



CANADA

# Recommendations for Budget 2019



TOXICS &  
PESTICIDES

FOSSIL FUEL  
SUBSIDIES

SUSTAINABLE  
AGRICULTURE

FRESHWATER

OCEANS



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*Likely lead departments*

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This document will be available, in English and French, at [www.greenbudget.ca](http://www.greenbudget.ca).

## Departmental Acronyms:

**AAFC:** Agriculture and Agri-Food Canada  
**CIRNAC:** Crown-Indigenous Relations and Northern Affairs Canada  
**CMHC:** Canada Mortgage and Housing Corporation  
**DFO:** Fisheries and Oceans Canada  
**ECCC:** Environment and Climate Change Canada  
**Finance:** Finance Canada  
**GAC:** Global Affairs Canada

**HC:** Health Canada  
**Infrc:** Infrastructure Canada  
**ISC:** Indigenous Services Canada  
**ISED:** Innovation, Science and Economic Development Canada  
**NRCan:** Natural Resources Canada  
**PC:** Parks Canada  
**StatCan:** Statistics Canada  
**TC:** Transport Canada



# EXECUTIVE SUMMARY



Photo: Guillaume Jaillet

## **A healthy environment is critical for Canadians' health and prosperity.**

The **Green Budget Coalition (GBC)**, active since 1999, brings together twenty-one of Canada's leading environmental and conservation organizations, representing over 1,000,000 Canadians, to present an analysis of the most pressing issues regarding environmental sustainability in Canada and to make recommendations to the federal government regarding strategic fiscal and budgetary opportunities.

The Green Budget Coalition appreciated the major funding (\$1.3 billion) for protected areas and species at risk in Budget 2018, and the supportive efforts of many parliamentarians and government officials. We also appreciated funding progress in recent budgets for issues including environmental laws, science, First Nations water infrastructure, climate change, and carbon pricing. However, many more actions and investments are still needed to put Canada on an effective path towards protecting Canadians' health, playing a responsible role in addressing climate change, and protecting our air, water, unique biodiversity and natural heritage.



In that context, in **Budget 2019 and fiscal announcements in the preceding months, the Green Budget Coalition recommends that the Government of Canada prioritize actions to advance the following five objectives.**

Adopting these recommendations would create notable economic, health and environmental benefits for Canadians.

Our recommendations are inter-related and synergistic. There are particularly strong linkages between the toxics and pesticides, agriculture and freshwater recommendations.



1

**TACKLING TOXICS AND PESTICIDES** – Provide regulatory departments (ECCC, HC) with sufficient resources to meet and enforce current and anticipated federal legislative requirements (CEPA, 1999; PCPA) for managing toxic substances, including pesticides, to protect the health of Canadians and our environment.



2

**PHASING OUT FOSSIL FUEL SUBSIDIES AND NON-TAX SUPPORT** – Continue progress on aligning fossil fuel tax policy with the Government's climate change objectives through increased transparency and reporting, a credible peer review, defining "inefficient" fossil fuel subsidies, and a phase-out timeline for remaining subsidies.



3

**DELIVERING ON CANADA'S COMMITMENTS TO SUSTAINABLE AGRICULTURE** – Invest in agri-environmental programs, research and development, and food loss and food waste prevention programs to make Canada a trusted global leader in sustainable food production and improve the agricultural sector's sustainability, resilience and competitiveness.



4

**DELIVERING 21ST CENTURY MANAGEMENT FOR FRESHWATER PROTECTION** – To address water challenges due to climate change and changing land use, restore aquatic habitat, reduce land-based run-off of nutrients and pollution, and balance hydroelectric development with river connectivity and flow.



5

**CONSERVING THE BIODIVERSITY AND HEALTH OF OUR OCEANS** – Invest long-term, stable funding to support Canada's domestic and international commitments to ocean co-management and conservation, ocean governance, a Blue Economy, and addressing fisheries stock assessment, aquaculture research, and ocean plastic pollution.

This document also outlines a number of complementary recommendations, including for environmental science data and management, carbon pricing, international climate financing, allocating the costs of climate change, Arctic ship fuels, zero emission vehicles, home and building energy efficiency, community ownership of clean energy, bird conservation, plastic waste, and First Nations drinking water and wastewater.

## GBC FEATURE RECOMMENDATIONS – ALIGNMENT WITH POLITICAL PRIORITIES

	1	2	3	4	5
	Toxics & Pesticides	Fossil Fuel Subsidies & Supports	Sustainable Agriculture	Freshwater Protection	Healthy Oceans
Meeting Public Expectations	✓	✓	✓	✓	✓
Improving Health & Wellbeing	✓	✓	✓	✓	✓
Reducing GHG Emissions		✓	✓		
Climate Resilience		✓	✓	✓	✓
Reconciliation with Indigenous Peoples			✓		✓
Healthy Waters	✓		✓	✓	✓
Protecting Nature & Wildlife	✓		✓	✓	✓
Clean Growth & Innovation	✓	✓	✓		✓
Economically Sustainable Rural & Remote Communities		✓	✓		✓



# WHO WE ARE



The **Green Budget Coalition (GBC)**, founded in 1999, brings together twenty-one leading Canadian environmental and conservation organizations (logos at left), which collectively represent over 1,000,000 Canadians, through our volunteers, members and supporters.

## Our Mission

The mission of the Green Budget Coalition is to present an analysis of the most pressing issues regarding environmental sustainability in Canada and to make a consolidated annual set of recommendations to the federal government regarding strategic fiscal and budgetary opportunities.

## Our Vision

The Government of Canada contributes to securing and maintaining the environmental sustainability of Canada through appropriate investments in environmental programs, and through the adoption of appropriate policies related to taxation, pricing and subsidies.

## Objectives

- To bring together the collective expertise of leading Canadian organizations regarding the important environmental issues facing Canada;
- To prepare and promote prioritized recommendations annually to the federal government on policies, actions and programs whose implementation would advance environmental sustainability and which could be reflected in the federal budget; and
- To monitor federal budget decisions and spending estimates and to track GBC recommendations with a view to assessing the likely effect of budgetary and fiscal decisions on the environment and to evaluating the GBC's impact on fiscal policy and budgetary actions.

The Green Budget Coalition makes its decisions on a consensus basis. The GBC's Co-Chairs are Stephen Hazell, Director of Conservation and Legal Counsel, Nature Canada, and Lisa Gue, Senior Researcher and Analyst, David Suzuki Foundation. Nature Canada hosts the Green Budget Coalition.

*The Green Budget Coalition sincerely thanks the Echo, McLean, The J.W. McConnell Family, and George Cedric Metcalf Foundations for their generous financial support. The Green Budget Coalition's efforts are largely funded by its members and these foundations.*



# **FEATURE RECOMMENDATIONS**







# 1 TACKLING TOXICS AND PESTICIDES



Photo: H. Ramovnick

## Recommendation Summary

Environment and Climate Change Canada and Health Canada lack adequate resources to meet federal legislative requirements for assessing and managing toxic substances, including pesticides, on an ongoing basis. To protect the health of Canadians and our environment from toxic exposures, the Green Budget Coalition recommends the following investments:

### 1. Next generation chemicals management:

- a. Preparing to implement legislative changes to modernize the *Canadian Environmental Protection Act, 1999* (CEPA): **\$25 million over two years** for ECCC and HC;
- b. Ongoing chemical assessment, research and monitoring, and risk management activities beyond Phase 3 of the Chemicals Management Plan: **\$100 million annually**, starting in 2021-22 and ongoing for ECCC and HC;



- c. Enforcement of CEPA and pollution prevention provisions in the *Fisheries Act*: **\$50 million in 2019, and then \$100 million annually ongoing** for ECCC.

2. Improving pesticide regulation:

- a. Fulfilling obligations under the *Pest Control Products Act* (PCPA) to assess risks from pesticides, and upgrading compliance and enforcement: **\$50 million in 2019, and then \$100 million annually ongoing** for Health Canada’s Pest Management Regulatory Agency (PMRA).
- b. Reviving and expanding the National Pesticides Monitoring and Surveillance Network: **\$10 million over five years** for ECCC.

Background and Rationale

Pollution and exposure to toxic substances have a significant impact on Canadians’ health, the environment and our economy. The annual economic cost of adverse health effects caused by toxic exposures is estimated to be in the tens of billions of dollars.<sup>1</sup> There is growing scientific evidence that toxic chemicals, including pesticides, are associated with cancer, learning and behaviour problems in children, asthma, allergies, diabetes and other chronic conditions. Nearly nine in ten Canadians are concerned about children’s exposure to toxics from consumer products and impacts on wildlife.<sup>2</sup>



Photo: Bjoern Wylezich

1. International Institute for Sustainable Development, *Costs of Pollution in Canada: Measuring the impacts on families, businesses and governments*, June 2017. <http://www.iisd.org/library/cost-pollution-canada>  
2. The Gandalf Group, *Canadian Public Opinion on Toxics*, June 2017. Commissioned by Environmental Defence.

GBC Feature Recommendations – Alignment with Political Priorities

1

Toxics & Pesticides

Meeting Public Expectations	✓
Improving Health & Wellbeing	✓
Reducing GHG Emissions	
Climate Resilience	
Reconciliation with Indigenous Peoples	✓
Healthy Waters	
Protecting Nature & Wildlife	✓
Clean Growth & Innovation	✓
Economically Sustainable Rural & Remote Communities	





Photo: N Humster

Pesticides are a unique category of toxic substances. Toxicity to targeted pests is intentional. However, pesticides can contaminate the environment and sometimes harm non-target organisms, as well. Human exposure to even very low levels of pesticides is also associated with a wide range of adverse health effects.<sup>3</sup>

To address these challenges and meet legislative requirements for assessing and managing toxics, the Green Budget Coalition recommends investments in the following areas.

## 1. Next-generation chemicals management

**a. CEPA reform: \$25 million over two years.** The *Canadian Environmental Protection Act, 1999*, Canada's main law governing pollution prevention and management of toxic substances, needs to be updated to respond to scientific developments in the understanding of environmental and health risks, changing use patterns and new products on the market. In June 2018, the government committed to advance reforms to CEPA in future parliamentary sessions in response to recommendations of the House of Commons Standing Committee on Environment and Sustainable Development for strengthening the Act.<sup>4</sup> Key recommendations related to chemicals management include: cumulative risk assessment; alternatives assessment; recognition of the human right to a healthy environment and protections for vulnerable populations; and prohibiting certain categories of substances of very high concern (such as carcinogens and reproductive toxicants) unless industry demonstrates that a particular use is safe. ECCC and HC will need to develop or refine processes for implementing these recommendations. The recommended investment would support a scan of approaches in other jurisdiction, review of applicable methodologies, stakeholder engagement and development of policy, guidance and regulations.

**b. Early renewal of the budget for chemicals management: \$100 million annually starting in 2021.** The Chemicals Management Plan (CMP) was launched in 2006. Current funding (\$491.8 million over five years) will sunset in March 2021. Pursuant to CEPA, the government has committed to completing assessments of 4,300 high priority legacy toxic substances by 2021. This presents an important opportunity to refocus the program for the future. At the same time, there will be an ongoing need to assess — and in some cases reassess — chemicals, and implement risk management plans.

3. Roberts, J. R., C. J. Karr, et al. "Pesticide Exposure in Children." *PEDIATRICS* 130, no. 6 (December 1, 2012): e1765–88. <https://doi.org/10.1542/peds.2012-2758>.

4. Environment and Climate Change Canada, News Release, June 29, 2018. <https://www.canada.ca/en/environment-climate-change/news/2018/06/government-of-canada-is-working-to-improve-canadas-law-on-pollution-prevention-and-toxic-chemicals-the-canadian-environmental-protection-act-1999.html>; Standing Committee on Environment and Sustainable Development, *A Review of the Canadian Environmental Protection Act, 1999, Report and Government Response*. <http://www.ourcommons.ca/Committees/en/ENVI/StudyActivity?studyActivityId=8817796>



The CMP has also funded important monitoring and research on chemicals in the environment. This research informs decision-making under CEPA, PCPA, and other legislation. Renewed funding at current levels will be necessary to allow these longitudinal studies to continue, and indeed expand their scope.

ECCC and HC are currently consulting on new directions for chemicals management in the next decade that must address emerging challenges such as nanomaterials and the continuous presence of certain substances in widespread use resulting in constant exposure, challenging traditional definitions of persistence or bioaccumulation. It is crucial that Budget 2019 confirm ongoing investment in chemicals management to support appropriate preparations and enable a smooth transition in 2021.

**c. Enforcement: \$50 million in 2019, and then \$100 million annually.**

ECCC's Enforcement Branch is responsible for enforcing many of the requirements under CEPA, as well as pollution prevention provisions in the *Fisheries Act*. This work includes enforcing more than 56 CEPA regulations. Planned spending on compliance and enforcement activities related to minimizing pollution in 2018-19 is \$34 million<sup>5</sup>, down from \$43.2 million in 2011-12 — although the number of CEPA regulations has increased. The department's Forward Regulatory Agenda, 2018-2020, indicates plans to develop or amend 21 new CEPA regulations to deliver on its mandate to protect the environment.<sup>6</sup> Furthermore, enforcement challenges are increasingly sophisticated and require new resources — not only additional environmental inspection officers and training, but also new investigative and intelligence capabilities. The recommended investment would support modernizing environmental enforcement in Canada to ensure federal pollution prevention laws and regulations achieve the intended results.



Photo: Jarun Ontakrai

Photo: Living Lakes Canada

5. Departmental Results Report 2016 to 2017, Department of Environment. <https://www.canada.ca/en/environment-climate-change/corporate/transparency/corporate-management-reporting/departamental-results-report/2016-2017/analysis-trends-spending-hr.html>

6. Forward Regulatory Plan 2018 to 2020, Environment and Climate Change Canada <https://www.canada.ca/en/environment-climate-change/corporate/acts-regulations/forward-regulatory-plan/2018-2020.html>



Photo: I. Tipon

## 2. Improving Pesticide Regulation

**a. Fulfilling legal obligations to assess risks from pesticides, and upgrading compliance and enforcement: \$50 million in 2019, and then \$100 million per year.** *The Pest Control Products Act* requires pre-market assessment and periodic post-market re-evaluation of every pesticide used in Canada but Health Canada's Pest Management Agency (PMRA) lacks adequate resources to fulfill these legal obligations. The level of funding for federal pesticide regulation has remained unchanged in recent years — at around \$40 million per year — despite a significantly expanded workload and compliance challenges. The recommended investment would enable PMRA to accelerate/expand work in the following areas:

- **Re-evaluations and special reviews**

More than 400 pesticide active ingredients registered before 1995 must be re-evaluated applying modern scientific methods. PMRA has committed to complete this work by 2020, but 35 large and complex reviews remain incomplete. Concurrently, the PCPA requires the re-evaluation of every registered pesticide on a 15-year cycle, as well as unscheduled special reviews of health or environmental risks in certain circumstances. In recent years, PMRA's re-evaluation workload more than doubled from 35 planned decisions in 2015-16 to 82 in 2017-18. Concerningly, PMRA expects delays in 20 percent of re-evaluations and special reviews, due in large part to resource constraints, and this will result in a growing backlog.<sup>7</sup>

- **Conditional registrations**

In 2016, the government committed to ending the controversial practice of registering a pesticide on the basis of incomplete information, conditional on data being submitted later. However, as of November 2017, 37 pest-control products remain conditionally registered. PMRA requires resources to review any new data provided to determine whether conditional registrations should be converted to full registration or cancelled.

- **Cumulative risk assessment**

In April 2018, PMRA published a framework for assessing cumulative risks of groups of pesticides with a common mechanism of toxicity. Implementing the new framework, as required by law, will be complex and must be properly resourced.

7. Health Canada, PMRA Stakeholder Web Session, 1 November 2017, Sir Frederick Banting Research Centre. Presentation by Margherita Conti.





Photo: Foto Kotic

- **Compliance and enforcement**

Re-evaluations frequently result in changes to use requirements or restrictions intended to reduce risks to human health and/or the environment, and these are specified on the product label.<sup>8</sup> A robust compliance and enforcement program is essential to ensure pesticide applicators follow label instructions. However, in 2016-17 Health Canada conducted just 1,300 targeted oversight inspections. This equates to less than 1 per cent of the 193,000 farms in Canada (not to mention non-agricultural uses of pesticides). The average rate of compliance was just 65 per cent and nearly one in four regulated parties previously identified as out of compliance were found to still be out of compliance in follow-up surveillance inspections.<sup>9</sup> A more robust compliance and enforcement program is needed to ensure the risk reduction requirements and restrictions are implemented.

- b. Revive and expand ECCC's National Pesticides Monitoring and Surveillance Network: \$10 million over five years.** PMRA relies on monitoring data from other government departments, particularly ECCC, and external sources in assessing risks from pesticides. Funding for the former National Pesticides Monitoring and Surveillance Network (approximately \$1.2 million per year) was discontinued in 2009. A comprehensive, national water-monitoring program for pesticides is needed to deliver robust data, for both environmental and human exposure assessment, in support of regulatory decisions. This will complement other recommended investments in freshwater protection (see *Freshwater Protection recommendation later in this document*).

8. A 2015 audit found that of the 238 historical re-evaluations then completed, 90 per cent resulted in label changes. See 2015 Fall Reports of the Commissioner of the Environment and Sustainable Development, Report 1 — Pesticide Safety. [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201601\\_01\\_e\\_41015.html#hd4c](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201601_01_e_41015.html#hd4c)

9. Health Canada's Pest Management Regulatory Agency/Regulatory Operations and Regions Branch Compliance and Enforcement Report 2016-2017.



## Toxics and Gender

Women and young children are disproportionately exposed to toxic substances. Physiologically, women have more body fat than men, increasing their body burdens of toxic substances that bind to fats. Likewise, babies carry extra fat. Far from being passive storage, body fat, or adipose tissue, is active endocrine tissue dynamically involved in all aspects of metabolism, growth and development.

Women's bodies are our first environment. Toxic chemicals can cross the placenta and also bioaccumulate in breastmilk. Fetal development is the time of greatest vulnerability to toxic substances, and often highest exposure. Toxic substances are associated with birth defects, impacts on healthy brain development, low birthweight and/or preterm birth, and associated impacts on immune system development contributing to risks for allergies and asthma.

Women tend to be exposed to greater levels of toxic substances from personal care products, household cleaners, and sales receipts, and in some female-dominated jobs such as retail sales or hair/nail salons, compared to men. As well, women are often responsible for household purchasing decisions. In the absence of a strong regulatory regime to prohibit toxic chemicals in products, or clearly label them, the consumer is ill-equipped to identify and choose safer products, and the burden of navigating this landscape falls predominantly to women.

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## 2 PHASING OUT FOSSIL FUEL SUBSIDIES AND NON-TAX SUPPORT



Photo: Zbynek Burival

### **Recommendation Summary**

The federal government has committed a number of times to stop subsidizing fossil fuels in Canada, recognizing that inefficient subsidies for fossil fuels undermine efforts to deal with climate change, encourage wasteful energy consumption, reduce energy security, and impede investment in clean energy. However, in 2017 Canada's Auditor General found that certain tax provisions in support of the fossil fuel industry have not been reformed by the Finance Department and that the Finance Department had not developed an implementation plan with timelines to support the phase-out by 2025.

Changes announced in Budget 2017 on fossil fuel subsidy reform were a positive step forward. In June 2018, the federal government also announced



**GBC Feature  
Recommendations –  
Alignment with  
Political Priorities**

# 2

**Fossil Fuel Subsidies  
& Supports**

Meeting Public  
Expectations ✓

Improving  
Health &  
Wellbeing ✓

Reducing GHG  
Emissions ✓

Climate  
Resilience ✓

Reconciliation  
with Indigenous  
Peoples

Healthy  
Waters

Protecting  
Nature &  
Wildlife ✓

Clean Growth &  
Innovation ✓

Economically  
Sustainable  
Rural & Remote  
Communities

it would enter into a peer review of its fossil fuel subsidies with Argentina, a welcome commitment that should help achieve the transparency needed to fulfil Canada's 2025 phase-out commitment. The Green Budget Coalition calls on the Government to take the most important next steps by:

1. Disclosing costs of all federal direct spending and value of annual tax deductions claimed for exploration, development and production of coal, oil and natural gas. This information should also be provided to the Parliamentary Budget Office.
2. Initiating work with partner countries to define "inefficient" fossil fuel subsidies.
3. Proceeding with a transparent and credible peer review of Canada's fossil fuel subsidies with Argentina that reflects the recommendations on subsidies made in this document.
4. Committing to not introduce new subsidies for fossil fuels.
5. Legislating a timeline for the phase-out of remaining deductions for fossil fuel exploration and production.
6. Legislating a timeline for the phase-out of other non-tax supports to the fossil fuel industry.

**Cost: Very low. Annual savings of several hundred million dollars.**



Photo: B. Geckoz





Photo: Boris Glovatskiy

## Background and Rationale

In its election platform, the government committed to stop subsidizing fossil fuels in Canada. The commitment was reaffirmed as recently as June 2018 at the G20 Energy Ministers' Meeting in Bariloche, Argentina. Canada officially recognizes that inefficient subsidies for fossil fuels undermine efforts to deal with climate change, encourage wasteful energy consumption, reduce energy security, and impede investment in clean energy. However, in 2017 Canada's Auditor General found that certain tax provisions in support of the fossil fuel industry have not been reformed by the Finance Department. In addition, the Auditor General found that the Finance Department had not developed an implementation plan with timelines to support the phase-out by 2025 and the government had no plan to reform flow-through shares, which allow fossil-fuel corporations to transfer tax deductions to investors. Canada also provides a range of non-tax provisions that support fossil fuels, such as billions of dollars in Export Development Canada financing for oil and gas projects.

In the North,<sup>10</sup> subsidies to offset the price of fossil fuels cost the government millions of dollars annually, \$36.5 million of which goes toward diesel-based electricity generation in Nunavut alone. The true price of diesel is masked by multiple layers of subsidies that reduce the price to an artificial level, creating a barrier to the adoption of renewable energy. While we recognize the importance of ensuring affordable energy access in the North, renewable energy has proven to be reliable, even in extreme climates, and research shows it can save some Arctic communities millions in ongoing costs, even with existing diesel subsidies. The savings would be even more significant if diesel subsidies were shifted to renewable-energy sources instead. There is no reason for the government to continue funding the use of fossil fuels that are not only damaging to the environment and human health, but are more expensive than cleaner forms of energy.

10. WWF Canada & IISD (2017), Tracking Diesel Fuel Subsidies in Nunavut: A mapping exercise, [http://assets.wwf.ca/downloads/costing\\_fossil\\_fuel\\_subsidies\\_in\\_nunavut.pdf](http://assets.wwf.ca/downloads/costing_fossil_fuel_subsidies_in_nunavut.pdf)



Photo: Jesse Bowser

Changes announced in Budget 2017 on fossil fuel subsidy reform were a positive step forward. In June 2018, the federal government also announced it would enter into a peer review of its fossil fuel subsidies with Argentina, a welcome commitment that should help achieve the transparency needed to fulfil Canada's 2025 phase-out commitment. The Green Budget Coalition calls on the Government to:

1. Disclose costs of all federal direct spending and value of annual tax deductions claimed for exploration, development and production of coal, oil and natural gas, and provide this information to the Parliamentary Budget Office.
2. Initiate work with partner countries to define "inefficient" fossil fuel subsidies.
3. Proceed with a transparent and credible volunteer peer review of Canada's fossil fuel subsidies with Argentina that reflects the recommendations on subsidies made in this document.
4. Commit to not introduce new subsidies for fossil fuels.
5. Legislate a timeline for the phase-out of the following remaining tax deductions for fossil fuel exploration and production:
  - Accelerated Capital Cost Allowance for Liquefied Natural Gas projects (in advance of its scheduled end in 2025);
  - Canadian Development Expenses claims;
  - Canadian Exploration Expenses claims, including for unsuccessful exploration;
  - Remaining Flow-through Share deductions for oil and gas sector;
  - Canadian Oil and Gas Property Expense claims; and
  - Foreign Resource Expense claims.



Photo: M. Scarc



Photo: Chris Kolaczan

6. Legislate a timeline for the phase-out of other non-tax supports to the fossil fuel industry, starting with the following:
  - Duty Exemption for Imports of Mobile Offshore Drilling Units in the Atlantic and Arctic;
  - The Natural Gas component of the “Deploying Infrastructure for Electric Vehicle Charging and Natural Gas and Hydrogen Refuelling Stations” program; and
  - Export Development Canada financing for oil and gas companies. After 2019, the World Bank Group will no longer be financing upstream oil and gas projects, in addition to other climate actions and commitments to increase transparency, by for example reporting on expected carbon emissions from project investments.<sup>11</sup> The GBC recommends that Export Development Canada move in a similar direction, and quickly eliminate the financing of oil and gas projects.

**Overall Recommendation Cost: Very low. Annual savings of several hundred million dollars.**

We note that unsuccessful exploration expenses can still be deducted from business income and that exploration and development expenses for fossil fuels can still be renounced as flow-through shares.

*Please see also the Complementary Recommendations, later in this document, regarding Climate Change and Energy Sustainability, particularly on Carbon Pricing, Attributing the Costs of Climate Change, and Supporting the Transition to Cleaner Ship Fuels in the Canadian Arctic.*

11. <http://www.worldbank.org/en/news/press-release/2017/12/12/world-bank-group-announcements-at-one-planet-summit>





**Related:**

*The government purchase of the Trans Mountain pipeline*

At the end of May 2018 the Government of Canada announced that it would be purchasing the Trans Mountain pipeline system, including existing assets and the proposed expansion project (TMX), from Kinder Morgan for a sum of \$4.5 billion. Including recent estimates of the capital cost of TMX, increasing costs and ongoing delays, the Government’s commitment to indemnification against “politically motivated” delays, and financial assurances for the project’s land-based spill risk, the final cost of the Kinder Morgan purchase could exceed \$11 billion.

It is not yet clear that the purchase of Trans Mountain amounts to a fossil fuel subsidy, but there is a high risk it might evolve into one in the long-term. The Green Budget Coalition is concerned that there will be a subsidized element of the sale, such as the government’s commitment to indemnifying TMX or the possibility that the newly-acquired assets could be sold to a private buyer for an amount that is below market value. This has the potential to be inconsistent with Canada’s commitment to a 2025 phaseout, underscoring the need for transparency around the financial aspects of this project.

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# 3 DELIVERING ON CANADA'S COMMITMENTS TO SUSTAINABLE AGRICULTURE



Photo: Arnaldo Aldana

## Recommendation Summary

Agricultural pollution, land conversion and climate change are increasingly jeopardizing the competitiveness and resilience of our agricultural sector — a sector that is key to our thriving economy. Canada is already committed to minimizing the environmental impacts of our working agricultural landscapes, through various international and domestic targets on sustainable agriculture and on-farm biodiversity conservation, such as the UN Sustainable Development Goals (SDGs) and Canada's 2020 Biodiversity Targets. However, as noted by the federal Commissioner of Environment and Sustainable Development Spring 2018



**GBC Feature  
Recommendations –  
Alignment with  
Political Priorities**

3

**Sustainable  
Agriculture**

Meeting Public  
Expectations ✓

Improving  
Health &  
Wellbeing ✓

Reducing GHG  
Emissions ✓

Climate  
Resilience ✓

Reconciliation  
with Indigenous  
Peoples ✓

Healthy  
Waters ✓

Protecting  
Nature &  
Wildlife ✓

Clean Growth &  
Innovation ✓

Economically  
Sustainable  
Rural & Remote  
Communities ✓

reports,<sup>12</sup> Canada will fail to meet both these targets unless it takes decisive action through strategic and targeted investments beyond announcements already made under the new Canadian Agricultural Partnership and a Food Policy for Canada.

The Green Budget Coalition recommends that the Government of Canada invest **\$117 million per year for the next five years (2019-2024)** to improve the sustainability, resilience and competitiveness of the agricultural sector via the following programs:

1. Agri-Environmental Programs: **\$109 million per year**
2. R&D in Environmentally Sustainable Agriculture: **\$4.4 million per year**
3. Food Waste Prevention Program: **\$3.6 million per year**

These programs and their rationale are outlined in the following pages and detailed online at **[www.greenbudget.ca/2019Agriculture](http://www.greenbudget.ca/2019Agriculture)**.



Photo: © Georgia McNeil, Ecology Action Centre

12. The Commissioner of the Environment and Sustainable Development released the following 2 reports in Spring 2018: Canada's Preparedness to Implement the United Nations' Sustainable Development Goals, and Conserving Biodiversity. [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201804\\_02\\_e\\_42993.html](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201804_02_e_42993.html), [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201804\\_03\\_e\\_42994.html](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201804_03_e_42994.html).



## Recommendation Summary (continued)

PROGRAM	COST/PROGRAM DETAIL	MAIN OUTCOMES
<b>AGRI-ENVIRONMENTAL PROGRAMS</b> Create positive incentives for on-farm conservation.	<b>\$109 million/year for five years for:</b> <ul style="list-style-type: none"> <li>Impact assessment of agriculture on biodiversity in Canada (\$2M/year for 5 years)</li> <li>Improvement of indicators/metrics for biodiversity (\$4M/year for 5 years)</li> <li>Creation of incentives for provinces to develop Safe Harbour Program (\$5M/year for 5 years)</li> <li>Establishment of a Pollinator Conservation Initiative (\$12M/year for 5 years)</li> <li>Development of a National Pesticide Reduction Strategy (\$12M/year for 5 years)</li> <li>Establishment of a National Perennial Cover Incentive Program (\$24M/year for 5 years)</li> <li>Establishment of a National Land Management &amp; Stewardship Program (\$50M/year for 5 years)</li> </ul>	<ul style="list-style-type: none"> <li>Sustainably conserve and enhance on-farm biodiversity</li> <li>Protect soils and water against degradation, loss and pollution</li> <li>Increase sector competitiveness</li> <li>Increase climate resilience for farmers</li> </ul>
<b>R&amp;D IN ENVIRONMENTALLY SUSTAINABLE AGRICULTURE</b> Accelerate the development and adoption of best environmentally sustainable practices	<b>\$4.4 million/year for five years for:</b> <ul style="list-style-type: none"> <li>On-farm participatory R&amp;D to conserve, breed and adapt seeds that perform well under low-input and organic practices (\$2M/year for 5 years)</li> <li>R&amp;D in agro-ecological climate change mitigation and adaptation practices (\$2.4M/year for 5 years)</li> </ul>	<ul style="list-style-type: none"> <li>Sustainably conserve and enhance on-farm biodiversity</li> <li>Encourage the sustainable use of biodiversity</li> <li>Contribute to climate change mitigation and adaptation and strengthen climate-resilience</li> <li>Grow more high-quality food</li> <li>Lower environmental footprint of agricultural practices</li> <li>Increase sector competitiveness</li> </ul>
<b>FOOD WASTE PREVENTION PROGRAM</b> Align sectoral efforts and collaborate across the value-chain to prevent food losses and waste.	<b>\$3.6 million/year for five years for:</b> <ul style="list-style-type: none"> <li>Food Waste Prevention Program (\$3.6M/year for 5 years)</li> </ul>	<ul style="list-style-type: none"> <li>Lower environmental footprint of the agri-food sector</li> <li>Reduce greenhouse gas emissions associated with food loss and food waste</li> <li>Reduce pressures on water, land and other resources</li> <li>Improve economic opportunities for farmers and along the value-chain</li> <li>Improve food system resilience and food security</li> <li>Increase sector competitiveness</li> </ul>
<b>TOTAL</b>	<b>\$117M/year for five years</b>	

\*\*\* For more details on these recommended investments (e.g., program structure, and other trading partners that invest in similar programs), please see [www.greenbudget.ca/2019Agriculture](http://www.greenbudget.ca/2019Agriculture) \*\*\*



Photo: Syda Productions

## Background and Rationale

### Investing in environmentally sustainable agriculture leads to a more productive and less polluting sector and creates more green jobs.

As the Barton report<sup>13</sup> highlighted, Canada's prosperity depends on a vibrant agriculture and food sector — that is a sector that is both financially and environmentally sustainable. Yet, the negative environmental impacts of this very large and important sector of our economy remain relatively un-checked. Our food system contributes about 30 percent of all greenhouse gas emissions,<sup>14</sup> more than any other sector except energy production, yet agriculture is often overlooked in climate change discussions and action plans, including the Pan-Canadian Framework on Clean Growth and Climate Change. Worldwide, conventional farming practices cost the environment some \$3 trillion per year<sup>15</sup> — almost twice Canada's annual GDP.<sup>16</sup> At the same time, agricultural productivity is impacted by climate change, such as through droughts, flooding, changing temperatures, new crop pests, and will increasingly be so.

Agriculture can play a more significant role in reversing climate change impacts. Research by the UN Environment Programme indicates that investing in the 'greening' of agriculture and fisheries, compared to continuing with 'business as usual', would produce \$293 billion more economic value-added per year by 2050 — an 11% increase<sup>17</sup> — and doing so would also mean a more productive and less polluting sector that would create more jobs.

### Agro-ecological approaches help us directly meet 15 of the 17 SDGs



Source: FAO, (2018): Catalysing Dialogue and Cooperation to Scale Up Agroecology: Outcomes of the FAO Regional Seminars on Agroecology, p. 70-71

13. Advisory Council on Economic Growth (2017). Unleashing the Growth Potential of Key Sectors. p. 8: <http://www.budget.gc.ca/aceg-ccce/pdf/key-sectors-secteurs-cles-eng.pdf>

14. According to Environment and Climate Change Canada, in Canada, one tenth (10.3%) of Canada's GHG emissions are linked to agriculture. Agriculture also accounts for 27% and 70% of the national CH<sub>4</sub> and N<sub>2</sub>O emissions, respectively, mostly due to the use of synthetic fertilizers. See the National inventory report 1990-2014: Greenhouse Gas Sources and Sinks in Canada, p.10. [http://publications.gc.ca/collections/collection\\_2016/eccc/En81-4-1-2014-eng.pdf](http://publications.gc.ca/collections/collection_2016/eccc/En81-4-1-2014-eng.pdf)

15. Food and Agriculture Organization of the United Nations (FAO) (2015). Natural Capital Impacts in Agriculture. [http://www.fao.org/fileadmin/templates/nr/sustainability\\_pathways/docs/Natural\\_Capital\\_Impacts\\_in\\_Agriculture\\_final.pdf](http://www.fao.org/fileadmin/templates/nr/sustainability_pathways/docs/Natural_Capital_Impacts_in_Agriculture_final.pdf)

16. Canada's GDP amounted to 1.53 trillion in 2017.

17. International Sustainability Unit (2011). What Price Resilience? Towards Sustainable and Secure Food Systems : [https://pcfis.org/wp-content/uploads/pdfs/TPC0632\\_Resilience\\_report\\_WEB11\\_07\\_SMALLER.pdf](https://pcfis.org/wp-content/uploads/pdfs/TPC0632_Resilience_report_WEB11_07_SMALLER.pdf), p. 5



Photo: Foto Kostic

### What is environmentally sustainable agriculture?

The goal of environmentally sustainable agriculture is to meet society's needs for nutritious and accessible food for everyone in a way that maintains ecosystem functions and also does not compromise the ability of future generations to meet their own needs. Environmentally sustainable agriculture:

- Relies on innovative practices that conserve, protect and enhance on-farm biodiversity, as well as soil, water and air quality and minimize downstream impacts;
- Seeks no net loss of natural cover;
- Minimizes the use and aims to move away from toxic synthetic fertilizers, pesticides and herbicides;
- Strengthens the resilience of agricultural ecosystems to cope with disturbance and climate change; and
- Aims to equally address the environmental, social and economic dimensions of agriculture.

Because it is context specific, environmentally sustainable agriculture takes many forms in Canada such as organic and diversified ecological farming, rotational grazing, cover cropping, sustainable agro-forestry, and agroecology.

Yielding multiple benefits for the environment, for our health and for the economy — including increased productivity under environmental stresses and better income for farmers — environmentally sustainable agriculture is thriving and growing quickly. For instance, organic agriculture, which has innovated some of the well-known environmentally sustainable practices, is one of the fastest growing sectors in the industry, with double-digit growth rates over the past decade<sup>18</sup> and no signs of slowing down. Demand for environmentally sustainable agriculture is growing globally. Preparing our Canadian farmers for these domestic and international markets through Research and Development of agri-environmental techniques and knowledge transfer would help to position Canada as a global leader in agri-food systems.

18. <http://www.agr.gc.ca/eng/industry-markets-and-trade/canadian-agri-food-sector-intelligence/organic-products/canada-s-organic-products-industry-overview/?id=1276292934938>





### Gender Analysis: The female face of farming

Women, and especially this generation of young women, are playing an increasingly larger role in agriculture. The 2016 Census of Agriculture showed that:

- While the number of farm operators in Canada is going down, the proportion of women is going up.
- Women accounted for 28.7% of all farm operators in 2016 (up from 27.4% in 2011) — nearly 78,000 of nearly 272,000 farmers in total. Women were most prevalent among farm operators between the ages of 35 and 54, representing nearly a third of the group.
- The percentage of farms with sole female and/or female & male operators is higher in organic (45%) compared to non-organic (40%).

Yet, women face important social and economic barriers to entering farming, including: that agriculture is still a male-dominated sector (with very few women in senior roles or positions), the challenges of balancing career and family, and the high capital cost of farmland and farm equipment. Low income women, new immigrants, young and aspiring female farmers, many of whom are not from farming backgrounds and carry student debt, simply cannot afford to take on the high costs of land and equipment, which can cost upward of a million dollars. Furthermore, an increasing number of women are choosing environmentally sustainable agriculture (organics, small ecological diversified farming)- sectors that are still vastly underfunded and for which Business Risk Management Programs are poorly adapted.

Supporting the leadership of women in agriculture, particularly environmentally sustainable agriculture in which they are leaders, has great potential for the future of farming and women in Canada.



Photo: Izf Studio

It is time for Canada to support greater innovation in this sector through investments that promote greater resilience and sustainability in our food system, especially in the face of climate change. Canada has the potential to become a world leader in environmentally sustainable agriculture that delivers critical environmental and social benefits. Doing so will also help better support gender equality, economic development and green jobs for Indigenous Peoples and new immigrants to Canada, as well as the next generation of farmers, all of whom are increasingly choosing environmentally sustainable agriculture.

Canada is already a signatory to a number of international agreements that recognize the importance of sustainable agriculture (e.g., Agenda 2030, Convention on Biological Diversity, Paris Agreement) and has developed several related national strategies (e.g., 2020 Biodiversity Targets). Canada has also committed to investments in sustainable agriculture and biodiversity through the Canadian Agriculture Partnership and A Food Policy for Canada. Yet, as the Commissioner of the Environment & Sustainable Development highlighted in her Spring 2018 reports,<sup>19</sup> Canada is falling short and requires more strategic investments, beyond announcements already made, to achieve meaningful impact and meet its targets.

In recent years, Canada's agricultural sector has made efforts to become more environmentally sustainable. Yet, environmentally sustainable agriculture<sup>20</sup> — that delivers results on multiple fronts, including: yields, crop resilience, soil health, and reduced pollution — has been largely underfunded and the outcomes clearly reflect this insufficient level of support. As such, more investments in environmentally sustainable agriculture are urgently required.

For more details on these recommended investments, please see **[www.greenbudget.ca/2019Agriculture](http://www.greenbudget.ca/2019Agriculture)**

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19. The Commissioner of the Environment and Sustainable Development released the following two reports in Spring 2018: Canada's Preparedness to Implement the United Nations' Sustainable Development Goals and Conserving Biodiversity. [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201804\\_02\\_e\\_42993.html](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201804_02_e_42993.html) & [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201804\\_03\\_e\\_42994.html](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201804_03_e_42994.html)

20. Canada's largest and most defined environmentally sustainable agriculture is its organic sector. Canada's total organic market (including food and non-food items) is estimated at \$5.4 billion, up from \$3.5 billion in 2012: <https://ota.com/sites/default/files/Canadian%20Organic%20Market%20Report%202017%20teaser.pdf>



## 4 DELIVERING 21ST CENTURY MANAGEMENT FOR FRESHWATER PROTECTION



Photo: Chris Montgomery

### **Recommendation Summary**

Water stewardship is a great challenge of our time. Growing populations. Increasing demand for food and energy. Urbanization. Climate change. These 21st century pressures are mounting and compounding. Effective water stewardship and management is critical to the health of our environment, our economy and to the people of Canada.

While the mandate to manage freshwater is a shared jurisdiction between all levels of government, the federal government is uniquely positioned to take a leadership and convening role in freshwater science, data sharing technology and communication to Canadians about freshwater health.

The Green Budget Coalition recommends scaling up the Freshwater Action Plan,



building on work already underway in the Great Lakes and Lake Winnipeg watersheds, with the following new and expanded investments in Budget 2019:

1. Improving Canada's ability to address water challenges due to climate change and changing land-use through significant investment in enhanced data-sharing, information and communication of results. **\$20 million per year for 5 years**
2. Creating an aquatic habitat "restoration economy". **\$110 Million (total) over 5 years; plus estimated revenues of \$5 million per year ongoing**
3. Reducing land-based run-off of nutrients and pollution in Canada's watersheds. **\$100 million per year for 5 years**
4. Balancing hydroelectric development with improved river connectivity and flow. **\$5 million (total) over 3 years**

## Background and Rationale

Sustainable management of our water resources is critical to Canada's future. The mounting and compounding global challenges of population growth, increasing demand for food and energy, urban expansion and climate change are putting pressure on global water resources, including in Canada.

Already, more than twenty per cent of the world's fresh water fish are extinct or have become imperiled. It is estimated that by mid-century most of the freshwater ecosystems in the world will be in significant trouble.

It is tempting to think of all this as "someone else's problem." Canadians have always believed that we live in a water-rich country. But the fact is: Canada has a water problem, and it needs to be recognized and addressed.



Photo: Roberto Nickson

### GBC Feature Recommendations – Alignment with Political Priorities

# 4

## Freshwater Protection

Meeting Public Expectations ✓

Improving Health & Wellbeing ✓

Reducing GHG Emissions

Climate Resilience ✓

Reconciliation with Indigenous Peoples

Healthy Waters ✓

Protecting Nature & Wildlife ✓

Clean Growth & Innovation

Economically Sustainable Rural & Remote Communities



A major factor is that, for decades, Canada has failed to collect comprehensive information on a national scale about the health of our freshwater ecosystems.

But what we do know now is troubling.

Unpredictability has become the new normal, particularly in water and natural resource management. Extreme weather events — such as floods in Toronto and Calgary, droughts in British Columbia — are becoming more common. The normal water cycles that people expect or rely on are becoming disrupted. This unpredictability threatens food production, jeopardizes communities and costs Canada millions of dollars. Climate change already affects every watershed in Canada<sup>21</sup> and is altering the abundance, growth, and recruitment of several North American inland fish species, with particularly severe impacts on coldwater species.<sup>22, 23</sup> Habitat loss and alteration due to land conversion and resource extraction, such as agriculture, urbanization and forestry, is extensive, impacting a majority of watersheds.<sup>24</sup> Pollution from agricultural runoff, wastewater treatment, mining, pipeline spills, oil and gas development and other activities is high or very high in more than one-third of our watersheds.

The federal government is uniquely positioned to take a leadership role in developing a national approach to freshwater protection. Budget 2018 allocated an additional \$14.4 million to the Freshwater Action Plan, focused on the Great Lakes, Lake Winnipeg and Lake of the Woods watersheds. Yet this freshwater problem is national in scope, and thus the Green Budget Coalition believes that this Plan should now be expanded throughout Canada and include a particular focus on the following four issues:

Photo: © Thomas Pick



21. WWF-Canada Watersheds Report 2017. <http://www.wwf.ca/conservation/freshwater/watershedreports/>

22. Lynch, A.J, et al. 2016. Climate Change Effects on North American Inland Fish Populations and Assemblages. *FISHERIES* Volume: 41 Issue: 7 Pages: 346-361 Special Issue: SI

23. Chu, Cindy, et al. 2015. An updated assessment of human activities, the environment, and freshwater fish biodiversity in Canada. *CJFAS* 72 (1): 135-148.

24. *ibid*



Photo: Kalen Emsley

### **1. Improving Canada's ability to address water challenges caused by climate change and changing land-use, through data-sharing, information and communication.**

*Building a World Class Freshwater Monitoring Framework — ensuring a national water quality and quantity monitoring framework that is data sufficient, accessible and comprehensive:*

Long-term watershed health can only be accomplished in conjunction with a strong national freshwater monitoring framework that is open and accessible to all sectors of society including academia, the public, and the non-governmental organizations working on freshwater issues. To modernize freshwater management for the challenges of the 21st century, Canada needs to invest in its ongoing national monitoring system to track the state of freshwater as climate change and increased population put more and new pressures on this resource.

The Green Budget Coalition recommends:

- Providing dedicated, long-term monitoring funding for open and accessible data, a process that ensures that availability challenges are resolved, and to reduce the loss of data over time due to programs being disrupted or discontinued;
- Improve regional-provincial-national data integration and comparison by advancing the standardization of data collection and reporting across jurisdictions; and
- Extending coverage of water monitoring catchments to better understand historically underrepresented, and in some cases high-risk, areas (e.g., Saskatchewan, Nunavut, Northern Ontario, Northern Quebec).

**Recommended Investment: \$20 million per year over five years**





Photo: Ty Feague

## 2. Creating an aquatic habitat restoration economy

Through strategic investments in departmental capacity, policy and program development, and seed funding programs, the federal government could leverage significant private dollars to greatly improve aquatic habitat, grow local economies, achieve biodiversity outcomes, and facilitate the *Fisheries Act* authorization and permitting process.

Historically, aquatic habitats in Canada have been altered significantly by development and natural resource exploitation. In many instances, fisheries productivity was harmed by impeding access to habitat, eliminating spawning grounds, or infilling aquatic environments. In some cases these actions have placed fish species at risk of extirpation and they have been listed under the federal *Species at Risk Act*. In recent decades, a portion of new damaging activities have been offset based on authorizations under the *Fisheries Act*; however, such efforts often fell short of completely offsetting the harms to fish habitat, and declines continue. Recently, Fisheries and Oceans Canada (DFO) began to support restoration through the Recreational Fisheries Conservation Partnerships Program (RFCPP). Though beneficial, restoration efforts could be improved by adopting a more strategic approach, advancing the most effective restoration techniques, increased federal funding, and exploring new revenue streams and novel ways to match federal dollars with private investment.

The forthcoming amendments to the *Fisheries Act* coupled with recent investments in fish habitat science and a renewed fish habitat protection program reposition Fisheries and Oceans Canada to take a leadership role in growing Canada's multi-billion dollar inland fisheries economy through restored habitat and fish stocks.

The Green Budget Coalition therefore recommends Budget 2019 include the following new investments and revenue stream:

- To build a national aquatic habitat restoration strategy and regional habitat restoration hubs, and create a seed-funding program for inland water habitat protection and restoration — \$10 million in 2019-2020, with an incremental increase of \$5 million per year over the subsequent four years (2020-2024).
- To train DFO staff in the use of habitat banking under the *Fisheries Act*, establish industry standards and practices for habitat banking, and engage industry and non-government groups in habitat bank pilot projects — \$2 million per year for 5 years.
- Implementing an offset fee program for the approximately 1,000 projects that currently receive a Letter of Advice for projects that cause a small area of habitat destruction — Creating estimated revenue of \$5 million per year, ongoing.

**Recommended total investment: \$110 million over 5 years**

**Estimated revenue to offset cost: \$5 million per year ongoing**

### 3. Reducing land-based runoff of pollutants and nutrients

Pollution is a serious concern in 60 of Canada's 167 subwatersheds. In more urban areas, point-source pollution from municipalities and industry, for example, is the primary culprit. In more rural and agricultural regions, agricultural contamination from phosphorus, nitrogen and pesticides are the main drivers. Pipeline incidents, and incidents from the transportation of dangerous goods, are also affecting freshwater ecosystems. Pollution can change the ecology and chemistry of rivers, sometimes in immediate and obvious ways (by killing large numbers of fish or making the water unfit to drink), and in other cases through the buildup of toxic substances in an ecosystem over a long period of time. The National Panel on Contaminants in Wastewater in 2018 recommended that holistic watershed approaches and source control is an important component of protecting human and aquatic health since not all contaminants are effectively or efficiently treated by water treatment plants.<sup>25</sup>

The federal role in preventing land-based run-off of pollutants and nutrients includes:

- Implementation of international agreements where applicable;
- Facilitating inter-jurisdictional co-operation;
- Conducting research and gathering baseline data;
- Monitoring and analyzing trends;
- Exchanging information;
- Consulting with, and reporting to, the public on how these issues are being addressed; and



Photo: T. Fox Foto

25. Mavinic, Don et al, National Expert Panel Report, Canada's Challenges and Opportunities to Address Contaminants in Wastewater, Canadian Water Network, 2018 <http://www.cwn-rce.ca/focus-areas/blue-cities/national-project-on-contaminants-in-wastewater/>



- Analyzing the areas of highest pollutant loading to these fresh waters and assisting with implementation of best management practices and other strategies on the landscape to reduce pollutant volumes.

**Recommended investment: \$100 million per year over five years**

*Please note that the Green Budget Coalition also recommends related Budget 2019 investments in environmentally sustainable agriculture, including: funding for a National Pesticide Reduction Strategy, which would also help reduce land-based runoff of pollutants; and re-investing in the National Pesticide Monitoring and Surveillance Network, which would contribute valuable information about pesticide run-off. (For more details on these recommendations, see the Sustainable Agriculture and Toxics & Pesticides recommendations, earlier in this document.)*

**4. Balancing hydroelectric development with river connectivity and flow**

The urgent need to move away from carbon-intensive fossil fuels has rapidly increased the demand for green, renewable sources of energy. Due to our relative wealth of freshwater resources, Canada has a unique opportunity to provide hydropower to meet this energy demand in North America. However,



Photo: Ron Whitaker



renewable energy must be developed and managed in a way that ensures Canada's watersheds are not further threatened. Other water extraction and flood control needs must be balanced with requirements for healthy functioning ecosystems. Overall, we must ensure that:

1. Environmental flows and the ecosystem services they provide are maintained; and
2. Fish passage and our free-flowing rivers are protected, and where necessary, restored.

It is a promising step to see environmental flow considerations included in the amendments of the *Fisheries Act*. All projects that will alter the volume and timing of available water beyond a threshold that interferes with the environmental flow needs of the aquatic ecosystem or prevent fish passage should be included as Designated Projects under the new *Fisheries Act*.

To begin implementation at a regulatory level, the Green Budget Coalition recommends:

**Recommended Investment: \$5 million over the next three years (2019-2022)**



Photo: Ravi Patel

## FRESHWATER MONITORING

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## 5 CONSERVING THE BIODIVERSITY AND HEALTH OF OUR OCEANS

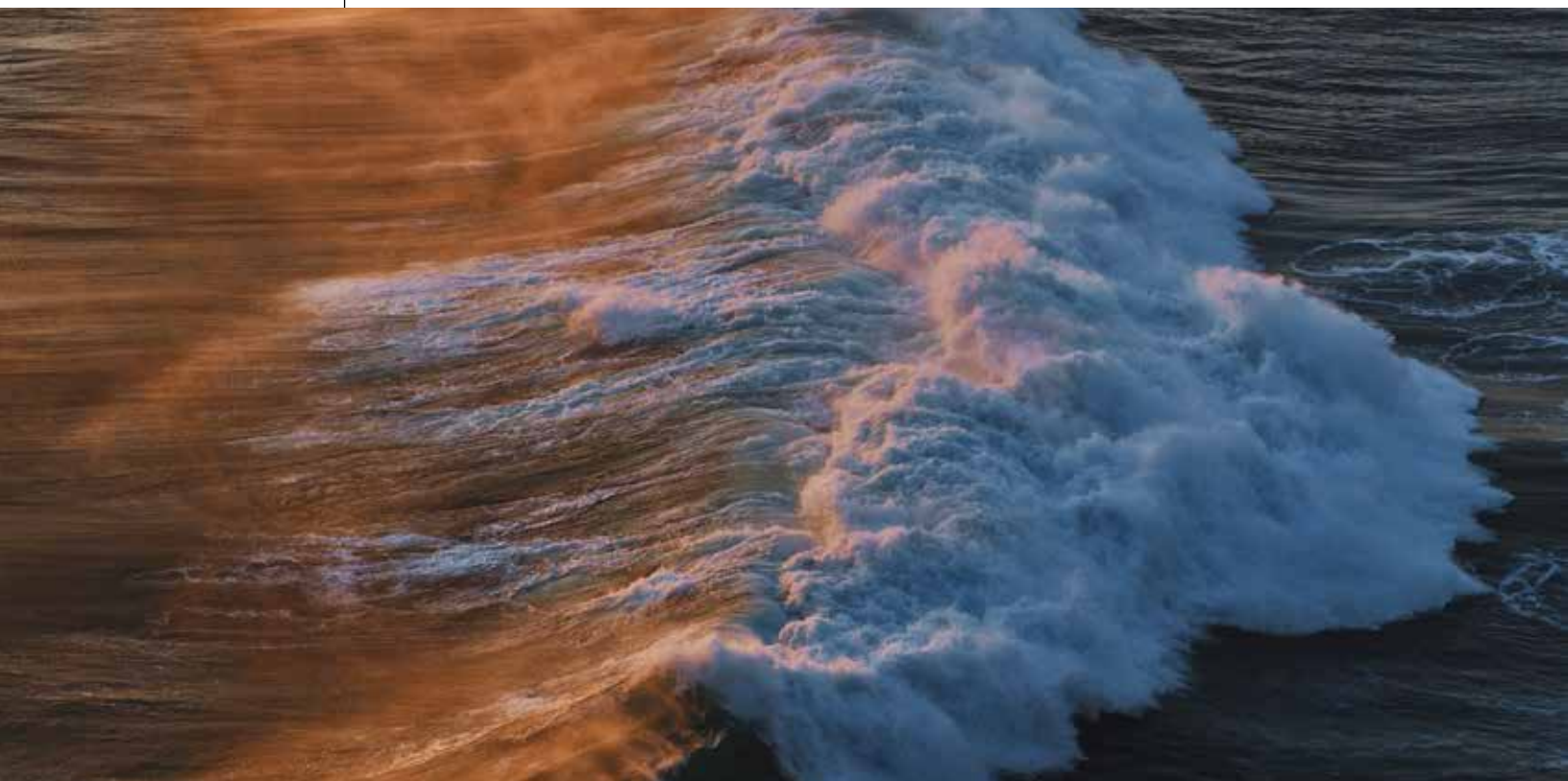


Photo: Victor Carvalho

### Recommendation Summary

Long-term, stable funding is necessary to support fulfillment of Canada's domestic and international commitments to ocean governance, co-management and conservation, to support Indigenous Reconciliation and a Blue Economy. The Green Budget Coalition recommends the following major investment to ensure Canada meets its international ocean conservation target commitments up to and beyond 2020, and to restore federal leadership and capacity for ecosystem-based ocean management:

1. Ocean co-management and governance, marine spatial planning, marine protected area (MPA) networks, and Inuit Impact Benefit Agreements
  - **\$247.5 million in 2019-2020**
  - **\$236 million per year over 2020-2024**
  - Ongoing funding of **\$94 million per year thereafter**

Additional funding is recommended for:

2. Rebuilding and enhancing fisheries stock assessment capacity — **\$30 million per year over five years**
3. Aquaculture related environmental research, monitoring, enforcement, and alternative production methods — **\$20 million per year over five years**
4. Reducing marine debris including plastic pollution – see complementary recommendation, later in document, on *Plastics – Enhancing Canada’s role in the stewardship and reduction of plastic waste in a Circular Economy*

## Background and Rationale

Healthy marine ecosystems are the foundation for economically prosperous maritime sectors, communities, and fisheries. Globally and in Canada, evidence clearly demonstrates that our oceans are suffering as a result of climate change and harmful human activities.<sup>26</sup> A comprehensive, ecosystem-based approach to ocean governance, planning and management is needed to ensure that conservation and sustainable human uses are appropriately managed, and will ensure that Canada achieves marine conservation targets and builds a sustainable Blue Economy.

The budgetary measures described below would contribute to the implementation of the commitments made by Canada under the UN Convention on Biological Diversity (especially Aichi Targets 6 and 11),<sup>27</sup> the Ministerial mandate letters for the Ministers of Fisheries, Oceans and the Canadian Coast Guard (DFO) and Environment and Climate Change<sup>28</sup> and the G7 declaration,<sup>29</sup> and the Auditor General’s recent reports on fisheries and salmon aquaculture.<sup>30</sup> In addition to restoring federal leadership on ocean conservation and management in Canada, these investments would ensure that the work currently funded under the National Conservation Plan, that ends in March 2019, would continue and be enhanced into the future, and ensure that the government’s reconciliation agenda is advanced with coastal Indigenous Peoples.

26. Jones et al. 2018. The Location and Protection Status of Earth’s Diminishing Marine Wilderness. *Current Biology* 28, 1–7 August 6, 2018 © 2018 Elsevier Ltd. <https://doi.org/10.1016/j.cub.2018.06.010>

27. <https://www.cbd.int/sp/targets/>

28. <https://pm.gc.ca/eng/mandate-letters>

29. The June 8, 2018 Charlevoix Blueprint for Healthy Oceans, Seas and Resilient Coastal Communities commits G7 leaders to: “advance efforts beyond the current 2020 Aichi targets including, the establishment of MPAs where appropriate and practicable and contribute towards these objectives, the sustainable management of fisheries and the adoption of marine spatial planning processes.”

30. Office of the Auditor General of Canada. Report 2—Sustaining Canada’s Major Fish Stocks—Fisheries and Oceans Canada. [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201610\\_02\\_e\\_41672.html#hd3a](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201610_02_e_41672.html#hd3a)

Office of the Auditor General of Canada. Report 1 — Salmon Farming. [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201804\\_01\\_e\\_42992.html](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201804_01_e_42992.html)

### GBC Feature Recommendations – Alignment with Political Priorities

5

#### Healthy Oceans

Meeting Public Expectations	✓
Improving Health & Wellbeing	✓
Reducing GHG Emissions	
Climate Resilience	✓
Reconciliation with Indigenous Peoples	✓
Healthy Waters	✓
Protecting Nature & Wildlife	✓
Clean Growth & Innovation	✓
Economically Sustainable Rural & Remote Communities	✓





## 1. Ocean Co-Management

Investments in co-management will advance reconciliation with Indigenous Peoples and directly support the Ministerial mandate for marine conservation in Canada.<sup>31</sup> Achieving real success in the development and implementation of marine use plans and marine protected area (MPA) networks depends on effective, collaborative work with all the federal departments, provinces, territories, Indigenous Peoples, and stakeholders through co-management arrangements for Canada's oceans. Success over the long-term requires ongoing funding that increases certainty for, and commitment by, governments and stakeholders to the effectiveness of the processes.

### 1a. Co-Management Governance

Co-management requires new decision-making bodies, trilateral governance structures, and supporting administrative structures based in a renewed *Oceans Act*. Successful co-management and implementation of marine plans rests on greater transparency, communication, engagement, and outreach with the full range of ocean decision makers and interests, especially coastal communities.<sup>32</sup>

Additional federal funding is needed to support the creation and operation of these structures and processes for all marine bioregions and to provide long-term funding for their long-term work.

**Recommended Investment:** \$60 million per year for five years and \$32 million ongoing

Photo: Ron Whitaker



31. Commitments to co-management were made through both the 2015 Liberal Party of Canada election platform and the Mandate Letter for the Minister of Fisheries, Oceans and the Canadian Coast Guard.

32. The following are examples of collaborative marine planning efforts currently underway in Canada's ocean territory: 1) BC's Marine Planning Partnership (MaPP), and Pacific North Coast Integrated Management Area (PNCIMA); 2) Atlantic Regional Oceans Plan (ROP); 3) Beaufort Sea Partnership's community conservation planning; 4) Nunavut's Land Use Plan; and 5) Nunatsiavut government Immapivut.

## 1b. Marine Spatial Planning (MSP)

Marine spatial planning can define thresholds and ecological limits within ocean ecosystems, providing certainty and a more stable investment climate for industry. Investments in tools to facilitate better MSP will set the foundation for achieving both ecological conservation and sustainable resource use goals and will help ensure an integrated, ecosystem-based approach to the planning, protection, management, and responsible use of marine resources.

**Recommended Investment:** \$40 million per year for five years and \$32 million per year ongoing

## 1c. Marine Protection – National Marine Protected Areas (MPA) Network

Marine protected areas make a vital contribution to Canada's \$39 billion a year ocean economy.<sup>33</sup> MPA networks are the most effective tool to conserve marine biodiversity, and to support many ecosystem services upon which coastal communities depend. They can help fish stocks to recover, boost nature-based tourism, buffer the impacts of climate change and ocean acidification by ensuring resiliency, and ensure that fisheries sector jobs are maintained into the future.

Meeting Canada's international and national commitments to protect **at least** 10% of our ocean territory by 2020, and the G7 commitment to a post-2020 agenda, will require an effective well-connected national MPA network, embedded in ecosystem-based marine spatial planning efforts. Budget 2016 funding (\$81.3 million over five years) is a critical base for achieving Canada's commitments; however, additional funding is needed to replace the National Conservation Plan funding that ends in 2019 and to provide ongoing funding for MPAs. This will ensure that all federal agencies can fully contribute to building an effective national MPA network, one that includes MPA networks across all marine bioregions in Canada.

**Recommended Investment:** \$36 million per year for 5 years and \$30 million per year ongoing

## 1d. Fifth International MPA Conference (IMPAC5) 2021

In 2021, Canada will play host to the International Marine Protected Areas Conference in Vancouver. This once every four-year conference brings together MPA practitioners and decision makers from around the world, and features a high-level government meeting focused on advancing MPAs globally. As the host country, Canada can highlight domestic success on MPAs and MPA networks on each coast and demonstrate leadership in advancing a new ambitious global target.

**Recommended Investment:** \$11.5 million in 2019



Photo: Jorge Vasconez

33. Canada's ocean economy based on 2008 numbers — <http://www.dfo-mpo.gc.ca/rpp/2013-14/S01/so-rs-1-eng.html>



## 1e. Inuit Impact Benefit Agreements

Respecting Indigenous rights and upholding the government's commitment to reconciliation must be paramount in meeting the potential and need for MPAs in Canada's Arctic Ocean. An equitable, consistent, and transparent financing formula for impact benefit agreements (IIBAs) across all four Inuit land claim regions should be negotiated well in advance with Inuit representative organizations. Significant long-term and stable funding is necessary to ensure progressive investment in community infrastructure to allow communities to manage and benefit from marine conservation.

**Recommended Investment:** \$500 million envelope for IIBA negotiations and settlements for individual MPAs and MPA networks (\$100 million per year over 5 years)

## 2. Rebuild and Enhance Stock Assessment Capacity, Particularly for Data-Poor and At-Risk Fish Stocks

In Canada, fish and seafood exports were worth \$6 billion in 2015 and recreational fishing was worth a further \$8 billion in 2010.<sup>34</sup> Since 1970, an estimated 52% of the biomass of Canada's fisheries has disappeared. A recent report by the Auditor General (OAG) highlighted the need for DFO to better manage, update and increase data as well as rebuild fish stocks in Canada.<sup>35</sup> Eighteen Atlantic Canadian marine fish species are considered as endangered or threatened<sup>36</sup> and forage fish populations from coast to coast have seen unprecedented declines, affecting the health of species like the western Bluefin Tuna and the endangered Southern Resident Killer Whale.

Photo: Kea Mowat



34. Office of the Auditor General of Canada. Report 2—Sustaining Canada's Major Fish Stocks—Fisheries and Oceans Canada [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201610\\_02\\_e\\_41672.html#hd3a](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201610_02_e_41672.html#hd3a)

35. Office of the Auditor General of Canada. Report 2—Sustaining Canada's Major Fish Stocks—Fisheries and Oceans Canada [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201610\\_02\\_e\\_41672.html#hd3a](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201610_02_e_41672.html#hd3a)

36. McDevitt-Irwin, J. M., Fuller, S.D., Grant, C., Baum, J. K. 2015. Missing the safety net: evidence for inconsistent and insufficient management of at-risk marine fishes in Canada. Can.J. Fish. Aquat. Sci. 72: P6. <https://foca.on.ca/wp-content/uploads/2015/06/Fish-Species-at-Risk-insufficiently-managed-NRC-Report-Sep-2015.pdf>





New measures are urgently needed to undertake more frequent stock assessments, improve knowledge of data poor fisheries, and rebuild fish stocks upon which coastal and indigenous communities rely.<sup>37</sup> Increased funding would align Canada with leading progressive fishing nations and international fisheries law and help drive progress on ensuring recovery of threatened/degraded stocks and on the long-term sustainability of fisheries and the populations of fish upon which they depend.

The Green Budget Coalition recognizes recent federal government investments to better protect fish, modernize the *Fisheries Act*, protect species at risk, and establish new recovery initiatives for priority species.<sup>38</sup> However, significant gaps in fisheries stock assessment, management, and rebuilding plans remain. New investments are needed to:

- Refine policies and management structures to update and implement science-based rebuilding plans by dates committed in response to the OAG report on Sustaining Canada's Fisheries;
- Establish science-based catch limits that account for ecological interactions/requirements;
- Adapt technological tools needed to advance science-based rebuilding plans, including electronic monitoring and data system modernization; and
- Coordinate fisheries management with MPA management plans.

**Recommended Investment:** \$30 million per year over 5 years

37. Hutchings, J.A., Côté, I.M., Dodson, J.J., Fleming, I.A., Jennings, S., Mantua, N.J., Peterman, R.M., Riddell, B.E., Weaver, A.J. and VanderZwaag, D.L. 2012. Sustaining Canadian marine biodiversity: responding to the challenges posed by climate change, fisheries, and aquaculture. Expert panel report prepared for the Royal Society of Canada, Ottawa.

38. <https://www.budget.gc.ca/2018/home-accueil-en.html>



### 3. Expand and Extend the Sustainable Aquaculture Program

Properly managed, sustainable aquaculture has the potential to benefit Canadians and support coastal and rural communities, including Indigenous communities.<sup>39</sup> However, open net pens in the ocean can have unacceptable effects on wild fish, benthic habitat, and the larger ocean ecosystem.<sup>40</sup>

Additional investment is urgently required to address the challenges identified by the Auditor General in 2018 that DFO is not adequately managing the risks associated with salmon aquaculture consistent with its mandate to protect wild fish.<sup>41</sup> DFO's Sustainable Aquaculture Program should be expanded to include a whole-of-government approach involving Science, Health Canada, Agriculture and Agri-Food Canada, Crown-Indigenous Relations and Northern Affairs Canada, and Innovation, Science and Economic Development Canada, to ensure that the aquaculture industry does not harm ocean health or infringe on Indigenous rights. The recommended investment would support:

- Monitoring, compliance and enforcement;
- Improved transparency and public reporting;
- Research on environmental effects, especially disease and parasite impacts and management for wild salmon;
- Land-based aquaculture systems research, science, and innovation; and
- Alternative species production and farming practices to support land-based systems.

**Recommended Investment:** \$20 million per year over five years.

Photo: Doug Firre



39. The Finance Minister's Advisory Council on Economic Growth identified agriculture and food – including aquaculture – as key sector to leverage as a driver for a future-oriented economic agenda. <https://www.budget.gc.ca/aceg-ccce/home-accueil-en.html>

40. Office of the Auditor General of Canada. Report 1 — Salmon Farming. [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201804\\_01\\_e\\_42992.html](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201804_01_e_42992.html)

41. *ibid*



Photo: Rich Carey

#### 4. Reducing marine debris including plastic pollution

The Green Budget Coalition is separately recommending \$86 million per year over five years for *Plastics – Enhancing Canada’s Role in the stewardship and reduction of plastic waste in the Circular Economy*. Please see the complementary recommendation, later in this document, for more details.

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## CONTACT



# **COMPLEMENTARY RECOMMENDATIONS**



## Climate Change and Energy Sustainability

### CARBON PRICING

A pan-Canadian price on carbon will be a key policy to enable Canada to reach its 2030 carbon reduction commitment under the Paris climate agreement. While complementary climate policies will be needed, a polluter pays policy that rises gradually over time will send the right signals to businesses, governments, and households. Federal carbon pricing legislation has now passed and a \$20/tonne carbon pricing backstop will be applied on January 1, 2019, rising by \$10/tonne every year until 2022. The federal government must now ensure that all provinces meet or exceed the federal backstop for provincial systems to apply.

It is of concern that the proposed carbon pricing backstop allows provinces to apply an Output Based Pricing System (OBPS) to all industrial sectors. Rather than applying the OBPS so broadly, it should be more targeted, applying only to sectors where there is evidence that carbon leakage will result from sectors facing the full carbon price.

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Photo: Hywit Dimyadi

### ATTRIBUTING THE COSTS OF CLIMATE CHANGE

Every year, the federal government incurs significant costs responding and adapting to climate change. However, rather than requiring fossil fuel interests to pay for the portion of climate change costs that are attributable to them (aside from carbon prices, which do not address the costs related to past emissions, international emissions, nor the full estimated costs related to emissions in current and upcoming years), the government requires these environmental externalities to be borne by taxpayers, effectively offering those costs as subsidies, contrary to federal policy, and reducing the incentive for industry to develop more sustainable alternatives. (In fact, the International Monetary Fund now includes negative environmental externalities of fossil fuels in its estimation of fossil fuel subsidies.)

To address this issue, the Green Budget Coalition recommends that the federal government identify and quantify the portion of costs incurred by Canada as a result of, and in order to prepare for, climate change that are attributable to global fossil fuel interests (and not otherwise explicitly paid), and investigate options to recover those costs from those interests.

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## INTERNATIONAL CLIMATE FINANCING

Canada and other industrialized countries committed in the Paris Agreement to mobilizing USD 100 billion every year to assist developing countries to adapt to climate change impacts and undertake low-carbon development. Using different methodologies, Canada's fair share of the total, based on its wealth and historic responsibility for the problem of climate change, is 3-4%. That totals USD 3-4 billion for every year from 2020 to 2025 for Canada.

The CAN\$2.65 billion that Canada committed in November 2015 is a good start, but the CAN\$800 million that is earmarked for 2020 falls well short of our fair share. Every \$1 of public financing for climate action can only be expected to leverage \$0.38 in private investment, mostly with respect to mitigation.<sup>42</sup> The federal government needs to scale up its efforts and provide certainty on funding in and beyond 2020 by indicating how it intends to mobilize its full, fair share. One promising option is to generate this funding through a levy on bunker fuels used in international aviation and/or marine shipping.

**Recommended Investment** (while considering new revenue sources):

**At least \$2.2 billion** between now and 2020/2021, inclusive (so that Canada can deliver \$3.9 billion in 2020/2021),

**CAN\$2.8-3.8 billion per year** from 2021/2022 to 2025/2026

For more details, please see the Green Budget Coalition's feature recommendation for Budget 2018 on International Climate Financing, at <http://greenbudget.ca/wp-content/uploads/2017/09/GBC-Climate-Financing-2018.pdf>.

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Photo: Chesky

## ZERO EMISSION VEHICLES

Zero emission vehicles (ZEVs) will play a critical role in reducing emissions from the transportation sector and helping Canada meet its Paris commitments. However, in 2017 ZEVs only made up one per cent of new vehicle sales in Canada. ZEV mandates, which require a certain percentage of vehicle sales to be zero emissions, have been used in California, nine other states, and Quebec to grow ZEV market share, thereby reducing pollution from vehicles. The Green Budget Coalition recommends that **Transport Canada implement a ZEV mandate combined with a two-year, Canada-wide ZEV incentive of \$6,000 per vehicle** (restricted to vehicles with a sticker price under \$75,000). Research by the Simon Fraser University Sustainable Transportation Action Research Team demonstrates that this would correct market failures that limit ZEV market penetration, and allow Canada to meet the Clean Energy Ministerial 30@30 global commitment.<sup>43</sup> The Team's research shows that, in the absence of a mandate, the \$6,000 incentive would need to be extended until 2030 to meet the target.

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42. OECD and Climate Policy Initiative. (2015). "Climate Finance in 2013-14 and the USD 100 billion goal."

43. Sustainable Transportation Action Research Team (2017), Canada's ZEV Policy Handbook, Simon Fraser University. <https://sustainabletransport.ca/portfolio/canadas-zev-policy-handbook/>



## SUPPORTING THE TRANSITION TO CLEANER SHIP FUELS IN THE CANADIAN ARCTIC

Heavy Fuel Oil (HFO) is a dirty and polluting fossil fuel that powers ships throughout the global ocean – accounting for 80% of marine fuel used worldwide. HFO, already banned in Antarctica, if spilled in cold polar waters, breaks down slowly, persisting for weeks and often longer. The lack of equipment and spill response capacity in the Arctic and for ice-infested waters, coupled with its persistence, makes HFO almost impossible to clean up. An HFO spill would have long-term devastating effects on Arctic indigenous communities, livelihoods and the marine ecosystems they depend upon.

To eliminate HFO use and carriage in Canadian Arctic shipping, a fuel transition fund is needed to support the phase out of polluting HFO to lighter less polluting fuels in the shipping industry. It is estimated that 70% of families in Nunavut are food insecure. By supporting the transition to cleaner fuels, this new fund would help reduce the risks of oil spills and their impact on the marine environment, which communities depend on for food, and thus help prevent food price increases.

### **Recommended Investment:**

**\$15 million over 5 years**, starting in 2021 when an international ban on HFO is in place.

To further incentivize fuel switching away from the world's dirtiest and most polluting ship fuel, HFO, a renewable energy innovation subsidy is needed. Funding the design, retrofitting and testing of emerging technologies such as wind-assist would not only save on fuel costs but also reduce GHGs and emission pollutants.

**Recommended Investment: \$5 million** (total) **over 3 years**, starting in 2020.

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## LABELLING HOME AND BUILDING ENERGY EFFICIENCY

Buildings account for 12% of Canada's GHG emissions and represent an important part of the Pan-Canadian Framework on Climate Change (PCF).

Home and building energy labeling were committed to by the provinces under the PCF. They are important tools in the shift to a decarbonized built environment, specifically building retrofits. According to the latest report from Clean Energy Canada and Efficiency Canada, retrofitting can lead to a 12MT reduction in greenhouse gases.

However, so far only Edmonton, Vancouver and Ontario have building benchmarking programs. No provinces and municipalities have instated mandatory home labeling, though several are running voluntary home energy labeling pilots. Provinces and municipalities face resistance to mandatory labeling from some stakeholders, such as real estate agents, and the effectiveness of labelling depends in part on building tradespeople and building inspectors being skilled on energy efficiency.

In that context, the Green Budget Coalition recommends the federal government allocate **\$2 million in 2019** to support provinces to implement mandatory labelling (for homes and buildings), including for convening stakeholders to increase awareness of the value of mandatory labelling, to develop and implement labeling pilot programs, and for capacity building for real estate agents, realtors, building inspectors, and building tradespeople.

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## COMMUNITY OWNERSHIP OF CLEAN ENERGY

Canada and the world are beginning a major transition to an economy based on renewable energy and decentralized electricity generation. Community ownership — by co-operatives, Indigenous communities, municipal utilities, community development funds and other forms of social enterprise — can play a major role in this transition, financing local grid development and keeping the control and benefits of energy production and use in local hands.

Investment by ordinary citizens in community-owned energy in Canada and around the world has shown that there is a huge opportunity to mobilize local savings for investment in clean energy. This will lead to secure local jobs, workplace democracy, local resiliency, new skills,

agricultural opportunities, and fixed pricing for energy. Local ownership also leads to greater awareness and support for climate change initiatives.

The federal government can play a key role in leveraging and unlocking this community capital by providing loan guarantees, debt financing, tax credits, and other support for community ownership of clean energy through existing small business and economic development programs such as the Community Futures Development Corporations.

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Photo: Karsten Wurth

## Cross-cutting Complementary Recommendations

### A NATIONAL ENVIRONMENTAL SCIENCE DATA AND MANAGEMENT STRATEGY FOR CANADA

#### An integrated and open data platform

Federal leadership is urgently needed to move Canada towards an updated, integrated and complete data collection and management strategy to effectively address Canada's growing environmental challenges and manage economic growth in an environmentally sustainable manner. A coordinated national scientific and data management strategy would have profound and long-lasting impacts.

A critical policy component to this is the need for improved data collection, management and integration among federal departments with other levels of government and with supporting non-government organizations like educational institutions and NGOs. Issues such as ensuring that collection and management overlaps are kept to a minimum and external experts are at the table with government will ensure that Canada builds the best data management strategy possible.

#### 1. Updated National Ecosystem Geospatial Data

Through Natural Resources Canada's Federal Geospatial platform, the Government of Canada has built an important data management tool that aggregates existing core data layers into a national geo-database. However, the foundational base layers of this data are badly outdated, sometimes by decades. A new and substantial investment in digital geospatial data is required to support Canada's land use, conservation and resource management decisions. Furthermore, third-party data, such as that provided by proponents for environmental assessment or regulatory approvals, is not made publicly available. The data that the federal government does make public is spread across multiple platforms and tends to focus on environmental indicators, rather than

include the projects and activities that impact the environment. As a result, our land use and management decisions are being made with outdated or incomplete information.

Core to this is to ensure that these new data tools and products remain open and accessible, that we create a more sustained and regular approach to data acquisition and management, and that we clarify the roles and responsibilities of the various external stakeholders and public sector participants in future data collection and management decisions.

The Green Budget Coalition therefore recommends a new federal investment in updated foundational geographic and landscape feature data. The intended outcomes are to: establish new baseline data; generate modern elevation, soil and biodiversity datasets; make proponents' data publicly available; and amalgamate all data respecting baseline data and federal assessment and regulatory approvals open and accessible on a single, consolidated database.

#### Recommended Investment:

For 2019-2020:

Investments in High Resolution Optical Data upgrades — \$5 million

Purchase LIDAR (Light Detection and Ranging) Data to construct 3D elevation geodatabase models — \$20 million

For 2020-2024

a) Investments in High Resolution Optical Data upgrades — \$5 million/year

b) Purchase LIDAR Data to construct 3D elevation geodatabase models — \$20 million/year

**Total Investment: \$125 million in updated data investments for 2019-2024**





## 2. Data Analytics: A National Census of the Environment

In order to effectively manage our natural heritage and corresponding ecosystem services, Canada is in need of a robust and full accounting of its environmental assets, including the development of a regularly published status and trends report leading to a national “Census of the Environment.” Creating such a baseline accounting and inventory of Canada’s environmental assets would highlight the benefits Canada gains from its combined ecosystem goods and services, benefits that frequently go unnoticed until the quality of the service degrades. This Census would provide many benefits including strong support of many policy objectives:

- Supporting the transition to a clean and low-carbon economy;
- Supporting smart “Green Infrastructure” program decisions and investments;
- Informing implementation plans for Canada’s biodiversity and protected area targets;
- Supporting proposed legislative reforms to core federal environmental and regulatory oversight processes;
- Informing the development of sustainable and climate resilient agriculture and extractive resources;
- Better managing our freshwater and saltwater fisheries;
- Enhancing the protection of our freshwater resources; and
- Reducing environmental risks from toxic chemicals.

### **For 2019-23: \$4 million/year (\$16M total)**

starting in 2019/2020 to build the central registry architecture of an environmental census and to run a pilot.

**For 2023-24 and ongoing thereafter: \$5 million/year** ongoing for (non-geospatial) data acquisition, data analysis and to expand the sectoral/functional capacity within Statistics Canada’s environmental statistics group.

## 3. A New Public-Private Advisory Panel on Sharing Environmental Data and Science

Similar to Statistics Canada’s Public Accounts Advisory Committee, the Green Budget Coalition recommends establishing a new public and private expert advisory panel, led by Natural Resources Canada, to make recommendations on the collection, exchange and use of environmental data and information across the federal government. In addition, this body would have a mandate to provide strategic advice on data collection and management issues including: barriers to environmental data collection; exchange and use issues across various data collectors and end-users, jurisdictions and sectors; identifying data gaps and needs; and assessing current information sharing systems in Canada and abroad. Lastly, it would publish a report with recommendations to government on actions and requirements that would help close Canada’s environmental information gap.

Given the complexities and potential benefits of developing and implementing this initiative, the Green Budget Coalition recommends an initial **\$3 million investment, over 3 years**, to establish and support an expert panel coordinated by officials from the Canada Centre for Earth Observation at the Department of Natural Resources Canada.

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## RENEWED COMMITMENT TO CANADA'S BIRDS

The 2016 State of North America's Birds report shows that one third of North America's birds need urgent conservation action to prevent extinction. The causes of declines are complex and numerous, and, for many Canadian birds, originate both within and beyond our borders. Most Canadian birds are migratory and spend a portion of their life cycle elsewhere, some as far away as South America. For this reason, international cooperation and conservation, across the whole of their ranges, is needed to ensure that birds remain part of our Canadian ecosystems.

Birds contribute enormously to our country's biodiversity; there are 690 species in Canada. Their presence increases human health and well-being. Further, birds are an integral part of our culture and our economy, providing services such as pollination and pest control, upon which our natural resource industries rely. The importance of birds to Canadians was recognized over one hundred years ago, with the signing of the *Migratory Bird Convention Act*.

Under this Act, the Government of Canada has a legal responsibility to manage and protect our birds. As a leading member of the North American Bird Conservation Initiative, the Government clearly recognizes the seriousness of the problem. Still, increased funding and immediate action are needed to address the crisis. While the \$1.3 billion for conservation announced in Budget 2018 will have positive impacts for some birds, it will not address the factors causing the most severe declines in bird populations. These include protecting and managing some of the world's most vulnerable habitats, such as oceans, grasslands, and tropical forests, as well as addressing the human-related causes of mortality such as window strikes, toxics, pesticides, marine pollution and cats.



Photo: Philip Brown

The Green Budget Coalition recommends that the Government of Canada renew its Canadian and international commitment to birds with **\$25 million per year over the next four years (2019-2023) to:**

- Support conservation of Canada's birds and their habitats within and beyond our borders;
- Revise and strengthen the *Migratory Bird Convention Act* to address current conservation issues, including incidental take;
- Increase capacity to adaptively manage bird populations;
- Address human-related threats outside scope of protected areas funding;
- Meet North American Bird Conservation Initiative commitment to implement an all-bird conservation approach; and
- Take steps to "keep common birds common" including reinstating the Habitat Stewardship Program's Prevention Stream funding.

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## PLASTICS – ENHANCING CANADA'S ROLE IN THE STEWARDSHIP AND REDUCTION OF PLASTIC WASTE IN A CIRCULAR ECONOMY

Although Canada has made international investment and commitments to reduce microplastics and marine debris in our Great Lakes,<sup>44</sup> and oceans,<sup>45</sup> it has not matched the efforts of the EU<sup>46</sup> or other jurisdictions through investment in infrastructure, research, extended producer responsibility programs, or modernized waste management programs and policies that support a movement towards a circular economy.<sup>47</sup> Now is the time for a national waste reduction strategy that harmonizes performance standards, measurement protocols, and definitions from coast-to-coast-to-coast.<sup>48</sup> Canada needs to take priority steps to declare single-use plastics, microplastics and microfibres as toxic under the *Canadian Environmental Protection Act* (CEPA);<sup>49</sup> and move to zero plastic waste by 2025.

The Green Budget Coalition recognizes Canada is in the early stages of this effort and we expect more will be learned over time regarding the scale and detail of the required actions and funding. To accelerate the efforts to create a national plastics and waste strategy, the GBC recommends the Government of Canada provide new **five-year funding of \$86 million per year** to Environment and Climate Change Canada, in collaboration with other federal agencies and other levels of government, with an initial focus on:

- Creating strong, innovative waste management policies and regulations to increase the reuse, recycling and composting of plastics, including extended producer responsibility by the plastics sector; (\$1M/year)
- Investing in research (\$50M/year) to:
  - Create innovative product designs that reduce harmful plastics and eliminate harmful additives to our natural environments, and
  - Increase knowledge and understanding regarding the impacts of plastics on the health of Canadians, and on the natural environments on which we depend; and
- Investing in a circular economy through modernized infrastructure for waste diversion (\$35M/year, conditional on provincial and territorial match), while ending subsidies to plastic manufacturers.<sup>50</sup>

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44. Microplastics in the Great Lakes Workshop Report, Final Report, September 2016, [http://www.ijc.org/files/tinymce/uploaded/Microplastics\\_in\\_the\\_Great\\_Lakes\\_Workshop\\_Report\\_FINAL\\_September14-2016.pdf](http://www.ijc.org/files/tinymce/uploaded/Microplastics_in_the_Great_Lakes_Workshop_Report_FINAL_September14-2016.pdf)

45. Working together on climate change, oceans, and clean energy. <https://pm.gc.ca/eng/news/2018/06/10/working-together-climate-change-oceans-and-clean-energy>

46. [https://ec.europa.eu/fisheries/new-proposal-will-tackle-marine-litter-and-%E2%80%9Cghost-fishing%E2%80%9D\\_en](https://ec.europa.eu/fisheries/new-proposal-will-tackle-marine-litter-and-%E2%80%9Cghost-fishing%E2%80%9D_en)

47. Per Baungart/McDonough, a Circular Economy is an economy wherein products and materials should be designed with life cycles that are safe for human health and the environment and that can be reused perpetually through biological and technical metabolisms. This definition therefore does not consider incineration or waste-from-energy to be a form of resource recovery or recycling.

48. See the following Plastics Declaration for more details on a call for a national waste reduction strategy from 43 Canadian environmental organizations, including six Green Budget Coalition members: [https://www.wcel.org/sites/default/files/publications/final\\_plastics\\_declaration\\_v3.pdf](https://www.wcel.org/sites/default/files/publications/final_plastics_declaration_v3.pdf)

49. For more details on these steps and the rationale, please see: Letter to Minister McKenna. Request for Addition of Single-Use Plastics, Microplastics and Microfibers to Priority Substances List Pursuant to s. 76(3) of the Canadian Environmental Protection Act, 1999. June 7, 2018. [https://www.ecojustice.ca/wp-content/uploads/2018/06/Plastics\\_CEPA\\_Priority\\_Substances\\_List\\_Request\\_June\\_7\\_2018.pdf](https://www.ecojustice.ca/wp-content/uploads/2018/06/Plastics_CEPA_Priority_Substances_List_Request_June_7_2018.pdf)

50. For one example of a recent subsidy to a plastic manufacturer, see <https://www.thestar.com/news/canada/2018/02/15/ottawa-gives-plastics-giant-35m-grant-despite-commitment-to-reduce-use-of-single-use-plastics.html>



## FIRST NATIONS DRINKING WATER & WASTEWATER INFRASTRUCTURE

While investments have been announced in previous budgets for First Nations water and wastewater, the Green Budget Coalition recommends that a permanent sustained funding envelope be established to provide predictability to First Nations and allow for ongoing and long term planning, construction, upgrading, retro-fitting, and maintenance of those systems, along with training and operational upgrades, in the amount of **\$415 million per year**.

Although the federal Clean Water and Wastewater Fund<sup>51</sup> is designed to accelerate short-term investments in communities, while also rehabilitating and modernizing drinking water, wastewater and storm water infrastructure,

and to assist in planning for additional facilities and upgrades to existing systems, on-going funding is necessary. Indigenous-led solutions for provision of safe drinking water and wastewater in First Nations communities are critical, and they must be an integral component of budgeted solutions. These federal investments should support the AFN's National Water Declaration.<sup>52</sup>

*Please see the more detailed recommendation online at [www.greenbudget.ca/2019FNs\\_water](http://www.greenbudget.ca/2019FNs_water).*

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Photo: Luis Tosta

51. <http://www.infrastructure.gc.ca/plan/cwwf-fepeu-eng.html>

52. <http://www.afn.ca/uploads/files/water/afn-water-declaration.pdf>



## SUMMARY TABLE — FEATURE RECOMMENDATIONS

### Lead Departments and Costs (and Savings) Associated with the GBC's Recommendations for Budget 2019

(in millions of dollars; negative figures represent savings or revenues)

Recommendation	Likely Lead Department(s)	2019-20	2020-21	2021-22	2022-23	2023-24	ongoing	(end-year)
Sub-Recommendation								
Tackling toxics								
Next generation chemicals management								
Update methodologies	ECCC, HC	12.5	12.5					
Ongoing assessment & regulatory activities	ECCC, HC			100	100	100	100	
Enforcement of CEPA, 1999 and Fisheries Act provisions	ECCC	50	100	100	100	100	100	
Improving pesticide regulation								
PMRA - Increased capacity re PCPA	HC	50	100	100	100	100	100	
National Pesticides Monitoring & Surveillance Network	ECCC	2	2	2	2	2		
Totals - for Tackling Toxics		114.5	214.5	302	302	302	300	
Fossil Fuel Subsidy Phase-Out								
Disclose costs of spending & tax deductions	Finance	No additional cost - we expect this could be achieved using existing capacity.						
Define “inefficient” fossil fuel subsidies	Finance, NRCan, ECCC	No additional cost - we expect this could be achieved using existing capacity.						
Transparent, credible peer review	Finance, NRCan, ECCC	No additional cost - we expect this could be achieved using existing capacity.						
Commit to not introduce new FF subsidies	Finance, NRCan	-	-	-	-	-	-	
Phase-out timeline for existing FF subsidies/supports	Finance, NRCan	Very low - annual savings of several hundred million dollars.						
Sustainable Agriculture								
Agri-Environmental Programs								
Impact Assessment on Biodiversity	AAFC, ECCC	2	2	2	2	2		
Biodiversity Indicators/Metrics	AAFC, ECCC	4	4	4	4	4		
Safe Harbour Program	AAFC, ECCC	5	5	5	5	5		
Pollinator Conservation Initiative	AAFC, ECCC	12	12	12	12	12		
National Synthetic Pesticide Reduction Strategy	AAFC, ECCC, HC	12	12	12	12	12		
National Perennial Cover Incentive	AAFC	24	24	24	24	24		
National Land Management & Stewardship Program	AAFC, ECCC	50	50	50	50	50		
R&D in environmentally sustainable agriculture								
On-Farm Participatory R&D for Seeds	AAFC, ECCC	2	2	2	2	2		
R&D in Agro-Ecological Climate Change Mitigation & Adaptation Practices		2.4	2.4	2.4	2.4	2.4		
Food Waste Prevention Program	AAFC, ECCC, HC	3.6	3.6	3.6	3.6	3.6		
Totals – for Sustainable Agriculture		117	117	117	117	117		
Freshwater Management								
Addressing climate change & land use-related water challenges	ECCC	20	20	20	20	20		
Aquatic habitat restoration economy								
Build national strategy & regional hubs	DFO, ECCC	10	15	20	25	30		
Train DFO staff, establish industry practices, engagement	DFO, ECCC	2	2	2	2	2		
Offset fee program revenue	DFO, ECCC	-5	-5	-5	-5	-5	-5	
Reducing land-based run-off of nutrients & pollution	AAFC, ECCC	100	100	100	100	100		
Balancing hydro connectivity with river connectivity & flow	NRCan, DFO	1.7	1.7	1.6				
Totals – for Freshwater Management		128.7	133.7	138.6	142	147	-5	
Oceans								
Ocean Co-Management								
Governance	DFO	60	60	60	60	60	32	
Marine Spatial Planning	DFO	40	40	40	40	40	32	
National MPA Network	DFO, PC, ECCC	36	36	36	36	36	30	
International MPA conference 2021	DFO	11.5						
Inuit Impact Benefit Agreements	DFO, ECCC	100	100	100	100	100		
Rebuild & enhance stock assessment capacity	DFO	30	30	30	30	30		
Aquaculture	DFO	20	20	20	20	20		
Plastics – see complementary recommendation section								
Totals – for Oceans		297.5	286	286	286	286	94	

**SUMMARY TABLE — COMPLEMENTARY RECOMMENDATIONS****Lead Departments and Costs (and Savings) Associated with the GBC's Recommendations for Budget 2019**

(in millions of dollars; negative figures represent savings or revenues)

Recommendation	Likely Lead Department(s)	Notes on Costs/Savings	2019-20	2020-21	2021-22	2022-23	2023-24	ongoing	(end-year)
Sub-Recommendation									
Climate Change & Energy Sustainability									
Carbon Pricing	ECCC	Revenues slated to be returned to provincial and territorial governments							
Attributing Costs of Climate Change	ECCC	Please contact <a href="mailto:agage@wcel.org">agage@wcel.org</a> for more details.							
International Climate Financing									
Financing	ECCC, GAC		2,200 (total) over 2019-2021		2,800 - 3,800 per year over 2021-2026				(2025-26)
New Revenue sources	Finance, ECCC, GAC		up to -2,200 (total revenues) over 2019-2021		up to -3,800 (revenues) per year over 2021-2026				(2025-26)
Cleaner Ship Fuels in Canadian Arctic									
Fuel Transition Fund	TC, ECCC + CIRNAC, NRCan				5	5	5	5	(2025-26)
Renewable energy innovation subsidy	TC, ECCC + CIRNAC, NRCan			1.7	1.7	1.7			
Zero Emission Vehicles	TC, NRCan + ECCC, ISED, InfC		573 to 1,900 (total) over 2019-2021						
Community Ownership of Clean Energy	NRCan, Finance, ISED	Cost would depend on chosen policy option(s); some have very little cost.							
Labelling home & building energy efficiency	NRCan, CMHC		2						
Cross-Cutting Recommendations									
Canada's Birds	ECCC		25	25	25	25			
Plastics	ECCC		86	86	86	86	86		
First Nations Water Infrastructure	ISC, CIRNAC, InfC		415	415	415	415	415	415	
Scientific & Data Management Strategy									
	NRCan, StatCan, ISED, AAFC, ECCC, DFO, HC								
Updated National Ecosystem Geospatial Data	NRCan		25	25	25	25	25		
Census of the Environment	StatCan		4	4	4	4	5	5	
Public-Private Advisory Panel	NRCan		1	1	1				

**Departmental Acronyms:**

**AAFC:** Agriculture and Agri-Food Canada  
**CIRNAC:** Crown-Indigenous Relations and Northern Affairs Canada  
**CMHC:** Canada Mortgage and Housing Corporation  
**DFO:** Fisheries and Oceans Canada  
**ECCC:** Environment and Climate Change Canada  
**Finance:** Finance Canada  
**GAC:** Global Affairs Canada

**HC:** Health Canada  
**InfC:** Infrastructure Canada  
**ISC:** Indigenous Services Canada  
**ISED:** Innovation, Science and Economic Development Canada  
**NRCan:** Natural Resources Canada  
**PC:** Parks Canada  
**StatCan:** Statistics Canada  
**TC:** Transport Canada





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[Footnotes]