



Transport  
Canada

Transports  
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# Sustainable Development Strategy 2004-2006



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Canada 

## **Sustainable Development Strategy 2004-2006**

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## MINISTER'S MESSAGE

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To preserve and strengthen Canada's transportation system and advance Canadians' quality of life, transportation policy must provide a framework that addresses the three elements of sustainable transportation – social, economic and environmental.

Transportation is fundamental to Canada's economic prosperity and Canadians' quality of life. To maintain and improve our competitiveness, we need to ensure our transportation system is efficient and responsive to new challenges. To enhance our quality of life, we also need to ensure that our system is safe, secure and environmentally responsible. These are the goals underlying our vision for transportation in Canada.

As part of achieving this vision, I am pleased to present *Transport Canada's Sustainable Development Strategy 2004-2006*. This is the third such strategy. The first provided a sound foundation for integrating environmental considerations into the decisions, policies and programs of the department. Building on the accomplishments and lessons learned from the first strategy, in the second one, Transport Canada adopted a set of sustainable development principles, identified priority challenges and made specific commitments to action. The following new strategy builds on these successes. It brings more precision to the concept of sustainability, and defines seven challenges and 32 specific commitments for the next three years.

This new strategy continues the journey towards a more sustainable transportation system for all Canadians. Transport Canada cannot do this alone. To develop this strategy, the department drew on the expertise of a national advisory group and other federal departments, consulted the provinces, territories and municipalities, and received input from Canadians from coast to coast. The strategy represents Transport Canada's plan for making better decisions in partnership with stakeholders in the transportation sector.

Achieving sustainable transportation is a long-term vision – one that requires partnerships among all levels of government and all segments of Canadian society. By working together, we can realize this vision.

The Honourable Tony Valeri, P.C., M.P.  
Minister of Transport



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## EXECUTIVE SUMMARY

### **Sustainable Development and Transport Canada**

Transportation takes place within a complex web of human and physical interactions and conditions. Trends in the environment, the economy and society affect the nature and scale of transportation activity, the impacts of that activity, and our responses to those impacts. The nature and volume of trade drives the demand for freight transportation. Similarly, the size of the population, its habits, income levels and land use patterns affect passenger travel.

Transportation is fundamental to Canada's economic prosperity and Canadians' quality of life. To maintain and enhance our competitiveness, we must ensure our transportation system is efficient and able to adapt to new challenges as they arise. To enhance our quality of life, we also need to ensure that our system is safe, secure and environmentally responsible.

To preserve and strengthen Canada's transportation system and advance Canadians' quality of life, transportation policy must provide a framework that addresses the three elements of sustainable transportation – social, economic and environmental. It must also give carriers and infrastructure providers the opportunity to adapt, innovate, compete and serve shippers and travellers, in a way that takes into account each of these elements. The fundamental policy challenge is to find the right balance among these three elements.

Transport Canada and other federal government departments tabled their first two sustainable development strategies in Parliament in December 1997 and February 2001. In this third strategy, Transport Canada builds on the accomplishments and lessons learned in the first two strategies. This strategy brings more precision to the

concept of sustainability and sets out new targets and performance measures for key sustainable transportation issues.

### **The Challenge of Sustainable Transportation**

Canada's size and high dependence on international trade make transportation very important to Canadians. Transportation – by land, water and air – links Canadians to each other and Canada with the world. Transportation moves goods to markets and people to their destinations (whether for business or pleasure), provides jobs and supports economic growth. Canada has a well-developed transportation system, with large investments in infrastructure, vehicles and fuel distribution networks.

Many of the social impacts of transportation are positive (e.g., mobility and human contact). However, there are social issues associated with the lack of access, availability and unintended effects of the operation of the transportation system. For example, health studies estimate that air pollution contributes to more than 5,000 premature deaths in Canada each year, as well as to numerous health-related problems.

Transportation has a wide range of impacts on the environment, including resource use (materials and energy), undesirable residuals (emissions, spills and leaks), and land use. Among those, some of the transportation activities that contribute to these impacts are: the construction of infrastructure; road system operation and maintenance; the production, operation, maintenance and disposal of vehicles; and, the use of energy.

### **Working Together**

Given the nature of sustainable transportation issues and its shared



jurisdiction, strong and effective partnerships are required with other federal departments, other levels of government, stakeholders and individual Canadians. A number of commitments, set out in Part 5 of this document, will be undertaken in partnership.

## Consultations

Consultations on this strategy were held in June 2003 in eight cities across Canada. They involved industry, transportation and environmental organizations, the general public, academia, health and labour groups, and other levels of government. Transport Canada also relied on a national advisory group, a group of transportation and environmental experts assembled to advise the department on the development of the strategy. The opinions shared by all participants with the department were instrumental in shaping the *Sustainable Development Strategy 2004-2006*. Appendix A provides the results of the consultation sessions and the full list of participants.

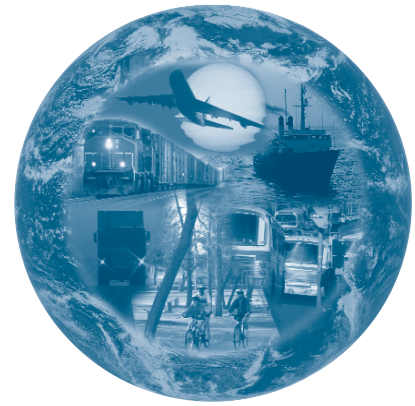
## Strategic Challenges for Transport Canada

Transport Canada has structured its 2004-2006 Strategy around seven strategic challenges. The seven challenges are:

1. Encourage Canadians to make more sustainable transportation choices
2. Enhance innovation and skills development
3. Increase system efficiency and optimize modal choices
4. Enhance efficiency of vehicles, fuels and fuelling infrastructure
5. Improve performance of carriers and operators
6. Improve decision-making by governments and the transportation sector
7. Improve management of Transport Canada operations and lands

Part 5 and Appendix B provide additional details on what the department will do over the next three years and how it will measure its progress.





# PART 1:

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## INTRODUCTION

Transportation is fundamental to Canada's economic prosperity and Canadians' quality of life. To maintain and enhance our competitiveness, we must ensure our transportation system is efficient and responsive to new challenges. To enhance our quality of life, we also need to ensure that our system is safe, secure and environmentally responsible.

In practical terms this means that, more and more, Canadians are relying on the transportation system to perform its vital role in ways that do not harm human health or the environment. Sustainable development is a concept that promotes a balance of the economic, social and environmental dimensions of transportation.

In its 1987 report, *Our Common Future*, the World Commission on Environment and Development defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The Government of Canada adopted this definition. In 1995, it passed amendments to the *Auditor General Act* requiring federal departments to prepare sustainable development strategies for tabling in Parliament by the end of 1997, and to update them every three years thereafter.

## Charting a course for the future

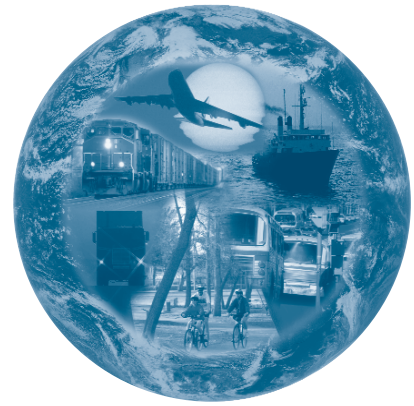
Transport Canada recognizes that sustainable development is a long-term goal, requiring the cooperation of many partners and individual Canadians in the search for effective solutions. Transport Canada's *Sustainable Development Strategy 2004-2006* builds on the accomplishments and lessons learned in previous strategies. It charts the department's course of action for the next three years.

The *Sustainable Development Strategy 2004-2006* has at its core, seven strategic challenges facing transportation. For each challenge, the department has defined specific commitments for action, along with targets and performance measures.

Making Canada's transportation system more sustainable requires a long-term commitment and coordinated effort by all levels of government, industry and, most importantly, by individual Canadians. It is not a goal that can be reached overnight, nor can it be achieved by Transport Canada acting alone.

Although this strategy represents an important step, Transport Canada recognizes that significant challenges lay ahead in adapting new technologies, improving transportation infrastructure, and educating Canadians on transportation choices.





## PART 2:

### TRANSPORT CANADA'S ROLE

#### We have been around for a while

Transport Canada was created in 1936 by combining the Marine Department, the Department of Railways and Canals, and the civil aviation branch of the Department of National Defence.

#### Committed to providing the best transportation system

The department has evolved significantly over the years in terms of its organization and responsibilities. However, our overall objective remains to provide Canadians with the best transportation system. This means ensuring they have a sustainable transportation system, characterized by safety and security, efficiency, and environmental responsibility.

#### Serving Canadians from coast to coast

Our department employs some 4,500 employees. Our headquarters are in Ottawa, and we have five regional offices across Canada: Atlantic (situated in Moncton), Quebec (Montreal), Ontario (Toronto), Prairie and Northern (Winnipeg) and Pacific (Vancouver). Regional offices are vital in ensuring that the federal government's transportation policies, programs, legislation

and activities respond to unique regional needs. They also deliver important Transport Canada services to Canadians.



#### Keeping up with the challenge of change

Since it was formed in 1936, Transport Canada has evolved considerably to meet the changing needs of Canadians. Generally, the department is moving away from the role of operator of the transportation system, towards that of regulator and policy maker.

Safety remains the department's number one concern. Transport Canada regulates and inspects vehicles, facilities, infrastructure and administrative practices for aviation, railways and shipping to ensure that people, as well as goods and services, are transported as safely as possible.

Transport Canada has the authority to regulate for certain environmental purposes. It regulates water pollution from ships, through the *Canada Shipping Act* and the *Arctic Waters Pollution Prevention Act*. Transport Canada also administers the *Transportation of Dangerous Goods Act* and operates CANUTEC, the 24-hour Canadian transportation emergency centre, to protect Canadians and the environment from the accidental release of dangerous goods.

The department works on environmental issues with other federal government departments, such as Natural Resources Canada on the fuel efficiency of road vehicles, and with Environment Canada on air emission regulations for road vehicles.

Transport Canada is also responsible for addressing international issues in transportation, such as air and marine transport, and for setting safety standards for new vehicles. The department oversees the national/interprovincial aspects of bus and truck transportation; rail passenger services through VIA Rail, a federal Crown Corporation; and, plays a role in monitoring and analyzing economic data to assess the competitiveness and efficiency of transportation services. Transport Canada undertakes research to improve transportation, concentrating on areas that advance safety, security, accessibility and environmental protection. Ensuring the necessary level of investment in our national transportation system is essential in a globalized world, and in our increasingly urbanized society. The federal government plays a key role in creating an appropriate environment, to encourage investments in transportation infrastructure that serve the national interest and enhance the quality of life in our communities.

In recent years, the department has worked to make Canada's transportation system more competitive and efficient by reducing government intervention and harmonizing regulations with other appropriate governments. To give users more say in how parts of the transportation system are managed, Transport Canada has divested many of its ports and airports to local organizations. As a result of this fundamental change, Transport Canada's role has evolved from operator to landlord and overseer.



### **A shared jurisdiction**

Creating a truly sustainable transportation system is challenging. In Canada, three levels of government share responsibility for transportation. In general, the federal government is responsible for national, interprovincial and international transportation; provincial governments are responsible for intraprovincial transportation; and, municipalities are responsible for urban transit and local planning decisions. Federal and provincial Ministers of Transportation coordinate activities through the Council of Ministers Responsible for Transportation and Highway Safety.

The **federal government** is responsible for most transportation policies, programs and



goals to ensure the safety, efficiency and accessibility of the national transportation system. The primary responsibility for transportation rests with Transport Canada. However, there are also other federal departments, agencies and Crown Corporations that play key roles in transportation issues. The Transportation Safety Board and provincial governments in particular, play important roles in maintaining the safety of the system nationwide.

The federal government is also largely responsible for international issues in transportation, standards for new vehicles (including national emissions standards for new on-road, off-road, and non-road vehicles and national fuel quality standards), the aviation mode, and most of the marine mode. It collaborates with foreign governments, agencies and organizations on several international safety initiatives. It is also responsible for national and inter-provincial/territorial aspects of rail, bus, and truck transportation. Urban transportation is not a federal responsibility per se, but many aspects of transportation in urban areas are within federal jurisdiction.

Most **provinces/territories** involve their departments of transportation, public works, economic development and environment, in decision-making related to transportation. The construction and maintenance of major highways, vehicle licensing and inspection, and the enforcement of traffic rules such as speed limits, fall within provincial/territorial jurisdiction. Responsibility for the local movement of goods and people within incorporated urban areas is, in many cases, delegated to municipal governments. This provides for more locally-responsive delivery of services.

**Local governments, municipalities, and regional governing bodies** are responsible for local planning decisions within the confines of provincial legislation, such as municipal transportation, development of transportation plans, public transit, parking fees, and the establishment of bicycle lanes.

These levels of government also carry out some local enforcement responsibilities such as parking and local traffic violations. Municipalities vary according to the actual and potential scope of their actions related to sustainable transportation, in part because the degree of delegation by provincial governments varies and, because of size. Larger municipalities generally have more scope for action than smaller municipalities, because it is usually more feasible for them to operate effective public transportation systems.

Given the nature of sustainable transportation issues, shared jurisdiction, and the range of private and public sector stakeholders involved in the transportation sector, working together is essential to finding the best path for Canada.

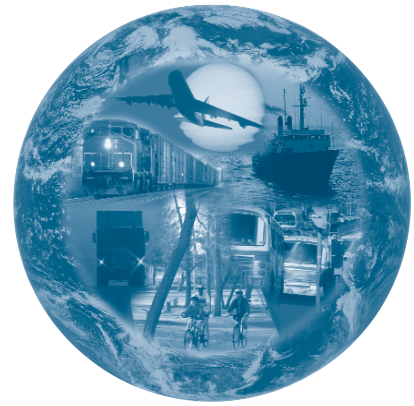
### **Leadership on Sustainable Transportation**

Transport Canada has heard from stakeholders consistently since the late 1990s that they are looking to Transport Canada to take a leadership role on sustainable transportation.

Within the Government of Canada, many departments and agencies have roles and responsibilities that affect the sustainability of the transportation system. Transport Canada will work closely with other federal government organizations to promote a common approach, and will seek to coordinate the development of sustainable transportation initiatives.

For Transport Canada, that means facilitating integrated decision-making by providing a framework for sustainable transportation, developing and promoting analysis, tools and innovative practices to promote sustainable transportation, and bringing partners and stakeholders together to work towards a common vision. It also means leading by example to improve the management of Transport Canada operations and lands.





## PART 3:

### SUSTAINABLE DEVELOPMENT AND TRANSPORT CANADA

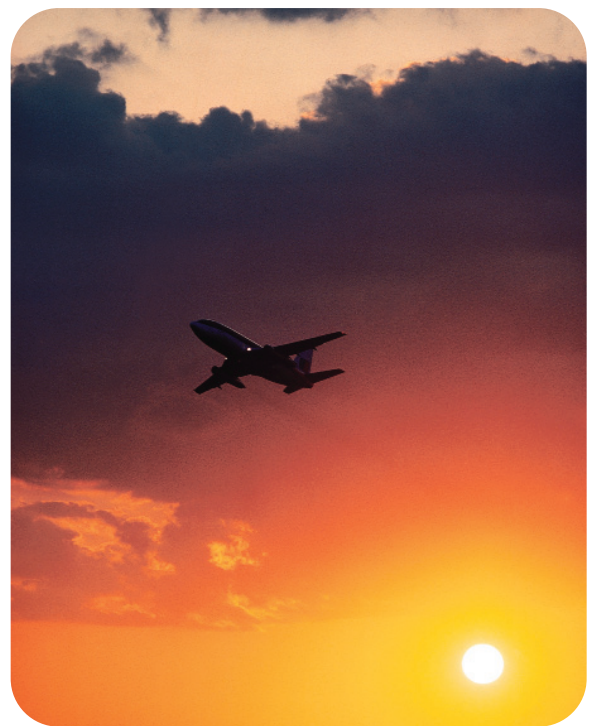
To preserve and strengthen Canada's transportation system and advance Canadians' quality of life, transportation policy must provide a framework that addresses the three elements of sustainable transportation – social, economic and environmental. It must also give carriers and infrastructure providers the opportunity to adapt, innovate, compete, and serve shippers and travellers in a way that takes into account each of these elements. Finding the right balance among these three elements is the fundamental policy challenge.

#### Our Vision

Transport Canada's vision of a sustainable transportation system is guided by the following principles:

- highest practicable safety and security of life and property;
- efficient movement of people and goods to support economic prosperity and a sustainable quality of life;
- respect for the environmental legacy of future generations of Canadians;
- user pricing that better reflects the full costs of transportation activity and transportation infrastructure decisions that meet user needs;
- reasonable access to the national transportation system by Canada's remote regions;

- accessibility in the national network without undue obstacles for persons with disabilities;
- coordinated and harmonized actions across all modes of transport; and,
- partnerships and collaboration among governments and with the private sector for an integrated, coherent transportation policy framework.



#### Strategic Directions

Transport Canada proposes new government initiatives and longer-term priorities in five key areas.

- **Setting frameworks for an efficient transportation marketplace**

The government's policy of deregulation, reducing subsidies, commercialisation, privatisation and related measures to favour competition and market forces has worked well for the most part. It is proposed to fine-tune this policy approach to stimulate further competition and efficiency where needed.

- **Managing and investing in transportation infrastructure**

Where possible, commercialisation and divestiture will continue, with some refinement in the way new entities are governed. Strategic infrastructure investments in support of competitiveness, sustainable growth and a well-integrated transportation system will be made in partnership with other levels of government and the private sector. This will include initiatives addressing urban transportation needs, such as public transit and trade and passenger corridors, while remaining sensitive to the needs of rural and remote areas.

- **Reducing the adverse environmental impact of transportation**

In collaboration with others, the government will continue to address the environmental impact of transportation. It will promote respect for the environment as a criterion in transportation planning, endeavour to implement Canada's environmental obligations and curb pollution in the transportation sector.

The government is interested in collaborating with industry, other governments and transportation experts, in the search for consensus on how to determine the full costs of transportation and practical ways to

cover them, as well as in pursuing public/private collaboration to improve emissions standards and promote greater use of lower-emissions vehicles and modes and fuels that are less greenhouse gas-intensive.

- **Improving safety and security**

With one of the safest and most secure transportation systems in the world, Canada wants to maintain its leadership, which springs from a long tradition of research, problem solving, and government action to achieve these results. Transport Canada's Strategic Plan for Safety and Security, first introduced in 1999, is being evaluated and will be updated. Working with industry, other departments and other governments, Transport Canada will continue implementing its safety and security plans covering each mode of transportation. The government will pay particular attention to ensuring that border crossings meet the demands of safety and security while facilitating the flow of people and goods.







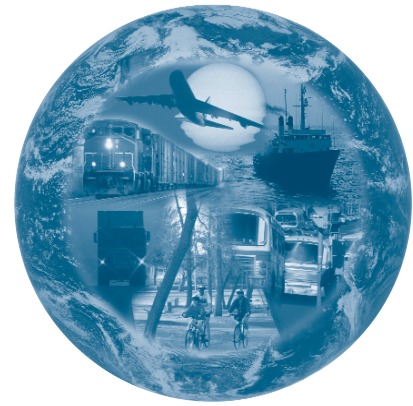
**• Encouraging innovation and skills development**

Innovation in the transportation sector is essential not only to maintain the sector's own growth and competitiveness, but also to contribute to national priorities like safety and security, greenhouse gas reduction, and improving the quality of life in cities.

Investment in innovation and skills will also contribute to national priorities for the economy, including making Canada a magnet for talent and investment and building competitive cities. Innovation in the transportation sector will support goals in Canada's Innovation Strategy.

Transport Canada will focus on advancing its research and development program in five areas: intermodal integration, congestion, environmental pressures, safety and security, and accessibility. The department will also work with industry, government and academic partners to identify areas of potential skills shortages and develop responses to them, to stimulate the adoption of e-commerce in the transportation sector, and to promote the adoption of intelligent transportation systems.





# PART 4:

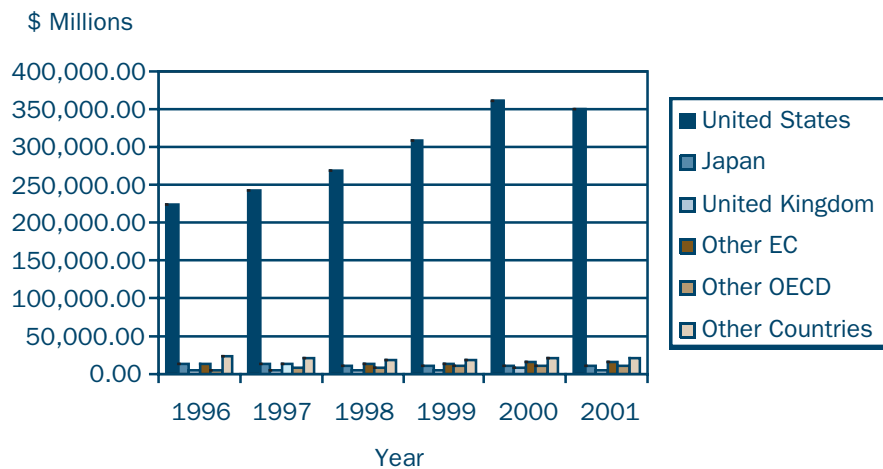
## KEY ISSUES IN TRANSPORTATION

Transportation takes place within a complex web of human and physical interactions and conditions. The characteristics of, and broad trends in the environment, the economy and society, affect the nature and scale of transportation activity, the impacts of that activity and our potential responses to those impacts. The nature and volume of trade drives the demand for freight transportation. Similarly, the size of the population, its habits, income levels and land use patterns directly or indirectly affect passenger travel.

## Trade and globalization

Canada is a trading nation in an age of globalization. Its economy is increasingly integrated with those of our major trading partners. Consequently, we rely on the safe and efficient movement of people and goods to support our economy. Although 2001 - 2002 saw a slowdown in the world economy and a reduction in trade, the long-term trend indicates increasing trade in both merchandise and services. Overall, freight movement is expected to increase by 60 per cent between 1990 and 2020, with the greatest growth in the air and trucking sectors. Globalization creates new opportunities for transportation users and providers. It also highlights the need for a broader definition of the competitive business environment, greater harmonization of standards, and smart regulations.

**Figure 4.1**  
Destination of Canadian Exports



Source: Statistics Canada.

### Importance of Transportation to Economic Activity

- The Canadian transportation system carries more than \$1 trillion worth of goods every year.
- Nearly 16% of all personal spending is on transportation, and nearly 90% of that is on personal motor vehicles.
- Over the last decade, the Canadian transportation sector experienced an average annual growth rate of 6.1%, almost doubling that of the economy at 3.3%.
- In 2000, more than 850,000 people held jobs in the transportation industry or related functions, representing 7% of the Canadian workforce.
- In 2000, almost half the \$38 billion spent on domestic tourism was on transportation.
- Over the last 20 years, carriers' costs have fallen in real terms by \$10 billion, or 30%.
- In 2000, governments and private operators spent more than \$20 billion on maintaining and operating infrastructure.

Transit Association (CUTA), transit ridership increased by about 13 percent over the period 1996-2002, from 1.35 billion passengers to about 1.53 billion passengers, recovering nearly the entire loss from the economic recession in the early nineties.

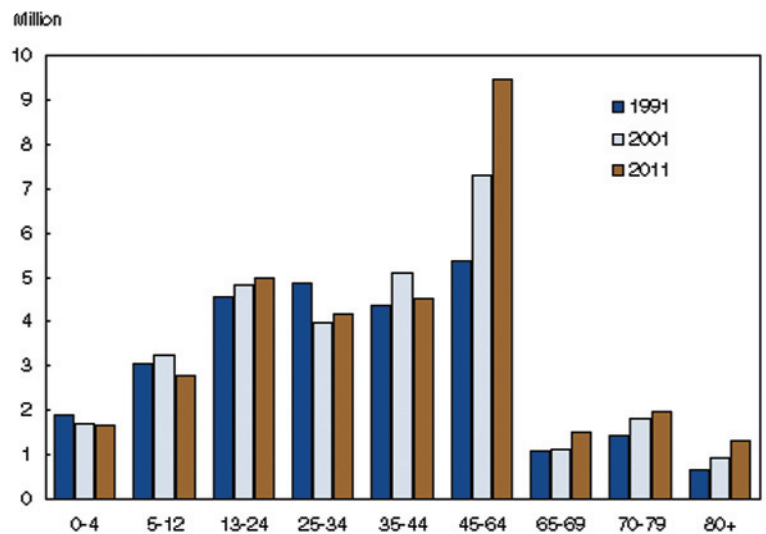
**The 2002 World Summit on Sustainable Development focused world attention and action on the difficult challenges of improving people's lives and conserving natural resources in the face of population growth, with ever-increasing demands for food, water, shelter, sanitation, energy, health services and economic security.**

### Population change

Canada's population is aging (Figure 4.2). Retiring baby boomers are likely to develop new and different travel needs, including destination (leisure vs. commuting), choice of mode, and demands for physical access. Canada is increasingly urban; 80 percent of Canadians now live in urban areas. Urbanization, together with steadily rising amounts of economic activity originating in urban centres, is putting pressure on public transit and on road infrastructure.

Between 1990 and 2000, motorized passenger travel increased by 15 percent. In 2000, road passenger vehicles accounted for about 75 percent of passenger kilometres, and air travel accounted for slightly more than 15 percent. By contrast, intercity bus, rail, and transit modes (combined) accounted for less than 10 percent of passenger kilometres. According to the Canadian Urban

**Figure 4.2**  
Canadian Population by Age Segment



Source: Statistics Canada.

### Transportation Activity

Canada's size and high dependence on international trade make transportation very important to Canadians. Transportation – by land, water and air – links Canadians to each other and Canada with the world.



Transportation moves goods to markets and people to their destinations (whether for business or pleasure), provides jobs and supports economic growth. Canada has a well-developed transportation system, with large investments in infrastructure, vehicles and fuel distribution networks.

Many of the social impacts of transportation are positive (e.g., mobility and human contact). However, there are social issues associated with lack of access, availability and unintended effects of the operation of the transportation system.

Transportation has a wide range of impacts on the environment including resource use (materials and energy), undesirable residuals (emissions, spills and leaks), and land use, including impacts on wildlife. Some of the transportation activities that contribute to these impacts are: the construction of

infrastructure; road system operation and maintenance; the production, operation, maintenance and disposal of vehicles; and the provision of energy and fuel, including non-renewable resources.



### Transportation Security

Following the events of September 11, 2001, the government took action on several fronts to enhance transportation security, including:

- Initiatives to improve aviation security (e.g., enhancements to pre-boarding screening of passengers, RCMP officers on selected flights, mandating locking and fortification of cockpit doors). The government also set up the Canadian Air Transport Security Authority.
- Security enhancements in the marine sector (e.g., requiring vessels to give 96 hours notice before entering Canadian waters, working with U.S. authorities to enhance security in the Great Lakes and Seaway system, increased security patrols and surveillance by port authorities, increased coastal surveillance).
- Working with other jurisdictions and industry to enhance the security of road and rail traffic.
- Technological enhancements to security (e.g., explosives detection systems, intelligent pass systems incorporating biometrics, intelligent transportation systems and modification in aircraft design, are being analyzed with the goal of applying the best technologies in all transportation modes).

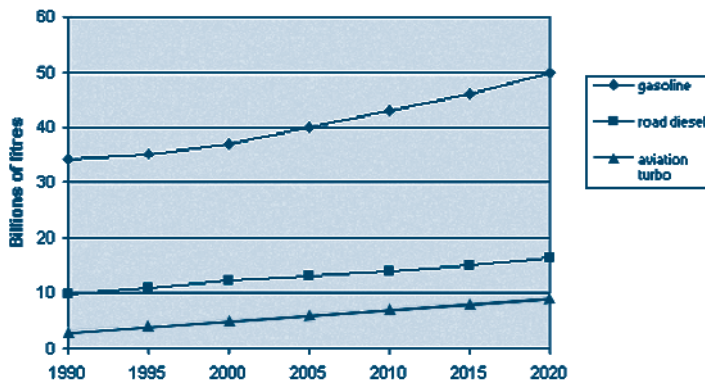
The government will seek to prevent, minimize and respond effectively to threats to the security of the national transportation system while promoting an efficient border.

## Key Environmental Issues

### Climate change

Transportation activities produce significant amounts of greenhouse gases (GHG). The transportation sector is the largest single contributor to GHG emissions in Canada (about 25% of total emissions). Measures that will begin to slow the growth in transportation GHG emissions will be a key element in achieving Canada's GHG emissions target under the Kyoto Protocol. Total transportation energy demand is expected to rise by more than 50 percent, between 1990 and 2020. There will be major increases in demand for gasoline, diesel and aviation fuels (Figure 4.3). At the same time, climate change impacts will have important implications for the transportation system, including effects on water levels and extreme weather events.

**Figure 4.3**  
Transportation Energy Demand



Source: Natural Resources Canada. *Canada's Emissions Outlook: An Update*, December 1999.

By ratifying the Kyoto Protocol in December 2002, Canada accepted a major commitment to reduce emissions to six percent below 1990 levels, by the five year period 2008-2012. Transportation will be counted upon to deliver a substantial portion of Canada's GHG reductions under the Kyoto Protocol. The focus for transportation action, outlined in the government's *Climate Change Plan for Canada*, is on vehicles and fuels that

produce fewer emissions, the increased use of alternative modes of transportation for passenger travel, and more efficient transport of goods.

To support implementation of the *Climate Change Plan for Canada*, the 2003 federal budget allocated \$1.7 billion over five years to support innovation and cost-effective measures leading to GHG emission reductions. The government also committed an additional \$3 billion in infrastructure support over 10 years. Climate-Change-related projects will be eligible and given particular attention under this initiative.

### Infrastructure Programs:

Transport Canada implements infrastructure programs including: the Strategic Highway Infrastructure Program, managed by Transport Canada; the Border Infrastructure Program and the Canada Strategic Infrastructure Fund, managed in partnership with Infrastructure Canada to support selected transportation related projects. These programs consider funding for projects that have high benefit/cost ratios; increase system efficiency, mobility and safety; contribute to reducing operating costs, to energy/fuel savings and to reducing GHG emissions along trade corridors.

### Intermodal Freight Transportation:

Transport Canada is committed to facilitating the development of a competitive Canadian transportation sector, in which modal efficiency is optimized. Transport Canada will place a high priority on investing in intermodal freight transportation, Intelligent Transportation Systems, and planning and feasibility studies in support of these investments. In aid of this effort, the department will conduct a series of regional consultations with stakeholders, in order to identify barriers to intermodal freight, opportunities to advance intermodalism, and opportunities for partnerships.



### **Urban**

In many of Canada's most densely populated centres, smog is a major health concern. The two main ingredients in smog that affect people's health are fine airborne particles and ground-level ozone, which is composed primarily of nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC). Transportation accounts for about 52 percent of all NO<sub>x</sub> emissions, 40 percent of carbon monoxide (CO), 20 percent of VOCs, 5 percent of sulphur oxides (SO<sub>x</sub>), and 5 percent of particulate matter – the major constituents of urban smog. On the positive side, a decreasing trend of these components has been evident in recent years. About two-thirds of Canada's GHG emissions are generated in urban areas.

Health studies estimate that air pollution contributes to more than 5,000 premature deaths in Canada each year, as well as to numerous health-related problems. Among those are cardio-vascular ailments and respiratory distress, resulting in increased emergency hospital visits and hospital admissions. In addition, excessive use of motorized transportation instead of active transportation options (e.g., walking, cycling) contributes to reduced physical activity and concurrent health problems (obesity, heart disease). Children are exposed to many of the same types of health risks as adults,

including respiratory ailments from air pollution and safety risks as passengers and pedestrians (e.g., one reason fewer children walk to school is safety concerns related to motorized traffic).

Congestion is an example of an impact that has environmental, social and economic costs. Economic costs include lost time and productivity, wages foregone, and extra fuel costs. Environmental costs include increased emissions of greenhouse gases and air pollutants. Social costs include increased stress. Congestion at border points presents a special problem. Canadian imports and exports, especially to and from the United States, demand reliable and timely traffic flows at border points, as well as the efficient movement of goods through integrated trade corridors. Security measures are now a major cause of congestion at border crossings and airports.

Low-density settlements, with their reliance on roads, are an important factor in the development of Canadian cities. Although there are benefits of a less crowded, open, green environment, this urban form can discourage the use of active transportation by increasing travel distances.

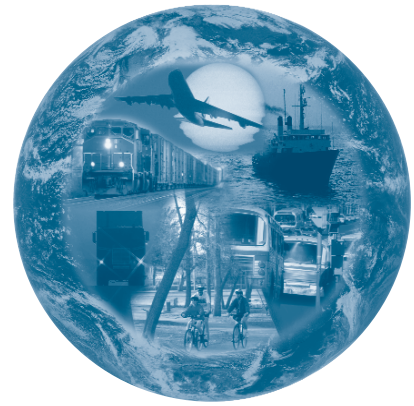
### **Safety**

Strong and safe communities are an essential part of the social fabric. They are critical in providing Canadians with the security to build a better future for themselves and their families.

Traditionally Transport Canada's most important priority, success in tackling transportation safety, is reflected in statistics showing an absolute decrease in accidents and fatalities for most modes. Nevertheless, accidents continue to take a huge toll in both health and economic terms. Transport Canada has been partnering with Health Canada and other organizations to promote road safety as an important health issue.







# PART 5:

## SEVEN STRATEGIC CHALLENGES

Transport Canada's *Sustainable Development Strategy 2004-2006* responds to the issues identified in the previous section while focusing on areas where the department can make a real difference towards achieving sustainable transportation.

In keeping with Transport Canada's first two sustainable development strategies, the third strategy is structured around a series of strategic challenges, each of which contains a number of commitments. The strategic challenges included in this third strategy have not changed significantly in substance from those in previous strategies – they still address key issues such as smog, climate change, clean water and promoting sustainable transportation technology. The department has placed increased emphasis on the identification of particular results.

### The seven strategic challenges are:

1. Encourage Canadians to make more sustainable transportation choices.
2. Enhance innovation and skills development.
3. Increase system efficiency and optimize modal choices.
4. Enhance efficiency of vehicles, fuels and fuelling infrastructure.
5. Improve performance of carriers and operators.
6. Improve decision-making by governments and the transportation sector.
7. Improve management of Transport Canada operations and lands.

### Reducing Air Emissions

A major challenge of sustainable transportation is to control or prevent air emissions from transportation, such as GHGs, nitrogen oxides, volatile organic compounds and particulate matter. Improved air quality and reduced GHGs are goals of the SDS and cut across all the challenges (e.g., see commitments 1.1, 1.3, 3.4, 3.5, 4.1, 4.2, 4.4, 5.2).

### Reducing Water Pollution

Another challenge of sustainable transportation is to prevent or control the discharge of effluents and wastes that contaminate rivers, lakes, oceans, harbours and beaches, and to prevent the introduction of non-native aquatic species through the discharge of ships' ballast water. Improved water quality is another goal of the SDS (e.g., see commitments 4.2, 5.1, 5.3).

### Promoting Adoption of Sustainable Transportation Technology

Developing and promoting the use of new and innovative technologies that reduce the environmental impacts of transportation while meeting the needs of passengers and shippers is an important challenge for sustainable transportation. Improvements in and adoption of sustainable transportation technology are important elements of the strategy (e.g., see commitments 2.1, 2.3, 3.1, 3.6, 4.3, 4.5, 4.6, 7.3).





## Challenge 1: Encourage Canadians to make more sustainable transportation choices.

### What is the challenge?

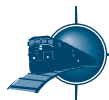
To create awareness and educate Canadians about sustainable transportation. This includes awareness of the issues, benefits and trade-offs, as well as practices and choices that individuals can adopt to reduce the adverse impacts of transportation. It will involve partnerships with other federal departments (e.g., Health, Environment, Natural Resources), other levels of government, industry, NGOs and other stakeholders in developing communications programs, including key messages, and delivering them to Canadians.

### Why is it important?

Changing behaviour is an essential part of the response to the environmental impacts of transportation. All segments of society need to understand the impacts of their transportation behaviour in order to make choices that reduce the adverse effects of transportation on the environment.

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>1.1 Education and Communications on Sustainable Transportation</b>            Transport Canada will coordinate sustainable development, climate change and the One Tonne Challenge (OTC) communications initiatives with federal partners, beginning in 2003/2004.</p> <p><b>Partners:</b> Natural Resources Canada and Environment Canada.</p>	<ul style="list-style-type: none"> <li>• Contribute to OTC design, beginning in 2003/2004.</li> <li>• Link OTC communications to relevant TC programs, beginning in 2003/2004.</li> <li>• Participate in OTC advertisement and information campaigns, beginning in 2003/2004.</li> <li>• Develop and deliver sustainable development and climate change announcements, beginning in 2003/2004.</li> </ul>	<ul style="list-style-type: none"> <li>• Canadians' awareness of sustainable development issues and related TC programs and behaviour change, as measured by public opinion polling.</li> <li>• Number of sustainable development-related communications products released.</li> </ul>
<p><b>1.2 Active Transportation</b>            Subject to funding and working with partners, Transport Canada will build on its work to promote active transportation (walking, cycling, in-line skating, etc.), beginning in 2004/2005.</p> <p><b>Partners:</b> Federation of Canadian Municipalities; Environment Canada; Health Canada; provinces; the Atlantic Canada Active Transportation Round Table; NGOs.</p>	<ul style="list-style-type: none"> <li>• Undertake a national survey on active transportation to assess the change in awareness from 1998 baseline, in 2004/2005.</li> <li>• Support workshops and regional forums on active transportation, beginning in 2004/2005.</li> <li>• Sponsor the Atlantic Active Transportation Conference, in 2004/2005.</li> <li>• Support the expansion of the Active and Safe Routes to School Program (ASRTS), beginning in 2004/2005.</li> <li>• Undertake analysis of active transportation and children's health, by 2005/2006.</li> <li>• Evaluate and promote FCM's <i>Moving Without Motors: A Guide to the Active Transportation Community</i>, beginning in 2004/2005.</li> </ul>	<ul style="list-style-type: none"> <li>• Awareness and behaviour change, as measured by the results of the survey.</li> <li>• Number of workshops and regional forums supported.</li> <li>• Number of participants at the Atlantic Active Transportation Conference.</li> <li>• Number of communities and new schools implementing the ASRTS program.</li> <li>• Number of new interactive users of <i>Moving Without Motors</i>.</li> </ul>

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>1.3.1 Green Commute Program</b> Transport Canada will expand distribution of <i>Commuter Options: The Complete Guide for Canadian Employers</i>, by 2005/2006. The department will provide training programs to other federal departments and agencies, and private sector employers, in 2004/2005.</p> <p><b>Partners:</b> Other government departments; Canadian Urban Transit Association; Federation of Canadian Municipalities; the Clean Air Council; others.</p>	<ul style="list-style-type: none"> <li>• Work with partners to expand the distribution of the Commuter Options Guide, by 2005/2006.</li> <li>• Provide Commuter Options training courses in each region with participants from other government departments, in 2004/2005.</li> <li>• Work with other government departments to identify and track current commuting habits, by 2005/2006.</li> <li>• Assist other government departments in setting up Commuter Options programs by providing support and best practices, beginning in 2004/2005.</li> </ul>	<ul style="list-style-type: none"> <li>• Results of training courses with other government departments across Canada.</li> <li>• Participants' increased knowledge of sustainable transportation following the workshops (measured through evaluation forms).</li> <li>• Number of Green Commute programs implemented across Canada resulting from the workshops and distribution of the Commuter Options Guide.</li> <li>• Completed baseline survey for government organizations implementing Commuter Options programs.</li> <li>• Anecdotal reporting and success stories from other government departments.</li> </ul>
<p><b>1.3.2 Green Commute in the Regions</b> Transport Canada's Pacific, Prairie and Northern (PNR), Ontario and Quebec regional offices will promote green commute in their regions by undertaking one or more of the following actions by 2006/2007: organizing a federal green commute working group; evaluating current transportation practices; implementing a carpooling program; and, gauging interest in joining a transit pass program.</p> <p><b>Partners:</b> Other federal departments in Pacific and Ontario Regions; Public Works and Government Services Canada; Environment Canada; Canada Revenue Agency; Health Canada in Quebec Region.</p>	<p><i>Pacific Region</i></p> <ul style="list-style-type: none"> <li>• Participate in the organization of a 'green mobility' federal working group, by 2004/2005.</li> <li>• Achieve a 10% increase in Transport Canada employees "green commuting", in the Vancouver Regional Office, by 2006/2007.</li> </ul> <p><i>Prairie and Northern Region</i></p> <ul style="list-style-type: none"> <li>• Deliver a comprehensive commuter options survey to all Transport Canada PNR employees, by 2004/2005.</li> </ul> <p><i>Ontario Region</i></p> <ul style="list-style-type: none"> <li>• Achieve a 5% increase in carpool users in the regional office, by 2005/2006.</li> <li>• Gauge interest in a transit pass volume incentive program, by 2004/2005.</li> </ul> <p><i>Quebec Region</i></p> <ul style="list-style-type: none"> <li>• Decrease by 10% the number of employees commuting to work by single occupancy vehicle, by 2006/2007.</li> <li>• Organize a federal working group in Quebec City and implement Commuter Options programs in 3 federal buildings, by 2006/2007.</li> </ul>	<p><i>Pacific Region</i></p> <ul style="list-style-type: none"> <li>• Number of Transportation Demand Management programs implemented for federal employees in the Lower Mainland.</li> <li>• Percentage increase in Transport Canada employees in the Vancouver Regional Office using "green commuting" options, as measured by an employee survey.</li> </ul> <p><i>Prairie and Northern Region</i></p> <ul style="list-style-type: none"> <li>• Report of survey results.</li> </ul> <p><i>Ontario Region</i></p> <ul style="list-style-type: none"> <li>• Percentage increase in carpool users.</li> <li>• Number of employees enrolled in a transit pass program.</li> </ul> <p><i>Quebec Region</i></p> <ul style="list-style-type: none"> <li>• Percentage decrease in employees commuting to work using a single occupancy vehicle.</li> <li>• Number of federal buildings with a Commuter Options program.</li> </ul>



COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>1.3.3: Transit Pass</b> Transport Canada will implement the recommendations of the evaluation of the Transit Pass Pilot Project, by 2006/2007.</p> <p><b>Partners:</b> Environment Canada; Natural Resources Canada; Treasury Board Secretariat; Public Works and Government Services Canada; the Canadian Urban Transit Association.</p>	<ul style="list-style-type: none"> <li>• Assess and implement recommendations of the Transit Pass Pilot Project evaluation, by 2006/2007.</li> <li>• Establish a database to measure the decrease in GHG emissions as a result of the program, by 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of recommendations implemented. <ul style="list-style-type: none"> <li>• Number of federal departments offering transit programs to employees.</li> <li>• Number of federal employees using transit.</li> <li>• Number of new cities offering annual transit passes.</li> </ul> </li> <li>• Decrease in amount of GHGs.</li> </ul>
<p><b>1.4 Moving On Sustainable Transportation (MOST) Program</b> Transport Canada will determine to what extent projects have continued beyond MOST funding in order to assess the ongoing contribution to enhancing sustainable transportation, by 2005/2006.</p> <p>The department will provide individual project results and an annual roll-up on the MOST program web site, by 2004/2005.</p> <p><b>Partners:</b> MOST funding recipients.</p>	<ul style="list-style-type: none"> <li>• Determine a baseline for the percentage of MOST projects continuing six months after MOST funding completed, by 2005/2006.</li> <li>• Develop and distribute roll-up report on an annual basis, beginning in 2004/2005.</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of projects that continue six months after MOST funding completed.</li> <li>• Number of unique users visiting the MOST project result web page.</li> <li>• Number of roll-up reports distributed (by e-mail or downloaded off web site).</li> </ul>

## Challenge 2: Enhance innovation and skills development.

### What is the challenge?

To foster the development and application of innovative transportation-related technologies, management practices and services in the public and private sectors, and among industry, academic and transportation sector stakeholders to increase the positive social, economic, and/or environmental outcomes of transportation activities. To ensure skills shortages in transportation are identified, and to work with other governments, industry and transportation stakeholders to address skills-related issues.

### Why is it important?

Innovation is a key element of the government's strategy to promote employment and prosperity. Transportation offers many opportunities for new technologies and techniques to help to improve safety, enhance efficiency and meet environmental objectives. Some of these could develop into new industries, leading to improvements in national productivity and the creation of new markets for Canadian products and services.

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>2.1.1: Intelligent Transportation Systems (ITS) Research and Development</b></p> <p>Transport Canada will work with partners to implement Innovation Through Partnership: Intelligent Transportation Systems Research and Development Plan for Canada, by 2005/2006.</p> <p><b>Partners:</b> ITS Canada; funding recipients.</p>	<ul style="list-style-type: none"> <li>• Under the Strategic Highway Infrastructure Program (SHIP) and until the end of 2005/2006, Transport Canada will fund ITS R&amp;D projects using three funding mechanisms: Contribution Agreements, R&amp;D Contracts and ITS Bilateral Federal-Provincial Agreements.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of proposals received.</li> <li>• TC total dollar contribution.</li> <li>• Dollars leveraged from TC contribution.</li> <li>• Number of partners engaged.</li> </ul>
<p><b>2.1.2: Intelligent Transportation Systems (ITS) Deployment and Integration Plan</b></p> <p>Transport Canada will provide funding, by 2005/2006, to stimulate the development and deployment of ITS, to maximize the use and efficiency of existing infrastructure and to ensure that future transportation needs are met more responsibly.</p> <p><b>Partners:</b> Funding recipients.</p>	<ul style="list-style-type: none"> <li>• Cost-shared funding will be made available to eligible recipients for projects on the deployment and integration of ITS applications. Projects would be required to be finished, by 2005/2006.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of proposals received.</li> <li>• Number of contribution agreements entered into.</li> <li>• TC total dollar contribution.</li> <li>• Dollars leveraged from TC contribution.</li> <li>• Number of partners engaged.</li> </ul>



COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>2.2: Skills Development in the Transportation Sector</b>            Transport Canada will work with partners in the establishment of sector councils and will support the development of transportation-specific skills, knowledge, and research in Canadian universities, colleges and the private sector, by 2006/2007.</p> <p><b>Partners:</b> The Department of Human Resources and Skills Development; universities and colleges; private sector; other stakeholders.</p>	<ul style="list-style-type: none"> <li>• Work in partnership to strengthen and improve transportation sector councils, by 2006/2007.</li> <li>• Identify areas of potential skills shortages and methods to address these through consultation at the Transport Skills Symposium and at other events, by 2004/2005.</li> <li>• Support continuous learning and the development of skills, knowledge and research in Canadian universities and colleges, by 2006/2007.</li> <li>• Explore interest among academics in establishing a visiting chair program at Transport Canada, by 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Progress in strengthening sector councils, and the creation of new sector councils.</li> <li>• Results of the Transport Skills Symposium.</li> <li>• Number of students and established academics in Canadian universities and colleges engaged in studies and research projects funded in partnership with Transport Canada.</li> <li>• Decision on whether to establish a visiting chair program at Transport Canada.</li> </ul>
<p><b>2.3: Stimulating Adoption of E-Commerce Technology</b>            Transport Canada will stimulate the adoption of electronic commerce technology by the transportation sector, beginning in 2003/2004.</p> <p><b>Partners:</b> Other federal departments; industry; stakeholders.</p>	<p>Beginning in 2003/2004 Transport Canada will:</p> <ul style="list-style-type: none"> <li>• Contribute to the development of paperless transaction systems.</li> <li>• Support the adoption of universal electronic message sets needed for transportation by paperless transactions.</li> <li>• Support private sector use of paperless transactions.</li> <li>• Broaden understanding across government and internationally of upcoming paperless transaction technologies and developments.</li> <li>• Support research into relevant technologies and their linkages with passenger traffic, intelligent transportation systems and freight shipments.</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of penetration of paperless transaction technologies and business models into the transportation sector.</li> <li>• Number of paperless transaction technology research projects.</li> <li>• Number of partnerships developed within TC, with other departments, industry and stakeholders.</li> </ul>

## Challenge 3: Increase system efficiency and optimize modal choices.

### What is the challenge?

To implement measures that improve the efficiency of transportation. This includes measures to encourage appropriate modal choices, and intermodal connections, and support transportation services and infrastructure.

To facilitate the development, implementation and maintenance of transportation services for remote communities and persons with disabilities.

### Why is it important?

A more efficient transportation system will deliver the same results with fewer or more efficient movements. More efficient movements mean that legitimate needs for mobility and trade can be met with reduced environmental impacts.

Equity of access and mobility are important social aspects of sustainable development. The development of mechanisms to preserve and enhance mobility and access, is an important complement to the quest for efficiency and environmental improvements.

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>3.1: Enhance the Accessibility of the National Transportation System</b></p> <p>Transport Canada will work with partners to develop a long-term, multimodal, federal strategy for enhancing the accessibility of the national transportation system.</p> <p><i>Custom transit pilot:</i> Transport Canada Pacific Region will work with partners to undertake a pilot project that will introduce integrated information technology to allow HandyDART operators to provide close to 'real-time' vehicle arrival information to transit customers in the Victoria Regional Area, by 2005/2006. The pilot would provide the basis for expanding the technology to para-transit operations and dial-a-ride type services.</p> <p><b>Partners:</b> The community of persons with disabilities; senior citizens; the transportation industry; BC Transit; the Victoria Regional Transit System; HandyDART operators; the Greater Vancouver Transportation Authority; the University of Victoria's Centre on Aging.</p>	<ul style="list-style-type: none"> <li>• Develop an action plan for the implementation of a federal strategy and identify research and development opportunities for enhancing the accessibility of the national transportation system, by 2006/2007.</li> <li>• Evaluate the impact of legislation and codes of practice on access to the federally regulated transportation system, by 2005/2006.</li> <li>• In cooperation with stakeholders, undertake research on accessible transportation for Canada's aging population, by 2005/2006.</li> <li>• Modernize the Minister's Advisory Committee on Accessible Transportation (ACAT) consistent with the Government of Canada's Voluntary Sector Accord, by 2004/2005.</li> <li>• Evaluate the results of the Intercity Bus Code of Practice Awareness Campaign on the Voluntary Provision of Accessible Transportation Services, by 2004/2005.</li> </ul> <p><i>Custom transit pilot:</i> <i>Phase 1</i></p> <ul style="list-style-type: none"> <li>• Confirm funding and partnerships for pilot project initiative, by 2004/2005.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of research and development projects.</li> <li>• Number of complaints on obstacles to mobility of persons with disabilities using the national transportation system.</li> <li>• Number of new measures developed to improve access to the federal transportation system.</li> <li>• Success of the codes of practice, as measured by evaluation, by the industry and users.</li> <li>• Qualitative assessment of consistency of ACAT with the Government of Canada's Voluntary Sector Accord.</li> </ul> <p><i>Custom transit pilot:</i></p> <ul style="list-style-type: none"> <li>• Increase in system efficiency and customer satisfaction.</li> <li>• Replication of piloted technology.</li> <li>• Customer satisfaction and improved efficiency resulting from replication of technology.</li> </ul>





COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>3.1</b></p>	<p><i>Phase 2</i> (conditional on the success of Phase 1)</p> <ul style="list-style-type: none"> <li>• Carry out pilot project, by 2005/2006.</li> <li>• Report on and distribute results of pilot project, by 2006/2007.</li> </ul>	
<p><b>3.2: Ensure Reasonable Access by Remote Communities to the National Transportation System</b>            In areas of federal responsibility and in collaboration with partners, Transport Canada will address the issue of reasonable access by remote communities to the national transportation system and will encourage local control of transportation infrastructure to service these remote areas.</p> <p><b>Partners:</b> Other federal departments; other levels of government; private sector.</p>	<p>Transport Canada will:</p> <ul style="list-style-type: none"> <li>• Maintain essential transportation services in remote communities where there is no alternative year-round service, ongoing through 2006/2007.</li> <li>• Address local infrastructure needs in partnership, and encourage innovative arrangements to support reasonable access to the national transportation system by remote communities, ongoing through 2006/2007.</li> <li>• Review TC’s long-term role in the operation of remote airports, by 2004/2005.</li> </ul>	<ul style="list-style-type: none"> <li>• Investment to maintain essential services in remote communities having no alternative year-round service.</li> <li>• Number of partnerships to promote local control of transportation infrastructure in remote communities.</li> <li>• Increasing local control of transportation infrastructure in remote communities.</li> <li>• Results of the review of TC’s long-term role in the operation of remote airports, by 2004/2005.</li> </ul>

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>3.3: Climate Change Impacts and Adaptation</b>  Transport Canada's Prairie and Northern Region, and Headquarters, will research and identify transportation adaptation techniques in response to global warming impacts in Canada.</p> <p><b>Partners:</b> Other government departments; NGOs; Climate Change Action Fund.</p>	<p><i>PNR and Headquarters:</i></p> <ul style="list-style-type: none"> <li>• Identification of key contacts, stakeholders and functions, in 2004/2005.</li> <li>• Raise awareness on impacts and adaptation via presentations at workshops etc, during 2004/2005 – 2006/2007.</li> <li>• Establish a network for information exchange, in 2004/2005.</li> <li>• Review and revise previous information on CD and website media, in 2005/2006.</li> </ul> <p><i>PNR:</i></p> <ul style="list-style-type: none"> <li>• Support or initiate research in areas of GHG reductions and adaptation by transportation operations and infrastructure, in 2005/2006.</li> <li>• Provide technical and financial support for a research project on transportation infrastructure in the Northwest Territories, during 2004/2005 - 2006/2007.</li> </ul> <p><i>Headquarters:</i></p> <ul style="list-style-type: none"> <li>• Provide expert advise for the Impacts and Adaptation Program and collaborate on the development and implementation of the National Adaptation Framework, during 2004/2005 – 2006/2007.</li> <li>• Participate on the Climate Change Action Fund Technical Committee for Impacts and Adaptation, during 2004/2005 – 2006/2007.</li> <li>• Assess climate change adaptation strategies for the transportation sector and their integration into government planning, by 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of transportation adaptation projects developed.</li> <li>• Number of presentations given on the impacts of climate change on transportation.</li> <li>• Number of network participants.</li> <li>• Amount of new data added to the current baseline.</li> </ul>



COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>3.4: Invest in Transit and Sustainable Transportation Planning</b>            Transport Canada will work with partners to minimize congestion and pollution from motor vehicles in urban areas, on an ongoing basis. Work in this area will focus on increasing use of public transit and alternative approaches to passenger transportation.</p> <p><b>Partners:</b> Infrastructure Canada; other federal departments; international partners; provinces; municipalities; stakeholders.</p>	<ul style="list-style-type: none"> <li>• Work in partnership under the Canada Strategic Infrastructure Fund to identify, analyse and implement worthwhile transit projects in order to capitalize on opportunities for the integration of planning/demand management in infrastructure investments, ongoing as proposals emerge.</li> <li>• Develop new transportation policies and measures that help meet Canada's climate change goals, on an ongoing basis.</li> <li>• Undertake a comprehensive exercise to determine the feasibility of expansion of the Urban Transportation Showcase Program (UTSP), by 2005/2006.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of projects where integration/planning is supported.</li> <li>• Amount of new funding dedicated to climate change measures in the department.</li> <li>• Amount of quantifiable GHG reduction resulting from the department's climate change measures.</li> <li>• Results of the comprehensive exercise, including a recommendation on whether to expand the UTSP program.</li> </ul>
<p><b>3.5: Support Shortsea Shipping</b>            Transport Canada will explore possible opportunities to promote the use of shortsea shipping, on an ongoing basis.</p> <p><b>Partners:</b> Other countries; industry; service providers; other levels of government; other stakeholders.</p>	<ul style="list-style-type: none"> <li>• Summarize and assess the outcome of six Transport Canada sponsored workshops held with industry in 2003, with a view to determining future policy issues to be addressed, beginning in 2003/2004.</li> <li>• Meet with other countries to exchange information and experience on shortsea shipping as a product of Memoranda of Cooperation with the United States and Mexico, beginning in 2003/2004.</li> <li>• Conduct a joint Canada – U.S. Great Lakes St. Lawrence Seaway system study designed to address the continued viability of the system, by 2005/2006.</li> <li>• Implement a continuous marketing campaign to raise the awareness of the potential of shortsea shipping, beginning in 2003/2004.</li> <li>• Expand Transport Canada's shortsea shipping website information, by 2004/2005.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of industry providers, shippers and other levels of government reached through the marketing/awareness campaign.</li> <li>• Results of the Canada - U.S. Great Lakes St. Lawrence Seaway system study.</li> <li>• Increased awareness of the benefits of shortsea shipping, as measured by the number and extent of new shortsea shipping services established by industry.</li> </ul>

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>3.6: Efficient Transportation Systems</b></p> <p>Transport Canada will build partnerships to:</p> <ul style="list-style-type: none"> <li>• Build capacities within Canada to develop and deploy more efficient transportation systems, with responsible energy use.</li> <li>• Support the deployment of emerging knowledge, concepts and technologies across all modes; across urban and rural areas; on inter-city and international corridors; across the many jurisdictions.</li> </ul> <p><b>Partners:</b> Other levels of government; industry and academia; in cooperation with the Program of Energy Research and Development.</p>	<ul style="list-style-type: none"> <li>• Develop and implement a plan to identify R&amp;D opportunities to optimize system efficiencies in urban transportation, intermodal freight, and air transportation, by 2003/2004.</li> <li>• Undertake urban transportation R&amp;D focusing on traffic management including advanced freeway management systems, and traveler information systems, by 2005/2006.</li> <li>• Undertake R&amp;D on improved transit including fleet management systems, pre-trip and on-board passenger information systems, and smart card payment systems, by 2005/2006.</li> <li>• Undertake R&amp;D on basic enabling ITS technologies and their standards, by 2005/2006.</li> <li>• Identify and initiate projects on intermodal freight R&amp;D, focusing on improved road/rail system efficiency, by 2005/2006.</li> <li>• Undertake air transport R&amp;D focusing on improved airport operations, aircraft operation and airport access, by 2005/2006.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of research projects on innovation technologies, for improved traffic flow monitoring, incident detection, and traffic signal communications.</li> <li>• Number of pilot deployments of traffic management innovations.</li> <li>• Results on research on multi-application smart card payment systems.</li> <li>• Results on research on next generation vehicle-to-roadside and vehicle-to-vehicle communications.</li> <li>• Number of technologies adopted that will yield more energy efficient transportation systems.</li> <li>• New or improved procedures, practices, information and communication systems, and policies for more efficient transfer of people and goods.</li> </ul>



## Challenge 4: Enhance efficiency of vehicles, fuels and fuelling infrastructure.

### What is the challenge?

To implement incentives (regulatory, economic, or voluntary) to improve the energy efficiency of vehicles (all modes), fuels and fuelling infrastructure while preventing or reducing air emissions (primarily), as well as liquid effluents and solid wastes. Measures include more efficient vehicles and systems, cleaner fuels, and the use of pollution-control technology.

### Why is it important?

Transportation activities are a significant source of air emissions, contributing to climate change, smog and pollution from airborne toxins. Under the Kyoto Protocol, Canada is required to reduce emissions of greenhouse gases to 6 percent below 1990 levels by 2008-2012. The Canada-Wide Standard on particulate matter and ozone, as well as Canada-U.S. agreements, also require significant reductions in emissions of smog precursors.

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>4.1: Implement Climate Change Commitments on Fuel Efficiency and Alternative Fuels</b></p> <p><i>Fuel Efficiency</i> Transport Canada will collaborate with partners to implement the Motor Vehicle Fuel Efficiency Initiative, that was renewed under the <i>Climate Change Plan for Canada</i>. The objective is to improve fuel efficiency for light duty vehicles by 25%, by 2010.</p> <p><i>Alternative Fuel</i> Transport Canada will study the impact of E10 (10% ethanol in gasoline) on light duty vehicle driveability and components, by 2003/2004, and will analyse the overall benefits and costs of ethanol in vehicle fuel.</p> <p><b>Partners:</b> Natural Resources Canada; other governments; industry.</p>	<p><i>Fuel Efficiency</i></p> <ul style="list-style-type: none"> <li>• Evaluate corporate average fuel consumption annually, beginning 2003/2004.</li> <li>• Participate in the continuation of the Tire-Inflation Campaign, beginning in 2003/2004.</li> </ul> <p><i>Alternative Fuel</i></p> <ul style="list-style-type: none"> <li>• Produce a report on the impacts of E10 on driveability and vehicle components in light-duty vehicles, by 2003/2004.</li> <li>• Develop an information kit on the impacts of using ethanol, by 2006/2007.</li> </ul>	<p><i>Fuel Efficiency</i></p> <ul style="list-style-type: none"> <li>• Percentage of improvement in corporate average fuel consumption each year.</li> <li>• Increase in public awareness of correct tire pressure (measured by surveys).</li> <li>• Improvements in tire inflation (for a sample population) and resulting reductions in fuel consumption.</li> </ul> <p><i>Alternative Fuel</i></p> <ul style="list-style-type: none"> <li>• Amount of media coverage on TC's E10 research.</li> <li>• Number of information kits/pamphlets distributed.</li> <li>• Number of website hits.</li> </ul>

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>4.2: Reduce Air Emissions from Rail, Air and Marine Transportation</b></p> <p>Transport Canada will work with partners on improving standards and reducing air emissions from transportation, including:</p> <ul style="list-style-type: none"> <li>• working in partnership to examine rail emissions standards and levels of air emissions from locomotive engines;</li> <li>• working with carriers to explore opportunities for enhancing the efficiency and infrastructure of Canada's air transportation system; and,</li> <li>• developing new air pollution regulations under the <i>Canada Shipping Act (CSA)</i> to reflect the requirements of Marpol Annex VI.</li> </ul> <p><b>Partners:</b> Environment Canada (EC); the Railway Association of Canada (RAC); domestic and international carriers; the Air Transport Association of Canada (ATAC); the International Air Transportation Association (IATA); the International Maritime Organization (IMO).</p>	<p><i>Rail</i></p> <ul style="list-style-type: none"> <li>• Formalize joint TC/EC management of Locomotive Emissions Memorandum of Understanding (MOU) with RAC, by 2005/2006, and evaluate annual reports resulting from the MOU.</li> <li>• Complete legal review of regulatory options for controlling emissions, by 2004/2005.</li> <li>• Develop and publish railway air emissions reduction strategy, in 2004/2005.</li> </ul> <p><i>Air</i></p> <ul style="list-style-type: none"> <li>• Investigate the impact and feasibility of increasing the levels of service available at a number of strategic northern Canadian aerodromes to facilitate more direct routing and report on emissions reduction potential, in 2004/2005.</li> <li>• Conduct three-dimensional modeling of aircraft emissions to predict the environmental impact of the different pollutants emanating from aircraft engines in Canada's polar regions, and report on air quality impacts, in 2005/2006.</li> <li>• Investigate the potential and feasibility of other options for enhancing the efficiency and infrastructure of Canada's air transportation system and report on the emissions reduction potential, in 2006/2007.</li> </ul> <p><i>Marine</i></p> <ul style="list-style-type: none"> <li>• Participate and contribute to the creation of IMO guidelines and standards, on an ongoing basis.</li> <li>• Introduce new air pollution regulations under the CSA, by 2006/2007.</li> <li>• Explore the possibility of developing voluntary agreements/guidelines with the marine sector to reduce marine emissions, by 2006/2007.</li> </ul>	<p><i>Rail</i></p> <ul style="list-style-type: none"> <li>• Reductions in emissions achieved due to MOU.</li> <li>• Decision on how to use regulatory authority provided in <i>Railway Safety Act (RSA)</i>.</li> <li>• Emissions reductions achieved, if regulations are introduced.</li> <li>• Emissions reductions achieved by the provisions of the strategy.</li> </ul> <p><i>Air</i></p> <ul style="list-style-type: none"> <li>• Reports including the estimated environmental benefits of the options proposed.</li> </ul> <p><i>Marine</i></p> <ul style="list-style-type: none"> <li>• Results achieved and activity initiated by IMO meetings.</li> <li>• Number of new air pollution regulations introduced under the CSA.</li> <li>• Number of voluntary agreements developed with the marine sector.</li> </ul>



COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>4.3: Promote Advanced Technology Vehicles</b>            By 2005/2006, through the Advanced Technology Vehicles Program (ATVP), Transport Canada will:</p> <ul style="list-style-type: none"> <li>• evaluate the fuel efficiency, emissions and safety performance of advanced technology vehicles;</li> <li>• conduct tests, inspections, evaluations and reports detailing the ability of advanced technology vehicles to comply with existing regulatory requirements and take steps to accelerate the introduction of advanced technology vehicles; and,</li> <li>• expand the public awareness component of the advanced technology vehicles program.</li> </ul>	<ul style="list-style-type: none"> <li>• Produce performance evaluations of advanced technology vehicles, on an annual basis.</li> <li>• Conduct tests, inspections and evaluations and produce reports detailing the ability of advanced technology vehicles to comply with existing regulatory requirements, by 2005/2006.</li> <li>• Subject to funding, incorporate a Hydrogen/Fuel Cell component into the existing ATVP, by 2004/2005.</li> <li>• Update Transport Canada's Internet site on an ongoing basis, beginning in 2003/2004.</li> <li>• Assess the market penetration and potential GHG reductions of advanced technology vehicles in Canada. Results will be available for the 2004 vehicle model year, by 2004/2005.</li> <li>• Deliver 15 to 20 awareness raising events annually, with a targeted audience of 1 million people per year.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of vehicles acquired, tested, inspected and evaluated.</li> <li>• Penetration of advanced technology and low carbon fuelled vehicles in the Canadian fleet.</li> <li>• Fuel consumption performance of new light-duty on-road motor vehicles.</li> <li>• Number of public awareness events held and their estimated audience.</li> <li>• Actions taken in the form of new regulations, updating existing ones or new policies and practices as a result of the identified barriers, tests, inspections and evaluations.</li> </ul>
<p><b>4.4: Promote Vehicle Emission Inspections</b>            Transport Canada will participate in the delivery of the LET'S DRIVE GREEN voluntary emissions testing program, from 2004/2005 - 2006/2007.</p> <p><b>Partner:</b> Environment Canada</p>	<ul style="list-style-type: none"> <li>• Delivery of the LET'S DRIVE GREEN program from 2004/2005 - 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of vehicles participating in the LET'S DRIVE GREEN program.</li> <li>• Number of Canadian cities participating in the program.</li> </ul>

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>4.5: Motor Vehicle Speed Control for Safety and Sustainability</b>  Subject to funding, analyze and quantify the effects of a number of technical and behavioural measures to control vehicle speeds in traffic in terms of their potential impact upon traffic speeds and congestion, reductions in greenhouse gases (GHG), collisions and injuries, and direct and social costs related to roadway incidents, from 2003/2004 – 2006/2007.</p>	<ul style="list-style-type: none"> <li>• Undertake a review of the literature on speeding and speed control, including the safety and greenhouse gas issues, from 2003/2004 – 2004/2005.</li> <li>• Conduct a fleet test to evaluate the practicality of <i>Intelligent Speed Adaptation</i> (ISA) in the Canadian environment, and the potential safety, efficiency and energy benefits, from 2003/2004 – 2006/2007.</li> <li>• Fleet test an instrument to display to the driver fuel consumption per distance traveled (L/100 km), fuel consumed (L), and the dollar equivalents, from 2003/2004 – 2006/2007.</li> <li>• Conduct laboratory tests of several vehicles to quantify the relationship of speed to fuel consumption, in 2003/2004 and 2004/2005.</li> <li>• Undertake attitudinal and behaviour studies to develop a public information and awareness program to accompany the fleet test, from 2003/2004 – 2006/2007.</li> <li>• Evaluate road design factors that contribute to drivers' speed choice, and test a limited number of roadway treatments aimed at influencing drivers' speed choice, from 2005/2006 – 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Results achieved in creating and sharing knowledge on: <ul style="list-style-type: none"> <li>• effects of speed on fuel consumption, GHG emissions, safety, trip times and traffic congestion;</li> <li>• the practicality, costs and effectiveness of technological and behavioural speed control measures; and,</li> <li>• factors influencing driver speed choices.</li> </ul> </li> </ul>
<p><b>4.6: Lightweight Materials and Low-Emission Vehicle Research</b>  Transport Canada will promote innovation in transportation by supporting the development and implementation of advanced technologies to support environmental sustainability by 2005/2006.</p> <p><b>Partners:</b> Program of Energy Research and Development; fuel cell suppliers; fuel providers; the automobile industry; governments.</p>	<ul style="list-style-type: none"> <li>• Undertake research on niche technologies to aid the development of lightweight vehicles, by 2005/2006.</li> <li>• Undertake research to aid the development of low-emission vehicles, in 2005/2006.</li> <li>• Undertake work with partners to demonstrate and deploy hydrogen and other fuelling infrastructure, and to encourage the uptake of fuel cell vehicles in Canada, by 2005/2006.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of partnerships formed to carry out work on lightweight materials for vehicles by 2005/2006.</li> <li>• Number of demonstrations of low-emission vehicle technologies by 2005/2006.</li> <li>• Research plan to develop standards for the use of hydrogen in road vehicles by 2005/2006.</li> </ul>





## Challenge 5: Improve performance of carriers and operators.

### What is the challenge?

To promote enhanced environmental management and operations by organizations in the transportation sector. To facilitate the adoption of good management practices throughout the transportation sector. To implement incentives (regulatory, economic or voluntary) to improve efficiency and to prevent or reduce air emissions, liquid effluents and solid wastes in operations. This includes measures to prevent, prepare for, and respond to accidental spills and measures to reduce or eliminate routine discharges of effluent and waste.

### Why is it important?

Transportation activities are a significant source of air emissions, liquid effluents and waste and they create a risk of accidents that can release fuels or hazardous materials into the environment. In addition to the characteristics of vehicles, fuels and infrastructure, how they are used and maintained is important. Mitigating these impacts is important to preserve the integrity of aquatic and terrestrial ecosystems, and avoid human exposure to hazardous materials.

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>5.1: Promote Best Practices for Environmental Management in the Transport Sector</b></p> <p>Transport Canada will work with partners to promote best practices for environmental management and corporate responsibility in the transportation sector. To this end, the department will:</p> <ul style="list-style-type: none"> <li>• consult and negotiate with marine stakeholders to establish a Greenship program in Canada, by 2006/2007;</li> <li>• support the purchase and installation of equipment to reduce greenhouse gas emissions in non-road transportation, beginning in 2004/2005; and,</li> <li>• support the adoption of Environmental Management Systems (EMS) and ISO 14000 certification by promoting environmental management best practices, by 2005/2006.</li> </ul> <p><b>Partners:</b> Transportation stakeholders (including port authorities and pilotage authorities).</p>	<p><i>Greenship</i></p> <ul style="list-style-type: none"> <li>• Hold consultations in 5 regions, in 2003/2004.</li> <li>• Complete the design of the Greenship program.</li> <li>• Increase industry support for the program and establish partnerships for program delivery, ongoing until 2006/2007.</li> </ul> <p><i>Non-Road Freight Efficiency Program</i></p> <ul style="list-style-type: none"> <li>• Support projects to purchase and install GHG reducing equipment, from 2004/2005 until 2006/2007.</li> <li>• Evaluate GHG reductions emissions from the program, beginning in 2005/2006.</li> </ul> <p><i>EMS</i></p> <ul style="list-style-type: none"> <li>• Transport Canada will hold a second workshop on EMS in the transportation sector with representatives from various modes, by 2005/2006.</li> </ul>	<p><i>Greenship</i></p> <ul style="list-style-type: none"> <li>• Number of partnerships developed under the Greenship program.</li> <li>• Number of certified Canadian Greenships.</li> </ul> <p><i>Non-Road Freight Efficiency Program</i></p> <ul style="list-style-type: none"> <li>• GHG reductions due to the program.</li> </ul> <p><i>EMS</i></p> <ul style="list-style-type: none"> <li>• Workshop attendance and feedback from participants.</li> <li>• Number of transportation partnerships established through sharing of best practices.</li> </ul>

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>5.2: ICAO Standards</b>  Transport Canada will work with partners to develop new aircraft emissions standards and operational practices that address concerns regarding local air quality and global climate change, from 2004/2005 to 2006/2007.</p> <p><b>Partners:</b> Air Transport Association of Canada (ATAC); International Civil Aviation Organization's (ICAO) Committee on Aviation Environmental Protection (CAEP).</p>	<ul style="list-style-type: none"> <li>• Participate in the CAEP working groups responsible for addressing aircraft engine emissions from the technical and operational perspectives, on an ongoing basis.</li> <li>• Promote operational measures for fuel and emissions reduction from aviation to Canadian carriers and operators, on an ongoing basis, including a third international workshop in 2004/2005.</li> </ul>	<ul style="list-style-type: none"> <li>• Estimated benefits of the standards developed and recommended measures proposed.</li> <li>• Number of events held and amount of promotional material distributed.</li> <li>• Workshop attendance and feedback from participants.</li> </ul>
<p><b>5.3: IMO Standards on Marine Pollution</b>  Transport Canada will work with partners and stakeholders in 2004/2005 – 2006/2007 to develop Canadian standards, monitor compliance, influence global marine transportation standards, and ultimately reduce and prevent water pollution. Transport Canada will incorporate appropriate provisions into Canadian law through the <i>Canada Shipping Act (CSA)</i>.</p> <p><b>Partners:</b> Transportation stakeholders; International Maritime Organization (IMO).</p>	<ul style="list-style-type: none"> <li>• Develop new regulations and standards for ballast water management in Canada, by 2004/2005.</li> <li>• Develop new regulations under the revised CSA 2001 that will include recent initiatives by the IMO in areas such as anti-fouling systems, by 2006/2007.</li> <li>• Participate in the development of international guidelines to address areas such as the recycling of ships, on an ongoing basis.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of provisions or regulations incorporated into the CSA.</li> <li>• Number of new guidelines developed.</li> </ul>



## Challenge 6: Improve decision-making by governments and the transportation sector.

### What is the challenge?

To understand transportation issues fully, including a better understanding of the scale of transportation activities, their impacts (positive and adverse), and the cost and benefits of policy measures. To use and disseminate better information, and to use better decision-making processes and frameworks to reach more balanced, timely, transparent and effective decisions.

### Why is it important?

Better information leads to better decisions. Given the importance of transportation to the economy, society and the environment, it is essential that governments and stakeholders have access to accurate and reliable data and analysis.

Sustainable development is best demonstrated through the process of assessing environmental, economic and social considerations, and reaching conclusions on the appropriate balance and integration of goals.

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>6.1: Transportation Data Initiative</b>            Transport Canada proposes to amend the <i>Canada Transportation Act</i> provisions on data collection to ensure the availability of consistent, useful information on the various elements of the transportation system.</p> <p>The federal-provincial-territorial Climate Change Data Strategy Steering Committee (chaired by Transport Canada) will, by 2005/2006, improve data available by implementing a strategy to:</p> <ul style="list-style-type: none"> <li>• improve national and provincial estimates of vehicle fuel use; and,</li> <li>• improve provincial and regional activity data by exploring the feasibility of obtaining records of vehicle odometer readings.</li> </ul> <p><b>Partners:</b> Statistics Canada and other jurisdictions.</p>	<ul style="list-style-type: none"> <li>• Propose amendments to the <i>Canada Transportation Act</i>.</li> <li>• Initiate a national survey of fuel use, as an addition to the Canadian Vehicle Survey (CVS), in 2003/2004.</li> <li>• Report on estimates of road vehicle fuel use, in 2005/2006.</li> <li>• Report to the Council of Deputy Ministers on the results of the odometer reading feasibility study and make recommendations for the Council’s consideration, in 2004/2005.</li> </ul>	<ul style="list-style-type: none"> <li>• National survey of fuel use results.</li> <li>• National and provincial estimates of road vehicle fuel use.</li> <li>• Results of the odometer reading feasibility study and recommendations for possible implementation by jurisdictions.</li> </ul>

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>6.2: Understanding Economic, Social and Environmental Costs of Transport</b></p> <p>Transport Canada will increase its understanding of the full cost implications of, and better pricing signals for, the use of different modes of transportation.</p> <p>Transport Canada will conduct a number of studies and research projects, in 2004/2005, to help fill analytical gaps identified during the work of the Transportation Climate Change Table; and, to contribute to a national perspective on key sustainable transportation issues.</p> <p><b>Partners:</b> Other federal departments; other levels of government.</p>	<p>As a follow-up to the Transportation Table work, the department will:</p> <ul style="list-style-type: none"> <li>• Complete a national study, in 2003/2004, to improve understanding of traffic congestion and develop recommendations for follow-up in an experts workshop, by 2004/2005.</li> <li>• Undertake a review of the costs and impacts of transit investments in achieving a range of urban transit ridership targets, in 2004/2005.</li> <li>• Undertake a survey of inter-modal freight terminals to improve the knowledge of inter-modal freight transportation, and provide a profile of inter-modal terminal data, by 2004/2005.</li> <li>• Improve understanding and promote use of the transit and road investments cost-benefit model, in 2004/2005.</li> <li>• Develop a full financial cost accounting framework for all modes of transportation identifying, to the extent possible, their full economic, social and environmental costs.</li> <li>• Contribute to the development of the federal government's energy consumption analytical/ forecasting tool, and explore options to improve urban passenger, freight and inter-urban modelling, beginning in 2004/2005.</li> </ul>	<ul style="list-style-type: none"> <li>• Results of national congestion study. Assessment of workshop participant feedback.</li> <li>• Usefulness of the studies and tools will be measured though: <ul style="list-style-type: none"> <li>• integration of the results in Transport Canada's and/or federal government decision process; and,</li> <li>• integration with the Federal government's energy consumption analytical/ forecasting model.</li> </ul> </li> <li>• Improved understanding and use of cost-benefit model, as measured by training conducted and feedback received.</li> <li>• Distribution of results of the transit investment study.</li> </ul>



COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>6.3: Improve the Conduct of Strategic Environmental Assessments</b></p> <p>The department will evaluate and improve current Strategic Environmental Assessments (SEA) tools and methods, to simplify and better integrate the conduct of SEA with the policy analysis framework. The department will also assess and promote greater compliance with its policy on SEA, beginning in 2004/2005.</p>	<ul style="list-style-type: none"> <li>• Provide SEA training sessions to departmental staff at least once per year. (Also refer to commitment 7.1)</li> <li>• Promote awareness of the requirements of the SEA Cabinet Directive and the Transport Canada SEA Policy, on an ongoing basis.</li> <li>• Conduct annual evaluations of a sample of completed SEA documents, to assess whether they meet the requirements of the SEA Cabinet Directive and the Transport Canada SEA Policy, and to determine whether improvements to guidance and awareness materials are needed, beginning in 2004/2005.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of employees to participate in SEA training.</li> <li>• Results of annual evaluations of sample completed SEA documents.</li> </ul>
<p><b>6.4: Sustainable Transportation Lens</b></p> <p>Develop a <i>Sustainable Transportation Lens</i>, by 2006/2007, that will serve as a tool to enhance Transport Canada’s ability to make integrated decisions. If successful, the Lens could be institutionalized and promoted within Transport Canada’s decision-making process. The Lens could also be shared with the transportation sector for use within other organizations.</p>	<p><i>Phase 1</i> – Develop and pilot the <i>Sustainable Transportation Lens</i></p> <ul style="list-style-type: none"> <li>• Develop a prototype of the Lens, by 2004/2005.</li> <li>• Pilot the Lens on 3 case studies within the department as a means of testing the product and obtaining feedback for improvement, by 2005/2006.</li> <li>• Evaluate the success of the pilot and determine whether to move on to Phase 2, by 2005/2006.</li> </ul> <p><i>Phase 2</i> – Publish and release the <i>Sustainable Transportation Lens</i> (conditional on success of Phase 1)</p> <ul style="list-style-type: none"> <li>• Publish and release the <i>Sustainable Transportation Lens</i> for use by decision-makers within the department, by 2006/2007.</li> <li>• Develop training workshops to be offered on an ongoing basis, starting in 2006/2007.</li> </ul>	<p><i>Phase 1</i></p> <ul style="list-style-type: none"> <li>• Success of the pilot as measured by evaluation forms.</li> </ul> <p><i>Phase 2</i></p> <ul style="list-style-type: none"> <li>• Number of employees to receive a copy of the Lens.</li> <li>• Number of employees to receive training on the Lens.</li> </ul> <p><b>Note:</b> The long-term (i.e. post 2006/2007) measures would include the uptake of the Lens and its impact on decision-making.</p>

## Challenge 7: Improve management of Transport Canada operations and lands.

### What is the challenge?

To improve environmental management within the department and take action to mitigate the environmental impact of the department's operations. To promote enhanced environmental management by other organizations in the transportation sector operating on federal lands, and those under federal jurisdiction.

### Why is it important?

A systematic approach to environmental management allows organizations to understand the nature of their environmental impacts and plan accordingly. By adopting best practices for environmental management, Transport Canada can reduce its own environmental impacts and set an example for others in the transportation sector. Although the department no longer operates many components of the transportation system, it retains a role and responsibility as landlord and overseer, to ensure appropriate environmental management by other organizations. Overall, Transport Canada is in a good position to demonstrate leadership on environmental management and disseminate best practices.

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>7.1: Transport Canada Environmental Management System</b>            Transport Canada will implement its Environmental Management System (EMS) on an ongoing basis, including new targets that focus on priority areas in the department's operations. (See Appendix B for Transport Canada's complete Environmental Management System Framework)</p>	<p><i>Hazardous Materials Management</i></p> <ul style="list-style-type: none"> <li>• Ensure that 100% of owned and operated facilities having equipment containing Ozone Depleting Substances (ODS) have ODS Management Plans, on an ongoing basis.</li> </ul> <p><i>Drinking Water</i></p> <ul style="list-style-type: none"> <li>• Ensure safe drinking water at department owned and operated facilities, on an ongoing basis.</li> <li>• Develop a TC training course for safe drinking water for TC owned and operated facilities, by 2005/2006.</li> </ul> <p><i>Green Commuting and Business Travel</i></p> <ul style="list-style-type: none"> <li>• Achieve a 5% increase in the number of employees green commuting in urban areas where services exist, by 2006/2007.</li> <li>• Achieve a 5% increase in the number of sustainable business travel trips in Quebec region and Headquarters, in urban areas where services exist, by 2006/2007.</li> </ul> <p><i>Environmental Assessment (EA)</i></p> <ul style="list-style-type: none"> <li>• Use the Environmental Assessment Quality Assurance Monitoring Program annually to identify strengths and weaknesses</li> </ul>	<ul style="list-style-type: none"> <li>• Number of EMS targets that have been achieved. (See Appendix B for specific performance indicators)</li> </ul>



COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>7.1</b></p>	<p>in the departmental EA program. (Also refer to commitment 7.5.3)</p> <ul style="list-style-type: none"> <li>• Provide annual training and awareness sessions for departmental staff and Crown Corporations. (Also refer to commitments 6.3 and 7.5.1)</li> </ul>	
<p><b>7.2: Environmental Monitoring Program for National Airports System (NAS) Airports</b>            Transport Canada will conduct reviews at NAS airports to confirm that appropriate systems are in place to ensure compliance with regulations and best practices and to identify existing or potential liabilities, on an ongoing basis.</p>	<ul style="list-style-type: none"> <li>• The department will ensure that all NAS airports are regularly evaluated using Transport Canada’s 2000 Environmental Property Evaluation Protocols, on an ongoing basis.</li> <li>• The department will track deficiencies observed through its monitoring program and ensure that corrective action is taken to address them, on an ongoing basis.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of evaluations conducted each year.</li> <li>• Number of non-compliances or non-conformances identified per facility per year, and corrective action taken.</li> </ul>
<p><b>7.3: Churchill Airport Solar Wall/Supplemental Heating Trial</b>            Subject to available funding, Transport Canada, Prairie and Northern Region, will conduct a three-year Solar Wall/supplemental heating trial at Churchill Airport in Churchill, Manitoba. The project will be a trial for the implementation of supplemental energy technology at other facilities. The trial will extend from 2004/2005 – 2006/2007.</p>	<ul style="list-style-type: none"> <li>• Conduct a preliminary feasibility study, in 2004/2005.</li> <li>• Undertake baseline monitoring data collection, in 2004/2005.</li> <li>• Installation of solar wall, in 2004/2005.</li> <li>• Monitoring of effectiveness, in 2005/2006 and 2006/2007.</li> <li>• Savings of 6.6% of the annual cost of electric heating and the associated savings in greenhouse gas emissions.</li> <li>• Complete a final report with findings and recommendations for potential application at other facilities, in 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Actual energy savings and GHG reduction attributable to solar wall.</li> <li>• Cost/benefit of the solar wall.</li> </ul>

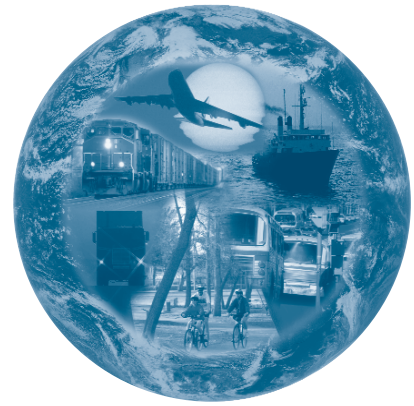
COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>7.4: Pickering Green Space Lands</b>            Transport Canada will prepare a Green Space Master Plan with short-term and long-term management scenarios, by 2003/2004. The Green Space Master Plan will determine how to manage these lands, consistent with the federal government's Green Space Strategy, to protect the federally owned portions of the Oak Ridges Moraine and areas around the Rouge Park.</p> <p><b>Partners:</b> Pickering Green Space Lands tenants; local governments; key stakeholder groups/organizations.</p>	<ul style="list-style-type: none"> <li>• Prepare and implement a comprehensive Long-term Green Space Implementation Plan, consistent with the Green Space Master Plan for the management and preservation of the Pickering Green Space Lands, by 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Environmentally sensitive areas are protected, as measured by the area of land conserved/protected.</li> <li>• Long term re-naturalization, preservation, enhancement and restoration of watersheds, corridors, linkages and infrastructure (buildings), as well as the preservation of cultural heritage, as measured by:               <ul style="list-style-type: none"> <li>• Number of sites/structures preserved and/or restored.</li> <li>• Number of Green Space Lands trail connections, with surrounding established trails.</li> <li>• Number of agricultural best practices adopted.</li> </ul> </li> </ul>
<p><b>7.5.1: Environmental Assessment – Extend CEAA to Federal Transportation Entities Not Currently Subject to CEAA</b>            Transport Canada will work with partners to implement amendments to the <i>Canadian Environmental Assessment Act</i> (CEAA), and develop regulations to bring entities not currently covered (e.g., airports and Crown Corporations) under the authority of CEAA by 2005/2006, with the objective of applying the Act to all projects on federal lands.</p> <p><b>Partners:</b> Canadian Environmental Assessment Agency; other federal departments; TC Crown Corporations; airport authorities and tenants.</p>	<ul style="list-style-type: none"> <li>• Work with partners to develop EA regulations for Airport Authorities, by 2004/2005.</li> <li>• Work with partners to develop an EA framework for Crown Corporations, including regulations where appropriate, by 2005/2006.</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of Airport Authority EA Regulations.</li> <li>• Implementation of EA framework and regulations for Crown Corporations.</li> </ul>





COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>7.5.2: Environmental Assessment – Develop a Departmental Policy Statement for Situations Where TC Initiatives do not Require an Environmental Assessment under CEAA</b></p> <p>For cases where the CEAA does not apply to a project or activity, Transport Canada will develop policy guidance to encourage staff to consider these initiatives within the Environmental Management System framework, and evaluate potential environmental impacts where appropriate.</p>	<ul style="list-style-type: none"><li>• Circulate the policy statement to TC senior management, and incorporate the statement in TC environmental assessment guidance material, by 2004/2005.</li><li>• Review policy statement to evaluate applicability at operations level, by 2005/2006.</li></ul>	<ul style="list-style-type: none"><li>• Results of evaluation of the policy statement's applicability at the operational level.</li></ul>
<p><b>7.5.3: Environmental Assessment – Improve the Conduct of Environmental Assessments of Projects Involving Transport Canada</b></p> <p>Transport Canada will initiate periodic reviews, beginning in 2004/2005, to evaluate Transport Canada's existing EA framework of procedures, training and reporting, in order to identify areas that require revising or updating to improve the overall effectiveness of the EA program.</p>	<ul style="list-style-type: none"><li>• Using the EA Quality Assurance Program (QAP), conduct a monitoring review once per year, beginning in 2004/2005, for at least one regional or Headquarters group, of a representative sample of environmental assessments completed under CEAA. (Also refer to commitment 7.1)</li><li>• Follow-up on QAP recommendations with appropriate regional or Headquarters group, to determine whether improvements to guidance and awareness materials are needed, by 2006/2007.</li></ul>	<ul style="list-style-type: none"><li>• Improvements to the environmental assessment process as a result of follow-up on QAP recommendations.</li></ul>

COMMITMENTS	TARGETS	PERFORMANCE MEASURES
<p><b>7.6: Conduct Natural Resource Inventories</b></p> <p>Transport Canada will expand the Natural Resource Inventory (NRI) pilot project at Churchill Airport to other Transport Canada-owned airports, and explore incentives for adoption by NAS airports.</p> <p>Transport Canada, Prairie and Northern Region, will present and make available the results of the findings of the Churchill NRI, in 2004/2005. Prairie and Northern Region will also provide information and support to TC regions, beginning in 2004/2005, to assist them in conducting NRIs on properties under their stewardship. Rare and endangered species identified will be included in TC national database to assist in their strategic management.</p> <p>Transport Canada, Pacific Region will conduct an ecological inventory at Sandspit Airport, by 2005/2006. The inventory will satisfy requirements of the <i>Species at Risk Act</i> as well as other federal environmental legislation.</p> <p>Transport Canada, Atlantic Region will work in partnership to develop a NRI, by 2006/2007, which will include comprehensive, accurate and objective information with respect to Atlantic Canada's natural heritage.</p> <p><b>Partners:</b> Atlantic Canada Conservation Data Centre in the Atlantic Region.</p>	<p><i>Prairie and Northern Region</i></p> <ul style="list-style-type: none"> <li>• Present NRI implementation template information to TC regions, in 2004/2005.</li> <li>• Present NRI findings to Churchill regional stakeholders, in 2004/2005.</li> <li>• Completion and distribution of NRI video, in 2004/2005.</li> <li>• Monitoring of key environmental parameters at Churchill Airport, in 2005/2006.</li> <li>• Provide assistance to regions and Headquarters in NRI application to sites, beginning in 2004/2005.</li> <li>• Development of NRI website, in 2005/2006.</li> <li>• Review NRI model and identify changes to include in a revised version, in 2006/2007.</li> <li>• Produce a report on TC implementation of NRI, in 2006/2007.</li> </ul> <p><i>Pacific Region</i></p> <ul style="list-style-type: none"> <li>• Complete a Natural Resource Inventory for Sandspit Airport, by 2005/2006.</li> <li>• Integrate management plans that reflect results of this inventory into the Airport's Environmental Management System, by 2006/2007.</li> </ul> <p><i>Atlantic Region</i></p> <ul style="list-style-type: none"> <li>• Complete a NRI for all remaining Transport Canada Atlantic Region owned and operated Airports (Wabush and St. Anthony), by 2005/2006.</li> <li>• Complete a NRI for all remaining Transport Canada Atlantic Region owned and operated Ports, by 2006/2007.</li> </ul>	<p><i>Prairie and Northern Region</i></p> <ul style="list-style-type: none"> <li>• Number of TC properties that implement NRIs, reported annually.</li> <li>• Results achieved by NRI projects, specifically related to increased habitat and species identification and protection at each site, reported annually.</li> </ul> <p><i>Pacific Region</i></p> <ul style="list-style-type: none"> <li>• Minimized ecological impacts and/or risks of ecological impacts to natural resources at Sandspit Airport through implementation of improved management practices.</li> </ul> <p><i>Atlantic Region</i></p> <ul style="list-style-type: none"> <li>• Number of site specific NRI's completed.</li> <li>• Number and variety of rare or endangered species identified as part of this process.</li> <li>• Report annually on the measures established to protect species or communities at risk.</li> </ul>



# PART 6:

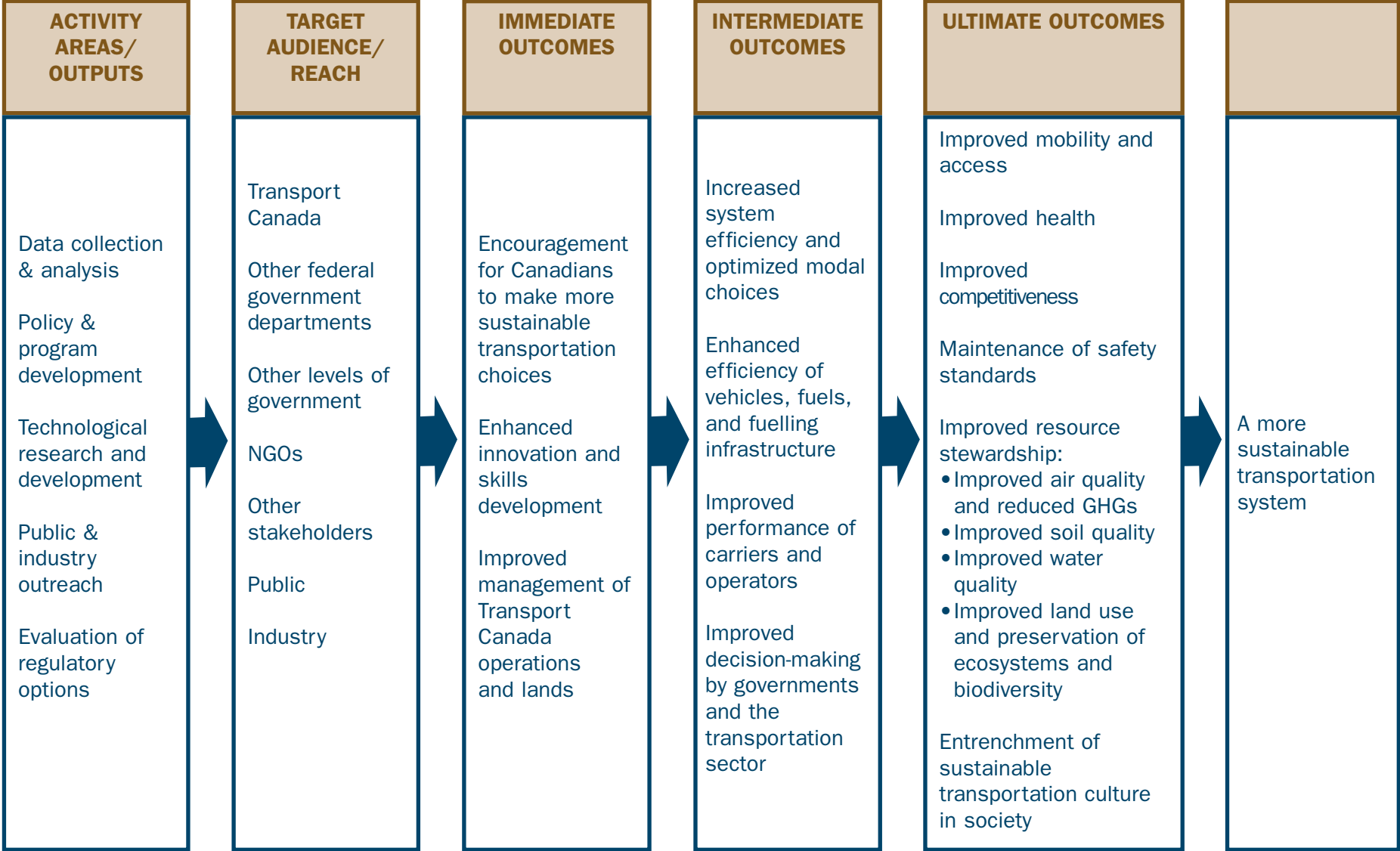
## MEASURING PERFORMANCE

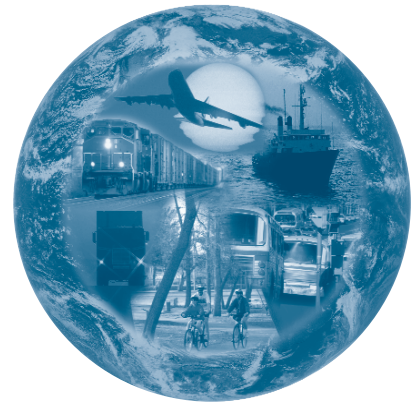
Transport Canada developed a results chain (Figure 6.1). The first step in the results chain is the activity, as defined by individual commitments. The activity can be aimed at various audiences (e.g., Transport Canada, other government departments, non-governmental organizations, industry, and the public). The results or outcomes of the activity are defined as either immediate or intermediate, and these outcomes are the strategic challenges for the third strategy. The ultimate outcomes (e.g. improved air and water quality) and, finally, a more sustainable transportation system, depend on meeting these strategic challenges.

Transport Canada will also work to improve sustainable transportation indicators, including urban indicators. This will build on work undertaken in the *Sustainable Development Strategy 2001-2003*. The purpose is to develop a set of indicators to assess Canada's progress towards sustainable transportation.



**Figure 6.1** Transport Canada 2004-2006 Sustainable Development Strategy Results Chain





# PART 7:

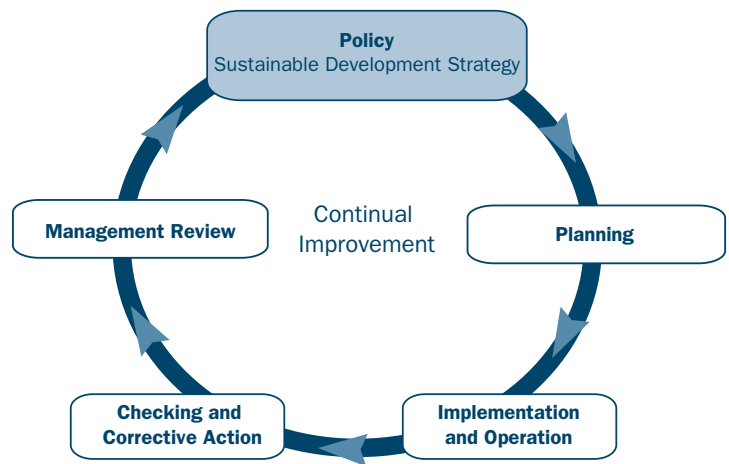
## FROM WORDS TO WORK

An integral part of any sustainable development strategy is a well thought out plan to systematically carry out that strategy, clearly demonstrate its positive impacts, and encourage ongoing improvement — in essence, to move effectively from words to work.

Transport Canada’s second sustainable development strategy took steps to improve the department’s system for managing the strategy and implementing its commitments (see Appendix C for a summary of the sustainable development strategy review). The department adopted the ISO 14001 model to address the policy, planning, implementation and operation, checking and corrective action, and management review processes for the strategy. Figure 7.1 portrays the major components of the ISO management system.

**Figure 7.1**

A Continual Improvement Model for Sustainable Development



Transport Canada will continue to improve its ability to monitor progress in implementing its sustainable development commitments and targets, based on the ISO 14001 model as follows:

## Policy

- Transport Canada will highlight key 2004-2006 SDS commitments, targets and indicators in the department's annual Report on Plans and Priorities.
- Transport Canada recognizes that the support of the department's senior management is critical. The department will undertake an annual assessment of accountability accords of those senior managers responsible for implementing specific actions in the strategy, to ensure that the 2004-2006 SDS commitments are reflected.

## Planning

- Transport Canada will continue to hold regular meetings (for the 2004/2005 – 2006/2007 period) of the department's internal Sustainable Development Strategy Committee to oversee and coordinate implementation of the strategy, and to provide a forum for sharing sustainable development information and best practices across departmental groups and regions, by 2003/2004.

## Implementation and Operation

- Transport Canada will undertake a review of training and competency needs for staff involved in the implementation of sustainable development commitments and objectives, by 2004/2005. The department will develop and implement a training plan to ensure that Transport Canada sustainable development training courses are available as required.
- The Sustainable Development Capacity Course, piloted under the 2001-2003 SDS, will be offered regularly to Transport Canada employees, beginning in 2004/2005.
- The department will undertake additional efforts to increase employee awareness and understanding of sustainable transportation. This will include learning events and sustainable transportation articles in departmental newsletters on an ongoing basis.

## Checking and Corrective Action

- A status report on sustainable development commitments, targets and indicators will be included in the department's annual Departmental Performance Report.
- Transport Canada will produce an annual SDS Progress Report, supplemental to the departmental performance report. The results of this report will be presented annually to Transport Canada's senior management committee.
- Transport Canada will develop an SDS reporting framework that will include standards and guidelines for reporting progress on SDS commitments and monitoring and implementing corrective action, by 2003/2004.

## Management Review

- Transport Canada will conduct a review of its sustainable development strategy every three years — the next taking place in 2005/2006.
- Transport Canada will engage its external National Advisory Group, beginning in 2005/2006, to provide strategic direction on the department's sustainable development priorities, review progress of strategy implementation, and make recommendations pertaining to review findings.



# APPENDIX A: STAKEHOLDER CONSULTATIONS

Transport Canada recognizes public consultation as a vital element in designing its Sustainable Development Strategy. In promoting sustainable transportation, Transport Canada must work in cooperation with other federal departments, other levels of government, academia, non-governmental organizations and others. The department received considerable input from across Canada that was instrumental in shaping the *Sustainable Development Strategy 2004-2006*.

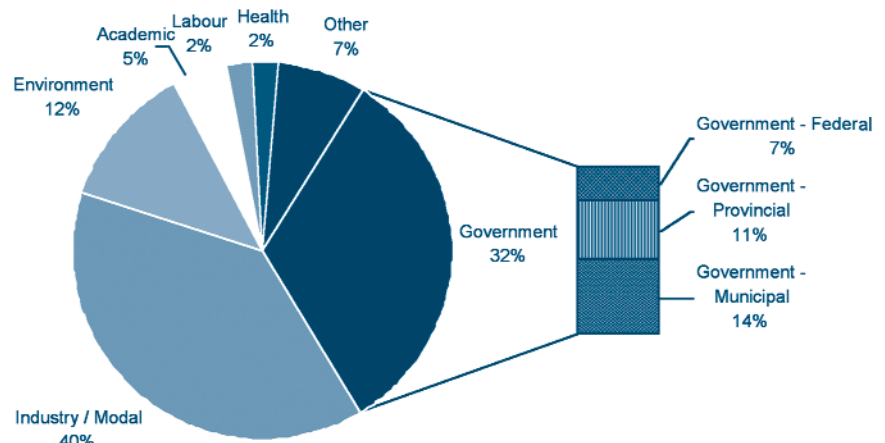
A key component in forming this strategy was Transport Canada’s National Advisory Group, a multi-stakeholder group mandated to advise the department on the development of the strategy. Beginning in January 2003, the department met with the Advisory Group to receive their advice on the development of *Sustainable Development Strategy 2004-2006*. In particular, the group provided feedback on the approach to developing the strategy, issue scan, discussion paper, consultation process, and final strategy.

Throughout the month of June 2003, Transport Canada conducted consultation sessions in Vancouver, Calgary, Winnipeg, Toronto, Ottawa, Montreal, Moncton, and St. John’s. Organized by the department’s regional offices and attended by a broad range of stakeholders and partners, these sessions were designed to help define the challenges and commitments for the department’s 2004-2006 Strategy.

To facilitate the consultation process, Transport Canada prepared a discussion paper on sustainable transportation and what Transport Canada could do to foster a more sustainable transportation system. This paper provided an assessment of the second

strategy. It identified what the department sees as the key sustainable development issues facing Transport Canada and the transport sector, and proposed seven priority challenges and a number of commitments or activities that could be undertaken in the 2004-2006 Strategy. Transport Canada sent the discussion paper to federal and provincial partners as well as stakeholders invited to the sessions. The department also posted the discussion paper on its Internet site, providing the public with an opportunity to review the paper and submit written comments to the department. Over 175 stakeholders attended the sessions and the department received over 25 written submissions.

### Identification of Participants\* by Sector



\* in person or in writing

Stakeholders made a number of recommendations on the discussion paper, particularly with respect to the proposed challenges and commitments or activities. In general, stakeholders felt that Transport Canada should:

- Continue to take a leadership role on sustainable transportation and act as a facilitator in bringing key players together;

- Make stronger links in the strategy between land-use planning, intermodal connections, and encouraging appropriate modal choices;
- Increase the profile of active transportation in the strategy by both promoting active transportation and supporting the development of the necessary infrastructure to ensure the safety of users;
- Work with the department of Finance on a taxation policy that would promote transit use (e.g. tax exempt transit passes) and, more broadly, support sustainable transportation;
- Ensure clear roles and responsibilities for data collection and the standardization of data formats, and ensure that data is shared and made readily accessible;
- Implement measures to balance car advertisements with sustainable transportation messages;
- Expand the scope for alternative fuels; and,
- Make the commitments, targets and performance measures more concrete and measurable and ensure that the performance measures are more outcome-oriented.

Stakeholder comments were incorporated into the strategy where possible. Commitments, targets and performance measures are now more concrete and an effort has been made to make the measures outcome-oriented. The department strengthened or added commitments on active transportation, intermodal transportation, adaptation to climate change, air quality, urban transportation, and financing for infrastructure. Transport Canada is limited in its ability to make proactive commitments in areas outside its jurisdiction, such as fiscal and tax measures and regulations for car advertisements or off-road vehicles. A report of the consultations and key messages from each

of the sessions are available at:  
[www.tc.gc.ca/envaffairs/english/sustain.htm](http://www.tc.gc.ca/envaffairs/english/sustain.htm).

## **Participants in the Stakeholder Consultations**

### ***Members of the National Advisory Group:***

Air Transport Association of Canada  
 The Centre for Sustainable Transportation  
 Bison Transport  
 Transportation Association of Canada  
 Association of International Automobile Manufacturers of Canada  
 Canadian Shipowners Association  
 Government of Alberta  
 Canadian Automobile Association  
 Canadian Vehicle Manufacturers Association  
 York University Centre for Applied Sustainability  
 The Railway Association of Canada  
 University of Manitoba  
 National Guide to Sustainable Municipal Infrastructure  
 Canadian Urban Transit Association  
 TRIMAP Communications  
 Pollution Probe  
 City of Toronto  
 Friends of the Earth  
 Canadian Trucking Alliance  
 Supply Chain and Logistics Canada  
 Canadian Industrial Transportation Association





**Groups consulted on the Sustainable Development Strategy 2001-2003:**

Representatives from these groups attended one or more of the eight stakeholder workshops or submitted their comments in writing.

**Academic**

Dalhousie University  
Memorial University  
Red River College  
Ryerson University  
Université du Québec à Montréal  
UBC TREK Program - University of  
British Columbia  
University of Manitoba  
University of Winnipeg

**Environment**

Association québécoise pour la maîtrise  
de l'énergie  
Bathurst Sustainable Development  
British Columbia Air Care Program  
Better Environmentally Sound  
Transportation  
Canadian Parks and Wilderness Society  
City Green  
Climate Action Network - Canada  
Climate Change Central  
Critical Mass  
Defenders of Wildlife Canada  
Ecology Action Centre (Halifax)  
ENVironnement JEUnesse  
Équiterre  
Greenest City Environmental  
Organization  
International Institute for Sustainable  
Development  
Nature-Action Québec  
Peterborough Green-Up  
Resource Conservation Manitoba  
Sierra Club of Canada  
Sierra Club of Canada, Eastern Canada  
Chapter  
Sustainable Calgary Society

**Government – Federal**

Agriculture and Agri-Food Canada  
Canada Mortgage and Housing  
Corporation  
Canadian Coast Guard

Environment Canada  
Fisheries and Oceans Canada  
National Capital Commission  
Natural Resources Canada  
NAV CANADA  
Public Works and Government Services  
Western Economic Diversification  
Canada

**Government – Municipal**

Agence métropolitaine de Transport  
Calgary Transit  
City of Burnaby  
City of Calgary, Planning and  
Transportation Policy  
City of Edmonton, Transportation and  
Streets  
City of Kelowna  
City of Moncton  
City of Ottawa  
City of Richmond  
City of Toronto (Moving the Economy)  
City of Vancouver  
City of Windsor, Planning Department  
City of Winnipeg  
Fraser Basin Council  
Gateway Council  
Halifax Regional Municipality  
Region of Durham  
Regional Municipality of Peel  
Resort Municipality of Whistler  
Saskatoon Transit Services  
Table d'aménagement du Quartier  
Hochelaga-Maisonneuve  
Tourism Vancouver - The Greater  
Vancouver Convention and Visitors  
Bureau  
Town of Markham

**Government – Provincial**

Agence de l'efficacité énergétique  
Alberta Economic Development  
Alberta Transportation and  
Infrastructure  
British Columbia Ministry of  
Transportation  
Government of Newfoundland and  
Labrador Department of Works,  
Services and Transportation

Government of Newfoundland and Labrador, Department of Mines and Energy  
Manitoba Transportation and Government Services  
Ministère de l'Environnement du Québec  
Prince Edward Island Department of Community and Cultural Affairs: Culture, Heritage, Recreation and Sport Division  
Culture and Sport Secretariat, New Brunswick  
Ministère des Transports du Québec  
Ministry of Water, Land & Air Protection  
New Brunswick Department of Transportation  
Nova Scotia Department of Transportation and Public Works  
Nova Scotia Office of Health Promotion - Sport and Recreation Division  
Ontario Ministry of Transportation

### **Health**

Go for Green  
New Brunswick Lung Association  
Norwest Coop Community Health Care

### **Industry / Modal**

Acadian Bus Lines  
Aéroports de Montréal  
Air Canada  
Alberta Trailnet and Trailpaq  
Alberta TrailNet Society  
Alberta Trucking Association  
Association des propriétaires d'autobus du Québec  
Association of Canadian Port Authorities  
Association of International Automobile Manufacturers  
Atlantic Provinces Trucking Association  
British Columbia Coalition of Motorcyclists  
Belledune Port Authority  
Black Creek Regional Transportation Management Association  
Burlington Bikeway Committee  
Canadian Automobile Association – British Columbia

Canadian Automobile Association – Quebec  
Calgary Motor Dealers Association  
Canadian Chamber of Commerce  
Canadian Courier & Messenger Association  
Canadian Enterprise Gas Products Ltd.  
Canadian Pacific Railway  
Canadian Trucking Alliance  
Canadian Urban Transit Association  
Cardinal Coach Lines  
Cement Association of Canada  
Cement Association of Canada, Ontario Region  
Clean Energy Fuels  
Day and Ross (Nfld.) Ltd./ Sameday Right-O-Way  
ECO Fuel Systems Inc.  
Edmonton Trolley Coalition  
Forest Engineering Research Institute of Canada, Eastern Division  
Fraser River Port Authority  
Hamilton Port Authority  
Ideo Communications Solutions  
Institute of Transportation Engineers – Southern Alberta Section  
Kent Line/Atlantic Towing  
Luscar Ltd.  
Manitoba Trucking Association  
Moncton Flight College Inc.  
Muskoka Airport, The District Municipality of Muskoka  
Newfoundland and Labrador Chamber of Commerce  
Northern Transportation Company Limited  
Ontario Trucking Association  
Port de Montréal  
Purolator Courier Ltd.  
R.L. Spack Transportation Consultant Inc.  
Rail Ways to the Future  
Société de transport de l'Outaouais  
Société de transport de Montréal  
St. John's Transportation Commission  
Sunbury Transport Ltd.  
SuperBuild Corporation  
Tecsult Inc.  
The Railway Association of Canada  
Thera-P-Cushion Inc.



Toronto Hoof & Cycle Courier  
Coalition  
Toronto Transit Commission  
Tourism Industry Association of Canada  
Translink  
Transport 2000 Canada  
Transport 2000 Ontario  
Vancouver Area Cycling Coalition  
Vélo Québec  
Victoria Transport Policy Institute  
Vrtucar  
West Coast Express  
Yellowhead Highway Association

**Labour**

The Amalgamated Transit Union –  
Local 279  
Canadian Labour Congress  
Syndicat des débardeurs du Port de  
Montréal

**Other/Interest Groups**

Association Habitat Montréal  
Behavioural Team  
C Tour de lac Inc.  
The Centre for Sustainable  
Transportation  
Citizens for Better Transit  
Les Conseillers ADEC  
PROGETRANS  
STOP  
Vivre en Ville  
Voyagez Futé Montréal  
Way to Go! School Program



**APPENDIX B: TRANSPORT CANADA’S ENVIRONMENTAL MANAGEMENT SYSTEM FRAMEWORK**

ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	OBJECTIVES	TARGETS	ACTIONS	PERFORMANCE INDICATORS
1. Air Emissions	Release of greenhouse gases	To reduce greenhouse gas emissions associated with Transport Canada operations.	<ul style="list-style-type: none"> <li>• Reduce Transport Canada greenhouse gas emissions by 4% from 1998/1999 baseline level, by 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Review and update facility and vehicle inventory on an annual basis.</li> <li>• Calculate Transport Canada’s greenhouse gas emissions, on an annual basis.</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage change in Transport Canada’s greenhouse gas emissions, measured in carbon dioxide equivalent per year.</li> </ul>
	Fuel consumption	To reduce exhaust emissions from Transport Canada’s fleet vehicles.	<ul style="list-style-type: none"> <li>• 40% of new vehicle purchases between 2004 and 2006 to be alternative fuel vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>• Purchase alternative fuel technology vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of alternative fuel vehicles of total annual vehicle purchases.</li> </ul>
	Energy consumption	To reduce the amount of energy used at Transport Canada owned and operated facilities.	<ul style="list-style-type: none"> <li>• 4% reduction in the amount of energy used at Transport Canada owned and operated facilities, by 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Collect data concerning energy consumption at Transport Canada owned and operated facilities, on an annual basis.</li> <li>• Compare annual energy usage data to 1998/1999 baseline.</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage difference between current fiscal year’s energy consumption and 1998/1999 baseline.</li> </ul>

**Note:** New EMS targets associated with the 2004-2006 SDS are indicated in bold.

ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	OBJECTIVES	TARGETS	ACTIONS	PERFORMANCE INDICATORS
2. Land Management	Soil and groundwater contamination	To assess Transport Canada's suspected contaminated sites.	<u>Short-term target:</u> <ul style="list-style-type: none"> <li>To assess Transport Canada's suspected contaminated sites, by 2007/2008.</li> </ul>	<ul style="list-style-type: none"> <li>Conduct Environmental Site Assessments of suspected contaminated sites.</li> </ul>	<ul style="list-style-type: none"> <li>Number of suspected contaminated sites assessed.</li> <li>Total amount spent on assessment per fiscal year.</li> </ul>
		To actively manage Transport Canada's known contaminated sites by using a risk-based priority approach, in accordance with the Federal Government Approach to Managing Contaminated Land.	<u>Short-term target:</u> <ul style="list-style-type: none"> <li>During 2004/2005 \$25M will be spent on mitigating high priority contaminated sites.</li> </ul> <u>Long-term target:</u> <ul style="list-style-type: none"> <li>To risk manage/remediate Transport Canada's known contaminated sites, by 2010/2011.</li> <li>To ensure that risk management plans are in place for all remaining known contaminated sites, by 2010/2011.</li> </ul>	<ul style="list-style-type: none"> <li>To expend \$25M, during 2004/2005, on mitigating the department's top priority sites.</li> <li>To develop risk management plans for lower priority sites.</li> <li>To remediate higher priority sites.</li> </ul>	<ul style="list-style-type: none"> <li>Number of risk management plans developed.</li> <li>Number of sites remediated.</li> <li>Total amount spent on risk management/remediation per fiscal year.</li> </ul>

**Note:** New EMS targets associated with the 2004-2006 SDS are indicated in bold.



ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	OBJECTIVES	TARGETS	ACTIONS	PERFORMANCE INDICATORS
<p>3. Waste Management – Non Hazardous Waste</p>	<p>Quantity and type of waste going to landfills</p> <p>Conservation of natural resources</p>	<p>To increase landfill diversion rates at selected Transport Canada facilities.</p>	<ul style="list-style-type: none"> <li>• For facilities that currently have non-hazardous waste recycling, increase land diversion rates by 5%, by 2005/2006.</li> <li>• To assess where new non-hazardous waste recycling programs are warranted at Transport Canada facilities.</li> </ul>	<ul style="list-style-type: none"> <li>• To improve existing non-hazardous waste recycling programs, and implement new programs at Transport Canada facilities where warranted.</li> <li>• To conduct non-hazardous waste audits.</li> <li>• To report on the department's total annual waste diversion rate in the Sustainable Development in Government Operations: Greening the Federal House Report.</li> </ul>	<ul style="list-style-type: none"> <li>• Calculation of the department's non-hazardous waste diversion rate.</li> <li>• Number of new non-hazardous waste programs implemented each fiscal year.</li> <li>• Number of audits performed during the Sustainable Development in Government Operations reporting year.</li> <li>• Results of the non-hazardous waste audits.</li> </ul>
		<p>To increase Transport Canada employees' awareness of recycling options.</p>		<ul style="list-style-type: none"> <li>• Development of a Headquarters non-hazardous waste recycling web page.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of unique visitors to the Transport Canada non-hazardous waste Headquarters recycling web page.</li> </ul>

**Note:** New EMS targets associated with the 2004-2006 SDS are indicated in bold.

ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	OBJECTIVES	TARGETS	ACTIONS	PERFORMANCE INDICATORS
4. Hazardous Materials Management	Soil and groundwater contamination	Operate and manage storage tanks using sound environmental management practices. (Note: Transport Canada will update this commitment when the Proposed Federal Petroleum Product and Allied Petroleum Products Tank System Regulation comes into force - expected date, 2004).	<ul style="list-style-type: none"> <li>• To ensure 100% compliance with the <i>Canadian Environmental Protection Act</i> (CEPA) Tank Technical Guidelines for Transport Canada owned and operated tanks, on an ongoing basis.</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct audits assessing storage tank compliance.</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of tanks in compliance with CEPA Tank Technical Guidelines.</li> <li>• Number of tanks audited per year.</li> </ul>
	Air contamination	To ensure responsible management of equipment containing Ozone Depleting Substances (ODS) across the department.	<ul style="list-style-type: none"> <li>• <b>To ensure that 100% of department owned and operated facilities having equipment containing ozone depleting substances have ODS Management Plans, on an ongoing basis.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Update ODS inventory.</li> <li>• Headquarters to develop a hands-on ODS Management Guide.</li> </ul>	<ul style="list-style-type: none"> <li>• Number and percentage of facilities inventoried for ODS.</li> <li>• Number and percentage of targeted facilities having ODS Management Plans.</li> <li>• Completion of the Guide and targeted distribution across the department.</li> </ul>

**Note:** New EMS targets associated with the 2004-2006 SDS are indicated in bold.



ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	OBJECTIVES	TARGETS	ACTIONS	PERFORMANCE INDICATORS
4.	Water (surface & groundwater) contamination	To prevent stormwater contamination from Glycol discharges.	<ul style="list-style-type: none"> <li>To ensure responsible management of Glycol at Canadian Airports, on an ongoing basis.</li> </ul>	<ul style="list-style-type: none"> <li>Airports prepare Glycol monitoring results and submit them to Transport Canada annually - Transport Canada then produces the Glycol Monitoring Report that is issued to Environment Canada.</li> </ul>	<ul style="list-style-type: none"> <li>Number of airports submitting Glycol monitoring results to Transport Canada.</li> <li>Assessment of the actual results of the monitoring results.</li> </ul>

**Note:** New EMS targets associated with the 2004-2006 SDS are indicated in bold.



ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	OBJECTIVES	TARGETS	ACTIONS	PERFORMANCE INDICATORS
5. Water - Drinking Water	Provision of drinking water	To implement a Drinking Water Program applicable to Transport Canada owned and operated facilities.	<ul style="list-style-type: none"> <li>• <b>To ensure safe drinking water for Transport Canada employees and the public, at department owned and operated facilities, on an ongoing basis.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Create an inventory of all Transport Canada owned and operated facilities that provide drinking water to employees and the public.</li> <li>• Use the Federal Drinking Water Program as a guide to create a Transport Canada Drinking Water Program.</li> </ul>	<ul style="list-style-type: none"> <li>• Approval of the Transport Canada Drinking Water Program.</li> <li>• Implementation of the program across the department.</li> </ul>
		To develop and implement a training program for staff, in support of the department's Drinking Water Program.	<ul style="list-style-type: none"> <li>• <b>To develop a departmental training course on safe drinking water, for use at Transport Canada owned and operated facilities, by 2005/2006.</b></li> </ul>	<ul style="list-style-type: none"> <li>• To develop a departmental training course, by 2005/2006.</li> <li>• To offer the course once per fiscal year, through to 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of training sessions held and number of participants attending the training sessions, per fiscal year.</li> </ul>

**Note:** New EMS targets associated with the 2004-2006 SDS are indicated in bold.



ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	OBJECTIVES	TARGETS	ACTIONS	PERFORMANCE INDICATORS
<p>6. Environmental Emergency Response</p>	<p>Soil, air, water (surface and groundwater) contamination</p>	<p>Ensure prevention and preparedness in the event of environmental emergencies at Transport Canada owned and operated facilities.</p>	<ul style="list-style-type: none"> <li>• Continue to maintain the environmental emergency plans that are in place for all Transport Canada owned and operated facilities.</li> <li>• To develop a Transport Canada training plan, by 2004/2005, and deliver one training session per fiscal year or as deemed required, through to 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Review and update the environmental emergency plan inventory on an annual basis.</li> <li>• By December 2004, a Transport Canada training course will be developed for departmental employees and Transport Canada owned and operated facilities.</li> <li>• Training course to be offered once per fiscal year, through to 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of facilities that require environmental emergency plans and number of plans in place.</li> <li>• Number of plans reviewed and updated, per fiscal year.</li> <li>• Number of training sessions held and number of participants that attended training, per fiscal year.</li> </ul>

**Note:** New EMS targets associated with the 2004-2006 SDS are indicated in bold.

ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	OBJECTIVES	TARGETS	ACTIONS	PERFORMANCE INDICATORS
7. Green Commuting and Business Travel	Awareness of Transport Canada employees about the impacts of commuting and business travel on the environment.	To provide all Transport Canada employees with better access to green commuting options.	<ul style="list-style-type: none"> <li>• <b>To achieve a 5% increase in the number of employees using green commuting in urban areas where services exist, by 2006/2007.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Implement Green Commuting programs in Transport Canada facilities with more than 100 staff, using the baseline produced in 2002. The goal is to reach one facility per region.</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of staff using green commuting options from the baseline.</li> </ul>
		To conduct a pilot project on sustainable business travel options with Quebec Region and Headquarters (i.e. use of environmentally friendly modes of transportation for business travel).	<ul style="list-style-type: none"> <li>• <b>To achieve a 5% increase in the number of trips using sustainable business travel options in Quebec region and Headquarters, in urban areas where services exist, by 2006/2007.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Develop a baseline for business travel commuting options for Transport Canada employees in the NCR and Quebec Region as a pilot project, by 2005/2006.</li> <li>• Provide information on business travel options to Transport Canada employees in the Quebec region and at Headquarters, by 2006.</li> <li>• Develop and implement a Transport Canada Business travel policy for Headquarters and Quebec regions, by 2006.</li> </ul>	<ul style="list-style-type: none"> <li>• Approval by Transport Canada's Senior Management Committee of the Transport Canada Business Travel Policy, for Headquarters and Quebec Region.</li> <li>• The percentage increase in the number of trips using sustainable business travel options in the Quebec and National Capital Regions, from the baseline.</li> <li>• Increased awareness by employees, as measured by the number of unique hits on a business travel website.</li> </ul>

**Note:** New EMS targets associated with the 2004-2006 SDS are indicated in bold.



ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	OBJECTIVES	TARGETS	ACTIONS	PERFORMANCE INDICATORS
7.					<ul style="list-style-type: none"> <li>• Number of people commuting in Quebec Region and Headquarters for business purposes by mode, per fiscal year.</li> </ul>

**Note:** New EMS targets associated with the 2004-2006 SDS are indicated in bold.

ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	OBJECTIVES	TARGETS	ACTIONS	PERFORMANCE INDICATORS
8. Environmental Assessment	Assessment of environmental impacts of projects involving Transport Canada, pursuant to the <i>Canadian Environmental Assessment Act</i> .	To improve the quality of environmental assessments (EA) of projects involving Transport Canada.	<ul style="list-style-type: none"> <li>• <b>Use the Environmental Assessment Quality Assurance Monitoring Program (QAP) annually, to identify strengths and weaknesses in the departmental EA program.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Conduct a monitoring review once each year, for at least one region or Headquarters group, of a representative sample of environmental assessments done under the <i>Canadian Environmental Assessment Act</i>.</li> </ul>	<ul style="list-style-type: none"> <li>• Improvements to the environmental assessment process as a result of follow-up on QAP recommendations.</li> </ul>
	Promote awareness of the <i>Canadian Environmental Assessment Act</i> and its requirements among departmental staff and Crown Corporations.	To develop and deliver guidance material to departmental staff and Crown Corporations, to increase their awareness of the requirements of the <i>Canadian Environmental Assessment Act</i> .	<ul style="list-style-type: none"> <li>• <b>To develop and deliver one awareness session to departmental staff and Crown Corporations per fiscal year, or as deemed warranted, through to 2006/2007.</b></li> <li>• <b>To develop guidance material as required.</b></li> </ul>	<ul style="list-style-type: none"> <li>• To continue to develop guidance and awareness material regarding the <i>Canadian Environmental Assessment Act</i>.</li> <li>• To deliver one awareness session to departmental staff and Crown Corporations once per fiscal year, or as deemed warranted, through to 2006/2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of awareness sessions held per fiscal year.</li> </ul>

**Note:** New EMS targets associated with the 2004-2006 SDS are indicated in bold.



ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	OBJECTIVES	TARGETS	ACTIONS	PERFORMANCE INDICATORS
8.	Assessment of environmental impacts of Transport Canada policies, plans and programs, pursuant to the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals, and the Transport Canada Policy Statement on Strategic Environmental Assessment (SEA).	To promote compliance with the Cabinet Directive and Transport Canada's SEA Policy Statement.	<ul style="list-style-type: none"> <li>• <b>Provide annual training sessions for departmental staff on Strategic Environmental Assessment.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Conduct annual evaluations of a sample of completed SEA documents to assess whether they meet the requirements of the SEA Cabinet Directive and the Transport Canada SEA Policy. Determine whether improvements to guidance and awareness materials are needed.</li> </ul>	<ul style="list-style-type: none"> <li>• Results of annual evaluations of sample SEA documents and improvements made to the guidance and awareness materials.</li> </ul>

**Note:** New EMS targets associated with the 2004-2006 SDS are indicated in bold.



## APPENDIX C: RESULTS OF TRANSPORT CANADA'S SUSTAINABLE DEVELOPMENT STRATEGY REVIEW

### TRANSPORT CANADA'S FIRST TWO SUSTAINABLE DEVELOPMENT STRATEGIES

In December 1997, Transport Canada tabled its first sustainable development strategy in Parliament. Spanning the department's internal operations as well as its policies, programs and legislation, the strategy was made up of eight strategic challenges and 47 commitments to action.

Transport Canada's second sustainable development strategy was tabled in February 2001. In this strategy, the department reported on progress in implementing the 1997 strategy, and identified how it would build on the accomplishments and lessons learned from the first strategy. The department structured its *Sustainable Development Strategy 2001-2003* around seven strategic challenges, which defined areas critical to sustainable transportation. The strategy also identified 29 commitments and more than 100 targets in areas where Transport Canada could make an important difference within its mandate.

Traditionally, Transport Canada has focused on ensuring that Canada's transportation system is both safe and efficient (i.e. social and economic considerations). As a result, the second strategy focused primarily on the environmental aspects of transportation, and how to better integrate environmental concerns with the department's existing safety and economic roles. The second strategy also recognized the department's intent to more fully address the social and economic aspects of transportation in future sustainable development strategies.

Transport Canada's first two sustainable development strategies have been important steps in integrating sustainable development into Transport Canada's activities. They have provided a solid foundation upon which to

continue the journey towards a more sustainable transportation system for Canada and Canadians.

### DID THE DEPARTMENT DO WHAT IT SAID IT WOULD DO?

In early 2003, Transport Canada's Corporate Audit and Advisory Services carried out a review of the management framework of *Sustainable Development Strategy 2001-2003* and assessed the extent to which the goals, objectives and targets had been met. The review also assessed the degree to which the recommendations from the previous management review have been implemented. For the complete report of the management review, please visit: <http://www.tc.gc.ca/programs/environment/sd/review03/menu.htm>.

This review revealed that at the time of the review approximately 80 percent of the commitments and more than 70 percent of the targets were either on-track or complete. However, an inconsistency in reporting was observed, as some commitments had been listed as on-track in the progress report, but the associated targets were reported as either complete or behind schedule.

In response to the management review's observations and recommendations on reporting, Transport Canada developed guidelines for reporting progress towards sustainable development strategy commitments to ensure accurate and consistent reporting across the department.

The main findings of the Management Review are outlined in the following table.

## 2001-2003 Sustainable Development Strategy Management Review Findings:

- Although support for sustainable development is provided and linked within the department through various planning and vision documents, a stronger link could be created to support the program by promoting greater management commitment.
- Clear descriptions of the commitments and better linkages between the commitments, targets and performance measures will provide more measurable outputs and outcomes.
- Access to the current status of all commitments in the SDS was not available to the various Offices of Primary Interest responsible for implementing the commitments. Horizontal sharing of information throughout the department related to the progress of commitments is a key element to the success of the strategy.
- The criteria used to assess the department's sustainable development management framework reflected the management principles set out by the International Organization for Standardization (ISO) in its 14000 series of standards.
- Significant sustainable development goals and objectives have been established and documented within the department, with initiatives such as the Strategic Environmental Assessment (SEA) policy, awareness sessions and sustainable development courses provided by the department.
- Performance measures were developed and incorporated into the second strategy. Further development is required, as baselines/metrics have not been incorporated into many of the targets and performance measures.
- There is a requirement for more substantive and timely reporting on commitments, especially those that are behind schedule.
- Overall, the strategy contains commitments that are achievable and relevant. However, there is a need for the development of commitments that clearly define the results to be achieved.
- Transport Canada's Environmental Management System (EMS) provides the framework for the department to improve its overall environmental performance.

### WHAT THE DEPARTMENT DID WELL

Changes introduced in the second sustainable development strategy produced a more clearly focused strategy that better met the expectations of the Commissioner of the Environment and Sustainable Development. In comparison to the first strategy, Transport Canada reduced the number of commitments and targets by about 40 percent – from 47 commitments to 29, and from 185 targets to 111.

The management review of the 1997 strategy identified that there was a difficulty measuring performance due to a lack of

performance indicators. As a result, 82 performance measures were developed for the 111 targets within the *Sustainable Development Strategy 2001-2003*.

The review also indicated that overall, sustainable development is well documented and publicized to stakeholders through various reporting mechanisms. For example, Transport Canada's 2002-2003 Departmental Performance Report identifies the *Sustainable Development Strategy 2001-2003* as a main document guiding the department's sustainable development and environmental initiatives, and provides an overview of the department's key





environmental outcomes, organized by the challenges outlined in the *Sustainable Development Strategy 2001-2003*.

## **LESSONS LEARNED: OPPORTUNITIES FOR IMPROVEMENT**

Transport Canada's second Strategy was successful in building on and learning from the first. However, there is still room for improvement. The third Strategy attempts to move beyond the second by not focusing entirely on the environment, and including elements of the social and economic pillars of sustainable development.

A key area for improvement is in defining the commitments, targets and performance measures. Transport Canada should ensure that commitments are clear and achievable. The strategy should include better linkages between commitments, targets and performance measures. The performance measures should also be strengthened, so that they are more results-oriented and meaningful. These were important considerations in the development of the action plan for this strategy.

To improve the implementation of the strategy, the department will attempt to strengthen its internal training and tools for sustainable development. The department will follow-up on the recommendations of the Management Review, and develop a training strategy and reporting framework for the SDS. Part 7 of this strategy outlines the department's commitments related to its sustainable development management system.





## APPENDIX D: SUSTAINABLE DEVELOPMENT PRINCIPLES FOR TRANSPORT CANADA

Transport Canada has adopted a set of principles that recognize sustainable development as among the highest of departmental priorities, and define how the department will apply the concept of sustainable development to the transportation sector. Transport Canada is committed to applying these principles to its policies, programs and operations, so that decisions will better reflect the goal of sustainable transportation.

### SOCIAL PRINCIPLES

**Safety and Health:** Transportation systems should first be designed and operated in a way that protects the safety of all people. In addition to Transport Canada's commitment to prevent accidents, the department will strive to reduce the negative health impacts of transportation.

**Access and Choice:** Transportation systems should provide people with reasonable access to other people, places, goods and services. The department will promote a more diverse transportation system, including access to innovative alternatives (i.e. information technologies).

**Quality of Life:** Transportation is a key ingredient in the quality of life of Canadians. The department recognizes that transportation policies have a direct effect on people, and that it must consider the characteristics of different communities and regions across the country.

### ECONOMIC PRINCIPLES

**Efficiency:** Transport Canada will use policies, programs and innovative approaches to support the productivity and competitiveness of Canada's transportation system and its contribution to the national economy. The department will explore ways of promoting efficient travel behaviour and sustainable transportation options.

**Cost Internalization:** The department recognizes the merit of "full cost pricing," whereby the costs of transportation reflect, to the extent possible, their full economic, social and environmental impacts. The department will assess barriers to sustainable transportation practices to better understand the full impact of its decisions.

**Affordability:** Transportation systems should be affordable. The department will promote sustained strategic investment in transportation through new partnerships, innovative financing and a clear identification of priorities. In seeking cost-effective solutions, it will promote options that include demand management and that foster an appropriate mix of modal alternatives.

## ENVIRONMENTAL PRINCIPLES

**Pollution Prevention:** Transport Canada will work to ensure that transportation needs are met in a way that avoids or minimizes the creation of pollutants and waste, and that reduces the overall risk to human health and the environment.

**Protection and Conservation:** The department will apply sound environmental protection and conservation practices. It will support transportation systems that make efficient use of land and natural resources, preserve vital habitats and maintain biodiversity.

**Environmental Stewardship:** The department will continually refine its environmental management system so that its internal operations support sustainable development. As both custodian and landlord, it will consider the potential environmental impacts of new initiatives, and will apply risk management and due diligence practices consistently to its real property assets.

## MANAGEMENT PRINCIPLES

**Leadership and Integration:** Transport Canada recognizes sustainable development as among the highest of departmental priorities, and accepts its responsibility to become a leader in sustainable transportation. The department will set priorities and responsibilities, allocate resources, and apply tools to integrate sustainable development into its policies, programs and operations.

**Precautionary Principle:** Where there are threats of serious or irreversible damage to the environment, the department will not use a lack of full scientific certainty as a reason for postponing cost-effective measures to prevent environmental degradation.

**Consultation and Public Participation:** The department will inform and engage employees, stakeholders and communities in its decision-making process as appropriate, and encourage them to participate in achieving the goal of sustainable transportation.

**Accountability:** The department will annually measure and report its progress in achieving its sustainable development objectives and targets. To this end, it will develop and refine sustainable transportation indicators.



## GLOSSARY

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**Active Transportation:**

Non-motorized transportation including travel modes such as walking, cycling, skating, skiing, and manual-powered wheelchair.

**Adaptation to Climate Change:**

Involves making adjustments in our social and economic activities to enhance their viability and reduce their vulnerability to climate change. This includes measures to reduce or avoid negative impacts of climate change, and also the steps taken to maximize new opportunities.

**Advanced Technology Vehicles (ATVs):**

Vehicles with available, or soon to be available, technologies able to improve fuel efficiency, reduce air emissions and contribute to the development of cleaner, sustainable transportation systems. Examples of advanced technologies include new powertrains and accessories (hybrid, electric, gasoline and diesel direct injection engines), new body construction and innovations (use of lightweight and/or recyclable materials, small size/dimensions and aerodynamics), lightweight metals and composites, and advanced emission control devices and fuels.

**Canada-Wide Environmental Standards Sub-Agreement:**

A framework for federal, provincial, and territorial Environment Ministers to work together to address key environmental protection and health risk reduction issues that require common environmental standards across the country. Transport Canada participated in the development of the first Canada-wide Standards on particulate matter and ozone, which will assist with meeting air quality standards.

**Climate Change:**

Human activities are altering the chemical composition of the atmosphere through the build-up of greenhouse gases that trap heat

and reflect it back to the earth's surface. This is resulting in changes to our climate, including a rise in global temperatures and more frequent extreme weather events.

**Cost Internalization:**

See Full-Cost Accounting.

**E-Commerce:**

The paperless execution of commercial transactions and the electronic messages required to plan, monitor and complete the transport of persons or goods covered by the transactions.

**Efficient Transportation:**

An efficient transportation system is one which allows the maximum movement of people and goods, at the lowest economic, environmental and social cost.

**Environmental Assessment:**

A planning tool which systematically identifies and assesses the environmental effects of proposed projects before they occur, with the aim of taking the potential effects into account in project decision-making before irrevocable decisions are made.

**Environmental Management System:**

An Environmental Management System (EMS) is a systematic approach for organizations to bring environmental considerations into decision-making and day-to-day operations. It also establishes a system for tracking, evaluating and communicating environmental performance. An EMS helps ensure that major environmental risks and liabilities are identified, minimized and managed. The ISO 14001 standard, Environmental Management Systems, is the standard within the ISO 14000 series that specifies the requirements of an environmental management system. See also ISO 14000.

**Freight Efficiency and Technology Initiative:**

An initiative designed to reduce the growth of greenhouse gas emissions from the freight sector of transportation. As part of this initiative, three sub-objectives are intended to be achieved: i) to increase the freight transportation industry's participation in voluntary climate change initiatives, namely through voluntary performance agreements with the modal associations; ii) to increase the operating efficiency and environmental training and awareness amongst freight operators and shippers; and iii) to demonstrate and encourage the take-up of innovative environmental technologies and efficient best practices within the freight transportation sector.

**Full-Cost Accounting (Cost Internalization):**

An accounting method that determines total value or final price by internalizing non-market values such as environmental and social costs and benefits.

**Green Commute:**

Transport Canada's Green Commute program demonstrates alternatives to single occupancy vehicle trips in commuting to and from work. Alternatives include public transit, active transportation, car pooling and telecommuting.

**Greenhouse Gases:**

Greenhouse gases are gases that absorb and trap heat in the atmosphere and cause a warming effect on earth. Some occur naturally in the atmosphere, while others result from human activities. Greenhouse gases include carbon dioxide, water vapor, methane, nitrous oxide, ozone, chlorofluorocarbons, hydrofluorocarbons and perfluorocarbons.

**HandyDART:**

A public transit service which uses specially equipped vehicles designed to carry passengers with physical or cognitive disabilities who are unable to use public transit without assistance. HandyDART passengers are picked up at the accessible

outside door of their residence and dropped off at the outside door of their destination.

**Horizontal Result:**

A horizontal result is an outcome that is produced through the contributions of two or more departments or agencies, jurisdictions, or non-governmental organizations.

**Intelligent Speed Adaptation (ISA):**

An in-vehicle system that informs the driver of the speed limit for the road being travelled, or automatically limits the vehicle maximum speed to the local limit.

**Intelligent Transportation Systems (ITS):**

The application, in an integrated manner, of advanced information processing (computers), communications, sensor and control technologies and management strategies, to improve the functioning of the transportation system.

**Intermodal Transportation:**

Intermodal transportation is the use of two or more modes to move freight or passengers from origin to destination. For freight, an intermodal movement includes all aspects of the supply chain involved in the movement and transfer of goods under a single freight bill. For passengers, intermodal movement means a seamless trip from origin to destination using more than one mode.

**International Civil Aviation Organization (ICAO):**

Formed under the 1944 Convention on International Civil Aviation, with aims and objectives "to develop the principles and techniques of international air navigation and to foster the planning and development of international air transport." The Convention established certain principles and arrangements in order that international civil aviation may be developed in a safe and orderly manner, and that international air transport services may be established on the basis of equality of opportunity and operated soundly and economically. Canada is a member.



**International Maritime Organization (IMO):**

Established in 1948 by the United Nations Maritime Conference, the purposes of the Organization are "to provide machinery for co-operation among Governments in the field of governmental regulation and practices relating to technical matters of all kinds affecting shipping engaged in international trade; and to encourage and facilitate the general adoption of the highest practicable standards in matters concerning maritime safety, efficiency of navigation and prevention and control of marine pollution from ships." The Organization has 158 Member States, including Canada.

**ISO 14000:**

ISO 14000 is a series of international, voluntary environmental management standards. Developed under International Organization for Standardization Technical Committee 207, the 14000 series of standards address the following aspects of environmental management: Environmental Management Systems (EMS), Environmental Auditing and Related Investigations (EA&RI), Environmental Labels and Declarations (EL), Environmental Performance Evaluation (EPE), Life Cycle Assessment (LCA), and Terms and Definitions (T&D). See also Environmental Management System.

**Issue Scan:**

An issue scan is an assessment of a department's activities in terms of their impact on sustainable development.

**Kyoto Protocol:**

An International Protocol negotiated in December 1997 under the United Nations Framework Convention on Climate Change in Kyoto, Japan. Under the Protocol, Canada agreed to reduce its emissions of greenhouse gases to 6 per cent below 1990 levels during the five-year period of 2008 to 2012. Canada ratified the Kyoto Protocol in December 2002.

**Let's Drive Green Program:**

A free Vehicle Emissions Inspection Clinic Program delivered by Environment Canada

during the summer months. During these free clinics people are invited to get their vehicle emissions tested. There are no fees or fines for vehicles that fail and a pamphlet of tips is given out to help people reduce their impact on air pollution.

**Logic Model:**

A map that explains the links between activities, key outputs and expected results. It provides a framework for building a focused set of results indicators and is a means of shifting emphasis from inputs and outputs to the achievement of expected results.

**Marpol Annexes:**

The Marpol Annexes were established at an international convention on marine pollution, with Marpol Annex VI being intended to reduce the discharges of air pollutants from ships.

**Moving On Sustainable Transportation (MOST) Program:**

A contribution program established in 1999 by Transport Canada, to support projects that produce sustainable transportation education, awareness and analytical tools.

**National Advisory Group:**

A committee created in 1996 by Transport Canada, to advise the department on the development of its 1997 strategy. Composed of transportation and environmental experts, the National Advisory Group was re-established in 2000 and 2003 to advise Transport Canada on the development of the department's second and third sustainable development strategies.

**Natural Resource Inventory:**

A process of characterizing natural resources, identifying valued ecosystem components, and determining potential impacts.

**Non-Renewable Resources:**

Non-renewable resources are natural resources that are in fixed supply (i.e. minerals, oil, coal).

**Performance Measure:**

An indicator that provides information (either qualitative or quantitative) on the extent to which a policy, program or initiative is achieving its outcomes.

**Pollution Prevention:**

The use of processes, practices, materials, products or energy that avoid or minimize the creation of pollutants or wastes, and reduce overall risk to human health or the environment.

**Precautionary Principle:**

When there are threats of serious or irreversible damage, scientific uncertainty shall not be used to postpone cost-effective measures to prevent environmental degradation.

**Sector Councils:**

Organizations led by a partnership of representatives in a defined area of economic activity, who seek to identify and address current and anticipated human resource, skills and learning challenges in various areas of the Canadian labour market.

**Species At Risk Act (SARA):**

Proclaimed in June 2003, the Act is one of a three part Government of Canada strategy for the protection of wildlife species at risk and to secure the necessary actions for their recovery. This three part strategy also includes commitments under the Accord for the Protection of Species at Risk, and activities under the Habitat Stewardship Program for Species at Risk. The Act complements existing laws and agreements to provide for the legal protection of wildlife species and conservation of biological diversity.

**Strategic Environmental Assessment (SEA):**

The systematic and comprehensive process of evaluating the environmental effects of a proposed policy, plan or program and its alternatives. SEA is a key tool for incorporating sustainable development considerations into government decisions.

**Shortsea Shipping:**

Generally refers to the movement of cargo and passengers by water, between points situated relatively closely to one another. This usually includes domestic shipping along coastlines, to and from nearby islands, or within lakes and river systems, but may also have an international element.

**Sustainable Development:**

Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.

**Sustainable Development Strategy:**

In accordance with the *Auditor General Act*, the strategy that each Minister responsible for a federal government department is required to submit to Parliament every three years, beginning in 1997. It outlines the department's goals and action plans for integrating sustainable development into its policies, programs and operations.

**Sustainable Development Strategy Committee:**

Comprised of managers from each group and region of Transport Canada, the Committee oversees the development of the department's sustainable development strategy, and provides a forum for sharing information and practices concerning sustainable development across the department.

**Sustainable Transportation Lens:**

A tool for promoting the more systematic consideration of sustainable transportation issues in the decision-making process. The lens would prompt decision-makers to consider specific questions or areas of analysis and would lead them to other existing tools when appropriate.

**Transportation Demand Management (TDM):**

A variety of strategies to influence travel behavior by mode, cost, time or route, in order to reduce the number of vehicles and to provide mobility options. TDM strategies





are often applied to achieve public goals, such as reduced traffic congestion, improved air quality, and decreased reliance on energy consumption. TDM strategies are also used by employers to reduce overhead costs, enhance productivity, and address other business problems such as employee turnover.

**Urban Transportation Showcase Program (UTSP):**

A five-year program created to demonstrate, evaluate and promote effective strategies to reduce GHG emissions from urban transportation. Through this program, Transport Canada will work in partnership with provinces and municipalities, to establish a number of transportation "showcases" in selected cities, for demonstrating and evaluating a range of urban transportation strategies within a broad planning framework. The Program's Information Network will disseminate information across Canada on effective GHG emissions reduction strategies and their co-benefits, including results of showcases.

**World Summit on Sustainable Development (WSSD):**

An international event held in August 2002 in Johannesburg, South Africa, which brought together tens of thousands of participants, including heads of state and government, national delegates and leaders from non-governmental organizations, businesses and other major groups. The Summit focused world attention and action on the difficult challenges of improving people's lives and conserving natural resources in the face of population growth, with ever-increasing demands for food, water, shelter, sanitation, energy, health services and economic security.