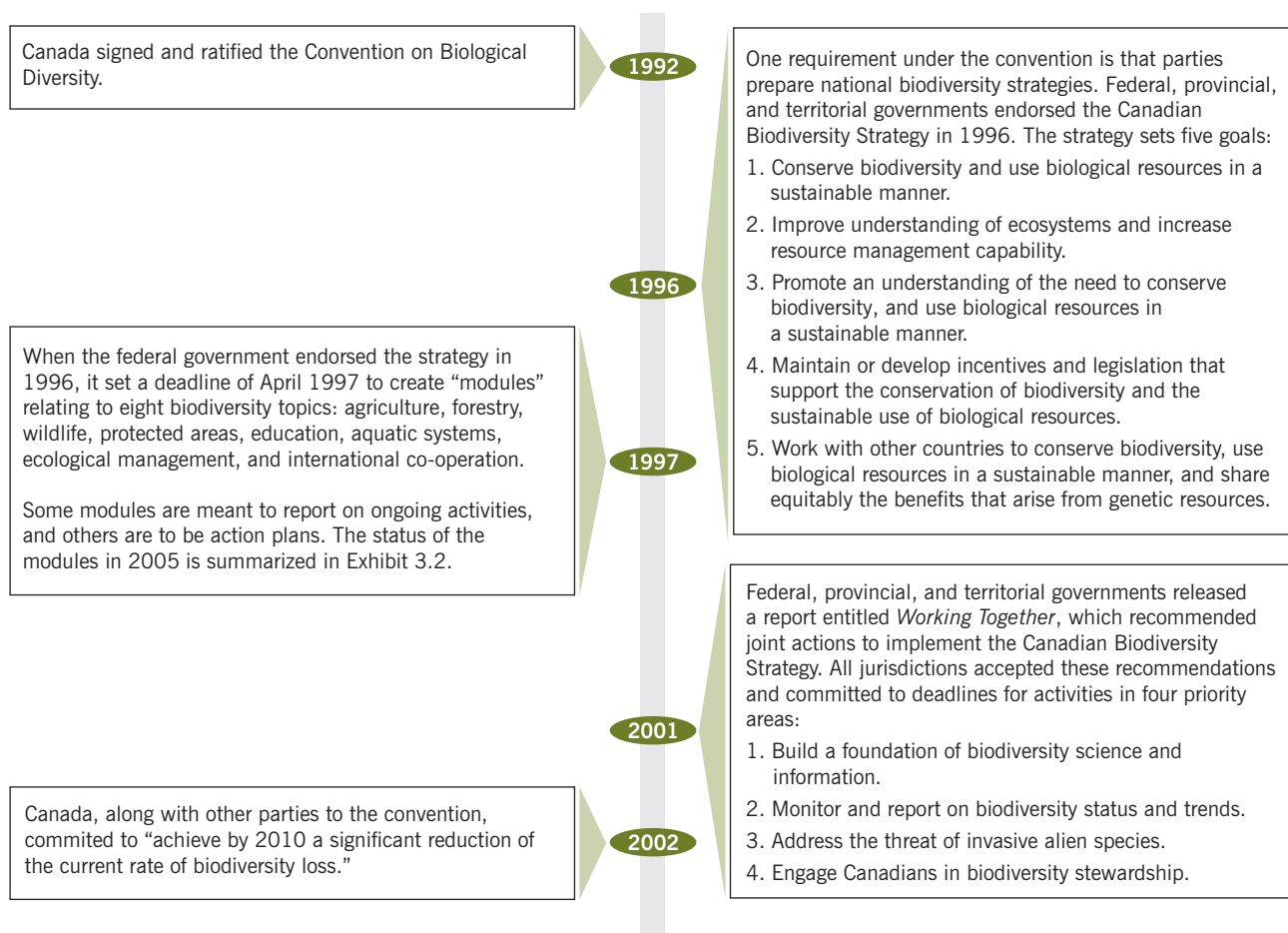
Canada's boreal forest provides vital services, such as purifying water and air.

Source: Natural Resources Canada

Canada. The mandate of the office is to co-ordinate and facilitate policy and international reports on Canada’s implementation of the convention. Currently, the BCO has three full-time staff acting as a national focal point and providing secretariat support for the domestic implementation of the strategy. The BCO is primarily occupied with preparing Canadian positions for international meetings.

**3.8** Implementation of the strategy is discussed at joint meetings of federal, provincial, and territorial ministers who have responsibility for forests, wildlife, endangered species, fisheries, and aquaculture. Meetings of deputy ministers and senior officials take place in advance of the ministerial meetings. Working-level officials form a federal-provincial-territorial Biodiversity Working Group that develops and co-ordinates plans to implement the strategy. In 2001, the Working Group released a report entitled *Working Together*, which recommended priority actions to implement the strategy.

**Exhibit 3.1** Dates of key biodiversity events



## What we said in previous reports

**3.9** We examined implementation of the Canadian Biodiversity Strategy in our 1998 Report, Chapter 4, Canada's Biodiversity Clock Is Ticking, and again in our 2000 follow-up, Chapter 9, Follow-up of Previous Audits: More Action Needed. In 1998, our assessment revealed that federal implementation of the strategy was still in its early stages, and as a result, we scaled back the scope of the audit. In the 2000 audit, we observed that the federal government had made satisfactory progress in certain areas; however, we expressed the following concerns:

- Deadlines for completing the reports—or “modules”—on implementation of the strategy were missed. The modules that were completed lacked time frames, resources to be allocated, expected results, and performance indicators.
- There was no federal plan for implementing the strategy.
- Co-ordination among federal, provincial, and territorial governments was lacking.
- Biodiversity science capacity needed to be enhanced.
- There was no overall report on the state of biodiversity in Canada.

### Examples of goods and services provided by biodiversity

Biodiversity exists at three levels: genetic, species, and ecosystem. Each of these provides vital goods and services upon which human health and well-being depend.

#### **Genetic diversity: Insurance against change; opportunities for the future**

- Diverse genetic traits may enable species to adapt to changing conditions. Food crops and livestock in particular may be bred to meet changes in environmental conditions, market demands, and nutritional needs; and to resist disease. For example, Canada's native plants endure both cold winters and hot summers. The genetic material in these plants may allow crops to adapt to wider temperature ranges.
- In 2005, a large-scale international assessment of biodiversity reported that genetic diversity had declined globally, particularly among domesticated species. There has been a shift toward fewer varieties of crops and livestock in part due to the adoption of modern farming practices.

#### **Species diversity: Pollinators for food crops**

- Many creatures help to transfer pollen, which fertilizes plants and allows them to reproduce. Examples of pollinator species include insects, such as bees, butterflies, beetles, and other animals, such as birds and bats.
- Numerous sources estimate that at least one-third of agricultural crops depend on pollinators.

- Bees are among the principal insect pollinators. A study by Agriculture and Agri-Food Canada in 2001 (based on 1998 figures) estimated that the value of honey bee pollination to Canadian agriculture is about \$782 million.
- Declines in pollinator populations have been recognized internationally and attributed to the use of pesticides, loss and fragmentation of habitat, and the impact of parasites and invasive species.

#### **Ecosystem diversity: Canada's boreal forest is a resource of national and global importance**

- The boreal forest is a vast ecosystem that covers large parts of Canada, Russia, Scandinavia, and other northern regions. Canada's boreal forest is a wide “green belt” stretching from Newfoundland to the Yukon and comprises approximately one third of the earth's boreal forest.
- The global boreal forest fills many roles, including storing freshwater and carbon.
- The boreal forest is closely linked to Canada's culture as the home of iconic species, such as caribou, beaver, and loons. The boreal region also provides numerous economic and recreational opportunities.

### Focus of the audit

**3.10** The objective of this follow-up audit was to determine the extent to which the federal government has made progress implementing selected aspects of the Canadian Biodiversity Strategy. We focussed on actions taken by the federal government on key observations in our 2000 Report, and on the four priorities outlined in *Working Together*. Specifically, the areas we examined in this audit were

- progress on observations from the 2000 audit: the biodiversity modules, the federal implementation plan, federal-provincial-territorial co-ordination, science capacity, and the federal government's ability to report on the state of biodiversity in Canada; and
- progress on the four *Working Together* priorities: science and information, monitoring and reporting, invasive alien species, and stewardship.

More information on our audit objectives, scope, approach, and criteria is provided in **About the Audit**.

## Observations and Recommendation

### Update on observations in our 2000 Report



Pollination services are of great importance for food crops and are provided by a number of species; bees are among the most important pollinators.

Source: Maryann Frazier, Mid-Atlantic Apiculture

### Biodiversity modules were not all completed

**3.11** The Canadian Biodiversity Strategy called for reports on policies, programs, strategies, and actions that were under way or would be undertaken to implement the strategy. The federal government began these reports, or “modules,” in eight thematic areas. In 2000, we found that only five of the eight planned modules had been completed.

**3.12** After 2000, no further modules were completed. Of the completed modules, most are currently not in use. However, some biodiversity issues discussed in the modules have been incorporated into federal biodiversity work in specific sectors (Exhibit 3.2). There are also cross-sectoral initiatives that address biodiversity issues. One example is Canada's strategy to protect species at risk.

### No coherent plan to implement the Canadian Biodiversity Strategy

**3.13** Environment Canada stated during our 1998 and 2000 audits that the eight planned modules would be summarized in a federal plan to implement the Canadian Biodiversity Strategy. In 1998, we noted that co-ordination of the strategy would be facilitated by an overall federal implementation plan. In 2000, we found that there was still no

implementation plan, even though such a plan was a fundamental component of Canada's effort to meet its international and domestic biodiversity commitments.

**3.14** Since 2000, the need for a plan to implement the strategy has been highlighted. For example, the National Round Table on the Environment and the Economy wrote in 2003 that current approaches, such as the strategy, are not enough, and that governments need to set conservation goals and targets and measure their progress in achieving them. A 2003 study prepared for Environment Canada found that the federal government needs "an overall federal game plan for biodiversity conservation."

**3.15** There is still no federal implementation plan. Given the major role of provinces and territories in conservation, Environment Canada has become convinced that a national approach is more effective than a federal implementation plan. This, combined with concerns about the strategy as a means of engaging ministers and setting direction, has led to discussions among federal, provincial, and territorial officials to

**Exhibit 3.2** Status of the federal biodiversity modules

Module topic	Status
Forests	Complete—current activities are guided by the National Forest Strategy.
Agriculture	Complete—current activities are guided by the Agricultural Policy Framework.
Protected areas	Complete—current activities are guided by the international Protected Areas Programme of Work under the convention.
Education	Complete
Wildlife	Complete—current activities are incorporated into programs aimed at wildlife, such as species at risk and migratory birds.
International co-operation	Incomplete
Aquatic diversity	Incomplete—some themes from the module are present in Canada's Oceans Strategy and issue-specific initiatives, such as <i>A Policy Framework for Conservation of Wild Pacific Salmon</i> .
Ecological management	Incomplete—formed the basis for a discussion paper on integrated land-use management and a practitioner's guide to ecological management; however, both remain in draft form.

create a national biodiversity outcomes framework. Among other things, the outcomes framework is intended to

- be a basis for jointly developing policy and setting priorities,
- integrate biodiversity work by different sectors and levels of government,
- be used for assessing and reporting on progress, and
- create coherence among jurisdictional, national, and international objectives.

**3.16** The outcomes for the framework have not yet been decided. It is unclear when this outcomes framework will be in place.

### **Governance problems overshadow improved co-ordination**

**3.17** In 2000, we found a lack of federal co-ordination with the provincial and territorial governments. This was illustrated by

- poor attendance at the federal-provincial-territorial Biodiversity Working Group;
- limited attention paid by ministerial committees to biodiversity due to many competing agenda items; and
- the lack of a ministerial home for biodiversity.

**3.18** The federal-provincial-territorial Biodiversity Working Group is more active than we found in our 2000 audit. In 2001, it released *Working Together*, which was intended to re-commit all levels of government to implementation of the strategy. It is also leading development of the biodiversity outcomes framework.

**3.19** Since 2001, biodiversity has been discussed at the ministerial level at joint meetings of federal, provincial, and territorial ministers responsible for forests, wildlife, endangered species, fisheries, and aquaculture. Biodiversity is receiving greater attention than we found in 2000; however, a 2004 report prepared for the three levels of government and based on interviews with senior federal, provincial, and territorial officials found that the majority agreed that there are problems with biodiversity governance. The report identified two main factors contributing to the problems:

- **Lack of engagement.** The report found that ministers do not relate biodiversity items on the agenda at their joint meetings to priorities of their governments or their individual portfolios.
- **Lack of accountability.** Accountability for meeting biodiversity commitments requires measurable outcomes, assigned

responsibility for achieving outcomes, clear leadership and mandates, and consistent reporting mechanisms. The report found these to be lacking.

**3.20** The report noted that lack of both engagement and accountability contributed to “very slow” progress of the four *Working Together* priorities. Recommendations from the report led to the initiative to create the national biodiversity outcomes framework, which is intended to address these governance problems.

**3.21** There is still no formal ministerial home responsible for overseeing implementation of the strategy. Environment Canada, which has been acting as the lead federal department on the national biodiversity outcomes framework, believes that a formal ministerial forum that allows for more integrated policy discussions is necessary. The framework for the national biodiversity outcomes may lead to the development of this structure.

### Progress on the *Working Together* priorities

#### **Biodiversity science and information commitments have not been met**

**3.22** Our previous audits noted that the level of resources used to support science, which is pivotal to understanding biodiversity, was inadequate. We also noted gaps in the federal government’s capacity for biodiversity research and in the accessibility of biodiversity information.

**3.23** The Working Group acknowledged in *Working Together* that “Canada is in urgent need of strong action to re-invigorate its biodiversity science capacity to: support biodiversity conservation and sustainable resource use; ensure its economic competitiveness; and meet its obligations under the Canadian Biodiversity Strategy and the Convention on Biological Diversity.” In addition, numerous reports since 2001 have called for improvements in the federal government’s biodiversity science and information management.

**3.24 Commitment to build a foundation of biodiversity science and information.** In response to *Working Together*, the federal, provincial, and territorial governments committed to develop

- a strategy to enhance the collection, management, sharing, analysis, and accessibility of biological information by the fall of 2002; and
- a science and research agenda to more effectively understand and address the underlying causes of biodiversity loss, and the conservation and sustainable use of biological resources by the fall of 2003.

**3.25 Strategy to enhance biological information not completed.**

The commitment to develop a strategy to enhance biological information by the fall of 2002 was not met. There has been significant federal activity that could have led to a strategy; however, none of it has addressed the *Working Together* commitment. For example:

- The federal government, along with other levels of government, academics, industry, aboriginal groups, and other stakeholders, undertook significant work to develop the Biodiversity Knowledge and Innovation Network. The network proposed to enhance Canada's capacity to study biodiversity and manage biological information, both of which we note are key to the science and information priority in *Working Together*. However, the network was not completed.
- In 2001, the federal Environment Minister received the report of a task force that recommended a Canadian Information System for the Environment (CISE), which aimed to create a network of environmental—including biodiversity—information. The CISE is still being implemented, and its biodiversity component is not designed to fulfill the commitment to develop a strategy for biological information.

**3.26** Despite these false starts, there has been some progress in making biodiversity information available on-line. The Federal Biodiversity Information Partnership (FBIP) has taken on some of the objectives of the Biodiversity Knowledge and Innovation Network related to biodiversity information management.

**3.27** FBIP membership includes several federal departments and agencies. Its main output has been an Internet site that provides access to data on nearly two million specimens housed in collections across Canada. This site, the Canadian Biodiversity Information Facility ([www.cbif.gc.ca](http://www.cbif.gc.ca)), provides access to less than five percent of the specimen-based biodiversity collections in Canada. In 2004, the FBIP operated on \$527,000 in cash and in-kind contributions from federal departments and agencies. By comparison, the Biodiversity Knowledge and Innovation Network proposed a budget of \$2.4 million in its first year and nearly \$4 million in its second year.

**3.28** Many federal collections are not easily accessible to biodiversity researchers because of varying formats or because information has not been entered into electronic databases due to lack of resources.

**3.29 Science and research agenda not finalized.** As a result of the commitment to develop a science and research agenda by the fall



of 2003, the joint meeting of ministers approved a draft agenda. It includes 36 “strategic directions” aimed at improving governance, enhancing the capacity of the biodiversity science community, addressing research needs, and establishing a biodiversity information network.

**3.30** The intention for 2004 was to prioritize the issues discussed in the draft agenda and to take action on the strategic directions described in it. Environment Canada indicated this was not done; the biodiversity science agenda remains in draft and, as there was no progress to report, biodiversity science was not discussed by the joint ministers when they met in 2004.

**3.31** During the audit, federal departments provided examples of their ongoing biodiversity science activity. The commitments to develop a biological information strategy and a science and research agenda—had they been met—could have supported this work.

### **Monitoring and reporting commitments are behind schedule**

**3.32** In 1998 and 2000, we found that there was no report on the state of biodiversity in Canada. *Working Together* included a recommendation to develop a business plan by the fall of 2002 aimed at enhancing the monitoring and integration of biodiversity data across ecosystems, and facilitating regular reporting on biodiversity status and trends in Canada, commencing in 2005.

**3.33** However, federal work on this commitment did not take place as planned. We were told by Environment Canada that co-ordination among jurisdictions was a significant obstacle to developing the business plan called for in *Working Together*. Instead, in 2002, the joint ministers endorsed the development of two elements of a national biodiversity reporting system: the Canadian Biodiversity Index and a Web portal to biodiversity status and trends.

**3.34** The Canadian Biodiversity Index, led in part by Environment Canada, is intended to provide a picture of the state of biodiversity in Canada by communicating biodiversity assessments across Canada in a meaningful, concise, and easy-to-understand way. In 2003, the intention was to implement the Index in March 2005. However, the Index is still in development and is not projected to be ready to report biodiversity information before 2006.

**3.35** The Canadian Information System for the Environment ([www.cise-scie.ca/biodiversity](http://www.cise-scie.ca/biodiversity)) has established a Web portal that provides links to reports of biodiversity status and trends information.

Also in development is a Web page that compiles individual indicators from these reports.

**3.36** While the Canadian Biodiversity Index and Web portal go some way toward enhancing reporting, they do not enhance the monitoring of biodiversity, which was also part of the *Working Together* priority. This is troubling because the Canadian Biodiversity Index will rely in part on consistent and sustained federal monitoring efforts.

**3.37** There are several monitoring initiatives taking place within federal departments. Environment Canada also co-ordinates a national network of organizations involved in monitoring through its Ecological Monitoring and Assessment Network. Efforts are under way to consolidate biodiversity data collected by groups that form the network and make it available to decision makers in a useful format.

#### Did you know?

##### Environment Canada notes

- The forest and agriculture sectors lose millions of dollars each year due to alien pests and disease; they spend millions more on pesticides, fungicides, and herbicides to control the invaders.
- Aquatic “invasives” are also a considerable problem; efforts to repair damage caused by the zebra mussel already total tens of millions of dollars.

A 2002 study by the Canadian Wildlife Service found that approximately 24 percent of species at risk in Canada may be threatened by invasive alien species.

A study of 16 invasive alien species conservatively estimated that annual costs of damage and control in Canada range from \$13.3 billion to over \$34 billion.

#### **3.38 Still no comprehensive biodiversity reporting for Canada.**

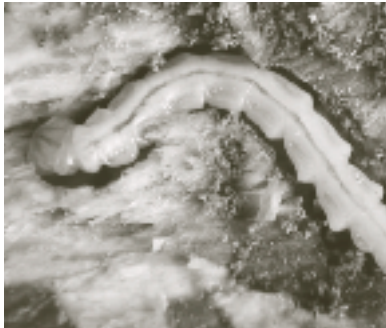
Reporting on the status and trends of biodiversity is essential to determine the effectiveness of the federal government’s efforts to conserve and sustainably use biodiversity, and to detect significant changes that require intervention. A state-of-biodiversity report would also increase Canadians’ awareness of biodiversity issues.

**3.39** In addition to the *Working Together* commitment to facilitate regular reporting on biodiversity status and trends, the Canadian Biodiversity Strategy committed federal, provincial, and territorial governments to report periodically on the status of Canada’s biodiversity. However, similar to what we found in our 1998 and 2000 audits, there is still no consolidated, comprehensive report on the state of biodiversity in Canada. There is still no answer to the basic question, “What is the state of biodiversity in Canada?”

**3.40** A look at two major biodiversity reports reveals some of the challenges in status and trends reporting:

- *Environmental Signals*. This Environment Canada publication reports on several environmental issues, including biodiversity. The first *Environmental Signals* was released in 2003, and the next edition is due in 2005. Environment Canada acknowledges that the indicators used in 2003 did not adequately communicate the threats to our biodiversity or how well Canada is protecting its biodiversity. It plans to report on a more complete set of indicators for the 2005 edition.
- *Wild Species*. This report is jointly prepared by federal, provincial, and territorial governments at five-year intervals. The

Larva of the emerald ash borer tunnels into a tree (top). This invasive species damages and eventually kills the host tree (bottom).



Source: David Cappaert,  
www.forestryimages.org



Source: Canadian Food Inspection Agency

2000 edition reported on approximately 1,600 species or two percent of the over 70,000 identified species in Canada. Coverage of a further 5,000 species is planned for the 2005 edition. *Wild Species* focusses on species diversity—not biodiversity at the ecosystem or genetic levels.

**3.41** The Canadian Biodiversity Index should also contribute to regular reporting on biodiversity status and trend information.

**3.42** Some biodiversity monitoring and reporting takes place within sectors. At the federal level, Agriculture and Agri-Food Canada, Natural Resources Canada's Canadian Forest Service, Parks Canada Agency, Fisheries and Oceans Canada, and the Canadian Wildlife Service all monitor and report on various aspects of biodiversity. Monitoring takes place at provincial, municipal, and community levels. The challenge is to co-ordinate efforts so that all significant aspects of biodiversity are effectively monitored and reported in a way that is scientifically rigorous and is communicated in a meaningful way.

**3.43** In addition to the lack of comprehensive biodiversity reporting, there has not been a report on the federal government's progress toward achieving the five goals of the Canadian Biodiversity Strategy. We note that in 2002, Natural Resources Canada's Canadian Forest Service did assess the forest sector's progress in meeting the goals of the strategy.

#### **Invasive alien species: Time to implement the action plans**

**3.44** *Working Together* contained a recommendation to develop a draft plan to address the growing threat of invasive alien species in Canada by the fall of 2002.

**3.45** An invasive alien species is a species that is non-native to a given ecosystem and that threatens the environment, economy, or society, including human health. Human actions are the primary means of alien species introductions.

**3.46** The draft plan to address the threat of invasive alien species was delivered two years late, in 2004, in *An Invasive Alien Species Strategy for Canada*. Environment Canada, which has assumed a co-ordinating role on this issue, indicated that one of the lessons learned in developing the Invasive Alien Species Strategy was that sufficient time must be devoted to consultations within and among jurisdictions on multi-sector issues such as alien species.

**3.47** The Invasive Alien Species Strategy contains no specific steps to achieve its key objectives: prevention, detection, rapid response, and management of invasive alien species; however, a series of action plans, which are to include concrete steps for implementation, are in development. Federal, provincial, and territorial officials expect to present the action plans, covering invasive alien terrestrial plants and plant pests, aquatic invasive species, and wildlife diseases, to the responsible ministers for approval in October 2005. The February 2005 federal budget announced \$85 million over five years for implementation of the Invasive Alien Species Strategy.

#### **Stewardship commitment was met**

**3.48** The federal, provincial, and territorial governments committed to develop, by the fall of 2003, a biodiversity stewardship strategy that

- supports and builds on existing commitments to the Canada-wide Stewardship Action Plan, previously endorsed by the wildlife ministers; and
- enhances efforts to increase participation in biodiversity stewardship by all sectors of society.

**3.49** “Stewardship” refers to the many actions that individuals, communities, industries, and non-profit organizations undertake to help conserve natural ecosystems. A 2002 compendium of stewardship activities across Canada, based on information collected by Environment Canada, cited over 200 examples, ranging from a national code of conduct for the mining sector to local programs involving people in protecting their watersheds.

**3.50** In response to their commitment to produce a stewardship strategy, federal, provincial, and territorial governments approved and released *Canada’s Stewardship Agenda* in 2002. This document is a general statement of the importance of stewardship and provides guidance on enhancing participation in stewardship activities in Canada. The federal-provincial-territorial stewardship working group that produced the Agenda is now dormant; however, stewardship activity continues across the country.

## Time to take stock of biodiversity in Canada

**3.51** Canada has had the Canadian Biodiversity Strategy to address its commitments under the Convention on Biological Diversity since 1996. After nearly 10 years and two audits by our office, the federal government has had a reasonable opportunity to implement the strategy within areas of its jurisdiction.

**3.52** Our current audit found that problems identified in previous audits persist and that several commitments in biodiversity priority areas have not been met (Exhibit 3.3). The areas we examined are key to effective implementation of the strategy. While the federal government has directed a lot of effort toward implementing the strategy in some areas, for example, species at risk and department-specific biodiversity work, the federal government does not know how well the five goals of the strategy are being met. We feel

**Exhibit 3.3** Summary of findings of this audit

Audit topic	Findings
Biodiversity modules	The three modules that were not completed in 2000 remain unfinished. Some components from the modules have been incorporated into strategies that guide federal departments in their work on biodiversity issues.
Federal implementation plan	As in 2000, there is still no federal plan for implementing the strategy. A national (federal-provincial-territorial) biodiversity outcomes framework, which would take the place of a federal implementation plan, is being discussed, but this is at a very early stage.
Federal-provincial-territorial co-ordination	Federal-provincial-territorial co-ordination has improved since our 2000 audit. There is still no formal ministerial home for biodiversity. The proposed national biodiversity outcomes framework may lead to a national structure, such as a formal ministerial council, to oversee implementation of the strategy. Engagement and accountability have been identified as lacking in the current governance structure.
Biodiversity science and information	Our 2000 audit noted concerns about the lack of federal biodiversity science capacity. <i>Working Together</i> included a recommendation to prepare a strategy to better manage biodiversity information (by 2002) and prepare a biodiversity science agenda (by 2003); neither the strategy nor the agenda has been completed.
Monitoring and reporting	Similar to what we found in our 1998 and 2000 audits, there is still no consolidated, comprehensive report on the state of biodiversity in Canada. Nor is there a report on federal implementation of the strategy. This commitment has led to work on a Canadian Biodiversity Index and Internet access to biodiversity status and trends. The index is not expected to be operational before 2006. Work on this commitment has not enhanced federal monitoring of biodiversity.
Invasive species	The commitment to prepare a plan to address invasive alien species has largely been met with the approval of the Invasive Alien Species Strategy for Canada in 2004; however, action plans necessary to implement this national strategy are not expected until October 2005. The federal government announced \$85 million over five years in funding for invasive species programs in the February 2005 budget.
Stewardship	The federal, provincial, and territorial governments met their commitment to prepare a biodiversity stewardship strategy by 2003. The federal-provincial-territorial working group responsible for stewardship is currently dormant; however, other stewardship activity continues across Canada.

that it is time for the federal government to take stock of the progress made in achieving the goals of the Canadian Biodiversity Strategy and assess how the strategy is being implemented.

**3.53 Recommendation.** Environment Canada should lead an assessment of the progress on the five goals of the Canadian Biodiversity Strategy. This assessment should conclude what has been achieved, what remains to be achieved, what are the lessons learned, and how further progress will be made. Any plan for achieving further progress on the strategy should include the following:

- Clearly defined outcomes
- Indicators for measuring progress toward the outcomes
- Timeframes
- Clear roles and responsibilities
- Resource requirements
- Mechanisms for assessing and reporting on results and making required adjustments in managing toward the outcomes

Departments could use their reports on plans and priorities, performance reports, and sustainable development strategies to set out and report on their contributions to advancing implementation of the Canadian Biodiversity Strategy.

**Department's response.** Agreed. The Canadian Biodiversity Strategy (CBS), adopted by all jurisdictions in 1996, continues to be widely supported by federal, provincial, and territorial governments as a guiding framework. Many provinces now have, or are developing, biodiversity strategies modeled on the CBS. From 1996–2000 the federal government produced a number of reports that set out federal implementation plans in key areas such as forestry, wildlife, agriculture, and protected areas. More recently, the federal approach has been to build biodiversity as an integral component into sector-based and cross-sectoral policy and planning frameworks such as the Oceans Action Plan, National Forest Strategy, the Agricultural Policy Framework, and the newly approved Invasive Alien Species Strategy. Significant steps have also been taken to address species at risk through new federal legislation and to conserve areas of ecological importance through considerable enhancement to protected area networks and through support for habitat stewardship.

Given that many biodiversity issues require a co-ordinated effort, Environment Canada has attached priority to developing a shared agenda with federal, provincial, and territorial partners, as well as seeking the engagement of the private sector, the conservation community, and aboriginal organizations. In 2000, federal, provincial, and territorial governments agreed to collaborate on a number of cross-cutting implementation priorities. *An Invasive Alien Species Strategy for Canada* and *Canada's Stewardship Agenda* are two products of that collaboration. More recently, in June 2005, federal, provincial, and territorial deputy ministers of wildlife, forestry, and fisheries and aquaculture, agreed to collaborate on the development of an outcomes-based implementation framework for the Canadian Biodiversity Strategy to enable more focussed implementation and evaluation of progress. The development of the framework will be a joint federal-provincial-territorial effort co-ordinated by Environment Canada. This work will be preceded by both a high-level review of progress, as well as a more technical review and consultation process to inform and provide a scientifically credible underpinning for biodiversity outcomes. The implementation framework will include measurable outcomes, timelines, indicators, and a mechanism for monitoring and reporting. The target date for completion of the framework is fall 2006. This framework will provide the basis for future reporting to Canadians on how successful Canada has been in conserving biodiversity and its associated economic and social benefits.

## Conclusion

**3.54** Unfortunately, the momentum of the early 1990s, following Canada's ratification of the Convention on Biological Diversity, has stalled on several fronts. The Canadian Biodiversity Strategy is now nearly 10 years old. This is our third audit of the federal implementation of the strategy. We found that problems identified in our previous audits persist and that several commitments to deliver on biodiversity priority areas have not been met.

**3.55** Once again, we found no federal implementation plan. While there is a new approach in development, it is in its very early stages. This new approach is to develop a framework of national biodiversity outcomes derived from input from the federal, provincial, and territorial levels.

**3.56** Commitments to improve Canada’s capacity to understand its biodiversity and manage biodiversity information have not been thoroughly acted upon, and a biodiversity science agenda remains at the draft stage, despite numerous calls for improvement in Canada’s biodiversity science and information capacity. There is also no comprehensive report on Canada’s state of biodiversity. By not knowing the extent of our own biodiversity, or understanding its complexity or its status over time, the federal government is limited in its ability to track the state of biodiversity, help conserve it, use it sustainably, and meet commitments that Canada has made to reduce the rate of biodiversity loss. These are not narrow problems: biodiversity directly benefits Canadians’ quality of life in terms of health and economic prosperity.



## About the Audit

### Objective

The objective of this follow-up audit was to determine the progress by the federal government in implementing selected aspects of the Canadian Biodiversity Strategy.

### Scope and approach

The scope of this audit included progress made on the priorities outlined in the September 2001 report of the federal-provincial-territorial biodiversity working group, *Working Together*, as well as significant observations reported in our 1998 audit and still outstanding in our 2000 follow-up.

The audit focussed on the federal government's progress made on the four priorities identified for collaborative action in *Working Together*:

- building a foundation of biodiversity science and information,
- monitoring and reporting on biodiversity status and trends,
- addressing the threat of invasive alien species, and
- engaging Canadians in biodiversity stewardship.

We reviewed the federal government's response to the following significant observations from our 1998 and 2000 audits on implementation of the strategy:

- the status of the biodiversity modules;
- the status of the federal implementation plan; and
- federal-provincial-territorial co-ordination.

Observations from our 2000 audit concerning science and the federal government's ability to report on the state of biodiversity were followed up as part of our review of the related *Working Together* priorities.

We interviewed selected department officials, reviewed documentation relevant to assertions made during interviews, and interviewed selected external stakeholders.

Departments within the scope of the follow-up audit were Agriculture and Agri-Food Canada, Environment Canada, Fisheries and Oceans Canada, Natural Resources Canada, Transport Canada, and the Parks Canada Agency.

Some quantitative information in this chapter is based on data drawn from various federal and other sources indicated in the text. We are satisfied with the reasonableness of the data, given their use in our chapter. However, the data has not been audited, unless otherwise indicated in the chapter.

### Criteria

We expected that the relevant federal departments and agencies responsible for implementing the Canadian Biodiversity Strategy would have developed a federal plan for implementation of the strategy. We also expected that federal departments and agencies responsible for implementing the Canadian

Biodiversity Strategy would have made satisfactory progress in addressing selected areas identified in our 2000 follow-up audit, as well as the priorities outlined in the 2001 report, *Working Together*.

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## Appendix List of recommendations

The following is a list of recommendations found in Chapter 3. The number in front of the recommendation indicates the paragraph where it appears in the chapter. The numbers in parentheses indicate the paragraphs where the topic is discussed.

Recommendation	Department's response
<p><b>Time to take stock of biodiversity in Canada</b></p> <p><b>3.53</b> Environment Canada should lead an assessment of the progress on the five goals of the Canadian Biodiversity Strategy. This assessment should conclude what has been achieved, what remains to be achieved, what are the lessons learned, and how further progress will be made. Any plan for achieving further progress on the strategy should include the following:</p> <ul style="list-style-type: none"> <li>• Clearly defined outcomes</li> <li>• Indicators for measuring progress toward the outcomes</li> <li>• Timeframes</li> <li>• Clear roles and responsibilities</li> <li>• Resource requirements</li> <li>• Mechanisms for assessing and reporting on results and making required adjustments in managing toward the outcomes</li> </ul> <p>Departments could use their reports on plans and priorities, performance reports, and sustainable development strategies to set out and report on their contributions to advancing implementation of the Canadian Biodiversity Strategy. (3.51-3.52)</p>	<p>Agreed. The Canadian Biodiversity Strategy (CBS), adopted by all jurisdictions in 1996, continues to be widely supported by federal, provincial, and territorial governments as a guiding framework. Many provinces now have, or are developing, biodiversity strategies modeled on the CBS. From 1996–2000 the federal government produced a number of reports that set out federal implementation plans in key areas such as forestry, wildlife, agriculture, and protected areas. More recently, the federal approach has been to build biodiversity as an integral component into sector-based and cross-sectoral policy and planning frameworks such as the Oceans Action Plan, National Forest Strategy, the Agricultural Policy Framework, and the newly approved Invasive Alien Species Strategy. Significant steps have also been taken to address species at risk through new federal legislation and to conserve areas of ecological importance through considerable enhancement to protected area networks and through support for habitat stewardship.</p> <p>Given that many biodiversity issues require a co-ordinated effort, Environment Canada has attached priority to developing a shared agenda with federal, provincial, and territorial partners, as well as seeking the engagement of the private sector, the conservation community, and aboriginal organizations. In 2000, federal, provincial, and territorial governments agreed to collaborate on a number of cross-cutting implementation priorities. <i>An Invasive Alien Species Strategy for Canada</i> and <i>Canada's Stewardship Agenda</i> are two products of that collaboration. More recently, in June 2005, federal, provincial, and territorial deputy ministers of wildlife, forestry, and fisheries and aquaculture, agreed to collaborate on the development of an outcomes-based implementation framework for the Canadian Biodiversity Strategy to enable more focussed implementation and evaluation of progress. The development of the framework will be a joint federal-provincial-territorial effort co-ordinated by Environment</p>

Recommendation	Department's response
	<p>Canada. This work will be preceded by both a high-level review of progress, as well as a more technical review and consultation process to inform and provide a scientifically credible underpinning for biodiversity outcomes. The implementation framework will include measurable outcomes, timelines, indicators, and a mechanism for monitoring and reporting. The target date for completion of the framework is fall 2006. This framework will provide the basis for future reporting to Canadians on how successful Canada has been in conserving biodiversity and its associated economic and social benefits.</p>

# Report of the Commissioner of the Environment and Sustainable Development to the House of Commons—2005

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