

Fall 2013



Report of the Commissioner of the Environment and Sustainable Development

**The Commissioner's Perspective
Main Points—Chapters 1 to 8
Appendix**



Office of the Auditor General of Canada

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To the Honourable Speakers of the House of Commons and the Senate:

On behalf of the Auditor General of Canada, I have the honour to transmit herewith this Fall 2013 Report, which is to be laid before the House and the Senate, in accordance with subsection 23(5) of the *Auditor General Act*.

Yours sincerely,

A handwritten signature in black ink that reads "Neil Maxwell".

Neil Maxwell
Interim Commissioner of the Environment
and Sustainable Development

OTTAWA, 5 November 2013

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The Commissioner's Perspective

The Commissioner's Perspective



Neil Maxwell
Interim Commissioner of the Environment
and Sustainable Development

The challenge of protecting our natural heritage

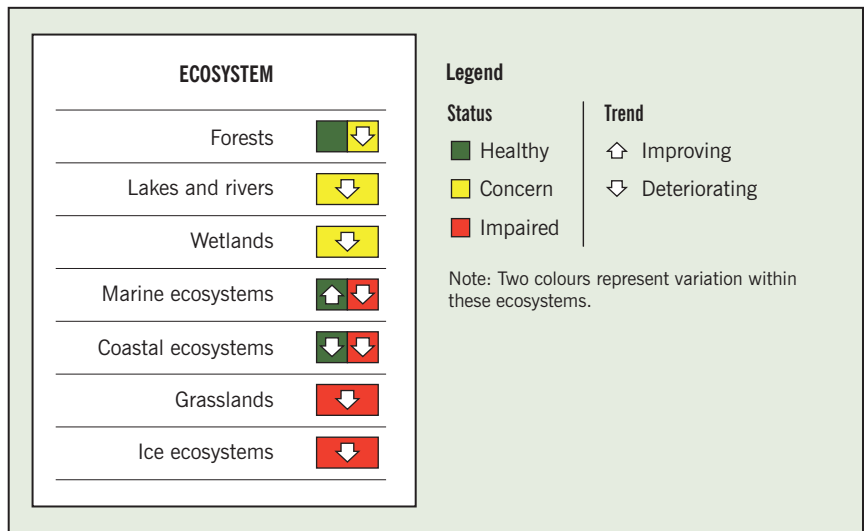
With an economy, society, and identity rooted in its natural resources, Canada has a long history of leadership in protecting natural landscapes—including forests, prairies, and wetlands—as well as the species living there. In 1885, the government established Banff National Park—one of the world's first. It signed the Migratory Birds Convention with the United States in 1916, one of the earliest international environmental agreements. More recently, Canada championed the 1992 United Nations Convention on Biological Diversity and introduced the 2002 *Species at Risk Act* to protect our wildlife species and support their recovery. To promote sustainable development, the 2008 *Federal Sustainable Development Act* was introduced. These efforts show that protecting species and spaces has been an important part of our national interests and identity.

Protecting our natural heritage is an immense challenge, given Canada's geography and the range of species involved, from fish and amphibians to birds, plants, and large mammals such as caribou. As well, the complex interaction among stressors such as climate change, habitat loss, invasive species, and pollution contributes to the difficulty of this task. Despite its long-standing tradition of leadership in conservation, Canada continues to lose ground in key areas as these pressures increase. For example, scientists have documented deteriorating biodiversity conditions in all of the main types of ecosystems in Canada. In some ecosystems there are healthy areas, but in others, the deterioration is quite rapid (Exhibit 1). According to the federal government, 518 species are at risk of disappearing, and the list is growing. While some bird populations in Canada have increased since 1970, other types of birds, such as grassland birds, have declined dramatically (Exhibit 2).

Protecting species and spaces makes economic sense. In its most recent report to the Convention on Biological Diversity, the government called biodiversity a cornerstone of Canadian competitiveness and the key to continued growth in other sectors, such as ecotourism and recreation. Falling behind on the protection of land and wildlife can lead to the disruption of valuable resource sectors like forestry and fisheries. The approval processes currently under way for large oil and gas pipelines in North America have shown that widespread acceptance of resource development depends, in part, on due consideration for protecting nature. Our trading partners see Canada

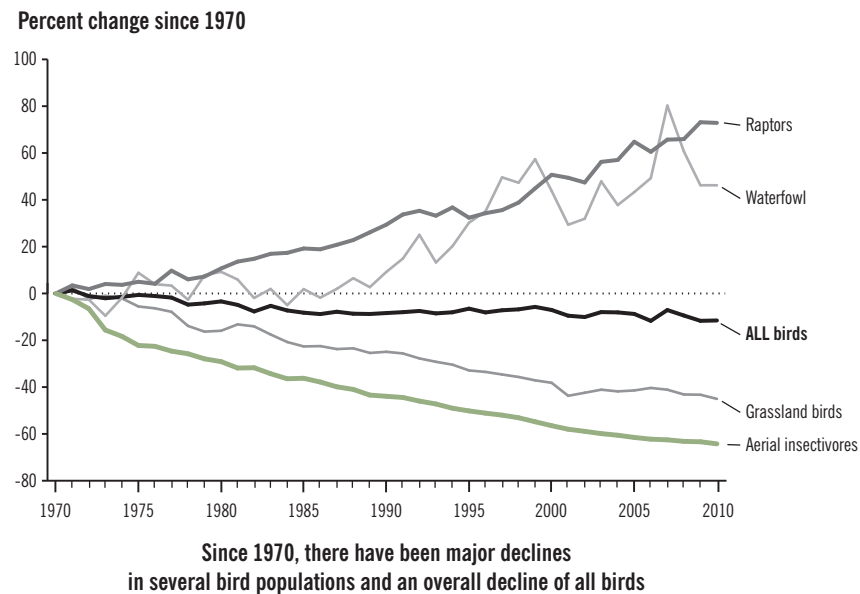
as a steward of globally significant resources. Canada's success as a trading nation depends on continued leadership in meeting international expectations for environmental protection, expectations that are increasingly enshrined in international trade agreements.

Exhibit 1 Status and trends of Canada's major ecosystems



Source: Adapted from Canadian Biodiversity: Ecosystem Status and Trends 2010

Exhibit 2 Status of bird populations in Canada since 1970



Source: Adapted from The State of Canada's Birds, 2012.

Our report this year focuses on two connected, overarching themes: the protection of nature, and sustainable development, including how the federal government is safeguarding biodiversity, species at risk, and protected areas. We've looked at these topics in a number of audits since 1998. Our findings have been consistent: despite significant efforts over the years and progress in some areas, there is still much to be done to meet key legislative responsibilities, deadlines, and commitments. This report finds many of the same issues, and I see a wide gap between the government's commitments and the results achieved.

Our findings include several examples that are particularly striking:

- Legislative requirements under the *Species at Risk Act* have not been met. At the current rate, it will take Environment Canada approximately 10 years to complete its backlog of recovery strategies required under the Act.
- Environment Canada has assessed ecological integrity to be less than adequate in over one half of its wildlife protected areas, which together cover an area about the size of New Brunswick and Nova Scotia.
- Although protecting ecological integrity is the first priority for Parks Canada, less than half of the ecosystems it assessed in 2011 were in good condition (with declining trends in the condition of many).
- Environment Canada has completed less than half of the Bird Conservation Region Strategies it committed to finishing by 2010.
- Environment Canada estimates that monitoring for 30 percent of the bird species in Canada is insufficient to determine whether they are at risk.

These findings are cause for concern. Despite Canadians' deep affinity with nature and the central place it holds in our economy, our history, our culture, and our values, we have been unable to keep up with the challenges. It is time to look for new approaches.

Federal roles in protecting nature

Land manager—The federal government manages national parks (Chapter 7), national wildlife areas (Chapter 4), and migratory bird sanctuaries (Chapter 4) that together cover an area approximately the size of Newfoundland and Labrador.

Rule-maker and enforcer—The federal government shares responsibility with provinces and territories, as well as the international community, for establishing and implementing the framework of laws, regulations, and policies that affect species and spaces. For example, it has put in place the *Species at Risk Act*, which is a key step in implementing the Convention on Biological Diversity (Chapter 6).

Funder—The federal government provides billions of dollars of funding, some of which is dedicated to protecting nature. For example, through selected funding programs over the last five years, Environment Canada contributed annually an average of \$73 million to directly and indirectly support conservation of species at risk and their habitats (Chapter 5).

Information collector and provider—The federal government is a key collector and supplier of information on the state of nature. For example, it provides information on the status of birds in Canada (Chapter 3) and the state of national parks (Chapter 7).

Coordinator—The federal government works with provinces, territories, Aboriginal groups, other nations, and other stakeholders to coordinate efforts and resources on the protection and recovery of species and spaces (all chapters).

Manager—The federal government is the country's largest single enterprise. It reports on its own sustainable development strategies for departmental and whole-of-government environmental priorities, including targets for greening government operations (Chapter 8).

Ground-breaking approaches are needed

In Canada, the federal government has important, interrelated roles to play with respect to protecting nature and promoting sustainable development.

To break the pattern of unfulfilled commitments and responsibilities that we have reported on over the years, the government needs to do things differently. It needs to apply new approaches and use the tools at its disposal more effectively in four key areas to address the issues identified in our report: collaborative approaches, reliable information, sound management practices, and transparency and engagement.

1. Collaborating for better results

Success in protecting land and species at risk involves not only the federal government and its resources; it depends on collaboration with provincial and territorial governments, First Nations, private industry, private landowners, and other citizens.

The North American Waterfowl Management Plan (NAWMP) is an example of how much can be accomplished through joint efforts. Many stakeholders, including individual ranchers and hunters and various conservation groups, have cooperated through the NAWMP to contribute to the dramatic rebound of many waterfowl species and to secure 8 million hectares of wetlands and upland habitat in Canada (roughly the size of New Brunswick).

This and other successful collaborations suggest ideas that can be applied more broadly:

- finding diverse funding sources;
- engaging volunteers or volunteer organizations through recognition and seed money;
- coordinating action through clear, agreed-upon objectives; and
- tracking and celebrating results.

2. Making good decisions with good information

Good information is at the core of good decisions. Humans are shaping the landscape on an unprecedented scale and so need to understand how development affects the natural environment on which we depend. The federal government is uniquely positioned to compile and analyze the national biodiversity picture. It needs to draw on that strength to gather and share usable and reliable data, such as scientific research and

monitoring measurements, to allow for informed decisions at all levels. This includes information about the effectiveness of existing programs and initiatives.

In this report, we note that Environment Canada has made progress in developing methods to estimate the economic value of ecosystem services in making policy decisions. This work is not without its challenges, but linking environmental protection and economic benefits is at the core of making informed decisions and moving toward more sustainable development.

In our report, we also noted several key information gaps. For example, none of the nine national parks we examined had put in place all of the elements identified by Parks Canada as necessary for scientifically credible monitoring of ecological integrity.

3. Applying sound management practices

We noted weaknesses in management practices in many of the areas we audited, such as a lack of clarity around roles and responsibilities, missing targets and timelines, and the ineffective use of available resources.

For instance, we found that Environment Canada's conservation plans, such as Bird Conservation Region Strategies, lack elements that are critical for success, including the identification of who is responsible for doing what over what time frame. Further, current requirements call for many different conservation plans, including recovery strategies and management plans for species at risk, management plans for protected areas and national parks, and bird conservation strategies. This raises the question of whether efficiencies can be achieved with more cost-effective approaches, such as multi-species recovery plans and regional conservation planning.

4. Fostering transparency and engagement

In the current budgetary context, the government must make difficult decisions about the protection of spaces and species. Trade-offs are inevitable as the government implements its reductions. Parliament and Canadians must be engaged and know what decisions are being made and why, as well as the results expected and achieved.

For example, we found that Parks Canada has not clarified how and by when, with significantly fewer resources, the Agency will address its backlog of unfinished work, the emerging threats to ecological integrity, and the decline in the condition of many park ecosystems.

Clear and measurable targets and implementation strategies are an important part of accountability and transparency. For example, Canada's current draft targets under the Convention on Biological Diversity are integral to Canada's approach to implementing the Convention, and greater clarity is needed on how Canada will achieve these targets. Similarly, clear and measurable targets and implementation strategies for the Federal Sustainable Development Strategy are important for explaining the government's sustainable development goals to Canadians and for tracking progress on planned results. However, the government's targets are often not clear or measurable.

Gaining ground requires committed action

Canada needs to gain ground on the issues outlined in this report and close the gap between commitments and results. The challenges are significant, and the pressures continue to grow. Without concerted and committed efforts, more key species and critical spaces will be lost.

The federal government has an important leadership role to play in protecting species and spaces and implementing a sustainable development agenda. Leadership means first identifying where the federal government can add the most value, finding the most cost-effective way to do so, investing what it takes to add that value, and finally, following through on commitments. Fulfilling current promises is critical, because commitments are only the first steps toward the research, protection, and recovery needed. Building on progress and successes such as the Habitat Stewardship Program and the North American Waterfowl Management Plan, for example, is also vital.

This report provides parliamentarians with information to hold government accountable. As always, we are pleased to appear before committees at any time, and to assist parliamentarians in their work.

A parliamentary committee's attention to our reports helps promote accountability in several ways. By asking senior officials of audited departments to appear before the committee to answer questions about our findings, parliamentarians can gain a better understanding of a particular program and the challenges involved. Committees can also request action plans from audited departments to help ensure they follow through on their commitments and act on our recommendations. While individual parliamentarians continue to show interest in our work, in recent years the review of our reports by parliamentary committees has decreased. We encourage committees to seize these opportunities to enhance accountability on the environment and sustainable development to help protect our natural heritage.

Main Points—Chapters 1 to 8

Backgrounder on Biological Diversity

Chapter 1 Main Points

Biological diversity is the variability among living organisms from all sources, which includes diversity within species, between species, and of ecosystems of which they are a part—the millions of animals, plants, and smaller organisms that live on the planet. Canada is home to over 70,000 species of plants, mammals, birds, fish, amphibians, reptiles, insects, and other organisms. While Canadian biodiversity is dispersed across landscapes and ecosystems ranging from forests to grasslands and from lakes and rivers to oceans, the greatest diversity is found in the southern areas and river valleys where most Canadians live.

Why it's important

A diverse mix of plants and animals is essential to produce the ecosystem services that make human survival possible. These services arise from the naturally occurring processes and functions of ecosystems, which depend on biological diversity to maintain their ability to respond to stresses. Ecosystem services include

- provisioning services that provide goods consumed directly or used to produce food, fresh water, and timber;
- regulating services that help to maintain air and water quality, and mitigate storms and flooding;
- cultural services that support recreation, aesthetic enjoyment, and spiritual fulfillment; and
- supporting services, such as soil formation, nutrient cycling, and photosynthesis, that make all other benefits possible.

Biodiversity is a prerequisite underpinning each of these services that are important to maintaining human societies, including human health. Some ecosystem services, such as the pollination performed by insects and birds, provide important economic benefits that would be extremely costly and perhaps impossible to replace if lost.

Key messages

Canada's social and economic prosperity relies on biological diversity and on the goods and services provided by a diverse natural environment. The use of plants and animals currently contributes billions of dollars to key sectors of the Canadian economy, including agriculture, forestry, ecotourism, fishing, and pharmaceuticals. Biodiversity is important to people's health, as many of our medications are derived from natural sources. For example, over half of the pharmaceutical drugs used to treat cancer are derived from plants.

Globally, growing human populations, urbanization, and increased consumption continue to intensify the direct threats to biodiversity. Similar trends exist within Canada. The area of urbanized land has nearly doubled over the past 50 years. Urbanization, economic growth, and a continuing reliance on natural resources puts pressure on our biodiversity. A key challenge for all stakeholders will be to balance the conservation of biodiversity while pursuing economic development.

As a result of human dependencies on biodiversity and the rate at which it is being lost, there is growing acceptance that the value provided by a biologically diverse environment needs to be determined and managed as an asset. While it is difficult to estimate, initial economic valuations suggest that the world's natural capital is in the trillions of dollars.

Based on our review of the literature and interviews conducted, we have identified a number of management approaches that support protecting and restoring biodiversity. These include the importance of

- proactive approaches to conserving biodiversity in order to reduce the impacts of various threats to biodiversity and the potential costs of its restoration in the future;
- integrating scientific data and information into decision making in order to allow for informed choices that support sustainable development;
- long-term commitments and strategies recognizing that it can take generations for habitats to be restored or species at risk to rebound;
- partnerships and cooperation among multiple stakeholders and often multiple jurisdictions; and
- an integrated approach that considers various aspects of an ecosystem, such as land, air, water, plants, animals, humans, and their interactions—including the social and economic factors relevant to the state of the ecosystem and its recovery.

Meeting the Goals of the International Convention on Biological Diversity

Chapter 2 Main Points

What we examined

The United Nations Convention on Biological Diversity is an international treaty that seeks to ensure that humanity conserves biodiversity, uses it sustainably, and shares the benefits equitably. Biological diversity—or biodiversity—refers to the variety of life in all its forms.

The Government of Canada, with support from provincial and territorial governments, signed and ratified the Convention in 1992; 193 countries are parties to the Convention. Each party establishes a National Focal Point to act as its liaison for the Convention, which includes providing overall leadership and coordinating the country's responses to the Convention. In Canada, this responsibility lies with Environment Canada.

Our audit examined whether Environment Canada has fulfilled selected responsibilities as the National Focal Point for the Convention on Biological Diversity, including those related to monitoring, promoting, and facilitating the Convention's implementation. This included whether Environment Canada had defined the actions and results it wants to achieve as National Focal Point. We also examined whether the Department has developed and applied models for the economic valuation of biodiversity and ecosystem goods and services.

Audit work for this chapter was completed on 30 July 2013. More details on the conduct of the audit are in **About the Audit** at the end of this chapter.

Why it's important

The Convention on Biological Diversity seeks to conserve biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources. In Canada and internationally, there is increasing recognition of the importance of determining the economic value of the goods and services provided by ecosystems and biodiversity, and the need to integrate this value into decision making.

As National Focal Point for the Convention on Biological Diversity, Environment Canada plays an important role in leading and coordinating Canada's responses to the Convention.

What we found

- Environment Canada has been leading the development of Canada's 2020 goals and targets under the Convention, resulting in four draft goals and 19 related draft targets covering a range of important topics, from creating protected areas to sustainably using biodiversity. However, most of the 19 draft targets are not sufficiently specific and key actions for achieving the targets have not been developed. Without details on key actions that need to be taken, it is not clear how Canada will meet its biodiversity targets by 2020.
- The first ecosystem status and trends report for Canada, released in 2010, was a positive step in addressing the lack of comprehensive biodiversity reporting in Canada, an issue we have raised in past audits. Environment Canada will no longer lead this initiative. As a result, the ability to comprehensively report on biodiversity status and trends may be in jeopardy.
- The Department has not set out what it plans to continue doing in connection with monitoring, promoting, and facilitating national implementation of the Convention on Biological Diversity. Without a specific plan setting out its future role as Canada's National Focal Point, it is difficult to determine what the Department plans to achieve as well as the resources it will require.
- Environment Canada has developed and applied models for the economic valuation of biodiversity and ecosystem services. Although gaps in methodology and data exist, the Department has applied these models to assist in decision making in selected areas. For example, Canadians' willingness to pay to ensure the continued existence of the polar bear in Canada was considered in analyzing the costs and benefits before listing the species as a species at risk.

The Department has responded. The Department agrees with all of the recommendations. Its detailed responses follow the recommendations throughout the chapter.

Conservation of Migratory Birds

Chapter 3 Main Points

What we examined

In Canada, as many as 658 different species of birds have been identified. More than 75 percent of Canadian bird species spend at least half the year outside Canada, following various migratory routes.

Environment Canada is the federal government's lead authority for the conservation and protection of migratory birds and their habitat. Under the *Migratory Birds Convention Act, 1994*, the Department is responsible for the conservation of 555 migratory bird species. The Department conducts monitoring and research to understand the status and trends of bird populations and develops conservation plans. It relies heavily on help from partners to achieve its conservation goals and is involved in bird conservation activities outside of Canada, for example, in South America.

We examined whether Environment Canada has fulfilled its responsibilities regarding conservation plans and activities for migratory birds, including monitoring activities and assessing the results achieved.

Audit work for this chapter was completed on 30 July 2013. More details on the conduct of the audit are in **About the Audit** at the end of this chapter.

Why it's important

Birds play an important role in ecosystems, as well as in Canada's economy and society. For example, they play an important ecological role as pollinators and an economic role in supporting recreational activities such as birdwatching and hunting.

Birds in Canada face a number of different threats and pressures. The loss and degradation of habitat is recognized as one of the main threats to migratory birds. According to *The State of Canada's Birds, 2012*, bird populations have declined overall by 12 percent since 1970. While some species have increased in population, certain bird groups, such as grassland birds and shorebirds, have experienced major declines. Changes in bird populations are often an early indicator of environmental problems.

What we found

- Environment Canada's efforts in migratory bird conservation have centred primarily on waterfowl, with good results. Many waterfowl populations have increased, showing what is possible through partnerships and concerted efforts, based on good conservation planning and agreed-upon conservation objectives.
- Environment Canada's conservation planning for other bird groups is inadequate. Trends indicate that some of these bird populations—such as shorebirds, grassland birds, and even more dramatically, aerial insectivores that depend on flying insects for food—are in major decline.
- The Department has missed its 2010 deadlines for completing its 25 Bird Conservation Region Strategies, meant to address conservation objectives and actions for all bird groups. Less than half are completed, and the completed strategies do not identify who should contribute to the proposed actions, timelines, and required resources.
- Environment Canada has acknowledged that there are many gaps in monitoring bird populations. A 2012 departmental scientific review found that for 30 percent of all bird species in Canada, monitoring is insufficient to determine whether they are at risk. Incomplete information can affect the Department's ability to make informed decisions regarding conservation actions for migratory birds and to track results of conservation efforts.

The Department has responded. The Department agrees with all of the recommendations. Its detailed responses follow the recommendations throughout the chapter.

Protected Areas for Wildlife

Chapter 4 Main Points

What we examined

Under the *Canada Wildlife Act*, national wildlife areas are federal sites created for the purposes of wildlife conservation, research, and interpretation. These areas are meant to protect nationally significant habitat for wildlife, including migratory birds and species at risk.

Migratory bird sanctuaries are designated under the *Migratory Bird Sanctuary Regulations* and are located on federal and non-federal lands.

Environment Canada manages a network of 54 national wildlife areas and 92 migratory bird sanctuaries. These sites cover an area of over 12.4 million hectares, roughly the size of New Brunswick and Nova Scotia combined.

In this audit, we examined how Environment Canada has fulfilled selected responsibilities regarding its protected areas, including national wildlife areas and migratory bird sanctuaries. Specifically, the audit focused on the Department's management plans and monitoring activities for the areas.

Audit work for this chapter was completed on 30 July 2013. More details on the conduct of the audit are in **About the Audit** at the end of this chapter.

Why it's important

To ensure their survival, species require adequate habitat in which to live, breed, and migrate. Habitat loss and degradation are recognized as the single greatest threat to plants and animals in Canada.

A habitat does not have to be totally destroyed to make it unsuitable for some species. The presence of people and associated disturbances can cause some species to abandon habitats or prevent them from breeding successfully. A majority of species at risk are affected by habitat problems. Environment Canada's protected areas are unique because they are specifically designated and managed to protect wildlife and their habitat. Effectively managed protected areas provide places where ecological processes can evolve, and act as refuges for migratory birds and species at risk.

What we found

- According to Environment Canada's own analysis, more than 70 percent of national wildlife areas and about 55 percent of migratory bird sanctuaries are considered to have less than adequate ecological integrity. As such, the Department is not meeting the purpose of its protected areas, which is to maintain the ecological integrity of the site for the benefit of wildlife, including migratory birds and species at risk. Without action to address threats to their ecological integrity, Environment Canada's protected areas may deteriorate.
- Environment Canada has made little progress in monitoring activities, conditions, and threats for the protected areas it manages. The Department's own assessments show a lack of proper inventories and insufficient information on species at risk. Monitoring of sites is done sporadically. Without regular monitoring, the Department cannot track whether the ecological integrity in protected areas is changing, nor can it identify any new or potential threats to local species so that it can react in an appropriate and timely manner.
- The Department is still operating with outdated management plans for most of its 54 national wildlife areas. On average, management plans date from 1992. Thirty-one were drafted before the *Species at Risk Act* came into force in 2003, while eight areas have never had a management plan. In 2011, Environment Canada assessed that 90 percent of national wildlife areas did not have adequate management plans. Without such plans to support decision making to achieve specific goals and objectives, it is difficult to effectively manage or assess progress in its protected areas.

The Department has responded. The Department agrees with our recommendation. Its detailed response follows the recommendation in the chapter.

Funding Programs for Species at Risk

Chapter 5 Main Points

What we examined

The decline of species can be linked to a number of factors, especially habitat loss. Under the *Species at Risk Act*, Environment Canada is responsible for ensuring that recovery documents—recovery strategies, management plans, and action plans—are prepared for the species assigned to it under the Act. In many cases, the Department promotes the implementation of the actions called for in recovery documents through funding programs that directly or indirectly support the protection and recovery of species at risk.

We examined whether Environment Canada has assessed results achieved through five funding programs and impacts on the recovery of species at risk.

Audit work for this chapter was completed on 30 July 2013. More details on the conduct of the audit are in **About the Audit** at the end of this chapter.

Why it's important

From 2008–09 to 2011–12, the federal government made an average annual contribution of \$73 million to the Habitat Stewardship Program for Species at Risk, the Aboriginal Fund for Species at Risk, the Interdepartmental Recovery Fund, the Natural Areas Conservation Program, and the Ecological Gifts Program.

There are 518 species at risk listed under the *Species at Risk Act*, of which 331 are the responsibility of Environment Canada. Tracking the results of recovery efforts for these species is important, as it can inform Environment Canada on the extent to which the planned actions in recovery documents have been implemented and inform future funding decisions.

What we found

- Environment Canada does reasonably well at tracking the results of individual projects it funds to recover species at risk and protect their habitats. However, the Department does not know the extent to which actions called for in recovery documents have been implemented through its funding programs. Compiling results from across the funding programs can help inform future funding decisions. Furthermore, along with other types of information, such

as species reassessment data, this can help the Department assess the effectiveness of recovery actions and support its reporting obligations on species at risk.

The Department has responded. The Department agrees with our recommendation. Its detailed response follows the recommendation in the chapter.

Recovery Planning for Species at Risk

Chapter 6 Main Points

What we examined

As of 31 March 2013, there were 518 species in Canada listed as at risk in Schedule 1 of the *Species at Risk Act*. Many factors can contribute to the decline of a species, placing it at risk. The most common is the loss and degradation of habitat, often through urbanization and conversion to agricultural use. Other common factors include the environmental contamination of habitat, outbreaks of disease within a species population, and the introduction of invasive species.

Under the Act, Environment Canada, Fisheries and Oceans Canada, and Parks Canada are responsible for preparing recovery strategies, action plans, and management plans for the species at risk that each organization is mandated to protect. The organizations have one to five years to develop these strategies and plans, depending on when a species is listed under the Act and the degree of the threat to the species. The recovery strategies, action plans, and management plans set out the steps needed to stop, and ideally reverse, the decline of a species. As a result, they are a critical element in managing the preservation and recovery of species at risk.

In 2008, we conducted a follow-up to our 2001 audit that looked at whether departments had made progress in implementing the recovery strategies, action plans, and management plans required by the Act to protect species at risk. Our report noted that the three organizations had made unsatisfactory progress in developing recovery strategies within the timelines set out in the *Species at Risk Act*.

Our current audit examined whether Environment Canada, Fisheries and Oceans Canada, and Parks Canada have, in accordance with the *Species at Risk Act*, established the required recovery strategies, action plans, and management plans for species determined to be at risk and for which the required strategies and plans were to have been completed by 31 March 2013.

Audit work for this chapter was completed on 3 July 2013. More details on the conduct of the audit are in **About the Audit** at the end of this chapter.

Why it's important

Apart from its intrinsic value as part of Canada's natural heritage, Canada's biodiversity, including wildlife species of plants and animals, represents a vast storehouse of biological resources. The animals and plants found in terrestrial and aquatic ecosystems are interdependent, making it important to conserve biological diversity to maintain healthy, functioning ecosystems that support the health of Canadians and a strong economy. Although it may go unnoticed, the loss of one or two key species can resonate across an ecosystem, with potentially significant effects on our quality of life. According to various scientific sources, human activities have greatly increased the rate at which species have been disappearing since the 20th century.

What we found

- Environment Canada, Fisheries and Oceans Canada, and Parks Canada have not met their legal requirements for establishing recovery strategies, action plans, and management plans under the *Species at Risk Act*. While the organizations have made varying degrees of progress since our 2008 audit in completing the recovery strategies they are responsible for, 146 recovery strategies remain to be completed as of 31 March 2013. Out of the 97 required action plans, only 7 were in place. The required management plans for species of special concern were not completed in 42 percent of cases.
- We noted that while Fisheries and Oceans Canada and Parks Canada have made notable progress in completing the majority of the recovery strategies they are responsible for, Environment Canada continues to have a significant number of outstanding recovery strategies. Of these, 84 percent were overdue by more than three years as of 31 March 2013. Of the recovery strategies that the organizations completed, 43 percent did not identify the critical habitat of the species at risk.
- Based on Environment Canada's annual rate for completing recovery strategies since our last audit, we estimate that it will take the Department approximately 10 years to complete its outstanding recovery strategies, including those coming due in the next year. This estimate does not reflect the additional time it will take the Department to complete the subsequent action plans.

- Given that many of the required recovery strategies, action plans, and management plans remain to be completed, the overall goals, objectives, and necessary actions have not been established for the recovery of species at risk. While the lack of strategies and plans does not preclude recovery activities from taking place, their absence leaves responsible organizations without the tools for identifying, directing, and coordinating recovery efforts, or benchmarks against which to monitor and report on progress.

The entities have responded. The entities agree with our recommendation. Their detailed responses follow the recommendation in the chapter.

Ecological Integrity in National Parks

Chapter 7 Main Points

What we examined

“Ecological integrity” is a term used to describe an ecosystem that contains its full complement of native species and the processes that ensure their survival. According to Parks Canada, a national park has ecological integrity when it supports healthy populations of those plants and animals that are representative of the unique natural region that the park was established to protect, and that the natural processes that support park ecosystems, such as a fire cycle, are in place and function normally.

Parks Canada was established to ensure that Canada’s national parks and related heritage areas are “protected and presented for this and future generations.” The Agency’s responsibilities include managing national parks for the benefit, education, and enjoyment of Canadians, and ensuring that the parks are maintained and made use of in a way that leaves them unimpaired for the enjoyment of future generations. The *Canada National Parks Act* specifies that maintenance or restoration of ecological integrity, through the protection of natural resources and natural processes, shall be the first priority when considering all aspects of the management of parks.

Our audit focused on whether Parks Canada is fulfilling its key responsibilities to maintain or restore ecological integrity in national parks. We examined park management planning and reporting, and the monitoring and research activities that support decision making for ecological integrity. We also examined a selection of ecological maintenance and restoration projects, as well as capital development projects and visitor activities undertaken in national parks. We did not examine national historic sites or marine conservation areas (the latter were included in the Commissioner’s 2012 Fall Report, Chapter 3—Marine Protected Areas).

Audit work for this chapter was completed on 25 June 2013. More details on the conduct of the audit are in **About the Audit** at the end of this chapter.

Why it's important

National parks provide many benefits. They serve as storehouses of biological diversity; they provide ecosystem services such as carbon sequestration, stormwater surge protection, freshwater filtration, and pollination; they protect wilderness and natural beauty so that current and future generations will be able to appreciate their natural heritage; they serve as ecological benchmarks for research into the effects of human activities on natural processes; and they contribute significant economic benefits to communities across the country as a result of the millions of tourists they attract each year from across Canada and around the world. Canada's national parks are an important component of a worldwide endeavour to protect significant natural areas.

What we found

- Parks Canada has developed a solid framework of policies, directives, and guidelines for fulfilling the Agency's key responsibilities with respect to ecological integrity. The Agency has produced or updated specific guidance on park management planning, ecological restoration, and monitoring of ecological integrity.
- The Agency has carried out significant work in every area we examined. For example, it has identified key ecosystems and established indicators as well as some measures for monitoring their condition and trends. In addition, park management plans—providing a long-term vision and objectives for the parks as well as a basis for monitoring and reporting on progress—have now been produced for most of Canada's national parks. Projects for the restoration and maintenance of ecological integrity are carried out in accordance with Agency directives and guidelines. Park management routinely considered the impacts on ecological integrity when approving and implementing visitor activities and capital development projects.
- However, the Agency has been slow to implement systems for monitoring and reporting on ecological integrity. It has failed to meet many deadlines and targets, and information for decision making is often incomplete or has not been produced. For example, the Agency has not met its own target for establishing, by 2009, a fully functional and scientifically credible monitoring and reporting system for ecological integrity in Canada's national parks. Scientifically credible and up-to-date information on the condition of ecosystems is essential in making informed decisions and to understand and counter threats to ecological integrity. In addition, the Agency either does not know or has not met targets for maintaining ecosystems through the active management of fire in 74 percent of national parks with fire management targets.

- Spending on Heritage Resources Conservation at Parks Canada has recently decreased by 15 percent. Overall staffing for conservation has declined by 23 percent and the number of scientific staff positions has decreased by over a third. Parks Canada has not clarified how and by when, with significantly fewer resources, the Agency will address the backlog of unfinished work, the emerging threats to ecological integrity, and the decline in the condition of 34 percent of park ecosystems that it has identified. As a consequence, there is a significant risk that the Agency could fall further behind in its efforts to maintain or restore ecological integrity in Canada's national parks.

The Agency has responded. Parks Canada agrees with our recommendation on ensuring that plans and reports be prepared on time and within statutory deadlines. The Agency disagrees with our recommendation on carrying out an analysis of its resource capacity; however, it has agreed to undertake several actions to close implementation gaps identified in this audit. Its detailed responses follow the recommendations throughout the chapter.

Federal and Departmental Sustainable Development Strategies

Chapter 8 Main Points

What we examined

Sustainable development is based on the ecologically efficient use of natural, social, and economic resources. For Canadians, this includes sustaining our natural resources, protecting the health of our people and ecosystems, and improving our quality of life and well-being.

The *Federal Sustainable Development Act* requires the Minister of the Environment to prepare a Federal Sustainable Development Strategy (FSDS). The Act also requires certain departments and agencies to prepare their own sustainable development strategies that contribute to the FSDS.

The Commissioner of the Environment and Sustainable Development is required under the Act to review whether the targets and implementation strategies in the draft Federal Sustainable Development Strategy can be assessed. The Commissioner is also required under the *Auditor General Act* to review the fairness of the government's progress report on implementation of the FSDS, as well as monitor and report on individual departments' progress in implementing their own sustainable development strategies. This chapter contains the results of the three separate reviews we completed.

- The draft Federal Sustainable Development Strategy 2013–2016, titled *Planning for a Sustainable Future: A Federal Sustainable Development Strategy for Canada 2013–2016*, was released by the government for public consultation in February 2013. We reviewed whether the targets and implementation strategies outlined in the draft FSDS 2013–2016 could be assessed. Results of our review were previously released in June 2013 and are included in this report for reference.
- In February 2013, Environment Canada also released *The 2012 Progress Report of the Federal Sustainable Development Strategy for 2010–2013*. We assessed the information presented in the progress report against fairness criteria to determine whether it was relevant, meaningful, attributable, and balanced. We did not review the reliability of the information contained in the report.

- In accordance with our legal obligation to monitor and report annually on the extent to which departments and agencies have met the objectives and implemented the plans set out in their own sustainable development strategies, and the extent to which they have contributed to meeting the targets set out in the Federal Sustainable Development Strategy, we examined the implementation of selected commitments within six federal organizations. We focused on commitments to greening government operations and on commitments related to strategic environmental assessment guidance and reporting processes.

Why it's important

Sustainable development strategies are important tools by which the federal government can advance sustainable development and make environmental and sustainable development decision making more transparent and accountable to Parliament. The strategies set out the goals, targets, and implementation strategies designed to contribute to the overall goal of furthering sustainable development. Well thought-out strategies and effective action to implement them, along with periodic progress reports that present a fair picture of progress, are fundamental to both the credibility and the impact of the strategies.

What we found

- The goals and targets in the draft Federal Sustainable Development Strategy 2013–2016 are relevant and reflect issues of importance to Canadians. However, most targets lack clarity and measurability, which will make it difficult to assess progress over the short and long term. Some key government initiatives are also missing or are not fully considered, such as the government's responsible resource development agenda and recent actions taken to enhance tanker safety. As a result, the draft 2013–2016 FSDS's potential for communicating the environmental and sustainable development plan of the Government of Canada has not been fully realized.
- The 2012 Progress Report on the 2010–2013 FSDS is the federal government's first report on progress being made. It provides a useful and informative explanation of some of the government's key environment and sustainable development priorities. However, the information in the Progress Report does not give readers a complete picture of progress. For example, the narrative accompanying about half of the targets, as well as sections summarizing progress, emphasizes positive aspects of progress, with only limited discussion on remaining challenges. Clear and measurable targets and consistent use of benchmarks and other means of comparison would make it easier to interpret the significance of the information presented.

- Departments are making satisfactory progress toward their commitments in support of the FSDS goal of greening government operations and are seeing tangible results from their efforts. For example, Human Resources and Skills Development Canada has removed 4,000 printers from its operations and the Department estimates \$1 million in savings to date as a result. Similarly, the Treasury Board of Canada Secretariat has eliminated more than 650 printers and reduced paper consumption by about 20 percent. Environment Canada has reduced staff travel by introducing over 100 teleconferencing locations across Canada. Environment Canada, Finance Canada, and Industry Canada have met their commitments to update guidance and reporting processes related to strategic environmental assessment.

Appendix

Appendix *Auditor General Act*—Excerpts

An Act respecting the office of the Auditor General of Canada and sustainable development monitoring and reporting

INTERPRETATION

Definitions	2. In this Act,
“appropriate Minister”	“appropriate Minister” has the meaning assigned by section 2 of the <i>Financial Administration Act</i> ;
	...
“category I department”	“category I department” means <ul style="list-style-type: none"> (a) any department named in Schedule I to the <i>Financial Administration Act</i>; (b) any department in respect of which a direction has been made under subsection 11(3) of the <i>Federal Sustainable Development Act</i>; and (c) any agency set out in the schedule to the <i>Federal Sustainable Development Act</i>.
“Commissioner”	“Commissioner” means the Commissioner of the Environment and Sustainable Development appointed under subsection 15.1(1);
	...
“sustainable development”	“sustainable development” means development that meets the needs of the present without compromising the ability of future generations to meet their own needs;

POWERS AND DUTIES

Examination	5. The Auditor General is the auditor of the accounts of Canada, including those relating to the Consolidated Revenue Fund and as such shall make such examinations and inquiries as he considers necessary to enable him to report as required by this Act.
Annual and additional reports to the House of Commons	<p>7. (1) The Auditor General shall report annually to the House of Commons and may make, in addition to any special report made under subsection 8(1) or 19(2) and the Commissioner’s report under subsection 23(2), not more than three additional reports in any year to the House of Commons</p> <ul style="list-style-type: none"> (a) on the work of his office; and, (b) on whether, in carrying on the work of his office, he received all the information and explanations he required.

Idem	<p>(2) Each report of the Auditor General under subsection (1) shall call attention to anything that he considers to be of significance and of a nature that should be brought to the attention of the House of Commons, including any cases in which he has observed that</p> <ul style="list-style-type: none">(a) accounts have not been faithfully and properly maintained or public money has not been fully accounted for or paid, where so required by law, into the Consolidated Revenue Fund;(b) essential records have not been maintained or the rules and procedures applied have been insufficient to safeguard and control public property, to secure an effective check on the assessment, collection and proper allocation of the revenue and to ensure that expenditures have been made only as authorized;(c) money has been expended other than for purposes for which it was appropriated by Parliament;(d) money has been expended without due regard to economy or efficiency;(e) satisfactory procedures have not been established to measure and report the effectiveness of programs, where such procedures could appropriately and reasonably be implemented; or(f) money has been expended without due regard to the environmental effects of those expenditures in the context of sustainable development.
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STAFF OF THE AUDITOR GENERAL

Appointment of Commissioner	<p>15.1 (1) The Auditor General shall, in accordance with the <i>Public Service Employment Act</i>, appoint a senior officer to be called the Commissioner of the Environment and Sustainable Development who shall report directly to the Auditor General.</p>
Commissioner's duties	<p>(2) The Commissioner shall assist the Auditor General in performing the duties of the Auditor General set out in this Act that relate to the environment and sustainable development.</p>

SUSTAINABLE DEVELOPMENT

Purpose	<p>21.1 In addition to carrying out the functions referred to in subsection 23(3), the purpose of the Commissioner is to provide sustainable development monitoring and reporting on the progress of category I departments towards sustainable development, which is a continually evolving concept based on the integration of social, economic and environmental concerns, and which may be achieved by, among other things,</p> <ul style="list-style-type: none">(a) the integration of the environment and the economy;(b) protecting the health of Canadians;(c) protecting ecosystems;(d) meeting international obligations;
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- (e) promoting equity;
 - (f) an integrated approach to planning and making decisions that takes into account the environmental and natural resource costs of different economic options and the economic costs of different environmental and natural resource options;
 - (g) preventing pollution; and
 - (h) respect for nature and the needs of future generations.
- Petitions received** 22. (1) Where the Auditor General receives a petition in writing from a resident of Canada about an environmental matter in the context of sustainable development that is the responsibility of a category I department, the Auditor General shall make a record of the petition and forward the petition within fifteen days after the day on which it is received to the appropriate Minister for the department.
- Acknowledgement to be sent** (2) Within fifteen days after the day on which the Minister receives the petition from the Auditor General, the Minister shall send to the person who made the petition an acknowledgement of receipt of the petition and shall send a copy of the acknowledgement to the Auditor General.
- Minister to respond** (3) The Minister shall consider the petition and send to the person who made it a reply that responds to it, and shall send a copy of the reply to the Auditor General, within
- (a) one hundred and twenty days after the day on which the Minister receives the petition from the Auditor General; or
 - (b) any longer time, where the Minister personally, within those one hundred and twenty days, notifies the person who made the petition that it is not possible to reply within those one hundred and twenty days and sends a copy of that notification to the Auditor General.
- Multiple petitioners** (4) Where the petition is from more than one person, it is sufficient for the Minister to send the acknowledgement and reply, and the notification, if any, to one or more of the petitioners rather than to all of them.
- Duty to monitor** 23. (1) The Commissioner shall make any examinations and inquiries that the Commissioner considers necessary in order to monitor
- (a) the extent to which category I departments have contributed to meeting the targets set out in the Federal Sustainable Development Strategy and have met the objectives, and implemented the plans, set out in their own sustainable development strategies laid before the Houses of Parliament under section 11 of the *Federal Sustainable Development Act*; and
 - (b) the replies by Ministers required by subsection 22(3).

**Commissioner's
report**

(2) The Commissioner shall, on behalf of the Auditor General, report annually to Parliament concerning anything that the Commissioner considers should be brought to the attention of Parliament in relation to environmental and other aspects of sustainable development, including

- (a) the extent to which category I departments have contributed to meeting the targets set out in the Federal Sustainable Development Strategy and have met the objectives, and implemented the plans, set out in their own sustainable development strategies laid before the Houses of Parliament under section 11 of the *Federal Sustainable Development Act*;
- (b) the number of petitions recorded as required by subsection 22(1), the subject-matter of the petitions and their status; and
- (c) the exercising of the authority of the Governor in Council under subsections 11(3) and (4) of the *Federal Sustainable Development Act*.

Duty to examine

(3) The Commissioner shall examine the report required under subsection 7(2) of the *Federal Sustainable Development Act* in order to assess the fairness of the information contained in the report with respect to the progress of the federal government in implementing the Federal Sustainable Development Strategy and meeting its targets.

Duty to report

(4) The results of any assessment conducted under subsection (3) shall be included in the report referred to in subsection (2) or in the annual report, or in any of the three additional reports, referred to in subsection 7(1).

**Submission and
tabling of report**

(5) The report required by subsection (2) shall be submitted to the Speakers of the Senate and the House of Commons and the Speakers shall lay it before their respective Houses on any of the next 15 days on which that House is sitting after the Speaker receives the report.