Environment Environnement
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PLANNING FOR A SUSTAINABLE FUTURE: A FEDERAL SUSTAINABLE DEVELOPMENT STRATEGY FOR CANADA

Sustainable Development Office
Environment Canada

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Canada

ERRATUM

Please be advised that there was a minor change made to the English version of this document. Implementation Strategy 8.5.1 which previously read: "By March 31, 2011, each department will establish a target to reduce GHG emissions below 2005-2006 levels. For this target, departments should establish an end date by which they expect to reduce their emissions below 2005-2006 levels. The end date chose should be based on opportunities for GHG reductions and departmental resources." has been changed to "By March 31, 2011, each department will establish a baseline of emissions, set a target and put in place an implementation plan to reduce greenhouse gas emission levels in absolute terms from 2005 levels and put them on a clear downward trend."

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MESSAGE FROM THE MINISTER

I am pleased to present to Canadians the first Federal Sustainable Development Strategy, *Planning for a Sustainable Future: A Federal Sustainable Development Strategy for Canada*. This Strategy will strengthen the way in which the Government of Canada promotes environmental sustainability, and it makes important improvements to the transparency and accountability of environmental decision-making.

To maintain our standard of living in the 21st century, Canada must address the important challenge of environmental sustainability. The issues are well known: we need to address climate change and air quality, maintain water quality and availability, and protect our natural heritage. We must balance environmental issues with economic and social considerations. By doing so, we can make long-term sustainable progress on the environment that is integrated with progress on the economic and social agenda for Canadians.

This first Federal Sustainable Development Strategy (FSDS) puts the Government of Canada's environmental priorities squarely within the broader context of social and economic priorities. The environment has an equal footing with the social and economic pillars of sustainable development in the FSDS, and this enables us to link environmental decision-making in a manner never before available to Parliamentarians and Canadians.

The FSDS replaces a system that was established in 1995, when amendments to the *Auditor General Act* required key federal departments and agencies to table in Parliament their individual strategies for sustainable development. The old system did not deliver the intended results. Without one government-wide strategy, environmental sustainability issues were often pushed to the margins of federal planning and reporting. There were no common goals or targets, and no way to measure federal accomplishments coherently. In government as elsewhere, what gets measured, gets done.

The new FSDS represents an opportunity to introduce some important improvements focused on three key elements. First, the FSDS will provide an integrated, whole-of-government picture of actions to achieve environmental sustainability. Second, we link sustainable development planning and reporting to the Government of Canada's core expenditure planning and reporting system. This will help ensure that federal decision-makers take into account the environmental consequences of their policies and programs. Third, we establish effective measurement, monitoring, and reporting systems to track results and report on progress to Canadians. This will help us improve the system as we learn more and, just as importantly, it will help Canadians hold us accountable for what we are doing.

The FSDS focuses on environmental sustainability as a first step in integrating environmental concerns with economic and social considerations. If we address the issue of sustainability in a clear and coherent way, and take major steps to get the policy framework right, we will set in motion a process that will improve the way in which environmental, economic, and social issues are considered as a whole when making decisions.

The FSDS has benefited from the input and advice of many who care passionately about sustainable development, and have recommended ways to bring environmental issues to the heart of federal decision-making. We have consulted with Canadians, Parliamentarians in the House and Senate, the Commissioner of the Environment and Sustainable Development as well as my Sustainable Development Advisory Council.

The Government of Canada welcomes this opportunity to improve planning and reporting for environmental sustainability through an approach that is both responsible and practical, and sets in motion the procedures that will lead to future progress. It will improve sustainable development in Canada, and will allow the Government of Canada to build and adapt as we learn over time.

I look forward to implementing this new FSDS and to learning from this process so that each subsequent three-year strategy may be improved and further advance sustainable development in Canada.
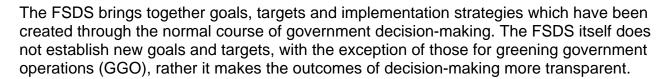
Jim Prentice
Minister of the Environment

EXECUTIVE SUMMARY

The Federal Sustainable Development Strategy (FSDS) fulfills the requirements of the *Federal Sustainable Development Act* (the Act)*,* passed by Parliament in 2008, by rendering environmental decision-making more transparent and accountable to Parliament. It responds to a decade of criticism by the Commissioner of the Environment and Sustainable Development (CESD), Parliamentarians, non-governmental organizations (NGO) and others, that the previous system did not deliver the intended results.

The FSDS establishes a framework for sustainable development planning and reporting with three key elements:

- An integrated, whole-of-government picture of actions and results to achieve environmental sustainability;
- A link between sustainable development planning and reporting and the Government's core expenditure planning and reporting system; and,
- Effective measurement, monitoring and reporting in order to track and report on progress to Canadians.

The FSDS brings together goals, targets and implementation strategies which have been created through the normal course of government decision-making. The FSDS itself does not establish new goals and targets, with the exception of those for greening government operations (GGO), rather it makes the outcomes of decision-making more transparent.

Goals, targets, and implementation strategies are organized under four priority themes:

- I.   Addressing climate change and clean air,
- II.   Maintaining water quality and availability,
- III. Protecting nature, and
- IV.   Shrinking the environmental footprint – Beginning with government.

The FSDS focuses on environmental sustainability as a first step in integrating environmental concerns with economic and social considerations and sets in motion a process that will over time improve the way in which environmental, economic, and social issues are considered. The FSDS will be updated every three years to report on what measures have been taken to address sustainable development, and which priorities remain to be addressed.

Public consultation has guided the FSDS throughout its development. From the beginning stakeholders have supported the adoption of a whole-of-government approach. In his

response to the consultation draft, the Commissioner of the Environment and Sustainable Development noted: "An overarching strategy is welcome both to help set Canada on a sustainable development pathway and to ensure policy coherence." (CESD, 2010) Support was also expressed for linking sustainable development to the Government's planning and reporting processes through the Expenditure Management System (EMS), using environmental indicators to measure and report on progress in the FSDS, and using SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) criteria to establish the targets in the FSDS.

Particular attention has been paid to commentary surrounding concerns and suggested improvements. Although the purpose of the Act is environmental decision making, the FSDS now clearly lays out for everyone that environmental, economic and social goals are connected. Air quality, for example, affects health – pollution worsens asthma which adds to health care costs and lowers productivity. Solutions for clean air cannot be decided in isolation – the impact on industry and trading partners needs to be considered.

The integration of environmental, social and economic decision-making involves many jurisdictions – governments at all levels, industry, and citizens all have a role to play. The FSDS lays out in detail the areas where the federal government is actively addressing environmental issues across departments. As well, it has examples of areas where the government is working to support industry and citizens in their efforts, e.g. support for industry efforts in Corporate Social Responsibility (CSR).

The FSDS outlines the government's commitment to strengthen the application of strategic environmental assessments (SEA). This will improve the consideration of environmental concerns when making economic or social decisions by applying the FSDS goals and targets when undertaking SEAs, reporting on the results of SEAs in Departmental Performance Reports (DPR), and describing the contribution of a proposal to the achievement of the FSDS goals and targets in the SEA public statements.

Goals, targets, and implementation strategies outlined in the Annex give a detailed description of federal government activities under each heading, so for the first time it is possible to see all activities in one place. The FSDS describes in detail how departments will report using the Expenditure Management System and what their Reports on Plans and Priorities (RPP) and DPRs will look like using the FSDS goals and targets. It illustrates how the Canadian Environmental Sustainability Indicators (CESI) will be used to report progress on goals and targets. The first progress report is planned for spring 2011.

CHAPTER 1: Context

Why Sustainable Development Matters

In the 21st century, the world faces tremendous challenges, including economic crises, global warming, air pollution, poverty, poor health, and loss of biodiversity. For more than two decades, *sustainable development* has been advanced as a means of reconciling human development with the earth's ecological systems. The journey toward truly sustainable development and decision-making has become a key goal of public policy in Canada and around the world. Development that is not sustainable will inevitably lead to negative economic, environmental, and social repercussions. Advancing sustainable development is about safeguarding our future and improving the quality of life in Canada and for the global community.

The sustainable development concept emphasizes the importance of maintaining and improving the quality of life by ensuring that decisions made today take into consideration social, economic, and environmental consequences. It integrates the social, economic, and environmental objectives of society in order to maximize human well-being in the present without compromising the ability of future generations to meet their own needs (OECD, 2001).

The History of Sustainable Development Strategies

In 1972, the delegates of the United Nations Conference on the Human Environment recognized the interconnection of economic development and the environment. Some 15 years later, the World Commission on Environment and Development took this concept further when it defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (WCED, 1987)

That definition has helped shape public policy, business strategies, and individual choices for nearly a quarter century. It envisions a world where all decisions – what we produce, what we buy, where we live, what we value – are informed by the need to take better care of the planet. Rather than looking at policy issues in terms of two pillars – economic and social, with environmental considerations as part of the economic pillar – the concept of sustainable development sees the three pillars as equal and mutually reinforcing.

A truly sustainable economy would require that environmental considerations inform every decision made – by governments, by businesses and organizations, and by individuals. In the past four decades, we can point to anecdotal evidence that this transformation is happening. We recycle. Our homes and vehicles are more energy efficient. We find innovative ways to reduce carbon dioxide emissions and pollution. We protect wilderness areas and rehabilitate rivers and lakes. The world has changed considerably since 1972. But it is not enough. We are still searching for a way to incorporate environmental considerations into everything we do – to promote the consideration of environmental factors in decisions in the same way we consider economic and social factors.

Around the world, many countries have taken steps to promote sustainable development, and there is much to learn from what has worked elsewhere, and what has not. A study by the Organisation for Economic Cooperation and Development (OECD) found that where governments have attempted to move too quickly and on too many simultaneous fronts to achieve sustainable development the governance systems became overloaded and paralyzed, and little progress was made (OECD, 2001).

Other countries have taken modest, achievable first steps, and built upon early successes to expand into new areas. In these countries, environmental considerations have been better integrated into economic and social policy over time (OECD, 2006). The key to success is to focus on a few priorities early on and, in this way, lay the groundwork for longer-term institutional change.

Canada's Approach – Addressing Past Limitations

How did Canada handle sustainable development? While some countries have chosen to develop national-level strategies, Canada's federal system of governance required an approach that acknowledged that many of the levers for promoting sustainable development are controlled by different levels of governments (e.g. municipalities, provinces, and territories). But within the federal government itself, Canada's efforts had been piecemeal and it did not deliver major results.

These results led to the 1995 amendments to the *Auditor General Act* that required departments and agencies to develop their own sustainable development strategies. The office of the Commissioner of the Environment and Sustainable Development (CESD) was also created with a mandate to monitor the extent to which departments met the objectives of their sustainable development strategies.

This decentralized approach was a beginning but, in the years since then, many observers, including the Commissioner himself, have noted that the system is not truly setting Canada on the path toward a sustainable future. The Commissioner has published annual reports on this subject since 1998. Consistently, those reports have highlighted the following points:

- The absence of an over-arching sustainable development strategy has meant there is neither central direction nor a longer-term focus.
- Inadequate performance measurement, monitoring, and reporting have resulted in a lack of information about whether initiatives are working or how they should be adjusted over time – there is no cycle of "plan, do, check, improve."
- Performance indicators have not been accurate enough, comprehensive enough, or given in a timely enough manner to influence decision-making.
- Goals and targets at the departmental level have been so vague and unfocused that, even when they were met, they failed to make any real difference.
- Sustainable development planning and reporting has been separate from, rather than integrated with, core government planning and reporting.

In 2007, these findings culminated in the Commissioner tabling a review of the Government of Canada's previous 10 years of sustainable development planning and reporting (CESD, 2007). It then became obvious that the government needed to change its approach.

Canada's New Approach – Planning for a Sustainable Future

To improve the federal government's performance in putting sustainability at the heart of its policies and programs, a range of options, including legislation and a review of global best practices was examined.

Building upon this research, Parliament developed and passed the *Federal Sustainable Development Act* (FSDA) in 2008. The FSDA requires the Government of Canada to develop a comprehensive Federal Sustainable Development Strategy (FSDS) that is "to provide the legal framework for developing and implementing a Federal Sustainable Development Strategy that will make environmental decision-making more transparent and accountable to Parliament".

This first FSDS has been designed to respond to the limitations of the previous approach to sustainable development planning and reporting. It creates an environmental decision-making system that is transparent and accountable and supports the continuous improvement of the management of sustainable development. It conveys a strong commitment to addressing the environmental and sustainable development priorities of Canadians and establishes environmental sustainability as a long-term, government-wide priority across federal departmental mandates.

The FSDS clearly articulates the Government of Canada's long-term vision, goals, and targets, including its plans for reducing the federal government's environmental footprint. It will raise the profile of environmental issues in federal government priority-setting and decision-making, placing them firmly on the same playing field as the country's economic and social priorities.

This FSDS does not promise an overnight fix – that would be neither responsible nor sustainable. Rather, it ensures that Canadians and Parliamentarians are aware of what the federal government has done and intends to do regarding sustainable development, and makes three key improvements to environmental decision-making.

The FSDS provides the reporting and the transparency that was lacking in the previous approach to sustainable development, and will drive progress over time. It is a mechanism

that will help the Government of Canada to be more deliberate in its decision-making and better understand what the trade-offs are and when and where they may need to be made.

Stakeholder Consultations

The *Federal Sustainable Development Act* requires a draft of the FSDS to be submitted for public consultation for a period of not less than 120 days before the final FSDS is tabled in Parliament. Holding public consultations on the draft FSDS is also consistent with the Government of Canada's commitment to involve Canadians in decision-making processes and has helped to increase the transparency and accountability of the FSDS. Public consultations were undertaken by the Sustainable Development Office at Environment Canada from March 15, 2010 to July 12, 2010. The comments and views from Canadians have helped shape the first FSDS.

The feedback was received from stakeholders including the CESD, Parliamentarians, non-governmental organizations and citizens. It acknowledged that the FSDS is on track in terms of addressing long-standing concerns. Stakeholders supported the major components of the FSDS which are outlined in more detail throughout this report and which include:

- Adopting a whole-of-government approach;
- Linking sustainable development to the Government of Canada's planning and reporting processes through the Expenditure Management System;
- Focusing on transparency of decision-making outcomes rather than process;
- Using environmental indicators to measure and report on progress in the FSDS; and,
- Using SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) criteria to establish the targets in the FSDS.

The CESD completed its legal requirement to review the draft FSDS. The Commissioner found that the FSDS "represents an important opportunity to correct a long-standing weakness in the federal government's approach to sustainable development" – namely, the absence of a single or overarching strategy (CESD, 2010).

This FSDS incorporates stakeholder comments by:

- Providing more clarity and detail on concepts such as transparency, accountability, and integration into the Expenditure Management System;
- Highlighting the significance of the sustainable development principles;
- Clarifying how the Canadian Environmental Sustainability Indicators (CESI) will be used to measure progress;
- Adding additional targets and a broader range of departmental programs and initiatives;
- Improving the quality and measurability of the goals, targets, and implementation strategies;
- Providing additional information on the role of federal departments; and,
- Integrating the economic and social dimensions of sustainable development.

The FSDS with its broad goals, targets and implementation strategies makes transparent how key environmental themes will contribute to the overall vision for Canada that:

- **Builds the jobs and industries of the future** by investing in Canadians' skills and education, keeping taxes low, opening markets to Canadian goods and services, and creating the conditions for continued success of industries that are the foundation of Canada's prosperity;
- **Makes Canada the best place for families** to provide for their children, to contribute to the local community, and to live in a safe and secure country;
- **Stands up for what is right in the world** including global security, human rights, maternal and child health, financial market regulation and international climate change; and,
- **Strengthens a united Canada in a changing world** by pursuing democratic reforms, further strengthening Canada's Francophone identity, improving the immigration and refugee systems, helping the North realize its vast potential, and protecting and preserving our natural environment (Canada, 2010).

This vision will continue to evolve over time as Canada moves closer to a more sustainable future. Continued involvement with stakeholders in future rounds of the FSDS will help drive improvements.

CHAPTER 2: Environmental Decision-Making in Canada

Environmental decision-making in Canada takes place in a complex array of jurisdictions, with multiple social and economic priorities, differing stakeholder interests, complex scientific knowledge, international considerations, and priorities of Canadians. This FSDS is one piece, and focuses on federal initiatives. However, the Government recognizes that sustainable development is a long-term process that requires the support and contribution of industry, non-governmental organizations, other governments and citizens.

Canada is a country of vast distances and a dispersed population, an economy driven by production and export of natural resources, a northern climate, and of high population growth. The Canadian economy is highly dependent on the health and sustainability of our natural resource industries (renewable and non-renewable), and the reliability of our critical infrastructure, including transportation and health care systems. The direct and indirect contribution of the natural resources sector to the Canadian economy is estimated to be between 20 and 25% of Canada's gross domestic product (Statistics Canada, 2008a). Canada has a small, open economy which means we are dependent on two-way trade. A large proportion of Canada's economic output is exported, and 40% of those exports are energy-intensive, resource-based commodities such as oil and natural gas (Environment Canada, 2007). Similarly, Canada imports 31% of our domestic consumption and, of that, 54% comes from within North America (Statistics Canada 2010a, Statistics Canada 2010b, and Statistics Canada, 2009a). The North American economy is highly integrated and there is a great deal of harmonization and alignment of a range of policies, regulations, and standards. Thus, Canada needs continued access to international markets, particularly the U.S.

> **Clean Air is Essential to Human Health**
>
> Asthma, lung cancer, and other respiratory illnesses have been linked to poor air quality. The young, the elderly and those with other acute illnesses are more greatly affected by poor air quality. The air pollutant particulate matter ($PM_{2.5}$) has been associated with hospitalizations, increased respiratory and cardiovascular mortality, asthma exacerbation, decreased lung function, inflammation and changes in heart rate variability (Health Canada, 2008). In 2004, respiratory illnesses such as asthma, pneumonia and acute respiratory infections accounted for 9.5% of all health care expenditures in Canada (CIHI, 2004), making it the third most expensive factor in patient care in the health care system (surpassed only by circulatory system diseases and care due to injury or poisoning). In 2009, 8.1% of Canadians 12 years and older reported they had been diagnosed with asthma by a health professional. This rate did not significantly change from 2001 to 2009 (Statistics Canada, 2010c).

In addition to economic considerations, there are important social implications, such as the link between clean air and human health.

Bringing together all factors is a very complex and far-reaching task that, in the federal government's view, requires careful, pragmatic, and incremental steps to get it right in delivering this first FSDS. While the federal government acknowledges the importance of integrated decision-making, it also recognizes the importance of building the environmental considerations first to ensure they are on equal footing with the social and economic ones before that integration can be fully achieved.

Key Principles that Guide Us All

The *Federal Sustainable Development Act* states that, "The Government of Canada accepts the basic principle that sustainable development is based on an ecologically efficient use of natural, social and economic resources." The Government of Canada's approach to sustainable development therefore reflects a commitment to minimize the environmental impacts of its policies and operations as well as maximize the efficient use of natural resources and other goods and services. This is expressed in the FSDS through the specific implementation strategies found in the Annexes that provide details on the actions and programs undertaken by the Government of Canada. For example, in the implementation strategy 7.1.1 in Annex 3, the federal government commits to delivering an integrated fisheries program that is credible, science-based, affordable, effective and contributes to sustainable wealth for Canadians.

Canada's environmental policy is guided by **the precautionary principle** and is reflected in the FSDS as required by the *Federal Sustainable Development Act* which states that the Minister of Environment must "develop a Federal Sustainable Development Strategy based on the precautionary principle." The precautionary principle states that: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation" (United Nations, 1992). In other words, the absence of complete scientific evidence to take precautions does not mean that precautions should not be taken – especially when there is a possibility of irreversible damage. In delivering on its environmental policies as outlined in the goals and targets in this FSDS, the Government of Canada demonstrates its commitment to this principle. The first three themes of this FSDS highlight the Government of Canada's priorities in terms of environmental sustainability. Failure to act in any of these areas threatens our natural environment, society, and economy.

Contribution of the Government of Canada to Sustainable Development

The Government of Canada, with this new FSDS, is making two significant new contributions to sustainable development in Canada.

First, the FSDS provides a new level of transparency to environmental decision making by providing a complete picture of the federal environmental goals, targets and implementation strategies. It is built on a whole-of-government view of environmental priorities at the federal level, and describes the implementation strategies of the various

departmental initiatives. Over time gaps will become evident and the federal government will be able to fill them.

Second, the Government of Canada will strengthen the deliberation of environmental considerations in its own decision-making. The *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals*, established in 1990, is the key policy that formally integrates environmental considerations into federal government decision-making through use of **Strategic Environmental Assessment** (SEA).

> **What is a Strategic Environmental Assessment?**
>
> SEA is a key analytical tool used by the federal government to support environmentally sustainable decision-making. It evaluates the environmental effects of a proposed policy, plan, or program and its alternatives, and informs strategic decision-making through a careful analysis of environmental risks and opportunities. For more information on SEAs visit www.ceaa.gc.ca.

Ministers and Cabinet are committed to strengthening the application of SEA in the federal government by ensuring that the Government of Canada's environmental goals are taken into account when pursuing social and economic goals. Revised guidelines are being provided to departments and agencies on applying the FSDS goals and targets when undertaking SEAs. Implementing the revised guidelines will improve the transparency of environmental decision-making in the following ways:

- Departments and agencies will describe the impact of their initiatives on federal environmental goals and targets in their SEA public statements.
- Departments and agencies will report on the extent and results of their SEA practices. This will include summary information in Departmental Performance Reports of how initiatives subject to SEA have affected or are expected to affect progress toward federal environmental goals and targets.

In addition to strengthening the application of SEA, there are other important and innovative ways that the Government of Canada is working to integrate the three pillars of sustainable development. This includes, for example, the Government of Canada's Northern Strategy. In 2009, the Government of Canada articulated its new vision for the North that reflects the social, economic, and environmental principles of sustainable development – The Northern Strategy.[1] Departments such as Citizenship and Immigration Canada, Justice Canada, and the Policy Research Initiative are developing tools and building capacity to integrate sustainable development principles into their operations. The Department of Foreign Affairs and International Trade supports the environmental assessment of trade negotiations guided by the *Framework for the Environmental Assessment of Trade Negotiations.*

Contribution of Industry to Sustainable Development

For many organizations, sustainable development is becoming an essential part of their business strategy. Improving environmental and social performance can reduce production and operating costs, manage risks, attract business partnerships and investors, improve stakeholder relations, attract and retain employees, stimulate innovation, expand new

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[1] The Government of Canada shares a common goal with Northerners – that Northerners have greater control over their destinies. Northerners have made extraordinary progress toward this goal, taking on greater responsibility for almost all aspects of their region's affairs. Through ongoing devolution and self-government negotiations, Canada continues to work with all partners to create practical, innovative, and efficient governance models in the North.

market opportunities, and maintain a "social license to operate" (Environment Canada 2010).

Corporate social responsibility (CSR) practices are becoming standard operating requirements for companies in Canada and around the world, thereby encouraging transparent and ethical behavior that contributes to sustainable development. Companies which fully integrate CSR principles into their operations can become more innovative, productive, and competitive. CSR practices can help companies realize operational efficiency gains, improve risk management, support favourable relations with the investment community and improve access to capital, enhance employee relations, build stronger relationships with communities, and improve reputation and branding.

> **What is Corporate Social Responsibility?**
>
> Corporate social responsibility is generally defined as the voluntary activities undertaken by a company to operate in an economically, socially and environmentally sustainable manner. CSR includes transparent and responsible behaviour that contributes to sustainable development and takes into account the expectations of stakeholders, including local communities.

The Government of Canada supports industry's movement towards environmental sustainability. In particular, Industry Canada helps to promote the standards and business case for CSR and supports and conducts research on CSR-related issues. It encourages CSR reporting by Canadian companies, and provides a range of management tools and a sustainability road map for small and medium-sized enterprises to support the integration of CSR into the operations of Canadian companies (www.ic.gc.ca/eic/site/csr-rse.nsf/eng/home).

In addition, the Department of Foreign Affairs and International Trade continues to enhance the capacities and knowledge of officers at home and abroad in the area of CSR in order to foster and promote responsible business practices. As well, it supports the implementation of the Government of Canada's CSR policy entitled *Building the Canadian Advantage: A Corporate Social Responsibility (CSR) Strategy for the Canadian International Extractive Sector*.

> **Supporting a transition to sustainable patterns of consumption and production** (SCP) is an environmental, social, and economic objective defined as the use of goods and services that respond to basic needs and bring a better quality of life while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations (Environment Canada, 2006). SCP is widely considered to be key to making progress towards sustainable development and is integral to developing a "green economy." Pursuant to commitments made in the Johannesburg Plan of Implementation at the World Summit on Sustainable Development in Johannesburg, South Africa, in 2002, Canada agreed to implement measures towards SCP and to participate in the United Nations-led Marrakech Process. Canada has also committed to working with the United States to establish a ten-year framework of programs to make progress towards SCP in North America, namely, to make an effort to "green" our economies; help corporations develop greener business models; and encourage consumers to adopt more sustainable lifestyles.

The Government of Canada supports the ability of communities to represent their interests and engage in informed dialogue with both companies and governments. Natural Resources Canada has developed the *Mining Information Kit for Aboriginal Communities* in partnership with Indian and Northern Affairs Canada, the Prospectors & Developers

Association of Canada, The Mining Association of Canada, and the Canadian Aboriginal Minerals Association. For more information see: www.nrcan-rncan.gc.ca/mms-smm/abor-auto/min-min-eng.htm.

Contribution of Other Levels of Governments to Sustainable Development

To act upon sustainable development principles, the Government of Canada works in partnership with provincial and territorial governments and supports many sustainable development activities of municipal governments.

Provincial governments have jurisdiction – exclusive or shared – in several policy fields that directly affect sustainable development, including natural resources, agriculture, and immigration. Some provincial governments have been developing sustainable development strategies. For example, Manitoba's *Sustainable Development and Consequential Amendments Act* (1997) created a framework through which sustainable development could be implemented in the provincial public sector and promoted in private industry and society in general (Bouder, 2001). Another example is the Quebec Government's Sustainable Development Strategy 2008-2013, that requires provincial government departments and agencies to implement sustainable action plans.

Municipal governments also have a strong role in fostering sustainable development across Canada. Municipal governments have direct or indirect influence over activities accounting for 44% of greenhouse gas emissions in Canada, including waste management, transportation, and commercial and residential building design (Federation of Canadian Municipalities, 2009). The federal government supports local action through the Green Municipal Funds administered by the Federation of Canadian Municipalities (FCM) and funded by a federal endowment of $550 million. The Fund provides below-market loans and grants, as well as education and training services to support municipal initiatives that improve air, water and soil quality, and protect the climate (Federation of Canadian Municipalities, 2010).

Contribution of Citizens to Sustainable Development

The actions of individual Canadians also make a difference when it comes to progress on sustainable development. The decisions made by every Canadian every day whether at home, work, school, on the road, or in their community have an impact on the social, economic, and environmental pillars of sustainable development. Choosing to recycle, conserve energy and water, and reduce waste helps to save resources and reduce pollution. Choosing to use alternative modes of transportation such as biking, driving less, and buying fuel-efficient vehicles keeps people healthy, stimulates the economy, and helps to reduce the emission of harmful greenhouse gases. Growing native plants and trees also helps to protect nature and improve air quality which can ultimately lead to improved human health. For more information on steps that we as individuals can take to live more sustainably visit Environment Canada's website on Action and Learning: www.ec.gc.ca/education/.

CHAPTER 3: Framework for Sustainable Development Planning and Reporting

The FSDS fulfils the requirements of the Act by rendering environmental decision making more transparent and accountable to Parliament. It does so by establishing a framework for sustainable development planning and reporting with three key elements:

1. An integrated, whole-of-government picture of actions and results to achieve environmental sustainability;
2. A link between sustainable development planning and reporting and the Government of Canada's core expenditure planning and reporting system; and,
3. Effective measurement, monitoring and reporting in order to track and report on progress to Canadians.

The development and implementation of the FSDS is a collaborative process across the whole of the Government of Canada that is based on an approach to improve transparency and accountability. The Minister of the Environment has overall responsibility for the development of the FSDS.

The goals, targets and implementation strategies in the first three themes of the FSDS have been drawn from existing policy and legislative authorities to ensure transparent accounting of existing decisions taken to support environmental sustainability. Future decisions on policy related to environmental sustainability will be captured in subsequent FSDSs.

> The *Federal Sustainable Development Act* commits the government to making environmental decision-making more transparent and accountable to Parliament. In the interests of clarity of interpretation, the following definitions are provided:
>
> **Transparency:** the process of ensuring open access to timely, clear, and easy-to-understand information about decisions, policies, practices, and operations (OAG, 2004a; OAG, 2004b).
>
> **Accountability**: an obligation to answer to Parliament for an action or accomplishments in terms of the results obtained, significance of the results, and the means used to achieve them, in light of agreed-upon expectations (OAG, 2004b; City of Kitchener, 2007).

The *Federal Sustainable Development Act* requires a Sustainable Development Office within Environment Canada to develop and maintain systems and procedures to monitor progress on the FSDS's implementation.

The Treasury Board Secretariat (TBS) also plays a key role by ensuring that the Government of Canada is well managed and accountable. TBS is responsible for the Government of Canada's Expenditure Management System (EMS) and thus oversees using the EMS to support the FSDS through the Reports on Plans and Priorities (Departmental Sustainable Development Strategies) and the Departmental Performance Reports (progress reporting).

Public Works and Government Services Canada (PWGSC), under Environment Canada's guidance, leads on theme four of the FSDS, "Shrinking the Environmental Footprint – Beginning with Government." As the department responsible for providing oversight of the greening of federal government operations, PWGSC has been working with the federal community to establish targets, implementation strategies, and performance measures to reduce the Government of Canada's environmental footprint. Importantly, however, each department is responsible for minimizing its own environmental footprint.

Finally, the *Federal Sustainable Development Act* provides a specific role for Cabinet by requiring that a Cabinet committee provide oversight of the development and implementation of the FSDS. The Privy Council Office is therefore engaged in its role as the Government of Canada's official secretary to the Cabinet. The responsibilities of the Commissioner of the Environment and Sustainable Development are also clearly outlined in the Act. The Commissioner has a mandate to review the draft FSDS and comment on whether the targets and implementation strategies can be assessed.

1. Integrated Whole-of-Government Picture

For the first time, the FSDS integrates the federal government's actions to achieve environmental sustainability and provides a new level of transparency to government decision-making. This approach lays out the Government of Canada's priorities and will also help to identify where gaps exist and where goals need to be strengthened.

The first three themes chosen for this FSDS are:

   I.   Addressing Climate Change and Air Quality;
  II.   Maintaining Water Quality and Availability; and,
 III.   Protecting Nature.

These themes are not new to government because, for many years, they have been the priority of Canadians. However providing a horizontal overview of the three themes across government is new in Canada.

The fourth theme reinforces the importance of the whole-of-government approach; it is:

  IV.   Shrinking the Environmental Footprint – Beginning with Government.

Under this theme, the FSDS lays out goals and targets that will help to reduce its own environmental footprint including, for example, setting targets for reducing emissions of greenhouse gases and making the federal government's purchasing more environmentally-friendly.

2. Linking to the Core Expenditure Planning and Reporting System

The second key element connects sustainable development planning and reporting to the federal government's core expenditure planning and reporting system. This responds to criticisms from the CESD and suggestions from stakeholders.

Linking the FSDS to the **Expenditure Management System** (EMS) provides a much stronger basis for improving the transparency and accountability of environmental decision-making under the FSDS. Linking to the EMS will provide access to reliable financial and non-financial performance information over time related to environmental sustainability. It brings together and enhances information on existing federal government activities and links them to environmental decisions.

The Government of Canada commits to producing the FSDS and a subsequent Progress Report each three years, as outlined in the Act. The FSDS and the Progress Report will be standalone documents describing the whole of government planning and reporting of sustainable development.

In order to explicitly link the FSDS to the EMS, all departments and agencies named in the annex of the *Federal Sustainable Development Act* or under schedule 1 of the *Financial Administration Act* (see Annex 5), will use the existing federal government core planning and reporting system to plan, monitor and report on their respective sustainable development activities. Under the EMS, the reporting on plans and the tracking of progress on results occurs through two key documents:

- The **Reports on Plans and Priorities (RPPs);** and
- The **Departmental Performance Reports (DPRs)**.

Given this level of integration with the EMS's subsequent reporting requirements, in developing their annual RPPs, departments will effectively be completing their Departmental Sustainable Development Strategies. This RPP reporting will contain objectives and plans that comply with, and contribute to, the FSDS. Each year, departments will report on their respective implementation strategies through their existing DPR. The RPP and DPR will identify departmental activities and programs contributing to the federal goals and targets by:

> **What is the Expenditure Management System (EMS)?** The EMS provides the economic planning procedures at the heart of the federal government operations. The system helps to match budget with priorities, oversees spending, and establishes the policies that departments will follow to manage and deliver their programs (OAG, 2006). It consists of two reports:
>
> **Report on Plans and Priorities (RPP)**
> The RPP outlines activities and expenditures for each department and agency. It outlines, over a three year period, an organization's priorities and where it will get the resources to act on those priorities.
>
> **Departmental Performance Report (DPR)**
> The DPR provides an overview of the accomplishments achieved by the organization compared to what it proposed in the RPP.

- Using icons and written text (Figure 1);
- Linking to departmental websites with more details on the departmental contributions to the FSDS and, where applicable, to broader contributions to the social, economic, and environmental pillars of sustainable development;
- Considering the precautionary principle when developing programs, policies, and initiatives; and
- Committing to strengthen SEA.

Currently, the implementation strategies (see Annexes 1 to 4) in the FSDS reflect existing departmental and agency initiatives related to the federal goals and targets. Over time, departments and agencies will contribute to the development of new goals and targets by leading new initiatives which are appropriate to their mandate. The FSDS also strives for further improvements to how the Government of Canada plans and reports on sustainable development. Environment Canada will continue to benchmark progress for public service managers to fulfil their departmental contributions to the FSDS.

The Treasury Board Secretariat, in consultation with the Sustainable Development Office, will assess whether the FSDS can make use of existing reporting tools, such as Canada's Performance Report, to better demonstrate the integration of environmental, economic, and social dimensions of reporting on results to Canadians.

Figure 1: Example of how Departments will integrate Sustainable Development into their respective RPPs

Transport Canada

2.2.1 Program Activity: Clean Air from Transportation
Description: Transport Canada's Clean Air from Transportation Program Activity advances the federal government's clean air agenda in the transportation sector and complements other federal programs designed to reduce air emissions for the health of Canadians and the environment for generations to come. The program regulates air emissions from the transportation sector; oversees Transport Canada's clean air program obligations and commitments; demonstrates and promotes clean transportation technologies; promotes environmentally responsible best practices and behaviours; and builds stakeholders' knowledge and capacity to reduce air emissions.

2010-11		2011-12		2012-13	
FTEs	Planned Spending	FTEs	Planned Spending	FTEs	Planned Spending
86	23	24	5	24	3

Program Activity Expected Results	Performance Indicators	Targets
A transportation system that is less intensive in its emissions of greenhouse gases and air pollutants	Level of intensity of emissions from freight and passenger transportation, as measured in tons of CO_2 equivalent per passenger-km.	An intensity improvement that is consistent with targets established under the government's horizontal approach for clean air

Programming in this area contributes to the Climate Change and Air Quality goal of the Federal Sustainable Development Strategy

Planning Highlights
During the planning period, the program will:
- continue to implement the Clean Air Agenda announced by the Government of Canada in 2007 by:
- developing emission regulations for Criteria Air Contaminants (CAC) for the rail sector to take effect in 2011, aligned with U.S. Environmental Protection Agency emissions standards;
- developing enhanced emissions regulations for vessels operating in Canadian waters;
- partnering with the United States to establish an Emission Control Area for North American coastal areas by 2012; and
- concluding the implementation of the programs under the ecoTRANSPORT Strategy.
- Programming in this area contributes to the Climate Change and Air Quality goal of the Federal Sustainable Development Strategy. For more information on the Federal Sustainable Development Strategy see the following website: www.ec.gc.ca/dd-sd/default.asp?lang=En&n=E19EE696-1

3. Measuring, Monitoring and Reporting on Progress

In the third element of the approach – effective measurement, monitoring and reporting on progress to Canadians – the FSDS provides a more concerted effort to report and track progress of the goals, targets, and implementation strategies. For themes 1-3, environmental indicators will be selected to assess progress of the FSDS goals and targets while existing departmental performance measures will be used for the implementation strategies.

The information needed to report on the results of environmental programs and policies will come from the Canadian Environmental Sustainability Indicators (CESI) initiative, with additional indicators coming from other federal departments such as Agriculture and Agri-Food Canada, Fisheries and Oceans Canada, Health Canada, Indian and Northern Affairs Canada, Natural Resources Canada, Parks Canada, Statistics Canada, and Transport Canada.

For theme 4, a performance reporting framework has been developed that establishes common performance measures that each FSDS department will report on in their Reports on Plans and Priorities and Departmental Performance Reports.

Some of the information in CESI is based on long-term monitoring programs with more than 15 years of data, which provides the required reference point for key environmental issues such as air, water, greenhouse gas emissions, and protected areas. Since CESI includes information from federal, provincial, and territorial governments and an assessment of key socio-economic drivers and impacts, it provides national coverage over a wide range of issues. Over the next few years, CESI will work closely with programs in Environment Canada and other federal government departments and agencies to expand the current suite of indicators in order to monitor progress on the environment.

The indicators and data to support them will be evaluated to ensure that they are methodologically sound and can effectively measure progress on the goals and targets of the FSDS. The criteria for selecting indicators are:

- Policy relevance (represents the FSDS goals and targets);
- Utility (meets the needs of decision-makers and the public);
- Soundness (provides consistent and solid methodology, comparable over time); and
- Data availability (uses existing high-quality data with adequate coverage).

Figure 2 below provides an example of how the indicators for air quality currently tracked by CESI, ground-level ozone and fine particulate matter ($PM_{2.5}$), meet the indicator criteria.

Figure 2: CESI Tracking of Air Quality Indicators

FSDS THEME	*Theme I:* Addressing Climate Change and Air Quality
GOAL	*Goal 2*: Air Pollution – Minimize the threats to air quality so that the air Canadians breathe is clean and supports healthy ecosystems
SELECTED INDICATOR	*Ambient air concentration indicators - CESI currently reports on ground-level Ozone and $PM_{2.5}$*
INDICATOR CRITERIA	*Policy Relevance* • Air quality indicators track measures of long-term exposure to Canadians of ground-level **ozone** and **fine particulate matter** ($PM_{2.5}$). • These indicators include measures of two key elements of smog and are two of the most widespread air pollutants to which people are exposed leading to serious health problems. *Utility* • Selected indicators inform policy analysts, decision-makers, and the public as to whether progress is being made towards improved air quality, in terms of reduced population exposure to ground-level ozone and $PM_{2.5}$ over the longer term. *Soundness* • Strict standards in place to measure air quality pollutants (endorsed by the Canadian Council of Ministers of the Environment). *Data Availability* • Environment Canada has 188 monitoring stations for ground-level ozone and 146 for fine particulates ($PM_{2.5}$). This provides adequate national coverage for these two substances.

It is expected that some indicators will be more mature than others and that some will need further development. The Sustainable Development Office will use the selected indicators to show progress on the FSDS when it prepares its Progress Reports. Figure 3 provides an example of the type of data that is available through CESI to measure progress. The indicators will be finalized and outlined in the FSDS Progress Report due in 2011.

Figure 3: Example of CESI: *Air Quality Indicators*

Air quality indicators including ground-level ozone and fine particulates ($PM_{2.5}$) are key components of smog which can cause human health concerns.
• Average levels of ground-level **ozone increased in Canada by 13%** between 1990 and 2007; and 2% between 2006 and 2007. While ground-level ozone has increased since 1990, the rate of that increase is slowing down.
• **There were no significant changes in average levels of fine particulates ($PM_{2.5}$) between 2000 and 2007.** The $PM_{2.5}$ in 2007 increased by 4% compared to 2006 but at this time, the variability in the data from year to year makes it difficult to determine whether the trend is going up or down.
• The Federal-Provincial Working Group on Air Quality Objectives and Guidelines established reference levels for ozone and $PM_{2.5}$: 20 parts per billion 1-hour daily maximum for ozone and 15 $\mu g/m^3$ for $PM_{2.5}$ averaged over a 24 hour period.
For more information on these air quality indicators and other CESI indicators, please visit:
www.ec.gc.ca/indicateurs-indicators

CHAPTER 4: Priorities for Environmental Sustainability

In preparing this first FSDS, the Government of Canada has been guided by best practices and international experience that demonstrate the benefits of a strategic and targeted approach to planning and reporting.

The Government of Canada adopted four themes that are consistently high priorities of the Canadian public:

I. Addressing Climate Change and Air Quality;
II. Maintaining Water Quality and Availability;
III. Protecting Nature; and
IV. Shrinking the Environmental Footprint – Beginning with Government

This chapter discusses the social, economic, and environmental context considered when developing the goals under each of these themes. Annexes 1 through 4 provide a detailed account of current federal goals, targets and implementation strategies for each of the environmental themes, transparently presenting, for the first time in one place, the Government of Canada's initiatives and priorities for environmental sustainability.

Establishing Goals, Targets and Implementation Strategies

The goals, targets and implementation strategies are taken from key commitments made by the Government of Canada in policy and planning documents such as the Speech from the Throne, the Federal Budget, Memoranda to Cabinet, Treasury Board submissions, departmental Reports on Plans and Priorities and Departmental Performance Reports. As such, they will evolve over time as new policy decisions are taken.

The federal government strives to ensure the **goals** are:

- Aspirational;
- Take a long-term view;
- Address important challenges and problems;
- Remain attuned to environmental information, data and indicators;
- Encourage flexibility in the choice of strategies for achievement; and,
- Reflect domestic and international priorities and commitments.

The **targets** are more specific in nature. The federal government strives to ensure the targets:

- Meet the SMART (Specific, Measurable, Achievable, Relevant and Time-bound) criteria;
- Take a medium-term view;
- Fall within federal jurisdiction and departmental mandates;
- Remain informed by environmental baseline data and indicators;
- Are consistent with Government of Canada priorities; and,
- Reflect the precautionary principle.

In some areas, the targets are already quite strong; strengthening others will take time. For example, the target for terrestrial ecosystems and habitat (park protected habitat) - *maintain or improve the overall ecological integrity in all national parks from March 2008 to March 2013* - already meets the SMART criteria. In some others, the SMART criteria cannot be met until the quality of the targets is improved. The Sustainable Development Office will work to ensure that departmental contributions toward meeting the targets meet SMART criteria to the fullest extent possible.

Finally, departments and agencies undertake implementation strategies as a means of reaching the targets set out in the FSDS. The **implementation strategies** should:

- Meet the SMART (Specific, Measurable, Achievable, Relevant and Time-bound) criteria;
- Take a short-term view;
- Fit within the reporting and planning structures of the federal government;
- Identify resources and activities; and,
- Contribute to the related target.

The *Federal Sustainable Development Act* lists 28 departments that are subject to the Act and are thus required to prepare their own departmental strategies to comply with and contribute to the FSDS. But only a subset of departments have mandates that include programming specifically related to the goals listed in the FSDS under the priorities of Addressing Climate Change and Air Quality, Maintaining Water Quality and Availability, and Protecting Nature. However, all FSDS departments are required to contribute to achieving the goals and targets of the fourth theme, Shrinking the Environmental Footprint – Beginning with Government.

What will the results be? Each program and policy has its own impact, and Annexes 1-4 describe the implementation strategy for each. The implementation strategies, categorized by four types that reflect the key roles of federal government, are coined as LEAD:

- **L**eading by example – activities that will have a direct impact on federal government operations, or will change how the federal government manages;

- **E**nabling capacity – activities where the federal government is building the capacity of others to take action, or is making strategic investments in support of goals and targets;

- **A**dvancing knowledge and communications – activities related to science, knowledge gathering and sharing, and public education; and,

- **D**emanding performance – activities, such as laws and regulations that require industries or individuals to change behaviours.

I. Addressing Climate Change and Air Quality

Climate change is a serious challenge to sustainability, but not an insurmountable one. Air pollutants are often closely associated with greenhouse gas emissions. Many air-borne substances have an impact on smog, pollution and our overall quality of life, including human health. Poor air quality also affects plants and animals, may put species at risk, and can reduce the productivity of our farms, fisheries and forests.

Over the past decades, as awareness of the stakes involved has increased, so has the will to combat climate change strengthened and Canadians are showing a determination to act. The scientific consensus, as reflected by the Intergovernmental Panel on Climate Change (IPCC), is that additional greenhouse gas emissions caused by human activity are beginning to have a discernible adverse impact on the climate (IPCC, 2007). New technologies point the way to clean energy and to methods of preventing emissions of greenhouse gases and air pollution.

Why It Matters

Canada is a country of vast distances and a dispersed population, an economy driven by production and export of natural resources, a northern climate, and of high population growth. Each of these factors contributes to Canada's growing energy demand, which is a key determinant of Canada's greenhouse gas emissions. For example, in 2008, approximately 81% of Canada's greenhouse gas emissions were generated from the production, distribution, and consumption of energy, including electricity generation, fossil fuel production, transportation activities, and residential, commercial and institutional heating, cooling and lighting (Environment Canada, 2010).

Canada's prosperity and well-being are linked to the strength of its resource economy and natural environment. Climate change initiatives should consider the economic importance of sectors such as energy (oil and natural gas), agriculture, forestry, fisheries, water resources, and mineral resources. In 2008, natural resources (timber, energy and minerals) contributed 22% to Canada's total wealth. The value of these natural resources rose 45% to $1,723 billion in the same year (Statistics Canada, 2009b). The natural resources sectors and earth sciences industries directly employed close to 859,000 people in 2008 (Natural Resources Canada, 2008). The main challenge is to meet the energy needs of our growing economy while achieving the important goal of reducing greenhouse gas emissions. On the ground this means making tradeoffs.

More than 25 million Canadians (80%) live in urban areas, where air pollution tends to be most significant (Human Resources and Skills Development Canada, 2010). Increased air pollution brings risks of increased respiratory and cardiovascular problems and certain types of cancer (Environment Canada, 2008a). Clean air will contribute substantially to the long term competitiveness of the Canadian economy, by reducing health care costs and improving the productivity of workers.

The Ontario Medical Association has estimated that air pollution costs more than $1 billion a year in hospital admissions, emergency room visits, and absenteeism. For example, the medical costs associated with a hospital admission for respiratory illness is, on average, approximately $3,000 as well as approximately an additional $1,000 in lost wages and worker productivity. (Environment Canada, 2010c).

Meeting challenges of climate change and air pollution requires new ways to produce and transport products, fuels and foods, light and heat our homes and offices; and commute and travel. Globally, we need to create a low-carbon world, where economic growth and competitiveness are driven by clean and efficient technologies. Canada intends to be a leader in that future world by taking concrete actions today.

Goal 1: Climate Change

> *Reduce greenhouse gas emission levels to mitigate the severity and unavoidable impacts of climate change.*

What Government Is Doing

The Government of Canada has developed an aggressive strategy to address climate change and air quality by taking action to reduce greenhouse gases and air pollution (Environment Canada, 2010d). This includes:

- Providing sustained action to build a low-carbon economy and make Canada a world leader in clean electricity generation.
- Working with the international community to implement the Copenhagen Accord, the first international agreement to include all major emitting countries. The Copenhagen Accord commits Canada to investing $400 million for international climate change efforts this fiscal year (2010-11), and to reducing greenhouse gas emissions 17% below 2005 levels by 2020.
- Developing and implementing a climate change and clean energy strategy that is harmonized with that of the United States, our largest trading partner. Canada has already aligned our 2020 automobile emission reduction target with that of the United States.
- Publishing draft regulations for greenhouse gas emissions from vehicles and continuing to work with the United States to produce regulations for heavy trucks.
- Tabling new regulations requiring 5% renewable content in gasoline and diesel fuel (Environment Canada, 2010e).
- Working with the United States to continue to reduce emissions through the Canada-United States Clean Energy Dialogue (CED) launched in 2009. The CED will promote the development of a Canada-United States clean energy sector. This will enhance the Government of Canada's ability to meet its commitment of 90% of electricity provided by non-emitting sources by 2020 (Environment Canada, 2009b).

Goal 2: Air Pollution

Minimize the threats to air quality so that the air Canadians breathe is clean and supports healthy ecosystems.

What Government Is Doing

The Government of Canada is committed to taking action to improve the air we breathe by limiting air pollution, and is working with the provinces, territories, and the private sector to develop strategies that will ensure cleaner air and a cleaner environment for all Canadians by:

- Moving forward with the Clean Air Regulatory Agenda by enabling the establishment of clear national standards, to move industry from voluntary compliance to regulations, to monitor progress, and to report to Canadians on the progress that Canada is making in reducing pollution and greenhouse gas emissions.

- Continuing to consult with provinces, territories, industries, and Canadians to set and reach targets for the reduction of both indoor and outdoor air pollutants and greenhouse gas emissions.

- Providing Canadians with the information they need to make informed decisions. For example, the Air Quality Health Index provides Canadians with information and advice on air quality related health risks to help them reduce their level of exposure to air pollutants (Environment Canada, 2010f). Similarly, the National Pollutant Release Inventory, Canada's legislated, publicly accessible inventory of pollutant releases to air, water, and land, provides Canadians with comprehensive emission summaries and trends for key air pollutants based on facility-reported data. It also includes emission estimates for other pollution sources such as motor vehicles, residential heating, forest fires, and agriculture.

- The Government of Canada has also committed to cleaning up the legacy of contaminated sites. The Government of Canada has invested in contaminated site clean-up and has successfully remediated 5,620 of the 19,775 identified sites (Treasury Board Secretariat, 2010).

II. Maintaining Water Quality and Availability

Canada has approximately seven per cent of the world's total renewable freshwater supply. But Canadians are among the highest water users per capita in the world. The demand for water is increasing, and often different interests have conflicting demands.

Why It Matters

Access to safe, clean water is a crucial issue for Canadians. The Government of Canada is committed to ensuring that everyone has access to a reliable and secure supply of clean water, and that our water resources are used wisely, both economically and ecologically.

Water pollution can affect the health of Canadians, the natural environment and the economy. For example, poor water quality can lead to waterborne disease and illness. Health problems related to water pollution in general are estimated to cost $300 million per year in Canada (Environment Canada, 2009b). Each time a Canadian community is served with an advisory to boil drinking water, we are reminded of the importance of taking better care of our water resources. As of June 30, 2010, there were 114 First Nations communities across Canada under a Drinking Water Advisory (Health Canada, 2010).

The Great Lakes provide a prime example of the importance of keeping our water ecosystems clean. This basin supports 33 million people, including nine million Canadians and eight of Canada's 20 largest cities. It is home to 90% of Ontario's population and 40% of Canada's economic activity. Each year, the Great Lakes contribute $180 billion to Canada-United States trade (Environment Canada, 2009b) and are used by 1.5 million recreational boaters and fishers.

A reliable supply of water is essential for Canada's economy given that approximately 60% of Canada's GDP is directly dependant on water (Environment Canada, 2002) for sectors such as resource extraction, manufacturing and the production and processing of food. Water and energy production are also fundamentally connected (i.e. thermal electrical power generation, hydroelectric power generation and, to a lesser extent oil and gas extraction).

The sustained growth in water demands from different users in Canada creates the potential for competing uses. Thermal power generation stations, industry, agriculture, households and mining are amongst the highest water users and consumers across Canada, responsible for withdrawing almost 44 billion cubic metres of water from Canadian rivers and lakes each year. Of this water withdrawal, almost 5.5 billion cubic metres is not returned to the ecosystem.

Marine transportation could be affected by lack of water availability. Lower water levels, for example, in the Great Lakes–St. Lawrence Seaway mean lighter loads putting seaway shippers at a competitive disadvantage to those who do not use the seaway (Environment Canada, 2010g).

Pressure on this water resource will mount as, between now and 2050, Canada's population is expected to increase by 25% and the Canadian economy is predicted to grow approximately 55% by 2030 (National Round Table on the Environment and the Economy, 2010). These stresses, along with climate change, will affect Canada's watersheds and create new pressures on the long-term sustainability of our water resources.

The Government of Canada is committed to ensuring that all Canadians have access to a reliable and secure supply of clean water, and that our water resources are used wisely, both economically and ecologically.

Goal 3: Water Quality

> *Protect and enhance the quality of water so that it is clean, safe and secure for all Canadians and supports healthy ecosystems.*

What Government Is Doing

In Canada, all three levels of government (federal, provincial/territorial, and municipal) have roles and responsibilities with respect to fresh water management. The provinces and territories have the primary responsibility for most areas of water management and protection, including the licensing of a majority of the principal water uses. The federal government's role includes management of water on Aboriginal and federal lands, fisheries, boundary and transboundary water, water monitoring, and water-related science and research. The Government of Canada recognizes the critical importance of a safe and secure water supply to human health, the environment, and the economy as well as clean water for all Canadians.

The Government of Canada is:

- Continuing to help Canadians restore lakes and marine ecosystems that have been damaged by pollution – the Government allocated $96 million in clean-up funding: $30 million for Lake Simcoe; $18 million for Lake Winnipeg; and $48 million for Areas of Concern in the Great Lakes (Environment Canada, 2010h);

- Working with communities and other tiers of government to protect and restore water quality in other priority areas such as the St. Lawrence River;

- Using a modern and coordinated approach to managing the impact of human activities on Canada's oceans, and making important progress in expanding the network of marine protected areas;

- Working to preserve and protect Canada's water resources through numerous commitments made under the *Canadian Environmental Protection Act* and the Action Plan for Clean Water – the Oceans Action Plan and the Plan of Action for Drinking Water in First Nations Communities (Environment Canada, 2010h);

- Working to eliminate the dumping of raw sewage into our waterways and enabling municipalities to upgrade water and wastewater infrastructure;

- Undertaking important science, research, and monitoring to enhance our understanding of the problems facing our ecosystems and to evaluate the effectiveness of our actions; and

- Working to ensure effective stewardship of water resources shared with the United States through the Great Lakes Water Quality Agreement.

Goal 4: Water Availability

Enhance information to ensure that Canadians can manage and use water resources in a manner consistent with the sustainability of the resource.

What Government Is Doing

The Government is collaborating with other jurisdictions and major stakeholders on sustainable water management through research, promotion, and distribution of information that will support water efficiency and integrated management.

In the 2008 Speech from the Throne, the Government of Canada also committed to introducing legislation to ban all bulk water transfers or exports from Canadian freshwater basins. If passed, the *Transboundary Waters Protection Act* will bring transboundary waters – those that flow across the Canada-U.S. border – under the same protections that are currently in place for boundary waters such as the Great Lakes.

Annex 2 contains many Government of Canada initiatives now underway to maintain water quality and availability, including action to limit the levels of phosphates in laundry and dishwasher detergents, as well as working with the agricultural community regarding agricultural run-off and water use. The Government is working with other jurisdictions and partners including First Nations communities to improve drinking water quality and wastewater treatment, and improve water sustainability.

III. Protecting Nature

Canadians are proud of the nation's rich and diverse natural heritage. Canada is a steward of many globally significant ecosystems, including 30% of the world's boreal forests and 20–30% of freshwater wetlands. Nature and natural ecosystems clean the air we breathe and the water we drink, support the food we grow, and play a critical part in maintaining our general well-being. They are vital to our economy, including pulp, timber, fishing and recreational activities and serve as the basis for the emerging bio-based economy, such as genomics, biotechnology and pharmaceutical industries. Canada's natural heritage includes significant non-renewable resources such as minerals, metals, oil and gas.

Why It Matters

The sustainable use of all our natural resources is the basis for healthy, prosperous communities and sustainable livelihoods. Hundreds of communities in Canada depend directly on employment in fisheries, forestry, and agriculture, including many indigenous communities (Government of Canada, 2009).

The country's natural resource base is an important part of the Canadian economy. In 2008, for example, 1.9% of Canada's GDP came from forests and 8% from agriculture and agri-foods. In financial terms the ocean sector contributed $17.7 billion to the GDP in Canada in 2006, creating more than 150,000 jobs (Natural Resources Canada, 2008; Pinfold, 2009). Natural resource wealth depends on a number of factors including the size of physical resource reserves as well as resource prices. Fuelled by increases in resource prices, natural resource wealth grew, on average 10% per year during the last decade. In 2005, Canada's natural resource wealth crossed the trillion dollar mark (Islam and Adams, 2010).

Canadians themselves value nature and spend more than $11 billion annually on nature-related activities such as bird watching and canoeing, creating approximately 215,000 jobs (Statistics Canada, 2000). Hunting, fishing, and trapping are an integral part of traditional Canadian life, especially in Aboriginal communities, and contribute to the provision of essential goods in communities around the country. During any given year, an estimated six million Canadians participate in recreational hunting, fishing, and trapping.

In 2002, Canada's boreal forests provided the net economic value of natural capital extraction of $50.9 billion. The non-market economic value of its ecosystem services (e.g. clean drinking water and decomposition of waste) if left intact was estimated at $703 billion (Anielski and Wilson, 2009).

As the pressures on natural habitat increase, the stakes for protecting nature continue to grow as well. Over the past 40 years, the total area of urban land in Canada has almost doubled, more land is being converted to industrial use and the integrity of ecosystems is being compromised by pollutants, invasive alien species, and a changing climate.

Since the St. Lawrence Seaway was opened, more than 180 alien species have been reported in the Great Lakes basin. In 2008, the annual cost to the Great Lakes region due

to alien invasive species introduced through shipping was calculated at a minimum of $200 million (Great Lakes United, 2008).

The Government of Canada understands the importance of protecting nature for current and future generations of Canadians.

Goal 5: Wildlife Conservation

Maintain or restore populations of wildlife to healthy levels.

What Government Is Doing

The Government of Canada is committed to protecting natural spaces and wildlife**,** including species at risk and migratory birds. To promote stewardship activities that protect and restore threatened ecosystems and endangered species, the Government works in partnership with the provinces and territories, private industry, Aboriginal communities, conservation organizations, and individual Canadians. Animals such as whooping cranes and sea otters have been brought back from near extinction, along with the Banff Springs snail, Blanding's Turtle, and the Atlantic Whitefish. By helping maintain the integrity of ecosystems, the habitats necessary for supporting the health of species are conserved.

The Government of Canada is equally committed to protecting the natural heritage of our country. Specifically, the Government has made commitments to protect species at risk, migratory birds, and their habitat. Examples include the following investments and commitments:

- $30 million per year to better implement the *Species at Risk Act*;
- $11.3 million to 205 projects in communities across Canada through the Habitat Stewardship Program in 2008-2009; and
- $85 million in funding to address the threat of invasive alien species by implementing an Invasive Alien Species Strategy for Canada.

Goal 6: Ecosystem/Habitat Conservation and Protection

Maintain productive and resilient ecosystems with the capacity to recover and adapt; and protect areas in ways that leave them unimpaired for present and future generations.

What Government Is Doing

Canadians value the health of the country's natural environment, and the Government of Canada recognizes that our social and economic well-being depends on its sustainability. That is why the Government of Canada is taking action and investing in conservation and protection of ecosystems and habitat including:

- Setting aside land for national parks – since 2006, 85,860 km^2 for national parks, national wildlife areas, national marine conservation areas, and other conservation purposes;
- Expanding Nahanni National Park Reserve in the Northwest Territories to six times its original size;
- Negotiating an agreement with Greenland to protect polar bears;
- Providing $225 million to the Nature Conservancy of Canada to establish the Natural Areas Conservation Program;
- Investing $5.5 million to monitor current Marine Protected Areas; and
- Strengthening the enforcement of environmental laws that protect ecosystems and important habitat.

Goal 7: Biological Resources

Sustainable production and consumption of biological resources are within ecosystem limits.

What Government Is Doing

The Government of Canada is committed to enhancing the responsible development and use of Canada's natural resources. The Government of Canada works to ensure the natural resource uses are environmentally sustainable, while supporting economic prosperity by:

- Providing funding and support to First Nations to participate in the forest sector – in 2008-09 the Program supported more than 130 projects at the community level and helped facilitate development of regional-scale projects;

- Undertaking important research to improve the understanding of ecosystems needed for future policy and regulatory decisions;
- Determining the resilience of the National Protected Areas network particularly in the face of climate change and other stressors;
- Assessing risks to Canada's forest biodiversity; and
- Taking action to prevent the introduction and spread of invasive alien species in Canadian ecosystems through the *Invasive Alien Species Partnership Program* and through the *Ballast Water Control and Management Regulations.*

Specific initiatives related to how the Government is working to protect nature can be found in Annex 3.

IV. Shrinking the Environmental Footprint – Beginning with Government

The federal government has a considerable environmental footprint ranging from the energy used to heat and cool federal buildings and operate the federal vehicle fleet, to the goods purchased to deliver services to Canadians and the disposal of electronic equipment at the end of its useful life.

Canadians expect their government to lead in finding ways to reduce its environmental impact and find more sustainable ways to deliver results. The Government of Canada has already launched initiatives throughout its operations, including the Policy on Green Procurement, and has made progress in important areas such as reducing greenhouse gas emissions. Many departments and agencies have also made considerable progress with their own initiatives.

Why It Matters

The Government of Canada has a significant operational presence across the country, with more than 40,000 buildings owned or leased, more than 30,000 on-road vehicles, and 260,000 employees across Canada. As a result, the Government of Canada is itself a major consumer of natural resources and a producer of air emissions and waste products which have a significant impact on the environment. As custodian, fleet manager, procurer of goods and services, and employer, the Government has demonstrated a commitment to do its part to reduce the impact of its operations and leadership with regard to greening operations.

The Government of Canada is committed to improving the environmental performance of its own operations. With this in mind, the federal government has developed new targets in the areas of green buildings, greenhouse gas emissions, electronic waste, printing units, paper consumption, green meetings, and green procurement. Public Works and Government Services Canada will continue to provide technical support to departments in greening their operations.

Goal 8: Greening Government Operations

Minimize the environmental footprint of government operations.

What Government Is Doing

The Government of Canada has already taken significant action to reduce its environmental footprint. For example, all new government office buildings are required to meet the Canada Green Building Council's Leadership in Energy and Environmental Design (LEED - Canada) Gold level. In 2006, the Treasury Board Secretariat approved the Policy on Green Procurement which requires that environmental performance considerations be integrated into federal procurement decision-making processes. In addition, in 2010 the government implemented a strategy to address the environmentally sound disposal of all federally generated e-waste.

CHAPTER 5: Looking Forward

As required under the *Federal Sustainable Development Act*, the Minister of the Environment will prepare and table Progress Reports on the FSDS every three years. The first Progress Report is due in the spring of 2011.

Spring 2011 Progress Report

The first FSDS Progress Report will focus on the Government of Canada's process and actions taken to implement the FSDS. It will outline the systems and processes developed to manage and deliver the requirements of the Act. It will also include the proposed suite of environmental indicators that will be used to track progress toward the goals and targets. The report will highlight any gaps and weaknesses that need to be addressed in the next FSDS and incorporate lessons learned. It will also explore opportunities to strengthen further the FSDS in relation to the sustainable development principles outlined in the Act. Finally, the report will examine how successful the approach to implementing the FSDS has been in increasing transparency and accountability of environmental decision-making.

Subsequent Progress Reports

The Sustainable Development Office (SDO) is currently developing systems and procedures to monitor progress on the goals and targets of the FSDS. Subsequent Progress Reports will track the implementation of the FSDS, the progress related to results achieved, and the integration of sustainable development into core planning and reporting processes. The reports will measure results by tracking indicators against the goals and targets. Departments will report on their respective implementation strategies through their DPRs. The Report will include broader environmental, economic and social considerations for the goals of the FSDS.

Figure 4 provides an example of how the results achieved from an implementation strategy through to the target and goal might be reported. This example demonstrates implementation strategy 2.1.22.2, "Implement national Vehicle Scrappage Program to encourage Canadians to retire their old high-polluting vehicles (models 1995 or earlier) and to choose more sustainable transportation options." Reporting, as demonstrated by the column on the far right of the table, will include quantifiable results at the goal, target, and implementation strategy levels.

Figure 4: Example of Planning Commitments and Reporting of Indicators for the Vehicle Scrappage Implementation Strategy

Planning Commitment Metrics supported by the vehicle scrappage implementation strategy	Indicator	FSDS and Progress Report (every 3 years)	RPP/DPR (annual)
Goal 2: Air Pollution Minimize the threats to air quality so that the air Canadians breathe is clean and supports healthy ecosystems.	Ambient air concentration indicators: ambient levels of $PM_{2.5}$, ozone, nitrogen oxides (NO_x), sulphur oxides (SO_x), volatile organic compounds (VOCs).	Description of the goal and its results	Overall statement committing to FSDS goals
Target 2.1: Air Pollution Reduce air pollutants in order to maintain or improve air quality across the country and achieve the emission targets which are currently under development in consultations with provinces and stakeholders.	Air emission indicators: emissions of $PM_{2.5}$, nitrogen oxides (NO_x), sulphur oxides (SO_x), volatile organic compounds (VOCs).	Description of the target and its results	Tagging and tracking progress of relevant target
Implementation Strategy 2.1.22.2 Implement national Vehicle Scrappage Program to encourage Canadians to retire their old high-polluting vehicles (models 1995 or earlier) and to choose more sustainable transportation options.	• Tonnes of nitrogen oxides (NOx) and volatile organic compound • Number of vehicles removed from use • Percentage of vehicle recyclers participating in the program who adhere to the code of practice Ratio of funding leveraged from non-federal government sources to funding received from the program Enabling Capacity: Implement national Vehicle Scrappage Program to encourage Canadians to retire their old high-polluting vehicles (models 1995 or earlier) and to choose more sustainable transportation options.	Identification of implementation strategy and vignette of government progress	• Planning highlight in RPP • Reporting highlight in DPR • Detailed description on departmental website

Figure 5 provides an example of data that could be reported for this implementation strategy (2.1.22.2). Results could include the number of vehicles accepted into the program by province, or level of consumer awareness or satisfaction.

Figure 5: Data Collected to Report on Implementation Strategy

Province	No. of vehicles accepted into the program	No. of vehicles permanently retired	No. of participating recyclers
Alberta	5,235	4,198	16
British Columbia	10,912	10,904	2
Manitoba	2,612	2,226	4
New Brunswick	929	804	12
Newfoundland and Labrador	587	456	7
Nova Scotia	1,436	1,367	23
Ontario	28,049	25,330	117
Quebec	16,988	14,853	87
Prince Edward Island	410	367	5
Saskatchewan	2,390	2,051	19
Total	**69,548**	**62,556**	**292**

CHAPTER 6: Conclusion

This first FSDS represents an important step forward for sustainable development planning and reporting in Canada. It strengthens how the Government of Canada promotes environmental sustainability and improves the transparency and accountability of environmental decision-making. This new approach has been informed by the views of Canadians and stakeholders, the Commissioner of the Environment and Sustainable Development, and by best practices around the world.

The improvements are many. For the first time, Canadians can see, all in one place, the Government of Canada's environmental sustainability priorities and our progress in achieving them. For the first time, federal departments and agencies are coordinated in their efforts to advance environmental sustainability with everyone moving in the same direction toward the same goals.

The Government of Canada has streamlined the process of planning for environmental sustainability and for reporting progress through better use of existing tools and information, such as the Expenditure Management System and the Canadian Environmental Sustainability Indicators. The Government has strengthened the application of Strategic Environmental Assessments in decision-making. The Government of Canada is now more attuned to the views of Canadians and stakeholders through the public consultation process.

These are important accomplishments. However, the Government of Canada also knows that more work remains to be done. It is committed to learning as the FSDS is implemented, with performance reports, and with the development of a new FSDS every three years. As the process matures and evolves, the Government of Canada will make adjustments: it will improve its integration of the three pillars of sustainable development – environmental, social, and economic; and it will be more capable of addressing gaps that become evident as the FSDS is implemented and progress is measured.

This adjustment over time is one of the strengths of this new approach. It is not rigid or static. It will respond to advances and to setbacks, and to changes in sustainability priorities in Canada. In this way, each new FSDS will be an improvement over the last and will place Canada ever closer to truly sustainable development.

ANNEX 1: Theme I

ADDRESSING CLIMATE CHANGE AND AIR QUALITY

1. Goal: Climate Change

Reduce greenhouse gas emission levels to mitigate the severity and unavoidable impacts of climate change.

1.1 Target: Climate Change Mitigation

Relative to 2005 emission levels, reduce Canada's total greenhouse gas emissions (GHG) 17% by 2020.

(Minister of the Environment)

Implementation Strategies for the Clean Air Agenda (1.1.1 to 1.1.19)

Advancing Knowledge and Communications

1.1.1　Conduct basic and applied research to increase knowledge of the effects of agricultural production on air; provide the science base for development and assessment of beneficial management practices. (AAFC)

1.1.2　Conduct targeted research to increase knowledge of climate change relative to agriculture; establish networks of scientists engaged in addressing climate change issues in a broader, integrated context (mitigation, adaptation, interdepartmental government efforts). (AAFC)

1.1.3　Assess and report on the collective environmental and economic impact of the adoption of sustainable agriculture practices by farmers on the Canadian landscape through two sub-programs: National Agri-Environmental Health Analysis and Reporting Program (NAHARP) and National Carbon Greenhouse Gas Accounting and Verification System (NCGAVS). (AAFC)

1.1.4　Develop and provide information and reports on atmospheric science assessments related to climate change. (EC)

1.1.5   Undertake and deliver scientific research and reporting in support of regulatory and other programs, including data analysis, inventory development, monitoring, modeling and assessment of the effectiveness of efforts as well as research on options, costs and benefits, and technology assessments. (EC, HC, NRCan, TC)

1.1.6   Develop climate change strategies harmonized with United States as part of Canada's commitment to meet Target 1.1. (EC)

Demanding Performance

1.1.7   Develop and implement a single window reporting initiative for national emissions reporting. (EC)

1.1.8   Develop renewable fuels regulations to mandate a 5% renewable fuel content in gasoline. (EC)

1.1.9   Develop greenhouse gas (GHG) emission regulations for new cars and light trucks beginning with the 2011 model year. (EC)

1.1.10 Develop regulations under the *Canadian Environmental Protection Act, 1999* to address greenhouse gas emissions from heavy-duty vehicles, aligned with the United States but taking into consideration the distinct nature of the Canadian fleet. The draft regulations are expected to be available for consultation in the Fall of 2010. (EC, TC)

1.1.11 Develop a performance standard for high-emitting coal-fired thermal electricity generation to transition to low- or non-emitting generation such as renewable energy, high-efficiency natural gas, or thermal power with CCS. (EC)

1.1.12 Continue to work with the provinces and territories to develop coherent greenhouse gases approaches. (EC)

1.1.13 Enhance energy-efficiency regulations for consumer and commercial products. (NRCan)

1.1.14 Work within the International Maritime Organization (IMO) to support the development of international energy efficiency / GHG standards for marine vessels. (TC)

1.1.15 Develop regulations under the *Railway Safety Act* to address greenhouse gas emissions from the rail sector in collaboration with the United States. (TC).

1.1.16 Work within the International Civil Aviation Organization (ICAO) to develop aircraft design performance standards for CO_2 as early as 2013. (TC)

1.1.17 Develop and/or implement new rules within Canada's domestic regulatory regime which reflect appropriate international standards and recommended practices concerning greenhouse emissions adopted by the International Maritime Organization and the International Civil Aviation Organization. (TC)

1.1.18 Continue to support a Memorandum of Understanding (MOU) with the Railway Association of Canada that ensures the rail industry continues to improve its GHG emissions performance during the period 2006-2010. (EC, TC)

1.1.19 Continue to support the MOU signed between Transport Canada and Air Transport Association of Canada to reduce emissions of greenhouse gases from aviation sources. The agreement sets an annual fuel-efficiency target that will achieve a cumulative improvement in fuel efficiency of 24% by 2012, relative to 1990 levels. (TC)

Implementation Strategies for Clean Energy (1.1.20 to 1.1.34)

Enabling Capacity

1.1.20 Develop climate change strategies aligned with the United States including working collaboratively through the Canada-U.S. Clean Energy Dialogue to advance clean energy priorities. (EC, NRCan)

1.1.21 Continue to provide science policy advice and policy frameworks, and work with portfolio agencies to fulfill commitments made in Canada's Science & Technology Strategy in support of the environmental science and technologies, natural resources and energy, and information and communications technologies research priorities. (IC)

1.1.22 Continue to work with industry stakeholders to encourage and promote the adoption and adaptation of new technologies such as information and communications technologies, biotechnology and clean energy technologies. (IC, NRCan)

1.1.23 Continue to implement the Strategic Aerospace and Defence Initiative in support of strategic, research and development projects that contribute to new A&D technologies, and which may reduce greenhouse gas emissions and produce new energy efficiencies. (IC)

1.1.24 Continue to promote the development and use of CSR management tools by industry and the use of CSR standards in the Canadian marketplace in support of environmental sustainability. (IC)

1.1.25 Encourage businesses, through the accelerated capital cost allowance for clean energy generation equipment, to invest in specified equipment that can contribute to a reduction in harmful emissions and diversification of the energy supply. (FIN)

1.1.26 Supply financial aid and develop capacity to reduce GHGs through adoption of emission reducing technologies and practices. (NRCan)

1.1.27 Use the Program on Energy Research and Development (PERD) to research and develop energy technologies that will reduce GHG emissions. (NRCan)

1.1.28 Use the Clean Energy Fund for transitioning the energy sector by developing and demonstrating new technologies that will reduce GHG emissions. (NRCan)

1.1.29 Finance projects that would, among other things, help to optimize resource use, valuing residual resources, and contribute to eco- efficiency. (DEC, NRCan)

1.1.30 The Atlantic Energy Gateway initiative aims to facilitate development of the Atlantic renewable energy sector by fostering collaboration, common understanding, and communication among governments, and between governments and the private sector, to maximize and expedite the development of renewable energy resources in the region. (ACOA, NRCan)

1.1.31 Work with Aboriginal and northern communities, organizations and governments on climate change issues through the development of sustainable energy initiatives and supporting them in managing vulnerabilities and opportunities created by a changing climate. (INAC, NRCan)

1.1.32 Diversify the western Canadian economy by making strategic investments in the commercialization and adoption of clean energy technologies through the Western Diversification Program. (WD)

Advancing Knowledge and Communications

1.1.33 Develop and provide information and reports on the environmental footprint of energy technologies. (EC)

1.1.34 Green Jobs LMI Project:
    1.1.34.1 Produce estimates of growth and skills requirements for green jobs. (HRSDC)
    1.1.34.2 Develop a definitional framework for green jobs. (HRSDC)

Implementation Strategies for Clean Transportation (1.1.35 to 1.1.42)

Enabling Capacity

1.1.35 Programs focused on supplying financial aid and developing capacity to reduce GHGs and air pollutants through adoption of emission-reducing technologies and practices:
    1.1.35.1 Deliver extensive outreach under the ecoTransport Strategy to build knowledge and capacity for the adoption of emission-reducing technologies and practices. The majority of ecoTransport programs will end March 31, 2011. (TC)
    1.1.35.2 Implement national Vehicle Scrappage Program to encourage Canadians to retire their old high-polluting vehicles (models 1995 or earlier) and to choose more sustainable transportation options. (EC)
    1.1.35.3 Provide tax relief to Canadians who use public transit regularly and encourage individuals to make a sustained commitment to using public transit regularly to help reduce traffic congestion, air pollution and greenhouse gas emissions, through the Public Transit Tax Credit. (FIN)

1.1.36 Continue to collaborate with partners to enhance Canada's competitive advantage in hydrogen and fuel cell technology development and commercialization. (IC)

1.1.37 Undertake research, development and deployment of new technologies to reduce GHGs. (NRCan)

1.1.38 Manage research and development, develop partnerships, support and/or conduct technology development (emerging and forward-looking) to improve energy efficiency and reduce emissions for surface, marine and air transportation. (TC)

Advancing Knowledge and Communications

1.1.39   Develop improved materials and processes to achieve more energy-efficient, lower-emission vehicles. (NRCan)

1.1.40   Offer information programs and decision-making tools which help Canadians purchase, drive and maintain their vehicles in a manner which reduces fuel consumption and GHG emissions. (NRCan)

1.1.41   Green Jobs LMI Project:
   1.1.41.1   Produce estimates of growth and skills requirements for green jobs. (HRSDC)
   1.1.41.2   Develop a definitional framework for green jobs. (HRSDC)

Demanding Performance

1.1.42   Impose a Green Levy on the most fuel-inefficient passenger vehicles available in Canada. (FIN)

Implementation Strategies for International Work on Climate Change
(1.1.43 to 1.1.53)

Enabling Capacity

1.1.43   Work with international partners to implement the commitments in the Copenhagen Accord such as mitigation targets and actions; short and long-term financing; mechanisms for technology and reducing emissions from deforestation and forest degradation; adaptation actions; and provisions for transparency and accountability of climate change actions. (EC, NRCan)

1.1.44   Support the development of international principles, standards, and recommended practices with the International Civil Aviation Organization aimed at a globally coherent approach to manage international aviation GHG emissions. (TC)

1.1.45   Support the development of international standards and recommended practices with the International Maritime Organization concerning greenhouse gas emissions from marine sources. (TC)

1.1.46   Support the development of recommendations on possible actions to mitigate short-lived climate forcers (SLCFs) including black carbon emissions through participation on the Arctic Council Task Force on Black Carbon, and the UN ECE- Long Range Transboundary Air Pollutants (LRTAP) Ad Hoc Expert Group on Black Carbon. (EC)

Advancing Knowledge and Communications

1.1.47   Lead Government of Canada participation in international negotiations on climate change, maintain National Registry and coordinate payment of the International Transaction Log dues. (EC)

1.1.48   *United Nations*:
   1.1.48.1   Participate in international negotiations on climate change, coordinate financial obligations. (DFAIT)
   1.1.48.2   Participate in strategic international climate change negotiations and engagement in the United Nations Framework Convention on Climate Change (UNFCCC), including leadership on key issues. (NRCan)
   1.1.48.3   Participate in negotiations. (AAFC)
   1.1.48.4   Develop and submit a complete and compliant annual national GHG Inventory Report and Common Reporting Format tables to the UN Framework Convention on Climate Change (UNFCCC) Secretariat by April 15 to meet UNFCCC and Kyoto Protocol reporting requirements. (EC, NRCan)

1.1.49   *Multilateral Organizations Outside of the UNFCC*:
   1.1.49.1   Advance Canadian interests in a range of high-level climate change-related international fora, such as the G8, the Major Economies Forum on Energy and Climate (MEF), including the MEF initiated Clean Energy Ministerial; and the Asia-Pacific Economic Cooperation. (NRCan)
   1.1.49.2   Support Canada's participation in multilateral organizations outside the United Nations, such as Methane to Markets and Renewable Energy and Energy Efficiency Partnership. (EC)

1.1.50   *Asia-Pacific Partnership*: Manage Canadian Asia Pacific Partnership-funded projects that promote the development, diffusion and deployment of clean technologies. (EC, NRCan, IC)

1.1.51   *International Civil Aviation Organization*:

      1.1.51.1   Work within International Civil Aviation Organization to continue to advance emissions limitations and reductions from international aviation, including the implementation of the ICAO Programme of Action on International Aviation and Climate Change, while maintaining a high level of safety. (TC, EC)

1.1.52 Work within the *International Maritime Organization* toward the development of international standards and recommended practices that reduce greenhouse gas emissions from marine shipping, while maintaining a high level of safety. (TC)

1.1.53 *Carbon Capture and Storage (CCS):* Participate in a variety of policy and technical multilateral cooperation fora including the Global CCS Institute, the Carbon Sequestration Leadership Forum, the International Energy Agency and the MEF Clean Energy Ministerial Carbon Capture and Storage Action Group. (NRCan)

Implementation Strategies for Forestry (1.1.54 to 1.1.58)

Enabling Capacity

1.1.54 Support the development and provision of scientific knowledge, modeling, data and tools that inform forest carbon budgets. (NRCan)

1.1.55 Support the development and adoption of clean energy technologies in the forest sector and the use of wood as a green building material in Canada and abroad. (NRCan)

      1.1.55.1 Investment in Forest Industry Transformation (IFIT): Enable renewal and transformation in the forest sector by supporting the development, commercialization and implementation of advanced clean energy technologies in the forest sector. (NRCan)

      1.1.55.2 Pulp and Paper Green Transformation Program: Support innovation and environmentally friendly investments in pulp and paper mills in areas such as energy efficiency and renewable energy production. The aim is for pulp and paper mills in Canada to further reduce their greenhouse gas emissions while helping to position them as leaders in the production of renewable energy from forest biomass. (NRCan)

Advancing Knowledge and Communications

1.1.56 Develop multidisciplinary assessments of the risks associated with the new and emerging bio-technology in the Forest sectors and the risks they may have on the environment. (NRCan)

1.1.57 Green Jobs LMI Project:

      1.1.57.1   Produce estimates of growth and skills requirements for green jobs. (HRSDC)

      1.1.57.2   Develop a definitional framework for green jobs. (HRSDC)

1.1.58 Negotiate international agreement to reduce emissions from deforestation and forest degradation (REDD). (NRCan)

2. Goal: Air Pollution

Minimize the threats to air quality so that the air Canadians breathe is clean and supports healthy ecosystems.

2.1 Target: Air Pollutants

Reduce air pollutants in order to maintain or improve air quality across the country and achieve the emission targets which are currently under development in consultations with provinces and stakeholders.

(Minister of the Environment)

Implementation Strategies for the Clean Air Regulatory Agenda (CARA)
(2.1.1 to 2.1.15)

Advancing Knowledge and Communications
2.1.1   National Pollutant Release Inventory (NPRI) tracking through the *Canadian Environmental Protection Act, 1999* (CEPA 1999). (EC)
2.1.2   Undertake scientific research and reporting in support of regulatory and other programs delivered, including data analysis, inventory development, monitoring, modeling and assessment of the effectiveness of efforts as well as research on options, costs and benefits including economic and social and technology assessments. (EC, NRCan, HC, TC)
2.1.3   Communicate outdoor air pollution health risks to Canadians through the Air Quality Health Index: Continue development of the Air Quality Health Index (AQHI) and support implementation into additional census metropolitan areas (CMAs). The AQHI provides current and forecast air quality information and advice on health risks in order to assist Canadians in making decisions on how to reduce their level of exposure. (HC, EC)
2.1.4   Develop and provide atmospheric science assessments related to air quality. (EC)

Demanding Performance
Enforce existing regulations
2.1.5   Continue to implement air pollutant emission regulations for various classes of on-road and off-road compression-ignition engines and small spark-ignition engines and fuels. (EC)
2.1.6   Target regulations on volatile organic compounds (VOCs) in some consumer and commercial products, and air pollutants for most transportation (on-road vehicles and engines, off-road compression ignition engines and off-road small-spark ignition engines), including implementation of the regulatory and control measures. (EC)

New Regulations
2.1.7   Continue cooperation with the United States on sustainable transportation and fuel quality. (EC)
2.1.8   Continue to work collaboratively with provinces and territories to develop and implement a coherent approach to managing air quality, including national ambient air quality standards and national industrial emissions requirements for key pollutants. (EC, HC)
2.1.9   Work through the World Forum for the Harmonization of Vehicle Regulation to develop harmonized global technical regulations for vehicles and engines to ensure that stringent emission standards will be applied around the world. (EC)
2.1.10 Develop new regulations to reduce emissions of air pollutants from marine engines and recreational vehicles, on- and off-road diesel engines and off-road large spark ignition engines. (EC)

2.1.11 Work on energy-efficiency regulations for consumer and commercial products. (NRCan)

2.1.12 Develop emission regulations for Criteria Air Contaminants (CAC) for the rail sector under the Railway Safety Act to take effect in 2011, aligned with U.S. Environmental Protection Agency emissions standards. (TC)

2.1.13 Continue to work with the United States and France to implement a designated Emission Control Area for North American coastal areas, under the auspices of the IMO, by 2012. (TC, EC)

2.1.14 Develop enhanced emissions regulations under the Canada Shipping Act, 2001, for vessels operating in Canadian waters. (TC)

Regulatory Complement

2.1.15 Continue to support a Memorandum of Understanding (MOU) with the Railway Association of Canada that ensures the rail industry continues to improve emission performance during the 2006–2010 period. (EC, TC)

Implementation Strategies for Clean Energy (2.1.16 to 2.1.21)

Enabling Capacity

2.1.16 ecoACTION programs reduce GHG emissions and can directly or indirectly contribute to air pollutant emission reduction. (NRCan, TC, INAC)

2.1.17 Finance projects that would, among other things, help to optimize resource use, valuing residual resources, and contribute to eco-efficiency. (DEC, NRCan)

2.1.18 Encourage businesses, through the accelerated capital cost allowance for clean energy generation equipment, to invest in specified equipment that can contribute to a reduction in harmful emissions and diversification of the energy supply. (FIN)

2.1.19 The Atlantic Energy Gateway initiative aims to facilitate development of the Atlantic renewable energy sector by fostering collaboration, common understanding, and communication among governments, and between governments and the private sector, to maximize and expedite the development of renewable energy resources in the region. (ACOA, NRCan)

2.1.20 Diversify the western Canadian economy by making strategic investments in the commercialization and adoption of clean energy technologies through the Western Diversification Program. (WD)

Advancing Knowledge and Communications

2.1.21 Green Jobs LMI Project:
    2.1.21.1 Produce estimates of growth and skills requirements for green jobs. (HRSDC)
    2.1.21.2 Develop a definitional framework for green jobs. (HRSDC)

Implementation Strategies for Clean Transportation (2.1.22 to 2.1.29)

Enabling Capacity

2.1.22 Programs focused on supplying financial aid and developing capacity to reduce GHGs and smog-forming pollutants through adoption of emission-reducing technologies and practices:
    2.1.22.1 Deliver extensive outreach under the ecoTransport Strategy to build knowledge and capacity for the adoption of emission-reducing technologies and practices. The majority of ecoTransport programs will end March 31, 2011. (TC)
    2.1.22.2 Implement a national Vehicle Scrappage Program to encourage Canadians to retire their old high-polluting vehicles (models 1995 or earlier) and to choose more sustainable transportation options. (EC)
    2.1.22.3 Provide tax relief to Canadians who use public transit regularly and encourage individuals to make a sustained commitment to using public transit regularly to help reduce traffic congestion, air pollution and greenhouse gas emissions, through the Public Transit Tax Credit. (FIN)

2.1.23 Undertake research, development and deployment of new technologies to reduce GHG and other air-pollutant emissions. (NRCan)

2.1.24 Continue to collaborate with partners to enhance Canada's competitive advantage in hydrogen and fuel cell technology development and commercialization. (IC)

2.1.25 Support the design, manufacture and sale of fuel-efficient, light-duty motor vehicles to promote energy efficiency. (TC)

2.1.26 Continue to implement the Automotive Innovation Fund through to 2013 in support of strategic, large-scale research and development projects leading to innovative, greener, more fuel-efficient vehicles. (IC)

Advancing Knowledge and Communications

2.1.27 Offer information programs and decision-making tools which help Canadians purchase, drive and maintain their vehicles in a manner which reduces fuel consumption and GHG emissions. (NRCan)

2.1.28 Green Jobs LMI Project:
    2.1.28.1 Produce estimates of growth and skills requirements for green jobs. (HRSDC)
    2.1.28.2 Develop a definitional framework for green jobs. (HRSDC)

Demanding Performance

2.1.29 Impose a Green Levy on the most fuel-inefficient passenger vehicles available in Canada. (FIN)

Implementation Strategies for International Negotiations (2.1.30 to 2.1.38)

Advancing Knowledge and Communications

2.1.30 Develop and promote awareness and best practices.
    2.1.30.1 Support the development of standards and recommended practices within the Committee on Aviation Environmental Protection (CAEP) of the International Civil Aviation Organization concerning air pollutant emissions from aviation sources. (TC)
    2.1.30.2 Support the development of international standards and recommended practices within the International Maritime Organization concerning air pollutant emissions from marine sources. (TC)

2.1.31 Work with the U.S to reduce transboundary emissions under the Canada-U.S. Air Quality Agreement. (EC, HC)

2.1.32 Submit air pollutant inventories to meet international reporting requirements using National Pollutant Release Inventory (NPRI) to the UN Economic Commission for Europe to meet the reporting obligations of the Protocols ratified under the Convention on Long Range Transboundary Air Pollution). (EC)

2.1.33 Participate in the Marine Environmental Protection Committee of the International Maritime Organization. (TC)

2.1.34 Participate in the International Civil Aviation Organization Council's Committee on Aviation Environmental Protection. (TC)

2.1.35 Participate in negotiations for revisions of the Gothenburg Protocol to Reduce Ozone, Acidification and Eutrophication under the UNECE Convention on Long-range Transboundary Air Pollution. (EC, HC)

Demanding Performance

2.1.36 Develop Extended Producer Responsibility Regulations for managing end-of-life ozone depleting substances and their halocarbon alternatives. (EC)

2.1.37 Continue development of a North American proposal to phase-down HFCs under the Montreal Protocol and develop complimentary domestic regulations. (EC)

2.1.38 Deliver compliance promotion activities for key regulatory initiatives. (EC)

2.2 Target: Indoor Air Quality

Help protect the health of Canadians by assessing indoor air pollutants and developing guidelines and other tools to better manage indoor air quality.

(Minister of Health)

Implementation Strategies for Indoor Air Quality (2.2.1 to 2.2.3)

Advancing Knowledge and Communications
2.2.1   Conduct exposure and risk assessments and source identification studies to support guideline development on priority indoor air contaminants. (HC)
2.2.2   Create a database of indoor radon concentrations, map areas of high radon potential in Canada, test for radon in federal buildings in high-risk, radon-prone areas. The strategy includes a radon awareness program. (HC)
2.2.3   Implement the health promotion campaign on mould as part of the National Strategy to Address Mould in First Nations Communities. (HC)

2.3 Target: Chemicals Management

Reduce risks to Canadians and impacts on the environment posed by harmful substances as a result of decreased environmental concentrations and human exposure to such substances.

(Minister of the Environment and Minister of Health)

Implementation Strategies for Chemicals Management (2.3.1 to 2.3.11)

Leading by Example
2.3.1   Federal custodians plan and undertake assessment and remediation/risk management activities at contaminated sites for which they are responsible in order to reduce human health and ecological risks at higher priority sites. (EC)
2.3.2   Guidance and program policies developed by the program secretariat and the expert support departments are used by federal custodians in the program implementation activities. (EC)
2.3.3   In 2010-11, site assessments will be undertaken on an estimated 1500 projects by 15 federal custodians in total while an estimated 500 remediation/risk management projects will be implemented by 17 custodians in total. (EC)

Advancing Knowledge and Communications
2.3.4   Assess 100% of existing commercial substances as identified under the Chemicals Management Plan for risks to human health and/or the environment (100% of total of 4300 by 2020). (EC, HC)
2.3.5   Assess 100% of new substances, for which Environment Canada has been notified by industry of their intended manufacture or import, to determine if they are suspected of being toxic within the timelines in the regulation or established services standards. (EC, HC)
2.3.6   Apply life-cycle thinking, sustainable materials management and environmentally sound management of hazardous wastes to promote sustainable consumption and minimize the impacts of products and wastes on the environment and human health. (EC, NRCan)

2.3.7 The Northern Contaminants Program will continue monitoring contaminant levels in wildlife and people in the Canadian North. (INAC)

Demanding Performance

2.3.8 Ensure at least one risk management measure is in place within the legally mandated timeframes for 100% of substances added to the List of Toxic Substances within. (EC, HC)

2.3.9 Deliver compliance promotion activities for new instruments developed under CEPA 1999. (EC)

2.3.10 Work with OECD and with the U.S. and Mexico under the auspices of the Commission for Environmental Cooperation to foster green growth collaborative initiatives. (EC)

2.3.11 Work with provincial and territorial authorities to promote waste minimization and diversion, such as the implementation of the Canada-wide Action Plan on Extended Producer Responsibility. (EC)

ANNEX 2: Theme II

MAINTAINING WATER QUALITY AND AVAILABILITY

3. Goal: Water Quality

Protect and enhance the quality of water so that it is clean, safe and secure for all Canadians and supports healthy ecosystems.

3.1 Target: Fresh Water Quality

Complete federal actions to restore beneficial uses in Canadian Areas of Concern in the Great Lakes by 2020.

(Minister of the Environment)

Implementation Strategies for Canadian Areas of Concern in the Great Lakes (3.1.1 to 3.1.10)

Enabling Capacity

3.1.1   Fund external work through Grants and Contribution Agreements to coordinate Remedial Action Plans related to the remediation and restoration of beneficial uses in Areas of Concern (AOCs) in the Great Lakes Basin and through the Great Lakes Sustainability Fund (GLSF) which provides technical and financial support to projects to clean up and restore AOCs. (EC)

3.1.2   Fund external work through Grants and Contribution Agreements to implement Lakewide Management Plans related to the restoration and protection of the Great Lakes. (EC)

3.1.3   Establish important cooperative partnerships between the federal and provincial governments and engage appropriate private, public (including local governments and agencies), Aboriginal communities and stakeholder participation in order to achieve the vision of a healthy, prosperous and sustainable Great Lakes ecosystem. (EC)

3.1.4   Promote voluntary approaches where appropriate to achieve results beyond compliance to attain Great Lakes water quality targets with respect to toxics, critical pollutant reduction, municipal

wastewater sources, etc. (EC)

3.1.5   Advance clean-up of historic radioactive wastes in the Port Hope area, which has been identified as an Area of Concern by the International Joint Commission. (NRCan)

Advancing Knowledge and Communications

3.1.6   Release reports regularly on: State of the Great Lakes environmental indicators, the Great Lakes Binational Toxics Strategy, the status of Remedial Action Plans for AOCs in the Great Lakes, and updates for Lakewide Management Plans. (EC)

3.1.7   Coordinate with the United States scientific research and monitoring activities in the Great Lakes through the binational Co-operative Science and Monitoring Initiative. (EC)

Demanding Performance

3.1.8   Manage/deliver Great Lakes results internally, within the Department, through the Great Lakes Basin Ecosystem Initiative. (EC)

3.1.9   Manage/deliver Great Lakes results federally-provincially, between the Government of Canada and the Province of Ontario. (EC, NRCan)

3.1.10 Manage/deliver Great Lakes results binationally, between Canada and the United States through the Great Lakes Water Quality Agreement (GLWQA). (EC)

3.2 Target: Fresh Water Quality (continued)

Contribute to the restoration and protection of the Great Lakes by developing and gaining binational acceptance of objectives and strategies for the management of nutrients in the Great Lakes by 2015.

(Minister of the Environment)

Implementation Strategies for Management of Nutrients in the Great Lakes (3.1.1 to 3.1.10)

Refer to the appropriate implementation strategies outlined under Target 3.1: Fresh Water Quality – Canadian Areas of Concern.

3.3 Target: Fresh Water Quality (continued)

Complete federal actions to reduce pollutants and restore beneficial uses in hot spots in the St. Lawrence River by 2016.

(Minister of the Environment)

Implementation Strategies for the St. Lawrence River (3.3.1 to 3.3.6)

Enabling Capacity

3.3.1   Fund external work through Grants and Contribution Agreements so that communities can restore beneficial uses and improve environmental quality in their locality along the St. Lawrence. (EC)

3.3.2   Establish important cooperative partnerships between the federal and provincial governments and engage the appropriate public and stakeholder participation in order to achieve the vision of a healthy, prosperous and sustainable St. Lawrence River ecosystem. (EC)

Advancing Knowledge and Communications
3.3.3   Release reports regularly on the State of the St. Lawrence and factsheets on environmental indicators. (EC)
3.3.4   Conduct and coordinate research, prediction and monitoring activities in the St. Lawrence with other federal and provincial Departments and with local communities. (EC)

Demanding Performance
3.3.5   Manage/deliver St. Lawrence results internally, within the Department, through the St. Lawrence Ecosystem Initiative. (EC)
3.3.6   Manage/deliver St. Lawrence results federally-provincially, between the Government of Canada and the Province of Quebec. (EC)

3.4 Target: Fresh Water Quality (continued)

Reduce nutrient inputs into Lake Simcoe by 2012.

(Minister of the Environment)

Implementation Strategies for Lake Simcoe (3.4.1 to 3.4.3)

Enabling Capacity
3.4.1   Manage/deliver Great Lakes results binationally, between Canada and the United States through the Great Lakes Water Quality Agreement (GLWQA). (EC)
3.4.2   Provide financial and technical support through the Lake Simcoe Clean-Up Fund (LSCUF) to implement priority projects aimed at reducing phosphorus inputs, restoring fish and wildlife populations, and enhancing research and monitoring capacity that are essential to making progress in relation to the restoration of the Lake Simcoe Basin watershed. (EC)

Demanding Performance
3.4.3   Ongoing action to limit phosphates in laundry and dishwasher detergents. (EC)

3.5 Target: Fresh Water Quality (continued)

By 2012, through strategic collaborations and by increasing scientific knowledge, contribute to the establishment of targets to reduce nutrients in Lake Winnipeg and its basin to support the sustainability of the lake.

(Minister of the Environment)

Implementation Strategies for Lake Winnipeg (3.5.1 to 3.5.6)

Enabling Capacity
3.5.1   Provide financial and technical support, through the Lake Winnipeg Basin Stewardship Fund, to projects having concrete, demonstrable results to reduce pollutants and, in particular, nutrient loads, throughout the Lake Winnipeg Basin. (EC)

Advancing Knowledge and Communications

3.5.2 Conduct science activities required to understand the relationship between the ecology and nutrient cycling within Lake Winnipeg, and the sources and transport mechanisms for nutrients, in order to help inform the development of nutrient objectives and performance indicators for Lake Winnipeg. (EC)

3.5.3 Conduct monitoring activities for Lake Winnipeg and its sub-watersheds in order to help inform the development of nutrient objectives and performance indicators for Lake Winnipeg. (EC)

3.5.4 Develop a single window web information portal to promote and enable data sharing and analysis with partners and other networks, in order to support research on Lake Winnipeg. (EC)

Demanding Performance

3.5.5 The Lake Winnipeg Basin Management Office will coordinate and manage the activities of the Lake Winnipeg initiative, work with existing water governance bodies, explore the need for an overarching basin mechanism to cooperatively develop a basin-wide strategy, and provide a forum for communication. (EC)

3.5.6 Work with the Province of Manitoba to establish a Canada-Manitoba Agreement to provide for a long-term collaborative and coordinated approach between the two governments to ensure the sustainability and health of the Lake Winnipeg Basin. (EC)

3.6 Target: Fresh Water Quality (continued)

Achieve a value between 81–100 on each of the Water Quality and Soil Quality Agri-Environmental Performance Indices by March 31, 2030.

(Minister of Agriculture and Agri-Food)

Implementation Strategies for Water and Soil Quality Agri-Environmental Indices (3.6.1 to 3.6.6)

Enabling Capacity

3.6.1 Provide a systematic approach to farmers, through federal/provincial partnerships, to assess priority environmental risks and address them by developing effective plans to mitigate these risks and/or implement suitable preventative on-farm actions. (AAFC)

3.6.2 Increase the adoption of sustainable agriculture practices at farm and landscape levels. (AAFC)

Advancing Knowledge and Communications

3.6.3 Conduct targeted research to increase knowledge of water resources relative to agriculture; establish networks of scientists engaged in addressing water resource issues in a broader, integrated context (environmental standards, microbial source tracking and interdepartmental government efforts). (AAFC)

3.6.4 Assess and report on the collective environmental and economic impact of the adoption of sustainable agriculture practices by farmers on the Canadian landscape through the National Agri-Environmental Health Analysis and Reporting Program (NAHARP). (AAFC)

3.6.5 Increase the understanding of the effectiveness of beneficial management practices (BMP) in an agricultural watershed setting, and improve the understanding of the long-term relationships between BMPs and related agricultural land use activities, both environmental and economic, through Watershed Evaluation of Beneficial Management Practices (WEBs). (AAFC)

3.6.6 Identify opportunities to work within the Canadian Council of Ministers of the Environment (CCME) to develop nutrient management approaches from non-point agricultural sources. (EC)

3.7 Target: Fresh Water Quality (continued)

Reduce risks associated with wastewater effluent by 2020 in collaboration with provinces and territories.
(Note: risk reduction for wastewater effluents relates both to freshwater and marine).

(Minister of the Environment)

Implementation Strategies for Wastewater Effluent (3.7.1 to 3.7.3)

Advancing Knowledge and Communications
3.7.1   Work collaboratively with provinces to conduct and disseminate research on wastewater effluent. (EC)

Demanding Performance
3.7.2   Implement the federal aspects of the CCME strategy for the management of municipal wastewater effluent in Canada through effluent regulations under the *Fisheries Act* and through agreements with provinces and territories by 2012. Work with the Northwest Territories, Nunavut, Quebec, and Newfoundland and Labrador to complete policy analysis and research for minimum performance standards for wastewater effluent for the far north. (EC)
3.7.3   Ensure compliance with performance standards for higher risk wastewater effluents by 2020. (EC)

3.8 Target: Marine Water Quality

Reduce the risks to Canadians and impacts on the marine environment posed by pollution from land-based activities.

(Minister of the Environment)

Implementation Strategies for Pollution from Land-based Activities (3.8.1 to 3.8.13)

Enabling Capacity
3.8.1   Fund external work through Grants and Contribution Agreements so that communities can restore beneficial uses and improve environmental quality in their locality along the St. Lawrence. (EC)

Leading by Example
3.8.2   Implement programs to prevent pollution and respond to environmental incidences, including spills. (TC)

Advancing Knowledge and Communications
3.8.3   Provide advice on garbage, ballast water, sewage and other marine pollution to support Canadian positions in international commitments. (TC, EC)
3.8.4   Collect required data to support International Maritime Organization, the United Nations Environmental Programme and other domestic and international organizations. (TC, EC)

Demanding Performance
3.8.5   Ensure compliance with the *Canada Shipping Act, 2001*, and its regulations that set controls for ships to manage ballast water and marine pollution as well as the controls on ships' discharges set out under the *Arctic Waters Pollution Prevention Act*. (TC)
3.8.6   Implement a national regime for preparedness and response to maritime hazardous and noxious substances incidences. (TC)

3.8.7   Monitor and regulate discharges from marine vessels into the marine environment through inspections and the detection of oil discharges using the National Aerial Surveillance Program which may result in investigations and enforcement actions. (TC)

3.8.8   Monitor and regulate Canada's Marine Oil Pollution Preparedness and Response regime to ensure private industry maintains the required capacity to respond to oil spills caused by marine transportation. (TC)

3.8.9   Advance positions that can influence global rules and practices on dumping waste at sea and other marine pollution matters. (EC, TC)

3.8.10 Manage research and development, develop partnerships, support and/or conduct technology development (emerging and forward-looking) to improve pollution prevention technologies and manage risks for marine transportation. (TC)

3.8.11 Advance Canadian positions on reducing and managing global marine pollution from ships. (TC)

3.8.12 Support the adoption by Canada of Marine Environmental Protection Committee (International Maritime Organization) requirements where applicable. (TC)

3.8.13 Ensure that 90% of CEPA 1999 disposal at sea permits are issued within 120 days. (EC)

3.9 Target: Marine Water Quality (continued)

Prevent marine pollution from uncontrolled dumping at sea. Ensure that permitted disposal at sea is sustainable such that 85% of disposal site monitoring events do not identify the need for site management action (such as site closure).

(Minister of the Environment)

Implementation Strategies for Uncontrolled Dumping at Sea (3.8.1 to 3.8.13)

Refer to the appropriate implementation strategies outlined under Target 3.8: Marine Water Quality – Pollution from Land-based Activities.

3.10 Target: Drinking Water Quality

Increase the percentage of First Nation communities with acceptable water and wastewater facility risk ratings by 2013.[1]

(Minister of Health and Minister of Indian Affairs and Northern Development)

Implementation Strategies for the Percentage of First Nation Communities with Acceptable Water and Wastewater Facility Risk Ratings (3.10.1 to 3.10.11)

Leading by Example

3.10.1 Undertake a National Assessment of First Nation communities to assess the current status and associated risk for all existing communal water and wastewater systems and analyze various options for community serviceability. (INAC)

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[1] Drinking water on reserve remains a primary focus of INAC's current Key Performance Indicators mapping pilot, and targets will be revised based on the pilot's recommendations.

3.10.2   Update "Guidance for providing safe drinking water in areas of federal jurisdiction." (HC)

Enabling Capacity

3.10.3   Work with First Nation communities to increase the frequency of testing drinking water quality. (HC)

3.10.4   Ensure that training is available for all operators and that a regime is in place so that all water systems have oversight of a certified operator. (INAC)

3.10.5   Enhance and expand the number of qualified waste and wastewater system operators in First Nation communities:
  3.10.5.1   Enhance the Circuit Rider Training Program. (INAC)
  3.10.5.2   Increase the number of Circuit Rider trainers and operators. (INAC)

3.10.6   Continue to enhance capacity to monitor drinking water quality in First Nation communities to protect public health:
  3.10.6.1   Support all First Nation communities in ensuring access to a trained Community-Based Water Monitor (CBWM) or Environmental Health Officer (EHO). (HC)
  3.10.6.2   Support all First Nations communities in monitoring drinking water quality as per the Guidelines for Canadian Drinking Water Quality (GCDWQ). (HC)

Advancing Knowledge and Communications

3.10.7   Develop up to five guidelines and guidance on water quality (i.e., drinking water, recreational water and water re-use) in collaboration with provinces/territories, supported by technical documents, as a basis for their regulatory requirements. (HC)

3.10.8   Continue to provide First Nations with communications products to enhance public awareness and knowledge as well as increase the confidence of First Nations residents about the safety of their drinking water supply. (HC)

3.10.9   Develop and continuously update technical guidance protocols, such as the *Protocol for Safe Drinking Water in First Nations Communities* and the *Protocol for Wastewater Treatment and Disposal in First Nations Communities*. (INAC, EC)

3.10.10 Support provinces and territories and internationally by sharing and disseminating scientific risk assessments on drinking water contaminants. (HC)

Demanding Performance

3.10.11 Develop appropriate regulatory framework and legislation for safe drinking water and wastewater treatment in First Nation communities. (INAC)

3.11 Target: Drinking Water Quality (continued)

Help protect the health of Canadians by developing health-based water guidelines.

(Minister of Health)

Implementation Strategies for Health-based Water Guidelines (3.10.1 to 3.10.11)

Refer to the appropriate implementation strategies outlined under Target 3.10: Drinking Water Quality – Percentage of First Nation Communities with Acceptable Water and Wastewater Facility Risk Ratings.

3.12 Target: Chemicals Management

Reduce risks to Canadians and impacts on the environment posed by harmful substances as a result of decreased environmental concentrations and human exposure to such substances.

(Minister of the Environment and Minister of Health)

Implementation Strategies for Chemicals Management
(3.12.1 to 3.12.8)

Leading by Example

3.12.1   Federal custodians plan and undertake assessment and remediation/risk management activities at contaminated sites for which they are responsible in order to reduce human health and ecological risks at higher priority sites. (EC)

3.12.2   Guidance and program policies developed by the program secretariat and the expert support departments are used by federal custodians in the program implementation activities. (EC)

3.12.3   In 2010-11, site assessments will be undertaken on an estimated 1500 projects by 15 federal custodians in total while an estimated 500 remediation/risk management projects will be implemented by 17 custodians in total. (EC)

Advancing Knowledge and Communications

3.12.4   Assess 100% of existing commercial substances as identified under the Chemicals Management Plan for risks to human health and/or the environment (100% of total of 4300 by 2020). (EC, HC)

3.12.5   Assess 100% of new substances, for which Environment Canada has been notified by industry of their intended manufacture or import, to determine if they are suspected of being toxic within the timelines in the regulation or established services standards. (EC, HC)

3.12.6   The Northern Contaminants Program will continue monitoring contaminant levels in wildlife and people in the Canadian North. (INAC)

Demanding Performance

3.12.7   Ensure at least one risk management measure is in place within the legally mandated timeframes for 100% of substances added to the List of Toxic Substances within. (EC,HC)

3.12.8   Deliver compliance promotion activities for new instruments developed under CEPA 1999. (EC)

4. Goal: Water Availability

Enhance information to ensure that Canadians can manage and use water resources in a manner consistent with the sustainability of the resource.

4.1 Target: Water Resource Management and Use

Promote the conservation and wise use of water to affect a 30 per cent reduction or increased efficiency in water use in various sectors by 2025 (based on 2009 water use levels).

(Minister of the Environment)

Implementation Strategies for Water Resource Management and Use (4.1.1 to 4.1.12)

Enabling Capacity
4.1.1   Provide non-financial support for a partnership consortium that will implement a water labeling and certification program to Canadians. (EC)
4.1.2   Enhance and expand effective partnerships that enable the voluntary and regulatory means of managing the demand for water towards its sustainability. (EC)
4.1.3   Diversify the western Canadian economy by making strategic investments in the commercialization and adoption of water technologies through the Western Diversification Program. (WD)

Advancing Knowledge and Communications
4.1.4   Improve knowledge of water, its nature, extent, availability, sector use and best management practices such as Integrated Watershed Management to Canadians. (EC, NRCan)
4.1.5   Provide web and print based information on the science and knowledge of water to Canadians in a comprehensive and timely manner to enable responsible decision. (EC, NRCan)
4.1.6   Continue work on collection of hydrometric data through the Water Survey of Canada. (EC, HC)
4.1.7   Conduct research and modeling with respect to water use and management particularly in the design and implementation of integrated decision systems such as Integrated Watershed Management. (EC)
4.1.8   Conduct surveys on water use such as the Municipal Water and Wastewater Survey (EC) and the CESI Industrial Water Use Survey, Survey of Drinking Water Plants and Agriculture Water Use Survey. (Stats Can, EC)
4.1.9   Continue the development and implementation of Water Availability Indicators. (HC, EC, NRCan)
4.1.10   Complete 15 assessments for Canada's 30 key regional aquifers and produce a national groundwater inventory to help Canadians better understand and manage underground water resources. (NRCan)
4.1.11   Conduct hydrological and hydraulic studies in support of key environmental projects/programs of federal interest (e.g. oil sands). (EC)

Demanding Performance
4.1.12   Develop appropriate tools to ensure federal leadership in water efficiency in the Federal House. (EC)

ANNEX 3: Theme III

PROTECTING NATURE

5. Goal: Wildlife Conservation

Maintain or restore populations of wildlife to healthy levels.

5.1 Target: Terrestrial and Aquatic Wildlife Conservation

Population trend (when available) at the time of reassessment is consistent with the recovery strategy for 100% of listed species at risk (for which recovery has been deemed feasible) by 2020.

(Minister of the Environment)

Implementation Strategies for Wildlife Conservation – Species at Risk (5.1.1 to 5.1.7)

Enabling Capacity
5.1.1   Fulfill Canada's obligations under the *Species at Risk Act* by listing and protecting those species in critical need of conservation action. (EC)
5.1.2   Fulfill Canada's obligations under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) by helping to ensure that the status of no species is threatened by international trade. (EC)

Advancing Knowledge and Communications
5.1.3   Maintain the Species at Risk Public Registry which fulfills the requirement under the *Species at Risk Act* (SARA). (EC)
5.1.4   Continue to support the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessments and re-assessments to understand and communicate progress in species survival and recovery. (EC)
5.1.5   Continue to lead and cooperate under the National Recovery Program (RENEW) with provinces and territories consistent with the Accord for the Protection of Species at Risk. (EC)

Demanding Performance
5.1.6   Enhance the implementation of SARA within DFO and EC to protect and recover species at risk relative to their respective mandates. (DFO, EC)

5.1.7   Lead the development of national recovery strategies for species at risk that are found primarily on Parks Canada administered lands and waters. (PC)

5.2 Target: Terrestrial and Aquatic Wildlife Conservation

Target for proportion of migratory bird species whose population varies within acceptable bounds of the population goals will be established in 2011 once the Bird Status Database is complete.

(Minister of the Environment)

Implementation Strategies for Wildlife Conservation – Migratory Birds (5.2.1 to 5.2.8)

Enabling Capacity
5.2.1   Fulfill Canada's obligations under the Migratory Bird Convention of 1916 between Canada and the United States as implemented in Canada under the *Migratory Birds Convention Act*, 1994 by ensuring that Migratory Bird populations are managed and conserved. (EC)
5.2.2   Fulfill Canada's obligations under the *Species at Risk Act* by listing and protecting those species in critical need of conservation action. (EC, DFO)

Advancing Knowledge and Communications
5.2.3   Ensure that all Conservation Plans for the 22 Bird Conservation Regions (BCR) are publicly available. (EC)

Demanding Performance
5.2.4   Complete hiring of management cadre within Enforcement Operations by Fall 2010. Recruit and train new officers for the Compliance and Enforcement Program by mid 2010-11. (EC)
5.2.5   Develop and implement a regulation for the management of the incidental takes of migratory birds in accordance with the purpose of the *Migratory Birds Convention Act, 1994*. (EC)
5.2.6   Implement recommendations of the review of migratory bird monitoring programs. (EC)
5.2.7   Recruit and train new officers for the Compliance and Enforcement Program. (EC)
5.2.8   Carry out actions for priority migratory bird species as indicated by Bird Conservation Regions Plans. (EC)

6. Goal: Ecosystem/Habitat Conservation and Protection

Maintain productive and resilient ecosystems with the capacity to recover and adapt; and protect areas in ways that leave them unimpaired for present and future generations.

6.1 Target: Terrestrial Ecosystems and Habitat

Non-Park Protected Habitat

Habitat target to support conservation of priority migratory birds and species at risk will be set by 2015.

(Minister of the Environment)

Implementation Strategies for Non-Park Protected Habitat (6.1.1 to 6.1.11)

Enabling Capacity
6.1.1   Implement integrated activities and programs with other levels of government and external stakeholders that lead to the improvement of the state (environmental quality) of priority ecosystems across the country. (EC)
6.1.2   Ensure the protection and conservation of important habitats for wildlife by facilitating an integrated landscape management approach. (EC)
6.1.3   Manage National Wildlife Areas (NWAs), Migratory Bird Sanctuaries (MBSs) and Marine Wildlife Areas to protect wildlife habitat, and unique and productive ecosystems either directly and/or through partnership arrangements. (EC)
6.1.4   Implement the Northwest Territories (NWT) Protected Areas Strategy and the Inuit Impact and Benefits Agreement to implement up to six new NWAs in the NWT and three in Nunavut. (EC)
6.1.5   Maintain the incentives for the protection of Canada's ecologically-sensitive land, including habitat used by species at risk, through ongoing tax assistance for donations of ecologically-sensitive land under the Ecological Gifts Program. (FIN)

Advancing Knowledge and Communications
6.1.6   Determine resilience of National Protected Areas network in the face of climate change and other anthropogenic stressors. (EC)
6.1.7   Develop and apply models for economic valuation of ecosystem services to support sustainable development decision-making. (EC)
6.1.8   Establish frameworks for identifying indicators and developing appropriate monitoring activities for EC habitat programs. (EC)
6.1.9   Maintain the Conservation Areas Reporting and Tracking System. (EC)

Demanding Performance
6.1.10   Complete the development of the protected areas strategy including the development of permitting standards and updating management plans. (EC)
6.1.11   Enhance enforcement in Environment Canada Protected Areas (MBSs and NWAs). (EC)

6.2 Target: Terrestrial Ecosystem and Habitat

Park Protected Habitat:

Maintain or improve the overall ecological integrity in all national parks from March 2008 to March 2013.

(Minister of the Environment)

Implementation Strategies for Park Protected Habitat (6.1.1 to 6.1.13)

Refer to the appropriate implementation strategies outlined under Target 6.1: Terrestrial Ecosystem and Habitat – Non-Park Protected Habitat, and:

Demanding Performance
6.1.12   Through active management and restoration initiatives address conservation challenges and demonstrate improvements in key indicators of ecological integrity in 20 of Canada's national parks. (PC)
6.1.13   Establish one new national park by March 2013; complete feasibility assessments for five other potential national parks and one proposed expansion. (PC, NRCan contributor)

6.3 Target: Marine Ecosystems

Improve the conservation of ocean areas and marine ecosystems by 2012.

(Minister of Fisheries and Oceans)

Implementation Strategies for Marine Ecosystems (6.3.1 to 6.3.9)

Enabling Capacity
6.3.1   Develop a federal-provincial-territorial network of Marine Protected Areas. (DFO, NRCan)
6.3.2   Adopt eco-system-based approaches for ocean activities. (DFO)
6.3.3   Identify indicators and develop draft monitoring plans for existing Marine Protected Areas. (DFO)

Advancing Knowledge and Communications
6.3.4   Undertake research to improve understanding of marine ecosystems and support initiatives to identify and characterize vulnerable marine ecosystems. (DFO, EC)
6.3.5   Provide advice to decision-makers on potential impacts on migratory birds and species at risk and ecological risks associated with specific high-priority ocean activities. (DFO, EC, NRCan)
6.3.6   Develop State of Oceans reports. (DFO)

Demanding Performance
6.3.7   Make demonstrable progress in protecting ecologically significant marine areas by identifying six new Marine Protected Areas under the *Oceans Act* by 2012. (DFO)
6.3.8   Complete feasibility assessments for two potential national marine conservation areas. (PC, NRCan contributor)
6.3.9   Develop a national zoning framework for the national marine conservation area program. (PC)

6.4 Target: Managing Threats to Ecosystems

Threats of new alien invasive species entering Canada are understood and reduced by 2015.

(Minister of the Environment)

Implementation Strategies for Managing Threats to Ecosystems – Alien Invasive Species (6.4.1 to 6.4.10)

Leading by Example

6.4.1   Fulfill federal responsibilities related to prevention, detection, rapid response and management of invasive alien species. Key activities are related to governance (including international cooperation legislation/regulation, science and technology, risk analysis, information management and sharing, performance promotion, management, and mitigation). (EC, NRCan)

Enabling Capacity

6.4.2   Implement the Invasive Alien Species Partnership Program, which provides funding to provinces, municipalities, educational institutions and non-government organizations, as well as to other groups who are working in support of the goals of the National Strategy – An Invasive Alien Species Strategy for Canada (2004). (EC)

6.4.3   Implement Canada's Action Plan to Address the Threat of Aquatic Invasive Species. (DFO)

6.4.4   Coordinate both national and regional environmental emergency preparedness capabilities. (EC)

Advancing Knowledge and Communications

6.4.5   Develop spill models, analysis methods, fate and behaviour algorithms, measurement and remote sensing capabilities, decontamination protocols, and countermeasures used during incidents. (EC)

6.4.6   Provide scientific and technical advice on weather and sea state and the behaviour and effects of chemicals, sampling and analysis, countermeasures, sensitivity mapping, trajectory, modeling, and operation of the 24/7 National Environmental Emergencies Centre in Ottawa. (EC)

6.4.7   Use preserved and living biological collections to support identification, characterization, risks assessment, and management strategies for alien invasive species. (AAFC)

Demanding Performance

6.4.8   Implement Ballast Water Control and Management Regulations to prevent invasive species from ships' ballast water. This includes cooperating with the United States Coast Guard and Seaway Authorities to inspect vessels entering the Seaway and Great Lakes to ensure compliance. (TC)

6.4.9   Promote compliance, track and report number of environmental emergency plans in place as required by s.200 Environmental Emergency Planning Regulation under CEPA 1999. (EC)

6.4.10   Prevent the introduction and rapid dispersal of invasive species and disease into Canada via land, air and marine ports of entry, thus reducing potential deleterious effects to ecosystems, economies, and society. (CBSA)

6.5 Target: Managing Threats to Ecosystems

Reduce the frequency and consequences of environmental emergencies that affect Canada.

(Minister of the Environment)

Implementation Strategies for Environmental Emergences (6.4.1 to 6.4.10)

Refer to the appropriate implementation strategies outlined under Target 6.4: Managing Threats to Ecosystems – Alien Invasive Species.

7. Goal: Biological Resources

Sustainable production and consumption of biological resources are within ecosystem limits.

7.1 Target: Sustainable Fisheries

Improve the management and conservation of major stocks.

(Minister of Fisheries and Oceans)

Implementation Strategies for Sustainable Fisheries (7.1.1 to 7.1.4)

Enabling Capacity
7.1.1   Deliver an integrated fisheries program that is credible, science-based, affordable, effective and contributes to sustainable wealth for Canadians. (DFO)
7.1.2   Sustainable development and integrated management of resources in or around Canada's aquatic environment through oceans and fish habitat management. (DFO)

Advancing Knowledge and Communications
7.1.3   Undertake research to improve understanding of marine ecosystems and knowledge of straddling stocks and highly migratory species such as tuna, swordfish and Greenland halibut. (DFO)
7.1.4   Increase knowledge of fisheries resources, their productivity and the ecosystem factors affecting them. (DFO)

7.2 Target: Sustainable Aquaculture

To promote the conservation and optimum use of marine resources and the aquatic environment through improved aquaculture management by 2014.

(Minister of Fisheries and Oceans)

Implementation Strategies for Sustainable Aquaculture (7.2.1 to 7.2.4)

Enabling Capacity
7.2.1   Deliver an efficient federal-provincial regulatory management regime developed consistent with regulatory best practices. (DFO)

Advancing Knowledge and Communications
7.2.2   Facilitate implementation of certification initiatives and support standards development. (DFO)
7.2.3   Develop and release the first report to Canadians on aquaculture sustainability. (DFO)

Demanding Performance
7.2.4   Increase the science knowledge base needed to support informed ecosystem-based environmental regulation and decision-making, especially that of regulatory-based programs such as Aquaculture Management. (DFO)

7.3 Target: Sustainable Forest Management

Improve the management of Canada's forest ecosystems through the development and dissemination of knowledge.

(Minister of Natural Resources)

Implementation Strategies for Sustainable Forest Management (7.3.1 to 7.3.2)

Enabling Capacity
7.3.1   First Nations Forestry Program - support initiatives to enhance first nations' capacity to sustainably manage reserve forests and other forests. (INAC, NRCan)

Advancing Knowledge and Communications
7.3.2   Generate and disseminate scientific knowledge related to forest ecosystems. (NRCan)

ANNEX 4: THEME IV

SHRINKING THE ENVIRONMENTAL FOOTPRINT – BEGINNING WITH GOVERNMENT

8. Goal: Greening Government Operations

Minimize the environmental footprint of government operations.

Note: These targets are applicable to federal operations in Canada only.

8.1 Target: As of April 1, 2012, and pursuant to departmental strategic frameworks, new construction and build-to-lease projects and major renovation projects will achieve an industry-recognized level of high environmental performance.[2]

Implementation Strategies for New Construction, Build-to-Lease Projects and Major Renovations (8.1.1 to 8.1.6)

Mandatory Implementation Strategies
8.1.1   By March 31, 2012, each department will develop a strategic framework that defines the custodian's intentions and approach to assessing all projects related to the green building targets. Elements of the strategic framework will include:
   8.1.1.1 Industry-recognized assessment and verification tool(s) to be used.
   8.1.1.2 Assessment level to be achieved (minimum level of environmental performance must be no less than the custodian's current commitment(s) to green building).
   8.1.1.3 For the new construction and fit-up targets: establishing an appropriate threshold (dollar value and/or floor area).
   8.1.1.4 For all green building targets, departments will identify applicable building types for inclusion.
   8.1.1.5 Number or percentage of existing crown buildings targeted for assessment in a given year.
   8.1.1.6 Whether, at the discretion of the custodian, certification will be sought.
Best Practice Implementation Strategies
8.1.2   Register projects, wherever possible

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[2] This would be demonstrated by achieving LEED NC Silver, Green Globes Design 3 Globes, or equivalent.

8.1.2.1 Canada Green Building Council.
8.1.2.2 Green Globes.
8.1.2.3 Building Owners and Managers Association of Canada.
8.1.3   Utilize a lifecycle approach, including the use of lifecycle assessment tools for accommodation and building management.
8.1.4   Utilize an integrated design approach early in the project planning phase.
8.1.5   Foster the use of wood and other sustainable materials in construction and renovation projects, while taking into account cost, project requirements, greenhouse gas emissions and the principles of sustainable development.
8.1.6   Establish benchmarks for key environmental aspects such as energy; water management; and construction, renovation and demolition waste management.

8.2 Target: As of April 1, 2012, and pursuant to departmental strategic frameworks, existing crown buildings over 1000 m^2 will be assessed for environmental performance using an industry-recognized assessment tool.[3]

Implementation Strategies for Crown Buildings Over 1000 m^2

Refer to both the mandatory and best practice implementations strategies under Target 8.1: New Construction, Build-to-Lease Projects and Major Renovations (8.1.1 to 8.1.6).

8.3 Target: As of April 1, 2012, and pursuant to departmental strategic frameworks, new lease or lease renewal projects over 1000 m^2, where the Crown is the major lessee, will be assess for environmental performance using an industry-recognized assessment tool.[4]

Implementation Strategies for New Lease or Lease Renewal Projects over 1000 m^2

Refer to both the mandatory and best practice implementations strategies under Target 8.1: New Construction, Build-to-Lease Projects and Major Renovations (8.1.1 to 8.1.6).

8.4 Target: As of April 1, 2012, and pursuant to departmental strategic frameworks, fit-up and refit projects will achieve an industry-recognized level of high environmental performance.[5]

Implementation Strategies for Fit-up and Refit Projects

Refer to both the mandatory and best practice implementations strategies under Target 8.1: New Construction, Build-to-Lease Projects and Major Renovations (8.1.1 to 8.1.6).

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[3] Assessment tools include: Building Owners and Managers Association (BOMA) Building Environmental Standards (BESt) Green Globes or equivalent.
[4] Assessment tools include BOMA BESt, an appropriately tailored BOMA International Green Lease Standard, or equivalent.
[5] This would be demonstrated by achieving LEED CI Silver, Green Globes Fit-Up 3 Globes, or equivalent.

8.5 Target: The Government of Canada will take action now to reduce levels of greenhouse gas emissions from its operations, to match the national target of 17% below 2005 by 2020.

Implementation Strategies for GHG Emissions from Federal Operations
(8.5.1 to 8.5.25)

Mandatory Implementation Strategies
8.5.1   By March 31, 2011, each department will establish a baseline of emissions, set a target and put in place an implementation plan to reduce greenhouse gas emission levels in absolute terms from 2005 levels and put them on a clear downward trend.
8.5.2   The FSDS is due to be updated in 2013, 2016 and 2019. At that time, the Government will take stock of progress and identify any additional plans required to meet the 2020 target.
8.5.3   Annually, departments will report their greenhouse gas emissions inventories using the Federal Greenhouse Gas Tracking Protocol – a Common Standard for Federal Operations.

Best Practice Implementation Strategies

Federal Buildings:

8.5.4   Utilize Natural Resources Canada's Federal Buildings Initiative.
8.5.5   Conduct energy audits and re-commissioning.
8.5.6   Implement building retrofits and upgrades.
8.5.7   Switch to lower-GHG-intensity fuels or energy sources.
8.5.8   Make use of on- and off-site renewable energy sources.
8.5.9   Optimize use of floor area.
8.5.10   Reduce GHG intensity of central heating and cooling plants.
8.5.11   Implement energy-efficient information technology infrastructure and services.
8.5.12   Purchase energy-efficient/energy-saving equipment.
8.5.13   Conduct office equipment energy audits.
8.5.14   Develop and implement awareness campaigns to encourage energy-saving behaviours.
8.5.15   Benchmark against government operations in other jurisdictions.
8.5.16   Prepare analysis for medium and long-term SMART targets.

Federal Fleet:

8.5.17   Follow guidance provided in the Treasury Board Secretariat's Guide to Fleet Management for light-duty and executive vehicles.
8.5.18   Utilize Natural Resources Canada's ecoENERGY for Fleets and FleetSmart programs.
8.5.19   Purchase fuel-efficient and alternative fuel vehicles through use of green standing offers.
8.5.20   Implement fleet rationalization/rejuvenation/right-sizing.
8.5.21   Participate in Natural Resources Canada's SmartDriver and Fuel Management training.
8.5.22   Install after-market devices to reduce fuel consumption or track vehicle-use statistics, e.g., anti-idling devices, heat recovery systems or Global Positioning System devices.
8.5.23   Undertake vehicle sharing, e.g., a central pool of administrative vehicles for use by all departments.
8.5.24   Benchmark against government operations in other jurisdictions.
8.5.25   Prepare analysis for medium and long-term SMART targets.

8.6 Target: By March 31, 2014, each department will reuse or recycle all surplus electronic and electrical equipment (EEE) in an environmentally sound and secure manner.

Implementation Strategies for Reuse and Recycle of Electronic and Electrical Equipment (8.6.1 to 8.6.5)

Mandatory Implementation Strategies

8.6.1   By March 31, 2012 each department will put into action an implementation plan for the disposal of all departmentally-generated EEE. Elements of the implementation plan will include:

   8.6.1.1 Key components of the EEE disposal process.
   8.6.1.2 Roles and responsibilities.
   8.6.1.3 Key activities / activity areas.
   8.6.1.4 Security considerations.
   8.6.1.5 Opportunities for continuous improvement.
   8.6.1.6 Mechanisms to evaluate plan effectiveness (e.g. audit / periodic review / monitoring).
   8.6.1.7 Plans/strategies for Intradepartmental engagement.
   8.6.1.8 Tools and resources.

8.6.2   In accordance with Treasury Board's Policy on Government Security, federal departments and agencies have sole responsibility for preventing the unauthorized release of information contained in their surplus assets.

8.6.3   In accordance with Treasury Board's Directive on Disposal of Surplus Materiel:

   8.6.3.1 Dispose of electronic and electrical equipment in a way that maximizes re-use where possible through:

      8.6.3.1.1   Donation to Computers for Schools (1st right of refusal).
      8.6.3.1.2   Resale through Crown Assets Distribution.
      8.6.3.1.3   Transfer or donation to other departments and agencies or other qualifying charitable or non-profit organizations.

   8.6.3.2 Convert surplus EEE to waste in an environmentally sustainable manner.[6]

      8.6.3.2.1   Recycle through provincial e-waste programs if applicable.
      8.6.3.2.2   Recycle through Departmental Individual Standing Offer (DISO).

Best Practice Implementation Strategies

8.6.4   Implement a centralized departmental asset management system that can track and report on all EEE directed to disposal mechanisms.

8.6.5   Access EEE disposal mechanisms in accordance with the Guideline for the Disposal of Federal Surplus EEE.

8.7 Target: By March 31, 2013, each department will achieve an 8:1 average ratio of office employees to printing units. Departments will apply target where building occupancy levels, security considerations, and space configuration allow.

Implementation Strategies for the Ratio of Office Employees to Printing Units (8.7.1 to 8.7.4)

Best Practice Implementation Strategies

8.7.1   Develop an inventory of organizational printing units.

8.7.2   Where data is limited, focus initial baseline-setting and tracking on areas/regions where data is most

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[6] Mechanisms indicated are not suitable for disposal of assets classified above Protected B.

readily available and extrapolate, as appropriate, across the department.

8.7.3   Use total number of networked printers as a proxy for all printers. This tracking method should be accompanied by a departmental policy to limit the use of desktop printers, where appropriate.

8.7.4   Utilize Public Works and Government Services Canada's Managed Print Services to facilitate improvements to organizations' imaging environment – specifically in regard to 'greening' and increased efficiencies.

8.8 Target: By March 31, 2014, each department will reduce internal paper consumption per office employee by 20%. Each department will establish a baseline between 2005-2006 and 2011-2012, and applicable scope.

Implementation Strategies for Reducing Internal Paper Consumption per Office Employee (8.8.1 to 8.8.9)

Best Practice Implementation Strategies
8.8.1   Purchase information can be used as proxy for quantity consumed.
8.8.2   Focus initial baseline-setting and tracking on areas/regions where data is most readily available and extrapolate across the department.
8.8.3   Maximize use of the green standing offer for paper (E60PD-070004) to improve tracking and reporting capabilities. (Upon request, PWGSC is able to provide departments with data on the usage of the green standing offer for paper, as of the 2010-11 fiscal year).
8.8.4   Utilize tracking capabilities of networked printers.
8.8.5   Adopt a paper consumption directive, establishing a department-wide set of practices, guidelines, and measurement procedures to reduce the environmental impact of paper consumption.
8.8.6   Set all duplex-enabled printers and copiers to default duplex printing.
8.8.7   Conduct a paper-intensity scan of the organization to determine which processes have the most significant impact on multipurpose office paper use, enabling appropriate actions to reduce this use.
8.8.8   Utilize green meetings guide.
8.8.9   Improve, or create awareness of, paper reduction practices of employees, including
    8.8.9.1   Intranet communication and promotion of paper reduction strategies, initiatives and best practices.
    8.8.9.2   Use of Compensation Web Applications.
    8.8.9.3   Use of collaborative tools (e.g., wikis).

8.9 Target: By March 31, 2012, each department will adopt a guide for greening meetings.

Implementation Strategies for Adopting a Guide for Greening Meetings (8.9.1)

Best Practice Implementation Strategies
8.9.1   Environment Canada's green meeting guide may be adopted or used as a reference for the development of the department's guide.

8.10 Target: As of April 1, 2011, each department will establish at least 3 SMART green procurement targets to reduce environmental impacts.

Implementation Strategies for Establishing SMART Green Procurement Targets (8.10.1 to 8.10.4)

Best Practice Implementation Strategies
8.10.1 Conduct an analysis of departmental spend and environmental risks to identify greatest opportunities to reduce environmental impacts.
8.10.2 Develop reference list of key categories of goods and services with significant environmental impacts.
8.10.3 Implement best practices for greening planning, acquisition, use and disposal of targeted goods and services.
8.10.4 Utilize Public Works and Government Services Canada's green consolidated procurement instruments whenever possible or incorporate comparable environmental performance considerations for other procurement activity.

8.11 Target: As of April 1, 2011, each department will establish SMART targets for training, employee performance evaluations, and management processes and controls, as they pertain to procurement decision-making.

Implementation Strategies for Establishing SMART Targets for Training, Evaluation and Management Processes and Controls (8.11.1 to 8.11.7)

Mandatory Implementation Strategies
8.11.1 Develop departmental green procurement targets with respect to:
    8.11.1.1 Training for select employees.
    8.11.1.2 Employee performance evaluation for managers and functional heads of procurement and materiel management; and,
    8.11.1.3 Management processes and controls (defined as approval processes and documentation requirements or any other oversight mechanism used by a department).

Best Practice Implementation Strategies
8.11.2 Departments to develop a standardized clause or clauses related to green procurement that would be included in employee performance evaluations, as set out in the target that they establish.
8.11.3 Ensure that procurement and materiel management staff and acquisition cardholders complete the necessary training to support the Policy on Green Procurement objectives, e.g., Canada School of Public Service online course on Green Procurement (C215) or in-house equivalent.
8.11.4 Include the contribution to the Policy on Green Procurement objectives in the performance evaluations of managers and functional heads of procurement and materiel management.
8.11.5 Adjust departmental management processes and controls to integrate environmental considerations in procurement decisions and operations.
8.11.6 Monitor, document and report on plans and targets with respect to green procurement.
8.11.7 Utilize the Public Works and Government Services Canada Guideline – Integrating Environmental Considerations Into Departmental Procurement Management Frameworks to facilitate integration of environmental considerations into management process and controls.

Figure 6: Responsibility for Greening Government Operations Targets by Department/Agency

Departments and Agencies[1]	Green Buildings[2]	Green Procurement	E-waste, Printing Units, Paper Consumption & Green Meetings	GHG emissions from buildings and fleet	GHG emissions from fleet only
Agriculture and Agri-Food	✓	✓	✓	✓	
Atlantic Canada Opportunities		✓	✓		
Canada Border Services	✓	✓	✓	✓	
Canada Revenue		✓	✓		✓
Canadian Heritage		✓	✓		
Canadian International Development		✓	✓		
Citizenship and Immigration		✓	✓		✓
Economic Development for the Region of Quebec		✓	✓		
Environment	✓	✓	✓	✓	
Finance		✓	✓		
Fisheries and Oceans	✓	✓	✓	✓	
Foreign Affairs and International Trade		✓	✓		
Health	✓	✓	✓		✓
Human Resources and Skills Development		✓	✓		✓
Indian and Northern Affairs	✓	✓	✓		✓
Industry	✓	✓	✓		✓
Justice		✓	✓		
National Defence	✓	✓	✓	✓	
Natural Resources	✓	✓	✓	✓	
Parks	✓	✓	✓	✓	
Public Health	✓	✓	✓		
Public Safety and Emergency Preparedness		✓	✓		
Public Works and Government Services	✓	✓	✓	✓	
Transport	✓	✓	✓	✓	
Treasury Board Secretariat		✓	✓		
Veterans Affairs	✓	✓	✓		
Western Economic Diversification		✓	✓		

Notes:
[1] Refers to the departments and agencies bound by the *Federal Sustainable Development Act*.
[2] Green buildings targets apply to custodians departments and agencies bound by the *Federal Sustainable Development Act*.

ANNEX 5: List of Departments

Departments and Agencies required to table SD strategies under the *Federal Sustainable Development Act*:
1. Department of Agriculture and Agri-Food
2. Department of Canadian Heritage
3. Department of Citizenship and Immigration
4. Department of the Environment
5. Department of Finance
6. Department of Fisheries and Oceans
7. Department of Foreign Affairs and International Trade
8. Department of Health
9. Department of Human Resources and Skills Development
10. Department of Indian Affairs and Northern Development
11. Department of Industry
12. Department of Justice
13. Department of National Defence
14. Department of Natural Resources
15. Department of Public Safety and Emergency Preparedness
16. Department of Public Works and Government Services
17. Department of Social Development
18. Department of Transport
19. Treasury Board
20. Department of Veterans Affairs
21. Department of Western Economic Diversification
22. Atlantic Canada Opportunities Agency
23. Canada Border Services Agency
24. Canada Revenue Agency
25. Canadian International Development Agency
26. Economic Development Agency of Canada for the Regions of Quebec
27. Parks Canada Agency
28. Public Health Agency of Canada

ANNEX 6: List of Acronyms

The following acronyms are frequently used throughout the chapters of the FSDS and are presented here for convenience:

CED: Clean Energy Dialogue
CESD: Commissioner for the Environment and Sustainable Development
CESI: Canadian Environmental Sustainability Indicators
CSR: Corporate Social Responsibility
DPR: Departmental Performance Report
EMS: Expenditure Management System
FCM: Federation of Canadian Municipalities
FSDA: Federal Sustainable Development Act
FSDS: Federal Sustainable Development Strategy
FTE: Full Time Equivalent
IPCC: Intergovernmental Panel on Climate Change
OECD: Organization for Economic Cooperation and Development
PM$_{2.5}$: Particulate Matter
PRI: Policy Research Initiative
RPP: Report on Plans and Priorities
SCP: Sustainable patterns of Consumption and Production
SD: Sustainable Development
SDO: Sustainable Development Office
SEA: Strategic Environmental Assessment
SMART: Specific, Measurable, Achievable, Relevant, and Time-bound
TBS: Treasury Board Secretariat

The following acronyms are used within Annexes 1 through 4 to specify those federal organizations that lead, or share the accountability for, the implementation strategies identified in support of the targets.

AAFC – Agriculture and Agri-Food Canada
ACOA – Atlantic Canada Opportunities Agency
CFIA – Canada Food Inspection Agency
DEC – Canada Economic Development Agency for the Regions of Quebec
DFAIT – Department of Foreign Affairs and International Trade
DFO – Department of Fisheries and Oceans
EC – Environment Canada
FIN – Finance Canada
HC – Health Canada
HRSDC – Human Resources and Skills Development Canada
IC – Industry Canada
INAC – Indian and Northern Affairs Canada
NRCan – Natural Resources Canada
PC – Parks Canada Agency
PWGSC – Public Works and Government Services Canada
Stats Can – Statistics Canada
TC – Transport Canada

WD – Western Economic Diversification

The following acronyms are frequently used throughout annexes 1-4 and are presented here for convenience.

ACOA – Atlantic Canada Opportunities Agency
AOCs – Areas of Concern
AQHI – Air Quality Health Index
BCR – Bird Conservation Region
BLIERS – Base-Level Industrial Emission Requirements
BMP – Beneficial Management Practices
CAAQS – Canadian Ambient Air Quality Standards
CAC – Criteria Air Contaminants
CAEP – Committee on Aviation Environmental Protection
CAMS – Comprehensive Air Management System
CARA – Clean Air Regulatory Agenda
CBWM – Community-Based Water Monitor
CCME – Canadian Council of Ministers of the Environment
CCS – Carbon Capture and Storage
CEPA 1999 – *Canadian Environmental Protection Act, 1999*
CESI – Canadian Environmental Sustainability Indicators
CITES – Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMA – Census Metropolitan Area
COSEWIC – Committee on the Status of Endangered Wildlife in Canada
CSR – Corporate Social Responsibility
DISO – Departmental Individual Standing Offer
EEE – electronic and electrical equipment
EHO – Environmental Health Officer
FCSAP – Federal Contaminated Sites Action Plan
FSDA – *Federal Sustainable Development Act*
GCDWQ – Guidelines for Canadian Drinking Water Quality
GHG – Greenhouse Gases
GLSF – Great Lakes Sustainability Fund
GLWQA – Great Lakes Water Quality Agreement
HFCs – hydrofluorocarbons
ICAO – International Civil Aviation Organization
IFIT – Investment in Forest Industry Transformation
IMO – International Maritime Organization
LMI – Labour Market Information
LRTAP – Long Range Transboundary Air Pollutants
LSCUF – Lake Simcoe Clean-Up Fund
MBSs – Migratory Bird Sanctuaries
MEF – Major Economies Forum
MOU – Memorandum of Understanding
NAHARP – National Agri-Environmental Health Analysis and Reporting Program
NAWMP – North American Waterfowl Management Plan
NCGAVS – National Carbon Greenhouse Gas Accounting and Verification System
NO$_x$ – Nitrogen Oxide
NPRI – National Pollutant Release Inventory
NWAs – National Wildlife Areas

NWT – Northwest Territories
PERD – Program on Energy Research and Development
PM – Particulate Matter
REDD – Reduce Emissions from Deforestation and Forest Degradation
RENEW – National Recovery Program
SARA – *Species At Risk Act*
SLCF – Short Lived Climate Forcers
SMART – Specific, Measurable, Achievable, Realistic, Time Bound
UNECE – United Nations Economic Commission for Europe
UNFCCC – United Nations Framework Convention on Climate Change
VOCs – Volatile Organic Compounds
WEBs – Watershed Evaluation of Beneficial Management Practices

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Additional information can be obtained at:

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