



Recommendations for Budget 2016

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Recommendations for Budget 2016

EXECUTIVE SUMMARY



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CLIMATE CHANGE | ENERGY | SUBSIDY REFORM | FISH HABITAT | OCEANS | NATIONAL PARKS | WETLANDS | CONSERVATION
NATURE | ENDANGERED SPECIES | BIRDS | RENEWABLE ENERGY | WATER | ENVIRONMENTAL HEALTH | CHEMICALS
INFRASTRUCTURE | SCIENCE | ARCTIC | AIR QUALITY | GREAT LAKES | GREEN ECONOMY | WILDLIFE

The prosperity of Canadians and that of future generations depends on sustaining healthy ecosystems; unfortunately all are threatened by climate change, habitat loss, invasive species and pollution. As such, the Green Budget Coalition is presenting this comprehensive stimulus package to assist the Government of Canada sustain a healthy, competitive and clean economy through innovative federal fiscal measures and targeted federal funding.

Budget 2016 provides the Government of Canada with an opportunity to orient key federal public policies through a series of reforms in areas of federal and shared jurisdiction. In particular, the next federal budget is a vital tool to build a strong Canadian economy by putting a price on pollution, removing ecologically harmful subsidies, using fiscal policy and redirected tax revenues to support the growth of renewable energy, implement green and natural infrastructure projects and promote the adoption of clean technologies.

Budget 2016 and those that follow are core policy tools through which the federal government must help restore the health of Canadian ecosystems, protect Canadian communities from environmental risks and ensure that our country is competitive in the emerging low carbon economy.

It is our intention that the Green Budget Coalition's Recommendations for Budget 2016 will provide respective Ministers with the resources to deliver on the commitments announced in the Ministerial Mandate Letters throughout the next four years.

For Budget 2016, the Green Budget Coalition is recommending the Government of Canada implement strategic budgetary measures in the following seven key areas:

Clean Energy and Climate Change Leadership

Strategic federal investments and immediate changes to specific tax policies are recommended to accelerate the uptake of renewable energy technologies. As part of the pan-Canadian framework for addressing climate change, Budget 2016 should deliver targeted federal funding to accelerate renewable energy generation in Canada in partnership with provinces and territories to make measurable progress towards our national emissions-reduction targets.

Complementary to renewable energy generation, the Government of Canada should also provide incentives in Budget 2016 to significantly increase energy conservation and energy efficiency in Canadian homes and businesses.

To support those priority federal investments, Budget 2016 can recoup substantial federal revenues by eliminating specific federal tax credits and other production subsidies to the fossil fuel sector beginning in Budget 2016, and similarly by implementing a complete phase-out of all federal production subsidies and federal public financing to the fossil fuel sector over the next five years.

Budget 2016 should deliver those fiscal measures necessary to implement this Government's commitment to carbon pricing by providing incentives for provinces and territories to put in said pricing regimes through a coordinated National Carbon Pricing Standard.

The Green Budget Coalition recommends that Budget 2016 launch Canada's contribution to global climate financing to support GHG reduction in less developed countries. It should also build the necessary criteria to leverage private sector financing to make these investments go further.

Infrastructure and Climate Change Adaptation

As federal infrastructure investments are positioned to be the centerpiece of Canada's economic stimulus efforts, the Green Budget Coalition recommends that Budget 2016 establish criteria to ensure the new Building Canada Plan contains outcomes that are directly linked to policy objectives including greenhouse gas emission reduction, carbon sequestration, enhancing resiliency against the impacts of climate change and natural disasters, and supporting ecological infrastructure to protect Canadian communities from the impacts of climate change.

The Green Budget Coalition is also recommending targeted federal funding starting in Budget 2016 to support public transit in Canada.

Budget 2016 should also extend the Government of Canada's jurisdictional responsibilities towards First Nations' health through improved essential physical infrastructure for Indigenous communities. Sustained long-term funding starting in Budget 2016 for green infrastructure in First Nations communities and clean drinking water systems are essential to deliver on those areas of federal responsibilities.

Protecting our Changing Arctic

Canada's North is the homeland for tens of thousands of Canadians, including Indigenous peoples who have inhabited this vast region for millennia. The Canadian Arctic also encompasses some of the least disturbed and largest marine ecosystems, however, climate change is causing the Arctic to warm at twice the rate of the rest of the planet, fundamentally changing both human communities and natural systems.

The federal government has a clear fiduciary responsibility for the care and welfare of Indigenous peoples in Canada and protecting this unique ecosystem.

Budget 2016 should deliver the funding necessary to protect the Arctic from the impacts of climate change and ensure the sustainable development of Canada's North.

Delivering on Canada's Conservation Commitments

Starting in Budget 2016, new and expanded investments are required to enable the Government of Canada to protect at least 17% of land and inland waters by 2020 as per our international obligations under the United Nations Convention on Biological Diversity. Meeting those commitments requires ongoing funding

for implementation in areas of federal jurisdiction such as the Species at Risk Act, the creation of new parks and protected areas, recognizing and supporting landscape-scale conservation on privately held lands and the effective management and expansion of National Wildlife Areas and Migratory Bird Sanctuaries.

Similarly, implementing Canada's international marine protection goals of protecting at least 10% of our oceans by 2020 requires targeted federal funding starting in Budget 2016. The Green Budget Coalition is recommending comprehensive budgetary measures to invest in ocean planning, restore ocean science and monitoring capacity, and transform fisheries management.

Achieving our conservation commitments will also require protecting the unique and ecologically valuable wildlife habitat on private lands across Canada. The Green Budget Coalition therefore recommends providing targeted federal funding to compensate landowners who maintain and restore habitats on their property through long-term conservation agreements.

Engaging Canadians in Conservation

Federal leadership, collaboration with provinces and territories and support for individual Canadians and civil society are all necessary to achieve our conservation commitments. The Government of Canada can offer opportunities for all Canadians to experience nature and to be involved in stewardship and conservation initiatives. Budget 2016 should provide funding to offer nature-based experiences to the public as well as employment opportunities to youth in the environmental sector.

Protecting Canada's Fresh Water

The Government of Canada has recognized that our freshwater as a precious resource that deserves protection and careful stewardship. As such, Budget 2016 should establish a Canada Water Fund as the federal investment to develop and implement the best wastewater treatment technologies, water quality monitoring and support the Canadian clean technology sector.

Similarly, working with provinces and territories, Budget 2016 should invest in a Great Lakes Protection Fund to ensure the ongoing care, stewardship, protection and restoration of the Great Lakes, as well as provide a new tax incentive program for landowners who take action to prevent land based nutrient runoff or establish permanent nearshore habitat.

Healthy Environments, Healthy Canadians

The Green Budget Coalition is recommending that the Government of Canada invest to prevent harmful environmental exposures thus contributing to a healthier population. Budget 2016 should begin implementation of a comprehensive environmental health equity agenda for Canada, to support assessment and integration of environmental health equity across the federal government and to work with provinces and stakeholders to facilitate coordinated action. This would include providing a new tax credit that would assist homeowners with the costs of mitigating indoor radon and ensuring adequate federal funding to effectively regulate industrial air pollution and implement Ambient Air Quality Standards.

CLEAN ENERGY AND CLIMATE CHANGE LEADERSHIP

ENERGY EFFICIENCY

The Green Budget Coalition recommends that the Government of Canada provide funding of \$30 million starting in Budget 2016, and \$1.5 billion over four years beginning in 2017-18 to Natural Resources Canada and Indigenous and Northern Affairs Canada to implement a series of initiatives to greatly improve energy efficiency in Canadian homes and businesses.

Recommendations

National Home Energy Retrofit Plan

Investment Required

For 2016/2017: \$10 million supplement in 2016-17 to Natural Resources Canada's existing EcoENERGY programs to develop a national home retrofit plan

Outcome: Funding will enable collaborative efforts with the provinces, territories, and First Nations to develop a national home retrofit plan to encourage a high proportion of Canadian households to retrofit their homes across Canada in the coming decade. The plan can also include a national program of energy retrofits to public sector buildings such as universities, schools, museums, and hospitals. Consistent with the Prime Minister's directives in the Mandate Letter to the Minister of Natural Resources to develop a Canadian Energy Strategy, encourage energy conservation and combat climate change, energy efficiency is the cleanest and fastest way to reduce greenhouse gas emissions, save individuals and businesses money and make more energy and money available for use in other priority sectors of our economy.

Renewed Funding for the Office of Energy Efficiency (OEE)

Investment Required

For 2016/2017: \$10 million
For ongoing: \$15 million per year over four years

For the Office of Energy Efficiency (OEE) to enable it to manage the National Home Retrofit Plan.

Outcome: Renewed funding for the Office of Energy Efficiency (OEE) will enable it to manage the National Home Retrofit Plan, which will help reduce greenhouse gas emissions, encourage energy conservation, save Canadians money on their energy bills, create new jobs and combat climate change.

Home Retrofit Grant Program for Low-Income Families

Investment Required

For 2017/2018: \$250 million per year over four years

Provide a total of \$1 billion in federal grants over four years (50% cost-shared with the provinces and territories) to help low-income Canadian families retrofit their homes

Outcome: Part of the National Home Retrofit Plan should include a “healthy retrofit” grant program for low-income families, including in Canada’s North, that is delivered through the successful community-wide approach in combination with, or as part of, the government’s election commitment to invest \$20 billion over 10 years in social infrastructure including affordable housing.¹ The program could be 50% cost-shared with the provinces and territories to provide grants for 50,000 homes annually from 2017-2021 (at \$10,000 average cost per home).

Restore the EcoEnergy Efficiency Program

Investment Required

For 2017/2018: \$50 million per year over four years
(estimated net cost of tax credits, foregone interest on federal loans and public outreach and engagement)

To provide tax credits to businesses and “pay-as-you-save”, interest free federal loans for those households that do not qualify for the Home Retrofit Grant Program for Low-Income Families.

Outcome: Restoring the EcoEnergy Efficiency Program or creating a new Canadian Energy Audit Program will enable businesses to receive refundable tax credits (e.g. 100% Accelerated Capital Cost Allowance) for all energy retrofit costs, and will allow homeowners who do not qualify for the Home Retrofit Grant Program for Low-Income Families to access revolving “pay-as-you-save” federal loans for retrofits, based on before-and-after EnerGuide or infrared heat tests. Home retrofits would provide homeowners with relief from higher energy bills while significantly lowering greenhouse gas (GHG) emissions from the building sector, one of Canada’s most significant sources of GHGs.² Part of this initiative must include developing innovative approaches to maximizing participation in the program. Despite the popularity of the previous EcoEnergy Efficiency Program, only 8 per cent of Canadian homes have been retrofitted. Energy efficiency initiatives will be a critically important component in meeting Canada’s GHG reduction targets, yet the cost per tonne of GHG reductions through this program was relatively high compared with other abatement measures. For this reason, we are recommending a loan and tax credit program, rather than federal grants, combined with an ambitious public outreach plan to encourage widespread participation in the program.

Canadian Energy Audit Program

Investment Required

For 2016/ 2017: \$10 million
For ongoing: \$60 million per year over four years

To encourage participation in the EcoEnergy Efficiency Program (above), provide \$250 million over five years to finance energy audits for households and businesses.

Outcome: The federal government can set up a Canadian Energy Audit program, which finances energy audits across the residential and commercial sectors for energy retrofits. This program should also include a generous Youth Energy Employment Tax Credit, modelled after the Co-operative Education Tax Credit, to support employers in hiring youth for energy efficiency retrofit (not audit) work. As a result of the national audit, additional targeted financing and tax incentive mechanisms for high-energy home and business owners should also be part of this national energy audit program.

1 <https://www.liberal.ca/files/2015/08/An-historic-investment-plan.pdf>

2 According to Natural Resources Canada’s Report on the Review of Clean Energy Initiatives (2011), the energy used to heat Canadian homes, run appliances and keep lights on is responsible for roughly 14 per cent of Canada’s total GHG emissions.

Total Investment Required

For 2016/17: \$30 million

For 2017/18-2020/21: \$1.5 billion

Summary

The Prime Minister's mandate letter to the Minister of Natural Resources included the following directives:

"Work closely with provinces and territories to: develop a Canadian Energy Strategy to protect Canada's energy security; encourage energy conservation; and bring cleaner, renewable energy onto a smarter electricity grid."

"Work with the Minister of Innovation, Science and Economic Development to invest in clean technology producers, so that they can tackle Canada's most pressing environmental challenges and create more opportunities for Canadian workers."

The Prime Minister's letter to the Minister of the Environment and Climate Change included the following directives:

"Ensure that our government provides national leadership to reduce emissions, combat climate change and price carbon."

"In partnership with provinces and territories, develop a plan to combat climate change and reduce greenhouse gas emissions, consistent with our international obligations and our commitment to sustainable economic growth."

The Green Budget Coalition's recommendations on energy efficiency speak directly to these priorities. Energy efficiency is the cleanest, most affordable, and fastest way to reduce greenhouse gas emissions, make more energy available to our economy and create opportunities for Canadian workers while saving individuals and businesses money that could be better used for other priorities. The Government of Canada has the jurisdictional authority, in collaboration with the provinces and territories, to implement measures that will help reduce Canada's greenhouse gas emissions through energy efficiency improvements and doing so will be imperative if Canada is to meet its international climate change commitments. Our recommended investments in energy audits, home retrofits and efficiency standards will help ensure the federal government fully implements the Prime Minister's Ministerial mandate directives.

Background and Rationale

In Canada, energy efficiency is currently addressed by a patchwork of policies. At the federal level, the Energy Efficiency Regulations prescribe minimum efficiency standards for select equipment crossing international or inter-provincial borders, from room air conditioners to industrial chillers; at the same time, a number of provinces have similar but often diverging regulations. Similarly, whereas the federal government manages the National Energy Code for Buildings, which applies stringent standards to new constructions, provincial governments are responsible for the adoption and implementation of local building codes, which may not follow the federal standards. Meanwhile, federal ecoENERGY programs, which offered incentives for energy efficiency retrofits, have expired or are sunset for the most part.

Canadians have a tremendous opportunity to reduce their monthly energy costs while cutting carbon pollution by becoming more energy efficient. In fact, energy efficiency is the most affordable and fastest way to make more energy available to our economy while reducing greenhouse gas (GHG) emissions.³ The energy used to heat Canadian homes, run appliances and keep lights on is responsible for roughly 14 per cent of Canada's total GHG emissions.⁴ Wasted energy due to inadequate insulation, inefficient lights and appliances and insufficient weatherproofing means that Canadians burn more fossil fuels than necessary at a cost both to consumers' wallets and the environment.

Some steps have been taken by previous Canadian governments to improve energy efficiency in the past but much more remains to be done. The former government's suite of ecoEnergy programs, which have now been mostly phased out, were extremely popular with Canadians, particularly the ecoENERGY home retrofit program. Homeowners who conducted retrofits supported by the ecoENERGY program saw their home energy bills reduced by 23 per cent on average.⁵ Yet of the over nine million homes in Canada, only 8 per cent have been retrofitted to improve efficiency. The GBC is recommending the ecoENERGY home retrofit program be reinstated in Budget 2016 with commensurate funding and promotional campaigns to ensure widespread adoption.

In addition, as renovation activities, including those to improve energy efficiency, can significantly increase the risk of toxic exposures to children, we are recommending that the government implement a "healthy" retrofit program that includes grants for low-income households and revolving "pay-as-you-save" loans for middle and high-income households.⁶ For instance, a home with vermiculite-based insulation may contain asbestos, a known carcinogen that can be exposed if disturbed. Healthy retrofits would help meet multiple objectives by improving indoor environmental health, as well as reducing carbon emissions and saving Canadians money.

Energy costs are particularly important to low income Canadians who are often the least able to afford these improvements. This is why the GBC is recommending the Government of Canada begin this national energy efficiency initiative by providing \$250 million per year over four years starting in 2017 for a retrofit grant program for low-income families, particularly in Canada's North. This proposal should be part of the government's National Housing Strategy and be delivered by provincial and territorial agencies (with 50 per cent cost sharing) and should follow the successful community-wide approach documented by Green Communities Canada using local non-profit delivery agents to create local jobs and coordinated with social agencies trusted by the program recipients.⁷

For those Canadians who are not considered low-income, long-term financing should be provided that allows homeowners to pay for retrofits out of the energy savings they achieve ("pay-as-you-save"). This

3 For example, a study by Canada Energy Systems Analysis Research found that from 1995 to 2010, energy efficiency measures have meant that the Canadian demand for fuels and electricity only rose by 12% while the nation's GDP rose 46%. Canada Energy Systems Analysis Research, *The Secret Life of Canada's Energy Systems*, May 2014, <http://www.cesarnet.ca/blog/secret-life-canada-s-energy-systems>. Without energy efficiencies, Canada would have needed an additional 3,246 PJ per year of new energy.

4 Natural Resources Canada, *Energy Efficiency Trends in Canada 1990 to 2010*, March 2013, http://publications.gc.ca/collections/collection_2014/rncan-nrcan/M141-1-2010-eng.pdf

5 Natural Resources Canada, *Report on the Review of Clean Energy Initiatives*, 25 March 2011.

6 Canadian Environmental Law Association. March 2011. 'Healthy Retrofits: The Case for Better Integration of Children's Environmental Health Protection into Energy Efficiency Programs.' <http://www.cela.ca/sites/cela.ca/files/CELA773-Healthy-Retrofits-report.pdf>

7 For a full description and examples of the community wide approach see <http://www.greencommunities.nonprofit-websites.ca/programs/home-energy-solutions/low-income-retrofits/>

would require a revolving federal loan fund that could support this financing over many years at a low cost. Such a strategy would bring Canada in line with similar efforts in the US and the UK.

For more than a decade the Office of Energy Efficiency (OEE) at Natural Resources Canada has played a critical role in leading Canadian energy efficiency efforts, producing tangible benefits that have led to cost savings for consumers, local job creation across Canada and economic stimulus. It is therefore crucial that the OEE continue to be the federal government's flagship organization for providing national energy efficiency services and coordinating new initiatives such as our proposed national home retrofit plan.

A 2012 study covering four Canadian provinces concluded that a \$14.5 billion investment over 15 years in cost effective energy efficiency programs to reduce electricity, natural gas, and heating oil consumption would increase GDP by over \$84 billion and create thousands of new jobs.⁸ As highly capital-intensive investments, building and housing retrofits will not only benefit from the low interest rate environment; they are essential if we are to meet our greenhouse gas reduction targets. Retrofit programs are a means to stimulate the economy, increase employment and achieve emission reductions, all while generating savings over the medium to long-term.

8 Environment Northeast, Energy Efficiency: Engine of Economic Growth in Eastern Canada, May 2012, http://www.env-ne.org/public/resources/ENE_EnergyEfficiencyEngineofEconomicGrowth_EasternCanada_EN_2012_0611_FINAL.pdf. The \$14.5 billion investment, and resulting \$84.0 billion increase in GDP and 625,000 job years represent the "mid-range" cost-effective efficiency investment scenario modeled by the study.

Budget Announcement

"The Government of Canada is committed to saving Canadians money on their energy bills while reducing greenhouse gas pollution.

"Today we are announcing a series of initiatives to help Canadians improve the energy efficiency in their homes and businesses including through the renewal of the popular ecoENERGY retrofit program."

Contact

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RENEWABLE ENERGY

The Green Budget Coalition recommends that the Government of Canada provide funding of \$2.325 billion over 5 years starting in Budget 2016 to Natural Resources Canada and Indigenous and Northern Affairs Canada to accelerate the uptake of renewable energy technologies, helping to create opportunities for Canadian workers, reduce greenhouse gas emissions and address our most pressing environmental challenges.

Recommendations

Transforming the Electrical Distribution Grid

Investment Required

For 2016/2017: \$10 million supplement in 2016-17 to Natural Resources Canada

For ongoing: \$5 million per year over four years to Natural Resources Canada

To develop a transition plan to transform the existing electrical distribution grid in consultation with provinces and territories

Rationale: In his Ministerial letter, the Prime Minister directed the Minister of Natural Resources to “develop a Canadian Energy Strategy to protect Canada’s energy security; encourage energy conservation; and bring cleaner, renewable energy onto a smarter electricity grid.” The recommended funding will enable Natural Resources Canada to develop a transition plan in consultation with the provinces and territories that will transform the existing electrical distribution system into a high efficiency, trans-Canada, nationally integrated electrical power grid capable of efficiently transporting high electrical loads and accommodating many diverse sources of renewable electrical energy.

Supporting Canadian Wind Energy

Investment Required

For ongoing: \$200 million over 4 years beginning in 2017-2018 to Natural Resources Canada

To accelerate the rapid deployment of wind turbines across Canada to meet 20% of Canada’s energy needs by 2025

Rationale: In his Ministerial letter, the Prime Minister directed the Minister of Natural Resources to “work with the Minister of Innovation, Science and Economic Development to invest in clean technology producers, so that they can tackle Canada’s most pressing environmental challenges and create more opportunities for Canadian workers.” In addition, the Minister of Environment and Climate Change has been directed to “develop a plan, in partnership with provinces and territories, to combat climate change and reduce greenhouse gas emissions, consistent with our international obligations and our commitment to sustainable economic growth.” New, targeted funding to support the rapid deployment of wind turbines across Canada will be essential to meeting our greenhouse gas reduction commitments while creating economic opportunities for Canadian workers. Funding of \$50 million per year for four years starting in 2017-18, which could be partly

funded through the Low Carbon Economy Trust, would give sufficient time to coordinate a national climate change plan and Canadian Energy Strategy in coordination with the provinces and territories.

Wind Power Production Incentive

Required Investment:

For 2016/2017	\$20 million to Natural Resources Canada
For ongoing	\$70 million per year over four years to Natural Resources Canada to restore the Wind Power Production Incentive (WPPI) and provide new financial incentives for wind projects

The total funding of \$300 million over five years required could be partly funded through the Low Carbon Economy Trust fund. These figures are based on the previous program cost of \$324 million over 5 years.¹

Rationale: The Wind Power Production Incentive program was a successful initiative set up by the former government of Paul Martin to help establish wind energy in Canada by providing a financial incentive of about 1 cent per kilowatt-hour produced from the installation of up to 1,000 megawatts (MW) of new wind power capacity in Canada between 2002-2007. Eligible recipients claimed payment of the incentive over a 10-year period. The program contributed to the production of new electricity from wind energy through the approval of 22 wind projects for a total capacity of 924 MW. The program was cancelled by the previous Conservative government.

Electricity Storage Technologies

Required Investment:

For 2016/2017:	\$50 million to Natural Resources Canada In addition, we recommend The Minister of Finance, through Budget 2016, amend class 43.1/43.2 of the Income Tax Act Capital Cost Allowance provisions to include energy storage technologies.
For ongoing:	\$50 million per year over five years to Natural Resources Canada

For research and development into electricity storage technologies and the expansion of Capital Cost Allowance provisions to include energy storage technologies.

Rationale: Large-scale power storage is one of the most important technological developments that will be required to deliver clean energy at scale given the variable production of many clean energy sources. Electricity storage would help to integrate all types of renewable energy technologies. Measures to incentivize accelerated power storage technology development in the short-term could play a key role in determining whether Canadians capitalize on this growing market. Funding should be provided for research and development into electricity storage technologies and expand class 43.1/43.2 of the Income Tax Act Capital Cost Allowance provisions to include energy storage technologies.

Power Grid Extensions

Required Investment:

For ongoing:	\$50 million per year over four years beginning in 2017/2018 to Natural Resources Canada
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To provide support for power grid extensions to bring wind and ocean power from remote areas, including

¹ <http://www.nrcan.gc.ca/plans-performance-reports/rpp/2015-16/17057>

in Canada's North

Rationale: The Minister of Natural Resources has been mandated to "bring cleaner, renewable energy onto a smarter electricity grid." Funding for power grid extensions will be required to transform the existing electrical distribution system into a high efficiency, nationally integrated electrical power grid capable of efficiently transporting high electrical loads and accommodating many diverse sources of renewable electrical energy.

Support for Solar, Tidal, Biomass and Micro-hydro Energy

Required Investment:

For ongoing:	\$25 million per year over four years beginning in 2017-2018 to Natural Resources Canada
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To help the solar, tidal, biomass and micro hydro energy industries through renewal of the ecoEnergy program for renewable power

Rationale: The ecoENERGY for Renewable Power program was launched in April 2007 to encourage the generation of electricity from renewable energy sources such as wind, low impact hydro, biomass, photovoltaic and geothermal energy. Projects with contribution agreements received a one-cent per kilowatt-hour (kWh) incentive for eligible production during their first ten years of operation. No new contribution agreements were signed after March 31, 2011. New funding for renewal of the ecoEnergy program for renewable power will help the solar, tidal, biomass and micro hydro energy industries achieve targeted energy contribution goals thereby contributing to the government's climate and renewable energy objectives.

Enhanced Geothermal Systems

Required Investment:

For ongoing:	\$40 million per year over four years beginning in 2017-2018 to Natural Resources Canada
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To support the geothermal energy industry and the oil industry (for drilling expertise) to develop Enhanced Geothermal Systems (EGS)

Rationale: A well-funded R&D program to develop EGS by drilling down to 10 kilometres could add an additional 25 GW of power to the Canadian energy system

Clean-tech flow through tax credit

Required Investment:

For 2016-2017:	\$100 million to Natural Resources Canada
For ongoing:	\$100 million per year over five years

To establish a clean-tech flow through tax credit

Rationale: Funding for a clean-tech flow through tax credit, similar to the 15% tax credit provided to mining companies, will assist junior clean tech companies in raising new equity to open up early-stage investments and seed next-stage technology.

Renewable heat program

Recommended Investment:

For ongoing: \$50 million per year over four years starting in 2017-2018 to Natural Resources Canada

To establish a renewable heat program with financial incentives for the commercial and industrial sectors to replace fossil-fired heating systems

Rationale: The Prime Minister directed the Minister of Natural Resources “to support Innovation and the use of clean technologies in our natural resource sectors, including the forestry, fisheries, mining, energy, and agricultural sectors.” To meet this objective, funding should be provided for a renewable heat program, notably for the commercial and industrial sectors, whereby (a) financial incentives are provided for the replacement of fossil-fired heating systems in favour of renewable heat sources (geothermal, biofuels, solar); and (2) renewable heating standards are phased in for new building constructions in the context of the National Energy Code for Buildings.

Electric Vehicle Rebates and Infrastructure

Investment Required:

For 2016-2017: \$25 million per year for Natural Resources Canada
For ongoing: \$25 million per year over four years

To provide for electric vehicle rebates and investments in electric vehicle infrastructure

Rationale: Provide federal rebates for the purchase of electric vehicles similar to the Ontario Electric Vehicle Incentive Program and investments in infrastructure to support electric vehicle infrastructure by investing in travel corridor pilot projects around major urban centres. Transportation is responsible for roughly 25 per cent of GHG emissions and personal vehicle transportation accounts for about one-third of these emissions. Electric vehicles (EVs) have the potential to play an important role in helping the government meet its GHG reduction targets.

Total Investment Required

For 2016/2017: \$205 million
For 2017/18 - 2020/21: \$2.12 billion

Summary

The Prime Minister’s mandate letter to the Minister of Natural Resources includes directives to:

“work closely with provinces and territories to: develop a Canadian Energy Strategy to protect Canada’s energy security; encourage energy conservation; and bring cleaner, renewable energy onto a smarter electricity grid”;

“work with the Minister of Innovation, Science and Economic Development to invest in clean technology producers, so that they can tackle Canada’s most pressing environmental challenges and create more opportunities for Canadian workers.”

The Prime Minister also directed both Ministers (as well as other responsible ministers) to “support innovation and the use of clean technologies in our natural resource sectors, including the forestry, fisheries, mining, energy, and agricultural sectors.”

In addition, the Minister of Environment and Climate Change has been directed to “develop a plan, in partnership with provinces and territories, to combat climate change and reduce greenhouse gas emissions, consistent with our international obligations and our commitment to sustainable economic growth.”

At the recently concluded COP21 Climate Change negotiations in Paris, Canada joined the Carbon Pricing Leadership Coalition (CPLC), which brings together leaders from government, business, and civil society to support the introduction and implementation of carbon pricing practices around the world. Canada also endorsed the Fossil Fuel Subsidy Reform Communiqué, in support of accelerating action to eliminate inefficient fossil-fuel subsidies, and Prime Minister Trudeau joined French President François Hollande, U.S. President Barack Obama and Bill Gates to announce the launch of Mission Innovation, an ambitious clean technology initiative that seeks to double government investment over the next five years in clean energy research and development, and to spur business investment in clean technology. The federal government has also committed to hold a First Ministers’ meeting within 90 days of the COP to work towards the development of a national climate change and energy strategy.

Measures to help reduce Canada’s greenhouse gas emissions through investments in renewable energy will be imperative if Canada is to meet its international climate change commitments. Our recommended investments in energy storage technologies, the electricity grid and a suite of renewable technologies will help ensure the federal government fully implements the Prime Minister’s Ministerial mandate directives while reducing GHG emissions and creating sustainable jobs and growth.

Background and Rationale

Implementing the government’s ambitious climate change agenda and fulfilling our international commitments to help limit global warming to 1.5 degrees Celsius will require targeted and significant investments in renewable energy and a rapid transition toward a 100% renewable energy future by mid-century. The challenge will be to determine how to finance this transition, which investments will be the most efficient and effective in reducing GHGs (“bang for buck”), and how to provide the necessary seed funding in technologies that can lead to substantial reductions rather than paying for every megatonne of GHGs reduced. Indeed, every investment and policy proposal will now need to be seen through the lens of how it helps Canada rapidly and cost-effectively transition to a fossil fuel free economy.

A 2009 C.D. Howe study concluded that previous Canadian governments have relied on a combination of subsidies and energy-use regulations that were poorly directed and would not meet targets for GHG reduction.² Instead, investments in wind power, solar, renewable heat and energy retrofitting, as prescribed in our Budget recommendations, were found to be the most cost effective government incentive programs with mitigation costs of \$10-\$60 of subsidies per tonne of carbon dioxide equivalent offset. Proven or very promising renewable energy technologies will need to be rapidly scaled up in order to catalyze widespread uptake as rapidly as possible but, given the financial constraints and budgetary pressures in the current fiscal climate, both direct incentives and alternative financing models will need to be considered.

2 C.D. Howe Institute. 2009. ‘Going Green for Less: Cost effective alternative energy sources.’ https://www.cdhowe.org/pdf/commentary_282.pdf

Creative financing models could include the creation of a Green Bank of Canada or a Green Infrastructure Bank, which would be a state-sponsored financial institution tasked with working in partnership with the private sector to increase investments in clean energy markets through project aggregation, credit enhancements, guarantees, data collection, and other activities. Successful green banks in the U.S. could be used as models. In addition, a suite of changes to the tax code, supported by a phase-out of remaining fossil fuel subsidies, would provide additional sources of financing to help promote energy efficiency, renewable energy, and other sustainable technologies. The new Low Carbon Economy Trust Fund, which the Minister of Finance has been mandated to create, is another potential source of funding for projects that would materially reduce carbon emissions.

Canada has a vast amount of renewable energy potential. With the right mix of policies and strategic investments, we are poised to become a world leader in renewable energy, which would bring significant employment and economic growth benefits. A study by the Climate Works Foundation and the World Bank Group found that government policies to stimulate a shift to clean transport, improved industrial energy efficiency and more energy efficient buildings and appliances could increase global GDP growth by an estimated \$1.8 trillion to \$2.6 trillion USD per year by 2030. The increased economic activity primarily occurs as consumers spend their energy cost savings in the wider economy and industry reduces the costs of doing business, stimulating competitiveness and generating new investment.

To realize this goal, the government needs to aggressively promote Canadian innovation in the renewable energy sector. By taking a more active leadership role, the federal government can rapidly accelerate the uptake of alternative energy sources. A 2014 study from Clean Energy Canada says Canada spent \$6.5 billion on the renewable energy transition in 2013 compared to the \$207 billion spent worldwide, including \$55 billion in China alone.³ Budget 2004 under former Prime Minister Paul Martin invested \$1 billion over seven years in support of renewable energy development. We feel the federal government needs a commensurate commitment today.⁴

It should also be noted that Canada is currently the only country that is not a member of the International Renewable Energy Agency (IRENA). In opposition, the current Minister of Foreign Affairs, Stéphane Dion, tabled a motion to have the government “enlist Canada as a full member” of IRENA, saying, “It’s a booming industry. It’s creating jobs and it’s a tool by which we might get out of recession.”⁵ Failing to participate means that Canada is missing out on the global ideas market.

At the current time, the Government of Canada provides public financing for the energy (fossil fuel) industry both domestically and internationally through Export Development Canada (EDC). Public financing for non-renewable energy production in Canada and overseas, provided by EDC alone, is estimated at \$2.894 billion annually.⁶ In light of the international commitments made in Paris, financial subsidies to this sector, particularly to mature, established and well-capitalized companies are at cross purposes with the overall environmental objectives of the Government of Canada with respect to its commitment to advancing a sharp reduction in GHG emissions at home and abroad. Indeed, given the ambitious targets to which Canada and the global community have committed, every domestic and foreign investment will now need to be evaluated on the basis of whether the measure will exacerbate carbon pollution or help reduce it.

3 <http://cleanenergycanada.org/work/trackingtherevolution2014/>

4 <https://www.ec.gc.ca/energie-energy/default.asp?lang=En&n=6766D86C-1>

5 http://www.thestar.com/business/2009/06/16/canada_called_on_to_join_renewableenergy_agency.html

6 Oil Change International, Overseas Development Institute, International Institute for Sustainable Development. November 12, 2015. G20 subsidies to oil, gas, and coal productions: CANADA, available at: <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9988.pdf>

The Green Budget Coalition is therefore recommending that the government conduct a systematic review of the financing portfolio of Export Development Canada, as well as Canada's financial contributions to multi-lateral development banks aimed at supporting investments in non-renewable energy projects in Canada and abroad, with a goal of phasing out those contributions starting in Budget 2017 (see Green Budget Coalitions' Energy Subsidy Reform recommendation [add hyperlink]). In Paris, Canada made a laudable commitment of \$150 million in support of the G7 African Renewable Energy Initiative, an ambitious plan to bring 10 gigawatts of renewable energy to the continent by 2020 and 300 GW by 2030. The government should build upon this commitment by redirecting the public financing portfolio of EDC to investments in clean energy technologies and ensuring Canadian companies capture their fair share of the rapidly expanding global clean energy technology export markets.

Considerations

In its election platform, the new government under Prime Minister Justin Trudeau promised to take advantage of a low interest rate environment to stimulate job and economic growth by investing in infrastructure spending. Strategic investments in renewable energy and electric vehicle infrastructure would not only create jobs for Canadians and stimulate growth; it would also help the government meet its environmental and greenhouse gas (GHG) reduction targets.

The electricity, oil and gas, and transportation sectors are the three largest sources of GHG emissions in Canada, representing about 60 per cent of Canada's total emissions.⁷ Innovation in these sectors could play a key role in capitalizing on global commercial opportunities for Canadian companies in clean energy and contribute to reducing our GHG emissions.

Transportation alone is responsible for roughly 25 per cent of GHG emissions and personal vehicle transportation accounts for about one-third of these emissions. Electric vehicles (EVs) have the potential to play an important role in helping the government meet its GHG reduction targets. With targeted, strategic investments, the federal government could contribute to the widespread adoption of EVs by investing in more charging infrastructure in key travel corridors.

Large-scale power storage is one of the most important technological developments that will be required to deliver clean energy at scale given the variable production of many clean energy sources. Electricity storage would help to integrate all types of renewable energy technologies. The global market for power storage technologies will likely grow rapidly over the next 10-20 years and measures to incentivize accelerated power storage technology development in the short-term could play a key role in determining whether Canadians capitalize on this growing market.

In addition, the recent global Pathways to Deep Carbonization Report indicated that Canada needs to increase the share of our electricity generated by wind and solar power from 2 per cent to 27 per cent to be "consistent with the objective of limiting the rise in global temperatures below 2°C" further emphasizing the importance of facilitating clean electricity production in Canada.⁸ Canada has expertise in leading storage technologies (including power to gas, pumped hydro storage and fuel cells), but there remains a gap between pilot stage and commercialization. With the world's sixth largest electricity system, Canada has a large enough market to be able to play a leading role in mitigating risk and commercializing this technology.

7 Environment Canada, National Inventory Report 1990-2012: Greenhouse Gas Sources and Sinks in Canada, Statistic is for 2012 data. <https://www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=5B59470C-1&offset=4&toc=show>

8 Sustainable Development Solutions Network (SDSN) and Institute for Sustainable Development and International Relations (IDDRI), September 2014, pathways to deep decarbonisation, Canada chapter, www.deepdecarbonization.org

An important policy tool to support power storage is amending the definition of Capital Cost Allowance ("CCA") in Class 43.2 of the Income Tax Act to include expenditures on tangible stand-alone electricity storage assets. Expanding the mandate to all types of electricity storage beyond fuel cells, including "power-to-gas", would level the playing field for power storage systems that are currently excluded from this benefit. This policy change can occur by either adding an additional section to the existing 43.1 CCA class, or by amending the existing Class 43.1 section (d)(xii) which is currently limited to fuel cells, to include both chemical and mechanical energy storage assets.

Should the existing Class 43.1(d)(xii) be amended, the section should eliminate the requirement that the energy stored be generated by photovoltaic, wind, or hydro-electric equipment, since storage can improve the efficiency of all existing forms of generation. This change would enable the deployment of bulk storage systems onto provincial electricity systems without creating the complicating requirement of only sourcing electricity that is substantially "generated by photovoltaic, wind energy conversion or hydro-electric equipment."⁹

While bulk storage will largely benefit renewable energy integration in the medium- to long-term, the current restrictive requirement to only source electricity from renewable sources will have the unintended consequence of making storage more burdensome for grid operators, thereby impeding its deployment at the scale required to support renewable sources.

9 <http://canadagazette.gc.ca/rp-pr/p2/2009/2009-05-13/html/sor-dors115-eng.html>

Budget Announcement

"The Government of Canada is committed to addressing Canada's most pressing environmental challenges and doing its part to reduce greenhouse gas emissions while creating more opportunities for Canadian workers.

"Today we are announcing a series of initiatives that will help foster the widespread development and adoption of clean, renewable energy technologies across the country."

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Canadian
Environmental Law
Association
EQUITY, JUSTICE, HEALTH.



CPAWS-SNAP
CANADIAN PUBLIC AND
NATURAL ENVIRONMENT
SOCIETY FOR THE PROTECTION
OF THE ENVIRONMENT



David
Suzuki
Foundation
SOLUTIONS ARE IN OUR NATURE



Ducks Unlimited Canada
Conserving Canada's Wetlands

ecojustice



Ecology Action Centre



GREENPEACE



International Institute for
Sustainable Development



WILDERNESS
COMMITTEE



WILDLIFE HABITAT
CANADA
HABITAT FAUNIQUE



A NATIONAL CARBON PRICING STANDARD

The Green Budget Coalition recommends that the Government of Canada coordinate a national carbon pricing standard, to support the provinces and territories in reaching a harmonized national carbon price across Canada of at least \$50 per tonne of CO₂ by 2020.

Further, the national carbon pricing standard should establish jointly-agreed principles for a stringent carbon price, increasing over time, that has broad coverage and that is progressive and equitable. The Government of Canada should explore the use of fiscal incentives and federal-provincial transfers to incentivize adoption of carbon pricing regimes in the remaining provinces and territories.

Investment required

For 2016-2017: \$2 million (12 FTE at Finance Canada in the Carbon Pricing Office, and funding to support negotiations with provinces and territories)

Ongoing: \$1 million per year

Funding requirement could increase in future years depending on fiscal incentives provided, such as federal-provincial transfer payments, used to support establishment of new provincial/territorial carbon pricing regimes.

Summary

The Minister of the Environment and Climate Change is mandated to ensure that the provinces and territories have targeted federal funding and the flexibility to design their own policies to meet national emissions-reduction targets, including their own carbon pricing policies.¹

The Government of Canada has committed to working in partnership with provinces and territories to establish national emissions-reduction targets and to develop a pan-Canadian framework for addressing climate change, within 90 days of the United Nations Framework Convention on Climate Change (UNFCCC) 21st Conference of the Parties in Paris.² The Government of Canada has reiterated on several occasions its support for putting a price on carbon as an essential component of this pan-Canadian framework. The Green Budget Coalition puts forward a recommendation to deliver on these commitments starting in Budget 2016.

A broad, economy-wide carbon price across Canada is key to achieving emissions reduction at the lowest cost. The Green Budget Coalition recommends that Budget 2016 allocate targeted funding for the Government of Canada to lead the development of a national carbon pricing standard and provide fiscal incentives for the remaining provinces and territories to adopt a carbon price.

¹ Prime Minister of Canada, Minister of the Environment and Climate Change Mandate Letter, retrieved at: <http://www.pm.gc.ca/eng/minister-environment-and-climate-change-mandate-letter>.

² Prime Minister of Canada, Minister of the Environment and Climate Change Mandate Letter, retrieved at: <http://www.pm.gc.ca/eng/minister-environment-and-climate-change-mandate-letter>. Environment Canada, Canada's Way Forward on Climate Change, retrieved at: <http://climatechange.gc.ca/default.asp?lang=En&n=72F16A84-1>

The outcome of this ongoing federal investment starting in Budget 2016 will be a federal mechanism to support provincial and territorial carbon pricing regimes, with the goal of reaching a harmonized carbon price of at least \$50 per tonne of CO₂ by 2020³ in all Canadian jurisdictions.

Background and Rationale

In the absence of a carbon price, there exists a real market failure around greenhouse gas (GHG) emissions whereby all Canadians are forced to pay the full social costs of carbon pollution. Without a carbon price, the price for electricity and oil and gas (including natural gas), does not account for the full costs, borne by all, for the consumption of fossil fuels triggered by carbon pollution including the long-term adaptation costs of rising temperatures for all our communities. Canada needs to put a price on carbon to send a market signal to all consumers and producers of energy and thereby create the incentive to shift to low carbon energy sources. In addition, a stringent carbon price, rising over time, will drive the technological change necessary to transition to a 100% renewable energy system.

Experience with carbon pricing regimes worldwide now demonstrates this policy's effectiveness at reducing GHG emissions at the lowest cost. Forty countries and more than twenty three sub-national jurisdictions have either priced carbon or have committed to do so.⁴

Carbon pricing regimes are currently in place or forthcoming in British Columbia, Québec, Ontario, Manitoba and Alberta. British Columbia's revenue-neutral carbon tax, currently at \$30 per ton of emission, has been in place since 2008. Empirical studies demonstrate that due to revenue neutrality, B.C.'s carbon tax has had no negative impact on the BC economy⁵ with the province's economy enjoying a strong economic performance. GHG emissions reduction attributable to the policy is estimated at ten percent.⁶ The B.C. carbon tax now funds more than a billion dollars a year in other tax cuts, resulting in one of Canada's lowest corporate tax rates.⁷ Ontario has now joined the Western Climate Initiative and is planning to establish a cap-and-trade system to be linked with that of Québec and California. The latest Quebec-California joint allowance auction resulted in a price of \$12.52 per ton of CO₂.⁸ In November 2015, the Government of Alberta announced its Climate Leadership Plan which includes a carbon price applied across all sectors, starting at \$20 per tonne on January 1, 2017 and moving to \$30 per tonne on January 1, 2018.⁹

Uneven carbon pricing policies across Canada could lead to some industries being exposed to competitiveness pressures. Production and investment might shift toward jurisdictions without a carbon price or with lower carbon prices. This leakage can undermine both the economic and environmental performance of Canadian policy, whether provincial or national. There is therefore a strong economic rationale for the Government of Canada to harmonize a carbon price in all Canadian jurisdictions, thus minimizing any potential interprovincial competitiveness issues.

3 As recommended in: Bataille et al. 2015. Pathways to Deep Decarbonization in Canada, published by the Sustainable Development Solutions Network (SDSN) and Institute for Sustainable Development and International Relations (IDDRI), http://deepdecarbonization.org/wp-content/uploads/2015/09/DDPP_CAN.pdf

4 World Bank. 2014. State and Trends of Carbon Pricing 2014 Report.

5 B. Murray and N. Rivers. 2015. "British Columbia's Revenue Neutral Carbon Tax: A Review of the Latest 'Grand Experiment' in Environmental Policy." *Energy Policy*, Volume 86, November 2015 pp 674-683.

6 Ibid.

7 Ibid.

8 August 2015, California Cap-and-Trade Program, Summary of Auction Settlement price and results, http://www.arb.ca.gov/cc/capandtrade/auction/results_summary.pdf

9 Government of Alberta, Climate Leadership Plan, Carbon Pricing, retrieved at: <http://alberta.ca/climate/carbon-pricing.cfm>

There is now unprecedented consensus that putting a price on carbon can efficiently and effectively contribute to significantly reducing GHG emissions in Canada.¹⁰ The World Bank,¹¹ the International Monetary Fund,¹² the Canadian Council of Chief Executives,¹³ the Canadian Chamber of Commerce¹⁴ and more than one thousand businesses, governments, multilateral banks, and others¹⁵ have all publicly expressed support for putting a price on carbon as the most efficient means for reducing emissions.

Carbon pricing is the choice of business. It introduces a clear and predictable policy to encourage efficiency and reduce carbon pollution and, because it applies across all industries, allows the most innovative and efficient businesses to prosper. The carbon pricing standard would provide Canadian businesses across Canada with a transparent and predictable price signal and reliable future trends on which they can make long-term investment decisions. A gradual and predictable increase in the price of carbon over time is essential to give emitters time to adapt and develop new, low-carbon technologies and practices.

Current federal climate change policy essentially consists of four regulations,¹⁶ estimated (by the federal government) to reduce emissions by around 27 Mt by 2020.¹⁷ These are far too weak to achieve the needed reduction of 250Mt between current emissions and Canada's current 2020 emission reduction target.¹⁸ This limited federal "sector-by-sector regulatory approach," combined with the patch work of carbon pricing regimes in Canada, currently leaves a substantial portion of the Canadian economy with no incentive at all to reduce emissions.

Carbon pricing design can be left to meet the economic realities of each province and territories. Canadian experts agree, however, that over the longer term, consistency of the carbon price across provinces is desirable, to improve overall cost-effectiveness by ensuring incentives exist for realizing all potential low-cost emission reductions, and to avoid interprovincial competitiveness issues.¹⁹ The Eco-Fiscal Commission, com-

10 Rivers, Nicolas. 2015. The Case for a Carbon Tax in Canada in Setting the New Progressive Agenda. Canada 2020, www.canada2020.ca; Canada's EcoFiscal Commission, April 2015, The Way Forward: A Practical Approach to Reducing Canada's Greenhouse Gas Emissions, <http://ecofiscal.ca/reports/wayforward/>; UNESCO- McGill Chair for Dialogues on Sustainability and the Trottier Institute for Science and Public Policy. March 2015. Action on Climate Change Solutions from Canadian Scholars, Sustainable Canada Dialogue, © 2015 DIALOGUES ON SUSTAINABILITY, <http://www.sustainablecanadadialogues.ca/en/scd/>; Sustainable Prosperity, April 12 2015, Canadian Leaders Pen Low Carbon Economy Letter to Premiers, <http://www.sustainableprosperity.ca/content/canadian-leaders-pen-low-carbon-economy-letter-premiers>.

11 World Bank, 3 June 2014, Statement, Putting a Price on Carbon, with excerpts: "The latest report from the United Nations Intergovernmental Panel on Climate Change makes clear the importance of putting a price on carbon to help limit the increase in global mean temperature to two degrees Celsius above pre-industrial levels" and "Pricing carbon is inevitable if we are to produce a package of effective and cost-efficient policies to support scaled up mitigation", <http://www.worldbank.org/content/dam/Worldbank/document/Carbon-Pricing-Statement-060314.pdf>

12 Christine Lagarde, Managing Director, International Monetary Fund, Center for Global Development, Promoting Responsible Energy Pricing, excerpts: "Pushing ahead with energy price reform might not be easy but it will certainly be worth it – many times over." <http://www.imf.org/external/np/speeches/2014/073114.htm>

13 See, for example, Canadian Council of Chief Executives, Framing an Energy Strategy for Canada, Submission to the Council of the Federation, where the CCCE supported "A clear, nationally consistent carbon price across the economy", <http://www.ceocouncil.ca/wp-content/uploads/2012/07/Framing-An-Energy-Strategy-for-Canada-FINAL-July-20122.pdf>

14 Canadian Chamber of Commerce, Environment – Our Position (web site page, accessed 14 September 2014), says "We favour a price on carbon", <http://www.chamber.ca/advocacy/issues/environment/>

15 <http://www.worldbank.org/en/news/feature/2014/09/22/governments-businesses-support-carbon-pricing>

16 There are four federal regulations related to GHG emission reductions covering the greenhouse gas intensity of the new light duty and heavy duty vehicle fleets, the greenhouse gas intensity of new coal-fired power plants, and the renewable fuel content in gasoline and diesel.

17 Auditor General of Canada. Report of the Commissioner of the Environment and Sustainable Development. Chapter 1. Mitigating climate change. Tech. rep. Office of the Auditor General of Canada, 2014.

18 Environment Canada, Canada's emission trends, 2013.

19 Rivers, Nicolas. 2015. The Case for a Carbon Tax in Canada in Setting the New Progressive Agenda. Canada 2020, www.canada2020.ca, Canada's EcoFiscal Commission, April 2015, The Way Forward: A Practical Approach to Reducing Canada's Green-

posed of former federal and provincial political leaders from across the political spectrum, CEOs of major Canadian companies, leading academics and economists from across the country, called for all provinces and territories to implement carbon pricing policies, and for the federal government to play a coordinating role.²⁰

Considerations

While the choice of carbon pricing policy, whether a tax on carbon or a cap-and-trade system, can be left to each province and territory, the Government of Canada should play a leadership role by developing a set of common carbon pricing principles, the proposed carbon pricing standard, to apply to provincial and territorial carbon pricing regimes.

Specifically, the Green Budget Coalition recommends that Budget 2016 allocate funding to create a Carbon Pricing Office in the Department of Finance to gather the tax and fiscal expertise of the Department, as well as expertise from the Department of Environment and Climate Change, to support the development of a carbon pricing standard. Canada's participation in the Carbon Pricing Leadership Coalition will also provide the Government of Canada with the additional expertise to support the development of the carbon pricing standard in Canada.²¹

The Carbon Pricing Office would recommend options for the Government of Canada to provide targeted federal funding, fiscal incentives, including through federal-provincial transfer payments, to incentivize carbon pricing in remaining provinces and territories and reach a harmonized carbon price in Canada of at least \$50 per tonne of CO₂ by 2020.²²

The Green Budget Coalition recommends that the Carbon Pricing Office develop a set of carbon pricing principles as part of the national carbon pricing standard that would include:

Stringency: The Government of Canada should lead negotiations with the provinces and territories to reach a goal of establishing a carbon price of at least \$50 per tonne of CO₂ by 2020 in all jurisdictions. A carbon price high enough is required to drive GHG emissions reduction. This would require setting a minimum price floor to provincial cap-and-trade systems in order to add predictability and reduce the possibility that the price will drop down to a point where there is no incentive for companies to further reduce their emissions.

Increasing over time: The initial carbon price of any carbon pricing regimes should rise over time, in \$10 increments annually, with a goal to have a carbon price of at least CAN \$50 per tonne of CO₂ by 2020, rising by \$10 increments until 2050.²³ A predictable annual increase is necessary for deep GHG emission

house Gas Emissions, <http://ecofiscal.ca/reports/wayforward/>. UNESCO- McGill Chair for Dialogues on Sustainability and the Trotter Institute for Science and Public Policy. March 2015. Action on Climate Change Solutions from Canadian Scholars, Sustainable Canada Dialogue, © 2015 DIALOGUES ON SUSTAINABILITY, <http://www.sustainablecanadadialogues.ca/en/scd/>

20 Canada's EcoFiscal Commission, April 2015, The Way Forward: A Practical Approach to Reducing Canada's Greenhouse Gas Emissions, <http://ecofiscal.ca/reports/wayforward/>, UNESCO- McGill Chair for Dialogues on Sustainability and the Trotter Institute for Science and Public Policy. March 2015. Action on Climate Change Solutions from Canadian Scholars, Sustainable Canada Dialogue, © 2015 DIALOGUES ON SUSTAINABILITY, [www. http://www.sustainablecanadadialogues.ca/en/scd/](http://www.sustainablecanadadialogues.ca/en/scd/)

21 Environment Canada, November 30, 2015 Backgrounder- Carbon Pricing Leadership Coalition, retrieved at: <http://news.gc.ca/web/article-en.do?nid=1022519&tp=930>

22 As recommended in: Bataille et al. 2015. Pathways to Deep Decarbonization in Canada, published by the Sustainable Development Solutions Network (SDSN) and Institute for Sustainable Development and International Relations (IDDRI), http://deepdecarbonization.org/wp-content/uploads/2015/09/DDPP_CAN.pdf

23 As noted in the Pathways to Deep Decarbonization in Canada report, it can be expected technological improvement driven by carbon pricing and complementary innovation policies would likely dramatically reduce the necessary price, as hap-

reduction over the long term as only a rising carbon price over time will drive innovations in low carbon technologies.

Broad coverage: The carbon price should cover all sectors of the Canadian economy, to provide the same incentive to all firms in all sectors of the economy, and all households, to reduce GHG emissions. Similarly, broad coverage across all Canadian provinces and territories is necessary to prevent interprovincial competitiveness issues. No emitters should be exempt from any carbon pricing regime.

Progressive and equitable: A portion of revenues from all carbon pricing regimes should be redistributed towards low-income families most affected by energy poverty, providing just transition and retraining for workers affected by the transition towards low carbon energy, targeting climate adaptation funding for regions facing the greatest climate risk, and ensuring Aboriginal opportunities for renewable energy investments. Specifically, the Carbon Pricing Standard should allocate a portion of carbon pricing revenues to support the adoption of renewable energy technologies in the North. This targeted funding is required to address energy poverty, increase energy security and support a fair transition towards the low carbon economy for the workforce in Northern and remote regions. See Green Budget Coalition Budget 2016 recommendation on renewable energy.

With the support of this Carbon Pricing Office, the Minister of Environment and Climate Change, together with the Minister of Finance, can lead negotiations with the provinces and territories to agree to a national carbon pricing standard in Canada, including reaching a carbon price of at least \$50 per tonne of CO₂ by 2020 in all jurisdictions.

pened in the U.S. SO_x cap-and-trade system. (Source: Bataille et al. 2015. Pathways to Deep Decarbonization in Canada, p.12, http://deepdecarbonization.org/wp-content/uploads/2015/09/DDPP_CAN.pdf).

Budget Announcement

"The Government of Canada is committed to supporting the provinces and territories in putting in place carbon pricing regimes across Canada."

"Today, we announce the Government of Canada will work with the provinces and territories to develop a National Carbon Pricing Standard to provide support, technical expertise, targeted funding and fiscal incentives to reach a harmonized national carbon price across Canada."

"The Government of Canada will ensure that a strong and consistent carbon price provides all Canadian businesses and households across the country with the same incentive to reduce carbon pollution."

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ENERGY SUBSIDY REFORM

The Green Budget Coalition recommends that the Government of Canada begin the phase-out of production subsidies to the fossil fuel industry starting in Budget 2016 by:

- Eliminating the Mineral Exploration Tax Credit (METC) applied to the coal industry for flow-through shares, set to expire in March 2016;
- Revoking the new Accelerated Capital Cost Allowance (ACCA) provided to Liquefied Natural Gas projects that was introduced in Budget 2015;
- Eliminating the duty exemption for imports of mobile offshore drilling units in the Atlantic and Arctic;

And Further:

- Announce a comprehensive review to quantify and publicly report the costs of all federal direct spending, federal public financing, production subsidies and tax deductions available to coal, oil and gas, natural gas industry either specifically or through broader mining schemes, including pipeline and refinery expansion. This information should be provided to the Parliamentary Budget Office and the Department of Finance in time for the pre-budget economic and fiscal outlook so that anticipated revenues can be included in Budget 2017 and subsequent federal budgets;
- Announce a clear timeline to phase out all remaining federal tax credits, production subsidies as well as all public financing provided by Export Development Canada by 2020 that support coal, oil and gas (including liquefied natural gas). This phase out should include the seven federal tax expenditures, direct federal spending and public financing measures identified below.

Investment required:

For 2016/2017: \$1 million (Estimated additional 10 FTEs in the Department of Finance to conduct the review and reporting of tax expenditures to the fossil fuel energy sector, as well as direct federal spending and public financing, in collaboration with officials in the Department of Natural Resources Canada, Export Development Canada and the Treasury Board, and establish a timeline for phase-out.)

For ongoing: \$500,000 per year over five years

Estimated savings:

\$CAN 4.694 billion per year*

* Estimate of federal tax expenditures is \$CAN1.8 billion per year, public financing provided to the oil and gas sector by Export Development Canada is estimated at \$CAN2.894 billion per year. Source: Oil Change International, Overseas Development Institute, International Institute for Sustainable Development. November 12, 2015. G20 subsidies to oil, gas, and coal

Summary

A recent report estimated that Canadian federal production subsidies to the fossil fuel industry amounted to a minimum of \$CAN 1.8 billion annually,¹ mainly through tax expenditures, and an additional estimated minimum of \$CAN 2.894 billion per year was provided in public financing to oil and gas producers and pipeline companies in Canada and in the U.S.²

The Minister of Finance and the Minister of Environment and Climate Change were both mandated to work together “to fulfill the G-20 commitment to phasing-out fossil fuel subsidies to over the medium-term” as outlined in their Mandate Letters.³

The Green Budget Coalition recommends a set of early actions through Budget 2016 and has identified seven tax expenditures that should be targeted for phase-out by 2020 to deliver on this commitment.

In addition, the Minister of Finance was mandated to:

“Ensure that our fiscal plan is sustainable by meeting our fiscal anchors of balancing the budget in 2019/20 and continuing to reduce the federal debt-to-GDP ratio throughout our mandate.”

There are a many oil and gas (including liquefied natural gas) projects in the application stage in Canada, with some start-up dates for these projects extend out to 2030 and beyond. With these tax credits still in place, the Government of Canada risks foregoing billions of dollars in additional tax revenues from accelerated deduction rates for pre-production costs for new projects over decades to come.⁴ Phasing-out of fossil fuel subsidies and other federal support to this sector will allow the Government of Canada to reap significant fiscal benefits over the medium and long-term by recouping foregone tax revenues, thus significantly facilitating the return to balanced budgets by 2019/20.

“Work with the President of the Treasury Board and your Ministerial colleagues to conduct a review of tax expenditures and other spending to reduce poorly targeted and inefficient measures, wasteful spending, and government initiatives that are ineffective or have outlived their purpose.”

A comprehensive review of all federal direct spending, public financing and production subsidies to coal, oil and gas, natural gas, is an essential deliverable in the proposed review of tax expenditures and other government spending led by the Treasury Board and the Department of Finance. As described below, many of those tax expenditures have not achieved their intended policy objectives, have outlived their original purpose and are currently contrary to this Government’s objective of making the tax system competitive for investments in clean technologies.

“Work with the Minister of Natural Resources to enhance existing tax measures to generate more clean technology investments and work with the provinces and territories to make Canada’s tax system highly competitive for investments in the research, development, and manufacturing of clean technology.”

1 This does not include production subsidies provided by provincial and territorial governments.

2 Oil Change International, Overseas Development Institute, International Institute for Sustainable Development. November 2015.

3 Prime Minister of Canada, Mandate Letter to the Minister of Finance, available at: <http://www.pm.gc.ca/eng/minister-finance-mandate-letter#sthash.gRot0eb3.dpuf>

4 Pembina Institute. July 2014. Fossil Fuel Subsidies: An Analysis of federal financial support to Canada’s oil sector, ©2014 The Pembina Institute.

Phasing out production subsidies to oil, gas, natural gas and coal will significantly enhance the neutrality of the tax system thus making investments in clean energy technologies more attractive. In addition, this phase-out will generate significant savings over the medium and long-term that can be re-directed to support the Government of Canada's investments in new and clean technologies through the proposed Low Carbon Economy Trust⁵.

Recommendations

The Green Budget Coalition recommends that the following tax credits be eliminated immediately in Budget 2016:

The Mineral Exploration Tax Credit (METC) for flow-through shares (applied to coal mining).

The METC was renewed in Budget 2015 and will expire on March 2016. The METC available to the coal sector should not be renewed in Budget 2016. The METC complements flow through shares,⁶ enabling individuals who invest in flow-through shares to claim an amount equal to 15% of specified mineral exploration expenses incurred in Canada and renounced to flow-through share investors.⁷ Exploration subsidies are particularly inefficient as they represent tax expenditures for projects that may not even go to full development eventually, and thus will not yield an employment in the sector nor royalties or tax revenues for provincial and federal governments.

Estimated savings: \$CAN17.5 million per year (over two years)⁸

The Accelerated Capital Cost Allowance (ACCA) provided to Liquefied Natural Gas projects.

Budget 2015 introduced a new ACCA treatment for assets used in facilities that liquefy natural gas. Capital cost allowance is the means by which Canadian businesses may claim depreciation expenses for their investments in capital, for calculating taxable income under the Income Tax Act. This new ACCA allows investments in eligible equipment used for natural gas liquefaction to be written-off from taxable income at a substantially higher rate; a 22 per cent allowance that brings the CCA rate up to 30 per cent for those eligible expenses. For non-residential buildings used at a facility that liquefies natural gas the ACCA was brought up to 10 per cent.

Estimated Savings: \$CAN9 million per year⁹

5 Prime Minister of Canada, Mandate Letter to the Minister of Finance, available at: <http://www.pm.gc.ca/eng/minister-finance-mandate-letter#sthash.gRot0eb3.dpuf>

6 "Flow-through shares allow companies to renounce or "flow through" tax expenses associated with their Canadian exploration activities to investors, who can deduct the expenses in calculating their own taxable income". (Budget 2012, Annex 4). <http://www.budget.gc.ca/2012/plan/pdf/Plan2012-eng.pdf>

7 Budget 2012, Annex 4. <http://www.budget.gc.ca/2012/plan/pdf/Plan2012-eng.pdf>

8 Budget 2015 projected a net reduction in federal revenues of \$35 million over the 2015–16 to 2016–17 periods from the METC for the mining sector as a whole data is not disaggregated by sector. Economic Action Plan 2015, Strong Leadership, a balanced budget, low tax plan for jobs, growth and security, tabled in the House of Commons on April 21, 2015 p.212. <http://www.budget.gc.ca/2015/docs/plan/toc-tdm-eng.html>

9 Budget 2015 projected the deferral of tax associated with this measure is expected to reduce federal taxes By \$45 million over the 2015–16 to 2019–20 period. Strong Leadership, a balanced budget, low tax plan for jobs, growth and security, tabled in the House of Commons on April 21, 2015 p.212. <http://www.budget.gc.ca/2015/docs/plan/toc-tdm-eng.html>

Duty exemption for imports of mobile offshore drilling units in the Atlantic and Arctic.

This tax break was originally designed to promote oil and gas exploration in the offshore Atlantic and Arctic. These regions are among the world's most vulnerable in terms of environmental risks of oil and gas production as well as being financially highly risky investments.

Estimated Savings: Unknown

In addition, the Green Budget Coalition recommends that the Department of Finance undertake a comprehensive review to quantify and publicly report the costs of all production subsidies and tax credits to coal, oil and gas, natural gas, including pipeline and refinery expansion. This will require that tax expenditures specific to fossil fuels be disaggregated from the tax expenditures available to the mining sector¹⁰. In addition, categorizing the tax expenditures available within the energy sector (i.e. to oil, gas, coal, wind, geothermal, solar etc.) will be necessary to determine the impact of the tax system on investments in clean energy, and to enhance existing tax measures to generate more clean technology investments.

Based on this review, the Government of Canada should announce in FY 2016/2017 a clear timeline to phase-out all remaining federal tax credits, production subsidies as well as all public financing provided by Export Development Canada by 2020 that support coal, oil and gas (including liquefied natural gas) including:

The Canadian Development Expense (CDE).

Oil and natural gas producers can claim up to 30 percent of their expenses against taxable income for drilling, converting or completing an oil well in Canada, sinking or excavating a mine shaft, main haulage way, or similar underground work for a mine in a mineral resource in Canada built or excavated after the mine came into production; and pre-production mine development expenses after 2017. The cost of any Canadian mineral property, or of any right to or interest in any such property, also qualifies as a CDE. CDE are accumulated in a pool called Cumulative Canadian Development Expenses (CCDE). The taxpayer can deduct up to 30% of the unclaimed balance in that pool at the end of each year. Unclaimed balances may be carried forward indefinitely.¹¹

Estimated Savings: \$CAN 1.127 billion per year¹²

The Canadian Exploration Expenses (CEE) tax break.

The CEE allows for further deductions, at a rate of 100 per cent, for costs incurred for geological, geophysical, and geothermal (G3) surveys and exploratory drilling (in the coal sector this includes the intangible costs of mine development). CEE are expenses incurred for the purpose of determining the exis-

¹⁰ The following tax deductions are particularly problematic to accurately and reliably estimate: the Canadian Development Expenses, the Canadian Exploration Expenses, the Canadian oil and gas property expense, the Foreign Resource Expense and Foreign exploration and development expense. These are deductions of capital costs that can be pooled each year and then be claimed whenever the owner chooses to, and the data specific to these tax deductions does not appear to be readily available. The most recent analysis for this from Finance Canada appears to be Part 2 of the Tax Expenditures and Evaluations 2012, Tax Expenditures for Accelerated Deductions of Capital Costs. Mostly, the document explains why it may be too difficult to come up with accurate figures in such cases, due in part to the intricate relationship with other tax deductions.

¹¹ Natural Resources Canada. 2014. 'Mining-specific Tax Provisions'. Ottawa. Government of Canada. <http://www.nrcan.gc.ca/mining-materials/taxation/mining-taxation-regime/8892#lnk10>

¹² Oil Change International, Overseas Development Institute, International Institute for Sustainable Development, November 2015. Estimate based on 2012 and 2013 data, originally reported in \$US, converted to \$CAN using the 2014 IRS rate.

tence, location, extent, or quality of a mineral resource, or petroleum or natural gas, in Canada. CEE also include expenses incurred for the purpose of bringing a new mine into production, including clearing, removing overburden and stripping, and sinking a mine shaft.¹³

Estimated savings: \$CAN 182 million per year¹⁴

The Canadian oil and gas property expense (COGPE).

The COGPE allows companies to claim a 10 per cent deduction from taxes for the costs of acquiring oil and gas wells and rights.

Estimated savings: \$CAN40 million per year¹⁵

The Foreign Resource expense (FRE) and Foreign Exploration and Development Expense (FEDE).

Canadian companies can deduct 30% of exploration expenses incurred overseas. Data is not available to estimate the amount of foregone federal tax revenues for these two measures.

Estimated savings: Unknown

Direct federal spending and public financing

The Government of Canada has provided significant amount of public funds in support of the oil and gas industry, in the form of advertising, outreach and research funding.¹⁶ In addition, the Government of Canada provides public financing for fossil fuel projects domestically and internationally through Export Development Canada.¹⁷ Public financing for fossil fuel production in Canada and overseas, provided by the Export Development Canada alone is estimated at \$CAN 2.894 billion annually.¹⁸ The Green Budget Coalition recommends the Government of Canada conduct a systematic review of the financing portfolio of Export Development Canada as well as Canada's financial contributions to multilateral development banks aimed at supporting investments in fossil fuel projects in Canada and abroad, with a goal to phasing out those contributions starting in Budget 2017.

13 Budget 2011 proposed that development expenses incurred for the purpose of bringing a new oil sands mine into production in reasonable commercial quantities be treated as Canadian Development Expenses (CDE) rather than CEE as in the past. Budget 2013 further proposes that pre-production mine development expenses be treated as Canadian Development Expenses (CDE) which are deductible on a 30% declining-balance basis. (Source, Natural Resources Canada, 2014)

14 Oil Change International, Overseas Development Institute, International Institute for Sustainable Development, November 2015. Estimate based on 2012 and 2013 data, originally reported in \$US, converted to \$CAN using the 2014 IRS rate.

15 Oil Change International, Overseas Development Institute, International Institute for Sustainable Development, November 2015. Estimate based on 2012 and 2013 data, originally reported in \$US, converted to \$CAN using the 2014 IRS rate.

16 The Auditor General of Canada estimated that the Government of Canada provided an estimated total direct spending to the sector of \$508 million over the fiscal period 2007–08 to 2011–12. Source: Commissioner of Environment and Sustainable Development (February 3, 2012). 2012 Fall Report of the Commissioner of the Environment and Sustainable Development, Chapter 4—A Study of Federal Support to the Fossil Fuel Sector. Ottawa, Canada. http://www.oagbvg.gc.ca/internet/docs/parl_ces-d_201212_04_e.pdf

17 For example EDC reported one transaction between \$435 million and \$870 million to India Reliance Industries Ltd. EDC's reporting of its financing is not precise and should be investigated and publicly reported.

18 Oil Change International, Overseas Development Institute, International Institute for Sustainable Development, November 2015. Estimate based on 2012 and 2013 data, originally reported in \$US, converted to \$CAN using the 2014 IRS rate.

Background and Rationale

A recent report by Oil Change International, the Overseas Development Institute and the International Institute for Sustainable Development estimates that Canadian federal production subsidies to the fossil fuel industry amounted to a minimum of \$CAN 1.8 billion annually¹⁹, mainly through tax expenditures, and an additional estimated minimum of \$CAN 2.894 billion per year in public financing to oil and gas producers and pipeline companies in Canada and in the U.S.²⁰

Most of the subsidies provided by the Government of Canada benefit conventional oil, oil sands, conventional gas and natural gas production providing tax breaks to exploration activities, field development, and extraction. Initial progress towards fossil fuel subsidy reform was made in previous federal budgets through the phase out the Accelerated Capital Cost Allowance (ACCA) and Intangible Capital Expenses (ICE) provided to oil sands projects, the Atlantic Investment Tax Credit – Oil & Gas and Mining, the Accelerated Capital Cost Allowance for Mining and Pre-production and the Mine Development Expenses.²¹ However, Budget 2015 introduced a new ACCA to the liquefied natural gas sector. Other countries, such as Germany, have phased-out all subsidies to the hard coal industry and both France and the U.S. have committed to phasing out public financing to the coal sector.

The Government of Canada's primary remaining subsidy programs for the oil and gas sector are the Canadian Development Expense (CDE) and the Canadian Exploration Expense (CEE) tax deductions, which quicken production growth by providing accelerated deduction rates for pre-production development and exploration expenses respectively. The Government of Canada provides additional tax preferences that apply only to oil and gas and mining (including coal, which is considered a fossil fuel), such as accelerated deductions for some exploration and development expenses and flow-through shares.

Many of these tax preferences and accelerated deductions recommended for reform date back to the 1970s and have since outlived their original objectives.²² These measures were historically premised on factors such as exploration risk, spillover benefits of exploration to third parties (similar to R&D), large capital requirements, price volatility, and a desire to be competitive. Today, however, it is not clear that these factors are unique to the sector or merit preferential treatment.

More importantly, these tax preferences are now contrary to the Government of Canada's global commitment to greenhouse gases emissions reductions as well as Canada's domestic policy with regards to carbon pricing and supporting investments in clean technology.

The Government of Canada, along with 39 other countries and major corporations, has endorsed the Fossil Fuel Subsidy Reform Communiqué submitted at the Conference of the Parties to the United Nations Framework Convention on Climate Change in Paris in November 2015. Supporters of this Communiqué have recognized that the elimination of fossil-fuel subsidies would make a significant contribution to reducing global greenhouse gas emissions and that accelerating the reform of fossil-fuel subsidies is therefore an urgent priority. The Green Budget Coalition's recommendations would allow the Government of Canada to meet the principles agreed to in the Communiqué related to communication and transparency and ambition in

19 This does not include production subsidies provided by provincial and territorial governments.

20 Oil Change International, Overseas Development Institute, International Institute for Sustainable Development. November 2015.

21 "Summary of Progress Reports on the Commitment to Rationalize and Phase Out Inefficient Fossil Fuel Subsidies: Canada, available at: <https://g20.org/wp-content/uploads/2015/10/Summary-of-Progress-Reports-on-the-Commitment-to-Rationalize-and-Phase-Out-IFFS.pdf>

22 Sawyer, Dave and Seton Stiebert, 2010, http://www.iisd.org/gsi/sites/default/files/ffs_awc_3canprovinces.pdf

the scope and timeframe for implementing subsidy reform.²³

Reform of the Government of Canada's preferential tax treatment, direct spending and public financing to the fossil fuel sector would place the federal government in a position to encourage similar subsidy reform by provincial governments.²⁴ Federal leadership on energy subsidy reform could be a key contribution to the pan-Canadian framework for addressing climate change to be negotiated with the provinces and territories following the UNFCCC COP21 meeting in Paris. The Green Budget Coalition recommends the pan-Canadian framework include an agreement to a set of common fiscal principles to reform federal and provincial tax systems to support investments in clean energy. For more details, [refer to the Green Budget Coalition's Recommendation to support renewable energy](#).

23 Fossil Fuel Subsidy Reform Communiqué, available at: <http://fffsr.org/communique/>

24 Estimates of provincial tax breaks amount to a minimum of \$CAN 1,125 billion annually, mostly delivered for oil and natural gas exploration activities as relief on royalties by the provinces of Alberta and British Columbia. Source: Oil Change International, Overseas Development Institute, International Institute for Sustainable Development

Budget Announcement

"The Government of Canada commits today to transparency by reporting to Canadians the amount of public funds used to support the oil and gas, coal and natural gas sector in Canada."

"In keeping with our commitment to the G20, we also announce a gradual phase out of all production subsidies to this sector. By removing the preferential tax treatment and public financing previously offered to the oil and gas sector, the Government of Canada will ensure the tax system support our commitment to support investments in clean energy."

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**PROTECTING
OUR
CHANGING
ARCTIC**

PROTECTING OUR CHANGING ARCTIC

The Green Budget Coalition recommends that the Government of Canada provide funding of \$12 million in Budget 2016 and \$270 million over four years to Indigenous and Northern Affairs Canada, Fisheries, Oceans and the Canadian Coast Guard, Transport Canada, and Environment and Climate Change Canada to help protect our changing Arctic from climate change and ensure the sustainable development of Canada's North.

Investment required

For 2016/2017: \$12 million

For ongoing: \$270 million/year over four years

Recommendations

Enhance Safety of Marine Transportation

Immediately provide \$50 million over five years (beginning in Budget 2016) to Transport Canada and Fisheries, Oceans and the Canadian Coast Guard to enhance the safety of marine transportation in the Arctic and further strengthen marine incident prevention, preparedness and response in Arctic waters.

Recommended Investment: \$10 million/year for 5 years beginning in FY2016.

Mandate(s): Minister of Transport; Minister of Fisheries, Oceans and the Canadian Coast Guard

Outcome: It will be critical that any increases in marine transportation be managed safely and that Canada is adequately prepared to respond to any accidents that may occur. Total damages and clean-up costs from the Deepwater Horizon oil spill in the Gulf of Mexico were estimated to be in the range of \$42 billion USD. Given the extreme conditions, remote locations and lack of response capacity in Canada's North, a blow-out or shipping accident of similar proportions would likely be even more costly to clean up.

Oils Spills Research

Immediately provide \$10 million over five years (beginning in 2016) to Environment and Climate Change Canada and Indigenous and Northern Affairs Canada for research to better understand both the potential impact of oil spills in the North and how oil and ice will interact.

Recommended Investment: \$2 million/year for 5 years beginning in FY2016.

Outcome: As climate change melts Arctic sea ice and industrial activity in the North becomes more feasible, investments in research will be required to better understand both the potential impact of oil spills in the North on marine ecosystems and how oil and ice will interact. If an oil spill does occur in the Arctic, current technology has not proven effective in cleaning up oil when it is either mixed with ice or trapped

under ice.¹ Norway has banned drilling in ice altogether, mainly due to concerns over the difficulty of cleaning up oil that is mixed with or trapped under sea ice.

Renewable Energy and Energy Efficiency in the North

From the Green Budget Coalition recommended investments in [renewable energy](#) and [energy efficiency](#) across Canada, allocate \$120 million over four years (beginning in 2017) to Indigenous and Northern Affairs Canada and Environment and Climate Change Canada for investments in projects in the North to help encourage energy efficiency and the development of renewable energy technologies and to reduce both the consumption of fossil fuels and the production of black carbon emissions, which are contributing to climate change and air pollution. These investments could be funded through the elimination of production subsidies to fossil fuel industry.

Recommended Investment: \$30 million/year for 4 years beginning in FY2017.

Outcome: The adoption of renewable energy technologies in the North will be necessary to reduce greenhouse gas emissions, as mandated, and meet our international climate change commitments. This targeted funding is required to address energy poverty, increase energy security and support a fair transition towards the low carbon economy for the workforce in Northern and remote regions.

Stakeholder engagement in Resource Development Projects in the North

Provide \$12 million over four years (beginning in 2017) to Indigenous and Northern Affairs Canada to ensure that all stakeholders and interveners can adequately participate in reviews of proposed major resource development projects in the North such as Canadian Environmental Assessment Act and National Energy Board reviews.

Recommended Investment: \$3 million/year for 4 years beginning in FY2017.

Outcome: Funding must be provided to ensure that all stakeholders and interveners can adequately participate in reviews of proposed major resource development projects in the North such as CEAA and National Energy Board reviews. Without adequate stakeholder participation in reviewing, approving and monitoring major resource projects, industrial development will not have the required social license to proceed.

Climate Resilience and Adaptation in the North

Provide \$80 million over four years (beginning in 2017), part of which could be funded from the Low Carbon Economy Trust, to examine the impacts of climate change on Arctic communities and ecosystems, and for investments in climate resilient infrastructure and adaptation funding to protect against changing weather in the North.

Recommended Investment: \$20 million/year for 4 years beginning in FY2017

Outcome: Immediate investments are required towards climate resilient infrastructure in the North, and adaptation funding to protect against changing weather in the North. The economic cost of extreme weather events in Canada has increased considerably in recent years and this trend is likely to worsen unless action is taken to minimize the economic impacts of climate change on Northern communities by

¹ National Research Council. Responding to Oil Spills in the U.S. Arctic Marine Environment. April 2014. <http://news.national-geographic.com/news/energy/2014/04/140423-national-research-council-on-oil-spills-in-arctic/>

improving climate resilience and adaptation capacity.²

Research on the impacts of climate change in the North

Research on the impacts of climate change on Arctic communities and marine ecosystems as mandated by the Prime Minister.

Recommended Investment: \$2.5 million/year for 4 years (beginning in FY2017)

Mandate(s): Minister of Environment and Climate Change; Minister of Indigenous and Northern Affairs; Minister of Fisheries, Oceans and the Canadian Coast Guard; Minister of Science

Outcome: The Prime Minister has mandated Ministers to examine the impacts of climate change on marine ecosystems.

Eliminate absolute liability for oil and gas operations in the North

Absolute liability limits under the Canada Oil and Gas Operations Act and the Arctic Waters Pollution Prevention Act should be eliminated. Currently, should an oil spill occur in the Arctic, federal regulations limit the liability of oil companies to \$1 billion, well below the anticipated clean-up costs.

Recommended Investment: None (potential savings)

Outcome: The elimination of absolute liability limits would ensure that taxpayers are not liable for clean-up costs in the event of an oil spill and that operators are given the right incentives to ensure that they take the necessary safety precautions.

Offshore Oil and Gas Lease Liabilities

Maintain existing rules that limit exploratory offshore oil and gas leases to nine years. Granting extensions on leases in the Beaufort Sea could result in a substantial financial liability for the Government of Canada based on foregone revenue from the new lease applications.

Recommended Investment: None (potential revenue)

Outcome: Imperial Oil and BP have delayed plans to drill for oil in the Beaufort Sea off the Northwest Territories, as they require more time to examine how to operate in the harsh Arctic environment, complete the regulatory process and conduct the necessary technical work.³ As a result, their exploratory drilling leases, which are limited to nine years, will expire in 2020 before drilling can begin. Imperial has been in talks with the previous government to extend its exploration license to 16 years rather than having to apply and pay for new leases. Denying this request could result in a significant source of new revenue for the government given that the original exploration rights were sold to the companies for a combined \$1.8 billion.

The Prime Minister's mandate letter to the Minister of the Environment and Climate Change included the

² Natural Resources Canada. 2014. Climate Change 2014: Impacts, Adaptation, and Vulnerability.

³ <http://www.cbc.ca/news/canada/north/imperial-oil-bp-delay-beaufort-sea-drilling-plans-indefinitely-1.3129505>

Background and Rationale

- “Ensure that our government provides national leadership to reduce emissions, combat climate change and price carbon.”
- “In partnership with provinces and territories, develop a plan to combat climate change and reduce greenhouse gas emissions, consistent with our international obligations and our commitment to sustainable economic growth.”

The Prime Minister also directed the Minister of Environment and Climate Change, in collaboration with the Ministers of Science and the Minister of Fisheries, Oceans and the Canadian Coast Guard, to “examine the implications of climate change on Arctic marine ecosystems.”

In addition, the Prime Minister’s letters to the Minister of Indigenous and Northern Affairs, Natural Resources, Environment and Climate Change, and Fisheries, Oceans and the Canadian Coast Guard, directed the Ministers to “collaborate to ensure that environmental assessment legislation is amended to enhance the consultation, engagement and participatory capacity of Indigenous groups in reviewing and monitoring major resource development projects.”

Finally, the mandate letter to the Minister of Infrastructure and Communities included a directive to “develop a 10-year plan to deliver significant new funding to provinces, territories and municipalities” that should focus on “green infrastructure, clean energy, climate resilient infrastructure like flood mitigation systems and infrastructure to protect against changing weather.”

The Green Budget Coalition’s recommendations on protecting our changing Arctic speak directly to these priorities. The federal government has a clear fiduciary responsibility for the care and welfare of Indigenous peoples in Canada’s North who are already being directly impacted by climatic change. The Government of Canada also clearly has the jurisdictional authority, in collaboration with the provinces and territories, to implement measures that will help reduce Canada’s greenhouse gas emissions, consistent with our international climate change obligations. As such, we are recommending that the federal government make the investments detailed above to help implement the Prime Minister’s Ministerial mandate directives.

Canada’s North is the homeland for tens of thousands of Canadians, including Indigenous peoples who have inhabited this vast region for millennia. The Canadian Arctic also encompasses some of the least disturbed and largest marine ecosystems in the world and is home to bowhead, beluga, and gray whales, walrus, polar bears, as well as millions of migratory birds. However, climate change is causing the Arctic to warm at twice the rate of the rest of the planet, fundamentally changing both human communities and natural systems. Melting sea ice is altering Arctic ecosystems and permitting, for the first time, industrial access to commercial fishing, offshore energy and commercial shipping on a scale never witnessed before.

In addition, climate change is causing increasingly volatile weather patterns that are already having considerable impacts across the country. Nowhere are these changes more evident than in Canada’s North.⁴ According to Natural Resources Canada, northerners, particularly the Inuit, are at greater risk of economic losses and poor health as a result of climate change and rapid warming of the Canadian Arctic is jeopard-

4 International Institute for Sustainable Development. Climate Change Adaptation and Canadian Infrastructure. November 2013. http://www.rediscoverconcrete.ca/assets/files/research/Climate-Change-Adaptation-and-Canadian-Infrastructure_Final_Nov2013.pdf

dizing hunting and many other daily activities with significant implications for livelihoods and well-being.⁵ More extreme weather in the North could inundate coastal communities and disrupt the provision of essential services, while the ongoing melting of Arctic permafrost poses a serious threat to roads and building structures.

It is clear that action must be taken to reduce greenhouse gas (GHG) emissions and to prepare for a changing climate with appropriate adaptation measures. The Minister of Finance has been mandated to work with the Minister of the Environment and Climate Change to create a “new Low Carbon Economy Trust Fund to help fund projects that would materially reduce carbon emissions.” Targeted investments in renewables and energy efficiency in the North will not only help combat climate change; crucially, they could also help address issues of energy poverty, the extremely high cost of energy, and skills and training of the Indigenous work force, all of which will be integral components of a just transition towards a Low Carbon Economy.

As Arctic sea ice melts, we must also prepare for the oncoming pressure for increased industrial activity in the Arctic by ensuring that development in Canada’s North is safe and sustainable, and that those who live in the region are included in the decision making process. There is still very little infrastructure, such as highways, airports, and ports, in the Canadian Arctic so any industrial accident in this sensitive region would have a profoundly adverse impact on local communities, wildlife and ecosystems. For example, there is currently no proven way to respond to an oil spill in icy waters and little is known about how oil might interact with ice when spilled in significant quantities.

The GBC’s Arctic recommendations highlight the importance of being prepared for the changes to come in Canada’s North. The recommended funding levels are modest (\$12 million in 2016-17 and \$67.5 million per year for the following four years) and will help ensure investments are made in areas that are consistent with the Prime Minister’s mandate letters. These measures represent necessary steps in ensuring that the negative impacts of climate risks can be minimized and the resiliency of northerners to climate impacts will be strengthened.

Arctic Offshore Liability

The current design of Canada’s liability rules for Arctic offshore oil operations, nuclear power and rail freight transportation leaves governments, taxpayers, communities and the environment vulnerable in the event of a significant accident or spill. The Green Budget Coalition believes that, in line with the government’s commitment to the polluter pays principle, liability should be commensurate with the entire potential costs of a catastrophic accident.

The liability regime for drilling operations conducted in Canada’s Arctic is established pursuant to the *Canada Oil and Gas Operations Act* (COGOA) and the *Oil and Gas Spills and Debris Liability Regulation*, SOR/87-331, as well as through the *Arctic Waters Pollution Prevention Act* (AWPPA). It is important not only because of how it shapes and limits any claims for post-spill compensation, but also because of how it creates an incentive for oil companies to pursue excessively risky activities, knowing they will only bear the full cost of liability (beyond the absolute liability cap) if negligence is established and upheld in court. Eliminating the liability cap is one major piece among a broader set of required offshore liability reforms that will encourage companies to weigh the full potential liability and make better risk decisions.

5 Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (Cambridge, UK and New York, NY: IPCC, 2014), chap. 11, http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap11_FINAL.pdf

Under the previous government's Bill C-22, *Energy Safety and Security Act*, in the event of an oil spill, much of the financial risk would be transferred to the federal taxpayer. In the case of an oil spill, the federal government could be left responsible for damages and clean-up costs in the billions of dollars due to the current \$1 billion cap on liability, well below the anticipated financial costs of catastrophic spill response and damages. Removing this cap and modifying the civil liability regime more generally, as other countries have done for nuclear accident liability, would eliminate these off-book liabilities by transferring the respective liabilities to those companies operating offshore.

A series of significant and highly-publicized oil spills, including the BP Deepwater Horizon spill in the Gulf of Mexico, have highlighted the inadequacy of Canada's liability regime. The damages in the BP spill alone are currently estimated at \$42 billion. In accordance with the polluter pays principle, operators should face unlimited absolute financial liability for oil spills, as is the case in some other jurisdictions including Norway and Greenland. Unlimited absolute liability will yield two direct benefits:

1. The appropriate allocation of risk will provide an incentive for industry to improve safety practices, reducing the likelihood of polluting accidents, and
2. It will ensure that taxpayers are entirely protected from the financial consequences of an offshore oil spill, which could run into the many billions of dollars.

Bill C-22 included several fundamental weaknesses that compromise its effectiveness in terms of improving safety practices and protecting Canadian taxpayers in the event of a catastrophic spill:

1. \$1 billion in absolute liability is too low to cover the costs associated with catastrophic spills like the BP Deepwater Horizon, especially in the Arctic where environmental conditions would frustrate spill response efforts;
2. The bill provides for ministerial discretion to reduce absolute liability levels to below the legislated level of \$1 billion;
3. The bill provides relief from liability, in certain cases, for the effects of dumping toxic spill treating agents (chemical dispersants) into marine environments;
4. The bill does not require an operator to provide proof that it has the financial resources to pay for the entire amount of at-fault liability.

The absolute liability limit under COGOA and the AWPPA should be eliminated. In the same vein, the GBC also recommends the elimination of the absolute liability limit established under the Canada- Nova Scotia Offshore Petroleum Resources Accord Implementation Act and the Canada-Newfoundland Atlantic Accord Implementation Act for offshore operations off Canada's east coast.

The Green Budget Coalition is recommending that the polluter-pays principle is applied consistently throughout Bill C-22 and is also extended to rail freight transportation, to improve safety practises and thus reduce the likelihood of highly-damaging events, and to fully protect taxpayers.

Budget Announcement

"Today the Government of Canada is announcing a series of measures that will help minimize the impacts of climate change in Canada's North while helping northerners adapt to climate impacts and ensuring the sustainable development of Canada's Arctic."

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INFRASTRUCTURE

PUBLIC TRANSIT FUNDING

The Green Budget Coalition recommends that the Government of Canada provide funding of \$20 billion over ten years to Infrastructure and Communities Canada to implement new public transit spending through Budget 2016.

Investment required

For 2016/2017: \$2 billion For ongoing: \$2 billion/year for ten years

Note: According to the Canadian Urban Transit Association, on average, each dollar invested by Ottawa in transit generates at least two dollars in additional funding from other levels of government. The recommended federal investment of \$20 billion could potentially leverage an additional \$40 billion over 10 years.

Summary

Federal funding for public transit is, at present, insufficient to meet the country's needs. Over the next five years, Ottawa plans to contribute a total of \$1.75 billion to a new Public Transit Fund, most of which (\$1 billion) will come in 2019. But the Canadian Urban Transit Association estimates that, over these five years, Canada requires about \$56 billion in transit infrastructure. Much of this amount is covered by existing funding programs but there is still an \$18 billion shortfall. This comes to \$3.6 billion per year, which needs to be borne by the three levels of government. Ottawa's current contribution — even when it reaches its maximum of \$1 billion annually — doesn't even cover one-third of this.

To remedy this situation the Green Budget Coalition recommends that the government of Canada shoulder about half the annual transit funding requirement (\$2 billion), with the remainder coming from provincial and municipal governments.

Giving people transportation options beyond cars is vital for a range of reasons, not least because emissions from this sector contribute so significantly to climate change. In Ontario, for example, transportation is the biggest source of greenhouse gases, dumping over 60 million tonnes of carbon dioxide into the atmosphere in 2013 alone. Automobile traffic also costs us time and money. Canadian commuters spend an average of 32 working days a year — more than a month — travelling to and from work. Congestion in the Toronto area alone costs \$11 billion annually. In Metro Vancouver over \$1 billion is lost each year in time, wasted fuel, and GHG impacts. All these problems are addressed by building high-quality public transit systems. Providing buses, light-rail and subways also drives economic growth. The Canadian Urban Transit Association (CUTA) estimates that every dollar spent on transit generates \$3 in economic activity.

Numerous studies suggest public-transit investment is a strong job-creator — especially compared with other infrastructure projects such as road-building. Research found that a billion dollars invested in road expansion creates 12,638 direct and indirect jobs. That same money invested in mass transit creates 17,784 jobs.¹

1 James Heintz et al. 2009. The Political Economy Research Institute, University of Massachusetts, Amherst.

Explaining why transit spending generates so much employment, the International Association of Public Transport argues, “In particular, the design and manufacturing of public transport vehicles is a highly job-intensive activity. There is much less automation than in the private car industry.”²

Getting Canadians out of cars also contributes to public health. According to the Canadian Association of Physicians for the Environment (CAPE), “Each additional hour spent in a car per day is associated with a 6% increase in the likelihood of obesity.” CAPE also argues that “Traffic injuries are the second leading cause of death for people age 5-29 worldwide.”

Finally, the proposed investment will be especially beneficial if it supports transit electrification. The latter is essential if we are to attain the deep decarbonization necessary to avoid climate catastrophe.

Background and Rationale

Paris climate conference

A climate action plan covering all sectors of the Canadian economy is necessary to ensure Canada meets its GHG reduction target commitments made at the United Nations climate conference in Paris.

In 2012, emissions from transportation (including passenger, freight and off-road vehicles) were the second-largest contributor to Canada’s emissions, representing 24 per cent of overall GHGs.³ Reducing emissions from the transportation sector — especially through electrification of transit and reduction in private vehicle use — is therefore necessary to achieve Canada’s emission-reduction commitment.

Previous transit funding

Over the past 15 years, the federal government has supported public transit through a number of programs, including:

- Gas Tax Fund (started in 2005): actual expenditure on transit: \$1.769 billion
- Building Canada Fund (started in 2007): funding commitment on transit: \$2.3 billion
- P3 Canada Fund (started in 2009): announced for transit: \$175.3 million
- Green Municipal Fund (started in 2000): allocated for transit: \$32.2 million⁴

² International Association of Public Transport. 2013. Public transport: creating green jobs and stimulating inclusive growth.

³ Environment Canada, Canada’s Emission Trends 2014. <http://ec.gc.ca/ges-ghg/default.asp?lang=En&n=E0533893-1&offset=5&toc=show>

⁴ Note: spending amounts are accurate as of February, 2013 Source: Canadian Urban Transit Association, “Federal, Provincial & Territorial Public Transit Funding Programs in Canada”, July 2013.

Budget Announcement

"The Government of Canada is committed to robust, stable, long-term support for public transit. Today we announce the launch of a ten-year program which will see transit funding increase by \$20 billion."

"This extraordinary investment will create tens of thousands of jobs annually, significantly reduce traffic congestion, protect our fragile planet, and improve Canadians' health."

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GREEN INFRASTRUCTURE FOR FIRST NATIONS COMMUNITIES

The Green Budget Coalition recommends the Government of Canada provide funding of \$244 million in Budget 2016 and \$514 million per year over five years to Indigenous and Northern Affairs Canada (INAC) for First Nations green infrastructure.

Investment required

For 2016/2017: \$224 million For ongoing: \$514 million/year over five years

Break down:

Water and wastewater systems: \$470 million per year over five years

Energy efficiency:

- Deep measures residential energy conservation programs - \$24 million per year over five years
- Non-residential energy efficiency projects - \$20 million per year over five years

Summary

The Minister of Finance and the Minister of Indigenous and Northern Affairs were mandated to collaborate to establish a new fiscal relationship that lifts the 2% cap on annual funding increases and moves towards sufficient, predictable and sustained funding for First Nations communities.¹

The Minister of Infrastructure and Communities and the Minister of Indigenous and Northern Affairs were mandated to collaborate and, in consultation with First Nations, Inuit and other stakeholders, to improve essential physical infrastructure for Indigenous communities including improving housing outcomes for Indigenous Peoples.²

Sustained long-term funding starting in Budget 2016 for green infrastructure in First Nations Communities is essential to deliver on the Government of Canada's commitments.

In addition, the Minister of Indigenous and Northern Affairs was mandated to work toward reconciliation "starting with the implementation of the United Nations Declaration on the Rights of Indigenous Peoples" of which articles 21 and 23 are of special importance in relation to these recommendations.³

1 Prime Minister of Canada, November 2015, Minister of Finance Mandate Letter, retrieve at: <http://www.pm.gc.ca/eng/minister-finance-mandate-letter>. Minister of Indigenous and Northern Affairs Canada Mandate Letter retrieved at: <http://www.pm.gc.ca/eng/minister-indigenous-and-northern-affairs-mandate-letter>

2 Prime Minister of Canada, November 2015, Minister of Indigenous and Northern Affairs Mandate Letter, retrieved at: <http://www.pm.gc.ca/eng/minister-indigenous-and-northern-affairs-mandate-letter>. Minister of Infrastructure and Communities Mandate Letter, retrieve at: <http://www.pm.gc.ca/eng/minister-infrastructure-and-communities-mandate-letter>

3 United Nations Declaration on the Rights of Indigenous Peoples, 2008 http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf Article 21 1. Indigenous peoples have the right, without discrimination, to the improvement of their economic and social conditions, including, inter alia, in the areas of education, employment, vocational training and retraining, housing, sanitation, health and social security. 2. States shall take effective measures and, where appropriate, special measures to ensure continuing

Green infrastructure thinking should be integrated into all investments in infrastructure on First Nations land. A coordinated approach that takes advantage of latest technologies, opportunities for First Nations communities to participate in green technology development, training for First Nations youth, and integration of green infrastructure approaches would pay big dividends for First Nations communities.

Drinking water systems in many First Nations communities require improvement and upgrading. Further funding is needed to meet the goals of the 2011 AANDC Report, and consistent long-term A-base funding must be allocated to the department to respond not only to building new systems and upgrading badly deteriorated systems, but also for ongoing operations and maintenance associated with any drinking water or wastewater system in order to provide safe clean water

Funding for energy retrofit programs provide opportunities for addressing health issues in on-reserve housing, including those arising from the prevalent mould problem, and can create employment and skills training for youth in those communities.

Background and Rationale

Water and Wastewater Systems

The federal government has made important steps to acknowledge issues with First Nations water systems, but urgent action is still required.

The *Safe Drinking Water for First Nations Act* came into force on November 1, 2013.⁴ The legislation acknowledges the importance of access to safe drinking water for residents of First Nation lands. However, the details of any requirements under the Act will come through regulations.⁵ The Minister of Indian Affairs and Northern Development and the Minister of Health have committed to working with First Nations to develop regulations under the Act.⁶ So far, no regulations have been promulgated.

A new regulatory regime will not ensure that safe drinking water is provided to First Nations unless those communities have adequate capacity to satisfy the regulatory requirements.⁷

The number of drinking water advisories (DWAs) on reserve remains extremely high. A 2011 assessment commissioned by AANDC found that 39% of First Nations drinking water systems were at high risk of being unsafe.⁸ On July 31, 2015, Health Canada reported 133 drinking water advisories in 93 First Nations across Canada (excluding British Columbia)⁹ and the First Nations Health Authority reported 27 drinking water advisories in 23 First Nation communities in British Columbia.¹⁰

improvement of their economic and social conditions. Particular attention shall be paid to the rights and special needs of indigenous elders, women, youth, children and persons with disabilities. Article 23 Indigenous peoples have the right to determine and develop priorities and strategies for exercising their right to development. In particular, indigenous peoples have the right to be actively involved in developing and determining health, housing and other economic and social programmes affecting them and, as far as possible, to administer such programmes through their own institutions.

4 Safe Drinking Water for First Nations Act, SC 2013, c 21 ("Safe Drinking Water for First Nations Act"), s 15

5 Safe Drinking Water for First Nations Act, ss 4, 5

6 Safe Drinking Water for First Nations Act, preamble.

7 Harry Swain, Stan Louttit and Steve Hruddy, Report of the Expert Panel on Safe Drinking Water for First Nations, Volume 1, November 2006, p 49. <<http://publications.gc.ca/collections/Collection/R2-445-2006E1.pdf>>

8 Aboriginal Affairs and Northern Development Canada ("AANDC"), National Assessment of First Nations Water and Wastewater Systems - National Roll-up Report Final, April 2011, p 16. <http://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ/STAGING/texte-text/enr_wtr_nawws_rurnat_rurnat_1313761126676_eng.pdf>

9 Health Canada, Drinking Water Advisories in First Nations Communities, July 31, 2015. <<http://www.hc-sc.gc.ca/fniah-sp-nia/promotion/public-publique/water-dwa-eau-aqep-eng.php>>

10 First Nations Health Authority, Environmental Health – Drinking Water Advisories, August 31, 2015. <www.fnha.ca/what>

The 2011 AANDC report recommended that \$1.2 billion be spent to meet existing water protocols and \$4.7 billion be spent for new servicing over the following ten years. The Government of Canada reports having invested approximately \$3 billion for water and wastewater in First Nation communities between 2006 and 2014.¹¹ In 2014, the federal government promised to invest \$323.4 million over two years for First Nations water systems.¹²

By 2015, the Federal Sustainable Development Strategy 2013-16 only commits to increasing the percent of on-reserve First Nations water systems with low risk ratings from 27% to 50% and increasing the percent of on-reserve First Nations wastewater systems with low risk ratings from 35% to 70%.¹³ Meeting existing protocols in 100% of First Nation communities should be a strong priority. There remains a large shortfall of funding to meet the 2011 recommendations. The funding recommendation is intended, on top of previously allocated funding, to address a portion of the approximately \$6 billion in funding that was needed in 2011.

Investment required:

2016-2017: \$200 million

\$470 million per year over five years¹⁴

Energy Efficiency & Healthy Housing

Energy conservation programs address health and comfort issues associated with poorly insulated housing, including prevalent mould issues.¹⁵

There is a significant housing shortage in First Nations communities.¹⁶ It is worsening because of a rapidly growing population.¹⁷ The Assembly of First Nations estimated the shortfall at approximately 85,000 units in 2011. In 2013, the Assembly of First Nations determined that approximately 44% of the housing stock on reserve needs repair and an additional 18% requires replacement and is beyond repair, yet remains occupied and overcrowded.¹⁸

Budget 2015 promised \$170 million per year for First Nations to support the construction, rehabilitation and renovation of affordable housing on reserves and to enhance the management of the housing stock.¹⁹ Further funding is needed, including increased funding in other core areas of need for First

we-do/environmental-health>

11 AANDC, Water and Wastewater Infrastructure Investment Report: April 2012 - March 2013, dated modified January 22, 2015. <<https://www.aadnc-aandc.gc.ca/eng/1403198954861/1403199074561>>

12 Minister of Finance, The Road to Balance: Creating Jobs and Opportunities, 2014, p 173. <<http://www.budget.gc.ca/2014/docs/plan/pdf/budget2014-eng.pdf>>

13 Aboriginal Affairs and Northern Development Canada: Departmental Sustainable Development Strategy, date modified March 31, 2015. <<https://www.aadnc-aandc.gc.ca/eng/1420657257127/1420657289257>>

14 The Green Budget Coalition recommends that \$470 million per year of funding be continued for a total of ten years.

15 Canadian Environmental Law Association, Healthy Retrofits: The Case for Better Integration of Children's Environmental Health Protection into Energy Efficiency Programs, March, 2011. <http://www.cela.ca/publications/healthy-retrofits-full-report>

16 Standing Senate Committee on Aboriginal Peoples, On-Reserve Housing and Infrastructure: Recommendations for Change, June 2015 ("On-Reserve Housing Report"), p 18 <<http://www.parl.gc.ca/Content/SEN/Committee/412/appa/rep/rep-12jun15-e.pdf>>

17 Standing Senate Committee on Aboriginal Peoples, Housing on First Nation Reserves: Challenges and Successes, Interim Report of the Standing Senate Committee on Aboriginal Peoples, February 2015, p 7

18 Assembly of First Nations, AFN Annual Report 2012-2013, p 120. <<http://www.afn.ca/index.php/en/policy-areas/housing>>

19 Department of Finance Canada, Strong Leadership – A Balanced Budget, Low-Tax Plan for Jobs, Growth and Security, April 21, 2015 ("Budget 2015"), p 279. <<http://www.budget.gc.ca/2015/docs/plan/budget2015-eng.pdf>>

Nations communities, so that funding allocated for infrastructure is not reallocated to cover shortfalls in other areas.²⁰

Deep Measures Retrofits

This recommendation targets deep measures retrofits that deal with building envelope, insulation, and major appliances in 1,000 homes per year. The capacity for energy efficiency and retrofit delivery programs should increase over time and should target remote, rural and northern communities.

Non-residential energy efficiency programs in First Nations communities are also critical for pursuit of energy use reductions, cost savings, and emissions reductions from institutional, commercial and other business facilities. The EcoENERGY for Aboriginal and Northern Communities Program (EANCP) funded under the Clean Air Agenda ends in 2016 and should be renewed.^{21, 22}

Similarly, the Clean Air Agenda funding for the Climate Change Adaptation Program (CCAP) allocated to INAC to support Aboriginal and northern communities to address risks and challenges posed by climate change impacts and to become more resilient, should be renewed and expanded.

It is important to ensure that energy efficiency and retrofit programs in First Nations communities create employment and skills training for youth in those communities. Program development and delivery by the federal government in partnership with First Nations communities is a key requirement.²³

Investment required:

- 2,000 homes per year across Canada at \$12,000.00 per home for deep measures retrofits - \$24 million per year for five years.
- 80 new non-residential energy efficiency projects across Canada per year at \$250,000 each
- \$20 million per year for five years (in addition to current EANCP funding averaging \$4 million per year)

Total: \$44 million per year over five years

(Some of this funding could come from the allocation of \$279 million between 2007 and 2015 to the First Nations Infrastructure Fund.)²⁴

20 On-Reserve Housing and Infrastructure Report, p 15

21 The EANCP was renewed in Budget 2011 for 2011-16 with \$20 million total funding over five years. It provides funding for clean energy projects in Aboriginal and Northern communities. It first operated from 2007 to 2011, and followed on the Aboriginal and Northern Community Action Program (ANCAP; 2003-2007) and the Aboriginal and Northern Climate Change Program (2001-2003). See AANDC, EcoENERGY for Aboriginal and Northern Communities Program, date modified June 3, 2015. <<http://www.aadnc-aandc.gc.ca/eng/1100100034258/1100100034259>>; AANDC, ecoENERGY for Aboriginal and Northern Communities Program, September 30, 2014. <<http://www.nofnec.ca/PDF/2014/ecoENERGY-Program.pdf>>.

22 Between 2007-2015, the EANCP provided support for 262 projects across Canada, at a maximum eligibility of \$250,000 per project. See AANDC, Projects funded by ecoENERGY for Aboriginal and Northern Communities Program, June 3, 2015. <<http://www.aadnc-aandc.gc.ca/eng/1334855478224/1334856305920>>

23 For example, see Five Nations Energy Inc. Conservation Program on the Western James Bay Coast: <<http://www.nan.on.ca/upload/documents/energy2012-pr-lucie-edwards-fnei-conservation-program.pdf>>

24 AANDC, First Nation Infrastructure Fund, date modified July 16, 2015. <<https://www.aadnc-aandc.gc.ca/eng/1100100010656/1100100010657>>

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DELIVERING ON CANADA'S CONSERVATION COMMITMENTS

LEADERSHIP, NATIONAL PARKS AND NATIONAL WILDLIFE AREAS

The Green Budget Coalition recommends that the Government of Canada invest \$68 million starting in Budget 2016, increasing to \$90 million per year on-going by 2018, to Parks Canada and the Department of Environment and Climate Change to:

- lead nation-wide efforts to protect at least 17% of land and inland waters by 2020;
- create at least six new national parks and three new national wildlife areas by 2020, and identify additional new areas for protection through science-based plans; and
- strengthen management of all national parks, national wildlife areas and migratory bird sanctuaries to protect their ecological integrity.

Investment required

For 2016/2017: \$68 million

For ongoing: \$90 million per year

Summary

The mandate letter for the Minister of Environment and Climate Change includes commitments to: “develop Canada’s National Parks system as well as manage and expand National Wildlife Areas and Migratory Bird Sanctuaries”, and “protect our National Parks by limiting development within them and where possible, work with nearby communities to help grow local eco-tourism industries and create jobs.”

Under the UN Convention on Biological Diversity, Canada has committed to protecting at least 17% of our land and inland waters by 2020, and to ensuring these protected areas are well-managed, well-connected, and integrated into the broader landscape.¹ Currently, only 10% of Canada’s landscape is protected.

In addition to the mandate letter, the Liberal election platform² commits the federal government to “rapidly develop a road map to meet Canada’s international commitment to protect 17% of our land and inland waters by 2020,” to invest “\$50 million per year in Canada’s parks system and manage and expand national wildlife areas and migratory bird sanctuaries,” and to “increase science spending in National Parks by \$25M per year to allow for early identification of ecological stresses and avoid permanent degradation.”³ The Green Budget Coalition budget recommendations build on these mandate letter and platform commitments.

Given the shared jurisdiction over land in Canada, the federal government also has an important role to play in leading a nation-wide effort by all jurisdictions to deliver on the 2020 commitments, and in putting Canada on the path toward the longer term goal of protecting at least half of Canada’s land and inland water by 2030.

1 See Aichi Biodiversity Target 11 of the Strategic Plan for Biodiversity 2011-2020: <https://www.cbd.int/sp/targets/>

2 Liberal Party of Canada, A New Plan for Canada’s Environment and Economy, retrieved at: <https://www.liberal.ca/files/2015/08/A-new-plan-for-Canadas-environment-and-economy.pdf>

3 Liberal Party of Canada, A New Plan for Canada’s Environment and Economy, pg. 10 retrieved at: <https://www.liberal.ca/files/2015/08/A-new-plan-for-Canadas-environment-and-economy.pdf>

Background and Rationale

Parks and protected areas are the cornerstone of nature conservation strategies because they protect habitat that species need to survive and thrive.¹ Since 90% of Canada's landscape is in the public domain, managed by federal, provincial, territorial, Indigenous and regional governments, coordinated government action is critical to achieve conservation goals.

To stem the tide of biodiversity loss, in 2010 Canada joined other countries in endorsing a 10-year strategic plan under the United Nations Convention on Biological Diversity (CBD). The plan includes 20 biodiversity targets to be achieved by 2020, covering a range of actions needed to reverse the decline of biodiversity and advance towards the 2050 vision of "living in harmony with nature."

Target 11 commits countries to protect at least 17% of land and inland waters by 2020, and to improve the quality of protected areas systems by ensuring they are well-designed, well-managed, well-connected and well-integrated into broader landscapes.² Currently, Canada is lagging well behind most other countries with only 10% of our landscape protected, versus the global average of over 15%.

Protecting at least 17% of land and inland waters by 2020 is now embedded in Canadian policy through Canada's Biodiversity Goals and Targets which were formally adopted by the federal, provincial and territorial governments in 2015.³ Now federal leadership and investment is needed to ensure Canada achieves this important commitment.

Recommendations

Leadership and Science Support

The Government of Canada should invest \$5 million per year to:

- convene federal, provincial, territorial, and Indigenous governments to create and implement an action plan to protect at least 17% of Canada's land and freshwater by 2020; and
- support systematic nation-wide conservation planning to identify priority areas for protection to safeguard Canada's biodiversity.

National Parks

Creating New National Parks: The federal government should ramp up investment from \$10 million in 2016 to \$25 million per year, ongoing, by 2018 to create and manage new national parks, including a \$50 million investment over 3 years to support land acquisition and other park establishment costs.

This would enable the creation of six new parks by 2020, including Thaidene Nene, NWT; South Okanagan Similkameen, BC; Manitoba Lowlands, MB; northern BC/southern Yukon (Parks Canada region 7); Flathead Valley, BC.

Looking ahead, the longstanding National Park System Plan needs updating to expand parks where needed to protect their ecological integrity, create new parks to improve representation of natural regions, and work with partners to improve ecological connectivity between national parks and other protected areas, which is particularly important in the face of climate change.

1 The World Bank. 2010. Valuing Protected Areas. Washington DC. 62 pp.

2 See [Green Budget Coalition Budget 2016 Conserving our Oceans](#) to achieve the coastal and marine component of this target.

3 <http://biodivcanada.ca/default.asp?lang=En&n=9B5793F6-1>

Strengthening protection of National Parks: The federal government should invest \$25 million per year, ongoing, to restore science capacity for ecological monitoring and public reporting, research, and restoration, to achieve the legislative responsibility to maintain or restore national park ecological integrity.

More than half of all national park ecosystems that have been assessed are in fair or poor condition, and ecological integrity is declining in one third of park ecosystems. Yet recent federal budget cuts resulted in the loss of one third of the Agency's science capacity. The impact of these cuts was highlighted in the Fall 2013 Report from the Commissioner on Environment and Sustainable Development, who noted that:

"There is a significant risk that the Agency could fall further behind in its efforts to maintain or restore ecological integrity in Canada's national parks."⁴

The Commissioner's report concluded that the Agency has developed a solid framework to manage for ecological integrity, but has failed to complete a fully functional and scientifically credible monitoring and reporting system.

Through direct support and partnerships with universities and other science-based institutions we recommend that this increased funding support:

- full implementation of the ecological integrity monitoring and public reporting program, including reporting every five years on the state of each of Canada's national parks and the system as a whole (\$10M per yr);
- increased research capacity, including for rapid assessment of emerging issues (\$2M per yr);
- integrating climate change considerations into park policy and management (\$1M per yr); and
- increasing support for ecological restoration (\$12M per yr).

Environment Canada Protected Areas

Creating new National Wildlife Areas (NWAs): The federal government should invest \$3 million in 2016, increasing to \$5 million per year, on-going by 2017 to create and manage at least three new national wildlife areas, and develop a clear plan for the future of the NWA system.

Environment Canada's protected area system currently includes 54 national wildlife areas (NWAs) and 92 migratory bird sanctuaries (MBS's). No new Environment Canada protected areas have been created since 2010, in spite of the urgent need to protect more wildlife habitat in Canada.

There are three immediate opportunities to establish new NWAs: a vast boreal area called Edézhíe, NWT, partnering with Dehcho First Nations; and two large areas of endangered prairie grassland -- Antelope Coulee, SK and OneFour Research Farm, AB,⁵ partnering with ranchers. There are also potential opportunities to create up to four more large NWA's in the Northwest Territories, in collaboration with local Indigenous communities and the Government of the Northwest Territories.

NWAs are federal tools that could be used to protect much more habitat in Canada, particularly for

⁴ Auditor General of Canada. 2013 Fall Report of the Commissioner of the Environment and Sustainable Development. Chapter 7 retrieved at: http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201311_07_e_38677.html

⁵ The Antelope Coulee proposal includes over 700 sq km of federally owned endangered native grassland on the former Govenlock, Naslyn and Battle Creek Prairie Farm Rehabilitation Area (PFRA) community pastures in southwest Saskatchewan. The OneFour Research Farm proposal in southeast Alberta covers 170 sq km of dry mixed grass prairie that is leased from Alberta by the federal government.

species at risk and migratory birds. Fulfilling this potential, however, requires the federal government to strengthen and better support this protected area program, including creating a clear plan for expanding and managing the system.

Better protect existing NWAs and MBSs: The federal government should invest \$10 million in 2016, ramping up to \$30 million per year, on-going, by 2019 to better manage the existing system of NWAs and MBSs, including up-to-date management plans, science-based ecological monitoring and public reporting, enforcement, and public education. Complementary investment needed to conserve migratory birds is included in the Green Budget Coalition's Budget 2016 recommendation on [Migratory Bird Conservation](#).

While the current system of NWAs and MBSs encompasses vital habitats across the country, including for many endangered species and migratory birds, these sites have been woefully under-resourced for over two decades, which is jeopardizing their conservation effectiveness and their accessibility to Canadians. As of 2011, 90% of NWAs did not have adequate management plans. As of 2013, more than 70% of NWAs and 55% of MBSs had less than adequate ecological integrity. A 2014 internal audit found that enforcement staff only visited some sites once or twice a year, and some not at all.

Considerations:

Expanding and better protecting Canada's parks and protected areas will:

- safeguard Canada's amazing natural heritage, which is at the heart of our national identity;⁶
- provide clean air and water, pollinators for crops, and spaces for healthy outdoor activities;
- prevent natural disasters by stabilizing soils, reducing flooding, and storing carbon;
- sustain cultural and spiritual values of Indigenous peoples; and
- support resilient ecosystems and people in the face of a destabilizing climate.

Parks and protected areas deliver significant economic benefits to Canadians. Canada's federal, provincial and territorial parks support 64,000 full time equivalent jobs across Canada, many of them in rural and remote communities. Every dollar spent by parks agencies generates \$6 for Canada's GDP, and 44% of government expenditures on parks returns to governments through tax revenue.⁷

6 Public opinion polling consistently shows that national parks are among the top four symbols of national identity in Canada. See Environics "Focus Canada" polling at: <http://www.environicsinstitute.org/uploads/institute-projects/environics%20institute%20-%20focus%20canada%202012%20final%20report.pdf>

7 The Outspan Group Inc. (2011) The Economic Impact of Canada's National, Provincial and Territorial Parks in 2009. A technical report prepared for the Canadian Parks Council. Available at http://www.parks-parcs.ca/english/pdf/econ_impact_2009_part1.pdf

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PROTECTING CANADA'S SPECIES AT RISK: PROPER SPECIES AT RISK ACT (SARA) IMPLEMENTATION FUNDING

The Green Budget Coalition recommends that the Government of Canada provide funding of \$225 million over five years starting in Budget 2016 to the Department of Environment and Climate Change, Fisheries, Oceans and the Canadian Coast Guard, and Parks Canada Agency in order to increase "B-base" funding for the proper implementation of the Species at Risk Act.

Investment required

For 2016/2017: \$25 million

For ongoing: \$50 million/year over four years

Summary

The *Species at Risk Act* (SARA) is one of Canada's key federal environmental laws. Its passage into law in 2002 represented an important step forward in protecting Canada's endangered wildlife and the habitat they need to survive. SARA is a strong law that offers potential to help endangered species survive and recover. Unfortunately, the federal Species at Risk Act has never been fully implemented as envisaged in the legislation.

The Minister of Environment and Climate Change was mandated to "enhance protection of Canada's endangered species by responding quickly to the advice of scientists and completing robust species-at-risk recovery plans in a timely way" as described in the mandate letter to the Minister.¹ This proposed increase in B-base funding would help enable the implementation of this commitment.

In the absence of full implementation, SARA cannot effectively meet its objective of protecting species at risk in Canada. The failure to implement a full suite of SARA policy tools and flexibility mechanisms creates tremendous uncertainty for project proponents and leaves Canada with an impaired species protection regime (though the Act itself is essentially sound) and with no one feeling particularly pleased with the status quo. We believe that additional financial resources are necessary to deal with several different obstacles that stand in the way of full implementation of the Act. These investments through Budget 2016 complement those proposed for [National Parks and National Wildlife Areas](#) as well as for [Migratory Birds Conservation](#).

¹ Prime Minister of Canada, November 2015, Mandate Letter to the Minister of Environment and Climate Change, available at: <http://www.pm.gc.ca/eng/minister-environment-and-climate-change-mandate-letter>

Background and Rationale

A backlog of recovery strategies and action plans means that the majority of species at risk are not moving through the five stages of the recovery process under SARA. This critique has been long standing and has been highlighted in several reviews and audits of SARA, both internal and external. As was noted in the 2012 report of the Audit and Evaluation Branch of Environment Canada:

“... [A] joint posting plan will be published and updated as required on the SARA registry by March 2013 in order to outline the species and recovery documents that will be posted and consulted on for a given fiscal year. Despite this prioritization, it will not be possible for departments to clear the backlog of overdue recovery documents in the short term within current resources.”²

Likewise, the Commissioner of the Environment and Sustainable Development noted in a fall 2013 audit report that:

“Environment Canada, Fisheries and Oceans Canada, and Parks Canada have not met their legal requirements for establishing recovery strategies, action plans, and management plans under the Species at Risk Act. While the organizations have made varying degrees of progress since our 2008 audit in completing the recovery strategies they are responsible for, 146 recovery strategies remain to be completed as of 31 March 2013. Out of the 97 required action plans, only 7 were in place. The required management plans for species of special concern were not completed in 42 percent of cases.”³

Another barrier to full implementation pertains to the absence of funding to enable the development of policies to guide the full utilization of mechanisms under SARA such as section 11 conservation agreements or section 73 permits and agreement (the so-called “flexibility mechanisms.”) These flexibility mechanisms are important because they encourage participation and buy-in from individuals, entities, and sectors active on the ground where the species live, and where protection/stewardship efforts can be most effective. These mechanisms can be used to encourage the protection of species and their critical habitat and are an important aspect of the Act that has been entirely underutilized to date.

One reason for the slow pace of deploying flexibility mechanisms is that they require an interdepartmental policy framework for implementation as well as sufficient financial resources be brought to the table to incentivize stakeholders and to monitor effectiveness over time. By applying more of its resources to implement recovery plans and strategies the federal investment can be used to leverage private sector funds and in-kind contributions to implement SARA on the ground.

2 Government of Canada, 2012, Evaluation of Programs and Activities in Support of the Species at Risk Act, 2012, http://www.ec.gc.ca/ae-ve/6AE7146E-0991-4C2F-BE2F-E89DF4F8ED1E/13018_EC_ID_1568_PDF_accessible_ANG.pdf.

3 2013 Fall Report of the Commissioner of the Environment and Sustainable Development, Chapter 6, http://www.oagbvg.gc.ca/internet/docs/parl_cesd_201311_00_e.pdf

Considerations

The ongoing failure to properly protect species at risk represents a breach of Canada's commitments under the U.N. Convention on Biological Diversity, and also leaves Canada open to a challenge before the Commission for Environmental Cooperation.

After years of political neglect federal leadership is needed, especially with respect to species for which the federal government has constitutional responsibilities such as migratory birds and marine species, to deliver on the full potential of SARA.

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MARK THE ANNIVERSARY AND ADVANCE MIGRATORY BIRD CONSERVATION

The Green Budget Coalition recommends that the Government of Canada provide funding of \$5 million to the Department of Environment and Climate Change to mark the 100th anniversary of the Canada-United States Migratory Birds Convention and \$25 million per year starting in Budget 2016, to deliver on Canada's responsibilities to conserve migratory birds and invest in conservation research, monitoring and action.

Investment required

For 2016/2017: \$30 million (including \$5 million for Migratory Birds Convention centenary)

For ongoing: \$25 million/year over five years

Summary

The 100th anniversary of the Migratory Birds Convention should be celebrated in Canada as an early example of cooperation on nature cooperation between Canada and the United States and one of the most successful such treaties anywhere in the world. Ongoing investment in migratory bird research and monitoring, conservation action and partnerships with other countries in the western hemisphere are needed to reverse dramatic declines in many migratory bird populations and to meet federal responsibilities internationally and under Canadian law.

These investments in migratory birds conservation through Budget 2016 complement those recommended by the Green Budget Coalition for [National Parks and National Wildlife Areas](#) as well as for [Species at Risk](#).

Background and Rationale

The federal government's significant migratory bird responsibilities derive from the Migratory Birds Convention signed with the United States in 1916. This first bilateral conservation treaty has been very successful in managing waterfowl harvests and conserving migratory birds in both countries. Canada should match the planned celebrations of the 100th anniversary of the Convention in the United States through an investment of \$5 million in 2016-17 to support efforts by the federal government and nature and wildlife groups to celebrate the Convention as well as increase awareness among Canadians as to its benefits for nature conservation in Canada.

The June 2012 State of Canada's Birds report,¹ co-led by Environment Canada, concluded that there is an urgent need for investment in migratory bird science and conservation. The report points to dramatic declines in many migratory bird populations such as shorebirds, grassland birds, and birds like swallows that feed on

¹ North American Bird Conservation Initiative Canada. 2012. The State of Canada's Birds, 2012. Environment Canada, Ottawa, <http://www.stateofcanadasbirds.org/>

flying insects; some species have declined by over 80% in the forty years of measurement. The report also notes that some groups of birds, such as waterfowl, have shown modest population increases in response to the collective efforts of government and non-government agencies through the North American Waterfowl Management Plan. State of North America's Birds to be released in 2016 by governments and partners will echo these priorities.

Given declines in migratory bird populations overall, the following investments are needed:

- Research and monitoring (\$10 million per year) is a fundamental underpinning of successful migratory bird conservation. Consistent monitoring tracks changes in abundance and distribution of bird species, and research is required to understand which stressors affecting populations are highest priority and most amenable to solutions.
- Conservation action (\$10 million per year) is required in parallel to research and monitoring. Keeping common birds common through pro-active conservation action is a more effective and inexpensive strategy than recovering birds once they are declared "at risk of extinction". But to prevent vulnerable species from further decline, Canada's pro-active bird conservation programs need to be enhanced. Canada should capitalize on the existence of broad coalitions of willing partners, with well-developed plans, to help advance migratory bird conservation.
- Every year, Canadians cause 270 million incidental bird deaths associated with roaming cats, window collisions, pesticides and a suite of other activities. A small but sustained investment of \$500,000 annually in mitigating harmful behaviours will save millions of bird lives and help recover declining populations.
- Tens of thousands of Canadians are actively supporting bird conservation through private funds and contributing valuable bird monitoring data.
- Partnerships in Canada and abroad (\$5 million per year) are also critically important. Canada shares its species with many other nations--in some provinces, over 90% of bird species leave Canada for more southern countries. What we do in Canada may be of little import if conservation is not strong in other nations.

Canada has historically played an important role supporting Western Hemisphere countries with relatively weak conservation infrastructure. Canada could help by playing a much more significant role in monitoring, research, conservation planning and capacity building in these countries.

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CONSERVING CANADA'S THREATENED GRASSLANDS

The Green Budget Coalition recommends that the Government of Canada provide funding of \$12 million over three years, starting with \$2 million in Budget 2016, to the Department of Environment and Climate Change to conserve biodiversity, sequester carbon, and support resilient ranching communities in Canada's prairie grasslands.

Investment required

For 2016/2017: \$2 million

For ongoing: \$5 million annually

Summary

This recommendation addresses the rapid loss of Canada's prairie grasslands by establishing a Grasslands Conservation Fund that would invest in:

- sustainable management planning and training for ecologically important former PFRA grasslands and support for economic sustainability of other ecologically important ranches;
- protection of key grasslands such as Govenlock, Nashlyn and Battle Creek Community Pastures (Antelope Coulee) in southwestern Saskatchewan and OneFour Research Farm in southeastern Alberta as National Wildlife Areas; and
- scientific research, program development and coordination of efforts to conserve and manage the North American Central Grasslands based on an ecosystems-based approach.

The Grassland Conservation Fund would assist the Minister of Environment and Climate Change in delivering on two top priorities included in the Mandate Letter from the Prime Minister, to "enhance protection of Canada's endangered species" and to "manage and expand National Wildlife Areas and Migratory Bird Sanctuaries."¹

¹ Prime Minister of Canada, November 2015, Mandate Letters to the Minister of Environment and Climate Change, available at: <http://www.pm.gc.ca/eng/minister-environment-and-climate-change-mandate-letter>

Background and Rationale

Prairie grasslands are one of the most endangered ecosystems in Canada with high concentrations of species at risk, including Greater Sage Grouse, Burrowing Owl, Swift Fox, Black-footed Ferret, Mountain Plover, Chestnut-collared Longspur, Sprague's Pipit, Long-billed Curlew and Prairie Falcon. Loss of prairie grassland habitat is accelerating the loss of grasslands biodiversity and threatens Canada's ranching communities. In 2012, the Canadian federal government decided to transfer 85 community pastures with 1.1 million hectares of largely native grasslands managed by the former Prairie Farm Rehabilitation Administration (PFRA). In Saskatchewan, 25 of 64 pastures have already been transferred to the province with no legal guarantees that these lands will not be converted to other uses such as monoculture agriculture, urban development or resource extraction.

Grasslands are also important globally as carbon sinks. For example, in 2010 the United Nations Food and Agriculture Organization declared that "... globally, the potential to sequester carbon by improving grassland practices or rehabilitating degraded grasslands is substantial – of the same order as that of agricultural and forestry sequestration."

The Green Budget Coalition is recommending a focused federal effort to conserve Canada's prairie grasslands so as to stabilize declining bird populations and other biodiversity, and to support sustainable management of grasslands by ranching communities.

Invest \$3 million annually in sustainable management planning and training for ecologically important former PFRA grasslands and support for economic sustainability of other ecologically important ranches.

The federal government should invest in planning to conserve the ecological values (protection of species at risk and carbon sinks) and sustainability of cattle grazing on former PFRA community pastures, management of which has not yet been transferred to the Saskatchewan government. Such planning should be carried out in consultation with pasture patrons and other stakeholders before further transfers to provinces are completed and should include legally binding conditions on such transfers to ensure conservation of grasslands and protection of grassland species. This investment would also include training for pasture managers to support protection of grassland species at risk and carbon sinks and sustainable management of cattle grazing.

Second, the federal government should invest in improving the economic sustainability of ranches, first by communicating that economically sustainable ranches and ranching communities are a key to conservation success. Ranch profitability should be enhanced through outcome-based beneficial management practices (BMPs); incentive tools that help achieve economic parity with alternate land uses; and improved competitiveness of conservation incentives, risk insurance and other programs for ranchers.

Establish and maintain Antelope Coulee and OneFour as National Wildlife Areas, starting by consulting with communities, ranchers, nature groups, and other governments in 2016.

The proposed Antelope Coulee National Wildlife Area comprises 706 sq km of short-grass prairie providing habitat for pronghorn antelope as well as numerous species at risk. The three former PFRA community pastures (Govenlock, Naslyn and Battle Creek) that make up Antelope Coulee represent the largest regional block of native grassland. Govenlock is easier to establish as a National Wildlife Area given that it is federally owned as is now managed by Environment Canada). OneFour Research Farm, another potential NWA, is 170 sq km in area, of which 70% is native grassland. OneFour is primarily provincial land under long-term lease for research purposes to the federal government. OneFour supports high densities of rare species and at least 23 species at risk.

National Wildlife Areas are established under federal law to conserve essential habitat for migratory birds and other wildlife in the national interest. Ranching activities are permitted in National Wildlife Areas. Given that well-managed cattle grazing can be beneficial to the conservation of grasslands biodiversity, National Wildlife Areas are preferred as a federal protected area approach.

The modest costs of establishing and operating these two proposed National Wildlife Areas are set out in the [National Parks and National Wildlife Areas section of the Green Budget Coalition's 2016 recommendations](#). Land acquisition costs for Govenlock would be nil, as it is federal land, and OneFour is under long-term lease. Grazing fees charged to ranchers should be sufficient to cover operating costs.

Invest \$2 million per year in contributing to scientific research, program development and coordination of efforts to conserve and manage the North American Central Grasslands.

The prairies of Saskatchewan, Manitoba and Alberta represent the northern extension of the North American Central Grasslands, which extend south to Mexico's Chihuahua desert. Canada's conservation efforts must link with other initiatives in Mexico and the United States if this ecosystem and its wildlife species are to be conserved. A key objective of these efforts is to stabilize declining populations of grassland birds.

The proposed Grasslands Conservation Fund would focus on advancing efforts to better understand the scale and nature of threats to biodiversity and carbon storage in the North American Central Grasslands (e.g., the rate of loss of native grasslands) in order to guide government and stewardship action.

For over a decade, the Commission for Environmental Cooperation (CEC) supported sustainable ranching practices and grassland stewardship to maintain and enhance the resilience of grasslands across North America. The CEC facilitated the development of the North American Grasslands Alliance (NAGA), an alliance of ranchers, governments and non-governmental organizations in Canada, United States and Mexico. NAGA is working to achieve North American grasslands that are environmentally healthy and productive ecosystems that sustain working landscapes, conserve biodiversity, and support vibrant rural economies.

Other initiatives seeking to conserve North American grasslands include the Prairie Habitat Joint Venture, the North American Grassland Birds Partnership (Bird Life International) and Partners in Flight (American Bird Conservancy). Coordination of these initiatives appears to be limited. A related initiative is the Canadian Roundtable on Sustainable Beef led by the Canadian Cattlemen Association.

The proposed investment would allow for continued Canadian participation in these several North America initiatives, thereby conserving biodiversity, sequestering carbon, and supporting resilient ranching communities.

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INVASIVE PLANT SPECIES

The Green Budget Coalition recommends that the Government of Canada provide funding of \$4.5 million over five years starting in Budget 2016 to tackle the spread of aquatic invasive plants in key areas of Canada as part of the government's commitment to watershed health.

This project would be supported by the Department of Environment and Climate Change and be implemented in collaboration with the Department of Fisheries, Oceans and the Canadian Coast Guard, and certain provincial governments including Ontario, Quebec and British Columbia.

Investment required

For 2016/2017: \$4,100,000

For ongoing: \$100,000/year over five years

Summary

Aquatic invasive plants are a growing ecological concern in Canada and threaten ecosystem health, function and biodiversity. Despite many examples of initiatives directed at tackling these problems, there is currently too little funding to make long-lasting and measurable gains in the face of this issue. In partnership with other government and non-government partners, the federal government must play a key role in tackling the spread of several key invasive plant species of national concern including: Spartina grass, non-native invasive Phragmites, Water Chestnut and Water Soldier.

As is the case with more well-known invasive species, such as the various sub-species of Asian carp, the spread of aquatic invasive plants poses a serious economic threat to the Canada's waterways, particularly boundary waters along the lower Great Lakes and the Ottawa River. Aggressive efforts to control of aquatic invasive plants should be enacted with similar levels of urgency currently afforded to measures to prevent the spread of Asian carp.

Background and Rationale

There are currently many government and non-government partners that are active in the fight against the proliferation and spread of invasive plants in Canada. While there are many other noxious and/or invasive terrestrial species that are of grave concern, the GBC recommends that the Government of Canada focus on the following list of aquatics invasive plants in the short term because there is a realistic possibility that, with a greater investment in their eradication and cooperation with efforts already underway, the proliferation and spread of these invasive plant species can be halted in hopes of dramatically reducing their prevalence.

Spartina grass is an alien invasive grass species well now established in the United States and has recently appeared on BC's west coast and within the Fraser River Delta and the East Coast of Vancouver Island. If left untreated and allowed to spread, it presents many serious ecological, social and economic risks. The risks of proliferation are real, as has been witnessed in the USA on the Pacific coast where Spartina grass has taken a critical, and many suggest irreversible, hold.

There is a real opportunity to eradicate this invasive plant from BC's coast, but action must be taken immediately. The BC Government, Metro Vancouver and non-government organizations such as Ducks Unlimited Canada and local naturalists currently spend \$200,000 annually (\$100,000 cash, \$100,00 in-kind) on the removal of Spartina grass including the chemical treatment of rapidly dispersing clones on the Southern Coast and are making great progress at ensuring the BC coastline stays Spartina free. In addition to these actions, the Spartina Working Group recommends that an annual monitoring program commence to survey the BC coast for the presence of new clones over the coming years. The cost of this new monitoring program would be \$100,000 annually.

Phragmites (European Common Reed) is an aggressive non-native invasive perennial grass that is causing serious damage to Ontario's biodiversity, wetlands and beaches – particularly in the lower Great Lakes Region. Non-native phragmites spreads quickly and out-competes native species for water and nutrients.

There are currently many groups that are actively involved in trying to combat phragmites in the Great Lakes region, including the Government of Ontario, Ducks Unlimited Canada and the Nature Conservancy of Canada. What is needed is a one-time intensive removal program, focusing in particular on high risk/ high value National Wildlife Areas, parks and border areas such as Long Point NWA, Lake St. Clair NWA, Point Pelee National Park, the Detroit River and the Lake Erie shoreline. The estimated cost of a one-time removal program would be \$3 million.

While non-native phragmites is now a serious problem afflicting the continentally important coastal marshes of the Lower Great Lakes, every effort must be taken to remove it in NWAs and parks, or where biodiversity is lost or threatened. Similarly, its spread outside of Ontario, particularly to western Canada, requires decisive action and must be prevented.

European water chestnut is an invasive aquatic plant that has been introduced to a section of the Rideau River system and the Ottawa River in eastern Ontario within Voyageur Provincial Park. Water chestnut populations in the Ottawa and Rideau Rivers, as well as neighbouring provinces and states have become a serious nuisance causing a number of impacts, particularly by reducing light penetration and plant growth beneath its canopy. When combined with a large amount of decomposing vegetation below, it can lead to decreased dissolved oxygen levels, which can impact native species and cause fish kills.

Since the water chestnut population in the Rideau and Ottawa Rivers are the only known populations in Ontario, it's very important that we put every effort towards removing this plant before it spreads to other locations. The Ontario Ministry of Natural Resources, with support from partnering agencies, are working to eradicate water chestnut from the Ottawa and Rideau Rivers by pulling the plants by hand, with rakes and mechanical harvesters. Efforts to control this new invader are ongoing and an infusion of new funds is imperative in making sure that this invasive plant does not take further hold within this and other regions.

Water soldier is an invasive perennial aquatic plant that is native to Europe and northwest Asia. The only known wild population in North America was found in the Trent River in 2008, near the Hamlet of Trent River,

Ontario. Water soldier is used as an ornamental plant in water gardens, the likely source of its introduction to the Trent River.

Since the water soldier population in the Trent River is the only one currently known in North America, it is very important to prevent the plant's introduction and spread to new locations. The Ministry of Natural Resources, with support from partnering agencies including the Ontario Federation of Anglers and Hunters, Lower Trent Conservation, Ministry of the Environment and Parks Canada is monitoring and tracking the spread of water soldier within this water body and undertaking a variety of control measures to prevent its spread to new locations. We recommend that the Government of Canada make a one-time investment of \$1 million dollars to aid in the eradication of Eurasian water chestnut and water soldier as part of a partnership program with the Province of Ontario and the Province of Quebec.

This investment is in addition to the investment recommended to address the threat of aquatic invasive species. (See [Green Budget Coalition Budget 2016 Recommendation – Great Lakes Water Quality Protection.](#))

Budget Announcement

"The Government of Canada is committed to reducing the proliferation and spread of invasive species in Canada and announces funding targeted at the management and removal of several dangerous aquatics weeds."

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CONSERVATION ON PRIVATE LAND

The Green Budget Coalition recommends that the Government of Canada provide funding of \$250 million over five years, starting in Budget 2016, in matching federal funds for:

- The restoration of lost or degraded habitats, namely wetlands & associated uplands, grasslands, southern forest ecosystems and other threatened habitats located on private lands throughout Canada,
- Securing the Ecological Goods and Services (EGS) that these habitats provide including: carbon capture and sequestration, severe weather offsetting, and habitat for threatened or endangered species,
- Compensation for landowners who maintain these restored habitats on their property through long-term conservation easements

This program would be administered by the Department of Environment and Climate Change in conjunction with Agriculture and Agri-Food Canada and be implemented in partnership with other levels of government and non-government partners who would be required to match federal government contributions on a cost-shared basis, i.e. at a 1:1 match ratio.

Investment required

For 2016/2017: \$50 million

For ongoing: \$50 million/year over four years

Summary

Private lands in Canada contain some of the most unique and ecologically valuable wildlife habitat on the North American continent. Frequently they are home to a disproportionate number of threatened or endangered species as they are often located in regions of the country that are highly pressurized by human activity. In addition to wildlife benefits, these habitats provide critical ecological goods and services such as flood-water attenuation which is provided by wetlands, and habitat for a disproportionate number of threatened or endangered species which reside in many of the southern grassland and southern forestland ecosystems such as the remnant Carolinian forests of Southern Ontario and the Gary Oak ecosystem on Vancouver Island.

The current suite of federal programs aimed at private land conservation are targeted and are effective, particularly the Natural Areas Conservation Program, the National Wetland Conservation Fund, the Habitat Stewardship program, and Canada's continued commitment to the North American Wetland Management Plan should be retained. However, landscape scale solutions, access to lost or degraded habitats on private land, and the ability to retain the ecological goods and services on these private lands remains a recurring challenge for governments and for conservation organizations alike. This recommendation seeks to address these gaps, while working in concert with current programming.

Because the vast majority of these residual habitats are in Southern Canada on private lands, it is critical that conservation-minded actions be encouraged and that actions that work against ecological goals be discouraged. There are currently not enough incentives to encourage conservation actions on private lands in Canada, particularly on the working landscape, a vital public policy gap that must be filled.

The GBC proposed that the Government of Canada partner with other levels of government and non-government organizations (including conservation groups) with secured matching funds to work with eligible landowners to identify wetland conservation enhancement opportunities on their industrial, farm or recreational properties and, as required, undertake any necessary habitat improvements to restore the lost or degraded ecological and economic values of these habitats using tools such as wetland and upland habitat restoration, grassland replanting, and reforestation.

Background and Rationale

This program would be focused on wetland and riparian habitats,¹² because of the high economic return on investment associated with the conservation of these habitats, but should be open and accessible to support other threatened terrestrial ecosystems and habitat values.

Landowners would receive compensation for conserved and restored habitat on their property through a funding formula based on its assessed market value. They would retain full legal rights to their property, including land identified under the conservation easement, and would be able to continue making productive use of their land in accordance with the terms of the conservation agreement – a perpetual legal encumbrance that would be held by a third party such as an NGO, a conservation authority, or other level of government, and that is registered on title. Regular monitoring and reporting requirements would ensure that conservation objectives are achieved and remain in place. Similar approaches have been employed with great success in other jurisdictions, such as the Agriculture Conservation Easement Program in the USA.³

Funding eligibility would be contingent on rigorous criteria, with compensation scaled according to public policy objectives. Higher-priority ecological services (e.g. flood mitigation in a high-risk area, habitat for severely endangered species etc.) would be compensated at a commensurately higher rate.

Given the significant costs in both time and resources of restoring lost or degraded wetlands, incentivizing the protection of existing wetlands on the working landscape is essential to ensure the long-term sustainability of these vital ecosystems, and maintaining the health and safety of Canadian communities.

While this \$250 million investment would not solve the ongoing crisis of habitat loss in Canada, there is no question that it would be a significant step toward achieving net habitat gains, particularly in areas where historical habitat loss has been longstanding and high.

Improving Canada's productivity: An accurate, comprehensive valuation of Canada's current wetland base would enhance and support land-use planning decisions at all levels of government, ensuring that both the economic productivity and ecological integrity of the landscape are optimized.

1 Wilson, Dr. Thomas A 2013. Net Fiscal Costs of Federal Funding of Ducks Unlimited Canada. Wilson Economic Research Inc. for Ducks Unlimited Canada.

2 Anielski, M., J. Thompson, and S. Wilson. 2014. A genuine return on investment: The economic and societal well-being value of land conservation in Canada. Anielski Research for Ducks Unlimited Canada, Stonewall, Manitoba, Canada.

3 <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/acep/>

Enhancing Canada's infrastructure and the safety of our communities: Working with landowners to maintain these vital ecosystems, the federal government would reduce the need for investment in built infrastructure and costly natural disaster recovery, while at the same time supporting biodiversity and species at risk.

Supporting job creation and economic growth: Habitat restoration would increase economic activity in rural communities, creating new jobs through additive construction work throughout the calendar year, particularly when regular construction activities are less active.

Generating \$11 Billion dollars in new Ecological Goods & Services: This five-year, \$250 million dollar investment, when matched at a 1:1 rate by non-federal government funds, will generate \$100M/year in new additive conservation that also generates \$11 Billion in ecological goods and services for Canada, including carbon capture and sequestration and flood mitigation.

Budget Announcement

"The Government of Canada is committed to promoting economic growth in Canada and protecting our critical ecological values and announces the creation of a National Private Land Conservation and Enhancement Fund."

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WETLANDS INVENTORY AND MONITORING

The Green Budget Coalition recommends that the Government of Canada provide funding of \$50 million over five years starting in Budget 2016 to make significant progress towards completing the Canadian Wetland Inventory (CWI) and that it provide an additional \$4 million annually over 5 years to develop a Wetland Monitoring component as a core part of Natural Resources Canada's National Terrestrial Monitoring Program.

This program would be led by the Department of Environment and Climate Change in partnership with the Department of Natural Resources.

Investment required

For 2016/2017: \$10 million

For ongoing: \$10 million/year over five years

Summary

The Canadian Wetland Inventory (CWI) is an essential tool for identifying and tracking land use change, particularly the presence of wetlands on the Canadian landscape. This type of tool provides key information to governments, industry and the public that aim to develop sustainably – in particular to avoid and minimize impacts to sensitive features like wetlands. While considerable work has been done on the CWI to date, there are still many information gaps that must be filled.

Background and Rationale

Geo-spatial data, such as the CWI, provides government and proponents with vital information data layers upfront enabling informed decision-making about habitat management, mitigation for lost or damaged wetlands, and informed natural resource development. A comprehensive, pan-Canadian suite of data would provide a strong baseline of information in all provinces and territories, and will greatly contribute to improving the ability of all levels of government to manage their natural resources effectively and to employ best management practices across Canada.

The CWI would increase the competitiveness of Canada's natural resource sector by improving the clarity and certainty around the existence of sensitive ecological features. This information would be available to all proponents and regulatory agencies and would streamline the project permitting and approval process.

A comprehensive CWI would allow communities to plan for the retention of their green infrastructure through proactive land use planning. This would help maximize human and social health and well-being and reduce communities' reliance on expensive engineered infrastructure.

The availability of accurate and up-to-date data has been shown to improve both the efficiency and effectiveness of regulatory regimes. It also provides clarity and certainty to proponents, allowing them to proactively plan.

A completed CWI and ongoing monitoring program would not only provide short-term job opportunities for Canadians, it would also help to safeguard the suite of resource sector jobs by promoting the sustainability of the resource sector, including jobs related to best management practices.

Budget Announcement

"The Government of Canada is committed to using science to assist in responsible planning and decision making for the management of our natural resources and announces funds to complete the Canadian Wetland Inventory and the development of a monitoring program that will track the status of wetlands in Canada over time."

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CONSERVING OUR OCEANS

The Green Budget Coalition recommends that the Government of Canada provide \$98 million per year ongoing, starting in Budget 2016, to fulfill the government's commitments to reach Canada's international marine protection targets, and to ensure ocean health by investing in ocean planning to manage development, restore ocean science and monitoring capacity, and transform fisheries management.

Investment required

For 2016/2017: \$98 million For ongoing: \$98 million/year over five years

\$45 million per year ongoing, for:

- A national Network of Marine Protected Areas (MPAs) to meet the government's target of 5% by 2017 and 10% by 2020.

\$13 million per year ongoing, for:

- Ocean Planning, including Integrated Oceans Management: \$8M/year
- Transforming fisheries: \$12.5M/year

\$40 million per year ongoing, for:

- Ocean science and monitoring programs.

Background and Rationale

The Minister of Minister of Fisheries, Oceans and the Canadian Coast Guard was mandated to, inter alia:

- Work with the Minister of Environment and Climate Change to increase the proportion of Canada's marine and coastal areas that are protected – to five percent by 2017, and ten percent by 2020 – supported by new investments in community consultation and science;
- Restore funding to support federal ocean science and monitoring programs, to protect the health of fish stocks;
- Use scientific evidence and the precautionary principle, and take into account climate change, when making decisions affecting fish stocks and ecosystem management;
- Work with the provinces, territories, Indigenous Peoples, and other stakeholders to better co-manage our three oceans.

as described in the Mandate Letter to the Minister.¹ The budgetary measures described below would contribute to the implementation of these commitments.

¹ Prime Minister of Canada, November 2015, Mandate Letter to the Minister of Fisheries and Oceans and the Canadian Coast Guard, available at: <http://www.pm.gc.ca/eng/minister-fisheries-oceans-and-canadian-coast-guard-mandate-letter>

Marine Protection

During the 2015 election campaign, and again in the Minister's Mandate Letter, the government committed to "...increase the amount of Canada's marine and coastal areas that are protected – to five per cent by 2017, and ten per cent by 2020. To help achieve this, we will invest \$8 million per year in community consultation and science."

This is a commendable commitment, in line with Canada's international commitment to the Convention on Biological Diversity to protect 10% of our ocean by 2020. MPAs contribute to Canada's \$39 billion a year ocean economy. Establishing a network of MPAs will help recover fish stocks, boost nature-based tourism, buffer the impacts of climate change and acidification by ensuring resiliency, and maintain stable jobs for the future. To enable this network, bioregional planning should be conducted to identify an ecologically representative and well-connected network of MPAs.

Recommended Investment

\$45 million per year, ongoing (\$30 million for Parks Canada to create and manage National Marine Conservation Areas, \$14 million for Fisheries and Oceans Canada to designate and manage *Oceans Act* marine protected areas and \$1 million for Environment Canada to establish and manage marine National Wildlife Areas)

Ocean Planning

Planning our ocean, as is done on land with land use planning, will provide certainty and a stable investment climate for industry stakeholders, as well as identify thresholds and ecological limits of the ocean ecosystem. There is an urgent need now for a mechanism to deal with immediate conflicts between user groups that arise because of the current lack of planning in our ocean, investing in the following tools will set the foundation for ocean planning to meet both resource and ecological goals:

- Cumulative effects and risk assessment – a whole-of-ocean approach that establishes thresholds is essential to maintaining the long-term health of the ocean ecosystem and the communities that depend on it. Cumulative effects should be evaluated through environmental impact assessments and risk assessments in all bioregions and special consideration should be given to areas described as ecologically and biologically significant areas (EBSAs) and sensitive benthic areas.
- Human-use mapping to ensure the highest and best use of our oceans — those critical to local and regional livelihoods and economies — are happening without conflict, and operators and regulators have the information they need for decision-making.
- Valuing biodiversity and ecosystem services (e.g., climate regulation, seafood provision, water filtration) and integrating these values into decision-making.

These tools used together will ensure an integrated, ecosystem based approach to the planning, protection, management, and responsible use of marine areas and their resources. Now is the time for the full federal family to support initiatives, such as those below, to ensure all jurisdictions are at the planning table and implementation can occur across agencies and departments:

- BC's Marine Planning Partnership (MaPP), and Pacific North Coast Integrated Management Area, (PNCIMA),
- Atlantic's Regional Oceans Plan (ROP),
- Beaufort Sea Partnership's community conservation planning, and

- Nunavut's Land Use Plan.

Recommended Investment

\$8 million per year, ongoing

Ocean science and monitoring programs

During the election, the Liberal Party also committed to reversing the \$40 million cut from the federal government's ocean science and monitoring programs. These funds must be restored to improve the quality and quantity of ocean science and monitoring programs in Canada. In addition, these funds should go towards investment in the ecosystem approach and advice for impacts of climate change on stock recovery and rebuilding trajectories including regime shifts, impacts of ocean acidification over the long term.

Recommended Investment

\$40 million per year, ongoing

Transforming Fisheries Management

Canada boasts one of the most diverse and valuable fisheries in the world, sourced from three oceans and the Great Lakes. These fisheries are economically important, both in terms of value and employment. In 2013 fisheries provided an estimated gross value of over \$7.8 billion, when taking into account commercial and freshwater fisheries, aquaculture and seafood preparation and packing revenues.² Canada's commercial fishing and aquaculture sectors provide more than 80,000 direct jobs to Canadians. Managing Canada's fisheries sustainably and equitably is vital to the livelihoods of rural Canadians and can provide enhanced food security for all Canadians.

Improved fisheries management requires continued investments, including the following: Implementing existing fisheries conservation policies and laws, specifically the Sustainable Fisheries Framework which includes the Policy for Managing the Impact of Fishing on Sensitive Benthic Areas, Policy for Managing Bycatch, and the Guidance for the Development of Rebuilding Plans under the Precautionary Approach Framework.

Implementation of these policies and laws is currently hindered by the lack of adequate catch monitoring. In addition, many species that are implicated in commercial fisheries (i.e. Atlantic cod, American plaice, redfish, porbeagle shark as examples) are also currently within the listing process under the *Species at Risk Act* (SARA). There is a need to prioritize management of these species under the *Fisheries Act*, as species wait an average of 3.25 years³ in the listing process and no species have been listed under SARA since 2013.

Recommended Investment:

\$2 million per year ongoing to Fisheries, Oceans and the Canadian Coast Guard to implement Canada's existing sustainable fisheries policies and specific measures for at-risk marine fish through the Integrated Fisheries Management Process (IFMP).

2 http://www.dfo-mpo.gc.ca/stats/FastFacts_14-eng.pdf

3 McDevitt-Irwin et al. 2015. Missing the safety net: evidence for inconsistent and insufficient management of at-risk marine fishes in Canada. *Canadian Journal of Fisheries and Aquatic Sciences*, 2015, 72(10): 1596-1608, 10.1139/cjfas-2015-003nrc-researchpress.com/doi/abs/10.1139/cjfas-2015-0030#.Vj0Mc6Ra8UV

Fisheries must be rebuilt by establishing and implementing science-led conservation plans and rebuilding strategies, with targets and timelines for all depleted fish populations. This must be done through an overall ecosystem approach, and in consideration of regime changes caused by climate change. Ensuring sustainable fisheries into the future is vital for the livelihood of tens of thousands of rural Canadians.

Recommended Investment:

\$9 million per year, ongoing to establish meaningful harvest control rules, precautionary reference points, and updated catch monitoring approaches.

Investing in the capacity of fisheries associations to develop co-management plans and supporting capacity to manage processes such as supplying lobster tags, on-line licensing, at sea monitoring, electronic logbooks, video monitoring, etc. will in the long run result in stronger and more independent fishing communities. This will enable communities to manage their resources and ensure smarter co-management of our oceans as well as a larger return of profits directly to communities.

Recommended Investment:

\$1.5 million per year, ongoing. Funding should be application-based and require matching funds from the community, private sector and other levels of government.

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ENGAGING CANADIANS IN CONSERVATION

CANADIAN CONSERVATION CORPS

The Green Budget Coalition recommends that the Minister of Employment, Workforce Development and Labour, in collaboration with the Minister of Environment and Climate Change, support the creation of a Canadian Conservation Corps.

Summary

As Canada nears its 150th birthday, the pressure on the country's land, water and species has never been greater, and the need for action never been more immediate. New challenges lie ahead for the next generation of conservationists and Canada must be ready.

Currently, opportunities to effectively transfer knowledge within environmental fields to the next generation are limited. The development of a national Canadian Conservation Corps program will ensure today's young Canadians, and tomorrow's, can gain the skills required to be global leaders in protecting, managing and caring for Canada's natural heritage. This internship-based program has the potential to address youth skill development, employment and natural heritage management. It will create opportunities for the assembly of a suite of technical, social and cultural skills which will greatly contribute to the fields of conservation, industry and government. Students accepted into the program will learn practical, collaborative and business-like approaches to environmental challenges and solutions.

Internships would be designed for youth aged 18-30. These paid opportunities can be focused on technical skills development for undergraduate and graduate-level students. Interns would benefit from mentorship from professionals in the fields, as well as exposure to issues such as community relations, negotiation and other elements of land management.

Background and Rationale

Employment and skills development

As of May 2015, the youth unemployment rate for those aged 15-24 was 13.2%, significantly higher than the national unemployment average of 6.8%. There has also been a marked increase in the number of youth employed in the retail trade, accommodation and food services sector, which are often cited as having limited skills development potential.

Meanwhile, industries with higher skills development potential have not experienced a significant change in employment levels over time, or have seen a decrease in the number of jobs available for youth. This, in addition to the high unemployment rate for youth, may lead to skill deficiencies among this demographic group. The resulting scenario is a cycle of unemployment or a lack of employment mobility into higher wage careers due to skills deficiencies.

Overall, employment growth in the environmental sector is increasing. Employment growth in the environmental sector (encompassing public, private and non-profit spheres) will be between 4.7% and 7.7% per year for the current period until 2020.¹ More specifically, moderate to high growth is projected in the nature conservation sub-sector. Occupations in the nature conservation sector include: wildlife biologists, infrastructure planners, GIS specialists, municipal engineers, farmers and hydrogeologists. Private sector companies are increasingly employing individuals with these conservation related technical skills for environmental stewardship purposes.

However, employers in sectors requiring skills relating to nature conservation felt that there was an “inadequate level of technical skills among recent graduates from environmental education programs... A lack of coordination between training and educational organizations and [as a result] employers will constrain growth in the segments of the environmental sector for which specialized skills are required.”² If job seekers possess competencies related to nature conservation, they would experience significant labour mobility in the green economy, due to high demand and transferability across diverse sectors located across the country’s varied landscapes.

Nature Conservation

In addition, conversion of natural habitats for human land use can cause degradation of ecosystems in Canada. Formerly large tracts of various habitats have shrunk to smaller and smaller parcels. This can affect water quality, flow rates in watercourses, groundwater and weather patterns. Ecosystem services provided by natural habitats are gradually being acknowledged by society as valuable to overall human wellbeing. A larger labour pool of Canadians involved in conservation stewardship as well as improved training will help mitigate the effects of habitat loss and will help people to better understand why good stewardship of these ecosystems is so important to the health and economic well-being of Canadians.

1 The study was coordinated by ECO Canada and funded through Employment and Social Development Canada’s Sectoral Initiatives Program.

2 Employment and Social Development Canada’s Sectoral Initiatives Program.

Considerations

There are several internship types within the conservation sector, including a) stewardship interns, b) research and science interns and c) communications, marketing and public engagement interns. In order to develop and sustain a leadership program, the capacity to mentor, supervise, train and communicate the impact of the Conservation Corps must be funded as part of the program.

Canada can foster the innovators and stewards of tomorrow through the creation of a national Canadian Conservation Corps pilot program, which builds skills development and supports employment.

Budget Announcement

"The Government of Canada announces the creation of a Canadian Conservation Corps - a youth jobs program in partnership with the environmental sector."

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CONNECTING CANADIANS TO NATURE

The Green Budget Coalition recommends that the Government of Canada provide funding of \$45 million over five years starting in Budget 2016 to the Department of Environment and Climate Change, and Health Canada for a leveraged funding program to connect Canadians to nature. This program would support partnerships with civil society groups to deliver nature-based activities, stewardship projects and outdoor recreation initiatives.

Investment required

For 2016/2017: \$5 million

For ongoing: \$10 million/year over four years

Summary

The proposed leveraged fund would assist the Minister of Environment and Climate Change in delivering on commitments included in the Mandate Letter from the Prime Minister, to provide opportunities for Canadians to experience Canada's outdoors.

The leveraged fund would provide matching funding to programs conducted by not-for-profit groups such as: NatureHood, focused on connecting urban Canadians – especially youths and new Canadians – to nearby nature (Nature Canada); Go Wild, curriculum-linked experiential and educational programs (Canadian Parks and Wilderness Society, CPAWS); Project Webfoot and Wetland Centres of Excellence (Ducks Unlimited Canada); Conservation Volunteers (Nature Conservancy Canada); the Suzuki Superhero Challenge (David Suzuki Foundation); and the Get Outside youth leadership program of CPAWS and the Child and Nature Alliance Canada. The leveraged fund would be delivered jointly by Environment Canada and Health Canada to reflect the dual nature conservation and human health objectives of the program.

The recommended \$45 million investment would leverage one of Canada's greatest assets – nature – to support a generation of active, environmentally literate children; build healthier communities; enhance environmental stewardship; increase eco-tourism; and address mental and physical health issues facing Canadians – especially young people.

Background and Rationale

Despite a rich natural heritage and a natural environment that is the envy of much of the world, modern Canadians' relationship with nature is at best fractured. It is not clear why this is the case: is it a result of increasing urbanization; distractions caused by prolific technology and modern life; lack of awareness or access to nature; an evolving national identity; or something else? Whatever the case, some of the indirect impacts on Canadian society are clear: less than one-quarter of Canadian youths aged 5-17, and only 15% of children aged 3-4, meet the present guidelines for daily screen time;¹ less than one-third of Canadian students walk to school each day;² up to 90% of our time is spent indoors; and more than one-quarter of Canadians are obese.³ Add to these frightening statistics the 688 wildlife species to date that COSEWIC has assessed as special concern, threatened or endangered in Canada.

A paradox is that almost 90% of Canadian adults participate in at least one nature-based activity, such as picnicking or relaxing in nature.⁴ Almost three-quarters of Canadian households report some engagement in outdoor activities "close to home"⁵ and more than 85% of Canadian households report being less than a 10-minute walk or drive to the nearest park or green space. In 2013 alone, Canadians spent an estimated \$41.3 billion overall on nature-based activities,⁶ most of which were self-propelled and non-consumptive.

Leadership is clearly needed to redress our fractured relationship with nature, as well as provide easy opportunities for Canadians to engage in nature. Work is already underway by governments and non-governmental organizations provides a foundation on which to build. Many non-government organizations have long been involved in offering nature-based experiences to the public. Young Naturalist Clubs across Canada have provided young people of ages 5 to 12 with opportunities to discover nearby nature for more than 50 years; other more recent programs offered by civil society are described above. The Canadian Wildlife Service and Parks Canada have also been working to encourage more people to connect with nature through innovative interpretive programs, public BioBlitzes⁷ and other activities at Canada's federal protected areas.

Notwithstanding the values of ecosystem services (i.e., \$582 billion for Canada's boreal forest carbon storage) and environmental protection (i.e., \$337 million in tax revenues from park visitorship), a growing volume of scientific research links nature-based recreation to improved human health outcomes – both physical and mental – and more resilient, active and safer communities.⁸ Indeed, investing now in the promotion of nature-based activities and outdoor programs for all Canadians could address the \$4.6 billion

1 ParticipACTION. 2015. The Biggest Risk is Keeping Kids Indoors. The 2015 ParticipACTION Report Card on Physical Activity for Children and Youth. Toronto: ParticipACTION. 58pp.

2 Green Communities Canada. 2012. Children's Mobility, Health and Happiness: A Canadian School Travel Planning Model. National Results.

3 Public Health Agency of Canada. 2011. Obesity in Canada. A joint report from the Public Health Agency of Canada and the Canadian Institute for Health Information. Ottawa, ON: Government of Canada. 62pp.

4 Federal, Provincial, and Territorial Governments of Canada. 2014. 2012 Canadian Nature Survey: Awareness, participation, and expenditures in nature-based recreation, conservation, and subsistence activities. Ottawa, ON: Canadian Councils of Resource Ministers.

5 Statistics Canada. 2015. Canadians and Nature: Outdoor activities, 2013. Enviro Fact Sheet, Catalogue no. 16-508-X from the 2013 Households and the Environment Survey. Ottawa, ON: Industry Canada. 6pp.

6 Federal, Provincial, and Territorial Governments of Canada. 2014. 2012 Canadian Nature Survey: Awareness, participation, and expenditures in nature-based recreation, conservation, and subsistence activities. Ottawa, ON: Canadian Councils of Resource Ministers.

7 A BioBlitz is a public scientific effort, usually 24-hours in length, to identify and document as many living things as possible in a given area at a given time of year.

8 Parks Canada. 2014. Connecting Canadians with Nature – An Investment in the Well-Being of our Citizens. Ottawa, ON: Parks Canada. 36pp.

financial burden of Canada's obesity epidemic.⁹

The benefits of this investment would not focus on a single region, nor affect only a small, privileged portion of society. By leveraging civil society groups with expertise in crafting initiatives that address well-known barriers to nature engagement, and by encouraging approaches that evidence demonstrates are most effective in connecting people to nature, the social return of this investment would be substantial.

In 2014, federal agencies were given a mandate and funding to engage Canadians in nature and support initiatives by civil society groups to connect Canadians with nature. These initiatives aim at improving Canadians' awareness of the natural environment, engaging youths in nature-based activities, and promoting healthier lifestyles for Canadians through nature-based recreation and play. Moreover, those initiatives help to identify and overcome barriers to engaging in nature-based activities for new Canadians and urban residents. The significant momentum of these investments must be sustained to achieve lasting benefits to Canadian society.

In the lead-up to 2020, Canada is working to achieve its international commitments under the Aichi Targets of the Convention on Biological Diversity (CBD). The recommended investment speaks to Targets 18 & 19 under Goal D of the 2020 Biodiversity Goals and Targets for Canada: "By 2020, Canadians are informed about the value of nature and more actively engaged in its stewardship." That goal is Canada's interpretation of Aichi Targets 1 and 4 under the Convention. The recommended four-year timeline for investment will support relevant programs until 2020.

Considerations

Previous funding specifically aimed at connecting Canadians to nature has amounted to \$9.2 million over five years in Budget 2014.

⁹ Ibid. Value is reported based on estimates in 2008.

Budget Announcement

"The Government of Canada is committed to improving Canadians' health and connecting them with nature by supporting a leveraged fund for civil society groups to get Canadians outside, active, and experiencing the wonder of nature together."

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PROTECTING CANADA'S FRESH WATER

CANADA WATER FUND: INVESTING IN ROBUST NATIONAL MONITORING AND CLEAN TECH INDUSTRY

The Green Budget Coalition recommends that the Government of Canada provide funding of \$52 million over five years, starting in Budget 2016, to the Department of Environment and Climate Change to establish the Canada Water Fund to foster the clean water tech industry and investment in the adoption of technologies for a robust national water quality and quantity monitoring system will contribute to meeting these commitments.

This investment will spur innovation and help to modernize Canada's monitoring system while simultaneously drive growth of Canada's Clean Technology.

Investment required

For 2016/2017: \$2 million

For ongoing: \$10 million/year over five years

Summary

The proposed recommendation would contribute to or fulfill commitments made in various Ministerial mandate letters, including the following:

- The Minister of Environment and Climate Change is mandated to “treat our freshwater as a precious resource that deserves protection and careful stewardship, including by working with other orders of government to protect Canada’s freshwater using education, geo-mapping, watershed protection, and investments in the best wastewater treatment technologies.”¹
- The Minister of Natural Resources is mandated to work with the Minister of Innovation, Science and Economic Development and other responsible ministers to support innovation and the use of clean technologies in our natural resource sectors.²
- The Minister of Fisheries, Oceans and the Canadian Coast Guard was mandated to restore annual federal funding for freshwater research, and make new investments in Canada’s Experimental Lakes Area.³

Establishment of the Canada Water Fund to foster the clean water tech industry and investment in the adoption of some of those technologies for a robust national water quality and quantity monitoring system will contribute to meeting these commitments. The outcome of this investment will be a national monitoring system for the 21st century that simultaneously drives economic growth in Canada’s Clean Technology industries.

1 Prime Minister of Canada, November 2015, Mandate Letters to the Minister of Environment and Climate Change, available at: <http://www.pm.gc.ca/eng/minister-environment-and-climate-change-mandate-letter>

2 Prime Minister of Canada, November 2015, Mandate Letters to the Minister of Natural Resources available at: <http://pm.gc.ca/eng/minister-natural-resources-mandate-letter>

3 Prime Minister of Canada, November 2015, Mandate Letters to the Minister of Fisheries, Oceans and the Canadian Coast Guard, available at: <http://www.pm.gc.ca/eng/minister-fisheries-oceans-and-canadian-coast-guard-mandate-letter>

Background and Rationale

Canada has one-fifth of the world's freshwater. Thousands of interconnected rivers and lakes across our country provide the essentials of life for people, animals and ecosystems.

Collectively, Canada's rivers make up 25 major watersheds, each brimming with stories of history, culture, ecology and economy. Yet, as a country we are missing an important part of that story. At a national level, we don't know how healthy our rivers and watersheds are or what threats they currently face. WWF's watershed reports are the first attempt at understanding the health of and threats to our watersheds at a national level.⁴

Ensuring long-term watershed health and reduction of threats can only be accomplished in conjunction with a strong national freshwater monitoring framework that is both accessible and comprehensible to all sectors of society including academia, the public, and the non-governmental agencies working on freshwater issues. Without long-term monitoring systems and accessibility to freshwater science, there is no way to understand if we're making progress to cleaner water for people and communities. Traditional monitoring efforts can be costly. Furthermore, with thousands of different monitoring methods and data collection formats, it is difficult to translate local monitoring efforts into a broader understanding of freshwater health in Canada. It's time to look for innovative solutions to these problems. With the widespread adoption of new technologies, consistency can be achieved while dramatically reducing monitoring costs.

A parallel story emerging is the opportunity for Canadian companies in the global market. The Conference Board of Canada estimates the global market for water technology at over \$450 billion with annual growth of up to 15 per cent. While Canada is lacking a national robust water monitoring network it is not lacking in a strong water technology industry. With the right investments the Government of Canada can support and promote this industry, making Canada a global leader while ensuring the best technologies on the market are working towards protecting Canada's freshwater.

4 <http://watershedreports.wwf.ca/#intro>

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GREAT LAKES WATER QUALITY PROTECTION

The Green Budget Coalition recommends that the Government of Canada provide funding of \$135 million per year, beginning in Budget 2016, as a permanent allocation to Great Lakes funding, to the Department of Environment and Climate Change and to the Department of Fisheries, Oceans and the Canadian Coast Guard.

Investment required

For 2016/2017: \$135 million

For ongoing: \$135 million/year ongoing

Summary

The Minister of Environment and Climate Change and the Minister of Fisheries, Oceans and the Canadian Coast Guard were both mandated to “collaborate to renew our commitment to protect the Great Lakes, the St. Lawrence River Basin and the Lake Winnipeg Basin.”

The Green Budget Coalition recommends a new permanent Great Lakes fund to ensure the Government of Canada can deliver on those commitments. The Great Lakes funding should address the following:

1. Alleviating land based run-off of pollutants and nutrients through the creation of a new partnership-based Great Lakes nutrient reduction stewardship strategy:
A federal \$50 million annual investment, leveraged by government and non-government partners
2. Continuing implementation of the Great Lakes Water Quality Protocol by way of an emphasis on the remaining Areas of Concern:
\$25 million per year
3. Increased investment in keeping invasive species out of the Great Lakes, and fighting the ones that have arrived:
An additional \$25 million per year to Department of Fisheries and Oceans in conjunction with Environment Canada
4. Investment in near shore strategies to protect and restore Great Lakes basin wetlands and riparian buffer zones; restore fish and wildlife habitat:
An additional \$35 million per year

Background and Rationale

Alleviating land based run-off of pollutants and nutrients

There are significant impacts resulting from land based run-off of pollutants and nutrients in many waters that are under federal jurisdiction or impacted by federal decision-making and institutions. Examples of these include nutrient (both phosphorous and nitrogen) run-off with resulting eutrophication and ecosystem health impacts in Lake Erie and Lake Huron in the Great Lakes. The Great Lakes Nutrient initiative, funded at \$13 million per year, will sunset in March 2016. The funding allocated to Lake Simcoe, \$30 million per year, will sunset in March of 2017. Serious eutrophication problems are impacting Lake Huron and Lake Ontario as well. Additional funding is required to devote to efforts to those lakes.

Recommended Investment:

A federal \$50 million annual investment, leveraged by government and non-government partners

Continuing implementation of the Great Lakes Water Quality Protocol

Looking forward, the Green Budget Coalition emphasizes the importance of renewing, in 2016 and 2017, the government's current funding for the Great Lakes which sunsets in March of those years, including addressing contaminated sediments in the Canadian Areas of Concern, and re-funding the Great Lakes Nutrients Initiative.

The GBC also recommends investing an additional \$25 million per year in Budget 2016 for implementation of the recent Great Lakes Water Quality Protocol (GLWQP of 2012; amending earlier versions of the Great Lakes Water Quality Agreement), 130 Areas of Concern (AOCs), environmental monitoring, a climate change impact strategy, and continued investment in the Canada- Ontario Agreement (Great Lakes). While the current level of federal funding is important, Canada lags far behind on a per capita annual investment in Great Lakes protection made by the U.S., its partner in the GLWQP. To achieve greater progress in Canada under the Protocol such as more robust action on nutrients and contaminants, faster AOC delisting, setting of lake ecosystem targets and contaminant targets, and implementation, the GBC recommends increasing the current level of federal Great Lakes program funding. In addition to continued efforts on Lake Erie, additional efforts at alleviation of algae impacts should be directed with program funding for Lake Huron and Lake Ontario.

Recommended Investment:

An additional \$25 million per year ongoing.

Aquatic invasive species

Among the most critical of issues threatening the ecosystem of many of Canada's most significant water systems is that of aquatic invasive species. Introduced, invasive Asian carp is threatening the Great Lakes from its presence in neighbouring waterways. In addition to the massive threat to the ecosystem, estimates of the threatened economic impact of these invasive species range from \$13 billion to \$35 billion. The GBC recommends that the Government of Canada invest in research, monitoring, coordination, and enhanced border protection (in addition to existing funding) to better address the threat of aquatic invasive species. This funding should be used for the following purposes:

- Research – Funding to continue developing and testing other methods of catching, killing and controlling unwanted fish and other aquatic invasive species.

- **Monitoring** – Expand water sampling areas in the Great Lakes and likely invasion spots
- **Coordination** – Prioritize action on aquatic invasive species, including Asian carp, in the Canada-Ontario Agreement. COA will likely be important in establishing the roles and responsibilities for the federal and provincial governments related to invasive species control and management in the Great Lakes.
- **Enhance border protection** – Better training and education for Canadian Border Services Agency staff to identify aquatic invasive species and to enforce existing laws and regulations. The United States is already contributing \$200 million over four years solely on its ongoing work to keep Asian carp out of the Great Lakes.

This investment is in addition to the recommended funding to address the threat posed by invasive plant species. ([See Green Budget Coalition Budget 2016 Recommendation – Invasive Plant Species.](#))

Recommended Investment:

An additional \$25 million per year ongoing.

Investment in near shore strategies to protect and restore Great Lakes basin wetlands and riparian buffer zones; restore fish and wildlife habitat

The near shore areas of the Great Lakes are critical to the health of the Great Lakes and all of those who depend upon them. New efforts are required to undertake strategies to protect and restore Great Lakes coastal and basin wetlands which provide key habitat to fish, migratory birds, and wildlife. Riparian buffer zones help protect drinking water and clean up Great Lakes waters to keep them fishable, drinkable and swimmable for both people and fish and wildlife.

Budget Announcement

“The Government of Canada is committed to protecting the Great Lakes for present and future generations and announces the creation of a permanent Great Lakes Protection Fund to ensure the ongoing care, stewardship, protection and restoration of the 20% of the world’s freshwater, as well as a new tax incentive program for landowners who take action to prevent land based nutrient runoff or establish permanent nearshore habitat.”

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**HEALTHY
ENVIRONMENT,
HEALTHY CANADIANS**

INDUSTRIAL AIR POLLUTION AND AMBIENT AIR STANDARDS

The Green Budget Coalition recommends that the Government of Canada provide funding of \$125 million per year to Environment and Climate Change Canada and Health Canada to effectively research, monitor and regulate air pollution including completing the development and implementation of Multi-sector Air Pollutant Regulations and Canadian Ambient Air Quality Standards. This amount would maintain the annual allocation to the Clean Air Regulatory Agenda that has occurred since 2011 and support completion of regulatory activities to address climate change and air quality.

Investment required

For 2016/2017:	\$125 million	For ongoing:	\$125 million/year for five years
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Summary

The Minister of Environment and Climate Change was mandated to “work with provinces and territories to set stronger air quality standards, monitor emissions, and provide incentives for investments that lead to cleaner air and healthier communities” as noted in the Minister’s Mandate Letter. This budgetary measure would enable implementation of this commitment. Further, the Minister of Transport was mandated to “work with the Minister of Infrastructure and Communities, who will have the lead, and in consultation with provincial and territorial governments as well as municipalities, to develop and implement an Infrastructure Strategy which will see significant investments made to improve public transit infrastructure and green infrastructure.”¹

Strong scientific evidence links industrial and traffic-related air pollution to chronic illness and death with an associated high economic burden. In October 2012, the federal, provincial and territorial (FPT) Environment Ministers agreed to take action to improve air quality in Canada. FPT Ministers proposed sectoral emission regulations for industry in 2014 and in June of that year the federal government proposed, but never enacted, regulations in three industrial sectors and stated that requirements for additional sectors/equipment groups would follow soon after. Also in 2014, FPT Ministers proposed two (of an eventual four) health-based Canadian Ambient Air Quality Standards that were then established in 2015 for fine particles and ground level ozone. Funding to support the federal role in the FPT Air Quality Management System occurred within the Clean Air Regulatory Agenda (CARA). CARA funding will sunset in 2016, leaving unfulfilled key elements of this strategy to address air pollution.

¹ Note also that the Mandate Letter to the Minister of Finance directs that he “work with the Minister of Infrastructure and Communities to develop the Canada Infrastructure Bank to provide low-cost financing (including loan guarantees) for new municipal infrastructure projects in our priority investment areas.”

Background and Rationale

The Canadian Medical Association estimates that 21,000 Canadians died prematurely as a result of air pollution in 2008 and that the economic cost of air pollution-related illness and death topped \$8 billion. Due to demographic trends, if air quality does not improve, the annual death toll is expected to increase to nearly 45,000 by 2031.² In addition to adverse respiratory and cardiovascular effects, the International Agency for Research on Cancer (the specialized cancer agency of the World Health Organization) classifies outdoor air pollution as carcinogenic to humans.³ Research also shows negative effects on brain development⁴ and associations between prenatal air pollution exposure and adverse birth outcomes – and that socially disadvantaged populations are at greater risk.⁵

In October 2012, through the Canadian Council of Ministers of the Environment, the federal, provincial and territorial (FPT) Environment Ministers agreed to take action to improve air quality in Canada and collaboratively developed the new Air Quality Management System.⁶ The federal government has a lead role to play in realizing two key pillars of the system: industrial emission reduction requirements and updated Canadian Ambient Air Quality Standards (CAAQS).⁷

Measured on a regional basis, air quality has been slowly improving in recent years in most parts of Canada.⁸ Yet more than 35 percent of Canadians live in communities where levels of ground-level ozone still exceed the current Canada-wide air quality standard.⁹ Fully implementing the Air Quality Management System would lead to further improvements, delivering health and economic benefits for Canadians.

Industrial emission reduction requirements

In June 2014, the Ministers of Health and Environment proposed new Multi-sector Air Pollutant Regulations. Initially, these regulations target pollution reductions from three industrial sectors or equipment groups, starting (if they had been enacted) in January 2015: the cement-manufacturing sector, stationary gas engines (used in the oil and gas sector to move gas through pipelines, for example), and non-utility boilers and heaters (used to create hot water or steam for industrial processes). The net benefits of the proposed Multi-sector Air Pollutant Regulations for industrial engines, boilers and heaters and cement kilns are estimated to be \$6.49 billion, \$1.13 billion and \$1.44 billion, respectively. These benefits correspond to benefit-cost ratios ranging from 15:1 (for engines) to 34:1 (cement kilns). The Air Quality Management System calls for national emission reduction standards for fifteen industrial sectors.

2 Canadian Medical Association, 2008, No Breathing Room: National Illness Cost of Air Pollution. Ottawa. http://www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/No_Breathing_Room.pdf

3 Dana Loomis et al., "The Carcinogenicity of Outdoor Air Pollution," *The Lancet Oncology* 14, no. 13 (December 2013): 1262–63, doi:10.1016/S1470-2045(13)70487-X.

4 Chiu, Yueh-Hsiu Mathilda, David C. Bellinger, Brent A. Coull, Shawn Anderson, Rachel Barber, Robert O. Wright, and Rosalind J. Wright. "Associations between Traffic-Related Black Carbon Exposure and Attention in a Prospective Birth Cohort of Urban Children." *Environmental Health Perspectives*, May 10, 2013. doi:10.1289/ehp.1205940; Sunyer, Jordi, Mikel Esnaola, and et al. "Association between Traffic-Related Air Pollution in Schools and Cognitive Development in Primary School Children: A Prospective Cohort Study." *PLoS Medicine*, March 3, 2015. doi:10.1371/journal.pmed.1001792.

5 Simone C Gray et al., "Assessing the Impact of Race, Social Factors and Air Pollution on Birth Outcomes: A Population-Based Study," *Environmental Health* 13, no. 4 (2014), doi:10.1186/1476-069X-13-4.

6 "AQMS," Canadian Council of Ministers of the Environment, n.d., <http://www.ccme.ca/en/resources/air/aqms.html>

7 Provinces are to lead complementary air zone management activities to ensure CAAQS are achieved in all areas of the country.

8 Environment Canada, 22 August 2014, Canadian Environmental Sustainability Indicators, Air Quality. <http://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=7DCC2250-1>

9 Environment Canada, "Proposed Multi-Sector Air Pollutants Regulations (p. 1321)" (Canada Gazette, June 7, 2014), <http://gazette.gc.ca/rp-pr/p1/2014/2014-06-07/pdf/g1-14823.pdf>.

Canadian Ambient Air Quality Standards

In May 2013, the Government of Canada established new, health-based ambient standards for fine particulate matter (PM_{2.5}) and ground-level ozone. These came into effect in 2015 replacing the less-stringent Canada-wide standards for air quality. The new CAAQS are to be reviewed and updated for 2020. The Air Quality Management System also foresees complementary CAAQS for other pollutants, including nitrous oxides and sulphur dioxide.

Completion of the Clean Air Regulatory Agenda

Further development and implementation of the Air Quality Management System would address two key aspects of the Liberal Party election platform and as specifically noted in the mandate letters to the Ministers of Environment and Climate Change, and Transportation (and further supported in the Mandate Letter to the Minister of Finance): to cut air pollution via investment in public transit and to work with the provinces to set stronger air quality standards and monitor emissions. These commitments can be honoured by renewing the Clean Air Regulatory Agenda (CARA), along with complementary air quality initiatives including research, monitoring and the Air Quality Health Index.

Budget 2011 funded the CARA for five years (the Budget announced \$252 million over two years; the total five-year investment was \$600.8 million.)¹⁰ This funding will sunset in March 2016. The coming years will be crucial for finalizing emission reduction regulations for the remaining industrial sectors, developing CAAQS for other pollutants and implementing these new standards. Renewal of the CARA funding in Budget 2016 would ensure continuity of the program and allow for complete implementation of the federally-led components of the Air Quality Management System without further delays. Work during 2016 should include immediate enactment of the Multi-Sector Air Pollutant Regulations published in the Canada Gazette in 2014, continued work on the next set of sectoral regulations, and renewed FPT progress towards CAAQS for nitrogen dioxide and sulphur dioxide.

10 <http://actionplan.gc.ca/en/initiative/clean-air-regulatory-agenda>

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OFFICE OF ENVIRONMENTAL HEALTH EQUITY

The Green Budget Coalition recommends that the Government of Canada provide funding to Health Canada to establish a new federal Office of Environmental Health Equity tasked with: improving understanding of the burden of preventable environmental health hazards faced by disadvantaged and vulnerable communities; assessing possible interventions; and identifying and implementing mechanisms to ensure that all Canadians have the opportunity to enjoy the same level of protection from environmental health hazards and access to environmental health benefits.

Investment required

For 2016-2017: \$15 million

For ongoing: \$15 million per year

Summary

The Minister of Families, Children and Social Development was mandated to “lead the development of a Canadian Poverty Reduction Strategy that would set targets to reduce poverty and measure and publicly report on our progress, in collaboration with the Minister of Employment, Workforce Development and Labour... [aligning] with and [supporting] existing provincial and municipal poverty reduction strategies.” As one of the multiple determinants of health, the environment is as important and cross-cutting an issue as income in determining a person’s health.

All Canadians should have the right to a healthy environment, but there is increasing evidence that disadvantaged and vulnerable communities bear a disproportionate burden of preventable environmental health hazards, such as pollution, toxic substances in consumer products, environmental degradation and the effects of climate change. A federal Office of Environmental Health Equity would support ongoing assessment and champion the integration of environmental health equity across all relevant government departments and agencies, programs, policies and activities. The benefits for Canadians will manifest as reduced health inequities and a healthier population overall, with associated economic benefits in terms of health care savings and increased productivity.

Background and Rationale

All Canadians should have the right to a healthy environment, but disadvantaged and vulnerable communities bear a disproportionate burden of preventable environmental health hazards. For example, one in four low-income Canadians lives within a kilometre of a major polluting industrial facility, whereas only seven per cent of the wealthiest quintile lives within this radius. Proximity to major sources of pollution results in higher levels of respiratory and cardiovascular illness for low-income Canadians.¹

The concept of environmental health inequity (also referred to as environmental injustice or environmental racism) describes “inadequate, unresponsive, and/or discriminatory policies that result in the concentration of multiple environmental risks, as well as inadequate access to environmental benefits among disadvantaged Canadian communities.”² Certain population sub-groups in Canada tend to bear a greater burden of adverse environmental effects on health including those in resource-dependent communities, Aboriginal communities, both on and off reserve,^{3,4} low-income and ethno-racial communities typically in urban settings;⁵ and biologically vulnerable populations such as children, pregnant women and older adults.^{6,7} Government programs and regulations that address environmental health hazards rarely address population-level inequities. Canada lacks co-ordinated capacity to ensure disadvantaged and vulnerable communities have the opportunity to enjoy the same level of environmental protection as other Canadians.

A Governance Model: The U.S. Office of Environmental Justice

Canada lacks a governance structure and capacity to advance environmental health equity but can follow the model of the United States Office of Environmental Justice, established in 1992. The mission of this office is to facilitate Environmental Protection Agency (EPA) efforts to protect and promote environment and public health in minority, low-income, tribal and other vulnerable communities.⁸

In 1994, President Bill Clinton issued Executive Order 12898 — Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. The Order requires all federal agencies to identify and develop strategies to address any disproportionately high and adverse health or environmental effects of their actions on minority and low-income populations. It also established the Federal Interagency Working Group on Environmental Justice, chaired by the EPA administrator (equivalent to Canada’s environment minister). The heads of 11 federal departments or agencies and several White House offices are represented on this working group.⁹

1 Urban Physical Environments and Health Inequalities (Ottawa: Canadian Institute for Health Information, March 2011). http://www.cihi.ca/CIHI-ext-portal/pdf/internet/CPHI_UPE_SUMMARY_REP_EN

2 “What Is Environmental Health Inequity?” The Centre for Environmental Health Equity, accessed August 6, 2014, <http://cehe.ca/aboutus>.

3 Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (Cambridge, UK and New York, NY: IPCC, 2014), chap. 11, http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap11_FINAL.pdf

4 “Chemical Valley Charter Challenge,” Ecojustice, accessed August 6, 2014, <https://www.ecojjustice.ca/cases/chemical-valley-charter-challenge-1>

5 Tara Zupancic, “At the Margins and in Deep: The Need to Prioritize Equity for Children’s Environmental Health” (Centre for Environmental Health Equity, n.d.), http://www.cehe.ca/sites/default/files/At%20the%20Margins%20and%20in%20Deep-3_0.pdf.

6 Sarah Lewis, Sex, Gender and Chemicals: Factoring Women into Canada’s Chemicals Management Plan (North York, ON: National Network on Environments and Women’s Health, June 2011), http://www.nnewh.org/images/upload/attach/NNEWH_chemicals_report_for_web.pdf.

7 Child Health and the Environment - A Primer (Toronto: Canadian Partnership for Child Health and the Environment, 2005), <http://www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/cpche-resources/Primer.pdf>.

8 “Environmental Justice - Basic Information,” U.S. Environmental Protection Agency, May 24, 2012, <http://www.epa.gov/environmentaljustice/basics/index.html>. It was originally called the Office of Environmental Equity. The name was changed in 1994.

9 “Federal Interagency Working Group on Environmental Justice,” U.S. Environmental Protection Agency, accessed August 6, 2014, <http://www.epa.gov/environmentaljustice/interagency/>

The EPA considers that environmental justice will be achieved when everyone enjoys the same degree of protection from environmental health hazards, equal access to related decision-making processes and a healthy environment in which to live, learn and work.¹⁰ This vision has yet to be realized in the U.S. Nevertheless, the U.S. Office of Environmental Justice, Executive Order 12898 and Interagency Working Group can claim some significant achievements over the past two decades.^{11,12,13}

More broadly, the Office of Environmental Justice, Executive Order 12898 and Interagency Working Group have helped to raise awareness in the U.S. of environmental health inequities and cemented environmental justice as a consideration in federal decision-making. In Canada, this conversation is just beginning.

Building Capacity for Action on Environmental Health Equity in Canada

A federal Office of Environmental Health Equity could support ongoing assessment of preventable environmental health hazards and the health benefits of environmental protection measures, on disadvantaged and vulnerable communities in Canada, and identify opportunities to intervene to prevent environmental health inequities. The new Office could champion efforts to integrate environmental health equity in all relevant government programs, policies and activities, and assist with co-ordination. Mirroring the whole-government approach of Executive Order 12898 in the U.S., it should be established as an independent or arms-length agency (parallel to the Canadian Mental Health Commission, for example).

10 "What Is Environmental Justice?" U.S. Environmental Protection Agency, accessed August 7, 2014, <http://www.epa.gov/environmentaljustice/>

11 "Office of Prevention, Pesticides, and Toxic Substances (OPPTS) Action Plan to Integrate Environmental Justice, 2009" (U.S. Environmental Protection Agency OPPTS, 2009), <http://www.epa.gov/environmentaljustice/resources/reports/actionplans/oppts-ej-actionplan-2009.pdf>.

12 Ibid.

13 "The Office of Air and Radiation (OAR) FY 2006 Environmental Justice Action Plan" (U.S. Environmental Protection Agency OAR, 2006), <http://www.epa.gov/environmentaljustice/resources/reports/accomplishments/oar-ej-progress-rpt-2006.pdf>.

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INDOOR AIR: TAX CREDIT FOR RADON REMEDIATION

The Green Budget Coalition recommends that the Department of Finance amend Division E of the Income Tax Act to add a tax credit of up to \$3,000 available to individual Canadians for radon mitigation by experts certified by the Canadian National Radon Proficiency Program where a three-month test indicates an indoor radon level above the Canadian radon guideline (currently 200 Bq/m³).

Investment required

Negligible.

Anticipated costs of this measure would be reduced income tax revenues (from using the tax credit) that could be largely offset by increased tax revenues from businesses conducting radon remediation.

Summary

Radon, a known carcinogen, is a naturally occurring radioactive gas arising from the decay of uranium in soil and rock. It is the second leading cause of lung cancer in Canada after smoking and is responsible for 16% of lung cancer deaths annually. Invisible, odourless, and tasteless, radon can only be detected via testing. The federal government's National Radon Program has shown important leadership in multiple areas related to radon testing, mitigation, and outreach, in particular with an aggressive campaign to encourage all homeowners in Canada to test for radon. A logical next step is providing financial assistance to Canadians when high radon levels are found. If all homes with radon above the federal guideline were mitigated, costs savings from prevented lung cancer deaths would reach over \$17 million annually.

Background and Rationale

Since 2008, Health Canada's National Radon Program has tested nearly 15,000 federal buildings and about 14,000 residences across Canada, added radon-protection measures to the National Building Code, undertaken research into radon testing and mitigation techniques, developed a Canadian certification program for radon mitigation professionals (the Canadian National Radon Proficiency Program), conducted extensive radon education and awareness programs, and repeatedly told Canadians that all homes should be tested for radon.

Surveys indicate that about 7% of homes in Canada (about 600,000 dwellings) have radon levels above the Canadian guideline of 200 Bq/m³ (becquerels per cubic metre, a measure of the number of radioactive disintegrations per second). While some areas are known to have high radon levels, including in parts of Manitoba, New Brunswick, Saskatchewan and the Yukon, radon is present in all homes at some level and high radon levels have been found in all provinces. Health Canada's cross-Canada survey indicates a need for all homes to be tested.

Help Canadians Take This Issue Seriously and Make Radon Mitigation Affordable

Health Canada has provided important leadership on radon policy and programs. While much new construction in Canada includes radon protection measures, radon can be a significant health risk in existing homes. Public uptake of Health Canada's message about the need for radon testing has been limited. A tax credit is a logical next step from the federal government and can send a strong signal to Canadians to take this issue seriously.

Homeowners Need Help to Offset the Costs of Radon Mitigation

Mitigation techniques to reduce indoor radon concentrations include sealing cracks and other openings in the foundation/floor, venting and/or Active Sub-Slab Depressurization (installation of a pipe and fan under the basement floor slab to vent radon from under the house preventing entry to the home). Typical mitigation costs range from \$500 to \$3,000. The federal government can help make radon mitigation affordable by adding radon mitigation as a tax credit under the Income Tax Act. While a permanent tax credit would be preferable, since even new housing stock may need to be remediated, a temporary five-year tax credit could incent many of the same benefits, and encourage more rapid action.

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SUPPORTING EVIDENCE-BASED DECISION MAKING

MEASURING ECOLOGICAL GOODS AND SERVICES

The Green Budget Coalition recommends that the Government of Canada provide funding of \$4.5 million over three years starting in Budget 2016 to Statistics Canada to allocate seed funding for creating a second phase of the Measuring Ecosystems Goods and Services (MEGS) project to support inter-departmental research to track the “stocks” and changes in the ecosystems and ecological goods and services that are fundamental to Canadians’ health, economy and natural heritage.

Investment required

For 2016/2017: \$2.4 million to Statistics Canada

For ongoing: \$2.4 million to other relevant policy departments over three years

Summary

The interdepartmental project on Measuring Ecosystems Goods and Services (MEGS) was coordinated by Statistics Canada and concluded with the release of some of its findings in the 2013 Human Activity and the Environment. This two-year project propelled research on ecosystem accounting and the quantification of ecosystem goods and services (EGS). Participating departments included Environment and Climate Change, Fisheries, Oceans and the Canadian Coast Guard, Natural Resources Canada, Parks Canada, Agriculture and Agri-Food Canada, and Policy Horizons Canada. It is strongly recommended that the Government of Canada allocate new funds for the continuation of this project.

There is strong interest in this project and further EGS measurement research remains a high priority, both within and outside the federal government. Members of the MEGS Working Committee have continued to meet on a quarterly basis to share experiences and provide feedback on interdepartmental work. Membership has been expanded to welcome other departments (e.g., Industry Canada) and initiatives (e.g., Inter-governmental Panel on Biodiversity and Ecosystem Services, IPBES). As such, the GBC expects that additional resources for identifying and quantifying EGS could facilitate benefits across the federal government.

Of the total \$4.5 million for incremental seed funding to advance development of a system of ecosystem accounting for Canada and start looking at the feasibility of a census of the environment, the GBC recommends \$2.4 million be directed to Statistics Canada to support their leadership and coordinating role, and \$2.1 million to support the participation of the relevant policy departments.

Background and Rationale

Quality information is pivotal for understanding and protecting our environment, for developing the best environmental policy, and also for devising promising new technologies. Statistics Canada reports that, “after extensive consultations, the agency has established a framework that will allow it to develop environmental statistics using much the same approach that has long been applied to economic and social statistics.”

Underpinning the exercise is the concept of natural capital. In simple terms, natural capital views the environment as a collection of assets that provide environmental goods and services. Clean air and fresh water are good examples.

Using wetlands as an example, measuring the economic values generated by the ecosystem services (flood attenuation, tourism, nutrient retention) of this natural cover would enable Canadians to possess a more accurate measure of the services/decreased expenditures required to remedy flood damage and declining water quality.

One result of the MEGS project was Statistics Canada’s decision to invest in developing annual land cover and land use change statistics and renewable water estimates. Both reports are slated to be available in 2015-16 and should provide important base data for researchers and federal departments working in the area of EGS research and eventually help to integrate environmental considerations into economic and policy decision-making, a priority in the Federal Sustainable Development Strategy.

While these new investments are a start, this additional federal funding could greatly extend the reach of this work. In conjunction with partners within and outside the federal government, Statistics Canada could start looking into the feasibility of a Canada-wide “Census of the Environment” as a potential statistical instrument, to form a spatial register of environmental assets that could be linked to socio-economic data.

Internationally, the United Nations has developed and finalized the System of Environmental-Economic Accounting (SEEA), a set of statistical standards that link environmental data to the economic data in the System of National Accounts. Statistics Canada is helping to develop additional experimental guidelines within the SEEA that focus on ecosystem accounts and the measurement of EGS. These guidelines are compatible with the techniques developed through MEGS, with Statistics Canada becoming one of the lead national statistical organizations to test these concepts. Also, the World Bank’s Wealth Accounting and the Valuation of Ecosystem Services (WAVES) is advancing efforts so that natural resources are mainstreamed in development planning and national economic accounts, and the Economics of Ecosystems and Biodiversity (TEEB) is advancing the tracking of the economic benefits of biodiversity.

Budget Announcement

"The Government of Canada is committed to evidence based decision making and keeping track of our Natural Capital accounts and announces the extension of the Measuring Ecological Good and Services Project for another 3 years."

"The extension of the program will allow government and partners to build on existing work and will provide Canada with essential decision making tools as we grow our economy, build strong communities and show global leadership on the environment and climate change."

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WHO WE ARE

The Green Budget Coalition brings together 15 leading Canadian environmental organizations, 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.

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