# Transport Canada

## Departmental Sustainable Development Strategy 2020 to 2023













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### **Executive Summary**

Transport Canada seeks to promote a safe, secure, efficient and environmentally responsible transportation system in Canada. Our departmental vision aligns closely with the social, economic and environmental pillars of sustainable development, which is defined as 'our ability to meet the needs of the present without compromising the ability of future generations to meet their own needs'<sup>1</sup>.

Our national transportation system – 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, provides jobs, and supports economic growth. However, transportation activities can sometimes have negative impacts on the environment, for example - through the release of air pollutants from vehicles which can contribute to poorer air quality or accidental oil spills in the marine environment which can affect water quality and marine species. Of increasing importance, climate change and extreme weather-related events can disrupt the movement of both freight and people, putting the economy and Canadians at risk. Given the complex nature of sustainable transportation issues and its shared jurisdiction, strong and effective partnerships are required with other federal departments, other levels of government, industry, other stakeholders and individual Canadians. A number of our departmental actions, as set out in Section 3, will be undertaken in partnership with others.

At the federal level, a whole-of government Federal Sustainable Development Strategy (FSDS) is prepared every three years. The 2019 to 2022 FSDS is the federal government's fourth strategy since the coming into force of the *Federal Sustainable Development Act*, and it serves as the Government of Canada's primary vehicle for sustainable development planning and reporting – both to Parliament and Canadians. The 2019 to 2022 FSDS centres on thirteen aspirational goals, with supporting targets and actions, which seek to promote clean growth, ensure healthy ecosystems and build safe, secure and sustainable communities. Furthermore, the FSDS demonstrates federal leadership towards implementing the environmentally-related global United Nations' Sustainable Development Goals (Figure 1).

Figure 1 – The United Nations' Sustainable Development Goals

SUSTAINABLE GOALS

<sup>&</sup>lt;sup>1</sup> World Commission on Environment and Development. (1987). "Our common future". Oxford: Oxford University Press.

Transport Canada remains committed to contributing to the FSDS and to supporting Canada's vision for sustainable development. The 2020 to 2023 Departmental Sustainable Development Strategy (DSDS) describes how Transport Canada will continue to contribute to the FSDS: our sustainable development context and vision; the actions we will undertake over the next three years to support the FSDS, and the ways we have integrated a sustainable development approach into our policies, plans and decision-making. Key areas of action presented within this DSDS include: initiatives to reduce greenhouse gas and air pollutant emissions from the transportation sector, including in support of the Pan-Canadian Framework on Clean Growth and Climate Change; climate change adaptation programs such as the Northern Transportation Adaptation Initiative which enhances northerners' capacity to adapt their transportation systems to climate change; actions under the Oceans Protection Plan to protect our coasts and oceans and keep them healthy for future generations; as well as activities to lead by example in improving our own operations through increasing efficiencies in how we do business and reducing the energy consumption of the facilities and fleet of vehicles that we own and operate.

# Section 1: Introduction to the Departmental Sustainable Development Strategy

The 2019 to 2022 Federal Sustainable Development Strategy (FSDS) presents the Government of Canada's sustainable development goals and targets, as required by the *Federal Sustainable Development Act*. In keeping with the purpose of this Act to provide the legal framework for developing and implementing a Federal Sustainable Development Strategy that will make environmental decision-making more transparent and accountable to Parliament, Transport Canada supports the goals laid out in the FSDS (Figure 2) through the activities described in this Departmental Sustainable Development Strategy (DSDS).

Figure 2: FSDS Goals



### **Section 2: Sustainable Development Vision and Context in Transport Canada**

To preserve and strengthen Canada's transportation system, transportation policy must provide a framework that addresses the three elements of sustainability - social, economic and environmental. It must also give carriers the opportunity to adapt, innovate, compete and serve shippers and travellers in a way that takes into account each of these elements.

Transport Canada is responsible for the Government of Canada's transportation policies and programs. While not directly responsible for all aspects or modes of transportation, the Department plays a leadership role to ensure that all parts of the transportation system work together effectively.

Our vision is 'A transportation system in Canada that is recognized worldwide as safe and secure, efficient and environmentally responsible'. This vision of a sustainable transportation system reflects social, economic and environmental objectives. Its three guiding principles are to work towards:

- the highest possible safety and security of life and property, supported by performance-based standards and regulations;
- the efficient movement of people and goods to support economic prosperity and a sustainable quality of life, based on competitive markets and targeted use of regulation and government funding; and,
- respect of the environmental legacy for future generations of Canadians, guided by environmental assessment and planning processes in transportation decisions and selective use of regulation and government funding.

'Transportation 2030 – A Strategic Plan for the Future of Transportation in Canada', announced in 2016 by the Minister of Transport, was prepared with views and ideas from Canadians, stakeholders, provinces and territories, and Indigenous groups across the country and reflects sustainable development in its vision of:

"...a safe, secure, green, innovative and integrated transportation system that supports trade and economic growth, a cleaner environment and the well-being of Canada's middle class".

Canadians are invited to visit our <u>Transportation 2030 website</u> to view our progress in advancing work under the following five key theme areas:

- 1. Enhancing the experience of the Canadian traveller;
- 2. Building a **safer**, **more secure** transportation system that earns the confidence of Canadians;
- 3. Investing in a **greener**, **more innovative** transportation sector that embraces new technologies to improve Canadians' lives;
- 4. Protecting Canada's waterways, coasts and the North; and
- 5. Improving Canada's **transportation infrastructure and trade corridors** to get products to global markets more efficiently.

Transport Canada continues to actively participate in and support the FSDS. Through this DSDS, the department directly contributes to six of the thirteen long-term goals identified in the 2019 to 2022 FSDS, as follows:

FSDS Goal: Greening Government - Transport Canada has identified a number of measures under the Greening government goal to support the Government of Canada's target to reduce greenhouse gas (GHG) emissions from federal government facilities and fleets by 40% below 2005 levels by 2030 (with an aspiration to achieve this target by 2025) and 80% below 2005 levels by 2050 (with an aspiration to be carbon neutral). These measures include: renovating facilities to be more energy efficient; starting in 2019 to 2020, and where operational needs permit, 100% of new light-duty administrative fleet purchases will must be zero-emission vehicles (ZEVs); incorporating environmental considerations into our procurement processes; and engaging with employees to promote sustainable employee behaviour.

Transport Canada is already making strides towards these goals. The department has seen a 12.4% reduction in GHG emissions from facilities between fiscal year 2005 to 2006 and fiscal year 2019 to 2020, and a 17.8% reduction in GHG emissions from Transport Canada's fleets over the same period. In 2019 to 2020, 100% of Transport Canada's new procurement specialists and acquisition cardholders were trained in green procurement using the Canada School of Public Service Green Procurement course. Transport Canada will also undertake waste audits (including plastics) at some of its largest owned and operated facilities across the country in support of the Government of Canada's commitment to better manage the use and disposal of plastics and waste in federal operations.

Additionally, Transport Canada continues to demonstrate leadership in its efforts to better understand and address climate risks to the department's assets, services and operations. In particular, the Transportation Assets Risk Assessment initiative seeks to improve the understanding of climate risks to federal transportation assets and potential adaptation solutions which could be employed.

FSDS Goal: Effective Action on Climate Change – The transportation sector is Canada's second largest source of greenhouse gas emissions, accounting for 186 Mt or 26% of the national total. Reducing these emissions is a key priority of the federal government, as outlined in the set of ambitious and collaborative areas of action under the Pan-Canadian Framework on Clean Growth and Climate Change. Transport Canada leads a suite of regulatory and voluntary measures to reduce greenhouse gas emissions from the aviation, marine, and rail sectors, and also supports emission reductions from the on-road sector. The department also represents the Government of Canada at the International Civil Aviation Organization and the International Maritime Organization to develop approaches for the international aviation and marine sectors. The Department also tests clean transportation technologies, so that they may be introduced in a safe, effective and timely manner. In January 2019, new federal targets were announced for sales of zero-emission vehicles in Canada. Many of the actions under this Goal also support the Safe and Healthy Communities FSDS Goal.

Impacts associated with a changing climate and extreme weather are already damaging and disrupting transportation systems, services and operations across all modes and in all regions of Canada. In Northern Canada in particular, climate impacts can threaten the efficiency, safety and resilience of transportation, and consequently, the ability of Northerners and industry to maximize social and economic development.

To support more climate resilient transportation infrastructure, Transport Canada's <u>National Trade Corridors Fund</u> supports trade and transportation infrastructure investments that strengthen the efficiency and reliability of Canada's trade corridors. Additionally, through the continuation of the <u>Northern Transportation Adaptation Initiative</u>, the department seeks to enable the enhancement of the resilience of existing and future Northern transportation infrastructure and operations to a changing climate.

FSDS Goal: Clean Growth – Investments in clean technology and innovation contribute to clean growth and the transition to a low-carbon economy, resulting in both economic and environmental benefits. Recognizing this, Transport Canada's "Core Clean Transportation Research, Development and Demonstration – Aviation, Marine and Rail

Transportation Program" will address GHG and air pollutant emissions from the aviation, marine and rail transportation sectors through targeted research on emerging technologies and innovative practices.

**FSDS Goal: Healthy Coasts and Oceans** – Transport Canada is committed to protecting Canada's coasts and oceans and keeping them healthy for future generations. The department develops and administers policies, regulations and programs to protect the marine environment.

In support of this goal, the *Oil Tanker Moratorium Act* received Royal Assent on June 21, 2019, formalizing a crude oil tanker moratorium on British Columbia's north coast, providing an unprecedented level of environmental protection for this special place and unique ecosystem. This legislation prohibits oil tankers carrying more than 12,500 metric tons of crude oil or persistent oil products as cargo from stopping, loading or unloading at ports or marine installations in the moratorium area.

The Government also continues to implement the Oceans Protection Plan (OPP): a whole-of-government, comprehensive strategy to build a world-leading marine safety system and protect Canada's marine ecosystems. The OPP includes a number of innovative and transformative initiatives being implemented by five federal organizations under four main priority areas, namely, prevention and response measures related to marine safety, preservation and restoration of marine ecosystems and habitats, building and strengthening partnerships with Indigenous and coastal communities, and ensuring Canada's marine safety system is built on a stronger evidence base that is supported by science and local knowledge.

As part of the National Strategy to Address Abandoned and Wrecked Vessels, the Government brought into force the *Wrecked, Abandoned or Hazardous Vessels Act* in July 2019. This Act prohibits irresponsible vessel management, strengthens vessel owner responsibility and liability, and enhances federal powers to take proactive measures on problem vessels or wrecks. It also brought into Canadian law the *Nairobi International Convention on the Removal of Wrecks, 2007*, which strengthens owner liabilities concerning wrecks. Over 130 vessels or wrecks have been addressed under the new Act. This is in addition to approximately 170 vessels or wrecks that have been removed and disposed to date under the Department of Fisheries and Oceans Small Craft Harbour Abandoned and Wrecked Vessel Removal Program, or under Transport Canada's Abandoned Boats Program.

Building on the OPP, on June 22, 2018, the Government of Canada announced the \$167.4 million Whales Initiative to protect and support the recovery of endangered whale populations across Canada by addressing key threats to the Southern Resident Killer Whale (SRKW), the North Atlantic Right Whale (NARW) and the St. Lawrence Estuary Beluga. On October 31, 2018, the Government announced a further \$61.5M in additional measures focused on broadening and strengthening protection of SRKW in response to the determination that this population faces an imminent threat. Transport Canada continues to implement and refine measures to reduce the risk of physical and acoustic disturbances from vessels such as expanding vessel slowdown zones on the East and West coasts, prohibiting approach distances of less than 400m from the Southern Resident killer whales, establishing Interim Sanctuary Zones for killer whales where vessels are prohibited from entering, taking monitoring and

enforcement actions for vessels in mandatory speed restriction areas, and increasing aerial and acoustic detection of whales in Canadian waters.



Many of Transport Canada's actions under the Healthy Coasts and Oceans Goal also support the **Pristine Lakes and Rivers** Goal.

FSDS Goal: Safe and Healthy Communities – Transport Canada is committed to doing its part to ensure that Canadians live in clean, safe environments that contribute to their health and well-being. Pollutant emissions from transportation have fallen significantly, largely due to regulatory changes introduced by the federal government. That being said, further action is required to ensure this trend continues in the transportation sector. Key departmental initiatives under this goal include: regulatory, voluntary and complementary efforts to improve air quality through the reduction of air pollutant emissions from transportation sources; the prevention of environmental emergencies or mitigating their impacts if they do occur; and taking action to remediate our contaminated sites.

This DSDS builds on our accomplishments and lessons learned in previous strategies and charts our course of action for the next three years. In the spirit of the 'evergreen' approach of the 2019 to 2022 FSDS, we will update the interactive <a href="FSDS e-Strategy">FSDS e-Strategy</a> and this DSDS as new policy decisions, programs and initiatives that support the FSDS goals or broader United Nations' Sustainable Development goals emerge. Detailed information about these initial commitments that Transport Canada has made to contribute to the 2019 to 2022 FSDS can be found in Section 3 of this DSDS.

### **Section 3: Commitments for Transport Canada**



Greening Government: The Government of Canada will transition to low-carbon, climate resilient, and green operations Responsible Minister: All ministers

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
Reduce GHG emissions from federal government facilities and fleets by 40% below 2005 levels by 2030 (with an aspiration to achieve this target by 2025) and 80% below 2005 levels by 2050 (with an aspiration to be carbon neutral)	All new buildings and major building retrofits will prioritize low-carbon investments based on integrated design principles, and life-cycle and total-cost-of ownership assessments which incorporate shadow carbon pricing	All new buildings will be constructed to be net-zero carbon unless a lifecycle cost-benefit analysis indicates net-zero carbon ready construction  Opportunities to implement energy efficiency retrofits in TC buildings will be considered, such as:  Ilighting upgrades (LED lighting)  upgrades to buildings envelope (insulation, windows, etc.)  reduce plug-load demand initiate energy performance contracts  implement recommissioning measures (buildings and systems optimization to improve comfort and save energy)	Prioritizing low-carbon investment in new constructions and major renovation projects will allow TC to reduce its energy consumption and associated GHG emissions from its real property portfolio and improve the environmental performance of its buildings  By optimizing TC's buildings and systems, energy consumption and GHG emissions will be reduced  Contribution to UNSDGs:  SDG 7 – Affordable and Clean Energy  SDG 9 – Industry Innovation and Infrastructure  SDG 11 – Sustainable Cities and Communities  SDG 12 – Responsible Consumption and Production  SDG 13 – Climate Action	Starting point:  5.68 ktCO <sub>2</sub> e as of 2005 to 2006 baseline year  Performance indicator:  • Percentage (%) change in GHG emissions from facilities as calculated by:  • GHG emissions from facilities in fiscal year 2005 to 2006 (base year): = 5.68 ktCO <sub>2</sub> e  • GHG emissions from facilities in current reporting fiscal year = [Y] ktCO <sub>2</sub> e  • percentage (%) change in GHG emissions from facilities from fiscal year 2005 to 2006 to current reporting fiscal year = [Y/X] %  Target:  • GHG emissions from buildings reduced by 40% by 2030 (3.408 ktCO <sub>2</sub> e) and 80% by 2050 (1.136 ktCO <sub>2</sub> e)	Environmental Stewardship of Transportation

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
	Fleet management will be optimized including by applying telematics to collect and analyze vehicle usage data on vehicles scheduled to be replaced	Telematics will be used to inform the replacement of on-road vehicles and optimize fleet management  100% of new light-duty unmodified administrative fleet vehicle purchases will be zero-emission vehicles (ZEVs) where operations permit  All new Transport Canada executive fleet vehicle purchases will be ZEVs or hybrids  Promote uptake of online Ecodriving course to encourage positive driving habits	Contribution to FSDS goal/target:  As conventional vehicles are replaced by ZEVs and hybrids over time and Ecodriving training is implemented, Transport Canada will reduce GHG emissions from its administrative and executive fleets  Contribution to UNSDGs: SDG 7 – Affordable and Clean Energy SDG 11 – Sustainable Cities and Communities SDG 12 – Responsible Consumption and Production SDG 13 – Climate Action	Starting point:  56 ktCO <sub>2</sub> e, GHG emissions from TC fleets in 2005 to 2006  Performance indicator:  • Percentage change in GHG emissions from fleets as calculated by:  • GHG emissions from fleets in fiscal year 2005 to 2006 (base year): = 56.054 ktCO <sub>2</sub> e  • GHG emissions from fleets in current reporting fiscal year = [Y] ktCO <sub>2</sub> e  • percentage (%) change in GHG emissions from fleets from fiscal year 2005 to 2006 to current reporting fiscal year = [Y/X] %  Target:  • GHG emissions from fleets reduced by 40% by 2030 (33.6 ktCO <sub>2</sub> e) and 80% by 2050 (11.2 ktCO <sub>2</sub> e)	Environmental Stewardship of Transportation
Divert at least 75% (by weight) of non-hazardous operational waste from landfills by 2030	Other	Develop and conduct surveys to understand current waste streams generated at large Transport Canada facilities (10,000m² or more)  Track and disclose waste diversion rates by 2022	Contribution to FSDS goal/target: Transport Canada needs to characterize waste generated at its larger facilities and identify waste reduction opportunities. Reducing and diverting waste from landfills will contribute to the reduction of GHG emissions from transportation of waste and landfill emissions	Starting Points 1 and 2:  No waste data is available at this time  Performance indicator 1:  • Survey conducted at targeted facilities and data analyzed to determine next steps to increase diversion rates	Environmental Stewardship of Transportation

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			Contribution to UNSDGs:  SDG 11 – Sustainable Cities and Communities  SDG 12 – Responsible Consumption and Production  SDG 13 – Climate Action	<ul> <li>Target 1:</li> <li>(a) Surveys have been conducted at targeted Transport Canada facilities by March 31, 2021</li> <li>(b) A waste management plan is implemented by March 31, 2022</li> <li>Performance indicator 2:</li> <li>From fiscal year 2021 to 2022: <ul> <li>Non-hazardous operational waste diversion rate as calculated by:</li> <ul> <li>mass of non-hazardous operational waste generated in the year: [X] tonnes</li> <li>mass of non-hazardous operational waste diverted from landfill in the year: [Y] tonnes</li> <li>non-hazardous operational waste diverted: [Y/X] %</li> </ul> </ul></li> <li>Target 2:</li> <li>75% diversion rate (by weight) by 2030</li> </ul>	
Divert at least 75% (by weight) of plastic waste from landfills by 2030	Other	Promote the use of alternatives to single use plastics in Transport Canada procurement decisions  Promote the reuse or recycling of plastics in Transport Canada waste management decisions	Contribution to FSDS goal/target:  By promoting the use of alternatives to single use plastics and promoting the recycling and reuse of plastics, Transport Canada will divert more plastics from landfills  Transport Canada must identify uses of plastics within the	Starting point 1 and 2:  No waste data available at this time  Performance indicator 1:  Survey conducted at targeted facilities and data analyzed to determine next steps to increase diversion rates	Environmental Stewardship of Transportation

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		Develop and conduct surveys to understand use of plastic products in Transport Canada operations  Track and disclose plastic waste diversion rates by 2022	department and identify plastics reduction and diversion opportunities. Reducing and diverting plastics from landfills will contribute to the reduction of GHG emissions from transportation of waste and landfill emissions  Contribution to UNSDGs: SDG 11 – Sustainable Cities and Communities  SDG 12 – Responsible Consumption and Production SDG 13 – Climate Change	<ul> <li>Target 1:</li> <li>(a) Survey has been conducted at targeted Transport Canada facilities by March 31, 2021</li> <li>(b) A waste management plan is implemented by March 31, 2022</li> <li>Performance indicator 2:</li> <li>From fiscal year 2021 to 2022:</li> <li>Plastic waste diversion rate as calculated by: <ul> <li>mass of plastic waste generated in the year: [X] tonnes</li> <li>mass of plastic waste divested from landfill in the year: [Y] tonnes</li> <li>plastic waste diverted: [Y/X] %</li> </ul> </li> <li>Target 2:</li> <li>75% diversion rate (by weight) by 2030</li> </ul>	
Divert at least 90% (by weight) of all construction and demolition waste from landfills (striving to achieve 100% by 2030)	Other	Track and disclose construction and demolition waste diversion rates by 2022	Contribution to FSDS goal/target: Transport Canada will ensure that construction and demolition waste are diverted from landfills. Reducing and diverting waste from landfills will contribute to the reduction of greenhouse gas emissions from transportation of waste and landfill emissions	Starting point: No waste data available at this time  Performance indicator:  • From fiscal year 2021 to 2022:  Percentage (%) of construction and demolition waste diverted from landfill as calculated by:	Environmental Stewardship of Transportation

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			Contribution to UNSDGs: SDG 11 – Sustainable Cities and Communities SDG 12 – Responsible Consumption and Production SDG 13 – Climate Change	<ul> <li>mass of construction and demolition waste generated in the year = [X] tonnes</li> <li>mass of construction and demolition waste diverted in the year = [Y] tonnes</li> <li>percentage (%) of construction and demolition waste diverted = [Y/X] %</li> </ul> Target:	
Our administrative fleet will be comprised of at least 80% zero-emission vehicles by 2030	Fleet management will be optimized including by applying telematics to collect and analyze vehicle usage data on vehicles scheduled to be replaced	100% of new light-duty unmodified administrative fleet vehicle purchases will be zero-emission vehicles (ZEVs) where operations permit  All new Transport Canada executive fleet vehicle purchases will be ZEVs or hybrids  Install charging stations at Transport Canada facilities	Contribution to FSDS goal/target:  By replacing conventional on-road vehicles by ZEVs, Transport Canada will reduce its GHG emissions. The replacement of vehicles will be informed by telematics, which will assess vehicle usage and best suited replacement The purchase and installation of charging stations will enable deployment of ZEVs across Transport Canada facilities  Contribution to UNSDGs: SGD 7 – Affordable and Clean Energy  SDG 9 – Industry Innovation and Infrastructure  SDG 11 – Sustainable Cities and Communities	<ul> <li>90% diversion rate (by weight) by 2030</li> <li>Starting points 1 and 2:         As of 2019 to 2020, Transport Canada's on-road administrative fleet is composed of 11% of ZEVs     </li> <li>Performance indicator 1:         <ul> <li>Percentage (%) of ZEVs in Transport Canada's administrative fleet as calculated by:</li></ul></li></ul>	1 and 2 - Environmental Stewardship of Transportation 3 - Internal Services

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			SDG 13 – Climate Action	Target 1:  By 2030, 80% of Transport Canada's new light-duty unmodified administrative fleet will be ZEVs  Borformance indicator 2:	
				Performance indicator 2:  Percentage (%) of administrative vehicles purchased that are ZEVs as calculated by:  number of administrative vehicles purchased in the year = [X]  number of ZEVs purchased in the year = [Y]  percentage (%) new administrative vehicles purchased that are ZEVs = [Y/X] %	
				<ul> <li>Target 2:         <ul> <li>100% of Transport Canada's new purchases of light-duty unmodified administrative fleet will be ZEVs where operations permit</li> </ul> </li> <li>Starting point 3:         <ul> <li>17% of Transport Canada facilities equipped with at least 1 charging station as of 2019 to 2020</li> </ul> </li> </ul>	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
By 2022, departments	Increase training and	Py 2021, departments will take	Contribution to ESDS goal/target:	Performance indicator 3:  Percentage of facilities that are equipped with at least 1 charging station  Target 3:  By 2023, all Transport Canada facilities will be equipped with at least 1 charging station  Assessing and addressing climate.	Climato
By 2022, departments have developed measures to reduce climate change risks to assets, services and operations	Increase training and support on assessing climate change impacts, undertaking climate change risk assessments and developing adaptation actions to public service employees, and facilitate sharing of best practices and lessons learned	By 2021, departments will take action to understand the wide range of climate change impacts that could potentially affect federal assets, services and operations across the country  Building on the completion of a departmental climate risk assessment in 2019 to 2020, Transport Canada will also undertake the following series of actions which are organized by three results chains:	Impacts associated with climate change and extreme weather are disrupting the movement of both freight and people, and increasing costs within the transportation sector. These impacts are projected to intensify in the future  Transport Canada owns and operates federal transportation assets, which are important components of our national transportation system	Assessing and addressing climate change risks:  1 a) Starting point:  Transport Canada's first climate change adaptation plan sunset in March 2016. In early 2020, Transport Canada completed a climate risk assessment, by identifying and evaluating climate risks and opportunities in areas such as Transport Canada's: assets and operations, regulatory role, policies and programs. This work will help inform the development of the department's second climate change adaptation plan (between 2020 to 2021 and 2024 to 2025)	Climate Change and Clean Air
		Assessing and addressing climate change risks      Establish measures to reduce climate risks to Transport Canada and increase departmental resilience, through the development of the second departmental	1. Assessing and addressing climate change risks Assessing climate change risks and opportunities to the department supports more informed decision making, and taking adaptation action strengthens Transport Canada's resilience. Moving from climate risk assessment to	Performance indicator 1:  Finalize the development of Transport Canada's second climate change adaptation plan  Target 1:  Transport Canada senior management approval of the second departmental	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		climate change adaptation plan  b) Implement the Transportation Assets Risk Assessment initiative to:  • Support risk assessments of federally-owned and/or managed transportation infrastructure  • Support research and analysis on risk assessments and climate change adaptation solutions that are of benefit to federal infrastructure  • Share information and analysis with the broader transportation sector to aid in spurring action and increasing the understanding of risks and potential solutions that can be employed  2. Building knowledge and capacity  a) Facilitate departmental adaptive capacity building activities that help strengthen Transport Canada's climate change adaptation knowledge	addressing impacts also enables operators of federally-owned and/or managed transportation assets to enhance the stewardship of these public assets  2. Building knowledge and capacity Increasing Transport Canada employees' knowledge may result in more informed and evidence-based departmental decisions that incorporate current and future climate risks. Many of Transport Canada's capacity building actions also result in enhancing climate resiliency for the broader transportation sector  3. Mainstreaming climate change considerations Finally, mainstreaming climate change considerations is a key part of Transport Canada's risk management efforts. Through the integration of adaptation into federal policy, planning, and operations, adaptation planning and decision-making will become part of the ongoing management processes  Ultimately, Transport Canada will be able to enhance the protection of public assets and resources and	climate change adaptation plan by March 31, 2021  Performance indicator 2:  Status of the climate change adaptation plan's implementation presented to senior management annually  Target 2:  First year progress report to senior management no later than September 30, 2021  1 b) Starting point:  Budget 2017 announced investments of up to \$16.35 million over five years, beginning in 2017 to 2018, to better understand climate risks to federal transportation assets  The Transportation Assets Risk Assessment initiative also undertakes dissemination of lessons learned from the support of climate risk assessment projects  Climate risk assessments of transportation assets are intended to lead to the incorporation of climate considerations into asset management plans and other decision documents	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		and capacity  3. Mainstreaming climate change considerations  a) Account for current and future potential climate risks within departmental business continuity and risk planning in order to adjust Transport Canada's risk response and processes, thus strengthening departmental resilience  b) Inform Transport Canada's investment planning process through the incorporation of climate change impacts and adaptation within capital and operating approval documents  c) Integrate climate change impacts and adaptation into departmental program design and delivery criteria	Contribution to UNSDGs:  SDG Target 9.1- Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all  SDG Target 13.1- Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries  SDG Target 13.2- Integrate climate change measures into national policies, strategies and planning  SDG Target 13.3- Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	To date, 42 projects have been approved for funding under the TARA initiative. These projects have supported full or partial climate risk assessments of 44 federal transportation assets across Canada  Performance indicator 1:  Percentage of asset management plans and other decision documents that integrate climate considerations (as a result of Transportation Assets Risk Assessment initiative climate risk assessment projects supported with operating funding)  Target 1:  By the end of the 2020 to 2021 fiscal year, establish a baseline percentage of the documents integrating climate considerations in order to establish a target  Performance indicator 2:  Number of dissemination activities (for example, conferences, presentations, webinars) undertaken to share lessons learned and best practices in assessing climate risk gained from the delivery of the Transportation Assets Risk Assessment initiative	

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				<ul> <li>Target 2:</li> <li>At least ten dissemination activities undertaken per year over two years, until March 31, 2022</li> <li>2. Building knowledge and capacity:</li> <li>2 a) Starting point:</li> <li>Between 2015 and 2019, Transport Canada has hosted 13 transportation adaptation webinars, which have attracted over 1000 participants from all levels of government (including Transport Canada), industry, academia and non-governmental organizations. Many of Transport Canada's climate change knowledge and capacity activities, such as the webinar series, extend to external transportation stakeholders, thus fostering both internal and external capacity</li> <li>In early 2020, Transport Canada conducted an assessment of its departmental adaptive capacity with the use of the Climate Capacity Diagnosis</li> <li>Development tool. This is the first time this tool has been used by a federal department to assess their current and desired level of adaptive capacity</li> <li>The assessment identified actions for the Department to pursue to increase its adaptive capacity, by transitioning to a higher response level</li> </ul>	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				The assessment showed that Transport Canada's current adaptive capacity is between Climate Capacity Diagnosis and Development Response Levels 2: Stakeholder Responsive and 3: Efficient Management and the department should strive towards Response Level 5: Strategic Resilience over the long-term  Performance indicator 1:  Number of Transport Canada employees who attended transportation adaptation webinars  Target 1:  Increase in the number of Transport Canada attendees, per year  Performance indicator 2:  Percentage of Transport Canada employees whose knowledge increased as a result of the information they acquired by attending a transportation adaptation webinar  Target 2:  75% of webinar survey respondents, per webinar, indicated a moderate or significant increase in their adaptation knowledge	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				<ul> <li>Performance Indicator 3:</li> <li>Complete transition from Climate         Capacity Diagnosis and Development         Response Level 2: Stakeholder         Responsive to Response Level 3:         Efficient Management</li> <li>Target 3:</li> <li>By March 31, 2023, complete the</li> </ul>	
				<ul> <li>implementation of all activities that will allow for the transition to Response Level 3</li> <li>Mainstreaming climate change considerations:</li> </ul>	
				3 a) Starting point: Since 2012, climate risk and transportation adaptation input has been incorporated into Transport Canada's corporate risk profile, Departmental Plans and Departmental Results Reports. Transport Canada has recently moved to an integrated risk approach which includes consideration of public, corporate and climate risks. Additionally, Transport Canada's Business Continuity Plan accounts for natural disasters and extreme weather	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				<ul> <li>Performance indicator 1:</li> <li>Climate change considerations continue to inform Transport Canada's integrated risk planning process</li> <li>Target 1:</li> <li>Climate change considerations continue to inform Transport Canada's integrated risk planning process, on an</li> </ul>	
				Performance indicator 2:  Percentage of recommended adjustments made to Transport Canada's Business Continuity Plan from a tabletop exercise focused on extreme weather events	
				<ul> <li>Target 2:</li> <li>100% of recommended strategic planning or operational adjustments are incorporated within the Business Continuity Plan, or approval of existing measures, that will strengthen Transport Canada's response to an extreme weather event, by March 31, 2023</li> </ul>	
				3 b) Starting point: Capital projects at Transport Canada assets (airports and ports) are prioritized on an annual basis according to available	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				funding (urgent health and safety projects are considered to be the highest priorities)  The Business Case and Project Charter provide key parameters for projects submitted for approval and must ascertain the need and justify the course of action chosen for the project. Currently, these documents do not include explicit climate change requirements  Performance indicator 1:  Extent to which Transport Canada's five-year investment plan references climate change adaptation  Target 1:  100% of recommended climate change adaptation input into the investment plan included by March 31, 2021  Performance Indicator 2:  Requirements to consider climate change risks and options for adaptation, including risk acceptance, be developed within Transport Canada's Business Case/ Project Charter documents  Target 2:  Application of the revised Business Case/Project Charter template by March 31, 2023	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				At Transport Canada, the integration of sustainable development into policies, plans and programs is supported by the use of a Sustainable Transportation Assessment Tool, which, since 2013, has been the basis of the department's Strategic Environmental Assessment Process. This tool requires all potential policies, plans or programs to consider possible effects on the economy, on society and on the environment. It also includes specific questions to assess possible impacts on Federal Sustainable Development Strategy goals and targets  Additionally, Transport Canada has applied a climate change resilience lens to project proposals submitted under its National Trade Corridors Fund which examines how projects will address and account for vulnerabilities to climate risk  Performance indicator 1:  Updated climate change adaptation component of Transport Canada's Sustainable Transport Assessment Tool	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				<ul> <li>Target 1:</li> <li>Sustainable Transport Assessment Tool adaptation component updated by March 31, 2021</li> </ul>	
				Performance indicator 2:  Established list of existing Transport Canada programs to review to identify opportunities to incorporate change climate risks and adaptation in their design and/or delivery	
				<ul><li>Target 2:</li><li>By March 31, 2022, establish a list of existing programs for review</li></ul>	
				Performance indicator 3:  Percentage of existing programs reviewed	
				<ul><li>Target 3:</li><li>100% of existing programs reviewed by March 31, 2023</li></ul>	
	By 2021, adopt climate- resilient building codes being developed by National Research Council Canada	All major real property projects will integrate climate change adaptation into the design, construction and operation aspects  In order to achieve the above objective, over the course of this	Contribution to FSDS goal/target: This action will support the development of measures to reduce climate change risk to Transport Canada's assets, services and operations by ensuring that climate risks are considered in their design	Starting Point:  Project experiences to-date under the Transportation Assets Risk Assessment initiative (since 2017) have highlighted key challenges for asset owners and operators in translating information gained through a climate risk assessment into adaptation	
		Departmental Suitable Development Strategy period,	and operations. This will position Transport Canada assets to be	action. Additionally, while the Transportation Assets Risk	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		Transport Canada will undertake the following progressive actions:  Establish mechanisms that facilitate the consideration of climate risks within the design, construction and operations / maintenance aspects of Transport Canada's assets and real property projects	Contribution to UNSDGs: SDG Target 9.1- Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all  SDG Target 13.1- Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	Assessment initiative has funded risk assessments of 20 Transport Canada transportation assets to date, the department would benefit from a more strategic and rigorous approach to risk assessment across its broader asset portfolio  Performance indicator 1:  Development of a tool that allows Transport Canada to prioritize the most vulnerable assets within its portfolio for a more comprehensive assessment of climate risks  Target 1:  Application of the tool beginning in 2022 to 2023  Performance indicator 2:  Creation of guidance on how to consider climate risks in the design, construction and operations / maintenance aspects of Transport Canada's assets and real property projects  Target 2:  Guidance document developed by March 31, 2023	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
Use 100% clean electricity by 2025	Other	Use 100% of clean electricity at Transport Canada's facilities by 2025 and, when not feasible, purchase renewable electricity certificates equivalent to that produced by the high-carbon portion of the electricity grid in provinces where the department owns facilities	Contribution to FSDS goal/target:  The use of clean electricity eliminates GHG emissions in jurisdictions with high emitting generation sources. In addition renewable energy certificates can contribute to reducing GHG emissions from electricity use where not connected to a clean source of energy  Contribution to UNSDGs:  SDG 7 – Affordable and Clean Energy  SDG 9 – Industry Innovation and Infrastructure  SDG 13 – Climate Action	Starting point:  In 2005 to 2006, 92% of electricity purchased was clean electricity  Performance indicator:  Percentage of clean electricity used at Transport Canada facilities as calculated by:  electricity consumption in the year = [X] kWh electricity consumption from non-emitting sources (including renewable energy certificates) in the year = [Y] kWh percentage (%) of clean electricity = [Y/X] %  Target:  Use 100% clean electricity, including	Environmental Stewardship of Transportation
Actions supporting the Goal: Greening Government [This section is for actions that support the Greening Government Goal but do not directly support a FSDS target]	Minimize embodied carbon and the use of harmful materials in construction and renovation	Specify low embodied carbon materials in construction and construction contracts	Contribution to FSDS goal/target: Using low embodied carbon materials helps to reduce embodied GHG emissions in Transport Canada's assets (scope 3 emissions) and encourages industry to adopt low carbon extraction, production and disposal practices	Renewable Energy Certificates, by 2025  Starting point: As of 2019 to 2020, Transport Canada does not specify that low embodied carbon materials must be used in its construction projects  Performance indicator:  Percentage of major construction projects in which embodied carbon in building materials was minimized	Environmental Stewardship of Transportation

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
	Departments will use environmental criteria to reduce the environmental impact and ensure best value in government procurement decisions	Include criteria that address broader environmental benefits when procuring or disposing of goods and services that have a high environmental impact, by following these best practices:  1. Implementing a new procurement vehicle for printing services with Shared Services Canada (DISO) <sup>[1]</sup> will enable procurement of environmentally friendly managed printing services  2. Providing functioning equipment that has reached end-of-life to select organizations  3. Deploying an optimized printer service throughout the department	Contribution to UNSDGs:  SDG 7 – Affordable and Clean Energy  SDG 9 – Industry Innovation and Infrastructure  SDG 13 – Climate Action  Contribution to FSDS goal/target:  1. The new managed printing services procurement vehicle includes several equipment environmental specifications:  a) Energy Star registration b) Consumables management, packaging, recycling and applicable environmental certifications (EcoLogo, Green Seal, BlueAngel, Ecolabel, etc.)  2. By sending functioning electronic equipment that is no longer of use to the federal government to schools, libraries and other non–profit organizations, we extend the life of this equipment	<ul> <li>By 2025, all Transport Canada construction contracts will include specifications for low embodied carbon materials in construction</li> <li>Starting Point 1:  The new standing offer for management of printing services procurement vehicle is not implemented</li> <li>Performance indicator 1:  Implementation of the new procurement vehicle for electronic devices is completed</li> <li>Target 1:  New procurement vehicle implemented nationally by March 31, 2023</li> <li>Starting Point 2:  100% of end-of-life electronic hardware is disposed of in a safe and environmentally-sound manner:</li> <li>85% is sent to Computers for Schools +</li> <li>10% is sent to the Ontario Electronic</li> </ul>	Internal Services
			the number of printers per employee and encourages a transition toward paperless	Stewardship +	

<sup>[1]</sup> DISO: Departmental Individual Standing Offer

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		4. Migrating applications from low efficiency legacy data centres to the Cloud  Seek opportunities to adopt new practices, including a current proposal to ensure that IT-based capital projects are assessed for positive environmental impact	workflow, reducing paper consumption  4. Cloud computing is estimated to be 98% more carbon efficient than legacy data centres  5. By incorporating sustainable development considerations to the investment decision-making process, we ensure that environmental impacts are considered alongside financial and business implications  Contribution to UNSDGs:  SDG 11 – Sustainable Cities and Communities  SDG 12 – Responsible Consumption and Production	5% is sent to TC's Cyber Security group for secure destruction  Performance indicator 2:  Percentage of end-of-life hardware disposed of in an environmentally-sound manner  Target 2:  Maintain the 100% environmentally-sound disposal rate  Starting Point 3:  Number of Multi-Function Devices (MFDs):  Tower C: 132 Other Sites: 388 printers/MFDs  User/Device ratio: Tower C: 20:1 Regional sites: 9:1  Printing Volume: Tower C: 10 million sheets Regional sites: 12.6 million sheets  Performance indicator 3:  a) Reduced number of MFDs  b) Increased User/Device ratio  c) Reduced print volume	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				Target 3: During 2020 to 2021:  1a) reduce Tower C MFDs by 30% 1b) increase the User/Device ratio by 50% to 30:1  1c) with a return to worksite of 30% Tower C occupancy: reduce print volume by 70-80%  By March 31, 2023: 2a) 40% reduction in MFDs 2b) reaching a User/Device ratio of 15:1  Starting Point 4: Less than 1% of applications in the Cloud  Performance indicator 4: Percentage of applications migrated to the Cloud  Target 4: Migration of applications to the Cloud (total % by end of year) 2020 to 2021 – 20% 2021 to 2022 – 60%	occur
				• 2022 to 2023 – 100%	

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
	Support for green procurement will be strengthened, including guidance, tools and training for public service employees	Train procurement specialists and acquisition cardholders on green procurement using the Canada School of Public Services Green Procurement course  Develop guidance material to support green procurement at Transport Canada	Contribution to FSDS goal/target: Training procurement specialists and acquisition cardholders on green procurement allows for better informed decisions for including green criteria in contracts for both commodities and services Supporting documentation on green procurement will enable employees to make informed decisions and incorporate environmental considerations in their purchasing decisions of goods and services	Starting Point 5: IT-enabled capital projects are currently not assessed for environmental impact  Performance indicator 5: Percentage of IT projects assessed for environmental impact  Target 5: By March 31, 2021, the process and measurement tools will be in place to ensure that all capital projects reviewed by Transport Canada's Architecture Review Board will be assessed for environmental impact  Starting Point 1: As of 2019 to 2020, 100% of Transport Canada procurement specialists and cardholders have completed training on green procurement  Performance indicator 1: Percentage of new procurement specialists and cardholders who have completed training on green procurement  Target 1: 100% of procurement specialists and cardholders have taken the course	Internal Services

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			Contribution to UNSDGs:  SDG 11 – Sustainable Cities and Communities  SDG 12 – Responsible Consumption and Production  SDG 13 – Climate Action	Starting Point 2: No guidance available as of 2019 to 2020  Performance indicator 2:  Guidance material supporting green procurement is developed  Target 2: Guidance developed by March 31, 2022	
	Other	Encourage employees to adopt sustainable workplace practices and engage in greener initiatives through green teams, education and awareness	Contribution to FSDS goal/target:  By having a green team that focuses on the adoption of sustainable workplace practices throughout the department, Transport Canada will adopt more sustainable workplace practices  Contribution to UNSDGs:  SDG 11 – Sustainable Cities and Communities  SDG 12 – Responsible Consumption and Production  SDG 13 – Climate Action	<ul> <li>Starting Point:</li> <li>No green team in place</li> <li>Performance indicator:</li> <li>Existence of a green team at Transport Canada and conduct of activities and events within Transport Canada promoting sustainable workplace practices</li> <li>Target:</li> <li>By March 31, 2021, a green team is in place and calendar of activities and events has been developed</li> </ul>	All sectors of Transport Canada
	Other	Implement a digital-first culture at Transport Canada where applications facilitating telework are enhanced, mobile phones	Contribution to FSDS goal/target:  By implementing a digital-first culture, Transport Canada will	Starting Point:  Transport Canada has already deployed a number of technologies enabling	Internal Services

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		replace desktop phones, and electronic signatures are enabled	reduce its paper consumption and electronic waste generation, all while adopting more efficient ways to deliver its mandate  Giving employees an option to work from home will reduce the GHGs associated with commuting to work  Contribution to UNSDGs:  SDG 12— Responsible Consumption and Production	employees to work remotely nationally. We will start reporting on this metric by Quarter 4 of fiscal year 2020 to 2021 and as part of our Transformation Plan, the department continues to look for opportunities to enhance the Remote working experience for employees  More than 90% of Transport Canada employees are equipped with digital tools to work remotely, however, the nature of the work means that not all employees can work remotely  Performance indicator:  Elements of the digital-first culture are adopted  Target:  1a) by March 31, 2021, Transport Canada will have replaced all landlines with mobile phones where feasible  1b) by March 31, 2021, Transport Canada will have deployed technology and implemented processes enabling electronic signatures	
	Other	Transition to digital service delivery (e.g. digitizing Transport Canada Centre in-person services, mobile fingerprinting, and remote inspections)	Contribution to FSDS goal/target: Transport Canada is transitioning to a focus on digital service delivery to Canadians.	Starting Point:  Transport Canada is undertaking transformative action to build the tools and processes that enable digital services delivery	Internal Services

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			This will reduce/eliminate in-person services and provide the public with the flexibility to access Transport Canada services from any Internet-connected device. This is also expected to reduce paper consumption and electronic waste generation while enabling Transport Canada to more efficiently deliver its mandate  Giving the public an option to access services remotely will reduce the GHGs associated with commuting to Transport Canada sites  Contribution to UNSDGs:  SDG 12 – Responsible Consumption and Production	<ul> <li>Performance indicator 1:         <ul> <li>Percent services transitioned to digital delivery</li> </ul> </li> <li>Target 1:         <ul> <li>(a) By March 31, 2021, Transport Canada will confirm number of in-person services slated for digitization</li> </ul> </li> <li>Performance indicator 2:         <ul> <li>Percent new services delivered digitally</li> </ul> </li> <li>Target 2:         <ul> <li>By March 31, 2023, 100% of new services delivered by Transport Canada will be digital</li> </ul> </li> </ul>	
	Other	Undertake innovative vessel design to meet Energy Efficiency Design Index set by the International Maritime Organization (IMO) in the replacement of 2 of the 4 Transport Canada owned ferries in Atlantic and Eastern Quebec	Contribution to FSDS goal/target: Transport Canada will undertake innovative vessel design that will reduce energy consumption and associated greenhouse gas (GHG) emissions from its 2 new ferries  Contribution to UNSDGs:  SDG 7 – Affordable and Clean Energy	Starting Point:  56 ktCO <sub>2</sub> e, GHG emissions from Transport Canada fleets in 2005 to 2006  Performance indicator:  • Percentage (%) change in GHG emissions from fleets as calculated by:  • GHG emissions from fleets in fiscal year 2005 to 2006 (base year): = 56.054 ktCO <sub>2</sub> e	Environmental Stewardship of Transportation

Greening Government FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			SDG 11 – Sustainable Cities and Communities  SDG 12 – Responsible Consumption and Production  SDG 13 – Climate Action	<ul> <li>GHG emissions from fleets in current reporting fiscal year =         [Y] ktCO<sub>2</sub>e</li> <li>percentage (%) change in GHG emissions from fleets from fiscal year 2005 to 2006 to current reporting fiscal year =         [Y/X] %</li> </ul>	
				<ul><li>Target:</li><li>GHG emissions from fleets reduced by 40% by 2030 (33.6 ktCO2e) and 80% by 2050 (11.2 ktCO2e)</li></ul>	



Effective Action on Climate Change: A low-carbon economy contributes to limiting global average temperature rise to well below two degrees Celsius and supports efforts to limit the increase to 1.5 degrees Celsius

Responsible Minister: Minister of Environment and Climate Change; supported by a whole-of-government approach to implementation

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
By 2030, reduce Canada's total GHG emissions by 30%, relative to 2005 emission levels	Use legislation and regulations to limit greenhouse gas emissions	Address, under the Aviation Sector Regulatory Initiative, greenhouse gas (GHG) emissions from aviation by supporting the International Civil Aviation Organization's (ICAO) development	Contribution to FSDS goal/target: Working with ICAO on the development of measures targeting the reduction of GHGs will	Starting point: Transport Canada actively leads the Government of Canada's participation at ICAO on the development of environmental standards and on	Climate Change and Clean Air

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		of new international standards and recommended practices and through the development and implementation of new domestic standards  Canada will be implementing the CO <sub>2</sub> Emissions Standard for airplanes, which targets domestic and international emissions, and the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which targets international emissions only	contribute to international consistency and lower emissions Canada's implementation of ICAO's CO <sub>2</sub> Emissions Standard for airplanes will incentivize the adoption of more fuel efficient technologies by manufacturers. All new airplane designs will have to meet the Standard as of 2020, and all in-production airplanes will have to meet the standard as of 2028  The direct impact of the Standard on GHG emissions will be realized in the future as the fleet is renewed through the purchase of new airplanes  Implementation of the Standard in Canada is an important step in the emissions reduction process. The standard is applicable to the aeronautical products of 3 airplane manufacturers in Canada  Under CORSIA, all implicated Canadian airline operators will contribute to carbon-neutral growth of the international aviation sector from 2021 onwards for their international operations. The obligations include a requirement for all operators, foreign and domestic, to offset emissions from a portion of their covered international flights through the purchase of credits	topics related to reducing the impact of aviation on the environment, including contributing to the creation of a Carbon Offsetting and Reduction Scheme for International Aviation, agreed to at ICAO in fall 2016 and its subsequent implementation  Domestic regulatory instruments to reduce GHG emissions (CO <sub>2</sub> Emissions Standard for airplanes and CORSIA) are drafted and targeted for publication, and will align with the ICAO international standards  Performance indicator 1:  The CO <sub>2</sub> Emissions Standard for airplanes has been implemented domestically  Performance indicator 2:  CORSIA has been implemented domestically  Targets 1 and 2:  Both the CO <sub>2</sub> Emissions Standard for airplanes and CORSIA have been implemented domestically by March 2021	

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			Contribution to UNSDGs:	Performance indicator 3:	
			SDG Target 13.2- Integrate climate change measures into national policies, strategies and planning	Percent of regulatees     (manufacturers) who comply with     the CO <sub>2</sub> Emissions Standard for     airplanes	
				Target 3:	
				Once in force, 100% compliance by airplane manufacturers to the CO <sub>2</sub> Emissions Standard	
				Performance indicator 4:	
				Percent of regulatees (airline operators) who comply with CORSIA	
				Target 4:	
				Once in force, 100% compliance to CORSIA by Canadian airline operators	
	Work with partners on	key on going and planned. Action Plan, such as improving and includes annual reporting	Contribution to FSDS goal/target:	Starting Point:	Climate
	climate change		The Action Plan was signed in 2012 and includes annual reporting of progress against a fuel efficiency target.	Change and Clean Air	
	The Action Plan is expected to be renewed by 2021	the future use of sustainable aviation fuel, industry and the government work to address GHG emissions from the sector	The latest report (2018) shows that Canadian air carriers improved their annual average fuel efficiency by 2% between 2008 and 2018		

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			Contribution to UNSDGs:	Performance indicator 1:	
			SDG Target 7.2 -By 2030, increase substantially the share of renewable energy in the global energy mix	<ul> <li>Annual average fuel efficiency improvements between 2008 and 2020</li> </ul>	
			SDG Target 8.4 - Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	<ul> <li>Target 1:         <ul> <li>The Action Plan set a target to improve annual average fuel efficiency by 1.5% between 2008 to 2020</li> </ul> </li> <li>Performance indicator 2:         <ul> <li>Renewal of the Action Plan</li> </ul> </li> </ul>	
			SDG Target 9.4 - By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities  SDG Target 13.2- Integrate climate	Target 2: • Renew the Action Plan by 2021	
			change measures into national policies, strategies and planning		
	Use legislation and regulations to limit greenhouse gas emissions	Address, under the Marine Sector Regulatory Initiative, greenhouse gas (GHG) and other air emissions from maritime shipping by working with the International Maritime Organization (IMO) in the development of new international	Contribution to FSDS goal/target: Working with IMO on the development of measures targeting the reduction of GHGs will contribute to international consistency and lower emissions	Starting Point:  During 2019 to 2020:  Progress on negotiations related to the Initial IMO GHG Strategy, including adoption of a resolution	Climate Change and Clean Air

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		standards and recommended practices for marine vessels, as well as through the implementation of new Canadian regulations  *this departmental action also contributes to the reduction of air pollutant emissions, which supports the Federal Sustainable Development Strategy's (FSDS) 'Safe and Healthy Communities' goal	Contribution to UNSDGs:  SDG Target 3.9- By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination  SDG Target 7.2- By 2030, increase substantially the share of renewable energy in the global energy mix  SDG Target 7.3- By 2030, double the global rate of improvement in energy efficiency  SDG Target 7.a- By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology  SDG Target 9.5- Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending	inviting Member States to encourage voluntary cooperation between the port and shipping sectors to contribute to reducing GHG emissions from ships  85% of instruments were aligned with domestic legislation or international standards  Vessels were 94% in compliance with vessel emissions regulations (based on minor deficiencies observed)  Performance indicator 1:  Percentage of instruments that are aligned with domestic legislation or international standards  Target 1:  100% of instruments are aligned with domestic legislation or international standards  Performance indicator 2:  Percentage of regulatees who comply with the regulations  Target 2:  100% compliance with regulations	

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
	Use legislation and regulations to limit greenhouse gas emissions	Support, under the Support for Vehicle GHG Emissions Regulations, Environment and Climate Change Canada's development and implementation of greenhouse gas (GHG) emission regulations for light-duty vehicles and heavy-duty vehicles under the Canadian Environmental Protection Act, 1999	sDG Target 17.16- Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries  Contribution to FSDS goal/target:  The transportation sector represents about a quarter of Canada's GHG emissions, with light-duty vehicle and heavy-duty vehicle emissions accounting for 50% and 35% of the total, respectively. The light-duty and heavy-duty GHG regulations establish stringent GHG emission standards on new vehicles which will help reduce emissions in the transportation sector  Contribution to UNSDGs:  SDG Target 13.2- Integrate climate change measures into national policies, strategies and planning	Starting Point: From 2005 to 2017 (latest year for which data is available):  GHG emission intensity decreased by 10% for passenger transportation, not including offroad equipment  GHG emission intensity decreased by 19% for freight transportation, comprised mainly of road, rail and marine transport  Performance indicator:  Change in transportation emissions intensity as measured in grams per unit of activity (e.g.: tonnes-km, passenger-km)  Target:  Continuous improvement in emissions intensity by March 31, 2023	Climate Change and Clean Air

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
FSDS targets	Use legislation and regulations to limit greenhouse gas emissions	Conduct research to generate technical evidence required to support legislative and regulatory approaches to reducing greenhouse gas (GHG) and air pollutant emissions, and to promote the adoption of clean technologies across several modes of transportation, including:  • eTV: Supporting projects under the ecoTECHNOLOGY for Vehicles Program to address GHG emissions from the road sector through its testing of advanced technologies and innovative practices to inform	Contribution to FSDS goal/target: Transport Canada's Innovation Centre conducts research to generate technical evidence required to support legislative and regulatory approaches to reducing GHG emissions, and to promote the adoption of clean technologies across several modes of transportation  Contribution to UNSDGs: SDG Target 3.9- By 2030, substantially reduce the number of deaths and illnesses from	Note: it will only be possible to set an absolute value if the transportation sector's share of the Government of Canada's reduction targets are established and published  Starting Point:  In 2019 to 2020, Transport Canada's Innovation Centre supported over 100 projects across all modes to advance research, development and testing of clean technology solutions for Canada's transportation system  Multiple road research projects were conducted in 2019 to 2020, including: testing the aerodynamic benefits and dynamic performance of cooperative truck platooning systems; occupant protection performance testing in electric and conventional vehicles, the studying the safety and environmental	actions will
		the development of regulations, as well as industry codes and standards to ensure that new technologies are introduced in Canada in a safe, secure and timely manner  *these departmental actions also contribute to the reduction of air pollutants, which supports the FSDS "Effective Action on Climate Change" and "Safe and Healthy Communities" goals	hazardous chemicals and air, water and soil pollution and contamination SDG Target 7.3- By 2030, double the global rate of improvement in energy efficiency  SDG Target 9.4- By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in	benefits of low rolling resistance tires, on-board sensor testing for measuring heavy duty vehicle NOx emissions and evaluating the long term performance of electric vehicle batteries  Performance indicator:  Percentage of the total research budget for testing and evaluation projects committed or spent	

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			accordance with their respective capabilities  SDG Target 13.2- Integrate climate change measures into national policies, strategies and planning  SDG Target 14.2- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	90% of total research budget committed or spent	
	Work with partners on climate change	Address greenhouse gas (GHG) emissions under the Heavy-Duty Vehicle Retrofit Requirements Program by working with other federal departments, provinces, territories and industry to explore the challenges and barriers to adopting fuel-saving retrofits on heavy-duty trucks, informing the development of future strategies to reduce GHGs from this sector  *this departmental action also contributes to the reduction of air pollutant emissions, which supports the FSDS 'Safe and Healthy Communities' goal	Contribution to FSDS goal/target:  Transport Canada with support from provincial and territorial governments are working collaboratively to explore the HDV landscape across the country to explore opportunities for increasing adoption of HDV fuel-saving retrofits that support businesses within the trucking sector  Contribution to UNSDGs:  SDG Target 13.2- Integrate climate change measures into national policies, strategies and planning	Starting Point:  A commitment was made in the Pan-Canadian Framework on Clean Growth and Climate Change to develop requirements to retrofit in-use heavy-duty vehicles with fuel saving devices  A federal-provincial-territorial (FPT) working group was created explore opportunities to support the adoption of fuel saving devices in the sector  Performance indicator:  Phase 1 Report presenting a landscape of the sector and detailing where the challenges lie in increasing adoption of fuel-saving retrofits	Climate Change and Clean Air

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				Target:	
				Phase 1 Report will be complete in fall 2020	
	Work with partners on climate change	Address greenhouse gas (GHG) emissions from the rail sector by	Contribution to FSDS goal/target: Transport Canada and RAC have	Starting Point:	Climate Change and
	-	enhancing collaboration with the Railway Association of Canada (RAC)	renewed a Memorandum of Understanding to address GHG emissions in the sector	A Memorandum of Understanding with the rail industry was renewed to cover 2018 to 2022	Clean Air
			emissions in the sector	Performance indicator:	
			Contribution to UNSDGs:	Annual average fuel efficiency improvements between 2018 and	
			SDG Target 7.a-By 2030, enhance international cooperation to facilitate	2022	
			access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	<ul> <li>By 2022, reduce emissions intensity for Class 1 freight by 6%, intercity passenger by 6% and regional and short line railways by 3% - from a 2017 baseline</li> </ul>	
			SDG Target 9.4- By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities		
			SDG Target 13.2- Integrate climate change measures into national policies, strategies and planning		

Effective Action or Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
Zero-emission vehicles (ZEVs) will represent 1 of new light-duty vehicles		Collaborate with provincial and territorial governments through the Federal-Provincial-Territorial Zero-	sDG Target 17.17- Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships  Contribution to FSDS goal/target:  Through the invindictions hold	Starting Point: The FPT ZEV Working Group was	Climate Change and Clean Air
sales by 2025, 30% by 2030 and 100% by 204		Emission Vehicle Working Group (FPT ZEV Working Group) to advance the uptake of zero-emission vehicles in Canada  Environment and Climate Change Canada, Innovation, Science and Economic Development Canada and Natural Resources Canada are also members of this working group	Group, the jurisdictions hold quarterly meetings where members share their best practices and experience to increase the uptake of ZEVs  Contribution to UNSDGs:  SDG Target 11.2- By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons  SDG Target 11.6- By 2030, reduce the adverse per capita	established Under the Pan-Canadian Framework on Clean Growth and Climate Change, As of September 2019, the group's objectives are to exchange information related to the development and implementation of ZEV measures which increase their uptake, with a view towards ensuring alignment and complementarity of policies and programs across the jurisdictions, where appropriate  Performance indicator:  Percentage of new light-duty vehicle sales that are ZEVs  Target:  The Government does not have specific ZEV sales targets for the inbetween years, however, notional	
			environmental impact of cities, including by paying special attention to air quality and municipal and other waste management  SDG Target 13.2- Integrate climate change measures into national policies, strategies and planning	benchmarks have been developed to ensure Canada is on a path towards meeting its 2025 target. For 2020-23 the annual benchmarks are as follows:  • 3.9% of new LDV sales to be ZEVs by December 31, 2020;	

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
	Support businesses and Canadians in taking action	Support increased adoption of zero-emission vehicles (ZEVs) by	Contribution to FSDS goal/target:	<ul> <li>4.5% of new LDV sales to be ZEVs by December 31, 2021; and</li> <li>5.4% of new LDV sales to be ZEVs by December 31, 2022</li> <li>Starting Point:</li> </ul>	Climate Change and
	to reduce greenhouse gas emissions	Canadians and Canadian businesses through Transport Canada's Incentive for Zero-Emission Vehicles program (iZEV)	Under the iZEV program, Transport Canada provides a point of sale incentive of up to \$5,000 on eligible ZEVs (including plug-in hybrids). This program is making ZEVs more affordable, thus encouraging more Canadians to purchase these vehicles and in turn, helping to increase the proportion of new light-duty vehicle sales that are ZEVs  By improving the market share of ZEVs, this program is also helping to reduce greenhouse gas (GHG) emissions in the transportation sector and thus contributing to the FSDS target of reducing economywide 2030 GHG emissions by 30%, relative to 2005 emissions levels	In January 2019, the government announced ZEV sales targets as follows: 10% of new light-duty vehicle (LDV) sales are to be ZEVs by 2025, 30% by 2030 and 100% by 2040  To help advance towards these targets, Budget 2019 allocated \$300 million over three years², starting 2019 to 2020, for the iZEV program  For iZEV: 63.5% of the incentive rebate fund used as of March 31, 2020  Performance indicator 1:  Percentage of new LDV sales that are ZEVs  Target 1:	Clean Air
			Contribution to UNSDGs:  SDG Target 11.6- By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention	The Government does not have specific ZEV sales targets for the inbetween years, however, notional benchmarks have been developed to ensure Canada is on a path towards meeting its 2025 target. For 2020 to	

<sup>&</sup>lt;sup>2</sup> Of this amount, \$292.7 million is available for incentive rebates, with the remainder allocated to program operating costs.

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			to air quality and municipal and other waste management	2023 the annual benchmarks are as follows:	
			SDG Target 13.2- Integrate climate change measures into national policies, strategies and planning	<ul> <li>3.9% of new LDV sales to be ZEVs by December 31, 2020</li> <li>4.5% of new LDV sales to be ZEVs by December 31, 2021; and</li> <li>5.4% of new LDV sales to be ZEVs by December 31, 2022</li> <li>Performance Indicator 2:</li> <li>Percentage of iZEV program's available incentive funds provided to Canadians (i.e., used)</li> <li>Target 2:</li> <li>100% of incentive rebate funding provided to Canadians by March 31, 2022</li> </ul>	
Actions supporting the Goal:	Provide support and funding for climate	Through the Northern Transportation Adaptation Initiative,	Contribution to FSDS goal/target: Transport Canada's support for	Starting Point: Transport Canada has been	
Effective Action on Climate Change	resilience	Transport Canada supports the research, development and testing of innovative adaptation	northern transportation adaptation research and related activities helps	implementing the Northern Transportation Adaptation Initiative	
This section is for actions that support the Effective Action on Climate Change	technologies, and capacity-building efforts (for example, through	<ul><li>foster interdisciplinary collaboration</li></ul>	since 2011. This program is scheduled to sunset (end) on March 31, 2021		
Goal but do not directly support a FSDS target engagement activities), with goal of increasing capacity t existing and future northern transportation infrastructure	engagement activities), with the goal of increasing capacity to adapt	<ul> <li>advance knowledge sharing</li> <li>strengthen institutional capacity to adapt northern transportation to the acute impacts of climate change</li> </ul>	One of Transport Canada's key outcomes under this initiative has been the engagement of other governments (provincial, territorial), academia and private industry		

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			Contribution to UNSDGs:  SDG Target 13.3- Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	As of March 31, 2020 a total of 95 NTAI research studies have been funded since the program's launch in 2011  Performance indicator 1:  Number of working group or network meetings, workshops and/or conferences funded, hosted, facilitated or presented at related to transportation adaptation  Target 1: During 2020 to 2021:  Five working group or network meetings, workshops and/or conferences funded, hosted, facilitated or presented at  Performance indicator 2:  Number of research studies funded  Target 2: Four research studies funded	
	Provide support and funding for climate resilience	Continue on-going implementation of the National Trade Corridors  Fund (NTCF), which is investing \$2.3B to strengthen the resiliency and efficiency of the transportation system	Contribution to FSDS goal/target: The NTCF is guided by 4 objectives, including increasing the resilience of the Canadian transportation system in a changing climate. To be eligible for funding under the NTCF,	Starting Point: To date, Transport Canada has launched and concluded two NTCF calls for proposals: an open national call (July 2017), and a call for	National Trade Corridors

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			projects must support a combination of the program's objectives	investments in the three territories (November 2018)	
			All project proposals are reviewed and receive a score on the degree to which the project supports or addresses climate change resilience, as well as how the	A third call for projects supporting trade diversification call was launched (January 2019) and remains open as long as there are funds available	
			project would promote sustainable transportation by reducing environmental impacts, including GHG and air contaminant emissions	Budget 2019 also provided an additional \$400M for the Canada's Arctic and northern regions, increasing the total NTCF funding that will be allocated to \$2.3B through 2027-28	
			Contribution to UNSDGs:	202. 20	
			SDG Target 9.1- Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all  SDG Target 9.4- By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	Performance indicator:  Number of program calls for proposals  Target:  One new Arctic and northern-focused NTCF call for proposals launched and implemented by 2023	
			SDG Target 11.2- By 2030, provide access to safe, affordable, accessible and sustainable transport		

Effective Action on Climate Change FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			systems for all, improving road		
			safety, notably by expanding public		
			transport, with special attention to		
			the needs of those in vulnerable		
			situations, women, children, persons		
			with disabilities and older persons		



Clean Growth: A growing clean technology industry in Canada contributes to clean growth and the transition to a low-carbon economy

Responsible Minister: Minister of Innovation, Science and Economic Development and Minister of Natural Resources

Clean Growth FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
Actions supporting the Goal: Clean Growth  This section is for actions that support the Clean Growth Goal but do not directly support a FSDS target	Clean Growth ["Other" placeholder]	Address, under the Core Clean Transportation Research, Development and Demonstration – Aviation, Marine and Rail Transportation Program, greenhouse gas (GHG) and air pollutant emissions from aviation, marine and rail transportation through targeted research on emerging technologies and innovative practices  Aviation: High quality research projects are selected for funding by Transport Canada in the current priority areas of: emissions	Contribution to FSDS goal/target:  By collaborating with research partners, the department will contribute to improved air quality in Canadian communities and reduced GHG emissions, by supporting research that improves the measurement, impact assessment and mitigation of aviation, marine and rail emissions	<ul> <li>Starting Point 1:</li> <li>In 2019 to 2020,</li> <li>rail research projects included a Hyperloop Feasibility Study and a Rail Innovation in Canada Scan that identified the top ten most promising rail technologies</li> <li>marine research projects included a small vessel electrification pilot project; assessing the effectiveness of hull coatings on vessel</li> </ul>	Climate Change and Clean Air

Clean Growth FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		contributing to climate change, air pollutant emissions and aviation fuels. These research areas are selected in accordance with current identified priorities of the Department and within the industry in general  Rail: Supporting projects to address GHG emissions from the rail sector by testing advanced technologies and innovative practices to inform the development of regulations, as well as industry codes and standards, in order to ensure that new technologies can be introduced in Canada in a safe, secure and timely manner  Marine: Supporting projects to address GHG emissions from the marine sector by testing advanced technologies and innovative practices to inform the development of regulations, as well as industry codes and standards, in order to ensure that new technologies can be introduced in Canada in a safe, secure and timely manner  * Given this work contributes to the reduction of GHGs and air pollutants, this departmental action also supports both the Federal Sustainable Development Strategy's	SDG Target 3.9- By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination  SDG Target 9.4- By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities  SDG Target 13.2- Integrate climate change measures into national policies, strategies and planning	emissions; assessing the effectiveness of hull and propeller cleaning on vessel energy efficiency and emissions. The program also launched a new \$4.7M call for proposals to advance the development and testing of clean technology solutions for the marine sector  • aviation research projects included a project to develop a novel calibration method for instruments measuring emissions from aircraft engines, and an inflight study of contrail characteristics when various fuels are used  Performance indicator 1:  • (a) Number of priority areas in which Transport Canada has funded high quality research projects.  • (b) Funded research projects provide evidence used to support policy making, regulatory development, and the	

Clean Growth FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		(FSDS) "Effective Action on Climate Change" and "Safe and Healthy Communities" goals		development of negotiating positions	
				Target 1:	
				For research projects:	
				(a) at least 1 project in each identified priority area is funded each year	
				(b) 80% of funded projects provide evidence/data which is used to support policy making, regulatory development, and the development of negotiating positions	
				Starting Point 2:	
				As of March 31, 2020, 29% of the grant funding envelope has been invested into 13 projects	
				Performance indicator 2:	
				(a) Percentage of federal grant funding envelope (an overall \$3 million funding envelope) invested to address GHG and air pollutant emissions from aviation, marine and rail transportation, through calls for proposals for	

Clean Growth FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				research on emerging technologies and innovative practices  • (b) Number of projects funded by federal grants to study and advance emerging technologies and innovative practices related to addressing GHG and air pollutant emissions from aviation, marine and rail transportation <sup>3</sup>	
				Target 2:	
				(a) 80% of the grant funding envelope invested	
				(b) at least 30 projects funded by March 31, 2023	

<sup>&</sup>lt;sup>3</sup> Maximum grant per project is \$100,000.



## Healthy Coasts and Oceans: Coasts and oceans support healthy, resilient and productive ecosystems

Responsible Minister: Minister of Fisheries, Oceans and the Canadian Coast Guard

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
Actions supporting the Goal: Healthy Coasts and Oceans This section is for actions that support the Healthy Coasts and Oceans Goal but do not directly support a FSDS target	Work with partners to protect and restore coastal ecosystems  Use legislation and regulations to protect coasts and oceans  Protect and manage marine and coastal areas	Implement the Oceans Protection Plan – Pillar I: A State-of-the-Art Marine Safety System  Pillar 1- Initiatives involved in enhancing the prevention of marine incidents include:  • new information-sharing systems - the Government of Canada will work with Indigenous and coastal communities to design new information-sharing systems and platforms so they have access to real-time information on marine shipping activities to support safer navigation in local waters  • pilot project to enhance marine weather services to support marine traffic operations and improve safety in higher-risk areas  • Proactive Vessel Management - allow those involved in the marine safety system — governments, communities, Indigenous groups — to inform local traffic management	Contribution to FSDS goal/target:  The Oceans Protection Plan aims to further protect Canada's coasts and coastal communities from the potential impacts of shipping. This means improving how we prevent and respond to marine pollution incidents. Through the Oceans Protection Plan, the Government of Canada is developing emergency response plans tailored to local needs, increasing on-water presence and response capacity, enabling rapid, science-based response actions in the event of a spill, and expanding the role of the Canadian Coast Guard Auxiliary  Contribution to UNSDGs:  SDG Target 14.2- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	Starting point:  Since 2016, the Government of Canada has been working with Canadians and Indigenous peoples through the Oceans Protection Plan to protect our coasts and waterways for future generations, while growing the economy. Three years later, the Plan has made our marine safety system stronger, and our coastal ecosystems more protected, than ever before. Work will continue to ensure that the Oceans Protection Plan delivers on its commitments  Performance indicator:  The number of marine safety incidents and spills from vessels in Canada's waters  Target:  By 2022, a reduction in the number of small oil spills and marine incidents relative to the number of vessel trips, compared with the average of the previous five years	Protecting Oceans and Waterways

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		safer resupply in Arctic communities – funding new tools and equipment to unload essential goods in northern communities			
		stronger polluter-pay principle – remove the per-incident limit of liability on Canada's Ship-Source Oil Pollution Fund to provide unlimited compensation to responders and victims of a ship- source oil spill			
		places of refuge: Pre-identifying potential coastal locations where a ship in need of assistance can take action to stabilize the condition of the vessel in order to protect human life and the environment. The department is revising its National Places of Refuge Contingency Plan based on the results of engagement activities, research and the addition of new regional annexes			
		Anchorages Initiative - Research and analyze the environmental, economic, social, safety and security impacts of anchorages			
		Seamless Regime Response – develop a broad and integrated framework for preparedness and			

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		response to all spills beyond ship-source oil Initiatives involved in strengthening of responses to marine incidents include:			
		a stronger Canadian Coast Guard - The Canadian Coast Guard's command systems will be strengthened where gaps have been identified. The Coast Guard will be given greater power to intervene directly to prevent marine incidents, such as where ship operators have been reluctant to act			
		increased emergency response: 24/7 response capacity will be established to effectively manage marine incidents; and baseline environmental data on B.C.'s North Coast will be collected			
		enhance ECCC's capacity to enforce wildlife and environmental laws for the east and west coasts, and expand set of 3D ocean products and enhance service by making it available 24/7			
		increased towing capacity - towing kits will be added to major			

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		Canadian Coast Guard vessels on the East and West to improve the capability to take swift action. Two new vessels will be leased with the ability to tow large commercial ships in distress  • alternative response measures (ARMs) – research and policy on ARMs – such as dispersants and in-situ burning – that could be used only when there is an environmental benefit to do so			
	Build our knowledge of coastal ecosystems, marine protected areas and fisheries  Protect and manage marine and coastal areas  Use legislation and regulations to protect coasts and oceans	Implement the Oceans Protection Plan – Pillar II: Preservation and Restoration of Marine Ecosystems Pillar 2 - Preservation and Restoration of Marine Ecosystems initiatives include:  • collection of baseline data and cumulative effects assessment - working closely with Indigenous and coastal communities, the Government of Canada will create a pilot baseline program to better understand the cumulative effects of shipping on coastal ecosystems  • protect aquatic ecosystems - new measures will be funded that implement a real-time whale detection system to alert	Contribution to FSDS goal/target: Through the Oceans Protection Plan, the Government of Canada is working to preserve and restore coastal marine ecosystems that are vulnerable to marine shipping. This includes protecting Canada's whale populations, removing abandoned and wrecked vessels, and restoring coastal ecosystems  Contribution to UNSDGs: SDG Target 14.2- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their	Starting point:  Since 2016, the Government of Canada has been working with Canadians and Indigenous peoples through the Oceans Protection Plan to protect our coasts and waterways for future generations, while growing the economy. Three years later, the Plan has made our marine safety system stronger, and our coastal ecosystems more protected, than ever before. Work will continue to ensure that the Oceans Protection Plan delivers on its commitments  Performance Indicator:  The number of abandoned and wrecked vessels addressed	Protecting Oceans and Waterways

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		mariners to the presence of whales, which will help them avoid interactions and vessel strikes  • addressing abandoned and wrecked vessels - the Government is implementing a national strategy that focuses on the prevention and removal of these problem vessels	restoration in order to achieve healthy and productive oceans	Target:  • By 2022, at least 275 vessels of concern addressed	
	Work with partners to protect and restore coastal ecosystems	Implement the Oceans Protection Plan – Pillar III: Indigenous Partnerships  • The Government will create opportunities for Indigenous communities to participate and play an active role in responsible shipping and the marine safety regime	Indigenous coastal communities share ties to Canada's oceans that span generations. As part of the Oceans Protection Plan, we are actively working together and partnering with Indigenous peoples across the country to improve our marine safety system. Since December 31, 2019, we have held over 870 engagement sessions, including over 600 engagement sessions with Indigenous groups  Contribution to UNSDGs:  SDG Target 14.2- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their	Starting point:  Since 2016, the Government of Canada has been working with Canadians and Indigenous peoples through the Oceans Protection Plan to protect our coasts and waterways for future generations, while growing the economy. Three years later, the Plan has made our marine safety system stronger, and our coastal ecosystems more protected, than ever before. Work will continue to ensure that the Oceans Protection Plan delivers on its commitments  Performance indicator:  The number of Indigenous groups that participate in Canada's marine safety system	Protecting Oceans and Waterways

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			restoration in order to achieve healthy and productive oceans	Target:  • By 2027, an increased number of interested Indigenous groups are active partners in Canada's marine safety system [specific target to be determined by April 2022 following engagement with Indigenous partners]	
	Build our knowledge of coastal ecosystems, marine protected areas and fisheries	Implement the Oceans Protection Plan – Pillar IV: A Stronger Evidence Base and Increased Community Participation and Public Awareness	As part of the Oceans Protection Plan, the Government of Canada is invested in scientific research and technology to better prevent and respond to ship-source oil spills, while increasing our understanding of how to protect coastal ecosystems  Contribution to UNSDGs:  SDG Target 14.2- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	Starting point:  Since 2016, the Government of Canada has been working with Canadians and Indigenous peoples through the Oceans Protection Plan to protect our coasts and waterways for future generations, while growing the economy. Three years later, the Plan has made our marine safety system stronger, and our coastal ecosystems more protected, than ever before. Work will continue to ensure that the Oceans Protection Plan delivers on its commitments  Performance indicator 1:  The percentage of policies and operational response plans developed through the OPP that are supported by scientific, local/traditional, and other relevant information and knowledge	Protecting Oceans and Waterways

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				Target 1:	
				By 2022, 100% of policies and operational response plans are supported by scientific, local/traditional, and other relevant information/knowledge	
				Performance indicator 2:	
				The percentage of Canadians who are confident in Canada's marine safety system	
				Target 2:	
				By 2022, at least 70% of Canadians and at least 75% of coastal communities have moderate or full confidence in Canada's marine safety system	
	Build our knowledge of	Support the protection and recovery	Contribution to FSDS goal/target:	Starting point:	Protecting Oceans and
	coastal ecosystems, marine protected areas and fisheries	of Canada's endangered whale populations through research and monitoring	Transport Canada is conducting research on underwater noise and supporting development of technologies for detection and monitoring of endangered whales to support their protection and recovery	World-leading underwater listening station (ULS) in Boundary Pass is capturing underwater noise data in real-time from vessels in both inbound and outbound shipping lanes, as well as ambient noise and marine	Waterways
			Contribution to UNSDGs:	mammal calls	
			SDG Target 14.2- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts,	Number of management measures to support the protection and recovery of	

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	Southern Resident Killer Whales (SRKW) that are informed by the data collected on underwater vessel noise from the ULS	
				Target:	
				Underwater vessel noise database will be used to help develop at least 1 management measure by March 31, 2024 to support the protection and recovery of the SRKW from the impacts of vessel noise	
				Starting point:	
				Remotely Piloted Aircraft System (RPAS) – or drone – supports aerial surveillance in the Dynamic Shipping Zone in the Gulf of St. Lawrence to detect the presence of North Atlantic right whales (NARW)	
				Performance indicator:	
				Integration of the RPAS to support management of dynamic measures for the protection of NARW	
				Target:	
				RPAS contributes to support management of dynamic	

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				measures, for the protection of NARW starting in 2020	
	Protect and manage marine and coastal areas	Support the protection and recovery of Canada's endangered whale populations through management measures	Contribution to FSDS goal/target:  Every year, Transport Canada is implementing management measures on the East and West Coasts to support the protection and recovery of Canada's endangered whale populations  Contribution to UNSDGs:  SDG Target 14.2- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	Starting Point:  On February 27, 2020, the Government of Canada announced its 2020 measures to protect the endangered North Atlantic right whale (NARW) including vessel speed restriction measures to reduce the risk of lethal collisions with NARW  For 2020, the Government of Canada partnered again with the Vancouver Port Authority's Enhancing Cetacean Habitat and Observation (ECHO) Program to implement a vessel slowdown during the summer of 2020 in Haro Strait and Boundary Pass in the Salish Sea  Performance Indicator:  Percentage of ships that are compliant with slowdown measures that mitigate the impacts of vessel traffic on marine species  Target:  By March 2021, at least 85% of ships 20 metres and greater to comply with vessel slowdown measures	Protecting Oceans and Waterways

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
	Use legislation and regulations to protect coasts and oceans	Set the legal and regulatory frameworks through domestic legislation and international conventions that govern the protection of the marine environment from pollution, and advance Canadian positions on reducing and managing global marine pollution from ships	The update of the Vessel Pollution and Dangerous Chemicals Regulations will further promote the elimination of deliberate, negligent or accidental discharge of vessel-source pollutants into the marine environment therefore reducing the negative impacts of shipping in further harmonizing and providing consistent standards for vessels as set out under MARPOL Convention. These new regulations will lead to increase protection of the marine and coastal ecosystems to avoid significant adverse impacts, and thereby contribute to maintaining the health of Canada's waters  Contribution to UNSDGs:  SDG Target 14.2- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans  SDG Target 17.7- Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and	Starting Point:  Since 2006, and as amended in 2012, the Vessel Pollution and Dangerous Chemicals Regulations implement standards set out under the International Convention for the Prevention of Pollution from Ships (MARPOL) to prevent pollution from vessels  This includes pollution from oil, chemicals, sewage, garbage, air emissions and greenhouse gas emissions  The Regulations also set controls for paints used to prevent marine growth on hulls that have been found to be harmful and greywater discharges from large passenger vessels  Performance indicator:  Canada's Vessel Pollution and Dangerous Chemical Regulations are aligned with the new international standards  Target:  By March 2023:  Publication of proposed regulations in Canada Gazette, Part I and implement	Protecting Oceans and Waterways

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			preferential terms, as mutually agreed	the updated Vessel Pollution and Dangerous Chemicals Regulations which reflect new international standards	
	Use legislation and regulations to protect coasts and oceans	Contribute to reducing pollution from vessels by monitoring compliance of marine transportation firms with Canadian legislation, such as the Canada Shipping Act, 2001, through the National Aerial Surveillance Program (NASP), inspections, audits, monitoring and enforcement	Contribution to FSDS goal/target:  Transport Canada's NASP conducts aerial pollution patrols over waters under Canadian jurisdiction to monitor shipping activities; thus acting as a deterrent to potential polluters. The evidence collected is forwarded to enforcement authorities for further review and investigation  Contribution to UNSDGs:  SDG 14- Conserve and sustainably use the oceans, seas and marine resources for sustainable development  SDG 17- Strengthen the means of implementation and revitalize the global partnership for sustainable development	Starting Point:  In order to measure Transport Canada's success in protecting Canada's oceans and marine environment from ship source oil pollution  Transport Canada's NASP monitors the number of vessels using the Automatic Identification System (AIS), vessel overflights and the number of ship-source oil spills detected over 10 litres. Smaller spills are typically non- recoverable and have a negligible impact on the environment The rate of ship-source oil spills is calculated per hours flown, per year In 2019 to 2020, the National Aerial Surveillance Program monitored 338,575 vessels using AIS, 31,335 overflights and detected six ship source spills over 10 litres	Protecting Oceans and Waterways

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				Performance indicator 1:     Percentage of actual vs forecasted pollution patrol hours conducted	
				Target 1:  90% of actual pollution patrols are conducted as planned	
				<ul><li>Performance indicator 2:</li><li>Number of vessels monitored using AIS per hour flown</li></ul>	
				<ul><li>Target 2:</li><li>Vessels monitored at a rate of 80 per hour using the AIS</li></ul>	
				<ul><li>Performance indicator 3:</li><li>Number of vessels overflown per hour</li></ul>	
				<ul><li>Target 3:</li><li>Vessels overflown at a rate of 5.5 per hour</li></ul>	
				<ul> <li>Performance indicator 4:</li> <li>Number of ship-source oil spills observed over 10 litres</li> </ul>	
				Target 4:  Ship-source oil spills into Canada's oceans and marine environment decline over time in relation to the level of activity	

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
	Use legislation and regulations to protect coasts and oceans	Update the regulatory framework for protecting the marine environment from the introduction and spread of aquatic invasive species by ships' ballast water, giving effect to the international Ballast Water Convention, to which Canada is party  *this departmental action also contributes to the 'Pristine Lakes and Rivers' Goal	Updated Ballast Water regulations will require ships carrying ballast water in Canada to take actions that reduce the risk of introducing and spreading aquatic invasive species  In particular, ships will be required to limit the concentration of viable organisms in the ballast water they carry, per Regulation D-2 of the international Ballast Water Convention  These new Ballast Water regulations will lead to increased protection of aquatic ecosystems from invasive species, and thereby contribute to protecting the health of Canada's coasts and oceans (and lakes and rivers)  Contribution to UNSDGs:  SDG Target 14.2- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans  SDG Target 15.8- By 2020, introduce measures to prevent the introduction and significantly reduce	Starting Point:  On June 8, 2019 Transport Canada published new proposed Ballast Water Regulations in the Canada Gazette Part I  Performance indicator:  • Canada's Ballast Water Control Management Regulations are updated in accordance with the requirements of the Ballast Water Convention that came into force worldwide in September of 2017  Target:  • By March 2023, Canada intends to have finalised and implemented new Ballast Water Regulations	Protecting Oceans and Waterways

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species		
	Use legislation and regulations to protect coasts and oceans	Monitor marine transportation firms and vessels for compliance with the Ballast Water Control and Management Regulations, and as amended.  *this departmental action also contributes to the 'Pristine Lakes and Rivers' Goal	Contribution to FSDS goal/target:  Ensuring that marine transportation firms and vessels comply with the Ballast Water Control and Management Regulations helps to prevent the introduction of aquatic invasive species in Canada, and thereby contributes to protecting the health of Canada's coasts and oceans (and lakes and rivers)  Contribution to UNSDGs:  SDG Target 14.2- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans  SDG Target 15.8- By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	Starting Point:  Transport Canada receives completed ballast water reporting forms on methods used by ships to comply with ballast water management regulations (Ballast exchange or via a Ballast Water Management System)  Performance indicator:  Compliance with the Ballast Water Control and Management Regulations and ballast water management standards  Target:  100% of vessels will be compliant or they will be requested to manage their ballast water in a manner that is not a threat to the Canadian Ecosystem	Protecting Oceans and Waterways
	Use legislation and regulations to protect lake and river ecosystems	Monitor the compliance of vessels arriving from overseas and bound for the Great Lakes with current ballast	Contribution to FSDS goal/target: Ensuring that vessels arriving from overseas and bound for the Great	Starting Point: Transport Canada receives completed ballast water reporting	Protecting Oceans and Waterways

Healthy Coasts and Oceans FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		water requirements, as well as cooperative enforcement with the U.S. in accordance with Annex 5 of the Great Lakes Water Quality Agreement  *this departmental action also contributes to the 'Pristine Lakes and Rivers' Goal	Lakes comply with requirements before arrival helps to prevent the introduction of aquatic invasive species in Canada, and thereby contributes to protecting the health of Canada's coasts and oceans (and lakes and rivers).  Contribution to UNSDGs:  SDG Target 14.2- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans  SDG Target 15.8- By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	forms on methods used by ships to comply with ballast water management regulations (via ballast water exchange or a ballast water management system)  Performance indicator:  Percentage of vessels inspected for compliance with the Ballast Water Control and Management Regulations and ballast water management standards  Target:  100% of vessels entering the Great Lakes from outside of Canadian waters will continue to be inspected for their compliance with ballast water management requirements, including for mid-ocean exchange to protect the Great Lakes ecosystems	



## Pristine Lakes and Rivers: Clean and healthy lakes and rivers support economic prosperity and the well-being of Canadians

Responsible Minister: Minister of Environment and Climate Change

Pristine Lakes and Rivers FSDS target(s)	FSDS contributing action(s)	Corresponding departmental action(s)	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting point(s) Performance indicator(s) Target(s)	Program(s) in which the departmental actions will occur
Actions supporting the Goal: Pristine Lakes and Rivers This section is for actions that support the Pristine Lakes and Rivers Goal but do not directly support a FSDS target		introduction of aquatic invasive specie	ons have been included under the FSDS s in Canada contributes to protecting th ons, please see the Healthy Coasts and	e health of Canada's lakes and river	



## Safe and Healthy Communities: All Canadians live in clean, sustainable communities that contribute to their health and well-being

Responsible Minister: Minister of Environment and Climate Change; Minister of Health

Safe and Healthy Communities FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
Actions supporting the Goal: Safe and Healthy Communities	for Vehicles Program, and the Change. Reducing air polluta			er the FSDS Goal: Effective Action of	
This section is for actions that support the Safe and Healthy Communities Goal but do not directly support a FSDS target	assessing and remediating contaminated sites	Contaminated Sites Action Plan (FCSAP) and complete remediation and risk management activities at known high-priority federal contaminated sites owned by Transport Canada	Transport Canada contributes to an environmentally responsible and resilient national transportation system by ensuring that we:  • reduced risks to human health and the environment as more contaminated sites are remediated; and  • reduce environmental liability at the department's highest priority federal contaminated sites by reducing the risk to human health or the environment  Contribution to UNSDGs:  SDG Target 3.9- By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Starting Point:  From 2016-17 to 2019-20 (FCSAP Phase III), 11% of Transport Canada FCSAP-funded sites completed remediation/risk management work  Transport Canada reduced environmental liability in 2019 to 2020 at its highest priority federal contaminated sites by 99.5% of its remediation expenditures  FCSAP annual reports can be found at:  https://www.canada.ca/en/environment-climate-change/services/federal-contaminated-sites/publications.html	Stewardship of Transportation

Safe and Healthy Communities FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			SDG Target 15.3- By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	Performance indicator 1:  Percentage of Transport Canada FCSAP-funded sites during Phase IV that have completed remediation/risk management work  Target 1:  By March 31, 2025, 25% of Transport Canada FCSAP- funded sites during Phase IV have completed remediation/risk management work	
				Performance indicator 2:  Percentage of Transport Canada remediation expenditures at FCSAP funded remediation sites that reduce liability each fiscal year  Target 2:  Annually, 95% of Transport Canada remediation expenditures at FCSAP funded sites reduce the environmental liability	
	Safe and Healthy Communities ["Other" placeholder]	Address, under the <b>Aviation Sector Regulatory Initiative</b> , air pollutant emissions from aviation by supporting the International Civil	Contribution to FSDS goal/target: Canada's work with ICAO to build consensus on international agreements that reflect Canadian	Starting Point:  A new standard for non-volatile particulate matter (nvPM) mass and number will be incorporated	Climate Change and Clean Air

Safe and Healthy Communities FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		Aviation Organization's (ICAO) development of new international standards and recommended practices and through the development and implementation of new domestic standards  Canada has domestic regulatory instruments in place for nitrogen oxides (NOx), non-volatile particulate matter (nvPM), carbon monoxide (CO), & unburned hydrocarbons (HC) emissions from aircraft engines. Work is ongoing to incorporate a new nvPM mass and number standard into the Canadian Aviation Regulations. These instruments align Canada with ICAO's international standards  Piston powered aircraft use aviation gasoline fuel, which contains a low level of lead. There is currently no unleaded fuel option that is approved and safe for use for all piston-powered aircraft operating in Canada. Lead is one of the top ten toxic substances listed in the Canadian Environmental Protection Act (CEPA). The Gasoline Regulations, under CEPA, prohibit the use of lead in fuels, however Canada has an exemption in place to allow for the use of low lead	objectives will contribute to further advancing international standards and recommended practices for air pollutant and harmful substance reductions, which will be implemented domestically  The new nvPM mass and number standard represents tighter emissions controls that will reduce potential negative health impacts experienced by Canadians in association with exposure to air pollutants  Transport Canada is collaborating with national and international partners on research to advance scientific understanding in this area, with the ultimate goal of finding an unleaded replacement fuel so that the exemption to the Gasoline Regulations can be removed in the future  Contribution to UNSDGs:  SDG Target 3.9- By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	into Canadian regulations in order to align with ICAO Standards  Transport Canada is working in collaboration with others to advance the transition to unleaded aviation gasoline for piston engine aircraft  Performance indicator 1:  • A new ICAO nvPM mass and number standard is implemented into the Canadian Aviation Regulations (CARs)  Target 1:  • New nvPM standard is incorporated into the CARs by December 2022  Performance indicator 2:  • Percentage of regulatees who comply with existing emissions standards for NOx, nvPM, CO, and unburned hydrocarbons, and with the new nvPM mass and number standard, once implemented  Target 2:  • 100% compliance to emissions standards	

Safe and Healthy Communities FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		aviation gasoline fuel due to safety issues. Canada is collaborating with others to find a suitable unleaded fuel, such that the exemption can be removed		Research and testing on unleaded aviation gasoline candidate fuels  Target 3: On an annual basis, research and testing has been conducted. Additional evidence is generated	
	Safe and Healthy Communities ["Other" placeholder]	Under the Rail Sector Regulatory Initiative, limit criteria air contaminant (or air pollutant) emissions from the rail sector through the Locomotive Emissions Regulations	Contribution to FSDS goal/target: Contribute to reducing air pollutant emissions from locomotives by promoting, monitoring, and enforcing compliance with the Locomotive Emissions Regulations, which is good for the health and quality of life of all Canadians. To comply with the Locomotive Emissions Regulations, railway companies must meet regulatory requirements, including emission standards for new locomotives, carry out emission testing and file reports with Transport Canada  Contribution to UNSDGs:  SDG Target 3.9- By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination  SDG Target 11.6- By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention	Starting Point: The Locomotive Emissions Regulations entered into force in June 2017 Performance indicator 1:  • Percentage of railway companies (regulatees) who comply with the reporting requirements under the Locomotive Emissions Regulations by filing Annual Reports and In-use Test Reports with Transport Canada  Target 1:  • 100% of railway companies (regulatees) per year that comply with the reporting requirements under the Locomotive Emissions Regulations	Climate Change and Clean Air

Safe and Healthy Communities FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
			to air quality and municipal and other waste management	Performance indicator 2:  Percentage of locomotives operated by railway companies (regulatees) that meet an emission standard, based on the information reported to Transport Canada in the Annual Reports  Target 2:	
				Positive change (increase) per year in the percentage of locomotives that meet an emission standard	
	Prevent environmental emergencies or mitigate their impacts	Prevention Transportation of Dangerous Goods policy and regulatory plan seeks to ensure compliance within industry by anticipating/responding to issues related to the transportation of dangerous goods. This includes:  • conducting education, outreach and awareness activities to ensure that the industry knows its legal and regulatory responsibilities  • bringing Canada's regulations in line with international codes; and  • maintaining an effective oversight regime that seeks to guarantee regulatory compliance and carry out enforcement when warranted	Prevention The primary mandate of the Transportation of Dangerous Goods (TDG) Act and Regulations is to promote public safety. This also includes the prevention of dangerous goods releases and incidents. The departmental actions will directly lead to more effective prevention of incidents throughout Canada  Mitigation In the event of a dangerous goods incident, Transport Canada may send a TDG Inspector or a TDG Remedial Measures Specialist (RMS). The primary role of the RMS is to promote public safety by monitoring remedial measures taken	Starting Point:  The rate of reportable releases for 2019 to 2020 was 202.64  Performance Indicator:  Rate of reportable releases of dangerous goods per year (the number of reportable releases divided by the nominal Canadian Gross Domestic Product for the year)  Target:  1% reduction in the rate for current year as compared to the rate of reportable releases in the previous year	TDG Regulatory Framework TDG Oversight TDG Technical Support

Safe and Healthy Communities FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
		Transportation of Dangerous Goods employs several strategies to mitigate emergencies involving dangerous goods, such as:  • requiring the development of Emergency Response Assistance Plans (ERAPs), to ensure that industry knows what to do in the event of a release or anticipated release of certain higher-risk dangerous goods while in transport  • dispatching Remedial Measures Specialists (RMSs) to the location of dangerous goods emergencies to promote public safety by monitoring remedial measures taken to mitigate the incident  The Canadian Transport Emergency Centre (CANUTEC) is a national advisory service that assists emergency response personnel in handling dangerous goods emergencies on a 24/7 basis	to mitigate the incident by emergency response personnel. The items listed under "Mitigation" in the departmental actions allow Transport Canada to minimize the effects of an incident, ensuring Canadians stay safe and healthy  Contribution to UNSDGs:  SDG Target 3.9- By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Note:  A reportable release means either:  an actual release has occurred where the amount of dangerous goods released meets the minimum threshold specified by regulation considered to endanger public safety, where "public safety" is defined as the safety of human life and health and of property and the environment; or  a release of dangerous goods is expected to occur.  Canadian regulations have been updated to include "anticipated releases" as reportable as of December 1, 2016 (SOR/2016-95 May 13, 2016). Some possible examples of an anticipated release include:  1. an incident has occurred and dangerous goods will likely have to be transferred to another container;  2. a container is damaged to the extent that its integrity is compromised and dangerous goods could be released; or  3. a container is lost in navigable waters	

Safe and Healthy Communities FSDS targets	FSDS contributing actions	Corresponding departmental actions	Contribution by each departmental action to the FSDS goal and target and the UNSDGs	Starting points Performance indicators Targets	Program in which the departmental actions will occur
				Continued efforts by the department are made to reduce number of reportable dangerous goods incidents per year. Since December 2016, companies have to report both a release and anticipated release to the Minister within 30 days of the initial report made to CANUTEC, and the reporting levels are expected to remain steady with improved industry reporting requirement awareness	

## **Section 4: Integrating sustainable development**

At Transport Canada, the successful integration of sustainable development into policies, plans and programs is supported by the use of our internal Sustainable Transportation Assessment Tool (STAT), which, since 2013, has been the cornerstone of the department's Strategic Environmental Assessment (SEA) process. Transport Canada's STAT requires all potential policies, plans or programs to consider possible effects on the economy, on society and on the environment. The STAT also includes specific questions to assess possible impacts on Federal Sustainable Development Strategy (FSDS) goals and targets. By asking these kinds of questions early in the design and development of proposals, it is anticipated that risks and opportunities will be better identified and managed and potential impacts across the Department's strategic outcomes will be considered. Through its SEA process, Transport Canada will continue to ensure that economic, social, environmental and FSDS considerations of proposals are integrated into departmental decision making.

All proposals seeking Ministerial or Cabinet approval, including Memoranda to Cabinet, Treasury Board Submissions and Regulatory Updates are required to complete a STAT under departmental policy. Subject matter experts on the initiative complete the STAT in consultation with the Environmental Management Branch contact on SEA.

There are four possible outcomes of the STAT preliminary scan, each requiring written justification and director general-level approval before submission to Minister/ Cabinet:

- 1. **Cabinet exemption** for situations where SEA is impractical or duplicative:
  - Urgent or emergency situations where time limitations prevent SEA from being completed;
  - Similar assessment has already been conducted, for example:
    - i. Assessment under the Canadian Environmental Assessment Act, 2012 or Impact Assessment Act;
    - ii. Treasury Board submission for an initiative already assessed as part of a previous Memorandum to Cabinet;
    - iii. Transport Canada is contributing to an initiative led and already assessed by another department.

- 2. **Departmental exclusion** for common types of proposals that do not have impacts on the environment:
  - Progress/performance reports to Cabinet or Treasury Board Secretariat;
  - Renewals or extensions of a program;
  - Summaries of program objectives and achievements given through Government response to Standing Committees;
  - · Communications strategies; and
  - Changes that are administrative in nature with no environmental, economic or societal implications.
- 3. **Full STAT and formal determination on the need for detailed SEA**. The general areas of consideration in the STAT are provided below. Impacts to FSDS goals and targets are also considered. Potential impacts are evaluated using Rating Guidelines within the STAT specific to each assessment criteria.

STAT Areas of Consideration				
Economy	Society	Environment		
Movement of goods	Safety	Air		
Movement of people	Security	Water		
Financial costs	System access and accessibility	Wildlife and habitat		
Trade and commerce	Human health	Soil		
Adaptive capacity	Communities	Natural resources		

Transport Canada is currently undertaking a review of the STAT to find opportunities to strengthen the assessment of departmental proposals and better determine their potential for important environmental effects, with updates to be completed by March 31, 2023.

4. A detailed SEA is required when there is potential for important impacts (positive or negative) on the environment. Public statements on the results of assessments are prepared when an initiative has undergone a detailed SEA. The purpose of the public statement is to demonstrate that the environmental effects, including the impacts on achieving FSDS goals and targets, of the approved policy, plan or program have been considered during proposal development and decision making.

Transport Canada's Environmental Management Branch tracks SEAs for initiatives going forward for Ministerial or Cabinet approval, including the number of approved initiatives for which an SEA has been completed, departmental compliance rate with SEA policy and public reporting on initiatives requiring a detailed SEA.