

# **Fisheries and Oceans Canada and the Canadian Coast Guard**

## **2017-2020 Departmental Sustainable Development Strategy**

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## Section 1: Introduction

The [2017-20 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 objectives of the Act to integrate environmental, social and economic considerations into decision-making, and make such decisions more transparent and accountable to Parliament, DFO/CCG support reaching goals laid out in the FSDS through the activities described in this Departmental Sustainable Development Strategy (DSDS).

## Section 2: Sustainable Development in Fisheries and Oceans Canada and the Canadian Coast Guard (DFO/CCG)

### **FSDS Goal: Low Carbon Government**

DFO/CCG is committed to reducing greenhouse gas emissions from our own operations and taking action on climate change. The Department will continue to work with the Centre for Greening Government at the Treasury Board Secretariat as they release government-wide direction related to the Low Carbon Government goal. DFO has already incorporated energy management considerations into departmental real property decision-making and daily operations and will continue to do so moving forward. Additionally, through the Federal Infrastructure Initiative, the Department is investing in a number of clean energy and efficiency upgrade projects, which will support the transition to a low carbon government.

### **FSDS Goal: Effective action on climate change**

The Department is working closely with Environment and Climate Change Canada (ECCC) and other partners to increase our understanding of climate change impacts and to advance a long-term climate strategy for Canada. This includes conducting scientific research and monitoring activities that inform decisions related to fisheries management, species conservation, and marine safety. For example, scientists are improving our ability to predict changing ocean conditions, increasing our understanding of the biological impacts of ocean acidification on marine species and environments, and determining the vulnerability of commercial fish species and their prey to climate change impacts.

### **FSDS Goal: Healthy coasts and oceans**

DFO/CCG is committed to protecting Canada's coasts and oceans by leading the efforts, with support from Environment and Climate Change Canada, to achieve the Government of Canada's commitment to protect marine and coastal areas to 5% by 2017, and 10% by 2020.

Work is also moving forward on continued implementation and development of the Sustainable Fisheries Framework (SFF) policies for an ecosystem approach to fisheries management. Implementation of the SFF policies will help ensure that all major fish and invertebrate stocks are managed and harvested sustainably, legally, and applying ecosystem-based approaches.

In partnership with Transport Canada (TC), Natural Resources Canada (NRCan), and ECCC, DFO/CCG will be involved in initiatives under the Ocean Protection Plan (OPP) including:

- Developing a world leading marine safety system, this will include a stronger Coast Guard and a coordinated emergency response system to respond to incidents involving search and rescue operations or environmental emergencies

involving oil spills and derelict vessels. CCG will offer training in search and rescue missions, spill report assessments, and emergency spill response working closely with Indigenous and local communities to assess risks and respond quickly to marine emergencies.

- Extending CCG icebreaker presence in the Arctic to support mariners earlier and later in the season to make Arctic resupply operation faster, safer and more efficient for remote communities.
- Working to protect marine mammals by developing a national approach and capacity, in line with international best practices, to respond to marine mammal incidents such as collision, entanglements, and strandings. This new capacity will bring with it the added benefit of enhancing compliance enforcement and surveillance of marine protected areas.

### **FSDS Goal: Pristine lakes and rivers**

DFO/CCG provides support to the International Institute for Sustainable Development Experimental Lakes Area to conduct scientific research that will help us better understand freshwater ecosystems. DFO/CCG will also continue to conduct scientific research and monitoring activities in freshwater environments, with a focus on the Lake Winnipeg Basin and the Great Lakes-St. Lawrence River Basin.

### **FSDS Goal: Healthy wildlife population**

The *Species at Risk Act* (SARA) is key federal government legislation. DFO/CCG, in cooperation with Parks Canada, supports the protection and recovery of listed aquatic species in Canada and their critical habitats and residences with the ultimate goal of preventing the extirpation or extinction of aquatic species. The Department provides scientific information and advice on species status reports produced by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) to help inform the risk status of aquatic species. The Species at Risk program is informed by sound scientific research and Indigenous and community knowledge and takes into account socio-economic and stakeholder considerations, in support of activities in the species at risk conservation cycle.

DFO/CCG also contributes to: the ECCC-led General Status of Species in Canada measure of species assessed as secure or at-risk which provides a measure of potential extinction risk and an indicator of the overall state of biodiversity in Canada; and, to the ECCC-led Canadian Environmental Sustainability Indicators Species at Risk Population Trends which assesses recovery trends of listed species.

### **FSDS Goal: Sustainable food**

Aquaculture is the fastest growing food production sector and now provides 50 percent of all fish for human consumption in the world. Canadian aquaculture represents around 15 percent of fish production in the country and close to 30 percent in value. In the coming decade, a shortfall in fish and seafood is projected, which can be met by increased aquaculture production. DFO/CCG contributes to the goal of sustainable food by supporting sustainable aquaculture production through aquaculture-science research, science-based decision making, and improved regulations.

DFO also conducts scientific research to increase knowledge of effects from agriculture and aquaculture on the environment. This research can assist in maintaining ecosystem health.

**FSDS Goal: Safe and healthy communities**

DFO/CCG is working to implement contaminated sites management and is committed to complete remediation and risk management activities for all priority contaminated sites on the Federal Contaminated Sites Inventory. The Department is working to identify and remediate all contaminated sites and expects to be able to clear 800 sites by 2020.

## DFO/CCG's Support for International Agreements

The 2017–2020 DSDS details DFO/CCG's work that supports the Government's sustainable development goals (SDG). The strategy also forms the foundation of our response to global efforts to implement sustainable development including the:

[United Nations Sustainable Development Goals](#)

[United Nations Convention on Biological Diversity](#)

### United Nations Sustainable Development Goals

In September, 2015, United Nations (UN) member states adopted the 2030 Agenda for Sustainable Development, including 17 SDGs and 169 targets.

Countries and organizations around the world continue to develop plans to implement the 2030 Agenda. For example, UN member states are working to develop a follow-up and review process, including indicators to measure progress toward the SDGs and targets.

UN SDG 14, Conserve and sustainably use the oceans, seas and marine resources for sustainable development, is the main focus of DFO/CCG's work on Agenda 2030.



1. By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.
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.
3. Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.
4. By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.
5. By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.
6. By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.

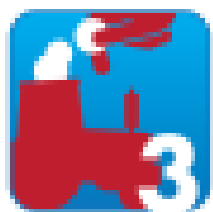
7. By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.
  - a. Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries.
  - b. Provide access for small-scale artisanal fishers to marine resources and markets.
  - c. Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want.

## United Nations Convention on Biological Diversity

The objectives of the UN Convention on Biological Diversity include: the conservation of biological diversity; the sustainable use of its components; and, the fair and equitable sharing of benefits from the use of genetic resources.

In 2010, Canada and other parties to the Convention adopted the 2011–2020 Strategic Plan for Biodiversity which includes 20 global biodiversity targets known as the Aichi Targets. Subsequently, in February 2015, Canada adopted the 2020 Biodiversity Goals and targets for Canada, national objectives that will help guide collective action on biodiversity conservation in Canada and support progress toward Canada’s commitments under the Convention. DFO/CCG supports the Aichi targets with a particular focus on the following targets.

### Aichi Targets:



By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.



By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.



By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.



By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.



By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.



By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.



## Section 3: Commitments for Fisheries and Oceans Canada

### Low-Carbon Government: The Government of Canada leads by example by making its operations low-carbon

Responsible Minister: All ministers

Low-Carbon Government FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
<p>Reduce GHG emissions from federal government buildings and fleets by 40% below 2005 levels by 2030, with an aspiration to achieve this reduction by 2025.</p>	<p>Improve the energy efficiency of our buildings/operations.</p>	<p>Replace old Marine Communications and Traffic Services and Aids to Navigation power generation equipment, with cleaner, low-carbon energy solutions.</p>	<p>New power generation units burn less fuel and produce less emissions.</p>	<p><b>Performance Indicators:</b></p> <p>GHG emissions from facilities in fiscal year 2005–06 (base year): = <b>34.42 ktCO<sub>2</sub>e.</b></p> <p>GHG emissions from facilities in fiscal year 2016-17 = <b>21.20 ktCO<sub>2</sub>e.</b></p> <p>Percentage (%) change in GHG emissions from facilities from fiscal year 2005-06 to fiscal year 2016–17 = <b>38.4 %.</b></p>	<p>Internal Services</p>
		<p>Consider opportunities to implement building automation and commissioning for new construction or major renovation/upgrade, during project proposal and planning phase.</p>	<p>Building automation will minimize human error and enhance information datasets which will assist the department to more efficiently manage building operations.</p>		
		<p>Continue to develop an approach for building operator training in Fisheries and Oceans Canada-Owned buildings, to ensure that appropriate personnel receive training in industry-certified, best practices of maximizing energy efficiency and conservation measures</p>	<p>Building operator training will assist operators in acquiring skills to maximize building performance and implement best management practices to enhance energy saving techniques.</p> <p>For facilities where investment is not a priority, building operator training will equip the staff to determine and implement carbon saving techniques customized to the needs of individual site.</p>		
		<p>Review, update, and integrate environmental considerations into corporate governing frameworks including but not limited to policies, programs and practices.</p>	<p>An evergreen process of re-evaluating environmental considerations into corporate processes will assist in tracking the environmental footprint of the department's activities and identify opportunities for improvements.</p>		
		<p>Implement accommodation projects to increase population density and promote effective space utilization.</p>	<p>Maximizing space-utilization efficiency will result in savings of energy and greenhouse gas emissions from</p>		

Low-Carbon Government FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
		<p data-bbox="903 219 1419 300"></p> <p data-bbox="903 308 1419 527">Adopt updated National Energy Code for Buildings for new construction and major renovations projects as well as review programs, assets, facilities, and base building equipment to identify/inventory sources of departmental real property greenhouse gas emissions and quantify climate change impacts and vulnerabilities.</p> <p data-bbox="903 609 1419 787">Continue Fisheries and Oceans Canada's commitment to achieve a high level of environmental performance for new construction, major renovations, and existing building projects, by using industry-recognized assessment and verification tools.</p> <p data-bbox="903 1201 1419 1388">Undertake energy audits at custodial facilities to determine the current state of energy consumption and to identify further opportunities for energy conservation measures. Compile, inventory and evaluate the recommendations of the energy audits.</p>	<p data-bbox="1451 219 1857 300">building operations, especially heating and cooling.</p> <p data-bbox="1451 308 1857 1128">Adopting updated National Energy Code for Buildings and DFO's goal of meeting Leadership in Energy and Environmental Design (LEED) Silver, Green Globes Design 3 Globes or equivalent certifications for new construction and major renovation projects, will ensure the Department's continued commitment to achieving a high level of environmental performance within its custodial facilities. These goals can be augmented by striving to achieve LEED Gold or Platinum in order to yield additional reductions in operations related greenhouse gas emissions. Finally applying similar certifications to existing buildings via industry-recognized assessment and verification tools, i.e. Building Owners and Managers Association (BOMA) Building Environmental Standards (BEST), will assist in identifying and reducing operational carbon emissions in existing custodial facilities.</p> <p data-bbox="1451 1201 1857 1356">Energy audits provide a snapshot of the current state of energy consumption of a facility and will assist the department in identifying emissions reduction opportunities.</p>		

Low-Carbon Government FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
		<p>Develop a work plan for clean energy infrastructure implementation opportunities for identified departmental sites, prioritizing by emissions, specifically aiming to reduce greenhouse gas emissions from heating and cooling needs.</p>	<p>A significant portion of greenhouse gas emissions are the result of heating and cooling needs of a building. A large reduction of these emissions will be offset utilizing clean energy infrastructure projects that have a reasonable return on investment and a longer project lifespan.</p>		
		<p>Develop an overarching, evergreen Climate Risks and Vulnerabilities Identification Framework, focused on identifying short and long-term climate change risks and vulnerabilities associated with sites across Canada.</p>	<p>Identification of key vulnerabilities and risks within real property's portfolio will aid in developing departmental adaptive capacity.</p> <p>A combination of policy and infrastructure measures can produce significant reductions in greenhouse gas emissions from custodial facilities over the lifespan of the current Federal Sustainable Development Strategy.</p> <p>A focus on greenhouse gas related emissions information development, auditing, feasibility studies, and funding renewable energy infrastructure in the short-term will help to ensure overall greenhouse reduction targets will be met by the 2025 deadline.</p> <p>Concurrently, policy measures and energy efficiency upgrades will be implemented to ensure carbon and greenhouse gas emissions related to operations are monitored and improved upon as newer technologies and adaptation measures arise. Risks identified in the framework will then be included in program and</p>		

Low-Carbon Government FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
			investment decision-making.		
		Install a solar wall at Canso Canal (Nova Scotia) to reduce energy consumption and operating costs.	Solar Wall systems deliver life-cycle cost savings and require limited maintenance over their lifespan. Solar wall will displace heating load and corresponding GHG emissions.		
		Install solar panels or a solar wall at Search and Rescue Stations to reduce energy consumption and operating costs.	Installing solar panels will reduce electrical/fuel consumption, which will help reduce dependence on fossil fuel.		
		Install high efficiency motors/speed drives on system pumps at the Bedford Institute of Oceanography (Nova Scotia).	A variable speed drive will reduce energy consumption and contribute to reduction in GHG emissions.		
		Upgrade all windows in the Murray building at the Bedford Institute of Oceanography (Nova Scotia).	Upgraded windows will contribute to energy savings and reduced load on Heating Ventilation and Air Conditioning (HVAC) systems		
		Upgrade to energy efficient lighting at multiple sites including: <ul style="list-style-type: none"> <li>• Canso Canal (Nova Scotia)</li> <li>• Cultus Lake Laboratory (British Columbia)</li> <li>• Quebec Base (Quebec)</li> </ul>	Upgraded lighting will be more efficient as compared to conventional lighting currently used at these sites.		
		Install building shading at the Bedford Institute of Oceanography (Nova Scotia) to control heat load.	The shading device will control solar heat gain through windows and reduce load on building HVAC systems, thereby contributing to the reduction in GHG emissions.		
		Retrofit piping to extend sea-water cooling system to Murray and Holland Buildings at the Bedford Institute of Oceanography (Nova Scotia)	Using seawater for cooling the condenser will reduce energy consumption.		
			Implementing renewable energy		

Low-Carbon Government FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
			projects will reduce energy consumption and benefit the environment by reducing dependence on other non-renewable sources of energy.		
		<p>Install solar panels at the following Canadian Coast Guard bases:</p> <ul style="list-style-type: none"> <li>• Nanaimo CCG Base (British Columbia)</li> <li>• Hay River CCG Base (Northwest Territories)</li> <li>• Prescott CCG Base (Ontario)</li> <li>• Parry Sound CCG Base (Ontario)</li> <li>• Richmond CCG Base (British Columbia)</li> <li>• Sidney CCG Base (British Columbia)</li> </ul> <p>Install solar thermal at the following Canadian Coast Guard bases:</p> <ul style="list-style-type: none"> <li>• Quebec City CCG Base (Quebec)</li> <li>• Trois-Rivières CCG Base (Quebec)</li> <li>• Sorel CCG Base (Quebec)</li> </ul> <p>Install photovoltaic panels in order to generate electricity onsite at Spius Hatchery (British Columbia).</p> <p>Install solar hot water panels on the roof of the hatchery and office buildings at Spius Hatchery (British Columbia).</p>	Solar panels generate reliable power producing clean, cost-efficient energy.		
		<p>Install a hybrid power generation system at the following lightstations:</p> <ul style="list-style-type: none"> <li>• Merry Island Lightstation (British Columbia)</li> <li>• Entrance Island Lightstation (British Columbia)</li> <li>• Boat Bluff Lightstation (British Columbia)</li> </ul>	By incorporating cycle-charging operations, and alternative power generation, this project will greatly reduce the fuel required to power lightstations.		

Low-Carbon Government FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
	Modernize our fleet	<p>Maintain or improve sustainable motor vehicle fleet management.</p> <p>Ensure right sizing of vehicle fleet for operational fleet optimization.</p> <p>Promote motor vehicle operator behavior changes.</p> <p>Purchase or replace vehicles with reduced carbon intensity in the vehicle fleet, where operationally feasible.</p> <p>Switch to less GHG intensive sources of fuels, where operationally feasible.</p> <p>Utilize the Departmental Vehicle Acquisition Plan process to identify motor vehicles for replacement and analyze business case submissions for new program requirements.</p>	<p>Materiel Management Specialists will use life cycle management principles and standing offers, or other approved instruments, to reduce the environmental impact associated with the acquisition, use, maintenance, repairs, and/or disposal of vehicles within the Department.</p>	<p><b>Performance Indicators:</b></p> <p>GHG emissions from fleet in fiscal year 2005–06 (base year): = <b>9.75kt CO<sub>2</sub> equivalent.</b></p> <p>GHG emissions from fleet in fiscal year 2016-17 = <b>6.31 ktCO<sub>2</sub>e.</b></p> <p>Percentage (%) change in GHG emissions from fleet from fiscal year 2005-06 to fiscal year 2016–17 = <b>35.2 %.</b></p> <p>Number of Vehicles in the Fleet on March 31<sup>st</sup>, 2017 = <b>1,342</b></p> <p>Percentage of vehicles identified for replacement in 2017-18 = <b>42.3%.</b></p>	Internal Services
	Support the transition to a low-carbon economy through green procurement.	<p>Train procurement and/or materiel management specialists on green procurement.</p> <p>Use Standing Offers, and other approved instruments, for specific commodities which include criteria to reduce the environmental impact associated with the production, acquisition, use and/or disposal.</p> <p>Ensure key officials include contribution to and support for the Government of Canada Policy on Green Procurement objectives in their performance evaluations.</p>	<p>Procurement officers will use standing offers, or other approved instruments to reduce the environmental impact associated with the production, acquisition, use and/or disposal of goods and services.</p>	<p><b>Performance Indicators:</b></p> <p>Number and percentage of new procurement and/or materiel management specialists who have completed the Canada School of Public Service Green Procurement course or equivalent in the current fiscal year. <b>Target: 5 (100%)</b></p> <p>Percentage of audio visual equipment purchases considered as “green.” <b>Target: 90%</b></p> <p>Percentage of furniture purchases</p>	Internal Services

Low-Carbon Government FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
				<p>considered as "green". <b>Target:70%</b></p> <p>Number and percentage of managers and functional heads of procurement and materiel whose performance evaluation includes support and contribution towards green procurement in the current fiscal year. <b>Target: 5 (100%)</b></p>	

**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	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
By 2030, reduce Canada's total GHG emissions by 30%, relative to 2005 emission levels.	Develop a solid base of scientific research and analysis on climate change.	<p>Conduct two annual 28-day ocean water sampling projects from CCG vessels, which are used for climate change research and other research areas.</p> <p>Support ice monitoring in the eastern Northwest Passage, where moorings collect data on water temperature.</p>	DFO/CCG's support for marine science underpins important research on climate change and its impacts. This work is particularly vital in the Arctic, where climate change is occurring at a more rapid rate than anywhere else in Canada.	<p><b>Performance Indicator:</b></p> <p>Number of operational day compared to planned days in support of science programs.</p>	CCG Operations
<b>Additional Departmental Sustainable Development Activities and Initiatives</b>				<b>Performance Indicators</b>	<b>Programs in which the Departmental Actions will occur</b>
Develop a solid base of scientific research and analysis on climate change, including improving our ability to predict changes in ocean conditions and undertaking fish stock/climate vulnerability assessments to determine their susceptibility to climate change impacts.				<p><b>Performance Indicators:</b></p> <p>80% of planned aquatic climate change research projects are completed annually.</p> <p>100% of Aquatic Climate Change Adaptation Services Program (ACCASP) science products available on DFO's website.</p>	Ocean and Climate Change Science



## 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	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
<p>By 2020, 10% of coastal and marine areas are conserved through networks of protected areas and other effective area-based conservation measures.</p>	<p>Protect and manage marine and coastal areas</p>	<p>DFO/CCG are working to achieve marine conservation targets:</p> <ul style="list-style-type: none"> <li>• has proposed amendments to the <i>Oceans Act</i> to establish Marine Protected Areas (MPA) faster under Bill C-55;</li> <li>• will continue to move forward with the establishment of existing Areas of Interest (AOIs) as <i>Oceans Act</i> MPAs;</li> <li>• will continue scientific assessment and consultations to identify AOIs that will progress towards MPA establishment;                             <ul style="list-style-type: none"> <li>• will advance other-effective area-based conservation measures (OEABCM) based on science-based guidance; and,</li> </ul> </li> <li>• will protect large, offshore areas.</li> </ul>	<p>Proposed amendments to the <i>Oceans Act</i> will better facilitate the process for establishing MPAs without sacrificing science or the public's opportunity to provide input. DFO/CCG has developed science-based guidance on OEABCMs which may contribute to the target (as of June 2017, 30 fishery area closures qualify based on criteria).</p>	<p><b>Starting Point:</b> 0.88% coastal and marine areas conserved as of March 2013, as reported by the Conservation Areas Reporting and Tracking System.</p> <p><b>Performance Indicators:</b></p> <p>5% of Canada's marine and coastal areas are protected by December 2017.</p> <p>10% of Canada's marine and coastal areas are protected by December 2020.</p>	<p>Oceans Management Program</p>
		<p>Establishing mechanisms to support collaboration with Federal/Provincial/Territorial and other stakeholders to support ocean management and marine conservation activities, through:</p> <ul style="list-style-type: none"> <li>• Interdepartmental Committees on Oceans ;</li> <li>• Canadian Council of Fisheries and Aquaculture Ministers– Oceans Task Group ; and,</li> <li>• Oceans Management Contributions Program to facilitate engagement and consultation with Indigenous groups, academic institutions and other stakeholders.</li> </ul> <p>Continuing to use data and information related to the conservation and management of the marine environment to support decision-making.</p>	<p>Collaboration and coordination amongst stakeholders is vital to healthy coasts and oceans, and to achieving our marine conservation target. Departmental actions to establish these mechanisms will sustain healthy relationships, information sharing and communication amongst key stakeholders.</p> <p>Use of data and information via risk assessments, socio-economic analysis and ecological analysis, will provide transparency and support an evidence-based decision-making approach.</p>	<p>Rating of the level of effectiveness of the Oceans Management Contributions Program collaborative governance structures.</p> <p>Memberships for the program's collaborative governance structures have been established. Surveys of members with a weighted scale to "rate" the responses will be conducted to assess perceived effectiveness of structures.</p> <p>Number of priority setting exercises undertaken to make decisions by 2019.</p>	

Healthy Coasts and Oceans FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
	Build our knowledge of coastal ecosystems, MPAs and fisheries	Conduct scientific research and monitoring and provide science advice to support marine conservation.	<p>Identify and describe ecologically significant areas to inform marine conservation measures.</p> <p>State of the Ocean Ecosystem Reports will be produced for each of Canada's three oceans.</p>	<p><b>Performance Indicators:</b></p> <p>Biophysical overviews are completed for new Areas of Interest.</p> <p><b>One State of the Ocean Ecosystem Report to be completed each year:</b></p> <p>State of the Atlantic Ocean Ecosystem Report 2017-2018, State of the Arctic Ocean Ecosystem Report 2018-2019.</p>	<p>Aquatic Ecosystem Science</p> <p>Oceans and Climate Change Science</p> <p>Fisheries and Aquaculture Science</p>
By 2020, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem-based approaches starting at 96% in 2015.	Work with partners to protect and restore coastal ecosystems	Scientific monitoring and research activities are conducted for aquatic species. Species are assessed and this information forms science advice that informs the sustainable management of Canadian fish stocks.	Science advice informs decisions that contribute to the sustainable management of fisheries.	<p><b>Starting Point:</b></p> <p>In 2015-16, 86% of client requests for science advice to support management decisions on fisheries resources were completed in the time required.</p> <p><b>Performance Indicator:</b></p> <p>90% of requests for science advice on fisheries resources, are completed within required time.</p>	Fisheries and Aquaculture Science
	Implement policies for sustainable fisheries	<p>Take concrete steps to implement an ecosystem approach to fisheries management through the continued implementation of the Sustainable Fisheries Framework (SFF) policies in Canada's fisheries.</p> <p>Continue to develop SFF policies, where required. DFO/CCG is developing a national fishery monitoring policy to ensure adequate and consistent monitoring of catches in individual fisheries, to further strengthen the management of fisheries.</p>	The continued implementation of the SFF policies will help ensure that all major fish and invertebrate stocks are managed and harvested sustainably, legally and applying ecosystem-based approaches.	<p><b>Starting Point:</b></p> <p>To measure the sustainability of Canada's major fisheries, DFO/CCG tracks the percentage of major fish stocks harvested at levels considered to be sustainable. Based on the results of the 2016 Sustainability Survey for Fisheries, 96% of Canada's 159 major fish stocks were managed and harvested at levels considered to be sustainable in 2015, up from 90% in 2011.</p> <p>In addition, to measure the sustainability of Canada's major fisheries, DFO/CCG tracks the</p>	Integrated Fisheries Management

Healthy Coasts and Oceans FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
				<p>precautionary approach status of major fish stocks: in 2015, 49% of 159 major fish stocks were classified in the healthy zone, 20% in the cautious zone, 12% in the critical zone, and 19% were not classified in any of the three precautionary approach zones due to information gaps.</p> <p><b>Performance Indicators:</b></p> <p>Percentages of major fisheries that have limit reference points and harvest control rules.</p> <p>Percentage of decisions for major fisheries where harvest control rules were followed.</p> <p>Major fish stocks generally refers to, but is not limited to fish stocks with an annual landed value of greater than \$1 million or an annual landed weight of greater than 2,000 tonnes</p>	
	<p>Innovate to reduce acoustic pollution in the marine environment</p>	<p>Reduce noise pollution by using state of the art science research vessels that minimize underwater radiated noise.</p>	<p>Reduce negative impacts on marine species associated with acoustic pollution.</p>	<p><b>Performance Indicator:</b></p> <p>Number of DFO/CCG vessels using technology to reduce radiated noise levels.</p>	<p>Integrated Technical Services</p>
	<p>Other- Oceans Protection Plan</p> <p>The OPP is a multi-year project that is being developed in stages. More performance indicators and departmental actions will be released in future DSDS updates.</p>	<p>Oceans Protection Plan – Pillar I: A State-of-the-Art Marine Safety System.</p>	<p>The Government of Canada will create a world-leading marine safety system that improves responsible shipping and protects Canada's waters. By world-leading, this means that the system will meet or exceed the best practices in the world. Initiatives under this pillar aim to better position Canada's marine safety system to prevent and respond</p>	<p>The number of marine safety incidents and spills from vessels in Canada's waters:</p> <ul style="list-style-type: none"> <li>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</li> </ul>	

Healthy Coasts and Oceans FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
			<p>to marine safety and pollution incidents.</p> <p>Initiatives involved in enhancing the prevention of marine incidents include:</p> <ul style="list-style-type: none"> <li>• <b>New information-sharing systems</b> - 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 (TC and DFO/CCG).</li> <li>• <b>Eight new radars</b> - To be installed across the country to increase the Coast Guard's capability to monitor and manage marine traffic (DFO/CCG).</li> <li>• <b>Better navigation tools</b> - Deliver new marine surveys and high resolution electronic navigation charts, regarding water levels, tides, currents, winds, sea-state conditions (DFO/CCG).</li> <li>• <b>Stronger polluter-pay principle</b> – Remove the per-incident limit of liability on Canada's domestic compensation fund for ship-source oil spill response (TC and DFO/CCG).</li> </ul> <p>Initiatives involved in strengthening of responses to marine incidents include:</p> <ul style="list-style-type: none"> <li>• <b>A stronger Canadian Coast</b></li> </ul>	<p>the previous five years.</p>	

Healthy Coasts and Oceans FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
			<p><b>Guard</b> - 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 (TC and DFO/CCG).</p> <ul style="list-style-type: none"> <li>• <b>Increased towing capacity</b> - Towing kits will be added to major 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 (TC and DFO/CCG).</li> <li>• <b>Risk-Based Response Planning</b> – Building upon the lessons learned from the Area Response Plan pilot project that previously took place, this new initiative will support the development of a national approach to response planning (TC, DFO/CCG, ECCC).</li> <li>• <b>Enhanced environmental response</b> - The Canadian Coast Guard will staff up, train and exercise more, and buy new, modern equipment such as booms, skimming vessels, and mobile incident command posts (DFO/CCG).</li> <li>• <b>Alternate response measures</b> - Research on alternate response measures – such as dispersants and in-situ burning – that could</li> </ul>		

Healthy Coasts and Oceans FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
			<p>be used only when there is an environmental benefit to do so (TC, DFO/CCG, ECCC).</p> <ul style="list-style-type: none"> <li>• <b>Enhance the role of the Canadian Coast Guard's Auxiliary</b> - The Coast Guard's maritime search and rescue activities are supported by a network of 4,000 Auxiliary volunteers across Canada. The Coast Guard will offer interested Auxiliary volunteers training in marine environmental response to leverage this extensive network of volunteers in support of rapid on-water response to reports of marine pollution (DFO/CCG).</li> <li>• <b>New lifeboat stations</b> - To be built across Canada: four along the West coast and two in Newfoundland and Labrador. In addition, a seasonal in-shore rescue boat station in the Arctic, with trained local personnel, will support near-shore search and rescue operations (DFO/CCG).</li> </ul>		
		<p>Oceans Protection Plan – Pillar II: Preservation and Restoration of Marine Ecosystems</p>	<p>Marine ecosystems will be preserved and restored using new tools and research, as well as taking measures to address abandoned and derelict vessels and wrecks. Initiatives under this pillar aim to protect and restore marine habitats and ecosystems in key strategic areas.</p> <p>Initiatives under this pillar include:</p> <ul style="list-style-type: none"> <li>• <b>Collection of baseline data and cumulative effects assessment</b> - Working closely with Indigenous</li> </ul>		

Healthy Coasts and Oceans FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
			<p>and coastal communities, the Government of Canada will create a pilot baseline program to better understand the cumulative effects of shipping on coastal ecosystems (TC and DFO/CCG).</p> <ul style="list-style-type: none"> <li>• <b>Coastal Habitat Restoration Fund</b> - To be established to support community-based efforts to restore degraded habitats (DFO/CCG).</li> <li>• <b>Protect aquatic ecosystems</b> - New measures will be funded that implement a real-time whale detection system to alert mariners to the presence of whales, which will help them avoid interactions and vessel strikes (TC and DFO/CCG).</li> <li>• <b>Addressing abandoned vessels</b> - The Government is implementing a national strategy that focuses on the prevention and removal of these problem vessels (TC and DFO/CCG).</li> </ul>	<p>The percentage of projects funded through Coastal Restoration Fund contribution agreements leading to rehabilitation of aquatic habitats:</p> <ul style="list-style-type: none"> <li>• 90% of projects funded through Coastal Restoration Fund contribution agreements lead to rehabilitation of aquatic habitats.</li> </ul> <p>The number of vessels of concern addressed:</p> <ul style="list-style-type: none"> <li>• By 2022, a reduction in the number of abandoned, derelict and wrecked vessels present in Canadian waters, compared with a 2019 baseline.</li> </ul>	
		Oceans Protection Plan – Pillar III: Indigenous Partnerships	The OPP will build and strengthen partnerships with Indigenous and coastal communities. The Government will look to build local capacity, and for Indigenous groups to play a meaningful role in emergency response and waterway management. In addition to the increased engagement and	<p>The number of Indigenous groups that participate in Canada's marine safety system:</p> <ul style="list-style-type: none"> <li>• By 2027, an increased number of interested Indigenous groups are active partners in Canada's marine safety system.</li> </ul>	

Healthy Coasts and Oceans FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
			<p>involvement of Indigenous groups in the other pillars, initiatives under this pillar aim to increase the participation of Indigenous groups within Canada's marine sector by exploring new governance arrangements and building the capacity of these groups within the marine sector.</p> <p>Initiatives under this pillar include:</p> <ul style="list-style-type: none"> <li>• <b>Engaging Indigenous communities</b> - The OPP includes a significant focus on engaging Indigenous communities on how they would like to see partnerships evolve, what their community priorities are, and how to work together in a way that brings consistent approaches to common geographic areas (all departments).</li> <li>• <b>Active role</b> - The Government will create opportunities for Indigenous communities to participate and play an active role in responsible shipping and the marine safety regime (TC and DFO/CCG).</li> </ul>		
		<p>Oceans Protection Plan – Pillar IV: A Stronger Evidence Base and Increased Community Participation and Public Awareness</p>	<p>The OPP includes important new work to ensure that Canada's marine safety system is built on a stronger evidence base, supported by science and local knowledge. This includes investing in oil spill cleanup research and methods to ensure that decisions taken in emergencies are evidence-based. Initiatives under this pillar aim to increase knowledge of the</p>	<p>The percent of policies and operational response plans developed through the OPP that are supported by scientific, local/traditional, and other relevant information and knowledge:</p> <ul style="list-style-type: none"> <li>• By 2022, 100% of policies and operational response plans are supported by scientific, local/traditional, and other</li> </ul>	



Healthy Coasts and Oceans FSDS Targets	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
			<p>behaviour and impacts of oil, to engage local communities, and increase public confidence in Canada's marine safety system.</p> <p>Initiatives under this pillar include:</p> <ul style="list-style-type: none"> <li>• <b>Foundation of science and local knowledge</b> - New investments will fund additional research that draws on the expertise and experience of the science community, both in Canada and abroad (DFO/CCG).</li> <li>• <b>Research</b> - The Government will conduct research to better understand how different oil and petroleum products behave when spilled in a marine environment. This will require ocean modeling using information such as currents, winds, waves to allow responders to accurately track spills and predict their path (DFO/CCG and NRCan).</li> </ul>	<p>relevant information/knowledge.</p> <p>The percentage of Canadians who are confident in Canada's marine safety system:</p> <ul style="list-style-type: none"> <li>• By 2022, an increased percentage of Canadians are confident in Canada's marine safety system.</li> </ul>	

**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	FSDS Contributing Actions	Departmental Action	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
Restore lake and river ecosystems: <ul style="list-style-type: none"> <li>By 2019, restore beneficial uses that will assist in the delisting of five Canadian Great Lakes Areas of Concern (AOCs). In the remaining AOCs, increase the number of beneficial use impairment re-designations from 18 in 2014 to 30 in 2019.</li> </ul>	Provide in-kind support and funding for projects	Conduct scientific research and monitoring activities and provide support for the Experimental Lakes Area in Northwestern Ontario.	Results of scientific activities will provide information and advice to inform decisions related to the restoration of Canadian freshwater ecosystems.	<b>Performance Indicator:</b> Establish a contribution agreement to provide support for freshwater research at the Experimental Lakes Area.	Aquatic Ecosystem Science

**Healthy Wildlife Populations: All species have healthy and viable populations**

Responsible Minister: Minister of Environment and Climate Change

Healthy Wildlife Populations FSDS Target	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
<p>By 2020, species that are secure remain secure, and populations of species at risk listed under federal law exhibit trends that are consistent with recovery strategies and management plans.</p>	<p>Work with partners to protect species and their habitats</p>	<p>Publish recovery or management documents on the public-facing Species at Risk Public Registry.</p> <p>Identify critical habitat, either partially or completely in recovery documents.</p>	<p>DFO/CCG has committed to identify and publish evidence-based information on listed aquatic Species at Risk and their habitats. This assists partners and other key stakeholders to make decisions and guide behaviour for the conservation and protection of listed aquatic species at risk.</p>	<p><b>Starting Point:</b> 65% of species listed under SARA have a recovery strategy or management plan published on the SARA Registry as of March 31, 2017.</p> <p><b>Performance Indicator:</b> 75% by March 31, 2020.</p> <p><b>Starting Point:</b> 29% of species where critical habitat has been identified either partially or completely, and an order has been made relating to that critical habitat as of March 31, 2017.</p> <p><b>Performance Indicator:</b> 75% by March 31, 2020.</p>	<p>Species at Risk Program</p>
	<p>Support Implementation of the Species at Risk Act.</p>	<p>Provide science advice and information in support of species assessment, listing and recovery planning under the <i>Species at Risk Act</i>.</p>	<p>Peer-reviewed science information and advice supports species at risk assessment and recovery.</p>	<p><b>Performance Indicator:</b> 90% of requests for science advice to support species at risk legislative requirements are completed within the required time.</p>	<p>Aquatic Ecosystem Science</p>

**Sustainable Food: Innovation and ingenuity contribute to a world-leading agricultural sector and food economy for the benefit of all Canadians**

Responsible Minister: Minister of Agriculture and Agri-Food; Minister of Health; Minister of Fisheries, Oceans and the Canadian Coast Guard

Sustainable Food FSDS Target	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
<p>By 2020, all aquaculture in Canada is managed under a science-based regime that promotes the sustainable use of aquatic resources (marine and freshwater) in ways that conserve biodiversity</p>	<p>Increase knowledge of sustainable agriculture, fisheries and aquaculture</p>	<p>Conduct targeted regulatory research on fish pest and pathogen interactions, ecosystem management and interactions with wild populations.</p>	<p>Information and science advice resulting from this regulatory research supports science-based aquaculture management decisions that help minimize the environmental impacts from aquaculture.</p>	<p><b>Starting Point:</b> In 2015-16, 90% of the 6 aquaculture science key priority areas were addressed. <b>Performance Indicator:</b> 100% of the 6 aquaculture science key priority areas are addressed through research.</p>	<p>Fisheries and Aquaculture Science</p>
	<p>Use legislation and regulations to ensure safe and secure food</p>	<p>Tracking the incidence of morbidity or mortality in Commercial, Recreational and Aboriginal fish species from pesticide treatments at salmon farms, as per the Aquaculture Activities Regulations.</p>	<p>Ensures that the impact of pesticides on fisheries species is minimized.</p>	<p><b>Starting Point:</b> Tracking began with the introduction of the regulations in July 2015. <b>Performance Indicator:</b> Number of morbidity or mortality events associated with aquaculture pesticide treatments on an annual basis.</p>	<p>Sustainable Aquaculture Program</p>
	<p>Conduct aquaculture regulatory reform</p>	<p>Carry out amendments to the:</p> <ul style="list-style-type: none"> <li>• Fishery (General) Regulations with the support of the Canadian Food Inspection Agency to better align both organizations' mandates and programs when it comes to fish health management; and,</li> <li>• Management of Contaminated Fisheries Regulations to enable shellfish aquaculture operations minimize health risks from consumption of bivalve shellfish.</li> </ul>	<p>Provide the aquaculture sector with a robust regime that will enable environmentally responsible development through the targeted aquaculture regulatory reform agenda.</p>	<p><b>Performance Indicator:</b> Percentage of amendments completed.</p>	<p>Sustainable Aquaculture Program</p>

*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 Target	FSDS Contributing Actions	Departmental Actions	Contribution	Performance Indicators	Programs in which the Departmental Actions will occur
By 2020, address the 4,300 substances identified as priorities for action under the Chemicals Management Plan	Demonstrate leadership on assessing and remediating contaminated sites	Implement contaminated sites management activities according to a Five-Year Strategic Plan, and in the context of the Federal Contaminated Sites Action Plan . Committed to complete remediation and risk management activities for highest priority contaminated sites on the Federal Contaminated Sites Inventory.	Identify contaminated sites and commence assessment, remediation, and monitoring.	<p><b>Starting Point:</b> In FY 2016-17, the Department has identified a total of 3,048 sites where contamination may exist and assessment, remediation and monitoring may be required.</p> <p><b>Performance Indicators:</b> By 2020, the Department expects to:</p> <ul style="list-style-type: none"> <li>• Assess 560 suspected sites,</li> <li>• Remediate 350 known contaminated sites;</li> <li>• Close 800 sites (having had the necessary work completed in order for them to be considered closed according to national criteria).</li> </ul>	Internal Services

## Section 4: Integrating Sustainable Development

Per the Cabinet Directive on the Environmental Assessment of Policy, Plan, and Program Proposals, DFO/CCG continues to ensure that its decision-making process includes sustainable development considerations through Strategic Environmental Assessments (SEA). The DFO/CCG SEA process requires assessment of whether the policy, program, or proposal impacts the achievement of the goals and targets of the Federal Sustainable Development Strategy. The Department also determines specific environmental effects either positive or negative and investigates whether the policy, program, or proposal would affect the environmental footprint of Canadian government operations. By answering these questions the Department fully integrates environmental considerations in the analysis of each option presented before Ministers along with economic and social analysis. In the current fiscal year, the Minister of Fisheries and Oceans and the Canadian Coast Guard has brought forward eight Memoranda to Cabinet (MC) for Cabinet consideration, and the Department has ensured SEAs were conducted for each MC resulting in a 100% compliance rate.

Public statements on the results of DFO/CCG's assessments are released when an initiative has undergone a detailed SEA ([see here](#)). The purpose of the public statements is to demonstrate that the environmental effects, including the impacts on achieving the FSDS goals and targets, of the approved policy, plan or program have been considered during proposal development and decision making.

DFO/CCG also seeks ways to further integrate sustainable development considerations into many of its key priorities as well as day-to-day operations.

### **Marine Conservation Targets**

International calls to increase marine conservation beyond 10% after 2020 are mounting. Balancing this ambitious conservation agenda with increasing demand for space with greater potential for cumulative impacts requires an integrated approach to management (i.e., marine spatial planning). Provisions under the Oceans Act authorize the Minister of Fisheries and Oceans and Canadian Coast Guard to lead the development of national strategies and integrated oceans management plans, in collaboration with federal, provincial, and territorial authorities, Indigenous groups and stakeholders. While a foundation for integrated oceans management in some key domestic areas has been built, much can be learned and applied from recent international experience to improve how Canada manages its three oceans. This goal is reflected in the DFO/CCG Minister's mandate letter. The Department is exploring options to meet this goal, including development of a new national oceans policy, renewal of Canada's Oceans Strategy (2002), and/or additional changes to the Oceans Act.

### **Canadian Coast Guard Renewal**

The Canadian Coast Guard is charting an ambitious path toward becoming a world leader in maritime safety and security. New investment, under the Oceans Protection Plan, is driving change at an unprecedented rate, and with that comes both challenges and opportunities. One of these opportunities vital to well-being is sustainable development.

Transitioning out of a period of fiscal restraint, where the Coast Guard had limited ability to purchase innovative, more sustainable technology, we are building on a history of excellent marine engineering that has sought fuel and GHG emission savings through creative means. Foresight around future international regulations driving down emissions from marine vessels has already seen the Coast Guard design new vessels

around more stringent emissions limits than required. However, there is progress to be made in terms of mainstreaming sustainable development across CCG.

This challenge runs parallel to mainstreaming sustainable development across Canadian society; it will involve cultural change. Coast Guard will mainstream sustainable development or 'sustainability' across all lines of business, creating a 'new normal.' In the case of procurement, this will entail establishing means of weighing cost factors against lifecycle factors, including full cost accounting.

This is a new frontier for the Coast Guard, and it will not be easy. However, this is a necessary step toward supporting a national and global transition to first a low-carbon reality, then taking the next step, toward a circular economic model, where resources are recirculated through the production/manufacturing – consumption – use – and remanufacturing loop.

The Coast Guard of the future will drive and support domestic innovation in the maritime sector, leading the way through life-cycle management from a cradle to cradle approach. The Coast Guard will be part of transformative change, not as an observer, but an agent. This includes leveraging opportunities to protect Canada's waters and coastlines while concurrently reducing the carbon footprint of CCG operations and those of the maritime sector.