



# Preliminary Recommendations for Recovery and Budget Actions in 2020-2021 (For Discussion)

## FEATURING

- **Stimulus Investments to Boost Clean Transportation**
- **Building Retrofit Jobs - Investments to Reduce Emissions**
- **Nature-based Climate Solutions**
- **Conservation and Protected Areas, including Indigenous protected areas and Guardian programs**

June 28, 2020



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This document will be available at [www.greenbudget.ca](http://www.greenbudget.ca). We expect the Green Budget Coalition's final *Recommendations for Recovery and Budget Actions in 2020-2021* to be available, in both French and English, in September 2020.

(\$) indicates recommendations with the potential to create many jobs

#### Department Acronyms

AAFC: Agriculture and Agri-Food Canada	ESDC: Employment and Social Development Canada	
CIB: Canada Infrastructure Bank	Finance: Finance Canada	ISED: Innovation, Science & Economic Development
CIRNAC: Crown-Indigenous Relations and Northern Affairs Canada	GAC: Global Affairs Canada	NRCan: Natural Resources Canada
CMHC: Canada Mortgage and Housing Corporation	HC: Health Canada	PCA: Parks Canada Agency
CSA: Canadian Space Agency	IAAC: Impact Assessment Agency of Canada	PMRA: Pesticide Management Regulatory Agency
DFO: Fisheries and Oceans Canada	INAC: Indigenous and Northern Affairs Canada	PSC: Public Safety Canada
ECCC: Environment and Climate Change Canada	INFC: Infrastructure Canada	StatCan: Statistics Canada
	ISC: Indigenous Services Canada	TC: Transport Canada

# Introduction and Executive Summary

As a society, we are at a crossroads. We can choose to reinvest in the status quo, or we can rebuild better and more safely. The choices we make will define our ability to deliver a society, economy and environment that is more resilient, just, and sustainable for the benefit of current and future generations.

Amidst the COVID-19 crisis and the stresses and challenges it has brought to Canadians, Canada and the world face ever-worsening climate and biodiversity crises. Canadians are already experiencing floods, fires, ecological disruption, dramatic loss of wildlife populations, and a rapidly warming Arctic, and scientists project these and other impacts will intensify if climate change and ecosystem destruction remains unchecked.<sup>1</sup>

The Green Budget Coalition, comprising 24 of Canada's leading environmental organizations, urges the government to step up to this defining moment in history and the opportunities it presents to build on previous action and achieve transformational change.

Recovery efforts from this health and economic crises offer many challenges but also an important opportunity to accelerate the transformation of Canada's environmental, social and health infrastructure - supporting how we work, live, travel, generate and use energy, and enjoy our recreational time - to be more supportive of a healthier, cleaner, just future with a stable climate and thriving ecosystems.

## *Core Aspects of Aligning Canada's Recovery with Climate and Biodiversity Priorities*

Overall, the Green Budget Coalition strongly encourages making climate and biodiversity objectives central to Canada's stimulus and recovery plans, funding and other actions, including through 1) attaching conditions ("green strings") on funding support for businesses and other governments, and 2) investing in transformative large-scale environmental initiatives and Indigenous-led conservation, along with job-intensive "green stimulus" projects.

At the same time, to preserve the clean and healthy air, water, soil, food and biodiversity on which we depend, it is very important that Canada 3) continue, expand and strategically add to existing climate, nature conservation, health protection and agricultural programs; while also planning ahead by 4) re-aligning Canada's economy and economic and fiscal policy structures to more naturally support long-term integrated progress on environmental, economic and social objectives.

Successfully rebuilding a better greener Canada will require an integrated approach involving many actors. Federal leadership requires significant and sustained investments plus complementary economic policy and regulatory actions. This Green Budget Coalition document provides a comprehensive package of timely recommendations, focused on job-creating investment opportunities, while also addressing tax measures, foundational

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<sup>1</sup> See for example, the UN's International Panel on Climate Change October 2018 special report, Global Warming at 1.5 °C, at [https://report.ipcc.ch/sr15/pdf/sr15\\_spm\\_final.pdf](https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf), and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) May 2019 report at <https://www.ipbes.net/news/Media-Release-Global-Assessment>

environmental funding, and re-aligning Canada's economic and fiscal policy structures, and touches further on green strings below.

### *Feature Recommendations*

For 2020-21, the Green Budget Coalition is featuring the following four transformative, investment opportunities with the potential to create new jobs and accelerate progress in addressing the climate and biodiversity crises:

- 1) Stimulus investments to boost clean transportation industries - creating jobs while reducing Canada's leading source of emissions
- 2) **Building retrofit jobs – Investments to reduce emissions**
- 3) Nature-based climate solutions
- 4) Conservation and Protected Areas, including Indigenous Protected Areas and Guardian programs

We further outline in this document many complementary recommendations with the potential to create jobs and advance long-term environmental sustainability, including:

- Further transformative large-scale investments in renewable and decentralized energy, transit, restoration, and natural infrastructure;
- Smaller job-intensive investments including existing Great Lakes programs, wildlife collision mitigation infrastructure, and supporting a reduced reliance on single-use plastic and expansion of the cyclic economy;
- Renewing and improving other existing foundational programs such as environmental enforcement, the Chemicals Management Plan, Pest Management Regulatory Agency, fisheries and oceans management, international climate finance, regional-scale governance, and First Nations water infrastructure.
- New initiatives to support sustainable agriculture, freshwater, Canadian Water Agency, and environmental data and science;

To most efficiently and effectively pursue environmental sustainability objectives, Canada needs to revise economic and fiscal policy making to better align environmental, economic and human well-being priorities. Important directions for the economy and for overall governance are to respect environmental limits (of many kinds, global, regional and local), to restore and improve environmental quality, to support improved overall well-being and equity, and to lead and support global progress. Tracking and regularly reporting on environmental quality, overall well-being, and genuine progress are important steps. Important GBC recommendations in that regard include *Making Budget 2021 a Well-Being Budget* and *Sustainable Finance*.

*“Green strings” on support to governments and businesses*

In addition, the Green Budget Coalition believes environmental sustainability, long-term human health and good governance all call for strong environmental principles, criteria and conditions (“green strings”) to be placed on support funding for business sectors and provincial, territorial, and municipal governments. More specifically, we strongly encourage that any additional government funding to businesses and governments be developed with a climate and biodiversity lens, and made conditional on preserving and accelerating action on climate and biodiversity issues. We appreciate the government’s efforts to date to promote climate change risk disclosure.

*Implementing these Green Budget Coalition recommendations would lead to transformative progress in advancing a healthier, safer future for Canadians from coast to coast to coast.*



## WHO WE ARE

The **Green Budget Coalition (GBC)**, founded in 1999, brings together twenty-four leading Canadian environmental and conservation organizations (*logos on front cover*), which collectively represent over one million 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 GBC's current Co-Chairs are Lisa Gue, Senior Researcher and Analyst, David Suzuki Foundation, and David Browne, Director of Conservation, Canadian Wildlife Federation.

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





# Climate Action

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## FEATURING

- Stimulus investments to boost clean transportation
  - Building retrofit jobs – Investments to reduce emissions
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## STIMULUS INVESTMENTS TO BOOST CLEAN TRANSPORTATION

Reducing emissions from the highly polluting transportation sector is one of Canada's biggest challenges given our vast distances, cities planned around cars, and a penchant for large, inefficient vehicles. Despite these challenges, addressing emissions from transportation offers a cost-effective opportunity to improve the livability of our cities, reduce expenditures on fuel, clean up the air and invest in public transit. This is an opportunity to create jobs that support the ramping up of zero emission vehicle deployment, building clean transportation infrastructure and transitioning to clean fuels. The following recommendations providing a suite of proven, effective measures to advance these objectives.

### Supporting Public Transit and Advancing Electrification

Transportation remains one of the highest-polluting sectors of the economy. Investments in public transit create jobs, reduce congestion, improve affordability and livability while helping Canada reduce its emissions.

Public transit has been run as an essential service for essential workers and others during the COVID-19 pandemic. With physical distancing measures in place, declining ridership, lost farebox revenue and decreasing gas tax revenues, transit authorities across the country are reporting staggering financial losses. For instance, TransLink in Metro Vancouver has reported a shortfall of \$75 million a month.

In support of the Canadian Urban Transit Association's recommendation, we endorse the federal government taking the necessary measures to stabilize transit systems to compensate for revenue losses and extra expenses incurred during the pandemic. This infusion will allow continued transit service for essential workers, support economic recovery and ensure planned capital expenditures on system expansion and electrification do not need to be deferred.

We further recommend that Infrastructure Canada work with provincial and municipal partners to accelerate the timelines for approved and pending transit projects, where possible, and flow funds faster. This will help create employment in communities across Canada while better positioning them for a net zero carbon transportation system.

As Canadians transition to EVs, the local revenue stream collected from fuel taxes to fund public transportation (such as the \$0.185/L TransLink fuel tax in Metro Vancouver and \$0.03/L fuel tax flowing to the Montreal's Autorité Régionale de Transport Métropolitain) will decline. This puts pressure on the budgets of transit authorities.

Likewise, revenues from provincial fuel taxes will decline with fewer fossil fuel powered cars on the road, further affecting local transit reliant on those funds. Yet, at the same time, transit authorities require greater funding to expand transit and encourage the shift out of private vehicles to climate friendly alternatives.

Declining municipal and transit authority revenues will slow the pace of transit investments, active transportation growth and bus fleet electrification.

The federal government must work with provincial and municipal counterparts to identify new funding mechanisms. We laud the government's commitment to predictable funding for transit, and endorse Federation of Canadian Municipalities' call for a permanent transit fund of \$3.4 billion annually. We recommend the start date for this fund be moved to 2021.

The integration of public transit and active transportation networks offers important synergies: transit operates most effectively and ridership increases when it is planned in conjunction with walking and cycling infrastructure. Most trips are multimodal and integrating active transportation options with transit systems can help solve the "last kilometer" problem. Furthermore, investing in active transportation infrastructure, prioritizing small and medium-sized cities, is an important response to safety and physical distancing requirements during the pandemic. We appreciate that active transportation infrastructure will be eligible for the special COVID-19 response fund to be made available through the Investing in Canada plan. Additional, dedicated funds may be needed to support new or better walking paths, bike lanes and other active transportation infrastructure.

Along with immediate emergency funding for transit, the Green Budget Coalition recommends that the federal government scales up investments in public transit infrastructure, especially electric buses, across Canada. Finally, to enable transit systems to procure exclusively zero emission buses per the federal government's commitment to the deployment of 5,000 zero emission buses, cutting up to 100 tonnes of GHGs annually per bus, we support CUTA's recommendation that the government cover 80% of the incremental capital costs of zero emission buses over their diesel counterparts (estimated at \$345,000), and provide a per-bus subsidy of \$115,000 for electric charging infrastructure, over the next five years.

#### Recommended investment:

In accordance with the CUTA and FCM recommendations: work with the provinces and territories to [INFC]:

- Provide \$400 million per month in funding to replace lost farebox revenues for transit systems, and urgently look to support transit systems that have lost non-farebox revenues.
- Provide access to up to \$1.2 billion in emergency relief funding for transit systems that will face liquidity challenges in the coming weeks and months.
- Proceed with the permanent transit fund of \$3.4 billion, bringing up the start date to 2021.
- Zero-emission bus procurement incentive program funded at \$472 million annually for five years.

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## Accelerating the Transition to Zero Emission Vehicles (ZEVs)

Electric vehicles can dramatically lower emissions from cars and light trucks, which generate 11% of Canada's carbon pollution. The federal government's target is for all vehicles sold in Canada to be ZEVs by 2040. Regulated sales quotas aligned with the federal ZEV targets, along with financial support for purchasing ZEV vehicles and charging infrastructure, are the most effective way to accelerate adoption, while also supporting jobs in the clean energy economy.

As recovery begins, there is an opportunity to accelerate the shift to zero-emission vehicles and to build up Canada's ZEV manufacturing capacity. In addition to the policy measures mentioned above, strategic investments in every aspect of the transportation value chain will bring the benefits of stimulating the Canadian economy. Globally, most electric vehicles (80%) are made in the region they are sold. However, Canada's auto industry lags behind other auto-manufacturing countries in its preparation for an electrified transportation future: Only 0.4% of the light duty vehicles produced in Canada are electric, which is 80% lower than the global average of 2.3%, according to the Power Play electric vehicle transition report.

Budget 2019 provided \$300 million for a consumer purchase incentive program (iZEV), \$130M for charging infrastructure, and tax incentives for business investments in ZEV fleets. These programs can be refinanced and adjusted to contribute to rebuilding. In addition, major investments are needed to build out Canada's ZEV value chain, which includes raw material production and refinement, electric vehicle manufacturing and battery manufacturing. Failing this, we are at risk of losing a major pillar of our economy. Targeted support for the workers and communities that depend on the auto sector is needed, as well. Retraining workers to have the knowledge and skill set to be a part of the ZEV manufacturing economy is critical to sustain and grow our jobs and maintain an automobile sector. *See also Just Transition recommendation, later in this document.*

### Recommended Investments:

- \$150 million top-up to the iZEV incentive program [TC]. Though approved for three years in Budget 2019, uptake in Year 1 suggests the program could run out of money in Year 2 without additional funding.
- \$300 million [NRCan] top-up to the Zero Emission Vehicle Infrastructure Program, which supports deployment of ZEV charging stations, to increase the federal government's contribution from 50% to 80% of costs for projects initiated by August 2021, and scale up the program. NRCan should establish targets for each of the charging infrastructure streams (e.g., public places, multi-unit residential buildings, fleets, transit) and review program design with a view to increasing uptake to meet these targets and fully realize the job-creation potential. *See also Decarbonizing Fuel Supply recommendation, later in this document.*
- \$10 million [ESDC] for ZEV automotive technician training program, modelled on the provincially-supported EV Maintenance Training Program at the British Columbia Institute of Technology.
- More favourable tax treatment to attract investments in EV manufacturing, including domestic innovation/development of ZEV technologies, manufacturing of more EV models, and driving adoption in the Canadian market. While there is already a commitment from the federal government to cut tax rates by 50% for companies that develop and manufacture zero-emission technology (e.g., manufacturing related to renewable energy, renewable fuels production, ZEVs, batteries for use in EVs, grid storage and EV charging systems), minimize investor and

financial risk remain barriers. Other financial incentives such as seed funding for projects, employment-related or manufacturing subsidies and loans can also be considered to reduce production costs. This can then spur follow-on funding from the private sector.

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## Reducing heavy-duty vehicle emissions

Freight trucks accounted for 36% of total Canadian transportation GHG emissions in 2017.<sup>2</sup>

With truck activity increasing and fewer vehicle efficiency gains compared to light vehicles, emissions from freight are expected to surpass those from passenger movement by about 2030 in Canada. It is important to support technological solutions that facilitate a shift to near- and zero-emission on-road heavy-duty freight vehicles. That is why we are supportive of the existing Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative (EVAFIDI) and Budget 2019's proposed tax incentives for business to purchase zero-emission light-, medium- and heavy- duty vehicles. At the same time, targeting vehicle efficiency improvements that can benefit existing freight trucks that will be on the road for years to come is also important.

Fuel saving devices such as aerodynamic add-ons, low rolling resistance tires, automatic tire monitoring and inflation systems and idle reduction technologies, among others, can play an important role in reducing the fuel consumption of freight trucks on the road now.<sup>3</sup> Though fiscal measures are expected to improve the adoption of fuel saving devices, educational tools are also an important means to promoting adoption. While there is existing information on best practices and technologies, ensuring that resources are comprehensible and easily accessible is imperative.

### Recommended Investment [NRCan]:

1. Establish financial incentives for fuel saving devices on heavy-duty trucks: \$200 million over five years (2020-2024)

*Please see also, earlier in this document, recommendations on funding zero emission vehicle rebates and urban transit.*

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<sup>2</sup> Natural Resources Canada, "Table 8: GHG Emissions by Transportation Mode."

<https://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/showTable.cfm?type=CP&sector=tran&juris=ca&m=8&page=0>

<sup>3</sup> As an example, Quebec's Ecocamionnage Program (\$81.35 million) provides financial support for firms which decrease GHG emissions through the use of equipment and technology, with a focus on goods transportation.

## Decarbonizing Fuel Supply

The forthcoming Clean Fuel Standard (CFS) will be a core regulatory pillar for decarbonizing the fuel supply and enabling Canada to meet its climate commitments and achieve net-zero carbon emissions by 2050. Locking in a robust CFS in 2021, as proposed, will help attract private investment in clean fuels. The sector has the potential to create thousands of jobs during the construction phase and new full-time clean-tech jobs.

To complement the CFS, the Green Budget Coalition recommends near-term financial support for the clean fuel sector to accelerate expansion of renewable, low-carbon fuel production capacity and distribution/use infrastructure, while supporting economic recovery. We further recommend that Finance Canada review applicable tax policy with a view to attracting investment in renewable, low-carbon fuel production, distribution and use.

### Recommended Investment:

- \$100 million [NRCan] top-up to the Electric Vehicle and Alternative Fuel Infrastructure Deployment Program, which aims to establish a national network of clean fuel charging/refueling stations, to increase the federal government's contribution from 50% to 80% of costs for renewable, low-carbon fuel infrastructure projects initiated by August 2021, and to expand eligibility criteria to include biofuel blending infrastructure.
- \$350 million over five years [NRCan] for a new low-carbon fuels innovation program, leveraging private capital, to accelerate expansion in clean fuel storage and distribution,

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## Pricing Road Infrastructure

One reason that Canadian roadways, highways and cities suffer from congestion is that infrastructure projects that increase traffic volumes qualify for federal funding, resulting in a subsidy that favours private vehicle dependency, while use of roads is for the most part unpriced. Users do not pay for pollution they emit, the GHG emissions or the costs they impose on other users by adding to the total volume of traffic, and hence their role in exacerbating congestion. Low density developments, the growth of suburbs and exurbs results in ever increasing demand for new investments in roads, yet too often, as soon as the roads are built or expanded, volumes increase, often negating the rationale for the investments. However, COVID-19 has forced companies and communities to rethink how work is carried out and the need to commute to downtown office spaces. Much of the revenue earned by municipalities comes from sources that can have the perverse effect of encouraging municipal leaders to embrace sprawl: gas taxes, development charges and property taxes. Outside of North America, many highways are tolled and a number of cities such as London and Milan, have gotten off road-building/congestion treadmill, addressed GHG emissions and improved air quality by road pricing and congestion charges.

The Green Budget Coalition recommends that the federal government:

1. Work with provinces to restructure infrastructure funding mechanisms for municipalities to better align incentives with smart growth principles;



2. Support municipal efforts (such as the City of Vancouver) to advance mobility pricing via special grants to support studies and evaluate tolling equipment;
3. Undertake a comprehensive review of budgetary and regulatory mechanisms to ensure a climate lens and demand side management is incorporated into roads built with federal support;
4. Make ineligible for federal funding road projects or other transportation infrastructure that will lock-in or exacerbate pollution, GHG emissions and loss of natural habitat.

Budgetary implications: \$1 million [INFC]

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## BUILDING RETROFIT JOBS -

### INVESTMENTS TO REDUCE EMISSIONS

Eliminating carbon pollution from homes and buildings by mid-century, essential to meeting Canada's Paris target, opens important opportunities to save money for Canadians and strengthen communities through well-paying jobs. Investing in our buildings and the people that design, build, and maintain them is an investment in our safety from a range of vulnerabilities – from health emergencies like this one to the floods, fires, extreme heat events and other extreme events we have experienced and will continue to experience as a result of climate change.

We recommend the federal government invests in refurbishing existing buildings, with a focus on schools, hospitals, social housing, and residential buildings to (1) get them off fossil fuels, (2) improve energy efficiency, (3) make them more responsive to fluctuating demand on the electrical grid via storage, on-site generation, and load shifting, and (4) make them more resilient to climate impacts and health crises such as the current pandemic.

The budget allocations for these programs should be commensurate with a major nation-building infrastructure investment. Canadian building owners and homeowners will need to invest \$200 billion to \$300 billion over the next thirty years to retrofit Canada's buildings. Some of these investments will happen as a result of changes in market expectations, some as a result of regulations. But before the federal government, provinces, territories and local governments can regulate, the supply chains and trained workforce must be in place, and building owners and managers must integrate these objectives in their capital plans. For this, Canada needs a long-term investment strategy, leveraging public and private capital, administered by a dedicated agency (i.e., a 'green bank', possibly a branch of the Canada Infrastructure Bank in partnership with CMHC).

#### Recommended Investment:

\$10 billion for economic stimulus through climate resilient retrofit of Canada's buildings and homes [NRCan] and ensure its rapid outlay through the following four strategies:

##### 1) Enhance the Greener Home initiative:

- Increase the Greener Home retrofit target (currently of 1.5 million homes) and expand the program to include multi-unit residential buildings;
- Increase loan maximums from \$40,000 to up to \$100,000 and provide grants to cover a significant portion of the retrofit cost, ranging from 20% for basic measures up to 40% of total costs for deep retrofits, similarly to the German KfW Bank programs;<sup>4</sup>
- Provide top-ups to these measures for non-profit housing societies and low-income households, and create a dedicated channel for rental apartment owners; and

<sup>4</sup> KfW Bank, "Existing Properties: Energy-efficient refurbishment." <https://www.kfw.de/inlandsfoerderung/Privatpersonen/Bestandsimmobilie/>

- Wherever possible, partner with provincial agencies to deliver these programs, providing flexibility to re-allocate funds to supplement existing provincial offers and ensure there is a single point of access for homeowners.
- 2) Enhance the National Housing Strategy funding:
- Create a top-up fund for retrofits and new construction projects, funded through the National Housing Strategy co-investment fund, that achieve deep carbon reductions. Right now, projects accessing NHS funding must achieve at least a 25% reduction in carbon pollution, a modest improvement that leaves many opportunities for carbon reduction unfunded. Adding a top-up fund to enable societies to go directly to deep retrofits (60-80% GHG reductions) would seize opportunities that would otherwise be missed for increased resiliency, carbon reductions, and economic activity in projects that are scheduled for design and construction in the coming years.
  - CMHC should work with provincial partners to align eligibility criteria and enable housing providers to leverage federal and provincial funding -- an outcome desired by all parties but at times made impractical because of incompatible eligibility criteria.
- 3) Increase the institutional and commercial retrofit rate by co-financing deep retrofits of public and commercial buildings:
- This could be achieved by instructing the Canada Infrastructure Bank to create a specific strategy for energy retrofits, and by endowing the four long-term funds to support retrofits in large buildings mentioned in the mandate letter to the Minister of Natural Resources. The CIB should provide loan guarantees to de-risk private lending and grants to close the gap in the business case for deep retrofits. It should also support national harmonization of commercial PACE programs which are being developed across Canada. There are significant costs associated with understanding and implementing a new financing mechanism for construction projects or major retrofits (e.g., business case analysis, implications for insurance, distribution of risk, legal review of contracts); the CIB can help reduce this initial cost for national portfolio managers by providing some of this analysis and by ensuring the rules of programs are similar across different provinces.
- 4) This transition to low-carbon buildings, however, requires trained professionals, contractors and trades skilled in the design and construction of high-performance buildings and retrofits. The current slowdown in various sectors provides an opportunity to provide distance education programs to upgrade and retool more workers with skills that are in high demand in the green building sector.
- We support the Canada Green Building Council and Efficiency Canada's recommendation to provide \$500 million for training for Canada's low-carbon building workforce. [ESDC, NRCan]

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## Complementary Climate Action Recommendations

### Phasing out Fossil Fuel Subsidies

Eliminating fossil fuel subsidies is a critical step to ensure a climate-safe future and transition to a low-carbon economy. These subsidies divert vital government resources away from other priority policy areas, such as healthcare, clean energy and just transition, whose importance has been highlighted by the COVID-19 crisis.

Canada has a longstanding commitment to phase out inefficient fossil fuel subsidies under the G20. Despite these commitments and strong public support for phasing out subsidies<sup>5</sup>, Canada remains the largest provider of subsidies to oil and gas production per unit of GDP in the G7 and the second largest provider of public finance to oil and gas in the G20.<sup>6</sup> Canada's progress on the G20 subsidy peer review with Argentina has been slow - past peer reviews have taken 12-18 months - and largely not transparent.<sup>7</sup>

In 2019 federal fossil fuel subsidies increased from the previous year to at least \$600 million<sup>8</sup>, not including tax provisions, subsidies for the Trans Mountain project, or subsidies resulting from credit support such as through Export Development Canada (EDC). EDC provides on average \$10 billion in government-backed financial support to oil and gas companies each year. EDC's new climate change policy is not aligned with Canada's climate commitments, requiring only a 15% decrease of its exposure to the most carbon intensive sectors.<sup>9</sup>

In the wake of COVID-19, calls from international leaders, such as the Executive Director of the International Energy Agency<sup>10</sup> and the Secretary-General of the UN<sup>11</sup> have urged countries to remove fossil fuel subsidies and put clean energy at the heart of stimulus plans. The response to COVID-19 requires unprecedented support for workers in industries such as the oil and gas sector, but this support should neither introduce nor entrench subsidies that hinder our urgently-needed transition away from fossil fuels. At least 53,000 jobs in the Canadian oil and gas industry have been lost since 2014 and the industry is no longer a stable source of job creation, pointing to an urgent need to support workers through just transition and economic diversification, for which subsidies hold us back.<sup>12</sup> Government support directed at creating employment in the reclamation industry must tangibly uphold the polluter pays principle and not lock government into covering costly future remediation liabilities.

<sup>5</sup> Environmental Defence. (2018). #StopFundingFossils: New poll shows Canadians want to end public subsidies for oil and gas companies. Retrieved from <https://environmentaldefence.ca/report/stopfundingfossils/>

<sup>6</sup> Whitley et al. (2018) G7 fossil fuel subsidy scorecard. Retrieved from: <https://www.odi.org/sites/odi.org.uk/files/resource-documents/12222.pdf>

<sup>7</sup> Office of the Auditor General of Canada. (2019). 2019 Spring Reports of the Commissioner of the Environment and Sustainable Development to the Parliament of Canada: Report 4—Non-Tax Subsidies for Fossil Fuels—Environment and Climate Change Canada. Retrieved from [http://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201904\\_04\\_e\\_43310.html](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201904_04_e_43310.html)

<sup>8</sup> Corkal, Levin & Gass. (2020) Canada's Federal Fossil Fuel Subsidies in 2020. Retrieved from: <https://www.iisd.org/library/canada-fossil-fuel-subsidies-2020>

<sup>9</sup> EDC (2019) Climate Change Policy. Retrieved from: <https://www.edc.ca/en/about-us/corporate/corporate-sustainability-responsibility/environment-people.html>

<sup>10</sup> Birol, F. (2020) Put clean energy at the heart of stimulus plans to counter the coronavirus crisis. Retrieved from: <https://www.iea.org/commentaries/put-clean-energy-at-the-heart-of-stimulus-plans-to-counter-the-coronavirus-crisis>

<sup>11</sup> UN News (2020) COVID-19 pandemic, an 'unprecedented wake-up call' for all inhabitants of Mother Earth Retrieved from <https://news.un.org/en/story/2020/04/1062322>

<sup>12</sup> Stand.earth (2020) Who Benefits? An investigation of foreign ownership in the oil sands. <https://www.stand.earth/sites/stand/files/report-foreign-ownership-oilsands.pdf>

This year, EDC's total contribution to supporting oil and gas will likely be much higher, given its role in the COVID-19 response. There is little clarity on the conditions attached to these loans, for example whether companies will be required to align with Canada's target to achieve zero emissions by 2050, how the assessments of economic viability will be made and whether they will include consideration of stricter polluter-pay requirements regarding future inactive well and tailings ponds clean up.

#### Recommendations:

- Commit to not introducing new subsidies for fossil fuels;
- End Export Development Canada's support for fossil fuels by 2020 (including through the Canada Account) and ensure their new climate change policy aligns EDC's entire portfolio with Canada's climate commitments;
- Complete a transparent G20 peer review, using internationally agreed upon definitions and robust criteria for "efficiency" that align with Canada's climate commitments;
- Develop a roadmap to meet or exceed Canada's commitment to phase out inefficient fossil fuel subsidies by 2025, exploring opportunities to redirect revenue to COVID-recovery, just transition needs and renewable energy acceleration;
- Include fossil fuel subsidy reform as a key element of focus in Canada's next NDC to the Paris Agreement;
- Transparently release information on quantified amounts of all federal fossil fuel subsidies on an annual basis. Provide transparent and detailed data on COVID-19 support provided to fossil fuel producers, including by federal credit agencies;
- Impose strict polluter pay conditions on any environmental remediation aid in order to maximize jobs and ensure industry pays for the cleanup of its operations;
- Work with the provinces and territories to address fossil fuel subsidies at the subnational level.

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## Avoiding Taxpayer Liabilities for Small Modular Reactors

The nuclear industry is seeking policy and financial support for the development of Small Modular Reactors (SMR), which are promised to be cheaper and safer than previous reactor designs. However, spending federal resources pursuing such an unproven technology during the climate emergency while the costs of renewables continue to fall and timelines for commercial SMRs continue to be pushed further into the future is imprudent,<sup>13</sup> even more so with the significant financial demands created by COVID-19. As a recent comprehensive review reports, “not a single ‘truly modular’ SMR has been built so far. Economic and financial reasons are strongly hindering SMR development.” Furthermore, cost benefit analysis of SMRs has largely failed to address operations and maintenance costs as well as decommissioning costs satisfactorily.<sup>14</sup>

In addition to subsidies, many industry policy requests contravene principles of sustainability, including protection from accident liability, waste responsibilities and exempting of SMRs from impact assessments.<sup>15</sup>

Based on similar promises, the Canadian nuclear industry has obtained significant federal support to develop new reactors in the past,<sup>16</sup> but been unable to commercialize new reactor designs. For example, between 2002 and 2009 Atomic Energy of Canada Limited (AECL) received \$433.5 million in federal subsidies to develop the “Advanced CANDU Reactor”<sup>17</sup> (ACR), but no ACRs were ever built. The uncertainties, questionable economics and this unsuccessful track-record should preclude federal support for SMRs.

**Recommendation:** The federal government should provide no support for the development of SMRs, including direct financial subsidies as well as indirect liability support or risks sharing. [NRCAN]

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<sup>13</sup> Thomas, Steve, Paul Dorfman, Sean Morris, and M. V. Ramana, [Prospects for Small Modular Reactors in the UK & Worldwide Nuclear Consulting Group & Nuclear Free Local Authorities](#), United Kingdom, July 2019

<sup>14</sup> Mignacca, B., & Locatelli, G. (2020). Economics and finance of Small Modular Reactors: A systematic review and research agenda. *Renewable and Sustainable Energy Reviews*, 118, 109519. <https://doi.org/10.1016/j.rser.2019.109519>

<sup>15</sup> For a discussion of these requests and how they may harm Canada’s commitment to sustainable development, please see: Blaise K., Stensil S-P. (2020) [https://ideas.ted.com/why-we-should-all-stop-saying-i-know-exactly-how-you-feel/?fbclid=IwAR2eK6BHwXfQ7pH\\_ZF42qWDPTri2FFWOxIFXgEBM04cCRHHacNF1ehO8](https://ideas.ted.com/why-we-should-all-stop-saying-i-know-exactly-how-you-feel/?fbclid=IwAR2eK6BHwXfQ7pH_ZF42qWDPTri2FFWOxIFXgEBM04cCRHHacNF1ehO8). In: Black-Branch J., Fleck D. (eds) *Nuclear Non-Proliferation in International Law - Volume V*. T.M.C. Asser Press, The Hague.

<sup>16</sup> Despite tens-of-billions in subsidies, the Canadian nuclear industry has been unable to successfully innovate, design, or sell any new reactor designs since the CANDU-6 was first developed in the early 1970s. Since the design of the CANDU-6, Atomic Energy of Canada Limited (AECL) received federal funding for a long line of reactor designs that were never sold, including the Organic Cooled Reactor, the CANDU-Boiling Light Water Reactor, the Slowpoke Energy System, the CANDU-3, the CANDU-9, and the Advanced Candu Reactor. None of these reactors were successfully commercialized.

<sup>17</sup> Briefing Note, “Atomic Energy of Canada Limited,” in response to an Access to Information request for “A copy of the briefing book that was left at CTV’s studios,” September 25, 2009.

## Accelerating Renewable and Decentralized Energy

The cost of renewables continues to decline. Renewable energy and decentralized electricity generation will play an important role in helping Canada reach net zero. There are additional benefits if this new capacity is community financed and owned by local public utilities, co-operatives, Indigenous communities or community development funds. Local ownership means local support for new projects and climate initiatives, as well as local jobs and economic diversification, and increased local resiliency - as demonstrated by existing community-owned energy in Canada and around the world. People are more than ready to invest their savings in clean energy, if there is a reasonable return and investments are RRSP and TFSA eligible.

Total Recommended Investment: \$3.25 billion over five years

### 1. Federal Procurement to support community-owned renewables

Procure renewable electricity for federal facilities from community owned sources in provinces with grids of higher carbon intensity- Alberta, Nova Scotia and Saskatchewan - and those where there is still significant on-going use of natural gas like Ontario. \$50 million per year (\$250 million over five years) [Public Services and Procurement Canada]

### 2. Support for Community Financing

- A. Fund a second round of the federal Smart Grid program, delivered by utility/community financing partnerships, focusing on deployment of community renewable energy technologies such as community-scale storage and virtual net metering for community solar. \$100 million over five years [NRCan, Clean Power Fund of the CIB]
- B. Provide “buy-down” incentives for integration of net metered solar financed using community sources with deep building retrofits - to bring the payback period for these projects to viable levels. \$50 million over five years [Low Carbon Economy Fund, the Green Municipal Fund, and the Canadian Industry Partnership for Energy Conservation]
- C. Provide incentives of up to 25% of the installed capital cost, delivered in partnership with the local communities in provinces that have a high carbon intensity, for renewable projects of 1MW to 10MW, including distributed generation projects that combine wind plus storage or solar plus storage. \$250 million over five years. [ECCC]

### 3. Financial support for rooftop [or distributed] solar

- A. Provide rebates towards the installed capital cost of net-metered large-scale rooftop solar, (rebates of up to 40% to a maximum of \$10,000 per household for about 70,000 homes and of up to 40% to a maximum of \$200,000 per project, for commercial, industrial and community buildings as well as agricultural producers). \$1 billion over five years. [ECCC]
- B. Provide incentives of up to 65% of the capital cost of renewables energy projects in low-income and vulnerable communities that help reduce energy poverty. \$250 million over five years [NRCan]

#### 4. Planning, integration and capacity Building

- Provide funding for regional dialogues, studies and models to expand inter-provincial transmission so as to support renewable integration, electrification of the economy and to displace fossil generation. \$50 million over five years. [NRCan]
- Support the development of and promote community investment options in renewable energy for individual citizens. Support the development of tools that improve the viability of community energy enterprises, including \$50 million over three years [ISED, NRCan, Infrastructure and Communities]

#### 5. Remote and Indigenous Communities

- Task the Canada Infrastructure Bank (CIB) with supporting feasibility studies and providing capital funding to enable projects in remote communities that displace diesel generation with renewables. \$450 million over five years [CIB]
- Capitalize an Indigenous Clean Energy, Technology, and Infrastructure Fund to increase Indigenous capacity and equity participation in clean energy projects while creating jobs. \$300 million over five years [CIB]

#### 6. Spur the renewables plus storage projects

Building off of the success of EcoEnergy for Renewable Power program (2007-2011), develop an updated version of this program to spur the development of projects that combine wind plus storage or solar plus storage. \$500 million over four years [NRCan, Clean Power Fund of the CIB]

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## A Future Beyond Fossil Fuels and a Just Transition for Workers and Communities

Many Green Budget Coalition recommendations are aimed at facilitating a transition to an economy less reliant on the oil & gas sectors, accelerating and managing a dynamic change that is already in motion as new technologies provide substitutes for fossil fuels, as major investors reduce their exposure to a declining sector, and as countries worldwide ramp up their ambition to mitigate climate change.

However desirable that transition, it will not happen unless we can also facilitate a transition toward desirable alternatives. Basic concepts of social welfare argue that in the transition we need to be concerned with the fate of fossil fuel sector-dependent workers and communities, and our recommendations on just transition respond to that immediate need. Going further, however, if those stakeholders cannot see a prosperous future for themselves beyond fossil fuels, their resistance to change will critically hobble any efforts at transition. As such, our recommendations for managed decline of the oil & gas sector are necessarily complemented by recommendations for the managed ascent of alternative sources of prosperity.

The impacts of COVID-19, especially on the oil and gas sector, demonstrate the urgency for the government to follow through on its promise to move forward a national just transition strategy, giving workers access to the training, support, and new opportunities needed to prosper today, and in the future.

While undertaking this legislative process, the Green Budget Coalition strongly encourages the Government of Canada to follow through on the recommendations provided by the Task Force on Just Transition for Canadian Coal Workers and Communities,<sup>18</sup> and to initiate broader consultation and analysis on just transition in Canada with industries beyond coal.

Embedding just transition in Canada's budget and climate policy will set a strong precedent for worker transition as the world moves to a low-carbon economy. Providing tangible support to workers and communities directly and indirectly impacted by actions that reduce or eliminate processes that produce carbon pollution will also increase public support for complementary climate policies at the federal level.

The GBC encourages the federal government to:

- Implement the Task Force on Just Transition for Canadian Coal Workers and Communities' full suite of recommendations.
- Identify opportunities to scale up just transition funding for all workers in industries impacted by a transition to a low-carbon economy and the communities that rely on these industries.
- Move forward with legislation and creation of a robust Just Transition Act to support workers and communities in transition. Create an adequately funded federal authority that has the mandate to move forwards with a national just transition strategy, and whose work is informed by experts from diverse fields including organized labour, the environment, economic development, and social work.

<sup>18</sup> <https://www.canada.ca/en/environment-climate-change/services/climate-change/task-force-just-transition/final-report.html>

- Create a major innovation fund, along the lines of the US Advanced Research Projects Agency (ARPA-E) or the Alberta Oil Sands Technology and Research Authority (AOSTRA), both of which built the foundations for transformational change in the energy sector. The fund should have an explicit mandate to support R&D, scaling up and commercialization of technologies that can help Canada diversify away from its reliance on fossil fuels as an engine of economic growth, and should have a geographic focus on those areas currently most dependent on such growth.
- Within that broad program of support, complement open (sector-neutral) competition for funds with a small number of mission-oriented programmes aimed at transformative technologies needing patient, risk-tolerant investment, such as green hydrogen production and utilization, and commercializing the manufacture of carbon fibre.
- Build on and ramp up pilot projects such as Calgary Economic Development's Edge Up, that work in partnership with existing educational institutions to retrain unemployed workers from the oil and gas sectors.

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## Independent Monitoring of Methane Emissions

Canada has committed to reduce methane emissions from the oil and gas sector by 45% by 2025. Methane abatement offers some of the most cost-effective GHG reductions available. Canada passed new methane regulations and has reached an equivalency agreement with B.C. to stand down federal requirements in favour of provincial regulations and is in the process of concluding similar agreements with Alberta and Saskatchewan. These regulations clarify industry's obligations to monitor and report on emissions. However, field measurement of emissions by independent researchers have shown a wide divergence with emissions reported by industry and included in the federal inventory and some questions remain as to the effectiveness of the different regulatory regimes in bringing down emissions. In April 2020, the federal government provided \$750 million in grants and repayable contributions to the oil and gas industry in support of abatement of methane emissions.

To assess the effectiveness of provincial regulations at meeting Canada's commitments, to verify inventory figures and to monitor the effectiveness of federal grants and contributions for methane abatement, increased independent aerial and field measurement of methane emissions is warranted.

Recommended Investment: \$16 million over two years. [NRCan]

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## Marine Shipping - Reducing Climate Impacts

The shipping industry is one of the world's largest emitters of greenhouse gases (GHGs). If it were a country, it would be the world's sixth-biggest climate polluter, with global CO<sub>2</sub> emissions greater than Germany. As a part of Canada's climate and economic recovery plan, steps must be taken to address the local and global climate impacts of shipping.

Recommended Investment: \$90 million over two years

### Developing Policy Tools

- \$20 million over two years for policy research and stakeholder engagement to:
  - Develop a national shipping GHG and black carbon reduction strategy which includes absolute targets and timelines in line with keeping global temperature rise to 1.5 degrees. The plan should also incorporate a comprehensive approach to reducing air pollution, Nitrous Oxide, Sulfur Oxide (NO<sub>x</sub> and SO<sub>x</sub>), fine and ultrafine particulate matter, and methane. [TC, ECCC]

### Kick-starting Innovation

- \$20 million over two years for R&D and sea trials to meet the achievable target of 100% zero emission vessels in Canadian inland waters by 2030. [TC, NRCan]
- \$10 million over two years towards a GHG reduction innovation fund to provide advisory and capacity building services to assist with design, retrofit and test emerging technologies such as wind-assist, solar sails, autonomous technology and digitalization, and hull appendages, that would not only save on fuel but reduce GHGs and emission pollutants. [TC]
- \$40 million over two years to implement a national shore power plan which would ensure all vessels are equipped to accept shore power and ports are able to provide it. [TC, ECCC]
  - To enable this, the GBC recommends that funds be used to build shore power connections for ships to plug in, charge, or otherwise decarbonize cargo-handling and drayage equipment, and supply green alternative energy for zero-emission vessels, vehicles, and equipment.

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## International Climate Finance

Canada and other industrialized countries continue to scale up to meet the Paris Agreement target of USD 100 billion per year to help developing countries with climate adaptation and mitigation. Federal funding for climate finance (\$2.65 billion over 5 years) will sunset in March 2021. The GBC recommends that funding for climate finance be renewed in Budget 2021, and that Canada increase its contribution in line with what is considered our fair share of responsibility (3%-4%),<sup>19</sup> and invest as much or more in adaptation as in mitigation. The Green Budget Coalition encourages the federal government to direct more attention to funding nature-based solutions (NbS) that fully respect the U.N. Declaration on the Rights of Indigenous Peoples, including Free, Prior, and Informed Consent. Most nature-based solutions are cross-cutting, offering adaptation and mitigation gains while benefiting biodiversity and local and Indigenous communities. Climate finance with development as a priority outcome will help fulfill Canada's Sustainable Development Goals, although climate finance should be additional to official development aid. NbS are prominent in the climate adaptation plans and NDCs of developing countries.<sup>20</sup>

We recommend that Canada enhance the transparency of its international climate finance by making the online database comprehensive and regularly updated, with aggregation by categories: bilateral grants, multilateral grants, concessional loans, private sector leveraging, and loan and investment guarantees. All loans should be reported at the grant equivalency value.

Recommended Investment: \$4 billion annually from 2021/22 to 2025/2026, with at least 50% for adaptation, and increased attention to nature-based solutions. Canada's Feminist International Assistance Policy requires that 15% be allocated to projects that specifically target gender equality and the empowerment of women and girls. [GAC]

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<sup>19</sup> Demerse, Clare. (2009). "Our Fair Share: Canada's Role in Supporting Global Climate Solutions." Pembina Institute. Accessed at <https://www.pembina.org/pub/1815>

<sup>20</sup> Seddon, N. et al. 2020. Global recognition of the importance of nature-based solutions to the impacts of climate change. *Global sustainability* 3, e15, 1-12.

## Strengthening Carbon Pricing

A price on pollution is the cheapest way to reduce harmful air pollution and carbon emissions and is integral to any plan to build a strong economy. The federal price on carbon pollution will reduce GHG emissions by 50 to 60 MT by 2022, and help the Canadian economy tap into the USD 26 trillion global cleantech market.<sup>21</sup>

Provinces and territories were encouraged to develop their own system that meets established criteria, or be subject to a federal backstop. The backstop consists of a fuel charge to provide a consistent market signal to consumers to lower their emissions and an output-based pricing system (OBPS) to ensure Canada's emissions intensive and trade-exposed (EITE) industries reduce emissions, while limiting the risks of competitive disadvantage and emissions leakage.

As part of the 2020 mid-term review of the Pan-Canadian Framework on Clean Growth and Climate Change (PCF), the federal government has committed to assess the overall approach to pricing pollution and best practices to address the competitiveness of EITE sectors. The GBC recommends that this process establish clear criteria regarding:

- How the price signal will increase beyond 2022: laying the groundwork for regular, incremental carbon price increases. This will offer much-needed certainty for investors and long-term incentives and flexibility for industry and consumers to move toward low-carbon options. That investment certainty and incentivization of low-carbon options is essential to the future resilience of the Canadian economy as the world strives to decarbonize to limit warming to 1.5 degrees Celsius.
- How the price treatment will convert to full coverage over time for EITE sectors: A properly designed OBPS must be targeted and temporary. In other words, it should only apply to EITE sectors with true competitiveness concerns.
- How to expand the scope of the federal carbon pricing system beyond combustion and industrial emissions to include ecosystem emissions associated with human activity – e.g., land use change and land degradation. *See Nature-based Climate Solutions, later in this document.*

The carbon pricing system is revenue neutral at the federal level, so any federal revenues generated under the system will be returned to the province or territory in which they are generated.<sup>22</sup>

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<sup>21</sup> The New Climate Economy, The 2018 Report of the Global Commission on The Economy and Climate, <https://newclimateeconomy.report/2018/>

<sup>22</sup> [https://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/RP-1920-024-S/RP-1920-024-S\\_en.pdf](https://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/RP-1920-024-S/RP-1920-024-S_en.pdf)

## Helping Restaurants Reduce Reliance on Single-Use Plastics

Tackling plastic pollution provides an opportunity to reorient the Canadian economy toward *circularity* - minimizing pollution and greenhouse gas emissions, while simultaneously reducing waste management costs, and creating jobs. It is estimated that a circular economy would reduce waste management costs by \$500 million annually and create 42,000 new jobs.<sup>23</sup>

The government has committed to banning non-essential, single-use plastics by 2021, and this, along with other regulatory measures, such as Extended Producer Responsibility requirements and targets, are the key to solving the plastic pollution problem.

To support evidence-based decision-making on priorities for improving circularity, and the development of effective EPR requirements, we recommend that Canada provide funds to collect and aggregate data on the amounts and types of plastic packaging introduced to the economy, their use, and end-of-life management. This information will be essential when benchmarking Canada's progress towards zero plastic waste.

To further accelerate a shift away from single-use plastics and assist with the transition, we recommend establishing a fund for SMEs—specifically restaurants and food service providers— and municipalities that implement the federal procurement guidelines as they relate to plastics. This would provide much needed financial support to a sector that has been hit especially hard by the COVID-19 pandemic, support the transition away from single-use and hard-to-recycle plastic packaging, and enable the expansion of nascent reuse systems.

### Recommended investment:

- \$500 million to establish a fund, to support SMEs—specifically restaurants and food service providers—and municipalities in implementing the federal procurement policies as they relate to plastic [ISED]
- \$5 million for ECCC and Statistics Canada to collect and aggregate data on the amounts and types of plastic packaging introduced to the economy, their use, and end-of-life management.

*See also Expanding Ghost Gear Clean-Up, later in this document.*

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<sup>23</sup> Environment and Climate Change Canada, *Economic Study of Canadian Plastic Industry, Markets and Waste*. 2019. Accessed at: [http://publications.gc.ca/collections/collection\\_2019/eccc/En4-366-1-2019-eng.pdf](http://publications.gc.ca/collections/collection_2019/eccc/En4-366-1-2019-eng.pdf)

## Sustainable Finance Report

The GBC acknowledges the importance of the June 2019 Final Report of the Expert Panel on Sustainable Finance<sup>24</sup> which provides a blueprint for integrating sustainability into the financial sector and financing the transition to a clean economy.

The Expert Panel calls for recognition of the economic opportunity presented by the transition to a “competitive low-emissions, climate-smart economy”. This would be guided by a detailed capital plan aligned with Canada’s long-term climate change plans.

The Panel also recognizes the opportunity for targeted tax incentives to drive private investment into clean innovation to embolden Canadians toward climate-aligned investments. The GBC’s recommendations on renewable and decentralized energy represent a concrete approach to realize this opportunity.

The Panel recommends creating and strengthening financial sector institutions to help integrate climate considerations throughout the sector. The Panel also recommends a focus on products to finance clean innovation in priority areas of the economy, including clean technology, oil and gas, buildings, and electricity. The GBC recommends that the federal government, especially Finance Canada, give the Panel’s report the most serious consideration, while not establishing additional subsidies for fossil fuels.

*Please see also GBC recommendations on Reducing Building Emissions, Renewable and Decentralized Energy, and Fossil Fuel Subsidies, all earlier in this document.*

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<sup>24</sup> [http://publications.gc.ca/collections/collection\\_2019/eccc/En4-350-2-2019-eng.pdf](http://publications.gc.ca/collections/collection_2019/eccc/En4-350-2-2019-eng.pdf)

## Ensuring that Budget 2020 Reflects the True Costs of Climate Change

Federal budgets to date have failed to consider, or have underestimated, the cost implications of climate change and failed to examine how the government should pay for these increased costs.

For example, Budget 2019 includes \$130 million per year for the Disaster Financial Assistance Arrangements, far less than the Parliamentary Budget Officer’s estimate that this program will cost \$902 million per year from 2016-2020.<sup>25</sup>

In addition to estimating current and future budgetary needs associated with climate change, Canada must enable transparent decision-making regarding keeping these costs manageable, including through investments in GHG mitigation, climate adaptation, and cost-recovery from corporations and individuals that benefit financially from fossil fuel production and use.

**Recommended Investment:** \$2 million over two years (2020-22) to ECCC to:

- Work with each federal department to identify and quantify the budgetary implications of *Canada’s Changing Climate*,<sup>26</sup> to ensure that those implications are incorporated into, and clearly identified in, the federal budget, starting with Budget 2021; and
- Explore opportunities to recover climate costs from polluters.

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<sup>25</sup> [http://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/2016/DFAA/DFAA\\_EN.pdf](http://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/2016/DFAA/DFAA_EN.pdf)

<sup>26</sup> <https://www.nrcan.gc.ca/maps-tools-and-publications/publications/climate-change-publications/canada-changing-climate-reports/canadas-changing-climate-report/21177>





# Protecting Canada's biodiversity legacy & investing in nature jobs

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## FEATURING

- Nature-based climate solutions
  - Conservation and protected areas, including Indigenous Protected Areas and Guardian programs
-

## NATURE-BASED CLIMATE SOLUTIONS

Nature based climate solutions (NBCS) are changes in land use and/or management with measurable benefits for climate change mitigation and adaptation, *and* biodiversity.<sup>27</sup>

Canada's ecosystems- such as forests, wetlands, including saltwater ecosystems, native grasslands, meadowlands and riparian areas - can be part of the climate solution. Actions to Protect (*see the Protected Area section*), Restore (*see the Habitat Restoration section*), and Reduce Land use Change and Manage ecosystems for near term climate mitigation benefits (*this section*), as well as for the resilience benefits they can provide to communities (*see the Natural Infrastructure section*), all have significant value in ensuring that our ecosystems are able to help us address climate change, both mitigation and adaptation and biodiversity targets in the coming decades.

Some NBCS, especially those described in the Federal Habitat Restoration Program and Natural Infrastructure sections, are investments that can immediately (6-18 months) generate new jobs for populations and communities that have been hit hard by the current economic downturn such as northern communities, including Indigenous communities impacted by the oil and gas sector downturn and the likely drop in demand for some types of wood products; and in agricultural communities. These actions have high returns on investment, can save cash strapped municipalities large sums of money compared to traditional infrastructure, will diversify economies, and can grow Canada's GDP in a more nature and climate friendly manner.

There is also a need to specifically harness the power of nature to meet our 2030 Paris Agreement mitigation targets. Our ecosystems are projected to sequester less carbon in 2030 than ever before and changing the rate of ecosystem degradation and loss in forests, native grasslands and wetlands will have an immediate mitigation impact. In addition to the role that can be played by some of the nature-based climate solutions noted above (e.g., restoring grasslands may store enough carbon in the near term to make a difference by 2030), we can do this by lightening our footprint on the land through innovative management approaches and technologies that can reduce our levels of ecosystem degradation, while still delivering important goods and services and safeguarding existing jobs. Putting in place programs and regulations to drive such business innovation and new practices, will also create jobs and revenue for those seeking new solutions and technologies.

To be effective, investments to implement land-use change and management practices that reduce direct emissions and increase sequestration should:

- Directly support actors (e.g., NGOs, industry, Indigenous peoples) who are developing and implementing innovative management and technology solutions to reduce the GHG emissions from industries with a significant ecosystem carbon footprint, such as the oil and gas, forestry, mining and agriculture sectors.
- Develop and grow ECCC programs focused on reducing land use change and degradation, such as loss of native grasslands and wetlands.
- Provide support for Indigenous peoples seeking to manage lands and natural resources with a lighter footprint and for local jobs.

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<sup>27</sup> Nature-based climate solutions, as defined by IUCN, help to address climate change while providing benefits for biodiversity conservation. <https://portals.iucn.org/library/sites/library/files/documents/2016-062.pdf>

- Support provinces to adjust and advance new forestry practices and land use planning to reduce their infrastructure footprint, while still ensuring jobs and safety.
- Ensure that any infrastructure funding or funding used to revitalize Canadian industries also consider how those investments could be made in a manner that would reduce ecosystem emissions from land use change and management practices.
- Address the need for the scientific and economic data required to develop the policies and regulations that further encourage actors to reduce their ecosystem emissions driven by ecosystem loss and degradation, for example by expanding the scope of the GHG Pollution Act.
- Support a better understanding and quantification of the GHG impacts that various activities are having on our natural assets, including wetlands, grasslands and oceans; and systemically including them into our laws and policies.

Investments could flow through existing channels in ECCC, INFC, AAFC, DFO and NRCan to help with resource deployment, but should be tracked carefully to ensure the funding criteria link back to providing: a) direct mitigation benefits from land use change and management by 2030; b) positive biodiversity outcomes, as well as, c) information to inform policies that will drive broader transformative change towards a greener economy.

#### Recommended Investment:

At least \$1 billion for reducing GHG emissions from land-use change and degradation over ten years. If managed carefully to leverage opportunities at around \$50/tonne CO<sub>2</sub> eq, this could leverage 2 MT of GHG emission reductions a year. Over 10 years and leveraging funding and policies for other related activities such as those listed above, these investments can put us on a path to achieving increased emission reductions from LULUCF in 2030. [ECCC, NRCAN]

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## CONSERVATION AND PROTECTED AREAS, including Indigenous Protected Areas and Guardian programs

COVID-19 has laid bare how our relationship with nature is badly out of balance. From the European Union, to Germany, and New Zealand, governments around the world are investing in healthy ecosystems and well-managed protected areas as cornerstones for building a sustainable economic recovery. Here at home, the Canadian government's enlightened commitments to protect 25% of land and ocean by 2025 and 30% by 2030 must also guide federal stimulus and budget investments to drive the transformational changes needed to build a cleaner and healthier economy that respects and protects the natural systems and biodiversity upon which we all depend.

The pandemic has reinforced for Canadians the benefits that parks and protected areas bring to nature and to people-- for their short-term health and long term well being. Yet, the spaces on which wildlife and people depend are being degraded and lost due to ever-expanding industrial, urban development, and climate change. In Canada, over half of all wildlife populations are in serious decline<sup>28</sup>, and we are losing critical ecosystems like wetlands and native grasslands. Large-scale networks of protected land are needed to support healthy ecosystems so they can sustain wildlife, sequester carbon<sup>29</sup>, and deliver the clean air, water, food, and other essential goods and services we need for survival including improved physical and mental health and cultural well being.

Indigenous-led conservation and stewardship is critical for this agenda, including expanding Guardian programs, Indigenous land and marine plans and Indigenous Protected and Conserved Areas (IPCAs) across Canada. See the section on IPCAs and Indigenous Guardians below for information on how investments in these areas can support goals for job creation and economic recovery, as well as key conservation, climate, and reconciliation outcomes

### Protecting Public Lands

In 2010 Canada endorsed an interim target of protecting at least 17% of our land and inland waters by 2020 and improving the quality of our protected areas as part of the UN's Convention on Biological Diversity (CBD) Strategic Plan. Over the past several years, the federal government has convened and led a nation-wide effort to achieve this target and invested more than \$1.3 billion over five years in nature conservation. This included creating the Canada Nature Fund to support conservation action by provincial, territorial, and Indigenous governments, conservation organizations, and other partners.

The historic investment is supporting efforts by provincial, territorial and Indigenous governments to establish new protected areas, including 55,000 square-kilometers in the Yukon's Peel River

<sup>28</sup> World Wildlife Fund Canada. (2017). Living Planet Report Canada. Retrieved from: [http://www.wwf.ca/about\\_us/lprc/](http://www.wwf.ca/about_us/lprc/)

<sup>29</sup> According to one study, Canada's national parks store approximately 4.43 billion tonnes of carbon, which is approximately 23 times Canada's 2009 annual greenhouse gas emissions. Kulshreshtha and Johnston 2004: Economic Value of Stored Carbon in Protected Areas; referenced in Parks Canada Agency, Canadian Parks Council Climate Change Working Group. 2013. Canadian Parks and Protected Areas: Helping Canada Weather Climate Change. <http://www.parks-parcs.ca/english/CPC%20Climate%20Change%20Report%20FINAL%20engLR.pdf>

Watershed, 27 new protected areas in Nova Scotia, the 50,000 square-kilometer Seal River Watershed in northern Manitoba, and a doubling of protected areas in New Brunswick.<sup>30</sup> Despite significant strides in the right direction, the job is not done yet. Canada is still lagging behind on terrestrial protected areas, with around 12% protection achieved.<sup>31</sup>

Given the lessons of the pandemic about the importance of protecting nature for human wellbeing, and with much of the world's remaining wilderness, the government must continue to lead and champion the importance of nature to our collective prosperity and well being.

Protected areas have a proven track record in delivering tangible economic benefits.<sup>32</sup> Investing in more and better managed protected areas, including Indigenous protected areas, will support short and long-term jobs across the country, build a long-term foundation for nature-based and culture-based tourism, and contribute to stable and diverse community economies. In 2017-18, the economic impact of visitor spending alone at Parks Canada sites included a \$2.6 billion contribution to Canada's GDP, almost 28,000 full time jobs across the country, and \$449 M in tax revenues across multiple levels of government.<sup>33</sup> Investments in conservation can thus play key roles in advancing economic, as well as social and environmental goals.

**For public lands, the Green Budget Coalition recommends that the federal government:**

*1) Continue to invest in conservation and protected areas to achieve 25% protection of land and freshwater by 2025*

Canada is 90% publicly owned land, meaning that the responsibility for land management and responsible stewardship is shared among federal, provincial, territorial, and Indigenous governments. Thus, all levels of government must contribute to the effort to protect more land and freshwater. In southern Canada, private land dominates, and non-governmental land trusts play an important role in conserving land.

*2) Lay out investment plans to deliver on the commitments to protect 30% of Canada's land and freshwater by 2030*

Canadians want Canada to lead on conservation. Polls show that public support for conservation and protected areas is high. A recent poll commissioned by The International Boreal Conservation Campaign (IBCC) showed that 9 out of 10 Canadians support the government's pledge to protect 30% of our land and seascape by 2030, 80% expect Canada to be a global leader in protecting land and water, and three quarters support expanding funding to create more protected areas.<sup>34</sup>

<sup>30</sup> <https://cpaws.org/protection-in-progress/>

<sup>31</sup> Canadian Wildlife Service (CWS), Environment and Climate Change Canada (ECCC). (2019). The Canadian Protected and Conserved Areas Database (CPCAD). <https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/protected-conserved-areas-database.html>

<sup>32</sup> Walls, M., P. Lee, and M. Ashenfarb (2020). National monuments and economic growth in the American West. Science Advances 6 (12). DOI: 10.1126/sciadv.aay8523

<sup>33</sup> 2017/18 data as provided by Parks Canada Infographic.

<sup>34</sup> <https://static1.squarespace.com/static/5a2ef5702278e792c098cc02/t/5e83cae95b213c10416e69c2/1585695470280/Pollara-Boreal+Forest+IBCC+Report+FINAL.pdf>

### 3) Continue Necessary Ongoing Investments in Protected Area Management

It is not enough to draw a line on a map and call it conservation. For conservation and protected areas to be effective, ongoing investments must be made in management and stewardship. One important lesson learned from the Challenge Fund is the importance of committing long-term funding to steward and manage new protected areas, in addition to providing funds for establishment. This is key to securing the support of provincial and territorial governments and communities, and to ensuring that protected areas deliver economic, social and environmental benefits.

#### Recommended Investments [ECCC, Parks Canada]:

1. Deliver on commitment to protect 25% of Canada's land and freshwater by 2025 by investing \$1.7 billion over five years:
  - a. \$700 million in the next two years (2020-2022)
  - b. \$1 billion over three years (2022-2025)
2. Deliver on commitment to protect 30% of Canada's land and freshwater by 2030 by investing \$1.6 billion over the subsequent five years (2025-2030).
3. Deliver needed investments to support ongoing management of existing protected areas of \$85 million per year ongoing.

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### Protecting Oceans with Effective MPAs

Marine Protected Areas (MPAs) not only conserve biodiversity but also sustain healthy fisheries, sequester carbon, support tourism and provide for coastal communities. Investments in MPAs produce economic benefits significantly greater than the cost of establishment.<sup>35</sup>

Over the past five years, Canada has gone from global laggard to potential leader in terms of ocean protection. In August 2019, Canada announced that it had protected 13.8% of its ocean territory, not only meeting, but significantly exceeding the 10% by 2020 target under the CBD. This included the protection of many iconic but vulnerable ecosystems including the Laurentian Channel MPA, Banc-des-Américains MPA, Tuvaijuittuq Interim MPA, and Tallurutiup Imanga NMCA, the Scott Islands marine National Wildlife Area, as well as the designation of multiple Marine Refuges. This tremendous achievement proves what can be done when there is political will and wise investment.

Yet this is just the tip of the iceberg. Recent studies have calculated that we need to protect 30-70% of land and oceans to effectively protect and restore biodiversity.<sup>36</sup> If we do so we can restore the

<sup>35</sup> European Union. 2018. Study on the economic benefits of Marine Protected Areas: Literature review analysis. Available at <https://ieep.eu/publications/the-economic-benefits-of-marine-protected-areas-in-europe>

<sup>36</sup> Woodley, Locke, Laffoley, *et al.* 2019. A review of evidence for area-based conservation targets for the post-2020 global biodiversity framework. PARKS. 31-46. 10.2305/IUCN.CH.2019.PARKS-25-2SW2.en.



health of our oceans within 30 years with an estimated global economic return of about \$10 per every \$1 invested, creating more than one million new jobs.<sup>37</sup> Polling has shown that Canadians support increasing ocean protection and do not think that current levels of protection are enough.<sup>38</sup> With a mandate and commitment to protect 25% of Canada's ocean by 2025, and achieve and advocate for protecting 30% by 2030, Canada is charting the right course.

The Green Budget Coalition recommends that the federal government:

*1) Deliver on commitment to protect 25% of Canada's ocean by 2025 and 30% by 2030, by establishing new MPAs and MPA networks, NMCAs and marine Indigenous Protected and Conserved Areas.*

In addition to helping maintain vital ocean ecosystem services, an investment in MPAs is an investment in coastal communities. Creating new marine protected areas provides an opportunity for long term job creation in remote coastal areas, investment in coastal infrastructure, and indirect benefits through goods and services provided during planning and management. Beyond establishing new sites, it is important the government develops an official policy to support implementation of its MPA protection standards across all federal agencies.

*2) Invest in the ongoing management and monitoring of MPAs.*

In addition to establishing new Marine Protected Areas, it is critical that the government invests sufficient resources for their ongoing management and monitoring. (Note that further recommendations on the need to significantly scale up investment in management, monitoring and enforcement are provided in the subsequent section on ocean conservation regarding climate impacts in marine ecosystems, as well as fisheries, vessels, and other marine industrial activities.)

Recommended Investments [DFO, ECCC, Parks Canada]:

1. Recommended Investment for Oceans Act MPAs and MPA network planning: \$185 million over 2020-2021, and then \$72 million per year ongoing.
2. Recommended investment for National Marine Conservation Areas and marine National Wildlife Areas: \$140 million over 2020-2021, which may include stimulus funding, and then \$53 million per year ongoing.
3. Invest in management of National Marine Conservation Areas and marine National Wildlife Areas: \$20 million over the next two years (2020-2022) and then \$20 million per year ongoing.

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<sup>37</sup> Duarte, C.M., Agusti, S., Barbier, E. *et al.* 2020. Rebuilding marine life. *Nature* **580**, 39–51. <https://doi.org/10.1038/s41586-020-2146-7>

<sup>38</sup> Seablue polling link

## Establishing Indigenous Protected and Conserved Areas on Land and Water

Large-scale, Indigenous-led establishment of Indigenous Protected and Conserved Areas (IPCAs) is necessary for meeting Canada's commitment to 25% protected areas by 2025 on the way to 30% by 2030. When taken holistically with Indigenous-led economic and land/ocean-use planning and stewardship programs, IPCAs (both land and marine) are important economic, social and cultural assets for Indigenous communities that will also help Canada meet its domestic and international commitments for reducing GHG emissions, protecting biodiversity, and advancing reconciliation.

Tourism is just one economic driver of IPCAs. Prior to COVID-19 Indigenous tourism in Canada contributed \$1.9 billion GDP annually, with a 20% annual growth rate, 40,000 employees and 19,000 businesses. Investing in IPCAs now will provide immediate support for communities, and also put in place the planning, infrastructure, and governance structures necessary to capitalize on economic opportunities from IPCAs, such as tourism, as our economy recovers.

For example, the recent [Thaidene Nënë Indigenous Protected Area](#) was established in 2019 with a \$30 million endowment that will generate \$1-4 million annually and support 18 new full time jobs critical to such a remote community. Prior to COVID-19, tourism development associated with Thaidene Nënë was anticipated to create at least 20 new year-round jobs and 30 seasonal jobs.

The Nature Fund Challenge Fund Program confirmed the demand for IPCAs across Canada. The Green Budget Coalition recommends that future funding support IPCA establishment along with the upfront economic development and land/ocean-use planning that creates the overarching framework for IPCAs and the stewardship and Guardians program that ensure their management. Such investments would accelerate IPCA development and the realization of its associated economic, cultural, climate and environmental benefits.

### Recommended Investment [ECCC, Parks Canada, DFO]:

*Recommendations for investing in Indigenous-led economic and land/ocean-use planning and IPCAs are embedded in Green Budget Coalition recommendations, elsewhere in this document, regarding: Protecting Public Lands, Protecting Oceans with Effective MPAs, and Managing Healthy Oceans.*

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## Indigenous Stewardship & Guardians

Investing in Indigenous-led economic development and land/ocean-use planning, environmental stewardship programs such as Indigenous Guardians, and establishment of Indigenous Protected and Conserved Areas (IPCAs) is a tested approach that will have economic benefits now that grow overtime and help Canada reach it's GHG emissions reduction targets and nature-protection goals.

Indigenous Guardians have provided critical emergency response capacity in communities during the COVID-19 pandemic. Outside of the current crisis, Indigenous stewardship programs support cost-effective and local monitoring of environmental and cultural values. These programs are essential in establishing and managing IPCAs and other formal conservation designations within their territories. Stewardship programs create stable, well-paying jobs in remote communities. They also have indirect economic benefits, such as improved health outcomes, food security, and cultural and language revitalization.

An [analysis of the Guardian Watchmen programs](#) on the BC coast found a 10:1 ROI annually for numerous social, cultural and economic Indigenous values. An [evaluation of the Dehcho and Akaitcho communities](#) in the North found that between 2008-2016 Indigenous-led stewardship programs hired 32 Indigenous Guardians for an average tenure of 3.6 years.

The federal government should significantly increase investments in Indigenous Guardians, both in terms of support for existing programs across the country as well as establishing new programs.

**Recommended Investment:**

*Indigenous-led efforts such as the [Indigenous Leadership Initiative](#) and [Land Needs Guardians](#) are calling for significant new investments in Indigenous-led conservation, including land/ocean- use planning and the creation of new IPCAs managed by Indigenous Guardians. In the spirit of reconciliation, the Green Budget Coalition affirms its support for these efforts and encourages the Government of Canada to adopt their budget recommendations moving forward.*

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## Complementary

# Nature and Biodiversity Conservation Recommendations

## Federal Habitat Restoration Program

Canada continues to lose more critical habitat than it conserves every year. We are now facing staggering losses of more than 75% of our native grasslands and 70% of wetlands in settled regions of the country. In some areas, the impacts of aquatic habitat degradation and loss have put many species at risk of extirpation, resulting in several being listed under the federal *Species at Risk Act*. In our forests, linear disturbances threaten many of our iconic mammals and aquatic life. Many of Canada's native meadow habitats and native grasslands on our Rights-of-Way (e.g., roadsides, hydro corridors, pipelines, railway lines) have been taken over by alien invasive grasses that are directly contributing to global native pollinator species decline. Simply put, this trajectory is not sustainable, and the approaches taken by all levels of government in response to these trends have been inadequate.

The GBC recommends that the federal government build on the commitment to plant trees and restore forest ecosystems managed by NRCan and ECCC, and invest additional funding for new and scaled-up national restoration program managed by ECCC focused on wetlands and native grasslands in cooperation with AAFC as part of a green recovery strategy.

Habitat loss is the main driver of species decline and, at the same time, this is resulting in increased ecosystem greenhouse gas (GHG) emissions through the release of ecosystem carbon, reductions in the carbon storage capacity of our landscapes, and the loss of critical climate adaptation and resilience services. These impacts are fundamentally undermining Canada's response to the biodiversity crisis and are limiting our ability to leverage nature-based solutions to help meet our climate change adaptation and mitigation goals. As we approach the [2021-2030 Decade on Ecosystem Restoration 2021-2030](#), Canada also has an international responsibility to take decisive action and do its part to replace its lost and degraded natural habitats across the country.

If we are to reverse the continued trends of unsustainable habitat loss for net habitat gains, and in turn support Canada's 2030 biodiversity and net-zero emissions by 2050 targets, we must take decisive actions to restore our lost and degraded habitats in the short and medium terms (particularly in highly impacted or fragile ecosystems), and protect those restored habitats and their ecological functions over the long-term (*this section*). Further, we must simultaneously protect the residual base of natural habitat across the Canadian landscape (*see the Protected Area section*), as we continue to implement habitat loss and land-use mitigation actions (*see the Investing in Canada's Nature-based Climate Solutions section*). Simultaneous protection and management actions are both fundamental and essential to maximize the return on restoration investments and ensure that the associated climate and biodiversity benefits are additive and long-term.

Further, studies tell us that habitat restoration activities are effective at generating jobs and economic stimulus. They support as many as 33 jobs per \$1 million invested, most of which result in localized employment benefits that generate well-paying jobs compared to average wages; similar to the construction industry at large. Data from the 2009 American Recovery and Reinvestment Act show that investments in habitat restoration projects in response to the 2008 financial crisis, resulted in, on

average, 15 jobs per \$1 million invested in restoration projects, and 30 jobs per \$1 million invested in labour intensive restoration projects. This is higher than the 8.9 jobs created for every \$1 million invested in oil and gas development.<sup>39</sup>

Canada now has a critical opportunity to bolster our economy while building landscape resilience, restoring critical climate adaptation services, supporting biodiversity and species recovery, and implementing nature-based solutions that will deliver essential mitigation outcomes towards Canada's net-zero emissions by 2050 target - an opportunity that it cannot afford to bypass. There are hundreds of 'shovel ready' ecosystem restoration projects across all habitat types in Canada, that with targeted investments and strategic implementation planning, can provide these win-win solutions.

The key will be to invest in restoration initiatives that maximize both socio-economic and ecological returns, advancing the government's vision for transformative change toward a nature-centered and low-carbon economy that will build a healthier cleaner future for all Canadians.

In addition to the federal government's current commitment to invest as much as \$2 billion over ten years in planting 2 billion trees over ten years for tree and forest restoration, we recommend investing an additional \$575 million over five years (or about \$115 million per year after an initial ramp up period) for a Federal Habitat Restoration Program, which would effectively restore wetland, native grassland and meadowland habitat. The tree planting program would be included in this federal restoration program. This investment would create many jobs, deliver landscape scale habitat gains, increase resiliency to climate change, and sequester carbon. Examples include:

- \$50 million per year over five years would result in approximately 30,000 acres of restored inland wetlands. We estimate that this program would also create approximately 20 person-years of employment per \$1 million invested in wetland restoration through planning, permitting, new construction and management work that requires diverse skilled labour and goods and services from many small businesses.
- \$100 million per year for ten years could restore about 10,000 km/year of linear disturbances in northern forests and create 80 five-person teams or 400 direct forest restoration jobs a year in northern communities, including Indigenous communities.

*See later in this document for the GBC's recommendation for an Ecological Goods and Services Program for farmers and ranchers, that could help support and advance this above investment.*

*More detailed information on GBC recommended investments in restoration for wetlands, forests, grasslands, and meadowlands on rights of way is available separately.*

<sup>39</sup> National Oceanic and Atmospheric Administration. (2017). Socioeconomic Benefits of Habitat Restoration. <https://www.fisheries.noaa.gov/feature-story/habitat-restoration-supports-jobs-stewardship>

## Habitat Project Renewal Fund

Although we have made positive progress in expanding our network of public and private conserved areas, inadequate natural asset infrastructure funding continues to jeopardize the climate adaptation, mitigation, and biodiversity benefits that these existing natural assets provide.

Many of these benefits were established through early investments and longstanding public and private partnerships that secured and restored some of Canada's most biodiverse and carbon-rich natural habitats. Some were established as intact natural landscapes, while others required intensive built infrastructure. Those projects, especially those employing built infrastructure to maintain or enhance their ecological function and integrity, now require major renewal, replacement or conversion to more naturally functioning designs. Similarly, these projects require scientific monitoring and a renewal of management strategies to ensure their viability.

The situation is similar for a number of privately conserved areas, particularly those that were enhanced prior to the 1990s and secured prior to the establishment of key publicly funded conservation support mechanisms. Many of these areas are falling into disrepair and require immediate remedial infrastructure renewal investments. The vast majority of these older permanently secured lands, held in trust by multiple conservation organizations, will never be converted to any primary purpose other than for biodiversity conservation and the provision of ecosystem services to Canadians.

Similarly, none of these privately held lands held in perpetuity are treated as "protected areas" nor are they captured under the Canadian Protected and Conserved Areas Database (CPCAD) maintained by ECCC. Under-investment and support for these habitats not only will cause their long-term decline but, due to their outright omission, are also causing Canada to dramatically under-report our collective conservation achievements against our Aichi-target commitments as a member nation signatory to the United Nations Convention on Biological Diversity (UNCBD).

The GBC recommends the federal government establish a new Habitat Project Renewal Fund to upgrade and extend the lifespan and functionality of existing conservation assets on public and private lands across Canada. In addition to supporting the resilience of our natural assets, protecting ecosystem carbon and contributing to the federal government's environmental commitments and mandate priorities, these strategic and targeted investments would create immediate and meaningful job opportunities with an economic multiplier effect, stimulating local and surrounding supply chains, and accelerating Canada's transition to a more resilient and environmentally sustainable economy.

This program would be administered by ECCC and implemented in collaboration with non-government partners across the country as part of the federal government's economic stimulus package designed to re-employ thousands of Canadians and inject funds into the economy.

**Recommended Investment:** \$120 million over five years, matched by \$80 million in non-federal government sources of funding [ECCC]

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## North American Waterfowl Management Plan Challenge Fund Top-Up

The North American Waterfowl Management Plan (NAWMP) is regarded as one of the most successful international habitat conservation partnerships in the world. To date, Canadian partners in NAWMP have secured 22.8 million acres, enhanced 3.5 million acres and influenced the conservation of 167 million acres of wetlands and associated habitats in Canada.

In addition to supporting healthy waterfowl populations, providing tangible biodiversity and climate change benefits, and directly contributing to Canada's new commitment to conserve 25% of Canada's terrestrial areas by 2025, NAWMP conservation projects provide net economic benefits to the Canadian economy. Canadian NAWMP activities require new construction work, create diverse jobs, provide ancillary ecosystem services that benefit all Canadians and allow the Government of Canada to leverage United States NAWMP funding for habitat conservation work in Canada.

Recent commitments from the United States to increase the match funding available for Canadian habitat conservation programs provide a critical opportunity for Canada to further capitalize on these ecological, economic and social benefits at a critical time in Canadian history. However, realizing these benefits requires new investments from Canadian NAWMP partners to meet the match funding requirements.

With only half of the \$20 million NAWMP portion of the Canada Target 1 Challenge funding allocated in 2019, and due to the unprecedented opportunity before us, the GBC recommends the federal government allocate the remaining \$10 million through a matching funds top-up investment available to Canadian NAWMP partners as part of the federal government's economic stimulus spending and green recovery plan. This investment will maximize Canada's access to the increased United States funding and will allow Canadian funding partners to meet the Canadian component of this match challenge in order to deliver additional conservation to support NAWMP, biodiversity and climate goals.

**Recommended Investment:** \$10 million in 2020, matched by external funds from NAWMP and Joint Venture partners [ECCC]

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## Establish the Pollinator Conservation Initiative

There are thousands of native pollinating insect species in Canada (i.e. bumble bees, solitary bees, flies, wasps, butterflies, moths, and beetles) that are responsible for billions of dollars in crop production and ecosystem functioning each year. Given the steep global decline of pollinators and the increasing unreliability of domestic bees to pollinate crops, Canada must act to conserve native pollinator diversity and abundance to increase food security, resilience of the agricultural sector, and sustainability of natural ecosystems. We recommend that, under a joint program, AAFC and ECCC i) establish a native pollinator Monitoring and Research Fund (\$3 million per year) to support national monitoring and reporting across southern Canada and leverage independent scientific research and technological developments in support of native pollinators and the habitat they need to provide pollination services; and ii) develop a Pollinator Protection Program (\$7 million per year) that provides increased operational capacity to fund on-farm native pollinator habitat restoration on marginal lands, knowledge transfer capacity to producers for Integrated Pest Management and habitat restoration, and national policy development and policy coherence in the context of global challenges such as climate change and biodiversity loss.

**Recommended Investment:** \$50 million over five years [AAFC, ECCC]

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## Investing in Communities by Protecting Canada's Freshwater

To support shoreline resilience, restore freshwater ecosystems and generate community economic benefit and employment, the Green Budget Coalition recommends that Canada invest in freshwater protection. Canada should enhance financial support available through application-based funding, while removing barriers such as match funding to speed up project implementation. These projects can deliver environmental benefits by preventing nutrient pollution, creating and remediating habitat, remediating contaminated and toxic sites, and controlling invasive species. These on-the-ground projects can also create 13-17 jobs per million dollars and, based on evidence from the U.S. Great Lakes Restoration Initiative, create a return on investment of 300%.<sup>40, 41</sup>

Additionally, Canada should align spending and action with the recommendations of the Great Lakes St. Lawrence Collaborative's [Action Plan to protect the Great Lakes and St. Lawrence 2020-2030](#) to invest \$2.2 billion over ten years. Long term investments are needed to address threats from climate change to shoreline resilience, nutrient pollution, bacteriological contamination of beaches and human and environmental exposure to toxic chemicals. New investments for preventing agricultural runoff with targeted conservation measures are needed to address harmful algae blooms in the Great Lakes and Lake Winnipeg. Our recommendation for the initial five-year investment of a ten year

<sup>40</sup> Assessing the Investment: The Economic Impact of the Great Lakes Restoration Initiative (2018): <https://www.glc.org/wp-content/uploads/GLRI-Project-Summary-Report-20180924.pdf>.

<sup>41</sup> Edwards et al (2013) Investing in nature: Restoring coastal habitat blue infrastructure and green job creation. *Marine Policy* 38: <https://www.sciencedirect.com/science/article/pii/S0308597X12001182>

action plan will create jobs in natural infrastructure, build resiliency, and contribute to long term savings. In Lake Erie, for example, harmful algae could cost Canadians \$5.3 billion in the long term if left unmitigated.<sup>42</sup> Our recommendation for enhanced funding to address key biodiversity and environmental concerns in the St. Lawrence, Great Lakes, and Lake Winnipeg will create jobs through renewal of invasive species control structures, restoration of fish and wildlife habitat, and other on the ground projects that drive economic activity and biodiversity conservation.

### Recommended Investment: \$1.3 billion

- \$100 million over five years to enhance application-based funding to address key biodiversity and environmental concerns for the Great Lakes, St. Lawrence and Lake Winnipeg.
  - \$40 million in new investments to strengthen aquatic invasive species control through control structure creation or renewal, expanded eradication programs, and research into prevention and control methods. [DFO]
  - \$30 million in new investments in fish habitat restoration in the Great Lakes and St. Lawrence River to benefit commercial and recreational species. [DFO]
  - \$30 million in new investments to reduce nutrient loading from the Red River and South Saskatchewan River Basins to Lake Winnipeg. [ECCC]
- \$1.2 billion over five years [ECCC] to implement the recommendations of the Great Lakes St. Lawrence Action Plan 2020-2030
  - \$200 million in new investments to reduce agricultural runoff that causes harmful algal blooms by using new technologies and conservation measures, targeting areas that contribute the most
  - \$574 million in new investments to enhance shoreline resilience via natural infrastructure
  - \$343 million in new investments to upgrade treatment and capacity of wastewater treatment plants to eliminate sources of bacteriological contamination
  - \$131 million in new investments to reduce human and environmental exposure to toxics

*See also recommendations, later in this document, for Natural Infrastructure and the Chemicals Management Plan.*

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<sup>42</sup> Smith et al (2019) Estimating the economic cost of algal blooms in the Canadian Lake Erie Basin. Harmful Algae, 87: <https://www.sciencedirect.com/science/article/abs/pii/S1568988319300915>

## Climate-Resilience Through Natural Infrastructure Solutions

The costs of protecting Canadians from the impacts of climate change are well-documented, widespread and increasing. Canada spent more in disaster response to flooding and wildfires and returning infrastructure to pre-disaster condition between 2010 and 2015 than over the previous 39 years combined.<sup>43</sup> The Insurance Bureau of Canada and the Federation of Canadian Municipalities estimates the cost of climate adaptation at the municipal level alone to be \$5.3 billion annually, and addressing the impacts of flooding to be one of the greatest costs.<sup>44</sup> A new report puts the cost of addressing shoreline erosion at \$800 million, which will increase as result of sea-level rise. At the same time, the Federation of Canadian Municipalities estimates that municipalities will incur between \$10 and \$15 billion in near-term, non-recoverable losses due to COVID-19, and many are on the brink of financial crisis.<sup>45</sup>

By first embracing and then implementing natural infrastructure solutions, municipalities can greatly increase their resilience to climate change and reduce the risks and costs of flooding, urban heat effect, shoreline erosion,<sup>46</sup> and other disasters that have become more prevalent with climate change. In this document, natural infrastructure refers to the natural vegetative systems and green technologies that collectively provide a multitude of economic, environmental and social benefits, while helping to mitigate climate change impacts. Examples of these vegetative systems include: smaller natural areas such as fields and gardens, green roofs and walls, and green assets used to manage stormwater runoff, such as rain gardens and restored wetlands; as well as larger areas, such as urban forests, parks (urban and more rural), and terrestrial and aquatic landscapes outside of urban areas that are not parks, such as portions of managed forest lands, large wetlands including salt water marshes, sea-grass beds, and native grasslands.<sup>47</sup>

Each dollar invested in natural infrastructures yields \$3 to \$15 of environmental, social and health benefits. Return on investments can reach 35:1 in the warmest and most polluted cities. A recent study estimated that natural infrastructure solutions in Ontario contributed \$8.33 billion in GDP and created 122,000 jobs in 2018 alone.<sup>48</sup> It also found that if 15% of Ontario's annual infrastructure spending was dedicated to natural infrastructure projects rather than continuing with business as usual, this sector would create an additional 43,200 jobs, generate \$5.4 billion in additional gross output (revenues), and contribute an additional \$3 billion to provincial GDP in 2030. When direct, indirect, and induced economic impacts are considered, the sector would generate 72,100 additional jobs and an additional \$5.4 billion in GDP. Further, these investments would result in significant cost savings, representing in some cases, hundreds of thousands of dollars in savings for municipalities, insurance companies, and homeowners.<sup>49,50</sup>

Investing in natural infrastructure solutions will help create new jobs, reduce costs and support cash-strapped provincial and local governments to better work with Indigenous, private and non-profit partners, such as farmers, conservation organizations and small forest owners to implement innovative natural infrastructure solutions that provide these critical benefits to Canadians.

<sup>43</sup> [https://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201605\\_02\\_e\\_41381.html#ex1](https://www.oag-bvg.gc.ca/internet/English/parl_cesd_201605_02_e_41381.html#ex1)

<sup>44</sup> <https://data.fcm.ca/documents/reports/investing-in-canadas-future-the-cost-of-climate-adaptation.pdf>

<sup>45</sup> <https://data.fcm.ca/documents/resources/reports/protecting-vital-municipal-services.pdf>

<sup>46</sup> <https://westbrookpa.com/glsicollab/reports/implementing-innovations-in-science-and-in-governance/>

<sup>47</sup> [https://greeninfrastructureontario.org/app/uploads/2020/04/Economic-Impact-Assessment-of-GI-Sector-in-Ontario\\_Online.pdf](https://greeninfrastructureontario.org/app/uploads/2020/04/Economic-Impact-Assessment-of-GI-Sector-in-Ontario_Online.pdf)

<sup>48</sup> [https://greeninfrastructureontario.org/app/uploads/2020/04/Economic-Impact-Assessment-of-GI-Sector-in-Ontario\\_Online.pdf](https://greeninfrastructureontario.org/app/uploads/2020/04/Economic-Impact-Assessment-of-GI-Sector-in-Ontario_Online.pdf)

<sup>49</sup> <https://www.horizonadvisors.org/natural-infrastructure-benefits>

<sup>50</sup> <http://assets.ibc.ca/Documents/Resources/IBC-Natural-Infrastructure-Report-2018.pdf>

In 2019, the government committed to investing \$3 billion dollars by 2030 for nature-based climate solutions, including tree planting actions that could restore or put in place new natural infrastructure. NRCAN was given the mandate to “help cities expand and diversify their urban forests” and “support the future and livelihood of workers and their communities in the transition to a low-carbon global economy.” The INFC mandate letter also spoke to adjusting the Disaster Mitigation and Adaptation Fund to support natural infrastructure, working with municipalities to build climate resilience and reduce GHG emissions, and creating an additional infrastructure fund by 2020-2021 to support priority projects and economic diversification for communities transitioning from fossil fuels.

All of these agendas can be supported by, and can support the expansion of, the use of natural infrastructure in Canada. In particular, we recommend:

1. Replenish and grow the Disaster Mitigation and Adaptation Fund (DMAF), while also adjusting the criteria to better allow natural infrastructure projects. Such changes include: a) allowing resilience projects as well as disaster mitigation actions to be considered; b) including conservation easements and supporting ecosystem goods and services programs as an eligible expense to support natural infrastructure projects on privately-owned land; c) suspending the \$20 million minimum expenditure threshold and reduce cost-sharing requirements to 20% for natural infrastructure projects initiated before September 2022.

Recommended replenishment: \$1 billion over five years

2. Expand the scope of the Investing in Canada plan’s Green Infrastructure Fund to more readily allow and support natural infrastructure projects, including shoreline erosion projects, and carve out 5% of the remaining \$11.9 billion in the fund specifically for natural infrastructure projects. Adjustments would need to include adding as allowable expenses the operation and maintenance of natural systems, measurement and evaluation of co-benefits, and land acquisition. Reduce cost-sharing requirements to 20% for natural infrastructure projects initiated before September 2022 as part of Green Recovery.

Potential resulting investment (from previously announced funds): \$595 million over five years

3. Funding to FCM to support municipalities developing “natural asset assessments” and other capacity building and readiness partnerships needed to advance natural infrastructure. To the extent possible, we recommend the federal tree planting occur in municipalities that have undertaken natural asset assessments or are investing in a municipal biodiversity and climate fund and could represent an “in kind” contribution to those municipalities as part of their broader plans.

Recommended Investment: \$16 million over four years

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## Ecological Goods and Services Programming for Agricultural Lands

The cumulative impacts from land degradation, loss of natural areas, and climate change, including more frequent and severe weather events, are environmentally and economically negative for Canada. Our ecosystems and land are becoming less productive in providing key ecosystem goods and services such as clean water, wildlife habitat, pollination services, and flood and drought control for surrounding and downstream communities. These losses are most acutely felt on the working landscapes of Canada where the majority of Canadians live.

Federal investment into an Ecological Goods and Services (EGS) program for agricultural lands will help rebuild, enhance and manage natural features like grasslands, wetlands, afforested areas, and riparian buffers on farm and ranch lands.

Other benefits include the opportunity to:

- Create significant employment in rural Canada, especially for young professionals with agricultural, environmental and management training;
- Enhance the sustainability of food production through increased pollinator services, soil improvement and retention, and water retention and filtration;
- Target marginal (uneconomic) land for projects thereby not impacting food production;
- Provide a new and additional revenue stream to farmers and ranchers based on project outcomes and management;
- Create new wildlife habitat for habitat for species-at-risk, migratory birds, waterfowl and other game species, and native pollinators; and
- Reduce GHG emissions / sequester carbon.

EGS programming provides a unique mechanism to positively engage private land-owners and managers in the fight against climate change. It is an efficient tool to rebuild land-based carbon stores - so far, an underutilized climate change mitigation strategy. And perhaps more important is the climate adaptation and resiliency that will come from enhancing ecosystems and natural cover to building greater flood and drought mitigation capacity in key watersheds as regional climates change over the coming decades.

### Recommended Investment:

\$20 million in 2020, ramping up to \$100 million per year for the subsequent four years (2020-2025) [ECCC, AAFC] for an Ecological Goods and Services Program for farmers and ranchers.

This program would create between 300 and 600 jobs in rural communities; reduce GHG emissions and sequester carbon; restore and enhance native and tame grasslands, wetlands, riparian habitat and other natural areas, including providing tree planting opportunities; create new wildlife habitat for pollinators, species-at-risk, migratory birds and game species; mitigate flood and drought and improve water quality; and increase agricultural sustainability through soil protection and water security. [ECCC, AAFC]

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## National Wildlife Collision Reporting & Infrastructure

Wildlife-vehicle collisions (WVCs) incur significant health, economic and environmental costs, including impacts on species at risk. WVCs are on the rise, costing an estimated \$280 million per year in Alberta alone in direct and indirect costs, according to a 2015 Alberta Transportation study.<sup>51</sup>

A 2003 study for Transport Canada recommended a national wildlife accident reporting system.<sup>52</sup> The data collected by the system would be used to identify hotspots, plan and monitor collision mitigation infrastructure, and create habitat connectivity plans. Adopting a smartphone-based system would produce more accurate, complete and timely WVC data.<sup>53</sup>

**Recommended Investment:** \$4.5 million over three years to work with the provinces and territories to develop and implement a national WVC data reporting system. [TC, ECCC]

The federal government has shown leadership in WVC mitigation infrastructure in Banff National Park, with 38 wildlife underpasses, 6 overpasses and fencing along the Trans-Canada Highway (TCH), that has reduced WVCs by more than 80%, and over 96% for elk and deer.<sup>54</sup>

Crossing structures also help to preserve wildlife migratory corridors, enhance connectivity among populations and reduce fragmentation of habitats.<sup>55</sup> However, despite these positive results, funding for such infrastructure is often scarce.

For example, in 2019 Alberta allocated \$20 million over 4 years for wildlife protection, including one overpass on the TCH that with fencing will likely cost \$14 million.<sup>56</sup> A 2012 study identified 10 sites along the same stretch of highway that need wildlife underpasses.<sup>57</sup> A properly sited wildlife crossing can pay for itself in 10 to 20 years, long before the end of the structure's projected 75-year lifespan.<sup>58</sup>

**Recommended Investment:** \$150 million over three years to support the building of federal, provincial and territorial WVC mitigation infrastructure. [TC, INFC, ECCC]

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<sup>51</sup> [Wildlife Watch App for Improved Road Safety in Alberta](#), Tetra Teck EBA, February 2016

<sup>52</sup> [Collisions Involving Motor Vehicles and Large Animals in Canada](#), L-P Tardiff & Associates Inc., March 2003

<sup>53</sup> [Wildlife Watch App for Improved Road Safety in Alberta](#), Tetra Teck EBA, February 2016

<sup>54</sup> [Budget 2019 sets aside money for wildlife overpass](#), Rocky Mountain Outlook, November 2019

<sup>55</sup> [Reducing Wildlife Vehicle Collisions by Building Crossings: General Information, Cost Effectiveness and Case Studies from the U.S.](#), Center for Large Landscape Conservation, February 2020

<sup>56</sup> [Budget 2019 sets aside money for wildlife overpass](#), Rocky Mountain Outlook, November 2019

<sup>57</sup> [Highway Wildlife Mitigation Opportunities for the Trans-Canada Highway in the Bow Valley](#), T. Lee, A. Clevenger and R. Ament, August 2012

<sup>58</sup> [Reducing Wildlife Vehicle Collisions by Building Crossings: General Information, Cost Effectiveness and Case Studies from the U.S.](#), Center for Large Landscape Conservation, February 2020

## Reinforcing Canada's Frontline of Defence Against Wildlife Disease

Canada is ill prepared to effectively deal with existing and emerging domestic wildlife diseases and threats to wildlife health. The COVID-19 crisis is a devastating example of the risks we take as a society when we fail to actively prevent the emergence and spread of wildlife disease. The Green Budget Coalition recommends that the federal government invest \$110 million over five years to fund the Pan-Canadian Approach to Wildlife Health.<sup>59</sup> Funding this program will result in strong, shared leadership to protect and promote wildlife health, prevent and control wildlife disease, and ensure food safety for Canadians that rely on wildlife for part of their diet.

Implementation of a national wildlife health program would allow Canada to achieve the following objectives:

- 1) Protect and conserve native fauna from harm due to emerging pathogens and sustain ecological and economic services provided by wildlife;
- 2) Provide assurances to Canadians that depend upon healthy wildlife for sustenance and livelihood;
- 3) Enable Canada to meet its national and international obligations for disease surveillance in relation to public health, agriculture and trade; and
- 4) Reduce surprises from emerging disease threats, particularly those anticipated with climate change, globalization, and erosion of ecological integrity.

A strengthened domestic approach to wildlife health would help position Canada on the international stage as a leader in surveillance, monitoring, and control of wildlife disease.

### **Background:**

The COVID-19 crisis has brought into sharp focus the need for countries to take wildlife health issues seriously for reasons of both human health and wildlife conservation. In the last decade we have observed several wildlife health issues arise in Canada and globally that have led to dramatic declines of wildlife, including white-nose syndrome in bats, chytrid fungus in salamanders, and chronic wasting disease in cervids. Wildlife disease is also a significant threat to human health in Canada with diseases such as West Nile virus, Lyme disease, rabies, and avian flu, as well as parasites such as trichinella, posing an ongoing threat. The current approach to addressing wildlife health issues in Canada is under-resourced and reactive. Consequently, problems are rarely addressed in their early stages when prevention and response options are greatest. Canada's on-going control efforts and research to address existing wildlife health threats is not sufficient to improve outcomes. Demands for wildlife health services and expertise are growing beyond current capacity because of the needs for assurances for trading partners, the need to ensure a safe and sustainable traditional food source for Indigenous Peoples and other Canadians who rely on wildlife for sustenance and livelihoods, and the increase in emerging diseases threatening public health, wildlife conservation and agriculture that has direct implications on biodiversity protection and the economy. Currently, Canada is not equipped to keep up with these emerging wildlife health threats.

Unlike public health and domestic animal health, which are the mandates of specific government agencies with direct budget allocations, wildlife health falls across multiple agencies at several levels

<sup>59</sup> A Pan-Canadian Approach to Wildlife Health, June 2018. [http://www.cwhc-rcsf.ca/docs/technical\\_reports/EN\\_PanCanadian%20Approach%20to%20Wildlife%20Health%20Final.pdf](http://www.cwhc-rcsf.ca/docs/technical_reports/EN_PanCanadian%20Approach%20to%20Wildlife%20Health%20Final.pdf)

of government. Accordingly, federal funding will need to be a combination of federal department support, provincial and Indigenous government capacity support, and support for non-government networks, organizations, and institutions. Furthermore, the program needs to have a strong focus on filling gaps and building capacity in northern Canada and providing improved services to Indigenous and non-indigenous hunters and fishers.

**Recommended Investment:** \$110 million over five years [ECCC, HC]

- \$45 million for the Canadian Wildlife Health Cooperative, to build the professional capacity within Canada, coordinate monitoring and surveillance, and provide access to diagnostic, data management and synthesis of information that is accessible across the country
- \$30 million for application-based program funding that will be open to all partners on an annual basis. This would include a Northern Wildlife Health Program.
- \$22.5 million to build government capacity to implement wildlife health programs
- \$12.5 million for governance, targeted Indigenous hunter communication tools, professional exchange programs, research fellowships, and State of Wildlife Health reports

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## Managing Healthy Oceans

More than 25% of Canadians live on or near the coast, and healthy coasts and oceans are every bit as important to our wellbeing as terrestrial ecosystems. With the longest coastline in the world and bound by three oceans, Canada has deep cultural and economic connections to marine ecosystems.

Healthy oceans are the foundation of prosperous coastal communities and sustainable ocean livelihoods in Canada including fisheries and aquaculture, tourism, marine research, and shipping. Beyond jobs, healthy and resilient oceans are critical for maintaining food security and a liveable climate for us and as habitat for millions of species that rely on marine ecosystems.

Our oceans are under increasing pressure. Already undermined by multiple stressors including historic overfishing, habitat destruction and pollution, the climate crisis is now driving ocean warming, acidification, shifts in currents, and changes to species' ranges - all contributing to an escalation of risk to ocean resilience and its ability to support people.

Healthy habitats and fish populations can buffer ocean ecosystems against the worst effects of climate change. A just, adaptive, and ecosystem-based approach to ocean management is needed to address rapidly changing conditions, rebuild biodiversity, and increase resiliency. Over the past few years, we have seen welcome attention and reinvestment by the federal government in an ambitious ocean strategy to modernize Canada's ocean governance. However, after the previous decade or more of cuts to management capacity, science and research, and enforcement infrastructure, these core functions remain underfunded - threatening to stall progress. In order to address the increasing complexity of oceans management in a rapidly changing environment and rebuild abundance, continued greater investment is needed.

The Green Budget Coalition recommends that the federal government:

- 1) Develop and actively implement robust Marine Spatial Plans that support MPA network establishment, in collaboration with Provincial and Indigenous Government partners.
  - 2) Significantly improve marine monitoring, research, compliance and enforcement infrastructure and capacity
  - 3) Increase fisheries science and management capacity to act rapidly on commitments to rebuild fish stocks and protect marine species-at-risk
  - 4) Ensure environmental sustainability within all aquaculture programs.
  - 5) Reduce Spill Risks and Biodiversity Impacts from Marine Shipping
- 1) Develop and actively implement robust Marine Spatial Plans that support MPA network establishment, in collaboration with Provincial and Indigenous Government partners.

Canada is currently in the early stages of developing Marine Spatial Plans in four bioregions (Salish Sea, Gulf of St. Lawrence, Scotian Shelf and Newfoundland and Labrador Shelf). Marine Spatial Planning brings together governments, resource users and communities to conduct regional level assessments of resource use and conservation needs that provide a sound basis for integrated marine management and conservation. These plans can be instrumental in supporting and providing an essential context for the designation and management of MPAs and MPA networks (including National Marine Conservation Areas) which have been addressed in the previous section.

Successful Marine Spatial Planning, including MPA network planning, requires effective co-governance and co-management structures involving federal departments, provincial and territorial governments, and Indigenous Governments and Peoples. Indigenous Governments have a strong role to play in the development and implementation of marine plans, many Indigenous communities have already developed marine and land-use plans. It also requires robust engagement of stakeholders and communities, as well as the collection of detailed and current ecological and socio-economic data. The resulting plans need to be regularly evaluated and revised through adaptive management. Adequate funding is required to support these processes and structures over the planning phase as well as into the implementation phase.

#### Recommended Investment:

Develop and actively implement MSP (in addition to recommendation for MPAs in earlier recommendation): \$118 million in 2020-2022 (which may include stimulus funding), and then \$48 million per year ongoing. [DFO]

## 2) Significantly improve marine monitoring, research, compliance and enforcement infrastructure and capacity

Research, monitoring, and enforcement capacity on our oceans have been drastically reduced through a combination of direct funding cuts and subsequent lack of reinvestment. Canada now faces significant and consequential annual data gaps due to research vessel breakdown that hinders our ability to assess and manage fisheries both domestically and as part of international management organizations. A lack of vessels and personnel also affects the coverage of compliance and enforcement monitoring in the inshore and offshore. Onboard and dockside fisheries monitoring, observing, and data collection is often failing to achieve coverage targets. Significant restructuring is needed to ensure modern, scientifically sufficient, safe, and reliable programs. In addition to filling these current gaps, as Canada continues to increase marine protected areas to meet conservation targets, there will be increased need for improved research and monitoring capacity to support effective protection and adaptive management.

Investment in improving monitoring and enforcement presents a significant opportunity for stimulus and recovery projects that create thousands of long-term and meaningful jobs and career opportunities, particularly within coastal communities that have been struggling with economic decline and job loss for decades. These opportunities would be of particular value to fishing communities and Indigenous communities and could dovetail with investment in protected area establishment, MSP, and improved resource management. Investment in vessel and equipment production and repair would inject funding directly into coastal economies, supporting skilled jobs within SMEs.

#### Recommended Investment:

Review observer and dockside monitoring programs and finalise gaps in guidance under the National Catch Monitoring Policy. Invest through government/industry cost-sharing or pilot projects to immediately increase to 100% coverage with at least 20% auditing on active, high impact gear through a combination of human observers and electronic monitoring: \$60 million over two years [DFO]

Invest in enforcement personnel and necessary boarding inspection equipment: \$75 million over three years [DFO]

### 3) Increase fisheries science and management capacity to act rapidly on commitments to rebuild fish stocks and protect marine species-at-risk

Acknowledging that many Canadian fisheries are challenged in 2020 due to COVID-19 we believe that specific types of stimulus investment should be considered beyond those needed for immediate financial support for fisheries and processors but that also take advantage of the opportunity to invest in transformational initiatives that help us better understand, manage fisheries and increase the probability of ensuring sustainable fishing quotas and practices are implemented over time.

Since 1970, the estimated biomass of Canada's fish stocks has been reduced by 52%. A 2019 report by the Auditor General (OAG) highlighted the need for DFO to better manage, update and improve fish stock data, and to rebuild fish stocks in Canada<sup>60</sup>.

Eighteen Atlantic Canadian marine fish species are considered endangered or threatened<sup>61</sup> and forage fish populations from coast to coast have seen unprecedented declines, affecting the health of species like the western Bluefin Tuna, the endangered Southern Resident Killer Whale and many others.

Over 30 aquatic species with a COSEWIC designation of threatened or endangered await listing on SARA, with some waiting for years. Aquatic species are often left in this limbo because they are impacted by economically important fisheries that may be curtailed if there is a SARA listing decision. There are also dozens of freshwater and marine species listed under SARA now awaiting critical habitat declarations and the required recovery action plans.

New measures are needed to undertake more frequent stock assessments, and improve knowledge of data poor fisheries in order to rebuild fish stocks upon which coastal and Indigenous communities rely.<sup>62</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 GBC 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. However, significant gaps remain. Continued investment is needed to:

- Develop policies and update management structures to implement Canada's new *Fisheries Act* requirements for science-based rebuilding plans
- Ensure capacity in management and science departments to adhere to dates committed to for rebuilding plans in response to the OAG report on Sustaining Canada's Fisheries;
- Establish science-based catch limits, harvest control rules, and management plans for all fisheries that integrate ecosystem-based fisheries management frameworks
- Develop and implement recovery plans either through SARA or the *Fisheries Act* as soon as a marine species is assessed as threatened or endangered by COSEWIC

<sup>60</sup> 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)

<sup>61</sup> 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>

<sup>62</sup> 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.



- Conduct a legislative review to make the SARA legislation more effective for protecting aquatic species.
- Fund and support the Species at Risk Advisory Committee.

Recommended Investment for fisheries rebuilding and continued implementation of new Fisheries Act: \$175 million over five years [DFO]

Recommended Investment for aquatic Species At Risk: \$130 million over five years [DFO]

#### 4) Ensure environmental sustainability within all aquaculture programs

Properly managed, sustainable aquaculture has the potential to benefit Canadians and support coastal and rural communities, including Indigenous communities.<sup>63</sup> However, open net pens in the ocean can have unacceptable impacts on wild fish, benthic habitat, and the larger ocean ecosystem.<sup>64</sup>

Significant investment is required to implement commitment to remove open net pen aquaculture from the ocean ecosystem. Continued investment is also required to address the concerns 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 and fish habitat.<sup>65</sup> This is critical for both the Pacific and the Atlantic coasts.

The GBC recommends that DFO's Sustainable Aquaculture Program be expanded to include a cross-department approach 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: \$125 million over five years [DFO]

#### 5) Reducing Spill Risks and Biodiversity Impacts from Marine Shipping

Half of Canada's wildlife species are in decline. Disturbance, oil spills, strikes, and pollution from ships can severely impact critical habitat as well as community food security and health. Putting measures in place to eliminate dumping and other harmful impacts from shipping in marine protected areas, requiring the use of advanced treatment systems for grey water and sewage, and banning the use of 'scrubbers' in Canadian waters would significantly reduce cumulative impacts and safeguard ocean and coastal community health.

<sup>63</sup> The Finance Minister's Advisory Council on Economic Growth identified agriculture and food – including aquaculture – as a key sector to leverage as a driver for a future-oriented economic agenda.

<sup>64</sup> 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)

<sup>65</sup> 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)

Recommended Investments:

\$15 million over five years, starting immediately, to prepare for 2024 when an international ban on HFO in the Arctic comes into effect, for a fuel transition fund to support the phase out of polluting HFO to lighter, less polluting fuels in the shipping industry. [TC, ECCC]

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.

*Developing Policy Tools*

\$20 million over two years for policy research and stakeholder engagement to:

- Ban the use of ‘scrubbers’ (also known as Exhaust Gas Cleaning Systems) in Canadian waters to eliminate the dumping of contaminated discharge water; and
- Mandate the use of Advanced Wastewater Treatment Systems in Canadian waters for sewage and greywater, and implement national policies, including in the Arctic, to prevent the dumping of any effluent treated or untreated from ships within 24 miles of the coast and in marine protected and Indigenous protected and used areas.

*Recommendations for Generating Revenue: [TC]*

- Establish a Vessel Pollution Control Fund: Require the collection of fees from vessels and deposit such fees in the Fund for use in carrying out the programs specified above.
- Cruise Tourism: Require the collection of a fee for every passenger who comes into Port in Canadian waters to fund enforcement, monitoring, and environmental initiatives such as treatment and shore power.
- Insurance Fund: Establish a legally enforced insurance fund paid by the marine sector for local communities, public health, and the environment that are negatively impacted by the shipping industry’s activities. This fund can help with any negative disruptions that the industry has on people and the environment where it does business. This fund would ensure that there is proper compensation for those people amid any potential disruption or disaster, including crew affected by the COVID-19 pandemic.

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## Expanding Ghost Gear Clean-up

The Green Budget Coalition appreciated the federal government's allocation of \$8.3 million to help clean up ghost gear. However, we sense that this is unlikely to be sufficient to address the problem and achieve the government's objectives.

In that context, the Green Budget Coalition recommends that the Government of Canada enhance its commitment to support coastal communities to clean up ghost gear and reduce impacts on wildlife, including endangered whales, by doubling its investment in the Sustainable Fisheries Solutions and Retrieval Support Contribution Program for innovation in rope-less gear and cleaning up ghost gear.

Recommended Investment: \$8 million in 2021-22 [DFO] *(in addition to previously announced funds)*

*See also, earlier in this document, the recommendation regarding Supporting SMEs and municipalities to reduce reliance on single-use plastics.*

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## ENVIRONMENTALLY SUSTAINABLE AGRICULTURE

### *Supporting Environmentally Sustainable Land Use and Biodiversity*

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment Report on Biodiversity and Ecosystem Services<sup>66</sup> notes the critical role of sustainable agriculture in feeding humanity while enhancing the conservation and sustainable use of biodiversity. According to the report, land use changes, related largely to agricultural expansion and unsustainable practices, have the largest negative impact on ecosystems people depend on for food, clean water and a stable climate.

Without involvement and leadership from the federal government – including adequate funding for programs, knowledge transfer, and metrics – biodiversity is bound to continue to decline on agricultural lands across Canada. This loss degrades the ecological goods and services (EGS) that have always supported farming production, and magnifies the vulnerability of agricultural lands to climate change. Reversing this trend would contribute to greater resilience in our agricultural production, and put farmers (and Canada) on better ground for an uncertain future.

See also:

- *Ecological Goods and Services Programming for Agricultural Lands (earlier in this document);*
- *Establish the Pollinator Conservation Initiative (earlier in this document); and*
- *Appendix 1: Sustainable Agriculture, Transitioning to Environmentally Sustainable Land Management and Food Production in Canada in the next Canadian Agriculture Partnership & Business Risk Management Plan*

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### Re-establish a Public Plant Breeding System

A sustainable food system needs high quality, locally adapted seeds that perform well in low-input systems with key traits of drought and flood tolerance, pest and disease resistance, productivity, and efficient nutrient use. Farmers' ongoing, unrestricted access to these varieties must be guaranteed. Greater support is needed for publicly funded initiatives to conserve the diversity of genes, species, varieties, cultivars, and breeds. This requires public investment in robust farmer-led or participatory research programs and networks that will serve the public interest while enhancing biodiversity, climate mitigation and adaptation, rural economies and food security.

Recommended Investment: \$20 million over 5 years [AAFC]

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<sup>66</sup> <https://www.ipbes.net/news/ipbes-global-assessment-summary-policy-makers-pdf>

## Build a Facility for the Canadian National Collection of Insects, Arachnids, and Nematodes

Effective public policy needs evidence-based decision-making and this requires protection of scientific assets. The Canadian National Collection of Insects, Arachnids and Nematodes is one of the five largest assemblages of its kind in the world. Established in 1886 by James Fletcher, the first official Dominion entomologist, it has grown to contain more than 17 million specimens. Many specimens are the only known representatives of their species. The collection is actively used by entomologists in Canada and around the world to inform research on emerging crop pests and bio-control. This collection will be critical to inform our understanding of change in the agricultural landscape under climate change conditions. Although one of the most important invertebrate collections in the world, it is currently stored in 1,500 metal cabinets, many scattered in the hallways of a building on the federal government's Central Experimental Farm in Ottawa, and is in jeopardy of being lost due to improper storage conditions. With a modest one-time investment, this collection could be safely retained and used to inform scientific understanding and public policy in perpetuity.

Recommended Investment: \$45 million [AAFC]

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## Conserving Canada's Birds Across Their Year-Round Range

Canada's 451 native bird species are found across every habitat, providing important ecological services such as pollination, pest control, seed dispersal and nutrient cycling. Birds contribute billions of dollars to the global gross domestic product through these ecological services.

Yet all is not well. The [2019 State of Canada's Birds](#) reports that many bird species continue to decline at alarming rates primarily due to habitat loss in Canada and Latin America. In 2019, we also learned that North America has lost one quarter (3 billion) of its wild birds since 1970. In Canada, the two groups with the most alarming trends are grassland birds and aerial insectivores (e.g., swallows) which have declined by 57% and 59%, respectively, since 1970.

*In Canada*, we are calling for targeted investments to stem the declines in the two groups of birds most at risk through:

- Implementing a roadmap for the protection of aerial insectivores in Canada, including a gap analysis of the legal framework, a Canada-wide insect monitoring program, identification of best practices to support aerial insectivores, consideration of harm to birds during the pesticide approval process, a phasing out of pesticides directly toxic to birds or their insect prey, and a return to the principles of Integrated Pest Management in agricultural production.
- Programs for ranchers and farmers to support grassland conservation measures and services (e.g., conservation easements, Best Management Practices). (*See Federal Habitat Restoration Program, earlier in this document.*)

We also know that a range of human-associated causes of bird mortality such as cat predation and window collisions take a huge toll on bird populations annually. Mitigation can save millions of bird lives annually. For that reason, we are calling for an investment in measures to mitigate human-related bird mortality in urban and rural Canada.

*In Latin America*, Canada can work with governments and NGOs to:

- Enhance protection as existing reserves and create or expand protected areas as needed;
- Restore habitat, especially in protected area buffer zones and conservation corridors; and
- Reduce human disturbance and direct mortality to shorebirds from illegal hunting, poisons, feral cats and dogs, and livestock, through regulations, enforcement, and public education.

### Recommended Investments:

\$4 million over four years (2021/22 through 2024/25) for an aerial insectivore roadmap and recovery fund [ECCC]

\$10 million over four years for conservation in Latin America [ECCC].

\$4 million over four years to address human-related threats to migratory birds in Canada [ECCC].

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## International Biodiversity Conservation

Just as climate change is regarded as a global issue, with higher income countries having an obligation to help developing countries, so it is with global biodiversity loss. The world's natural heritage belongs to all of us and is our shared responsibility. And it is most under threat in low-income tropical countries. Disease outbreaks such as the COVID-19 pandemic that result from the exploitation of wild animals are considered likely to increase as wildlife and habitats are put under more stress. This highlights the need for a worldwide effort to address threats to ecosystems and wildlife.

International cross-border public support for biodiversity is in the range of USD 3.9-9.3 billion per year<sup>67</sup> and while global conservation spending is considered less than a third of what is needed, the funding gap is far greater in tropical low-income countries.

As parties to the UN Convention on Biological Diversity develop a post-2020 framework, Canada could emerge as a leader by committing to substantial assistance for developing countries and encouraging other developed countries to do the same, while continuing to increase conservation action at home.

**Recommendation summary:** Begin building financial support from Canada for high-impact conservation in lower-income countries through bilateral agreements<sup>68</sup> or partnerships with conservation NGOs.

**Recommended Investment:** \$40 million in 2020/2021, scaling up to \$200 million, ongoing, by 2025/2026. [GAC, ECCC]

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## Increasing Canada's Role in the International Union for the Conservation of Nature

Addressing the global challenges of climate change, biodiversity loss, and the transfer of diseases from wildlife to humans all require cooperation through multinational and multilateral institutions that support the transformational changes needed. Likewise, making progress on the Sustainable Development Goals and achieving Canada's domestic and international objectives requires cooperation with strong international partners.

The International Union for the Conservation of Nature (IUCN) is a strong international organization committed to addressing the major environmental challenges of our time while advancing sustainable development goals. The IUCN is noted for its intellectual leadership in developing comprehensive approaches to nature conservation, such as nature-based solutions and ecosystem-based conservation with the potential to also address societal challenges. Its unique membership of governments, NGOs and Indigenous Peoples Organizations, and its international profile and high-level political engagements have enabled it to establish a track record of creating standards and processes that engage members and others from around the world on important conservation issues.

<sup>67</sup> OECD, 2020. A Comprehensive Overview of Global Biodiversity Finance.

<sup>68</sup> We view biodiversity support as separate from and additional to development assistance.

The Green Budget Coalition recommends that the Government of Canada increase its role and leadership within the IUCN by supporting two targeted programs of work that align strongly with Canada's interests.

- 1) Strengthen development of nature-based solutions that blend private capital and government contributions.

IUCN is increasingly relied upon to provide nature-based solution expertise for initiatives that blend private capital and government sources, such as the Global Environmental Facility and the Green Climate Fund. Canada's investment would advance development of these types of initiatives by creating a fund to support the early stages of planning and partnership development. It would also advance the engagement of women and men to create and implement gender equitable nature-based solutions.

- 2) Strengthen civil society organization reporting on progress toward achieving the nature and climate-focused Sustainable Development Goals (SDGs) 13, 14 and 15: Climate Action, Life Below Water, and Life on Land.

The nature and climate focused Sustainable Development Goals (13, 14 and 15) underpin many of the other goals. Success on these is critical to the overall success of the SDGs. Governments have developed mechanisms to monitor and track their own progress toward achieving the SDGs, but governments cannot achieve the SDGs alone. They need the support, leadership, and participation of civil society. However, adequate mechanisms do not exist to report on the contributions and impacts of civil society organizations whose work helps make progress on the nature and climate-focused SDGs. Canada's investment would allow for the development of a process to collect, analyze, and report on contributions and progress of civil society toward achieving the SDGs 13, 14, and 15.

Both investments provide Canada opportunity to shape major international initiatives consistent with its policy goals and values.

**Recommended Investment:** \$8 million over four years [ECCC]

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# OTHER ENVIRONMENTAL PRIORITIES



## Establishing a Canada Water Agency

The science and rising costs of water-related climate change impacts are telling us that Canada is facing an emerging water crisis for which we are largely unprepared. The federal government's commitment to establish a Canada Water Agency is an important step towards building the collaborative watershed management and governance systems we need to achieve a more resilient and secure freshwater future for Canada. While aspects of water management in Canada are provincial jurisdiction, each jurisdiction acting individually does not provide us with the information and systems needed to ensure that water is being managed and governed effectively and proactively at a national level. We currently lack the ability to coordinate water management decisions and policies across provincial/territorial borders and continue to operate without comprehensive information about our lakes, rivers, streams, groundwater and wetlands. Many of the associated risks remain unknown, fragmented and go unmitigated across jurisdictions. In order to create a better and more cohesive water management regime, a national, single window agency is needed. The mandate of this agency would be to:

1. Coordinate and modernize freshwater management systems and legislation;
2. Expand and enhance water monitoring to address current gaps and standardize data reporting related to water quantity and water quality across Canada.
  - a. **Water quantity:** The agency needs dedicated resources to establish a national flood forecasting system and provide coordinating capacity across governments to anticipate climate threats to water security. The agency should use a collaborative watershed approach and maintain basin integrity against mounting pressure for ecologically damaging water diversions and continued wetland drainage in some jurisdictions that makes watersheds less resilient to flooding. Through an expanded, standardized and coordinated water monitoring network the agency can anticipate climate threats to at-risk watersheds and support freshwater projects that promote flood and climate resilience. In the long term, the Agency should prioritize investments and action to protect and build resiliency among shoreline communities from the threat of flooding and climate change impacts.
  - b. **Water quality:** Systematic and standardized water monitoring data on contaminants, such as pesticides and agricultural nutrient run-off, manufacturing and wastewater effluents is needed for ECCC and Health Canada to assess risks to environmental and human health. ECCC and several provinces currently conduct water monitoring, but there is a need to expand capacity to provide the standardized data needed by agencies to fulfill their mandates particularly under the *Pest Control Products Act* and the *Canadian Environmental Protection Act*. Water quality data is also needed to identify priorities for long term watershed health, and wastewater infrastructure investments. *(See also, later in this document, the related recommendation regarding the immediate need for a two-year water monitoring pilot within the PMRA).*
3. Expand, enhance and standardize publicly available water monitoring data and create a central, credible repository for information related to water in Canada for governments and the public;

4. Better identify and anticipate climate threats to water security as well as ways to mitigate threats;
5. Improve water governance, including providing a meaningful forum in which to integrate water priorities and needs of Indigenous communities into the national dialogue on water;
6. Align long-term actions and investments with the recommendations of the [Great Lakes St. Lawrence 2020-2030 Action Plan](#) to reduce human and environmental exposure to toxics, and the threat of flooding;
7. Work collaboratively with partners to identify priorities for research and action; and
8. Enhance public trust in resource governance by reporting to Parliament annually on the state of freshwater in Canada.

To be effective, this agency must have the resources necessary to coordinate within and among 20 federal departments with water-related responsibilities - as well as provincial, municipal, territorial and Indigenous governments, researchers, and an external advisory committee. Federal leadership through this agency is essential in making Canada climate-ready and presents a vehicle by which to advance commitments to reconciliation.

**Recommended Investment** [ECCC]: \$200 million over five years to establish and operationalize the Canada Water Agency, including capacity to support water monitoring

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## Renewal of the Chemicals Management Plan

Canada's cornerstone initiative for protecting human health and the environment from pollution and toxic chemicals is sunsetting in March 2021. With compelling scientific research underscoring the connection between toxic chemical exposure and chronic illnesses such as asthma, diabetes and cancer, and growing evidence of a strong link between toxic pollution and more severe COVID-19 outcomes, continued investment in a renewed CMP at current funding levels is vital for our public and ecosystem health.<sup>69</sup>

Exposure to toxic chemicals in the air, water and consumer products, is increasingly linked to the rise of chronic illnesses in Canada. As the world grapples with recovering from the COVID-19 pandemic, leading researchers from reputable academic institutions have published research demonstrating a compelling connection between our exposure to pollutants and illnesses such as diabetes, COPD, hypertension, and heart disease, which are risk factors for severe sickness from COVID-19 and even mortality. These scientific revelations make clear that Canada's investment in pollution prevention is key to reduce chronic disease burden and foster resilience when faced with public health crises such as pandemics.

By 2021 the federal government anticipates it will complete the task of assessing 4,300 chemicals prioritized through the categorization process in 2006. But the job of protecting Canadians from the risks of chemicals will be far from complete. A recent parliamentary review of the Canadian Environmental Protection Act as well as several evaluations conducted by the Office of the Auditor General of Canada have revealed important gaps in the implementation of the CMP.

As a result of the review of CEPA by the Standing Committee on Environment and Sustainable Development in 2017, the federal government has committed to strengthening the Act and better addressing the risks of toxic substances. The renewal of the CMP is vital to the effective implementation of a modernized CEPA.

Furthermore, since the beginning of the CMP, Canadians and the environment have faced significant new threats that the current program has been unequipped to address. From plastic pollution and widespread exposure to endocrine disrupting chemicals to regrettable substitution and the rise of e-commerce and emergence of tens of thousands of new substances. The renewal of the CMP would enable government departments to tackle these issues as well as other priorities identified by the government in its CMP post-2020 stakeholder consultations over the last few years such as the reassessment of certain chemicals to consider vulnerable populations, including workers, and new science on potential harms and exposure.

**Recommended investment:** \$100 million annually, starting in 2021-22 and ongoing; [ECCC, HC]

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<sup>69</sup> Health Canada. Pest Control Products Sales Report for 2017



## Closing the Resource Gap at Health Canada's Pest Management Regulatory Agency

*The COVID-19 crisis has prompted strong recognition of food security issues among Canadians, both food affordability and the ability to produce food domestically. Alongside COVID-related government investment to support Canada's agricultural sector, longstanding challenges remain in achieving timely pesticide regulation. To keep pace with the needs of growers and other pesticide users, federal statutory authority, obligations, and capacity to assess and regulate pesticides must be expanded.*

Assure adequate funding to update pesticide risk assessments. As required by law, PMRA initiates a re-evaluation of each registered pesticide on a 15-year cycle. However, PMRA cannot keep pace with a workload of both aging files and an increasing backlog, exceeding capacity and existing resources.<sup>70</sup> PMRA recently undertook a review of the re-evaluation program, which resulted in a proposal for a more integrated approach. While the new approach is intended to achieve greater efficiency, increased funding is essential to avoid problems with performance, further delays, and limits to PMRA's ability to respond to stakeholder expectations and emerging issues. This situation threatens to undermine the integrity of Canada's pesticide regulatory regime.

Moreover, PMRA must also complete re-evaluations for pesticides registered before 1995, which pose unknown risks, never having been assessed in Canada using modern scientific methods. Thirteen large and complex historical reviews remain incomplete. Additional, dedicated resources are needed to clear this backlog.

Launch a pesticides water monitoring program. A key element of the new integrated approach to pesticide re-evaluation is early and ongoing identification of changes in pesticide use and exposure. Thus, success of the new approach will require investment in a systematic approach to collecting robust water monitoring data. Currently, PMRA does not conduct water monitoring and available data from other federal departments, provinces, and stakeholder associations often lack the level of detail needed for exposure assessment calculations.<sup>71</sup> (see *related recommendations regarding the Canada Water Agency, earlier in this document*)

Upgrade label requirements. Re-evaluations routinely result in changes to use requirements and these are specified on the product label. The label is the key interface between a pesticide risk assessment and its end use. In 2019 PMRA launched a "Label Improvement Initiative" that requires additional resources to address identified problems such as label consistency and clarity, as well as implementation issues.

Fund compliance and enforcement. In 2018-19 PMRA conducted 217 "Compliance Outreach" educational activities and just 780 inspections, over 500 fewer inspections than in 2016-17. This number equates to less than 1% of the 193,000 farms in Canada (not to mention non-agricultural uses of pesticides). The rate of compliance by sub-sector ranged from as low as 8% (mainly due to illegal imports) up to 100%,<sup>72</sup> with a multi-year problem of non-compliance among pest control operators

<sup>70</sup> Health Canada, Update on Re-evaluation and Special Reviews. Presentation to Pest Management Advisory Council, February 2, 2020.

<sup>71</sup> Health Canada, Pest Management Regulatory Agency 2018-2019 Annual Report, p. 20.

<sup>72</sup> Health Canada, Pest Management Regulatory Agency 2018-2019 Annual Report, pp. 16-17.

(exterminators) apparent from multiple fines levied in this sector again during 2019.<sup>73</sup> Across all pesticide uses, a more robust compliance and enforcement program is needed to ensure that end users properly implement risk-reduction requirements and restrictions, particularly label changes.

### Recommended Investment:

An additional \$80 million over two years [Health Canada] to upgrade post-market pesticide regulation and enforcement as follows:

- \$65 million for PMRA's post-market review program (roughly double the current annual spending).
- \$5 million for PMRA to launch a water monitoring pilot.
- \$2 million for PMRA to implement its Label Improvement Initiative.
- \$8 million for Health Canada to expand pesticide compliance and enforcement activities.

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<sup>73</sup> Health Canada, PMRA Enforcement Bulletins, 2019: <https://www.canada.ca/en/health-canada/services/consumer-product-safety/pesticides-pest-management/public/protecting-your-health-environment/compliance-enforcement/enforcement-bulletins.html>

## Upgrading Enforcement of Environmental Laws

A robust regulatory framework and effective enforcement of environmental laws will be an important foundation for rebuilding Canada's economy. ECCC is responsible for enforcing federal laws that protect air, water, land and wildlife: the *Canadian Environmental Protection Act, 1999*; pollution-prevention provisions in the *Fisheries Act*; *Migratory Birds Convention Act, 1994*; *Canada Wildlife Act*; *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act*; and *Species at Risk Act*; and their regulations.

There has been no significant new investment in environmental enforcement since Budget 2008 – although the number of protected species and places, and pollution prevention regulations has increased significantly over the past decade. An audit of ECCC's enforcement of CEPA regulations in 2018, by the Commissioner for Environment and Sustainable Development (CESD), found that the department had not carried out a single inspection in relation to many toxic substance regulations. ECCC's forward regulatory agenda, which includes 30 new CEPA or *Fisheries Act* regulations, expanding federally protected wildlife areas and eliminating SARA listing backlogs, will further stretch existing enforcement capacity.

ECCC is in the final stages of implementing a risk-based enforcement planning framework. ECCC's enforcement branch is well-positioned to scale up its activities based on analysis of non-compliance risks but lacks funding to do so.

Additional resources are also needed to ensure regular recertification training for all enforcement officers.

Furthermore, enforcement challenges are increasingly sophisticated and require new investigative and intelligence capabilities, as well as additional enforcement officers and training. The CESD audit found that ECCC had challenges in fulfilling intelligence needs to assist enforcement officers in making informed decisions. Some regions had no dedicated intelligence staff. For example, Ontario had the largest number of regulated businesses but no permanent intelligence staff. The audit underscored that key intelligence information is important to targeting the work of enforcement officers.

**Recommended Investment:** \$50 million additional investment annually, ongoing, [ECCC] to upgrade enforcement of Canada's pollution prevention and wildlife protection laws.

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## Improving Environmental Data and Science to Support Evidence-Based Decisions

Accessible, current and coordinated science and data are vital to enable evidence-based decision making and to evaluate and inform effective public policy. Joint federal and provincial leadership in this area is overdue and new investments are urgently needed to implement an environmental science and data management strategy that addresses Canada's emerging and longstanding environmental data challenges and needs. These include:

- overlapping and fragmented data collection and management responsibilities among federal departments and other levels of government;
- incomplete and outdated datasets (particularly geospatial habitat inventory data);
- lack of integration and poor coordination of data-sharing across jurisdictions and sectors;
- inconsistent collaboration with outside organizations and academia
- inadequate resources to fully embrace international standards in data collection or analysis, particularly with respect to international environmental asset accounting;
- limited public accessibility;
- large time lags between policy implementation and evaluation data; and
- inadequate science, data and quantification methodologies needed to inform the effective implementation of nature-based climate solutions, achieve net-zero emissions by 2050, price carbon emissions, and manage the risk of severe weather events such as flooding.

To address these needs and support the federal government's commitment to evidence-based decision making, the GBC recommends the following investments.

### a. Coordinated and Updated National Geospatial Habitat Inventories

Canada's open Federal Geospatial Data Platform aggregates individual geospatial data layers into a national geodatabase. However, many of the individual base layers are outdated, incomplete, inaccessible to the public, and when publicly available, are often spread across multiple data platforms and governments.

Building on current efforts to develop an integrated Federal Geospatial Platform, the Green Budget Coalition recommends that the federal government invest in undertaking an audit and inventory of existing geospatial datasets (and gaps) across federal departments and other levels of government, in addition to updating geographic and landscape feature data to complete Canada's national habitat inventories. This includes completing the Canadian Wetland Inventory, creating a critical fish habitat inventory, native grasslands inventories and national groundwater mapping. In addition to enabling Canada to make well informed land-use and management decisions, these investments can be leveraged to improve evidence-based decision making in other areas, including better understanding the diverse values and benefits we gain from conserving our natural assets (and the values we lose when natural assets are lost); and informing the implementation of climate policies and our understanding of how policies are working.

Coordinated and updated national geospatial habitat inventories are essential for enabling Canada to effectively and efficiently implement nature-based climate solutions as part of its approach to meet

its biodiversity and 2030 and 2050 GHG mitigation reduction targets. These inventories provide important baseline information needed to expand Canada's quantification of GHG emissions and sequestration from human activities beyond those currently captured in the national GHG inventory (e.g., wetland drainage, compaction of peatlands from roads and other activities, removal of native grasslands, changes in grassland management), and to assess potential strategies to quantify emission reduction opportunities.

**Recommended Investment:** \$2 million over three years for an inventory and audit, and \$125 million over four years to update and complete national habitat inventories [NRCan and ECCC]

#### b. A National Census of the Environment

Effectively managing Canada's natural assets and the essential ecological functions and services they provide requires full accounting of our environmental health and assets. A census of the environment with baseline accounting of Canada's environmental assets and regular status and trends reporting (similar to the way GDP and employment statistics are published) will generate the critical data that is needed to measure the diverse values and benefits Canada gains from its ecosystem services - most of which are often overlooked until the service is lost or degrades. Calls to action for a national environmental census are emerging in other countries with similar environmental challenges and data gaps, including recommendations made in the United Kingdom's 2019 State of Natural Capital Annual Report.

The Green Budget Coalition recommends new investments to launch an initiative led by Statistics Canada to work with federal departments and other levels of government to advance the development of a robust and full accounting of Canada's environmental assets. This includes building a central registry and framework for a national census of the environment.

**Recommended Investment:** \$16 million over four years [StatsCan]

#### c. External Advisory Panel on Integrating Environmental Data

The GBC recommends establishing an external advisory panel, co-led by ECCC and StatsCan, and comprised of public and private data collectors, users and processes, including representatives from all levels of governments, industry, Indigenous groups, environmental organizations and the public. The panel would be similar to Statistics Canada's National Accounts Advisory Committee, and would have a mandate to provide strategic advice to governments on data collection and management issues. A key deliverable would be recommendations to the federal government on actions to help close Canada's growing environmental information gap and enable evidence-based decision making.

**Recommended Investment:** \$3 million over three years [ECCC]

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## Collaborating on Regional-Scale Environmental Governance

COVID-19 has amplified important conversations about the need to transform the way we make decisions that affect our environment and communities.

Regional assessments (RAs) and strategic assessments (SAs) are a critical but underused tool for taking stock of cumulative effects and having collaborative discussions about shared visions of the future and pathways for achieving desired outcomes.

Further funding is required to continue Canada's RA and SA program, in partnership with provincial and Indigenous authorities, to protect biodiversity, nature and the climate.

Recommended Investment [IAAC]: \$155 million over five years:

- \$50 million over five years to: incentivize and facilitate the collaborative participation of provincial and Indigenous authorities in RAs and SAs, by offering financial support for land and resource use planning following the successful completion of assessments; encourage land and resource use planning and better management of cumulative effects; and better inform project-level decision making.
- \$5 million over five years to establish an advisory panel of Canada's leading experts to inform the development of regulations and supporting policy under the Impact Assessment Act respecting the processes, objectives and outcomes of RA and SA. The GBC recommends that this panel also help identify priority RAs and SAs, and advise on the terms of reference of those first assessments.
- \$100 million over five years to establish co-governance bodies with provincial/territorial and Indigenous authorities to conduct further RAs and SAs according to best practices, do follow-up and monitoring, and ensure that those assessments inform project-level decisions with up-to-date information.

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## First Nations Water and Wastewater Funding

*Recommendation pending. For more information, please contact Theresa McClenaghan at [theresa@cela.ca](mailto:theresa@cela.ca).*



## Making Budget 2021 a Canadian Well-Being Budget

As governments - and private sector actors - shift to planning for economic recovery, there is a critical window to rethink the fundamentals of our economic system. The Green Budget Coalition recommends the government redesign the federal fiscal and economic policy framework to focus on well-being and make Budget 2021 a Canadian well-being budget.

Wellbeing is when people are able to lead fulfilling lives with purpose, balance and meaning to them in a manner that respects Nature's capacity to provide. A well-being budget recognizes that economic growth alone does not guarantee better quality of life, and seeks to optimize social and environmental outcomes, alongside monetary outcomes. By aligning fiscal decision-making with a well-being framework, a well-being budget would be a foundational step towards repurposing our economy to explicitly generate well-being for people today within the limits of nature, thus ensuring a healthy planet for generations to come.

Several other countries are already moving in this direction. New Zealand delivered its first well-being budget in 2019. Budget decisions were based on a well-being analysis that considered a range of economic, social, environmental and cultural considerations, with a long-term view of intergenerational outcomes. Scotland, Finland and Iceland have also formally adopted well-being economy approaches.

Canada's Minister of Middle-Class Prosperity and Associate Minister of Finance, the Hon. Mona Fortier, is mandated to, "Lead work... to better incorporate quality of life measurements into government decision-making and budgeting, drawing on lessons from other jurisdictions such as New Zealand and Scotland." The Green Budget Coalition appreciates that this work has begun and recommends that it be accelerated to support a Canadian well-being budget in 2021. We further recommend that national economic updates be expanded to track well-being indicators -- broadening the definition of what constitutes economic success to include not only the health of national finances but also the health of the natural environment, people and communities.

As Canada rebuilds, there is an opportunity to rebuild better. This will be accomplished in part by appropriately targeting stimulus spending to align with environmental objectives. To achieve lasting progress towards a cleaner, more sustainable economy, the Green Budget Coalition recommends formally reorienting Canada's economy to optimize economic decision-making in consideration of social foundations and environmental limits. Making Budget 2021 a Canadian well-being budget will support integrated decision-making towards these desired outcomes.

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## Appendix 1: SUSTAINABLE AGRICULTURE:

### Transitioning to Environmentally Sustainable Land Management and Food Production in Canada in the next Canadian Agriculture Partnership & Business Risk Management Plan

The Green Budget Coalition envisions a future in which our food production, including the land management that supports it, is environmentally sustainable. We can do this while maintaining a strong agriculture and food sector, employing millions of Canadians, and supporting biodiversity and agrobiodiversity on our land base. Feeding the world's increasing population sustainably in the context of climate change requires resilient and diverse food systems that minimize environmental impacts, protect and restore the ecosystem services that are vital to a thriving agricultural economy, and offer long-term solutions for climate adaptation and mitigation and mitigating climate change.

Key to achieving this is embracing innovation, including appropriate technologies, that supports environmentally sustainable agricultural outputs through no increase in the conversion of existing natural or marginal lands on the existing agricultural land base, while concurrently moving towards net habitat gains through restoration and enhancement. This concept has already been embraced by the Canadian Roundtable for Sustainable Crops, an industry-NGO partnership working collaboratively towards innovative agricultural practices and sustainability.

Canada has the potential to become a world leader in environmentally sustainable agriculture that also meets international targets such as the UN Sustainable Development Goals (SDGs) and CBD Biodiversity Targets by delivering Ecological Goods and Services and social benefits, including gender equality, food security, economic development, reconciliation with Indigenous Peoples, and support for the next generation of farmers.

#### Consultations on BRM and CAP Renewal

The federal government has invested significantly in science and technology to spur growth in the agriculture industry in Canada and to provide risk management tools to ensure business viability. It has made very little investment in reducing environmental risk or building agricultural resilience to climate change - yet both of these areas are part and parcel of reducing on-farm business risks and ensuring stable livelihoods for farmers now and in the future. Canadian agriculture will remain unsustainable without mitigating the negative environmental impacts of agricultural production, particularly under changing climate conditions, and will only continue to degrade marginal lands and natural habitats. The federal government must be a key driver in supporting a transition to environmentally sustainable agriculture, including regenerative agriculture and practices that support ecosystem services, and provide income stability for a strong and diverse farming community. It must also demonstrate an elevated level of national leadership by working openly through established forums, particularly the Federal-Provincial-Territorial Ministers of Agriculture, to develop sector-specific approaches that meaningfully address the climate crisis, the biodiversity crisis and the continued loss of ecosystem services on the working agricultural landscape. These collaborative solutions must be developed for and supported within the next Canadian Agricultural Policy Framework.

To achieve a transformational shift in the environmental impacts of the Canadian agri-food industry in the medium to long term, the Business Risk Management (BRM) and Canadian Agricultural Partnership (CAP) programs must be adapted to support the adoption of ecological best practices including new and innovative approaches to agri-food production and processing. However, as these programs are intended to provide stability, predictability, and assurance for producers, changes must be seen as incentivizing and additive rather than punitive or reductive. At the same time, inaction will come with financial costs and increased risks, which should not continue to be pushed downstream and, by extension, fully absorbed by Canadians working outside of the sector.

Sustainable harvest standards have been mainstream in seafood harvest for some time, they are gradually making inroads into land-based agriculture as well. For example, the European Union has adopted the International Sustainability and Carbon Certification (ISCC) standards for the acceptable use of agricultural based biofuels. Under this standard, the production or use of biofuels from converted lands (natural habitat to new crop lands) is not authorized for use or sale in the EU. As consumers are demonstrating increased awareness of and concern about the environmental impact of their lifestyle choices, similar certification regimes will continue to gain mainstream support and acceptance across the global marketplace. These emerging standards create a significant business and market risk for Canadian producers. Taking proactive steps now to address the practices that undermine environmental sustainability would shift the current risk of ecological standards to a competitive advantage for Canadian producers.

The Green Budget Coalition recommends that the Government of Canada publicly commit to making environmental considerations a primary focus of its negotiation for the renewal of CAP and BRM in 2023. In preparation for these negotiations, the Green Budget Coalition recommends that AAFC assess the efficacy of environmental strategies incorporated into similar agricultural support programs in other nations, and undertake a broad process of consultation with stakeholders to identify options for enhancing environmental incentives within CAP and BRM. To ensure that this is implemented effectively and comprehensively, the Green Budget Coalition recommends allocating \$1 million of existing funding (over two years) for this purpose.

In the 2023 renewal, the Green Budget Coalition also recommends that Canada:

- Seek to identify and eliminate, within CAP and BRM, perverse subsidies for activities that cause unnecessary ecological harm;
- Target 10% of total BRM investment towards incentivizing agro-ecological transitions, and
- Devote 40% of all CAP expenditure to research, programs, and investments that are consistent with regenerative agricultural principles and practices.

*For GBC recommendations to advance sustainable agriculture over 2020-21, please see Environmentally Sustainable Agriculture, earlier in this document.*

### Contacts

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# Appendix 2: Summary Table - Recommendations

Lead Departments and Costs (and Savings) Associated with the GBC's Recommendations for Recovery and Budget Actions in 2020-21  
(in millions of dollars; negative figures represent savings or revenues)

Recommendation	Likely Lead Department(s)	2020-21	2021-22	2022-23	2023-24	2024-25	ongoing	(end-year)
Sub-Recommendation								
Climate Action								
Road Transportation								
Investments in Public Transit and Fleet Electrification								
Funding to Replace Lost Revenues for Transit Systems	INFC	4,800						
Emergency Relief Funding for Transit Systems	INFC	1,200						
Permanent Transit Fund	INFC	3,400						
Zero-emission Bus Procurement Incentive Program	INFC	472	472	472	472	472		
Zero Emission Vehicules (ZEVs)								
iZEV top-up	TC	150						
ZEV Infrastructure Program	NRCan	200	100					
ZEV automotive technician training program	ESDC	10						
More favourable tax treatment	Finance, ISED, NRCan, TC							
Reducing heavy duty vehicle emissions	NRCan	40	40	40	40	40		
Decarbonizing Fuel Supply								
Electric Vehicle & Alternative Fuel Infrastructure Deploy't Program	NRCan	100						
New low-carbon fuels innovation program	NRCan	70	70	70	70	70		
Pricing Road Infrastructure	INFC	1						
Buildings & Energy Efficiency								
Retrofits of buildings & homes	NRCan	10,000						
Training for Canada's low-carbon workforce	ESDC + NRCan	500						
Complementary Climate Action Recommendations								
Phasing out Fossil Fuel Subsidies	Finance, NRCan, ECCC, NRCan	No additional cost - we expect this could all be achieved using existing capacity.						
Avoiding Taxpayer Liabilities for Small Modular Reactors	NRCan	Provides opportunity to reduce costs and reduce liabilities.						
Accelerating Renewable and Decentralized Energy								
Support for Community Owned Renewables	PSPC	50	50	50	50	50		
Support for Community Financing	NRCan, ECCC, CIB	80	80	80	80	80		
Financial Support for Rooftop Solar	ECCC, NRCan	250	250	250	250	250		
Capacity Building	ISED, NRCan, INFC	30	30	20	10	10		
Remote Communities	CIB	90	90	90	90	90		
Indigenous Communities	CIB	60	60	60	60	60		
Renewable Energy Storage Projects	CIB, NRCan	125	125	125	125			
	NRCan	8	8					
Independent Monitoring of Methane Emissions								
Marine Shipping- Reducing Climate Impacts								
Policy tools - national shipping & black carbon reduction strategy	TC, ECCC	10	10					
R&D & Sea Trials	TC,NRCan+ECCC,CIRNAC	10	10					
GHG Reduction Innovation Fund	TC+ECCC,NRCan,CIRNAC	5	5					
National Shore Power Plan	TC, ECCC + NRCan, CIRNA	20	20					
International Climate Finance	GAC	4,000	4,000	4,000	4,000	4,000	4,000	2025-2026
Sustainable Finance Report								
Finance, NRCan, ISED, ECCC, INFC								
Strengthening Carbon Pricing								
ECCC + NRCan		No additional cost - we expect this could be achieved using existing capacity.						
Reduce Reliance on Single-Use Plastics								
Fund to support SMEs to reduce single-use plastic	ISED	500						
Data collection re plastic packaging life cycle	ECCC, StatCan							
Sustainable Finance Report								
ECCC		1	1	1				
True Costs of Climate Change								
ECCC		1	1					
Nature Conservation								
Nature Based Climate Solutions								
ECCC, INFC, AAFC, DFO,		100	100	100	100	100	100	2030-31
Conservation and Protected Areas								
Protecting Public Lands								
Achieve 25% protection by 2025	ECCC, PCA	350	350	333.5	333.5	333		
Commit to protectinq 30% by 2030	ECCC, PCA						333.4	(2030-2031)
Ongoing management and stewardship	ECCC+PCA	85	85	85	85	85	85	
Totals - for Protecting Public Lands		435	435	418.5	418.5	418	418.4	
Protecting Oceans with Effective MPAs								
Oceans Act MPAs and MPA network planning	DFO, ECCC, PCA	185	72	72	72	72	72	72
NMCA and MNWA	DFO, ECCC, PCA	140	53	53	53	53	53	53
NMCA and MNWA Management	DFO, ECCC, PCA	10	10	20	20	20	20	20
Establishing Indigenous Protected, Conserved Areas on Land								
ECCC, PCA, DFO		(incorporated in above recommendations for public lands and oceans)						
Indigenous Stewardship & Guardians								
GBC supports Indigenous-led efforts calling for new investments in Indigenous-led conservation.								
Restoration								
Federal Habitat Restoration Program	ECCC	115	115	115	115	115		
Habitat Project Renewal Fund	ECCC	24	24	24	24	24		
North American Waterfowl Management Plan	ECCC	10						
Totals - for Restoration								
Investing in Communities by Protecting Canada's Freshwater								
Great Lakes, St. Lawrence & Lake Winnipeg	DFO, ECCC	20	20	20	20	20		
Great Lakes St. Lawrence Action Plan Implementation	ECCC	240	240	240	240	240		
Preserving Natural Infrastructure (EGS)	INFC, ECCC, AAFC, NRCAN	322.2	322.2	322.2	322.2	322.2		
Wildlife Collision Reporting System								
National WVC data reporting system	TC, ECCC	1.5	1.5	1.5				
WVC mitigation infrastructure	TC, ECCC, INFC	50	50	50				
Reinforcing Canada's Frontline of Defence vs Wildlife Diseases								
ECCC, HC		22						
Managing Healthy Oceans								
Marine Spatial Planning	DFO	59	59					
Marine Monitoring	DFO	55	55	25				
Fisheries - data collection assessment/monitoring	DFO	35	35	35	35	35		
Aquatic Species at Risk	DFO	26	26	26	26	26		
Environmental Sustainability of Aquaculture Programs	DFO	25	25	25	25	25		
Marine shipping								
Reducing Spill Risks and Biodiversity Impacts	DFO	3	3	3	3	3		
Developing policy tools- ban scrubbers, advanced wastewater	TC, ECCC	10	10					
Expanding Ghost Gear Clean-up	DFO		8					
Totals - for Oceans								
		213	175	86	61	61	0	
Sustainable Agriculture								
Agri-Environmental Programs								
ESG Program for farmers and ranchers	AAFC, ECCC	20	100	100	100	100		

Recommendation	Likely Lead Department(s)	2020-21	2021-22	2022-23	2023-24	2024-25	ongoing	(end-year)
<i>Sub-Recommendation</i>								
Re-establish a Public Plant Breeding System	AAFC	4	4	4	4	4		
Facility for Collection of Insects, Arachnids, & Nematodes	AAFC	45						
Pollinator Conservation Initiative	AAFC, ECCC	10	10	10	10	10		
<i>Totals - for Sustainable Agriculture</i>		<i>79</i>	<i>114</i>	<i>114</i>	<i>114</i>	<i>114</i>		
<b>Conserving Canada's Birds Across their year-round range</b>	ECCC	4.5	4.5	4.5	4.5			
<b>International Biodiversity Conservation</b>	ECCC, GAC	40	70	100	130	160	200	
<b>Increasing Canada’s Role in the IUCN</b>	ECCC, GAC	2	2	2	2			
<b>Other Environmental Priorities</b>								
<b>Establishing Canadian Water Agency</b>	ECCC	40	40	40	40	40		
<b>Renewal of the Chemicals Management Plan</b>	ECCC, HC		100	100	100	100	100	
<b>Health Canada's Pest Management Regulatory Agency</b>	HC	40	40					
<b>Upgrading Enforcement of Environmental Laws</b>	ECCC	50	50	50	50	50	50	
<b>Environmental Science &amp; Data</b>	ECCC, NRCan, StatCan, ISED + AAFC, DFO, PCA, HC, CSA							
Updated National Geospatial Habitat Inventories	NRCan, ECCC	35	34	34	25			
National Census of the Environment	StatCan	4	4	4	4			
External Advisory Panel on Integrating Environmental Data	ECCC	1	1	1				
<b>Regional Scale Environmental Governance</b>								
Collaborative Participation - Indigenous & provincial	IAAC	10	10	10	10	10		
Advisory panel on RAs & SAs	ECCC, IAAC	1	1	1	1	1		
Establishing co-governance bodies to conduct RAs & SAs	ECCC, IAAC	20	20	20	20	20		
<b>Designing a Well-being Focused Canadian Economic System</b>		-						
<b>First Nations Water &amp; Wastewater Funding</b>	ISC, CIRNAC + INFC	<i>Please contact <a href="mailto:theresa@cela.ca">theresa@cela.ca</a> for further details</i>						

Departmental Acronyms:

AAFC:	Agriculture and Agri-Food Canada	IAAC:	Impact Assessment Agency of Canada
CIB:	Canada Infrastructure Bank	INAC:	Indigenous and Northern Affairs Canada
CIRNAC:	Crown-Indigenous Relations and Northern Affairs Canada	INFC:	Infrastructure Canada
CMHC:	Canada Mortgage and Housing Corporation	ISC:	Indigenous Services Canada
CSA:	Canadian Space Agency	ISED:	Innovation, Science and Economic Development Canada
DFO:	Fisheries and Oceans Canada	NRCan:	Natural Resources Canada
ECCC:	Environment and Climate Change Canada	PCA:	Parks Canada Agency
ESDC:	Employment & Social Development Canada	PMRA:	Pest Management Regulatory Agency
Finance:	Finance Canada	PSC:	Public Safety Canada
GAC:	Global Affairs Canada	StatCan:	Statistics Canada
HC:	Health Canada	TC:	Transport Canada



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