

Canada and the Day After Tomorrow
A Strategic Outlook 2017-2037

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Executive Summary

This report proposes a new approach to Canadian foreign policy for the next twenty years with the primary goals of creating of a strong and sustainable Canadian economy, and strengthening the multilateral global governance system through which Canadian interests are best served. The rationale for choosing a twenty-year time frame is to offset a tendency toward short-term approaches in favor of a forward thinking policy that does not look farther ahead than can reasonably be forecasted. At the heart of this report is a proposal to merge economic and environmental policies by addressing their perceived incompatibilities and decoupling economic growth from environmental harm. While a strong Canadian economy is a high priority, it cannot come at the cost of environmental stewardship. This report's security agenda combines hard and soft power in a hybrid approach best suited to the wide ranging threats that exist today and will likely persist in the future: climate change, unpredictable or unstable migration, corporate and government espionage, radicalization and terrorism, and threats to both Arctic territory and environmental integrity. These priorities require the strengthening of the Multilateral Global Governance Systems that ensure Canadian security. The report's development agenda also utilizes the multilateral nature of Canadian Foreign Policy to focus on the alleviation of poverty. By centering policies on education, access to health care, economic empowerment, and ensuring food and water security, at both the individual and community level, the need for development assistance will decrease in the future. Implemented jointly, these three policy areas—economic environmental, security, and development— and their subsequent recommendations will support multilateralism and responsible economic strength, and establish a cohesive Canada foreign policy outlook for the next two decades.

Philosophy

The core of Canadian foreign policy must be guided by an adherence to a fine balance between self-interest and international cooperation. Therefore, the security and prosperity of the Canadian population must be a core foreign policy objective. Canada must continue to act through multilateral institutions in order to promote international stability, and to be able address a wide variety of international issues that impact Canada (i.e. climate change and its impact on Arctic sovereignty.) Additionally, Canadian policy-makers should also support efforts to reform and modernize international institutions to better reflect current power distributions and emerging issues, which will also ensure the continued viability of the institutions. Canada must also remain committed to meeting its international responsibilities and agreements; most importantly, to climate change and multilateral institutional commitments, namely the UN and NATO, which continue to provide the country with the ability to ‘punch above its weight.’

Canadian foreign policy efforts must be targeted towards addressing key issues in which Canada can best utilize its strengths in order to gain leadership roles and maximize the value of its limited resources. It is essential that the selection of foreign policy priorities not be shaped by nostalgia alone, and instead be guided by pragmatic policy built upon clearly defined and manageable goals. This principle comes with the caveat of Canada needing to ‘lead by example.’ Breaking international commitments risks damaging Canada’s international standing and credibility, and risks damaging the perceived legitimacy of the international agreements it is supposed to support. Despite the United States’ relative decline, this report recognizes that the U.S. will remain a prominent international actor for years to come, and Canada cannot allow this relationship to deteriorate. Meanwhile, efforts should be made to promote Canadian academic and private sector involvement in developing innovative solutions to addressing international challenges. This will allow Canada to excel in identified niche fields, to better diversify trade, to engage in sustainable economic development, and to keep technology and policy in harmony with international progress.

Criticisms: Why We Need a Change

This report lays out the future of Canadian foreign policy in order to avoid repeating past mistakes. Canadians have always been very proud of their image in the world as a peacekeeper, helpful fixer, honest broker, and good ally. Despite this positive perception, actual policies have failed to meet these standards. While Canadian foreign policy has indeed been successful in benefitting millions of people around the world, this report highlights several areas worth critiquing:

The fulcrum of criticism directed against Canadian foreign policy centers around two broad themes. Firstly, Canadian foreign policy tends to take a short term, reactionary approach at the expense of a long-term goal. Canadian policymakers have a history of adhering to specific issues or policies for a short or intermittent period of time, with newly elected governments displaying a desire to distinguish their foreign policy agenda from those of past administrations. Human rights is one example. Generally speaking, human rights issues are entrenched in the societies of the countries where they are found, meaning that a long term approach is required to adequately address human rights issues. Canadian Prime Ministers have often supported policies addressing human rights issues, but the steps that have been taken thus far have all failed to produce anything substantial due to a lack of long-term thinking. The Canadian tendency is for policy makers to set short-term, specific human rights goals – such as John Baird prioritizing issues of child marriage and discrimination against sexual minorities – which will sound great for a short period, but will then promptly shift to another issue.¹ This is obviously motivated by the idea that each government must be substantially different from the last. The same issue is found in other policy areas, such as in recent ad hoc approaches to the global migrant crisis, which resulted in thousands of refugees being housed in military sites, often poorly equipped for winter habitation due to a lack of planning and long-term thinking about their integration.² In the bigger picture, the tendency for Canadian foreign policy to adhere to partisan principles has robbed it of long-term goals and the success that comes with it. Policies are formulated and implemented with particular problems in mind that arise globally, but a lack of an overarching strategy has left policies trailing well behind stated commitments. Canadian policymakers simply trying to deal with issues as they arise while attempting to leave their own distinct mark on foreign policy does not lead to any meaningful changes or long-term strategic objectives.

¹ David Petrusek, “Towards a New Canadian Human Rights Diplomacy,” in *The World Won’t Wait*, eds. Taylor Owen and Roland Paris (Toronto: University of Toronto Press, 2016): 126.

² Susana Mas, “Refugees to be temporarily housed at military sites in Quebec, Ontario,” *CBC News*, November 19, 2015. <http://www.cbc.ca/news/politics/refugees-temporary-military-housing-quebec-ontario-1.3326462>.

CRITICISMS: WHY WE NEED A CHANGE

The second broad area of criticism directed at Canadian foreign policy is that it lacks coherence. In order for a policy to achieve its goal, it not only needs to address an issue correctly, but also need to maintain coherence within the larger context of Canadian foreign policy. For example, goals aimed at Canadian economic prosperity cannot come at the cost of environmental responsibility. Canada cannot increase contributions to the Overseas Development Assistance program, and then sacrifice such contributions when funding is required in another sector. In addition, policy coherence also includes following through on statements that are made. Whether it be to gain domestic support for a policy or to win votes in an upcoming election, Canadian Prime Ministers often make grand statements about a particular area of interest, but then fail to follow through with tangible policy. It is temporarily convenient to campaign on promises of saving the environment and moving toward a green economy, but it is disappointing when just months later ‘saving the environment’ turns into the authorization of three new pipelines.³ It means nothing to say Canada is ‘back and here to help’ if nothing is contributed to prove that Canada is in fact, back and here to help.⁴ There will always be tensions in the foreign policy making process and areas that must be pushed aside for the pursuit of something else, but it is to the detriment of Canadian foreign policy when rhetoric is left without coherent policies to back it up. Canadian foreign policy will continue to be viewed as ineffective if the Government continues to pursue strategies that lack coherence.

Aside from the two main issues of short-termism and incoherence, several other features of Canadian foreign policy have faced notable criticism. Canadian foreign policy tends to be rooted in a sense of nostalgia. Canadians are very proud of their past, and many would like to return to the ‘Golden Age of Diplomacy.’ Canadian policymakers tend to engage in areas in which Canada has made an impact in the past. A prime example is peacekeeping. Peacekeeping was once one of the most visible measures of Canadian influence globally. Presently, Canadian personnel contributions to peacekeeping are not as critical, with many other states providing hard power contributions to peace operations.⁵ Canadian policymakers must consider changes in areas where Canada has excelled in the past, but cannot do things simply because they worked for Canada in the past. Canadian foreign policy needs a forward-looking approach to find new areas of influence and expertise for Canada to make an impact, while simultaneously contributing to Canada’s domestic prosperity.

³ Liberal Party of Canada. *Climate Change*. <https://www.liberal.ca/realchange/climate-change/>.

⁴ Justin Trudeau, *Speech at the United Nations, 2016*, <http://pm.gc.ca/eng/news/2016/09/20/prime-minister-justin-trudeaus-address-71st-session-united-nations-general-assembly>.

⁵ Chris Perry and Adam C. Smith, “Trends in Uniformed Contributions to UN Peacekeeping: A New Dataset, 1991–2012,” *International Peace Institute*, June 2013, https://www.ipinst.org/wp-content/uploads/publications/ipi_e_pub_trends_un_peacekeeping.pdf.

CRITICISMS: WHY WE NEED A CHANGE

Another criticism of Canadian foreign policy is that it is too closely oriented toward the United States. Canadians view themselves as inherently distinct from their neighbours to the South.⁶ This fear of over-dependence has historically prompted several Canadian leaders to attempt a distancing from the United States, such as Pierre Trudeau with his “Third Option.”⁷ Close relations between Canada and the United States are only negative if it influences Canadian foreign policy in a way that harms Canadian goals. For example, if Canada were to let Donald Trump’s current stance on the environment influence its adherence to the Paris Climate Agreement, that criticism would be accurate. However, the United States has been and will continue to be Canada’s closest partner and ally and it would be harmful to long-term goals if we were to let that critique get in the way of such a strong relationship. Lastly, an important critique that has the potential to harm the Canadian image globally is the accusation that Canada is a free rider, specifically in terms of military spending.⁸ This accusation hurts Canadian legitimacy on the very international playing field that we are trying to strengthen. Canadian foreign policy going forward needs to prove that Canada is doing all that it can to the best of its ability. The impact that Canada can have in certain niche areas will be much more respected than a weak impact from trying to do too much.

⁶ Sean M. Maloney, *Canada and UN Peacekeeping: The Cold War by Other Means, 1945-1970* (St. Catherines: Vanwell Publishing, 2002), 7.

⁷ Ivan Head and Pierre Trudeau, *The Canadian Way: Shaping Canada's Foreign Policy 1968-1984* (Toronto, ON: McClelland & Stewart, 1995) 265.

⁸ Donald Trump, interview By David E. Sanger and Maggie Haberman, *Transcript: Donald Trump on NATO, Turkey's Coup Attempt and the World* The New York Times, July 21, 2016.

Global Trends

This report highlights several key global trends that shape the environment in which Canadian policy makers operate. A rapidly changing climate creates a dynamic environment, resulting in the need for a cohesive, long-term plan to advance Canada's interests. Increasingly scarce resources in the future will drive demand for more efficient extraction processes and, significantly for the Canadian Arctic, previously untapped sources of fossil fuels.⁹ Canadian firms also face increasing pressures to engage in greener business practices, and must remain competitive while undergoing these advancements.

An increasingly interconnected and interdependent global economy has led to the globalization of even the most traditionally-isolated events. Events anywhere in the world have far-reaching consequences for the international community. Such trends are displayed in the rise of economic powerhouses, such as the ASEAN states, which can pose severe risks for Canadian economic interests if not they are not addressed. Shifting labour demand due to the rise of automation coupled with a relatively high cost of manufacturing goods in Canada presents risks in the form of a possible loss of global competitiveness.¹⁰ Meanwhile, a growing global middle class provides opportunities for Canadian firms in the global marketplace, provided they are given the tools to tap into these new pools of purchasing power worldwide.

In terms of security, such interconnectedness results in the increased capability of non-state actors, including terrorist groups, NGOs, and corporations. A truly long-term foreign policy will offer the ability to operate in an environment where the role of the state remains vital, but declines in relative terms with the rise of such actors. In a similar vein, the relevance of international organizations is also coming under serious question with the election of controversial populist leaders worldwide. With decision makers such as Donald Trump questioning the need for alliances such as NATO, and the European Union facing increasing pressure from secessionist members, Canada must seek to both prop up such organizations and develop the capability to operate without them. Canadian bilateral relations must also be reviewed. While the US will continue to remain Canada's closest ally, it would be irresponsible for Canada to maintain an overreliance on a state that is currently unpredictable.

⁹ PwC, *Climate Change and Resource Scarcity* (2017), accessed March 16, 2017, <http://www.pwc.co.uk/issues/megatrends/climate-change-and-resource-scarcity.html>.

¹⁰ Danielle Goldfarb, "Why Canada's Global Commerce Policy Needs to Lean In," in *The World Won't Wait: Why Canada Needs to Rethink Its International Policies* eds. Roland Paris and Taylor Owen (Toronto: University of Toronto Press, 2016), 24.

GLOBAL TRENDS

Economic hardship and the rise of powerful terrorist organizations have also prompted the largest refugee crisis since the Second World War. The movement of populations away from the global south creates economic, humanitarian, and security-based issues for recipient states. While some states seek to discourage immigration by citing economic, cultural, or security concerns, other states with aging labour pools seek to augment their workforce through increased immigration. Surges of undocumented immigration in areas such as Europe, consisting of millions of unidentified asylum seekers, prove to be a significant security issue in the fight against terrorism. Simultaneously, the humanitarian requirements of such situations cannot be ignored.

Rationale and Goals

This report proposes a shift in policy making that focuses on central goals that foster long-term thinking, while still keeping in mind interests that are crucial to the wellbeing of Canadians. Establishing clear, long-term goals represents a departure from past practice and will enable Canada to evaluate and react to global events in a consistent way.¹¹ Canadian policy will pursue and highlight these established goals, and when problems arise – conflicting policies, humanitarian crises, and new threats – policymakers will be equipped to develop new policies that maintain the centrality of Canada’s goals. As a result, Canadian foreign policy will suffer less from policy incoherence, which will enable Canada to be a reliable actor in the international system. Canada’s potential will therefore be realized, and Canadian foreign policy will make more of an impact. It will be possible for Canada to act as a leader in certain fields. If Canada develops consistent and coherent policy through the pursuit of clear goals, a leadership role can be attained in certain areas. The following goals inform our policy priorities and recommendations, and identify objectives that Canada should pursue.

1. MAINTAIN STRONG AND SUSTAINABLE CANADIAN ECONOMY

Canada must remain strong internally in order to have the capacity to execute its foreign policy effectively and sustainably. A long-term focus on economic sustainability will help Canada achieve this goal while addressing global climate change, which is crucial for global sustainability. Canada is a resource-dependent nation. Nonetheless we must also adapt to the new global economy by responding to global trends on climate change and technological advances. Investment in innovation and growing the Canadian economy in sustainable ways is crucial to the survival and strength of the economy. When Canada has a strong economy, it has the capacity to lead by example, contribute to collective efforts in the liberal multilateral global governance system, and work towards a prosperous world with enlarged consumer markets and relative stability. Domestic support for ambitious foreign policy will also increase if Canada chooses to foster a strong and sustainable economy as a primary goal.

¹¹ Roland Paris and Taylor Owen, “Introduction: A Transforming World,” in *The World Won’t Wait: Why Canada Needs to Rethink Its International Policies* eds. Roland Paris and Taylor Owen (Toronto: University of Toronto Press, 2016), 4.

RATIONALE AND GOALS

2. STRENGTHEN AND MAINTAIN AN EFFECTIVE LIBERAL MULTILATERAL GLOBAL GOVERNANCE SYSTEM

Canada's influence on the world stage comes largely from its membership in international institutions and the overall liberal multilateral system. Institutions such as the United Nations (UN), the North Atlantic Treaty Organization (NATO), the Organization for Economic Co-operation and Development (OECD), and many others have allowed Canada to have considerable input in the global conversation, work with like-minded states and organizations to pursue common goals, and guide global politics to mutually benefit Canada and states that also commit to the liberal multilateral global governance system. Due to a shifting power balance, international organizations and multilateral institutions will be challenged by an increasing number of non-state, subnational actors and diverse emerging powers that pose a challenge to the multilateral governance system. According to the United States National Intelligence Council, the liberal global governance system is forecasted to have limited reach and power over how states interact.¹² If the global governance structure that Canada relies on is facing increased backlash, Canada must work to strengthen the multilateral system and maintain its relevance by adhering to international agreements, actively participating in efforts to mitigate global crises such as humanitarian or climate-related disasters, and working with other countries on trade, development, security, and environmental measures in order to encourage cooperation. This involves policymaking that will push Canada in the direction of meeting our international commitments while recognizing Canadian limitations and realities. As John Holmes once said, Canada "[has] the geography of a superpower, the gross national product of a middle power, and the population of a small power."¹³ Through the liberal global governance system, Canada can actively contribute to protecting human dignity, combating disasters, and maintaining security while simultaneously promoting its own interests and priorities.

¹² National Intelligence Council, *Global Trends 2030: Alternative Worlds* (Washington: National Intelligence Council, 2012), vii.

¹³ Adam Chapnick, 'Taking Sides: The Myth of Canadian Neutrality in World Affairs,' *Canadian Military Journal* 8(2) (Summer 2007), 70.

RATIONALE AND GOALS

ASSUMPTIONS

There are a number of underlying assumptions that have helped to define the focus of this report. These assumptions have been derived from the collective research assembled, drawing on several common trends agreed upon by academics and practitioners. They are as follows:

- The United States will remain a powerful actor in both North America and abroad, despite its relative decline to the “rise of the rest” – namely southern-developing nations and the BRICS;
- Canada is a self-interested international actor, but neither can nor should be solely a hard power;
- Canada should actively participate in global affairs, with special focus on niche fields where the value of Canada’s limited resources can be leveraged effectively;
- There is a global ‘digital revolution’ underway, for which Canada remains under-prepared;
- Global population growth and mobility will continue to place pressure on international state borders, which will inevitably impact the flow of humans, goods, and services

Economic and Environmental Policy

RATIONALE

Environmental and economic interests are often depicted as oppositional, so that economic growth is associated with environmental harm, and environmental improvement with economic cost.¹⁴ By adopting a sustainable development approach in which economic and environmental policy are combined, this report seeks to challenge the perceived incompatibility between economic growth and environmental protection, and better integrate Canadian environmental and economic priorities. Sustainable development refers to an integration of environmental and economic decision-making in which emphasis is given to assuring the long-term prosperity of current and future generations.¹⁵ Rather than adopting environmental policy in reaction to economic decision-making, it is essential to integrate environmental considerations from the outset to better incorporate the external environmental and social costs of policies. However, environmental considerations do not necessarily have a negative impact on economic policy. As global demand for natural resources and renewable energy expands, developing clean technologies will be key for maintaining a competitive Canadian economy. By incentivizing the development of clean technologies, environmental damages can be reduced. The Canadian economy can also benefit from improved production efficiency and capacity, diversified export products and expertise, and the potential to be part of the international carbon emissions trade regime.

The impacts of climate change will have increasingly negative and severe consequences for both the Canadian economy and environment in future years if adaptation is not actively implemented. The Bank of Canada estimates that by 2050, Canada may face annual costs between \$21 billion and \$43 billion as a direct result of climate change.¹⁶ Mitigating the effects of climate change requires immediate, pervasive action and each day that passes without such action makes a difficult problem even more challenging. For example, coastal regions are particularly vulnerable to rising sea levels caused by climate change. This is a direct concern for Canada, especially considering that it is a maritime nation with eight of its ten provinces

¹⁴ Stewart Elgie, "Brown Meets Green: How Can Canada's Resource-Intensive Economy Prosper in a Low-Carbon World?" in *The World Won't Wait: Why Canada Needs to Rethink Its International Policies*, ed. Roland Paris and Taylor Owen (Toronto: University of Toronto Press, 2016), 88.

¹⁵ James Meadowcroft and Glen Toner, "Engaging with Sustainable Development: Setting the Canadian Experience in Context," in *Innovation, Science, Environment: Charting Sustainable Development in Canada, 1987-2007*, ed. Glen Toner and James Meadowcroft (Montreal: McGill-Queen's University Press, 2009), 11.

¹⁶ Timothy Lane, "Thermometer Rising - Climate change and Canada's Economic Future," *Bank of Canada*, 2017. <http://www.bankofcanada.ca/2017/03/thermometer-rising-climate-change-canada-economic-future/>.

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and all three territories bordering ocean waters.¹⁷ Over the period of 1948-2013 the average Canadian annual temperature rose by 1.6°C, a higher rate of warming than in most other regions of the world, with most effects being seen in the north.¹⁸ The decrease in the surface area of ice will have impacts on trade, natural resource extraction, and local communities. While some of these effects may be positive, such as access to transport routes in the Arctic and natural resources, it also will cause flooding in communities and threaten the way in which Indigenous peoples hunt and live.

It is not only the Arctic region which is at risk from the effects of climate change. There will be significant economic impacts on the tourism, trade, manufacturing, insurance and industry sectors. For example, the changes in Canadian forests from climate change have effects on construction, manufacturing, insurance, and trade. The projected impact from an increase in the global temperature is a 75 to 140 percent rise in the number of wildfires by the end of the 21st century.¹⁹ Furthermore, the quality and quantity of timber supply will be affected by the combined impacts of climate change, with substantial financial impacts on the forest industry.²⁰ Economic consequences will also extend beyond impacts on timber supply as climate change will also affect industries that rely on timber, such as construction and manufacturing.²¹ The recent fires in Alberta cost about 1 percent of Canada's GDP in the second quarter of 2016, and there may be only a decade or two before increased fire activity exceeds the capacity of fire management agencies to maintain current levels of effectiveness.²²

The Stern Review argues that action to reduce the impacts of GHG emissions would cost only 2 percent of GDP, but it warns that the costs of delaying action will result in significantly higher economic costs which could be up to 20 percent of GDP.²³ The macroeconomic costs from climate change impacts on selected markets amount to 1 to 3.3 percent of annual GDP by 2060 and 2 to 10 percent by the end of the century if adaptation measures are not undertaken. This is caused by a continued build-up of greenhouse

¹⁷ Government of Canada, "Impacts of Climate Change," <http://www.climatechange.gc.ca/default.asp?lang=En&n=036D9756-1>, last modified November 27, 2015.

¹⁸ Ibid.

¹⁹ Donald S. Lemmen, Mark Johnston, Catherine Ste-Marie et al, "Natural Resources," in *Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation*, ed. by F.J. Warren and D.S. Lemmen, (Ottawa: Government of Canada, 2014), 71.

²⁰ Lemmen, Johnston, Ste. Marie, et. al. "Natural Resources," 73.

²¹ Ibid, 73.

²² Mike De Souza, "Here's what the science really says about Fort McMurray and climate change," *National Observer*, June 3, 2016, <http://www.nationalobserver.com/2016/06/03/analysis/heres-what-science-really-says-about-fort-mcmurray-and-climate-change>.; Timothy Lane, "Thermometer Rising - Climate change and Canada's Economic Future," *Bank of Canada*, 2017. <http://www.bankofcanada.ca/2017/03/thermometer-rising-climate-change-canada-economic-future/>.

²³ Nicholas Stern, *The Economics of Climate Change: The Stern Review* (Cambridge, UK: Cambridge University Press, 2007), vi.

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gas concentrations which are projected to increase global average temperature to 3.6°C by 2100, far above the intended cap of temperature increase of 2°C.²⁴ Canada may benefit from an increase in tourism because of higher temperatures, however the government will still lose money from severe weather, degradation of forests, and impacts on water.

The consequences of climate change prove the necessity of cutting down GHG emissions in order to achieve more sustainable development.²⁵ By ratifying the Paris agreement in 2016, the Liberal government of Canada has made the international pledge to reduce Canada's annual GHG emissions by 3 percent below the 2005 levels, or to an annual emissions target of 523 megatons of carbon dioxide equivalent by 2030.²⁶ Given Canada's traditional commitment to solving international issues through multilateral cooperation, Canada should orient its current policies and regulations toward this commitment, and adopt innovative and cooperative approaches with major emitter countries.

Profitability, competitiveness, and job sustainability do not have to suffer at the expense of environmental policies.²⁷ Canada is well positioned to capitalize on opportunities in the clean energy industry, with vast landmass available for solar and wind development, and long coastlines that support these energy sources.²⁸ In terms of economic priorities with an environmental focus, this report will focus on areas such as green energy development, improving sustainable mining technology and practices, developing Canada's digital economy, and supporting increased cooperation between business and government in order to accomplish mutually beneficial goals.

With its resource-based economy, Canada must realize that new demands give rise to new industrial opportunities. International GHG reductions have created new markets and economic opportunities such as clean and renewable energy technology, industry digitalization, and the emissions trade systems. The regional and international carbon trade regimes have facilitated both market-driven emission reductions and inter-governmental communications and exchanges. Revenues generated by those

²⁴ "The Emissions Gap Report 2016," UNEP, xviii., and OECD, "The Economic Consequences of Climate Change – Policy Highlights," (2015): 5.

²⁵ IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp. SPM 2.

²⁶ Government of Canada, Environment and Climate Change Canada, "Environment and Climate Change Canada - Environmental Indicators - Progress Towards Canada's Greenhouse Gas Emissions Reduction Target," February 09, 2017, <https://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=CCED3397-1>.

²⁷ David J. Blair (2016) "The Framing of International Competitiveness in Canada's Climate Change Policy: Trade-Off or Synergy?" 12.

²⁸ The Canadian Trade Commissioner Service, "Renewable Energy," accessed Mar. 1, 2017, <http://www.international.gc.ca/investors-investisseurs/sector-secteurs/energy-energie.aspx?lang=eng>.

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innovative approaches can in turn be reinvested in environment protection initiatives and green technologies, subsidize low-income communities, and assist in transitioning to a low-carbon economy.²⁹

By focusing on economic policy priorities that have a clear and obvious environmental component as well as unique methods through which these priorities can be realized to their fullest extent, this report will address the immediate challenges presented by environmental concerns without sacrificing economic stability and competitiveness.

ACCEPTING THE CHALLENGE OF TRANSITIONING TO A LOW-CARBON ECONOMY

Achieving drastic global reductions of greenhouse gas emissions is becoming a more urgent concern for Canada as the wide range of environmental, economic, and human costs of climate change continue to intensify. Additionally, the timeframe available to effectively limit climate change continues to diminish. Climate change poses many direct and indirect threats to Canada, ranging from rising sea levels, increasingly extreme weather events, and widespread droughts and desertification across the world.³⁰ However, the international transition of major economic actors and emitters from fossil fuel- to clean and renewable energy-based production and consumption is signaling the growing global demand for low-carbon products and technology. Any further delay by the Canadian government regarding low-carbon technological development will both delay and increase the costs of future carbon reduction efforts, and weaken the competitiveness of Canada in a low-carbon global economy.

Although the recent ratification of the Paris Climate Agreement has increased optimism for international progress, studies show that existing national contributions remain inadequate to prevent warming of even 3°C.³¹ Therefore, the most pressing challenge facing Canada, as well as the world, will be to develop policies and partnerships as rapidly as possible that can effectively bridge this gap between current commitments and the reductions needed to limit warming to 2°C above preindustrial levels. In order to accomplish this challenging task, Canada must restore its damaged international credibility caused by their withdrawal from the Kyoto Protocol by investing significant resources towards meeting its current nationally determined contribution (NDC) for the Paris Agreement. In the long term, Canada should lead by example by promoting overachievement in the Paris Agreement by routinely increasing Canadian NDC

²⁹ Eden, Alexander, Unger, Acworth, Wilkening, and Haug. "Benefits of Emissions Trading." International Carbon Action Partnership, July 2016, https://icapcarbonaction.com/en/?option=com_attach&task=download&id=389

³⁰ Sebastian Oberthür, "Reflections on Global Climate Politics Post Paris: Power, Interests and Polycentricity," *The International Spectator* 51, no. 4 (2016): 86.

³¹ Richard Kinley, "Climate Change after Paris: From Turning Point to Transformation," *Climate Policy* 17, no. 1 (2016): 13.

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pledges. It will be even more essential for Canada to work with like-minded partners to increase international emission reductions through confidence-building mechanisms as well as increasing contributions to the Green Climate Fund. Immediate action and initiative by Canada will be essential in order to help prevent extreme climate change and its associated costs.

After the widely regarded failure of the 2009 climate negotiations in Copenhagen, the successful adoption and ratification of the Paris Agreement was widely praised by commentators for bringing together seemingly incompatible interests to create a balanced and relatively ambitious agreement.³² However, it remains to be seen whether the untested bottom-up approach of NDCs can effectively achieve the accepted international aim of limiting global warming to 2°C. Recent estimates warn that current NDCs may only limit global warming to 3°C, suggesting that significantly more ambitious national targets are necessary.³³ Although the Paris Agreement requires members to update their NDCs with increasingly ambitious targets every five years, the targets are not legally binding and lack any enforcement measures.³⁴ As a result, the success of this nationally determined model rests largely on the willingness of states to honor their commitments, adopt sufficiently ambitious targets, and build confidence amongst one another.

An additional challenge to the Paris Agreement is its vulnerability to the non-compliance or withdrawal of major emitters.³⁵ For example, the skeptical view towards climate change of the new Trump administration threatens to undermine U.S. pledged emission reductions as well as the Paris Agreement more broadly. The current administration has pledged to undo a great deal of environmental legislation and is proposing deep budget cuts to the Environmental Protection Agency and climate change research, undermining the United States' ability to achieve its current NDC pledge to reduce carbon emissions by 26 percent from 2005 levels by 2025.³⁶ Therefore, even if member states do not formally withdraw from the agreement, confidence in the NDC framework still risks being seriously undermined if numerous governments fail to implement their pledges.³⁷

³² Radoslav S. Dimitrov, "The Paris Agreement on Climate Change: Behind Closed Doors," *Global Environmental Politics* 16, no. 3 (2016): 1.

³³ Guri Bang, Jon Hovi, and Tora Skodvin, "The Paris Agreement: Short-Term and Long-Term Effectiveness," *Politics and Governance* 4, no. 3 (2016): 211.

³⁴ Trevor McLeod, and Shafak Sajid, *Look Out: Toward a Climate Strategy that Reduces Global Emissions*, (Ottawa: Canada West Foundation, Centre for Natural Resources Policy, 2016), 5.

³⁵ Luke Kemp, "US-Proofing the Paris Climate Agreement," *Climate Policy* 17, no. 1 (2016): 86.

³⁶ Coral Davenport, "Top Trump Advisers Are Split on Paris Agreement on Climate Change," *The New York Times*, March 2, 2017.

³⁷ Robert Falkner, "The Paris Agreement and the New Logic of International Climate Politics," *International Affairs* 92 (2016): 1121.

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Current Canadian efforts to reduce domestic carbon emissions must increase substantially in order for Canada to meet its current pledge of reducing emissions to 30 percent below 2005 levels by 2030.³⁸ According to the UN Emissions Gap Report and the independent Climate Action Tracker, current Canadian policies are projected to be insufficient for achieving their 2030 emission targets without the substantial purchasing of international credits.³⁹ Additionally, even if the current Canadian pledged emission reductions were achieved, the current Canadian NDC has been regarded as an insufficient contribution for achieving the 2°C limit proposed by the Paris Agreement.⁴⁰ Although Canada is not a leading contributor to carbon emissions in absolute terms, it is among the highest in per capita terms, releasing approximately sixteen tons per person in 2014.⁴¹ In order for Canada to effectively contribute to reducing climate change, and to regain international confidence in Canadian emission reduction commitments Canada must intensify efforts to meet its current NDC pledge in the short term, and adopt a more ambitious pledge soon after.

For Canada to help achieve the international goal of limiting global warming to between 1.5°C and 2°C, the government can no longer afford to delay action. Numerous scientific studies, including the 2016 Emissions Gap Report, warn that without significant emission reductions within the next five to fifteen years, achieving the 2°C limit will be nearly impossible without intensive use of unproven carbon dioxide removal technologies.⁴² If the government continues to delay action, society will quickly be left with fewer and increasingly expensive options to prevent severe global warming.⁴³

STRATEGY TO REDUCE DOMESTIC CARBON EMISSIONS

In order to effectively contribute towards mitigating climate change, and to help build confidence in the NDC model of the Paris Agreement, Canadian emission reductions and targets must be increased significantly. By implementing the recommended policies in this report such as increasing investment in green energy, green mining technologies, and the sustainable development of the Arctic, Canada can uphold its current emission targets and avoid repeating its previous failures over the past decades. In order to

³⁸ Climate Action Tracker, *Canada Assessment*, November 2, 2016.

³⁹ United Nations Environment Programme, *The Emissions Gap Report 2016*, xiv; Climate Action Tracker, *Canada Assessment*.

⁴⁰ Climate Action Tracker, *Canada Assessment*.

⁴¹ Axel Franzen, and Sebastian Mader, "Predictors of National CO2 Emissions: Do International Commitments Matter?" *Climate Change* 139 (2016): 493.

⁴² United Nations Environment Programme, *The Emissions Gap Report 2016: A UNEP Synthesis Report*, (UNEP, 2016), 16.

⁴³ Lorenza Campagnolo et al., "Can Climate Policy Enhance Sustainability?" *Climate Change* 137 (2016): 640.

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overcome complications caused by differing jurisdictions, it will be vital for the federal government to align policies with provincial and municipal actors to maximize emission reduction efforts.⁴⁴ Following the short term goal of meeting current Canadian pledges, the government should then update their NDC to establish a more ambitious 2030 emission reduction goal. By doing so, Canada may help reinforce confidence in the Paris Agreement by both meeting initial pledges early, and strengthening future pledges over time.⁴⁵ Through leading by example, Canada can strengthen its international reputation as a supporter of climate change mitigation, contribute towards achieving the goal of a 2°C limit, and reinforce confidence in the successful implementation of the Paris Agreement.

Currently, the Canadian government has adopted both a control-and-regulate and a market-based approach in its effort to reduce carbon emissions.⁴⁶ Firstly, the regulatory approach seeks to achieve emission reductions primarily in emission-intensive industries, and applies carbon taxes on emitting industries. Secondly, the cap-and-trade market system involves trading emission allowances among industries, enabling them to carry out emissions reduction plans at their own pace. The standards and regulations are tailored to fit the circumstances of each sector, provide incentives to reduce emissions, and balance the reduction costs and sectorial interests.

As the largest emitting sector in Canada, the transportation sector currently faces stringent emissions standards for new cars and light trucks since the 2011 model years.⁴⁷ The government has also devised regulations for new on-road and heavy-duty vehicles for the 2014-2018 model years.⁴⁸ In the aviation, rail and marine transportation sectors, both domestic and international policies have been put in place to regulate emissions. Since 2001, the Canadian Shipping Act regulates marine emissions.⁴⁹ Canada's "Action Plan to Reduce Greenhouse Gas Emissions" is also part of an international effort to improve the regulation of emissions within the aviation industry.⁵⁰

⁴⁴ Sarah Burch, *Global Treaty or Subnational Innovation?: Canada's Path Forward on Climate Policy*, (Waterloo: Centre for International Governance Innovation, 2015), 1-2.

⁴⁵ Niklas Höhne et al., "The Paris Agreement: Resolving the Inconsistency Between Global Goals and National Contributions," *Climate Policy* 17, no. 1 (2016): 24.

⁴⁶ Joseph Aldy and Robert Stavins, "The Promise and Problems of Pricing Carbon: Theory and Experience," *Journal of Environment & Development* 21, no. 2 (2012): 153, doi:10.3386/w17569.

⁴⁷ Government of Canada, Environment and Climate Change Canada, "Progress Towards Canada's Greenhouse Gas Emissions Reduction Target."

⁴⁸ Ibid.

⁴⁹ Government of Canada, Environment and Climate Change Canada, "Progress Towards Canada's Greenhouse Gas Emissions Reduction Target."

⁵⁰ Ibid.

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In the energy sector, the government has set performance standards for traditional energy industries. New regulations are made for existing and new electricity generation facilities that operate using fossil fuel combustion. The government intends to use these standards to reduce GHG emissions and incentivize companies to invest in low- or non-carbon technologies. Regarding the gas and fuel industries, the Renewable Fuels Regulations set standards for 5 percent renewable content in gasoline (2010) and 2 percent renewable content in diesel and heating oil (2011).⁵¹ The government has also been encouraging increased production of clean electricity, the substitution of fossil fuels with alternative cleaner fuels, and improvement of end-use energy efficiencies.⁵² As of November 2011, the National Energy Code for Buildings set standards for the design and construction of new energy-efficient buildings. New carbon capture and storage projects are being constructed across Canada. SaskPower's Boundary Dam in Saskatchewan and Shell's Quest project in Alberta are the two major projects in Canada, with two other projects under construction in British Columbia and Alberta.⁵³ The combined capacity for the four projects is estimated to be up to 6.4 million tons per annum (mtpa), or an equivalent of 3 percent of the 2030 reduction target.⁵⁴

Canada has also been implementing a carbon-pricing framework. Provinces control and reduce carbon emissions either by putting a tax on emissions per ton or by auctioning carbon emissions allowances to emission-intensive industries. Regional cooperation between U.S. states and Canadian provinces has often outpaced national action, and have facilitated the linking of the regional carbon emissions trading systems (ETS).⁵⁵ The province of Alberta implemented an emissions trading program in 2007 primarily due to the challenges posed by the oil sands extraction industry in the region.⁵⁶ British Columbia followed suit in 2008, implementing a carbon tax of \$10 per ton of CO₂ emission.⁵⁷ Ontario and Quebec have joined the Western Climate Initiative (WCI) to participate in the cap-and-trade system across the U.S. and Canada.⁵⁸ In 2016, the Canadian government established a pan-Canadian framework for carbon pricing. Internationally, Canada has been collaborating with the U.S. in establishing several North American carbon-trading regimes, including the Regional GHG Initiative (RGGI), the WCI, and the Midwestern Regional GHG Reduction Accord

⁵¹ Ibid.

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Natural Resources Canada, *Carbon Capture and Storage: Canada's Technology Demonstration Leadership*.

⁵⁵ Erik Haites and Michael Mehling, "Linking existing and proposed GHG emissions trading schemes in North America," *Climate Policy* 9, no. 4 (2009): 374, doi:10.3763/cpol.2009.0622.

⁵⁶ Ibid, 375

⁵⁷ Haites and Mehling, "Linking existing and proposed GHG emissions trading schemes in North America," 377.

⁵⁸ Ibid, 377.

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(MGGGA), where states and provinces are either participating or observing.⁵⁹ These international carbon emissions trading regimes aim at developing a cap-and-trade system for carbon emissions allowances that covers major emitter sectors in the participating jurisdictions. Mexico has also expressed a willingness to join the North American emissions trading systems, and plans to implement a limited cap-and-trade system domestically to prepare for potential future integration.⁶⁰ Establishing a domestic framework can potentially pave the way for smoother international integration, and Canada's carbon-pricing framework would allow for easier linking of domestic and international markets.

However, statistics suggest current control-and-regulate and cap-and-trade systems are not sufficient for Canada to achieve its short-term goal of meeting the 2030 reduction target or long-term goal of sustainable development⁶¹. The tension between environmental sustainability and economic development lies in Canada's high-carbon domestic economy.

Devising an effective plan for low-carbon transition is necessary to accommodate the needs for climate change mitigation and economic sustainability. In planning for the transition to a low-carbon domestic economy, it is necessary to maintain an international vision because the Canadian economy is export-oriented. A sustainable domestic economy can increase Canada's competitiveness in the international green technology and carbon emissions trading markets, as well as in any other markets where low-carbon products are expected. Successful domestic practices can also facilitate international communications through the international transactions of green products and technology, and the exchange of information and practices.

Given the upward trends for energy consumption in all economic sectors as past statistics show, sustained economic growth depends upon sufficient energy supplies.⁶² The tension between the need for long-term development and growing energy demand can be resolved by substituting fossil energy with electricity, which can be generated and consumed without carbon emissions. The transition to an electricity-based economy is the first step for Canada toward industrial de-carbonization. The next step is to improve efficiency of the production, transportation, and use of energy through digitalization and adoption of renewable energy technology. Eventually, environment-friendly domestic policies would foster the growth

⁵⁹ Ibid, 376.

⁶⁰ Ibid, 374.

⁶¹ Government of Canada, "Progress Towards Canada's Greenhouse Gas Emissions Reduction Target."

⁶² Government of Canada, Environment and Climate Change Canada, "Environment and Climate Change Canada - Environmental Indicators - Greenhouse Gas Emissions by Economic Sector," April 14, 2016, accessed March 15, 2017, <https://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=F60DB708-1>.

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of digital information and green technology sectors, which could result in diversified export products, including low-carbon manufactured goods, clean energy, renewable energy expertise and other low-carbon intellectual capitals. A low-carbon economy can fully embrace the international demand for green products and expertise, and Canada should capitalize its potential to be a global supplier of clean and renewable goods.

Canada is a vast country with abundant potential for electricity generation, and the transition to low- or non-carbon emission energy sources should be a viable option with the advancement of green and digital technology. Ontario and Quebec are the two leading provinces in utilizing hydro- and nuclear power to generate electricity⁶³. Hydropower plants, mostly concentrated in these two provinces, are capable of generating approximately 60 percent of Canada's total electricity.⁶⁴ Hydropower production capacity is projected to be beyond 500 TWh in the year 2020, which will account for 90 percent of energy generated for industrial and everyday use.⁶⁵ Wind and solar energy can be used to generate electricity for the prairie provinces where hydropower is not available.⁶⁶ Geothermal resources in western and northern Canada and large uranium reserves in Saskatchewan have been discovered. Coastal provinces can benefit from the strong wave and tidal power, and the relatively isolated geographic connections of the Atlantic provinces provide a suitable environment for testing off-grid energy technology and practices⁶⁷. Although climate change may pose threats to those energy sources due to drop in precipitation and changes in temperature, hydro cycle, and wind speed, strategic planning and distribution of electricity fostered by efficient production, transportation and end-use mechanisms should guarantee stable electricity generation to substitute most energy generation from fossil combustion.⁶⁸

Improved energy efficiency should be another priority of the domestic carbon reduction effort. In the energy sector, new and advanced information technology should be employed to increase efficient extraction and refinement at the production stage, reduce leakages during transportation, and ensure appropriate end-use. Digitalizing industrial plants allows companies to keep track of their energy consumption and production to avoid unnecessary or excessive use of energy. Dispatchable power capacity

⁶³ National Round Table on the Environment and the Economy and Canadian Electronic Library, *Framing the future: embracing the low-carbon economy* (Ottawa: National Round Table on the Environment and the Economy, 2012), 27.

⁶⁴ Larry Hughes and Nikhil Chaudhry, "The challenge of meeting Canada's greenhouse gas reduction targets," *Energy Policy* 39, no. 3 (2011): 1352, doi:10.1016/j.enpol.2010.12.007.

⁶⁵ Hughes and Chaudhry, "The challenge of meeting Canada's greenhouse gas reduction targets," 1353

⁶⁶ National Round Table on the Environment, "*Framing the future: embracing the low-carbon economy*," 27

⁶⁷ National Round Table on the Environment, "*Framing the future: embracing the low-carbon economy*," 27

⁶⁸ Hughes and Chaudhry, "The challenge of meeting Canada's greenhouse gas reduction targets," 1354-1355

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is one area of technological development that addresses the need to store, adjust the production of, and transport energy with ease⁶⁹. The clean and renewable energy production will require the dispatchable generation technology to be updated accordingly given their intermittent supply, so that electricity can be shared across the country with efficiency. To improve efficiency in the extractive industries where resources are both consumed and produced, a number of technologies have also been proposed to recover or reuse wasted energy. Once fully developed, the carbon capture and sequestration (CCS) technology is promising and is capable of capturing and converting emitted carbon into electricity.⁷⁰ Although at its current stage of development, it requires more energy from coal combustion to run the facilities than they can generate, the conversion efficiency of the CCS plants is expected to outpace its consumption.⁷¹ Other similar practices aiming at reducing industrial emissions include the capture of carbon for the purpose of generating biomass fuel. Oil sands cogeneration is another technology proposed to solve the issue of excessive carbon emission and air pollution due to oil sands extraction and refinement.⁷² The waste heat recovery technology can store thermal energy released from truck's engines for power generation, which can consequently be used to power the driver's compartment without additional fuel consumption. Benefits of developing the ICT and renewable technologies will spill over to the traditional economic sectors, and can be exported as intellectual products.

Recognizing the growing global demand for low-carbon energy, products, and services permits the Canadian domestic market to capitalize on its advantages of abundant natural resources and educated workforce through diversifying trade. Canada needs to have a strong technological basis to gain a foothold in the highly competitive yet lucrative international low-carbon market where the U.S., the EU, and China have established themselves. The low carbon goods and services (LCGS) market has continued to grow despite the recent economic recession as many developed countries have invested in this relatively new field in an attempt to replace some traditional industries⁷³. Technological innovations would enable Canada to export cleaner and renewable resources and high-tech products necessary for constructing clean and efficient energy plants to other countries. Canada would be able to prevent its current international market share for green technology export from further losses,⁷⁴ and become less vulnerable to changing resource demands of the U.S. Establishing a carbon-pricing framework across Canada increases the likelihood of a unified North

⁶⁹ National Round Table on the Environment, "*Framing the future: embracing the low-carbon economy*", 45

⁷⁰ Hughes and Chaudhry, "The challenge of meeting Canada's greenhouse gas reduction targets," 1356

⁷¹ Ibid, 1357

⁷² A. Ouellette et al., "Achieving emissions reduction through oil sands cogeneration in Alberta's deregulated electricity market," *Energy Policy* 71 (2014): 20, doi:10.1016/j.enpol.2014.04.020.

⁷³ National Round Table on the Environment, "*Framing the future: embracing the low-carbon economy*," 38.

⁷⁴ 2016 Canadian Clean Technology Industry Report, publication no. AA-2016, Analytical advisors.

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American carbon ETS. However, there could be potential disputes over the setting of the price and safety valves, market regulations, and calculations and verifications.⁷⁵ Stephan Schott suggests that Canada set up its own carbon emission registry to calculate and verify historical and current total emissions to better set up the total cap, number of permits and price, and form a directorate to set up reduction targets.⁷⁶ Once the integration of North American carbon ETS becomes successful, it can then be linked to the EU ETS and other ETS in Asia and Latin America.

Canada's domestic strategy for mitigating climate change must also embrace opportunities to improve coordination and cooperation with non-state actors. Over the past several years, the role of non-state actors in international climate change negotiations have become more substantive, but there remains significant opportunity for developing this relationship further.⁷⁷ Business organizations and private actors offer insight into low-carbon technologies and strategies for a variety of economic activities, and increasing collaboration between state and non-state actors has already shown signs of success through "technical expert meetings" hosted through United Nations Climate Change Conferences.⁷⁸ Specifically, by improving coordination between the private sector and the government, shared knowledge could produce new solutions and strategies to further assist Canadian emission reduction efforts. In order to improve the ability for non-state actors to contribute to Canadian climate efforts, a system should be developed to systematically standardize methods to track and verify progress by non-state actors towards targets.⁷⁹ By improving coordination with Canadian non-state actors, Canadian climate policy will be able to maximize opportunity for new contributions and initiatives to achieve Canadian NDCs.

ADDRESSING THE ECONOMIC AND ENVIRONMENTAL TENSIONS OF CANADA'S OIL SANDS

For Canadian international environmental and sustainable development efforts, the oil sands remain a contradiction which few policymakers have been willing to address. How can a country with a large per capita carbon footprint – accounting for 2 percent of global CO₂ emissions, despite only having 0.5 percent of the world's population – possibly achieve its Paris Agreement pledges, let alone undertake

⁷⁵ Stephan Schott, "Carbon Pricing Options for Canada," S117-S119.

⁷⁶ Ibid, S120-S121

⁷⁷ United Nations Environment Programme, *The Emissions Gap Report 2016*, 23.

⁷⁸ Sander Chan, Clara Brandi, and Steffen Bauer, "Aligning Transnational Climate Action with International Climate Governance: The Road from Paris," *Review of European Community & International Environmental Law* 25, no. 2 (2016): 242.

⁷⁹ Höhne et al., "The Paris Agreement: Resolving Inconsistency," 26.

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leadership roles in international environmental efforts and in the procurement of green technology?⁸⁰ How can Canada reduce its emissions to 30 percent below 2005 levels by 2030 while simultaneously continuing the heavily carbon-dependent extraction and refining of bitumen, on which significant Canadian GDP depends?⁸¹ Such a solution will require not only significant resources, but also the coordination of government, private, and non-government efforts which, as this report demonstrates below, has already been effectively showcased in other areas of the world. With a close structural organization, funding can be more effectively funneled into Greenhouse Gas (GHG) reduction efforts on the oil patch using technologies that have been proven to work, allowing Canada to position itself as the world's greenest producer of resource products.

Oil sands production has been predicted to double or even triple over the next twenty years.⁸² During this period, the oil sands are expected to contribute \$1.7 trillion to the Canadian economy and 11 million people years of employment.⁸³ Naturally, greenhouse gas (GHG) emissions and environmental degradation will grow at similar rates if not managed, with devastating costs to both the short and long-term environment. Canada's international reputation will also continue to be damaged. With natural resource management being provincial jurisdiction, the Government of Alberta has promised to offer incentives for renewable generation, to implement an economy-wide carbon price, and legislate a cap on oil sands emissions in efforts to reduce GHG emissions and incentivize green technology.⁸⁴ In addition, the Canadian Government has committed \$300 million annually to support research and technological innovation in the oil sands.⁸⁵ Most of the provincial and federal funding available for innovation and environmental initiatives requires a strict adherence to knowledge-sharing and academic research commitments, which can often serve as a disincentive to private oil patch operations.⁸⁶ GHG emissions are not the only unsustainable practice being targeted. Tailing ponds and water usage in the extraction process are strictly controlled by provincial regulation, and the gross land disturbances caused by the ore extraction

⁸⁰ Canada's Oil Sands, "GHG Emissions," 07 March, 2017. <http://www.canadasoilsands.ca/en/explore-topics/ghg-emissions>.

⁸¹ Climate Action Tracker, *Canada Assessment*, November 2, 2016.

⁸² Robert J. Johnston, "Energy Policy Update: Canada's Oil and Gas Potential at a Cross-Roads," *Canada 2020* (October 2, 2014). <http://canada2020.ca/energy-policy-update-canadas-oil-gas-potential-cross-roads/>.

⁸³ Bruce Carson, "Sustainable solutions in the oil sands," *Policy Options* (February 1, 2011). <http://policyoptions.irpp.org/magazines/from-climate-change-to-clean-energy/sustainable-solutions-in-the-oil-sands/>.

⁸⁴ Government of Canada, "Crude oil: 7 facts on the oil sands and the environment," modified July 7, 2016. <http://www.nrcan.gc.ca/energy/oil-sands/18091>.

⁸⁵ Ibid.

⁸⁶ Canada's Oil Sands Innovation Alliance, "Carbon Capture and Storage," accessed 11 March, 2017. http://www.cosia.ca/initiatives/greenhouse_gases/carbon-capture-and-storage.

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require all producers to reclaim any land disturbed by development.⁸⁷ There is a clear recognition in current policy that, in order for the oil sands to continue providing the supply for the steady American demand and the increasing East Asian demand, environmentally-friendly production improvements are required – especially as demands for unconventional sources of oil, like the bitumen of the oil sands, are set to increase.⁸⁸

The policy recommendations to follow reflect and respond to the deficiencies in the current oil sands practices. The current focus places primary emphases on short-term environmental issues in the oil sands – namely, land reclamation, tailing ponds and energy inefficiencies. With these issues absorbing most government and private sector funding for environmental innovation and sustainable development, there will be little impact made on improving Canada's GHG emissions, which the federal government has already pledged to reduce by 30 percent below 2005 levels.

The unavoidable fact for Canada is that the oil sands are too valuable a resource to either ignore or eliminate in the name of environmental sustainability. Both short- and long-term goals for achieving a low-carbon future for Canada require a harmonious compromise to be reached between economic and environmental concerns. The reason is simple: Total Albertan Crude Oil production in 2016 was 169,099,024.1 m³, of which 140,474,341.6 m³ was from the oil sands while 28,624,682.5 m³ was conventional.⁸⁹ The value of the crude extract from the oil sands alone in 2016 exceeded \$3,500,000,000 and, in the process, provided the greatest sectoral employment to First Nations' of any other sector.⁹⁰ With so much at stake for both Canadians and foreign investors, the key to sustainability will be to

⁸⁷ Carson, "Sustainable Solutions."

⁸⁸ Ibid.

⁸⁹ Alberta Energy Regulator, "Supply and Disposition of Crude Oil and Equivalent," 27 February, 2017. <http://www.aer.ca/data-and-publications/statistical-reports/st3>.

⁹⁰ Alberta Energy Regulator, "ST-3: Alberta Energy Resources Industries Monthly Statistics: Table-OilPrices-2016," Accessed 08 March, 2017. http://www.aer.ca/documents/sts/st3/prices_oil_current.pdf; Oil Sands Magazine, "Alberta Oil Production: Supply Data," 01 March 2017.

<http://www.oilsandsmagazine.com/energy-statistics/alberta-crude-oil-production>; Andrea Mandel-Campbell, "Make Canada the World Leader in Mining Innovation," *The World Won't Wait*, edited by Roland Paris and Taylor Owen (Toronto: University of Toronto Press, 2016): 52.

CARBON CAPTURE AND STORAGE

The International Energy Agency has called CCS, "the only technology available to mitigate GHG emissions from large-scale fossil fuel usage." CCS projects capture CO₂ emissions from large industrial sources, like bitumen refineries, and stores them safely deep underground.⁹³

There are currently 22 CCS projects globally, with a total capture capacity of 40 million tons per year. The Quest Facility, located on the Athabasca Oil Sands Project (AOSP), is the first commercial-scale CCS project on an oil sands operation in the world.⁹⁴

Following its first year of operation in 2016, the Quest facility captured and stored one million tons of CO₂ both ahead of schedule and under budget.

Shell, which built the Quest facility, has begun sharing the technology with other industries

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find a way to reinvest a fraction of these proceeds back into the Albertan resource sector each year to support organized and efficient initiatives aimed at carbon emission reductions. The main initiative already underway is Canada's Oil Sands Innovation Alliance (COSIA), which is a collective of twelve companies representing almost 90 percent of oil sands producers.⁹¹ This percentage will only continue to grow in the wake of both large scale selloffs, such as the recent sale of Royal Dutch Shell and Marathon Oil's combined 80 percent share of the Athabasca Oil Sands Project to COSIA-member Canadian Natural Resources Ltd., as well as government-organized initiatives incentivizing GHG emissions reduction.⁹² Combined with federal and provincial government programs, COSIA has both the unity and the mission required to drive oil sands production to a low-carbon future, bearing in-mind the inherent limitations of ever achieving an entirely green- method of bitumen extraction. The challenge facing this future, however, is not its inherently- 'dirty' nature; it is its inherent uncertainty. Rather than spend the money to stay in the oil patch and innovate to reduce carbon emissions in the face of low commodity prices, producers would rather go elsewhere, where mining has quicker returns and is less carbon-intensive.⁹⁵ Canada must become the world's most environmentally responsible and innovative oil producer, beginning with the oil sands.⁹⁶

COSIA's mandate focuses on four Environmental Priority Areas (EPAs): Greenhouse Gases, Land, Water, and Tailings.⁹⁷ While all four are undoubtedly important for short-term environmental sustainability, GHG emission reduction efforts occupy the primary EPA for achieving a low-carbon future due to their direct relationship with bitumen extraction and carbon emissions. Indeed, Andrew Leach reflected on the fine line between manufacturing and mining in the oil sands, where the extraction of bitumen from the oil

⁹¹ Canada's Oil Sands Innovation Alliance, "About COSIA," Accessed 10 March, 2017.

⁹² The Canadian Press, "Royal Dutch Shell signs deals to sell oil sands assets," *CBC*, 09 March, 2017. <http://www.cbc.ca/beta/news/business/shell-oilsands-1.4016874>.

⁹³ Sally Benson. "Carbon capture: "The Technology We Cannot Afford to Ignore"." Shell Global. Accessed March 8, 2017. <http://www.shell.com/inside-energy/carbon-capture-the-technology-we-cannot-afford-to-ignore.html>.

⁹⁴ Shell Canada. "A CCS Project that is Exceeding Expectations." Shell Canada. Accessed March 2, 2017. http://www.shell.ca/en_ca/about-us/projects-and-sites/quest-carbon-capture-and-storage-project/carbon-capture-and-storage.html.

⁹⁵ Mandel-Campbell, 53.; Kyle Bakx, "Future of the oil sands: The good, the bad, and the ugly," *CBC News*, 15 January, 2017. <http://www.cbc.ca/news/business/oilsands-future-tertzakian-carbon-bitumen-1.3735773>.

⁹⁶ Stewart Elgie, "Brown Meets Green: How Can Canada's Resource-Intensive Economy Prosper in a Low-Carbon World?" *The World Won't Wait*, edited by Roland Paris and Taylor Owen (Toronto: University of Toronto Press, 2016): 87.

⁹⁷ "About COSIA".

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sands requires significant amounts of energy in its own right and, therefore, is heavily carbon-intensive.⁹⁸ However, although efforts to reduce GHG emissions should occupy the central role in COSIA's budget and mandate, the opposite appears to be true in practice. Of the 936 distinct technologies and innovations developed through COSIA since the alliance's inception in 2012, only 154 have been directed towards GHGs.⁹⁹ Further, GHGs receive the least amount of funding for projects and innovation of all four EPAs, with only twelve active projects costing a mere \$15 million. This contrasts with the 126 projects for Land, 63 for Water, and 75 for tailings.¹⁰⁰ Thus, COSIA's mandate is inherently short-sighted, aimed at reducing the environmental impacts which can be seen and felt immediately by the media and the public. Even within the GHG EPA, 42 percent of all funding goes toward highly-speculative research, while only 25 percent is spent on actual deployment of new technologies and innovations.¹⁰¹ As argued by Andrea Mandel-Campbell and Andrew Leach, mining needs to be innovative and progressive, and the bulk of emissions funding should therefore be directed towards incremental improvements using "proven technology," rather than nearly half of all funding going to research.¹⁰² Thankfully, COSIA's open-source sharing system is already helping the spread of environmentally-friendly technologies – such as the Quest Carbon Capture and Storage (CCS) project, paid for by Shell, Chevron and Marathon Oil – which allow all GHG EPA members to access the technology for their own operations.¹⁰³ CCS has been successfully employed across the world as an effective means of significant carbon emission reduction, with the Quest CCS in the Athabasca Project estimated to be capable of reducing the oil sands' carbon footprint by one million tons of CO₂ per year – the equivalent of removing 175,000 North American cars from the road each year.¹⁰⁴ However, without correct prioritization of funding, progress toward a lower-carbon oil sands will remain slow.

Environmental Priority Area sub-goals, such as investing in new steam generation design and optimizing facility energy integration, are undoubtedly important. However, they are short-term goals which should be scaled-back in favor of investing in long-term goals of carbon capture, storage and conversion, as well as low carbon heat and power generation. COSIA, the Albertan Provincial and the Federal Governments should use the Australian system as an example, where the Commonwealth Scientific and Industrial

⁹⁸ Andrew Leach, "Canadian Hydrocarbon Resources in an Era of Manufactured Energy," *The World Won't Wait* edited by Roland Paris and Taylor Owen, (Toronto: University of Toronto Press, 2016): 71.

⁹⁹ Canada's Oil Sands, "GHG Emissions.;" Canada's Oil Sands Innovation Alliance, "2016 Project Portfolio: Steadily Transformative," accessed 10 March, 2017: 5. <http://www.cosia.ca/uploads/files/performance-goals/COSIA-2016-Project-Portfolio.pdf>.

¹⁰⁰ Canada's Oil Sands Innovation Alliance, "2016 Project Portfolio: Steadily Transformative," 10 March 2017

¹⁰¹ *Ibid.*

¹⁰² Mandel-Campbell, 58.

¹⁰³ "Carbon Capture and Storage."

¹⁰⁴ *Ibid.*

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Research Organization (CSIRO) is the central organization for innovation funding and collaboration.¹⁰⁵ This contrasts with the Canadian practice which, in 2015, had roughly 4500 government programs channeled through academia and research for both domestic and foreign Canadian mining operations.¹⁰⁶ COSIA serves as the “overarching collaborative hub” for companies to accelerate environmental performance improvements in the oil sands, much like CSIRO. Although it collaborates with the provincial and federal governments, it only receives federal or provincial funding on a by-case basis for COSIA’s member projects.¹⁰⁷ This means that COSIA is given limited autonomy to produce effective results and relies heavily on the funding of its own member companies. As a result, most of COSIA’s projects will be focused on short-term, quantifiable and reportable changes in mining efficiency as opposed to GHG emission reduction, as reflected in the budgetary breakdown of COSIA’s EPAs. Thus, the lack of federal funding without significant strings attached serves as a disincentive for foreign companies to continue investing and operating in the cumbersome oil patch mining. Combined with the \$30/ton carbon price and maximum emissions limit of 100 mt. per year for oil sands facilities legislated by the Albertan government, foreign companies will continue to face disincentives to operate in the oil sands without a streamlined federal- and provincial-funding program through the existing network of COSIA.¹⁰⁸

Canada’s energy markets, primarily concentrated in the oil sands, will continue to operate under increasingly-stringent climate change policies. This means that, while companies must adapt to the low-carbon future, the Canadian government needs to simultaneously provide incentives for the companies to continue operating in the oil sands. Under GHG compliance costs, emission limits and bitumen extraction costs, these companies will have little room for the continued self-funding scheme with limited organized governmental assistance as currently practiced under COSIA.¹⁰⁹ The Canadian Government’s annual \$300 million commitment for research and technological innovation in the oil sands must be granted in its entirety to a concentrated body such as COSIA, with a mandate focused on long-term GHG emission reduction and carbon capture technology.¹¹⁰ This will prepare the oil patch for continued economic viability

¹⁰⁵ Mandel-Campbell, 55.

¹⁰⁶ Ibid, 55.

¹⁰⁷ Special to Financial Post, “A Joint Venture with CAPP: Canada’s Oil Sands Innovation Alliance: Collaboration for the environment,” *Financial Post*, March 7, 2014. <http://business.financialpost.com/news/energy/a-joint-venture-with-capp-canadas-oil-sands-innovation-alliance-collaboration-for-the-environment>.

¹⁰⁸ Alberta government, “Capping oil sands emissions,” accessed 11 March, 2017. <https://www.alberta.ca/climate-oilsands-emissions.aspx>.

¹⁰⁹ Leach, 75.

¹¹⁰ Government of Canada, “Crude oil: What are the oil sands?” modified February 19, 2016. <http://www.nrcan.gc.ca/energy/oil-sands/18089>.

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in the inevitability of a carbon-constrained future, and will allow Canada to come closer to achieving both the global 2°C Paris Agreement goal, as well as the 30 percent reduction of carbon emissions.

STRATEGY FOR STRENGTHENING THE INTERNATIONAL CLIMATE CHANGE REGIME

In addition to accelerated domestic emission reductions, Canadian climate change policy must emphasize building and maintaining international support for ambitious policies among all major emitters to successfully achieve the goal of a 2°C limit. Over the last several decades, carbon emissions have become an increasingly global issue as traditionally large emitters such as the European Union have declined relative to developing states, primarily India and China.¹¹¹ Despite this trend towards multi-polarity, however, the combined emissions of China, the United States, and the EU still contribute more than half of all greenhouse gas emissions.¹¹² Therefore, the engaged participation of these leading emitters will remain essential for the Paris Agreement to successfully curtail emissions. Canada must encourage continued U.S. participation in the Paris Agreement, even if mitigation efforts are minimal under the current Trump administration. Coercive approaches for maintaining American commitment, such as applying carbon border tax adjustments or other punitive measures, risk economic retaliation and are unlikely to be widely adopted, especially against a major power.¹¹³ Instead, it will be essential to maintain the near-universal participation in the Paris Agreement, and remain receptive to future willingness by the United States to reengage in emission reductions. Canada should focus on aligning itself with the European Union in future climate change negotiations and initiatives. Despite recent internal instability as a result of Brexit, EU environmental policy remains coherent and domestic support for ambitious targets remains high.¹¹⁴ Having joined the EU in its 'High Ambition Coalition' during the Paris negotiations, Canada should continue to work in coalitions to advocate for immediate and increasingly binding action on climate change.¹¹⁵

Specifically, Canada and the EU should encourage China to take a leading role in encouraging the acceleration of global climate change mitigation. Although China has historically been resistant to binding international efforts against climate change, viewing this as oppositional to domestic economic growth, the

¹¹¹ Oberthür, "Reflections on Global Climate Politics Post Paris," 84.

¹¹² Miranda A. Schreurs, "The Paris Climate Agreement and the Three Largest Emitters: China, the United States, and the European Union," *Politics and Governance* 4, no. 3 (2016): 219.

¹¹³ Kemp, "US-Proofing the Paris Climate Agreement," 92.

¹¹⁴ John Vogler, "Global Climate Politics: Can the EU be an Actor?" in *The European Union in International Climate Change Politics: Still Taking a Lead?*, ed. Rüdiger Wurzel et al. (New York: Routledge, 2017), 31-32.

¹¹⁵ Schreurs, "The Paris Climate Agreement and the Three Largest Emitters," 220.

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Chinese position has evolved substantially over the past several years.¹¹⁶ Since China's twelfth Five-Year Plan in 2011, the Chinese leadership has increasingly emphasized environmental objectives and investment in green technologies in order to address growing domestic environmental issues caused by pollution and the increasing effects of climate change.¹¹⁷ As the world's largest emitter of greenhouse gases and an influential figure amongst developing countries in climate negotiations, increased Chinese leadership on promoting ambitious emission reductions will be crucial for the success of the Paris Agreement, particularly in the event of declining American commitment.¹¹⁸ The joint press statement in November 2014 between the United States and China, in which both countries agreed to commit to substantially more ambitious 2030 climate targets, may provide a useful framework for future Canadian and European efforts to encourage greater Chinese initiative and cooperation on climate change.¹¹⁹ By working with like-minded partners, Canada must continue to encourage ambitious action on climate change both through leading by example and by supporting more binding and substantial international commitments.

A central element of Canada's international climate change strategy must be to increase financing of and investment in green energy technologies and other emission reduction projects in heavy-emitting developing countries. Although there have been efforts to increase assistance to developing countries in reducing their emissions, such as the Green Climate Fund and the Paris Agreement goal of providing US\$100 billion in climate finance per year by 2020, there is a continued lack of binding commitments to financing.¹²⁰ Although Canada must contribute the majority of its resources towards domestic emission reduction efforts, the government must also encourage greater investment into emission reduction projects within large developing nations. Canada's limited resources should be prioritized towards projects that offer the largest reduction in emissions for the lowest cost. A prime candidate for such Canadian climate financing and investment would be green energy and technology projects in India. Given Canada's growing economic ties with India, increased Canadian investment and funding could further improve relations as well as help reduce emissions from the fourth largest emitter in the world. India has already started a broad range of projects to increase non-fossil fuel energy production to reduce dependence on coal, and has constantly

¹¹⁶ Xinlei Li, "China: From a Marginalized Follower to an Emerging Leader in Climate Politics," in *The European Union in International Climate Change Politics: Still Taking a Lead?*, ed. Rüdiger Wurzel et al. (New York: Routledge, 2017), 256.

¹¹⁷ Isabel Hilton, and Oliver Kerr, "The Paris Agreement: China's 'New Normal' Role in International Climate Negotiations," *Climate Policy* 17, no. 1 (2016): 51-52; Yun Gao, "China's Response to Climate Change Issues After Paris Climate Change Conference," *Advances in Climate Change Research* 7 (2016): 238-239.

¹¹⁸ Li, "China: From a Marginalized Follower to an Emerging Leader in Climate Politics," 254.

¹¹⁹ Schreurs, "The Paris Climate Agreement and the Three Largest Emitters," 221.

¹²⁰ Falkner, "The Paris Agreement and the New Logic of International Climate Politics," 1111.

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requested low-cost international financing to achieve its objectives.¹²¹ By providing such financing, Canada and like-minded nations may satisfy longstanding requests by India for assistance in meeting the emission reduction goals set for developing countries. Such improved cooperation may encourage increasingly ambitious emission targets that can be achieved in shorter time frames.¹²² Considering that the countries ranked from 114 to 186 in terms of greenhouse gas emissions produce only 1 percent of global emissions, funding to these nations should be based on climate change adaptation needs rather than mitigation projects with low returns.¹²³

Increasing numbers of studies show that the timeframe to successfully act against climate change is rapidly declining.¹²⁴ Therefore, the next two decades will be crucial in determining whether Canada and other leading emitters can successfully prevent extreme global warming, which threatens to cause a wide range of environmental, economic, and human consequences across the world. Although Canada presented renewed commitment to combatting climate change during the Paris negotiations, it is essential that the government illustrate the validity of its rhetoric by making immediate efforts to achieve its current pledged reductions. Although significant emission reductions by the world's largest emitters will be most essential to achieving the goal of 2°C warming, Canada must lead by example by strengthening 2030 emission targets in line with this global objective. Such initiative may reinforce confidence in the state-led framework of the Paris Agreement, improve Canada's diplomatic standing in future climate negotiations, and encourage similar initiatives from other states in response. By aligning itself with like-minded states such as the EU and potentially China, Canada can expand its diplomatic influence and more effectively push for ambitious efforts to reduce climate change. Canada can additionally influence the outcome of global climate efforts by providing low-cost funding and investment into green energy and technology projects in developing countries with large potential for emission reductions, such as India. The framework of the Paris Agreement is vulnerable to failure, however, it is essential that it succeeds to prevent the extreme costs that continued global warming would entail. Canada must be willing to contribute its share to emission reductions and encourage similar action abroad in order for the gap between current and necessary international emissions to close.

¹²¹ Montgomery Blah, "Commitments Inked in Paris: Can India Deliver by 2020?" *India Quarterly* 72, no. 4 (2016): 348.

¹²² *Ibid.*, 347.

¹²³ Steven R. Brechin, "Climate Change Mitigation and the Collective Action Problem: Exploring Country Differences in Greenhouse Gas Contributions," *Sociological Forum* 31, no. 31 (2016): 857.

¹²⁴ United Nations Environment Programme, *The Emissions Gap Report 2016*, xv.

THE PURSUIT OF SUSTAINABLE ECONOMIC DEVELOPMENT

What should be prioritized?

In order to achieve the immediate-term goal of ensuring that Canada's carbon-intensive industries operate in the most sustainable way possible until Canada transitions to a low-carbon economy, Canada's international mining practices must be examined in detail. Canada is one of the most important mining centers in the world, and this industry provides a useful platform from which Canada can demonstrate that multinationals based in Toronto and Vancouver are accountable for their environmental and social abuses abroad. Effectively regulating the international operations of the Canadian extractive industry is a crucial component of this report's sustainable development framework that this report is advocating for. Until Canada's extractive industry is held to the same standard abroad as it is domestically, a genuine effort to encourage sustainable development of current resources while transitioning to a greener economy in the longer term will not be taken seriously.

Secondly, Canada must strive towards innovating in green technology in order to partake in environmentally friendly practices and meet previous foreign commitments such as those outlined in the Paris Agreement. While addressing Canada's transition towards a green economy, the problem of maintaining a balance between preserving the environment while increasing economic growth is one that is difficult to solve as many consider one to be the antithesis of the other. However, maintaining growth is not something that Canada should be willing to sacrifice completely for the sake of future sustainability as it may be permanently detrimental to the country. Therefore, it is crucial to maintain a balance between the two as Canada transitions towards more sustainable practices. In order to approach this issue in a practical manner, Canada must focus on improving their strengths: further innovating Canadian oil reserves and taking advantage of the country's high potential to create renewable energy infrastructure. Firstly, a Canadian transition away from the oil sands and high carbon emission resources will have to be addressed, as it would be illogical to completely abandon these profitable industries. Only then would it be safe for Canada to slowly transition away and focus on harnessing the country's renewable energy potential.

The Arctic represents nearly 40 percent of Canada's landmass, and was largely inaccessible until recently.¹²⁵ The impacts of climate change are most visible in this region, where the reduction in sea ice and permafrost has forced local communities to adapt to the changing environment. This must be a key policy area for the Canadian government because the Arctic is a platform for Canada and a number of other states and indigenous groups who have a stake in the area. While the Arctic is rich in non-renewable resources, the

¹²⁵ "Arctic," World Wildlife Fund, accessed March 2, 2017 <http://www.wwf.ca/conservation/arctic/>.

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exploitation of such could be catastrophic for the area, contributing further to climate change while also permanently damaging the existing ecosystems. The issues within Canada's North are an opportunity for the government to pursue a sustainable development approach which adheres to the transition to a low-carbon economy, while also strengthening the multilateral governance approach through collaboration within the Arctic Council.

Finally, the digital revolution provides Canada with an opportunity to shape our future economy and diverge from prioritizing economic growth in isolation. This is a chance to recognize the interdependence between the economy and sustainable development because we need both to ensure future prosperity. Canada is a technologically advanced country and consistently ranks in the upper tiers of various indexes. The Global Competitiveness Index by the World Economic Forum ranks Canada 21st out of 138 in technological readiness¹²⁶ and the World Bank's Digital Adoption Index gives Canada a score on par with the likes of USA and Germany, both of which are high-tech countries.¹²⁷ It is imperative for Canada to capitalize on this advantage and develop a useful digital policy to bolster Canada's competitiveness in the global economy. The benefits of a strong digital economy will enable policymakers to ensure a sustainable future through the application of digital technologies for reducing resource dependency.

CURRENT SUSTAINABLE DEVELOPMENT PRACTICES

Before developing our specific policy recommendations to improve the economic and environmental sustainability of the Canadian economy, it is important to provide a brief overview of the current extent of Canada's effort to establish a sustainable development framework.

Since the concept of sustainable development gained international prominence during the 1980s, the Canadian government has made significant progress in constructing a coherent and effective sustainable development strategy. The 1987 report *Our Common Future*, by the World Commission on Environment and Development, established the concept of sustainable development, defining it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".¹²⁸ International support for the adoption of sustainable development was consolidated in 1992 during the United Nations Conference on Environment and Development. At the conference, sustainable

¹²⁶ "Global Competitiveness Index," World Economic Forum, accessed March 1, 2017, <http://reports.weforum.org/global-competitiveness-index/competitiveness-rankings/#series=GCI.B.09>.

¹²⁷ "Digital Adoption Index," The World Bank, accessed March 1, 2017, <http://wbfiles.worldbank.org/documents/dec/digital-adoption-index.html>.

¹²⁸ Jenna Bedore, "Sustainability Planning System and the Federal Sustainable Development Act," (MA diss., Queen's University, 2013), 1.

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development was officially endorsed as an international goal, and attending states committed to developing national sustainable development strategies.¹²⁹ In 1995 Canada adopted a decentralized sustainable development approach by amending the Auditor General Act to require key federal departments and agencies to produce individual sustainable development strategies.¹³⁰ However, it soon became clear to auditors that this system was plagued with issues. The decentralized approach lacked common goals or targets; it was often difficult to measure performance; and goals tended to be short-sighted or incoherent.¹³¹ In an effort to create a more centralized and accountable framework, the government passed the Federal Sustainable Development Act in 2008, committing the government to produce a Federal Sustainable Development Strategy (FSDS) every three years, which federal departments would be required to follow.¹³² In 2016 the federal government released its third FSDS, outlining thirteen priorities to better achieve economic and social objectives while minimizing damage to the environment.¹³³

Since passing the Federal Sustainable Development Act, the Canadian government has incrementally improved the coherence and effectiveness of its sustainable development approach. The 2016 FSDS contains measurable targets, an emphasis on both short- and long-term goals, and information concerning the relevant departments responsible for carrying out each goal. In addition, the strategies have improved over time through extensive public consultation and the development of more specific and measurable goals.¹³⁴ In an attempt to better harmonize Canadian and international sustainable development efforts, the 2016 FSDS linked its priorities with the UN Sustainable Development Goals.¹³⁵ Canadian sustainable development priorities have emphasized combatting climate change, promoting clean energy, improving the efficient use of resources, and maintaining ecosystems. A particular focus of Canada's approach has been its efforts to invest in clean energy technology. The 2016 federal budget provided over \$1 billion over four years to develop clean technologies, and the current FSDS commits to doubling federal government investments in clean energy research by 2020.¹³⁶ Federal funding of institutions such as

¹²⁹ Meadowcroft and Toner, "Engaging with Sustainable Development," 4.

¹³⁰ Sustainable Development Office, Environment Canada, *Planning for a Sustainable Future: A Federal Sustainable Development Strategy for Canada*, October 2010, v.

¹³¹ Glen Toner and François Bregha, "Institutionalizing Sustainable Development: The Role of Governmental Institutions," in *Innovation, Science, Environment: Charting Sustainable Development in Canada, 1987-2007*, ed. Glen Toner and James Meadowcroft (Montreal: McGill-Queen's University Press, 2009), 46.

¹³² Meadowcroft and Toner, "Engaging with Sustainable Development," 3.

¹³³ Environment and Climate Change Canada, *Achieving a Sustainable Future: A Federal Sustainable Development Strategy for Canada 2016-2019*, 2016, i.

¹³⁴ Environment and Climate Change Canada, *Achieving a Sustainable Future*, iii.

¹³⁵ *Ibid.*, 72.

¹³⁶ *Ibid.*, 26-27.

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Sustainable Development Technology Canada have supported a wide range of new clean-energy technologies and companies, which both create economic growth and reduce environmental damage.¹³⁷

Despite the recent improvements to Canada's sustainable development approach, it continues to suffer from several issues which limit the feasibility of achieving environmentally sustainable growth. Although the 2016 FSDS frequently emphasizes the need for cooperation at the provincial and municipal level to address the wide variety of sustainable development issues that are beyond federal jurisdiction, little detail is provided on how this will be achieved. For example, the development of natural resources is primarily within provincial jurisdiction.¹³⁸ While the federal government does support local initiatives through the Green Municipal Fund, greater efforts and resources should be put towards improving coordination and cooperation between all levels of government.¹³⁹ Another major limitation of current Canadian strategy is that it overemphasizes the environmental dimension of sustainable development in comparison to economic aspects. While developing green technologies and clean energy is discussed, there is little mention of potential tensions between environmental and economic objectives, or how one should resolve them. Finally, although the Canadian approach has shown considerable willingness to adapt, the current FSDS system lacks any legislative requirement to address the shortcomings identified in progress reports.¹⁴⁰ If goals or targets are not met, it is essential that the subsequent FSDS be required to address previous shortcomings in order for Canada to meet its long-term goal of achieving low-emission sustainable growth.

CANADA'S GLOBAL MINING INDUSTRY

Current Practices

Canada is a leading player in the global mining industry. In 2012, 53 percent of the funds raised for capital expenditures in the global mining industry originated on Toronto's two main stock exchanges: the

¹³⁷ Anique Montambault, "Building a Sustainable Development Infrastructure in Canada: The Genesis and Rise of Sustainable Development Technology Canada," in *Innovation, Science, Environment: Charting Sustainable Development in Canada, 1987-2007*, ed. Glen Toner and James Meadowcroft (Montreal: McGill-Queen's University Press, 2009), 244.

¹³⁸ Marc Lee and Amanda Card, *A Green Industrial Revolution: Climate Justice, Green Jobs and Sustainable Production in Canada* (Ottawa: Canadian Centre for Policy Alternatives, 2012), 29.

¹³⁹ Sustainable Development Office, *Planning for a Sustainable Future*, 10.

¹⁴⁰ Bedore, "Sustainability Planning System and the Federal Sustainable Development Act," 88.

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TSX and the TSX Venture.¹⁴¹ For the purposes of this report, Canada's regulatory policies regarding international mining operations of Canadian companies will be addressed and critiqued.

Canada currently has three primary pieces of legislation intended to regulate the mining industry both within Canada and abroad: The Canadian Environmental Assessment Act, the Canadian Environmental Protection Act (1999), and the Metal Mining Effluent Regulations under the Fisheries Act.¹⁴² In 2004, the Parliamentary Subcommittee on Human Rights and International Development issued a report titled *Mining in Developing Countries*, a report addressing the disparity between domestic regulations and international practices in the Canadian mining industry.¹⁴³

In December of 2014, the Extractive Sector Transparency Measures Act (ESTMA) was enacted as a means of requiring extractive entities active in Canada to disclose specific payments to all governments in Canada and Abroad.¹⁴⁴ As recently as 2015, the Department of Foreign Affairs, Trade, and Development Canada launched a public-private partnership with three multinational Canadian mining companies and NGOs to assist these corporations with various Corporate Social Responsibility (CSR) initiatives.¹⁴⁵ The program is intended to improve the practices of Canadian mining companies abroad, and fund various sustainable development projects in the regions in which they operate.¹⁴⁶

The primary issue with Canada's current regulatory regime with respect to international mining companies is that it is essentially non-existent, as recognized by the 2004 Parliamentary Subcommittee report titled *Mining in Developing Countries*.¹⁴⁷ The report highlighted several of the current inadequacies in Canadian government regulation of companies' practices abroad. The Government's official response to the report included rejections of many of the recommendations contained in the report, citing the difficulty in measuring certain initiatives such as CSR.¹⁴⁸ Considering the fact that the report contained many reasonable

¹⁴¹ The Mining Association of Canada, "Mining Facts," accessed Mar. 10, 2017, <http://mining.ca/resources/mining-facts>.

¹⁴² Peter Kent, "Minister's Response: Environment Canada," (2011): Parliament of Canada, accessed Mar. 9, 2017.

¹⁴³ Sara Seck, "Canadian Mining Internationally and the UN Guiding Principles for Business and Human Rights," *Canadian Yearbook of International Law* 49 (2011): 51.

¹⁴⁴ "Extractive Sector Transparency Measures Act," Justice Laws Website, last modified Mar. 10 2017, accessed Mar. 10 2017, <http://laws-lois.justice.gc.ca/eng/acts/E-22.7/page-1.html>.

¹⁴⁵ Dragana Bodruzic, "Promoting International Development Through CSR: The Canadian Government's Partnership with Canadian Mining Companies," *Canadian Foreign Policy Journal* 21.2 (2015): 129.

¹⁴⁶ *Ibid*, 129.

¹⁴⁷ Sara Seck, "Canadian Mining Internationally and the UN Guiding Principles for Business and Human Rights," 51.

¹⁴⁸ *Ibid*, 51.

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recommendations, including those proposed in the Organization for Economic Co-operation and Development's Guidelines for Multinational Enterprises (an initiative Canada has expressed support for), it is reasonable to suggest that Canadian policies should reflect their existing commitments.¹⁴⁹

In 2009, a report was released on CSR initiatives in the extractive industry. It proposed several recommendations that the government could pursue to address the issue at hand, and some attempts have been made at following through with those recommendations.¹⁵⁰ Furthermore, of the three main regulatory bodies intended to regulate mining activities domestically – the Canadian Environmental Assessment Act, the Canadian Environmental Protection Act (1999), and the Metal Mining Effluent Regulations under the Fisheries Act – the Canadian Environmental Assessment Act is the only one that applies to companies operating abroad, and it only applies if there is federal funding involved.¹⁵¹ This is the most obvious example of the lack of effective international oversight of Canadian mining companies' activities internationally, highlighting the need for immediate change.

Mining Policy Recommendations

This section of the report will offer policy recommendations to hold Canadian mining companies environmentally and socially responsible internationally while maintaining Canada's strong position in the industry. It is important to recognize the critical role that Canada's mining industry plays in the makeup of the nation's economy. As of 2015, the industry employs 373,000 of the highest paid workers in Canada, including the largest proportion of Aboriginal peoples of any industry. Mining also contributes \$56 billion to Canada's GDP, and paid a total of \$71 billion in taxes and royalties to federal and provincial governments from 2003-2012.¹⁵² Despite its relatively small size in terms of population, Canada ranks in the top five countries in the world in the production of 13 major minerals and metals including potash, uranium, nickel, niobium, cobalt, salt, aluminum, and others.¹⁵³ The extractive industry is an immensely important sector of Canada's economy, and maintaining a global leadership position is key. However, leadership does not have to come at the expense of environmental and social considerations abroad.

¹⁴⁹ Tony Andrews, "National Roundtables on Corporate Social Responsibility (CSR) and the Canadian Extractive Industry in Developing Countries: Advisory Group Report," *Foreign Affairs and International Trade Canada* 2009, 1.

¹⁵⁰ "Doing Business the Canadian Way: A Strategy to Advance Corporate Social Responsibility in Canada's Extractive Sector Abroad," *Foreign Affairs, Trade, and Development Canada* 2015.

¹⁵¹ The Honorable Peter Kent, P.C., M.P., "Minister's Response: Environment Canada."

¹⁵² The Mining Association of Canada, "Mining Facts."

¹⁵³ *Ibid.*

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While the extractive sector is important to Canada's economy, it is important to note the harmful effects that actors within this industry have had on the areas in which they operate globally in order to recommend policies that aim to prevent further negative externalities. Countless environmental disasters have occurred in regions all over the world as a direct result of the operations of Canadian-owned mining companies.¹⁵⁴ The specific results of these disasters have ranged from massive toxic waste spills causing the hospitalization of 2000 people in Kyrgyzstan, to a dam rupture that caused 6000 hectares of fertile farmland to be decimated in Spain.¹⁵⁵ Not only do these disasters have extreme consequences for the environment and the communities that inhabit these regions, they end up costing the corporations involved millions of dollars in additional reparations, not to mention the legal costs associated with potential lawsuits.¹⁵⁶

There are obviously inherent risks associated with extractive activities. Environmental disasters rarely occur in Canada, where regulations and effective oversight on the part of the government are generally implemented well when compared to the regions where Canadian mining companies are active abroad. It is important to note that, while rare, environmental incidents do occur in Canada, most recently at the Mount Polley Mine in Central B.C. in 2014.¹⁵⁷ So, if the negative events that occur as a result of mining operations internationally adversely affect both the communities in which they are located and the companies that are responsible for them, more effective policies are required and will be proposed in the following section.

First and foremost, policies should attempt to encourage Canadian mining companies operating abroad to abide by the same standards that have been set out domestically for decades.¹⁵⁸ While it may be a difficult task for the Canadian government to effectively regulate companies operating in jurisdictions that it has no control over, there has been significant recent progress in holding companies accountable for negligent practices abroad.¹⁵⁹ While the progress is a positive development, the focus of future policies

¹⁵⁴ Sara Seck, "Environmental Harm in Developing Countries Caused by Subsidiaries of Canadian Mining Corporations: The Interface of Public and Private International Law," *Canadian Yearbook of International Law* 37 (1999): 139.

¹⁵⁵ *Ibid.*, 140.

¹⁵⁶ "Canadian Mine Giant Barrick Fined a Record \$16.4M in Chile," *The Globe and Mail* (2013), accessed Mar. 10, 2017, <http://www.cbc.ca/news/world/canadian-mine-giant-barrick-fined-a-record-16-4m-in-chile-1.1308099>.

¹⁵⁷ Dirk Meissner, "Mount Polley Mine Disaster Hits 2-Year mark, Causes Divisions," CBC News, accessed Mar. 10, 2017, <http://www.cbc.ca/news/canada/british-columbia/mount-polley-anniversary-1.3706850>.

¹⁵⁸ Chris Baldwin and Johanna Fipke, "Canadian Mining Law," *Lawson and Lundell LLP* (2010): 12. http://www.lawsonlundell.com/media/news/135_CanadianMiningLaw.pdf.

¹⁵⁹ Max Chewinski, "Liberals Failing on Duty to Hold Canadian Mining Companies Accountable Abroad," *National Observer* (2016), 1, accessed Mar. 9, 2017,

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should be the proactive prevention of such violations. Canada's three primary regulatory bodies that oversee the mining industry domestically, the Canadian Environmental Assessment Act, the Canadian Environmental Protection Act, and the Metal Mining Effluent Regulations, should be adapted, consolidated, and applied to mining companies not just within Canada, but also to their global operations. These regulatory bodies provide useful guidelines and rules that Canadian companies are required to follow domestically, and there is no reason they should not be required to abide by those same rules internationally.

In order to effectively translate Canada's domestic environmental standards to the international realm in the mining industry, this report will argue that the Canadian government and industry representatives must develop new policies in tandem, paying special attention to the many challenges of rethinking the regulation of foreign operations. It is clear that changes must be made on the government side; encouraging internal CSR initiatives combined with government oversight should also be considered as a means of improving operational standards internationally.

Due to the fact that affecting change in this area requires a symbiotic relationship between the Canadian government and the companies it is attempting to regulate, this report will recommend that Canadian policies should aim to implement the Advisory Group Recommendations contained in the 2009 Roundtable on Corporate Social Responsibility.¹⁶⁰ The 2009 Roundtable was a group consisting of experts from a wide variety of fields in issues pertaining to CSR and the extractive industry including academics, policy advisors, and industry representatives. The group proposed the creation of a comprehensive Canadian CSR Framework, encouraging the government to adopt a wide variety of policies that serve to support CSR initiatives and monitor progress on the part of industry actors on these initiatives.¹⁶¹ This report will recommend that the initiatives introduced in both the 2004 Parliamentary Subcommittee as well as the 2009 Roundtable Advisory Group are pursued as a means of achieving the goal of effectively regulating Canada's extractive sector abroad. It is important to note that many of the recommendations put forth in these reports are reasonable, attainable, and that they are the result of hundreds of speeches, interviews, and contributions from a wide variety of experts in the field.¹⁶²

¹⁶⁰ Tony Andrews, "National Roundtables on Corporate Social Responsibility (CSR) and the Canadian Extractive Industry in Developing Countries: Advisory Group Report." 2.

¹⁶¹ *Ibid.*, 3.

¹⁶² Tony Andrews, "National Roundtables on Corporate Social Responsibility (CSR) and the Canadian Extractive Industry in Developing Countries: Advisory Group Report." 3.

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This report will advocate for a condensed, selective strategy that emphasizes cooperation with industry to achieve the common objective of developing Canada's overseas mineral assets in the most sustainable and environmentally responsible way. The timeline of these recommendations is relatively short-term in terms of implementation, as the Canadian government has already made notable progress on many of the initiatives proposed in the 2009 report.¹⁶³

In 2014, the Department of Foreign Affairs, Trade and Development – now called Global Affairs Canada – announced a strategy to address issues raised surrounding Canada's extractive sector abroad titled "Doing Business the Canadian Way: A Strategy to Advance Corporate Social Responsibility in Canada's Extractive Sector Abroad."¹⁶⁴ The strategy outlined several goals pertaining to CSR initiatives, including a wide variety of specific measures intended to "outline Canada's commitment to promoting CSR, defined as the voluntary activities undertaken by a company, over and above legal requirements, to operate in an economically, socially, and environmentally sustainable manner."¹⁶⁵ The primary issue with this definition of CSR is that it emphasizes the *voluntary* nature of CSR initiatives, as well as the fact that they are *over and above legal requirements*. If CSR and its corresponding mandates continue to be viewed as optional, the desired effects of the government's policies will not be fully realized. The key for Canadian policies in the field of CSR and regulation of companies operating abroad will be oversight, regulation, and punishment if need be for a lack of commitment to the previously outlined initiatives. While many multinationals based in Canada have made a concerted effort to bring their international operations in line with the recent norm of sustainable development, most of their progress thus far has been the result of internal policies, and there are few mechanisms in place to monitor progress and ensure compliance.¹⁶⁶

In order to create a standard of compulsory requirements dealing with regulation and oversight of Canadian companies' international operations, Bill C-300 was introduced to Parliament in 2009.¹⁶⁷ The three primary objectives contained in the Bill were as follows: (1) put in place human rights, labor, and environmental standards for Canadian companies abroad; (2) create a complaints mechanism that would

¹⁶³ "Canada's Enhanced Corporate Social Responsibility Strategy to Strengthen Canada's Extractive Sector Abroad," *Global Affairs Canada* (2014), accessed Mar. 10, 2017, <http://www.international.gc.ca/trade-agreements-accords-commerciaux/topics-domaines/other-autre/csr-strat-rse.aspx?lang=eng>.

¹⁶⁴ *Ibid.*

¹⁶⁵ *Ibid.*

¹⁶⁶ Dragana Bodruzic, "Promoting International Development Through CSR: The Canadian Government's Partnership with Canadian Mining Companies," 136.

¹⁶⁷ Penelope Simons and Audrey Macklin, "Defeat of Responsible Mining Bill is Missed Opportunity," *The Globe and Mail* (2012), last updated Aug. 2012, accessed Mar. 10, 2017, <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/defeat-of-responsible-mining-bill-is-missed-opportunity/article4348527/>.

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allow members of affected communities to file complaints against companies not living up to those standards; and (3) create a possible sanction for companies that were found out of compliance with established standards, in the form of loss government financial and political support.¹⁶⁸ The Bill was defeated in 2010, with the government preferring not to spar with a “large, wealthy, and well-connected interest group.”¹⁶⁹ If the government continues to avoid the adoption of meaningful policies that monitor and effectively regulate Canadian mining companies internationally, it will only harm the long-term interests of the companies themselves, the global environment, and the communities that are adversely affected by their misconduct. Policies should emulate the contents of Bill C-300 going forward for the government to make progress on their commitments to their OECD and UN obligations. The policies as recommended in the Bill serve to protect Canadian interests and reflect Canadian values while balancing the need for economic gain as a result of the extractive activities in question.

Global Governance and Mining

There are several instruments of Multilateral Global Governance that relate to the issue of Canadian mining companies operating internationally that can serve to bolster the Canadian government’s policies in the immediate term. The International Finance Corporation, a division of the World Bank Group, has been a global leader in the attempt to effectively monitor and regulate corporations active in developing regions, with a focus on Africa.¹⁷⁰ The Group aims to work with corporate actors in the mining industry, many of which are Canadian, to adopt more sustainable practices and encourage efficient and responsible development of mineral reserves.¹⁷¹

As previously mentioned, the Organization for Economic Cooperation and Development (OECD), an institution of global governance that Canada is an active member of, has established a set of guidelines for multinationals engaged in resource extraction to follow in order to ensure sustainability is at the forefront of their operations.¹⁷² Canada has expressed support for these guidelines, and should continue to enforce them

¹⁶⁸ Dragana Bodruzic, “Promoting International Development Through CSR: The Canadian Government’s Partnership with Canadian Mining Companies,” 136.

¹⁶⁹ Penelope Simons and Audrey Macklin, “Defeat of Responsible Mining Bill is Missed Opportunity.”

¹⁷⁰ The International Finance Corporation, “Sustainable and Responsible Mining in Africa – A Getting Started Guide,” (2010): 1, accessed Mar. 10, 2017, <https://www.ifc.org/wps/wcm/connect/dfaac38043fea19b8f90bf869243d457/Sustainable+Mining+in+Africa.pdf?MOD=AJPERES>.

¹⁷¹ The International Finance Corporation, “Sustainable and Responsible Mining in Africa – A Getting Started Guide.”

¹⁷² The Organization for Economic Co-Operation and Development, “OECD Guidelines for Multinational Enterprises,” (2009), accessed Mar. 10, 2017, <http://www.oecd.org/corporate/mne/1922428.pdf>.

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in order to both address the issues associated with the global extraction industry and maintain its outsized influence within the Organization. Both the International Finance Corporation (IFC) and the OECD are multilateral institutions that provide Canada with platform to engage with the most innovative and mutually beneficial policies on international mining practices. Future policies should continue to involve both of these organizations, as they are able to partner on funding, oversight, and generally cooperate on both short and long term goals, primarily the adequate regulation of Canadian mining firms.¹⁷³

Mining is a crucial sector for Canada's economy and will remain so for the immediate future. In the longer term, policies should reflect the reality presented by non-renewable resource extraction, and focus on more sustainable alternatives. With that said, improving current practices of Canadian mining firms abroad is one step that must be taken on the road to a greener future. To accomplish this goal, policies implemented by the Canadian government going forward should abide by the CSR initiatives as outlined in the 2009 Roundtable Report, with the addition of monitoring, enforcement, and compliance mechanisms similar to those proposed in Bill C-300. Additionally, any proposed policies should reflect the commitments Canada has made as part of their engagement with the OECD and the IFC as multilateral cooperation is key to Canada's success as a global leader in the mining industry.

GREEN TECHNOLOGY

Current Practices

Renewable energy technology is one of the few ways a nation is able to bridge the divide between its economic interests with interests towards preserving the environment. Canada has one of the highest hydroelectricity producing capacities in the world, and was the world's third largest producer of hydroelectricity in 2015.¹⁷⁴ This leads to economic gain through greater levels of trade with countries, namely the United States. Furthermore, hydroelectricity is also vital to Canada's own domestic energy needs. As it stands, hydro power is Canada's main source of electrical power accounting for 55 percent of the Canadian energy production.¹⁷⁵

Other types of renewable resources in Canada such as solar energy and wind energy are underdeveloped relative to Canada's potential energy output. Solar power in particular is one medium of

¹⁷³ The International Finance Corporation, "Sustainable and Responsible Mining in Africa – A Getting Started Guide."

¹⁷⁴ Renewable Energy Policy Network for the 21st Century, "Renewables 2016 Global Status Report," (2016), 21.

¹⁷⁵ *Ibid*, 77.

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energy production that large Canadian cities such as Calgary, Regina, and Winnipeg have the greatest potential to become domestic leaders if the solar infrastructure in these areas is further developed.¹⁷⁶ In 2014, Canada's solar power infrastructure generated less than 1 percent of Canada's total renewable energy production.¹⁷⁷ Wind energy similarly is able to provide a small portion of Canada's electricity demand at 6 percent. As of the end of 2016 Canada has 272 wind farms within the country, with most of them being located in Ontario, Quebec, and Nova Scotia.¹⁷⁸ The beginning of Canadian renewable energy infrastructure is present, however it is small and underdeveloped. Canada has potential to grow these technologies, and this growth is crucial if Canada wishes to pursue increasingly sustainable practices in the future.

The government of Canada has also been taking steps to further invest in green technology to promote sustainable development and economic growth in underdeveloped industries. In 2015, energy ministers on every level of government collaborated to create a collaborative guide on energy strategy. The strategy focused on three themes: sustainability, technology and innovation, and delivering energy to the people.¹⁷⁹ Within these themes are past federal research development and distribution programs such as the Clean Energy Fund that was active from 2009 to 2016, which invested \$316 million in clean energy technologies like large scale carbon capture and storage programs and clean energy systems.¹⁸⁰ Other programs include the ecoENERGY Innovation Initiative that invests \$268 million into green technology innovation, and the ongoing Automotive Innovation Fund, which supports the research of more fuel-efficient vehicles.¹⁸¹ The current Liberal Government also made it a priority to develop private-public partnerships with organizations that will create new innovations in clean energy.¹⁸²

As it stands, the government of Canada has made significant investments in the realm of green technology innovation in the past, to the point where the nation is one of the top hydroelectricity producing countries in the world.¹⁸³ However, the country still has much to improve. Currently, Canada's solar energy

¹⁷⁶ Canada's National Energy Board, "Canada's Energy Future 2016," (2016), 20.

¹⁷⁷ Natural Resources Canada, "Energy Fact Book 2016-2017," (2016), 87.

¹⁷⁸ "Installed Capacity," *CANWEA*, accessed March 3, 2017, <http://canwea.ca/wind-energy/installed-capacity/>; "List of Wind Farms in Canada," *CANWEA*, Dec 31, 2016, http://canwea.ca/wp-content/uploads/2013/12/Installedcap_PublicWebsite-Dec-31-2016_dk.pdf.

¹⁷⁹ "Energy Policies of IEA Countries - Canada 2015 Review," *International Energy Agency*, (2016): 28. <https://www.iea.org/publications/freepublications/publication/EnergyPoliciesofIEACountriesCanada2015Review.pdf>.

¹⁸⁰ "Energy Policies of IEA Countries - Canada 2015 Review."

¹⁸¹ *Ibid.*

¹⁸² "A New Plan for Canada's Environment and Economy," *Liberal Party of Canada*, 2015, <https://www.liberal.ca/files/2015/08/A-new-plan-for-Canadas-environment-and-economy.pdf>.

¹⁸³ Renewable Energy Policy Network for the 21st Century, "Renewables 2016 Global Status Report," (2016), 21.

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supply is negligible in comparison to other International Energy Agency (IEA) members, making up less than 0.1 percent of the IEA total.¹⁸⁴ The most productive solar power facilities in Canada are all located in Ontario, while other cities with a high potential to harvest solar energy are underdeveloped.¹⁸⁵ In addition, in the realm of wind energy, Canada must further develop and implement offshore wind turbines, especially in the Maritimes.¹⁸⁶ The development of solar and wind technology in itself will create job opportunities toward Canadians in addition to a healthier environment. Furthermore, with more domestic energy production, Canada will be able to trade more energy to countries such as the United States, a country that has strict carbon emission restriction laws.¹⁸⁷

Although most federal research and develop programs are aimed towards creating more sustainable green technologies, some programs seem to prioritize reaping short term economic benefits rather than long term sustainable development goals. Canada's Clean Energy Fund is one example of short term economic gain being prioritized. As a government R&D project, the Clean Energy Fund is an investment of \$316 million to advance clean energy technologies. Most of that money is spent in support of large scale carbon capture and storage programs in fossil fuel plants, whereas only \$26.4 million is spent on the development of clean energy systems.¹⁸⁸ Although carbon capturing is an important technology, Canada must make a quick transition towards innovating in green technologies. In the future, the global demand for oil is projected to decline due to the current demand for oil coming from mainly developing countries who are seeing growth in their economies begin to slow down.¹⁸⁹ Therefore, it is both economically sensible and beneficial for the environment if the majority of resources from government research programs were to go to innovating new clean energy systems rather than further developing technology with relation to fossil fuels.

It cannot be denied that Canada's green technology sector has not been developing at a steady rate within the past decade. Some aspects of the industry such as wind and solar energy remain underdeveloped and a mere shell of what it could become. In addition, current government R&D projects plan more towards

¹⁸⁴ "Energy Policies of IEA Countries - Canada 2015 Review," *International Energy Agency*, (2016): 210. <https://www.iea.org/publications/freepublications/publication/EnergyPoliciesofIEACountriesCanada2015Review.pdf>.

¹⁸⁵ Natural Resources Canada, "Energy Fact Book 2016-2017," (2016), 88; 87.

¹⁸⁶ "Energy Policies of IEA Countries - Canada 2015 Review," *International Energy Agency*, (2016): 226. <https://www.iea.org/publications/freepublications/publication/EnergyPoliciesofIEACountriesCanada2015Review.pdf>.

¹⁸⁷ Canada's National Energy Board, "Canada's Energy Future 2016," (2016), 18.

¹⁸⁸ "Energy Policies of IEA Countries - Canada 2015 Review," *International Energy Agency*, (2016): 253. <https://www.iea.org/publications/freepublications/publication/EnergyPoliciesofIEACountriesCanada2015Review.pdf>

¹⁸⁹ Canada's National Energy Board, "Canada's Energy Future 2016," (2016), 15.

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short term benefit than for long term goals. If Canada can pivot and focus more upon developing the renewable energy technology industry, then the nation would have the potential to be a leader in sustainable development and would also be economically sound due to job creation and fulfill previous environmental international obligations.

Green Technology Policy Recommendations

Within this section of the report, policy recommendations are offered in regards to the future of green technology. These recommendations revolve around the concept of improving Canada's environmentally friendly practices through the use of green technology and also ensuring that the country is able to make that improvement without harming the economy. Therefore, it is important to recognize the importance of the Canadian oil industry regardless of its negative environmental impacts because of prior large investments made into that industry.

The future of Canadian oil is projected to remain profitable in the near future, increasing in price by 56 percent by 2040.¹⁹⁰ In addition, a rapid complete transition away from oil to green technologies would be economically detrimental as current investments, oil that has not yet been extracted, and remaining capital would more or less all go to waste. It is estimated that such a transition would waste more than \$100 trillion worth of stranded assets.¹⁹¹ Therefore it is not advised to completely abandon the oil sands at this time; however crucial steps must be made to begin a transition towards greener technologies as the price of oil is highly volatile and difficult to predict. In 2014 and 2016, global oil prices decreased by 70 percent due to an oversupply of crude oil in the market coupled with the deceleration of Chinese and European economic growth.¹⁹² Furthermore, it is projected that by 2040 electric cars will become 150 times more popular than they are today, working towards eventually replacing cars that run on gasoline.¹⁹³ It is only a matter of time until a low-cost car battery is created that will lower the price of electric cars and as a result the demand and price of oil.¹⁹⁴

In order to make the green transition smoother, it would be necessary to continue current practices in the oil sands, as well as make related technology more sustainable. Carbon capturing is one technology that is absolutely necessary for Canada to utilize during this time of transition. Carbon capturing devices

¹⁹⁰ Ibid, 3.

¹⁹¹ Tyler Hamilton, "Die or Adapt: Can Big Oil Transition to a Low-Carbon Economy," *Corporate Knights* (2015): 28.

¹⁹² Renewable Energy Policy Network for the 21st Century, "Renewables 2016 Global Status Report," (2016), 29.

¹⁹³ International Energy Agency, "World Energy Outlook 2016," (2016), 3.

¹⁹⁴ Tyler Hamilton, "Die or Adapt: Can Big Oil Transition to a Low-Carbon Economy," *Corporate Knights* (2015): 28.

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capture carbon dioxide emissions and stores them so that they are not released into the atmosphere.¹⁹⁵ Canada's adoption of this technology would allow it to cut emissions from oil sand extraction operations, and limit the carbon dioxide emissions released from coal-fired electricity generation. Provinces such as Alberta and Saskatchewan which burn the most coal in Canada would be able to greatly limit their emissions.¹⁹⁶

In terms of developing new renewable resource infrastructure, Canada is already a leader in hydroelectricity and still has the potential to increase its capacities.¹⁹⁷ Within the country there is still over 160,000 MW of energy that can be used only if the necessary infrastructure is built.¹⁹⁸ This could be highly advantageous given that a recent document created by the United States called the "U.S. Clean Power Plan 2015" outlines a strict set of new regulatory measures that have been put in place to limit carbon emissions from American firms. In light of this, American companies are encouraged to seek other methods of obtaining energy that does not involve emitting carbon emissions themselves such as importing energy from Canadian sources.¹⁹⁹ By further developing Canada's hydroelectric potential, the country is securing itself environmentally as well as making a smart economic move.

Canada is currently behind in the development of wind, solar and geothermal infrastructure. However, thanks to Canada's extensive geography, development in these areas is possible.²⁰⁰ Solar energy in particular benefits from Canada's wide area, capable of meeting its 2010 energy demand with only 125,000 square kilometers of solar farming.²⁰¹ Wind energy is sparse with a majority of wind farms located in eastern Canada and only accounting for 6 percent of the country's electricity demand.²⁰² However, offshore wind energy is the second largest potential renewable resource for Canada, with the most untapped potential in British Columbia. Currently, Canada has very limited geothermal infrastructure within the

¹⁹⁵ U.S. Greenhouse Gas Abatement Mapping Initiative, "Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost?" (2007): 60.

¹⁹⁶ Jeff Rubin, "Economic Opportunities from a Changing Climate," *Centre for International Governance Innovation*. (2017): 5.

¹⁹⁷ Renewable Energy Policy Network for the 21st Century, "Renewables 2016 Global Status Report," (2016), 21.

¹⁹⁸ Jeff Rubin, "Economic Opportunities from a Changing Climate," *Centre for International Governance Innovation*. (2017): 5.

¹⁹⁹ Canada's National Energy Board, "Canada's Energy Future 2016," (2016), 18.

²⁰⁰ Christopher Barrington-Leigh and Mark Ouliaris, "The Renewable Energy Landscape in Canada: A spatial analysis," *Renewable and Sustainable Energy Reviews* (2015): 1.

²⁰¹ *Ibid*, 4.

²⁰² "Installed Capacity," *CANWEA*, accessed March 3, 2017, <http://canwea.ca/wind-energy/installed-capacity>

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country; however, once created it is will be a strong renewable resource in British Columbia and northern Alberta.²⁰³

Although investing resources into developing hydro, solar, wind and geothermal energy is necessary for the green transition and our international commitments, the problem of effectively transporting the energy across provinces and great distances must be solved.²⁰⁴ Much of the time, areas where there is high potential for the creation of renewable infrastructure suffer from being located in sparsely populated areas where it is difficult to justify building expensive infrastructure.²⁰⁵ However, by investing in more efficient energy transportation methods, provinces that require more energy than their neighbors will be able to affordably access that energy. Plans are currently in place in Canada to create a few interprovincial energy transportation lines; British Columbia, a strong hydroelectricity producer, has proposed a transmission line to Alberta.²⁰⁶ Plans such as these are crucial for Canada's international reputation because they will allow Canada to reach internationally set carbon emission goals. Transmission lines would connect to provinces such as British Columbia, Manitoba, Ontario, and Quebec who are usually regarded as power exporters, and allow them to manage domestic electricity demand with their surplus energy.²⁰⁷

The creation of new energy technologies could also benefit Canada by making the nation an important player in the global climate change movement. Emerging economies, namely those in Latin American and Africa, follow similar development paths to the West and given their rapid growth and the West's current transition to a greener economy. These nations can be influenced and supported to follow a more sustainable approach. The competition for these markets will be decided by which country will be able to provide the best renewable technology rather than who can provide the most natural resources.²⁰⁸ Canada's investment in sustainable technology development today will serve to promote them on the world stage as leaders of climate change technology and earn a share of the emerging nation's renewable energy market.

²⁰³ Christopher Barrington-Leigh and Mark Ouliaris, "The Renewable Energy Landscape in Canada: A spatial analysis," *Renewable and Sustainable Energy Reviews* (2015): 6.

²⁰⁴ Canadian Electronic Library, "Acting on Climate Change," (2016): 32.

²⁰⁵ Christopher Barrington-Leigh and Mark Ouliaris, "The Renewable Energy Landscape in Canada: A spatial analysis," *Renewable and Sustainable Energy Reviews* (2015): 2.

²⁰⁶ Jeff Rubin, "Economic Opportunities from a Changing Climate," *Centre for International Governance Innovation*. (2017): 7.

²⁰⁷ "Energy Policies of IEA Countries - Canada 2015 Review," *International Energy Agency*, (2016): 224. <https://www.iea.org/publications/freepublications/publication/EnergyPoliciesofIEACountriesCanada2015Review.pdf>

²⁰⁸ Government of Canada, "Canada in a Changing Global Energy Landscape," (2016): 7

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Therefore, it is recommended that in order for Canada to secure a smooth transition towards a sustainable economy, infrastructure must be developed in both the oil industry to reduce emissions in the near future as well as in green technology for sustainable long term development. Furthermore, it is crucial that transportation lines are constructed between provinces to allow provinces that have a surplus of renewable energy to trade with those that still rely on coal for energy. By implementing these measures, Canada is not only securing itself environmentally for the future, but also economically by becoming a leading nation in the global transition towards green technology.

THE ARCTIC: POTENTIAL FOR ECONOMIC GROWTH AND MULTILATERALISM

Canada's vast northern region is particularly susceptible to the impacts of climate change and is an area in which the Canadian government should focus on implementing sustainable development policies to preserve the environmental integrity of the Arctic and its communities. The Arctic represents 40 percent of Canada's landmass, which fosters several crucial ecosystems and is the home of a large indigenous population.²⁰⁹ A number of actors and states have made claims to the region, which has made it important for Canada to act multilaterally and collaborate with others in addressing the issues which effect the Arctic, mainly through the Arctic Council.²¹⁰

Current Practices

The Canadian Government began oil drilling practices during the 1970s. This practice of energy exploration and development goes through cycles which vary by decade.²¹¹ In the mid-1980s world oil prices and oil demand began to decline, preventing further hydrocarbon exploration at that time. In 2007 there was an increase in global oil prices which resulted in political efforts to build Canada's energy economy.²¹² This included a focus on militarizing the Arctic because of disputed territory and controversy over the status of the Northwest Passage.²¹³

The Canadian government traditionally worked cooperatively with the other circumpolar countries in securing the Arctic and handling issues that arose. During the Harper administration, Canadian policy

²⁰⁹ "Arctic," World Wildlife Fund, accessed March 2, 2017 <http://www.wwf.ca/conservation/arctic/>.

²¹⁰ Arctic Council, accessed March 3, 2017, <http://arctic-council.org/index.php/en/>.

²¹¹ Sarah Gulas, Mitchell Downtown, et al. "Declining Arctic Ocean oil and gas developments: Opportunities to improve governance, and environmental pollution control," *Marine Policy* 75 (2017): 57, accessed March 11, 2017.

²¹² Gulas, Downtown, et al. "Declining Arctic Ocean oil and gas developments," 57.

²¹³ R. Huebert, G. Exner-Pirot, A. Lajeunesse, J. Gullede, "Climate change and international security: The Arctic as a Bellwether," *Center for Climate and Energy Solutions* (2012): 19, accessed March 10, 2017.

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shifted to emphasize unilateral action and projected force into the Arctic to solidify Canada's claims on the territory.²¹⁴ This was in part because the Canadian government argued that the Northwest Passage was an exclusive right of Canada's territory and not an international strait. The Harper government was criticized for anti-multilateralism and having a limited focus on maintaining Canada's global position as an energy superpower.²¹⁵ There are a number of continuing offshore exploration initiatives in the Arctic at this time from the previous government, which may be potential sources of economic gain but can pose significant problems to the environmental integrity and sustainability of the region.²¹⁶

The current policy of the Canadian government in the Arctic addresses the criticisms of the Harper era, and is designed to be more cooperative and sustainable. Canadian Arctic policy is centered on close collaboration with the United States, including through research and development, the reduction of greenhouse gas emissions, and the development of a sustainable Arctic economy.²¹⁷ While it may have been beneficial to tie climate and economic policy with the U.S. during the Obama administration, President Trump has different priorities. The Trump administration is likely to pursue policies which have immediate economic benefit rather than working towards environmentally sound policies and standards.²¹⁸ The Canadian Government must adapt its approach to the Arctic to prevent following the model which has been prescribed in the U.S. The Canadian government must develop a policy which is reactive to changes in the circumstances in the Arctic, and establishes regulations for sustainable economic development in the future as the ice continues to melt.

Arctic Policy Recommendations

Canada's Arctic region is particularly susceptible to climate change, and each decade there is a 13.3 percent decrease in sea ice coverage relative to the 1981 to 2010 average.²¹⁹ The loss of ice combined with warming temperatures alters the geography of the Arctic, and exposes new transport routes and resources.

²¹⁴ Huebert, Exner-Pirot, Lajeunesse and Gulledge, "Climate change and international security," 27.

²¹⁵ Peter Stoett and Mark S. Kersten, "Beyond ideological fixation: ecology, justice, and Canadian foreign policy under Harper," *Canadian Foreign Policy Journal* (2014): 229, accessed March 10, 2017.

²¹⁶ Paul Barnes, "Industry Perspectives on Offshore Oil and Gas Development and R&D in Canada's Arctic," Canadian Association of Petroleum Producers (2015): 14.

²¹⁷ "US-Canada Joint Statement on Climate, Energy, and Arctic Leadership," Washington D.C., United States of America, March 10, 2016, <http://pm.gc.ca/eng/news/2016/03/10/us-canada-joint-statement-climate-energy-and-arctic-leadership>.

²¹⁸ Alex Brockman, "Trump may have difficulties reversing Obama's offshore drilling ban," in CBC News, January 25, 2017, <http://www.cbc.ca/news/canada/north/donald-trump-offshore-drilling-reversal-1.3950858>.

²¹⁹ "Arctic Sea Ice Minimum," Global Climate Change – NASA, accessed March 5, 2017, <https://climate.nasa.gov/vital-signs/arctic-sea-ice/>.

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The Canadian government needs to implement an economic policy which takes advantage of the change in climate, but which is also cognizant of the need for sustainable development and uniqueness of the Arctic as a region with multiple actors. While the Arctic has the largest untapped gas reserves and undeveloped oil reserves, the Canadian government must mitigate risk and work towards other means of economic growth in the domestic sphere, while establishing regulations for other circumpolar states that pursue resource exploitation policies which are inherently damaging to the environment.²²⁰ The impacts of climate change on the Arctic present Canada with an opportunity to strengthen the relationship with other circumpolar states through the increased use of the Arctic Council. While the Arctic is both an environmental, economic and security concern, this policy recommendation will focus on specific political and economic concerns in the area, rather than security implications of the region.

Canada has an opportunity to work as a “steward” in the Arctic, and can mediate between different actors who have significantly different opinions on how to approach the area now that it is becoming more easily accessible through multilateralism.²²¹ Current practices regarding the Arctic are less clear under the Trudeau administration than Harper, and the most recent “Canada’s Northern Strategy” document is dated from 2009.²²² Although the US-Canada Joint Statement made at the end of 2016 promised coordination between the two countries in improving environmental protections in the Arctic, no official action plan documents have been produced by the Government of Canada.²²³

The Liberal government has the opportunity to take a new direction regarding Arctic foreign policy, and address the criticisms of the Harper era. Canada, as a member of the Arctic Council, acted as chair for the 2013-2015 period. Prime Minister Harper was able to set the agenda for this organization, and moved away from traditional topics of environmental protection and sustainability to focus on potential economic development within the region.²²⁴ The Arctic Economic Council was established, and was criticized harshly because of its self-interested focus on economic development over environmental sustainability. Greenpeace

²²⁰ “Arctic,” World Wildlife Fund, accessed March 2, 2017 <http://www.wwf.ca/conservation/arctic/>.

²²¹ Heather Exne-Pirot and Joel Plouffe, “In Search of a Concrete Arctic Policy,” Open Canada, October 6, 2016, <https://www.opencanada.org/features/search-concrete-arctic-policy/>.

²²² “Canada’s Northern Strategy: Our North, Our Heritage, Our Future,” Government of Canada, accessed March 4, 2017, <http://www.northernstrategy.gc.ca/cns/cns-eng.asp>.

²²³ Exne-Pirot and Plouffe, “In Search of a Concrete Arctic Policy,” <https://www.opencanada.org/features/search-concrete-arctic-policy/>.

²²⁴ Heather Exner-Pirot, “Canada’s Arctic Council chairmanship (2013-2015): a post-mortem,” *Canadian Foreign Policy* 22.1 (2016): 87, accessed March 3, 2017, <http://dx.doi.org/10.1080/11926422.2015.1115772>.

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released a statement arguing that this was a direct exploitation of Arctic resources because it negated the prime function of the Council which was to consider and negate negative impacts on the environment.²²⁵

Trudeau announced in early January 2017 that the Canadian government would freeze the extension of exploration licenses for a number of oil firms for an initial five-year period.²²⁶ The suspension of oil and gas development projects in Canadian Arctic waters have effects on the economic growth of the Northern provinces and territories, who are now unable to take advantage of these opportunities.²²⁷ Non-renewable resource exploitation still dominates the federal northern economic development plan, and there must be economic diversification to maintain the growth and stability of such economies.²²⁸ The government defends its position by arguing that an oil leak could have catastrophic consequences in the North, and the unilateral declaration was welcomed by the international community who support the global transition to a clean economy. Alex Speers-Roesh, a Greenpeace campaigner, said that developing Arctic oil in the future would go against Canada's emissions reduction pledges undertaken as part of the Paris Climate agreement, and would not be compatible with a transition to a low-carbon global economy.²²⁹

The announcement banning offshore oil drilling in the Arctic was done in conjunction with former U.S. President Obama, who attempted to guarantee environmental protections in the future. However, President Trump has made it clear that the priority for his term in office is to exploit resource markets and re-invest in energy industries.²³⁰ It is likely that he will try to overturn Obama's policies in the Arctic. Canada also has Russia to consider. The Russian government has claims to the Arctic and wants to capitalize on the oil which is becoming more accessible due to melting ice. The Russian government engages both in active offshore oil drilling and militarization of the area.²³¹ However, the Russian government has in the past been

²²⁵ *Ibid*, 90.

²²⁶ Josh Wingrove and Robert Tuttle, "Canada Rules Out Arctic Oil Drilling Extensions for Exxon and BP," in Bloomberg January 6, 2017, accessed March 4, 2017, <https://www.bloomberg.com/news/articles/2017-01-06/canada-rules-out-arctic-oil-drilling-extensions-for-exxon-and-bp>.

²²⁷ Rob Huebert, "Trudeau's Arctic oil decision a fresh example of Canada ignoring the North," in The Globe and Mail January 6, 2017, accessed March 4, 2017, <http://www.theglobeandmail.com/opinion/trudeaus-arctic-oil-decision-a-fresh-example-of-how-canada-ignores-the-north/article33534313/>.

²²⁸ Frances Abele, "The North in New Times: Revising Federal Priorities," in *North of 60: Toward a Renewed Canadian Arctic Agenda (CIGI)*, ed. John Higginbotham and Jennifer Spence (Waterloo: CIGI, 2016): 7.

²²⁹ Abele, 7.

²³⁰ Alex Brockman, "Trump may have difficulties reversing Obama's offshore drilling ban," in CBC News January 25, 2017, accessed March 3, 2017, <http://www.cbc.ca/news/canada/north/donald-trump-offshore-drilling-reversal-1.3950858>.

²³¹ Rob Huebert, "Russia and North America Diverge on Arctic Resources," Arctic Deeply (February 3, 2017), accessed March 4, 2017, <https://www.newsdeeply.com/arctic/community/2017/02/03/russia-and-north-america-diverge-on-arctic-resources>.

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committed to abiding by rules in regards to the Arctic, including discussing the possibility of collaboration with Canada on the issue of international shipping in the Arctic to preserve the quality of the maritime environment.²³² The Canadian government must be strategic in its approach to the Arctic, considering the diverging policies of Russia and the U.S., who are more inclined to exploit the natural resources for short-term economic profit over long-term sustainability initiatives and policies. The best way to engage with these countries is through both the Arctic Council and bilateral or multilateral agreements.²³³ The Arctic Economic Council was established in 2014, and it presents an opportunity for Canada to discuss such issues and create regulations with partner countries in safe environmental practices. In the short-term timeframe, Canada should focus on using this institution as a means to achieve some transparency with both the American and Russian governments. Oversight will be crucial in ensuring that if exploitative policies are implemented, there will be some degree of safety, regulation, and response. While its establishment was criticized previously, economic development in the Arctic is a reality which needs to be addressed, and this is a forum where realistic solutions which incorporate environmental protection can be discussed with relevant actors.

The Canadian Government must select specific initiatives regarding economic and environmental policy to pursue within the short term to ensure economic sustainability in the long run. The loss of Arctic ice, as mentioned previously, increases the potential for commercial shipping through the Arctic Ocean. A 2009 Arctic Marine Shipping Assessment (AMSA) concluded that this could pose a serious threat to the region's ecosystem, and that oil pollution would be the most significant threat of increased shipping activity.²³⁴ The Canadian Government must adopt regulations for oil pollution prevention, obtaining the necessary equipment and vessel structures as outlined by the International Maritime Organization (IMO).²³⁵ The enforcement of pollution prevention measures and regulations is carried out primarily by the Canadian Coast Guard, which currently operates 43 vessels.²³⁶ Canada also has a National Aerial Surveillance Program (NASP), which is used for both enforcement and surveillance. However, there is no emergency unit with which would be able to respond to an oil spill incident in the Canadian Arctic.²³⁷ This function must be

²³² Kari Roberts, "Why Russia will play by the rules in the Arctic," *Canadian Foreign Policy Journal* 21.2 (2015): 117, accessed March 10, 2017.

²³³ Gulas, et al. "Declining Arctic Ocean oil and gas developments," 58.

²³⁴ Devon Emily Thorsell and Thomas M. Leschine, "An evaluation of oil pollution prevention strategies in the Arctic: A comparison of Canadian and U.S. approaches," *Marine Policy* 72 (2016): 255, accessed March 4, 2017.

²³⁵ *Ibid*, 257.

²³⁶ *Ibid*, 258.

²³⁷ *Ibid*, 258.

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developed in future years as transportation increases in the Arctic, and should be pursued with other circumpolar countries to coordinate efforts. Even though it is likely that countries, like the U.S., might pursue extractive policies, this coordination will ensure a quick response mechanism to prevent extensive damage should spills occur.

Another aspect to consider is the use of heavy fuel oil (HFO), which could cause long-term damage to the environment. In December 2016, the Canadian and U.S. governments announced a cooperative effort to reduce HFO's from their respective arctic regions.²³⁸ Both countries have agreed to propose a plan for the next meeting in July 2017 to implement the necessary work, but in light of the new administration in the U.S. this effort is uncertain.²³⁹ Instead, Canada should look to Norway as an example of policy framework and a partner in handling oil spills. In the long-term Canada should prioritize relations with Norway because of its environmentally friendly approach and progressive policy. Bilateral agreements between countries should be established to help coordinate cleanup efforts in case of potential spills – which could help prevent potential conflicts between nations if an oil spill occurred between national waters.²⁴⁰ Canada should work through the Arctic Council to establish “predictive management tools” (SEAs) for each circumpolar state to adopt to reduce risks of oil spills.²⁴¹ Such policy prevention tactics will mitigate further damage of the Arctic.

The effects of climate change in the Arctic will include a reduction in late-summer sea ice extent and a degrading of permafrost. Due to the extended warmth season there will be more tourism and cruise ships, which must be addressed and prepared for, keeping strict environmental standards and implementing a force to respond to environmental issues.²⁴² The opening of Canada's Northwest Passage will increase tourism and small craft traffic, and infrastructure must be updated and regulations imposed to meet new challenges.²⁴³ Transportation will become key to maintaining a healthy economy, and the Canadian Government must do its part to establish prevention policies to reduce pollution and negative environmental impacts.²⁴⁴ The current regulation structure is strict, and the repercussions have been the prevention of cruise tourism in the Arctic. The circumpolar Arctic is predicted to garner investments ranging

²³⁸ Sian Prior, “Time to Commit to Cleaning up Arctic Shipping,” Arctic Deeply (January 23, 2017), accessed March 3, 2017, <https://www.newsdeeply.com/arctic/community/2017/01/23/time-to-commit-to-cleaning-up-arctic-shipping>.

²³⁹ Ibid.

²⁴⁰ Gulas, et al. “Declining Arctic Ocean oil and gas developments,” 58.

²⁴¹ Ibid, 58.

²⁴² Gulas, et al. “Declining Arctic Ocean oil and gas developments,” 58.

²⁴³ “Pathways: Connecting Canada's Transportation System to the World Volume 1,” Government of Canada, Ministry of Transport (2015): 58, accessed March 4, 2017.

²⁴⁴ Ibid, 88.

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from \$145 to \$325 billion over the next decade as climate change improves international shipping routes.²⁴⁵ It is important to provide the platform for tourism to develop because it is a more sustainable way of pursuing economic growth in the Northern region, and it has potential to be complementary to the cultures and traditions of indigenous populations in the region.²⁴⁶

The current Coasting Trade Act (CTA), while designed to protect Canadian shipping, acts as a barrier to the development of a strong tourism industry, with cruises now beginning in Greenland to avoid the expensive duty tax associated with the CTA.²⁴⁷ To overcome this obstacle the Government of Canada must adopt a simpler procedure to ensure that cruise ships are able to pass through. Furthermore, there needs to be more attention paid to gathering post-trip data, in conjunction with other Arctic Council countries, to help regulators decide on the placement of search and rescue teams and further positively develop tourism infrastructure to adhere to environmental standards.²⁴⁸ The Arctic is a highly contested area, and in order to handle environmental, security, and economic risks there must be coordination with the other circumpolar countries. This cooperative approach to policy will improve relations with Arctic Council members, and create a safer and more secure environment to pursue sustainable economic initiatives.

The Arctic will continuously change in the coming decades, and in order to respond appropriately, the Canadian Government must be equipped with the best research and scientific assessments. Information sharing should be encouraged through the Arctic Council, and Canada should push for initiatives in technology sharing and scientific collaboration with other members.²⁴⁹ Ultimately, the Arctic Council is the best mechanism to address issues in the Arctic in a cooperative and multilateral manner. By using this forum to develop policy and implement regulations, Canada can help encourage other nations to adapt the same standards in economic development, further protecting the Arctic from the consequences of climate change in the long-term.

²⁴⁵ Jackie Dawson, Margaret Johnston, and Emma Stewart, "The unintended consequences of regulatory complexity: The case of cruise tourism in Arctic Canada," *Marine Policy* 76 (2017): 71, accessed March 11, 2017.

²⁴⁶ *Ibid.*, 72.

²⁴⁷ *Ibid.*, 71.

²⁴⁸ Dawson, Johnston, and Stewart, 77.

²⁴⁹ "Scientific Cooperation Task Force," Arctic Council, accessed March 5, 2017, <http://www.arctic-council.org/index.php/en/task-forces/74-sctf>.

THE DIGITAL ECONOMY

Current Practices

Currently, Canada has a substantial Information and Communications Technology (ICT) sector that serves as the backbone of Canada's digital economy. In 2015, the ICT sector accounted for 4.4 percent of the national GDP and has been growing faster than the overall economy.²⁵⁰ There are more than 37 400 companies in the ICT sector that employ more than 500,000 workers, which accounts for 3.3 percent of national employment.²⁵¹ The ICT sector accounts for companies and employees that are directly related to ICT goods and services, so it is important to keep in mind that there are numerous ICT departments within non-ICT companies that also connect companies to the digital economy. Furthermore, the Canadian ICT sector is export-heavy with 87 percent of products manufactured in Canada being exported.²⁵² This clearly outlines a large Canadian stake in the global digital economy.

The current digital policy is laid out in the Digital Canada 150 strategy that was released in 2014 under the Harper government.²⁵³ The main priority under this strategy was connecting Canadians by providing broadband internet. The plan further lays out initiatives to bolster cybersecurity, improve digital governance, and to promote Canadian content in the digital world. Regarding "Economic Opportunities," Digital Canada largely consists of supporting organizations or funds through investments in the technology sector and STEM academia. The current digital strategy fails to recognize the opportunity to re-develop the national economy in a more symbiotic fashion with sustainable priorities. Any digital strategy needs to assess how the benefits of a digital economy can be used beyond just economic growth.

In the 2016 budget, there is relatively little mention of any explicit digital policy. The only three directly related initiatives were linking Canadian tech companies to global markets, improving rural broadband access, and improving data on the clean tech sector.²⁵⁴ Despite the significance of these areas, there is no clear, identifiable digital policy. This indicates that it is not a priority. The rapid pace of development in digital technologies will not wait for governments to adapt. It is crucial for the federal

²⁵⁰ "2015 Canadian ICT Sector Profile," Innovation, Science and Economic Development Canada, accessed March 10, 2017, https://www.ic.gc.ca/eic/site/ict-tic.nsf/eng/h_it07229.html.

²⁵¹ Ibid.

²⁵² Ibid.

²⁵³ "Digital Canada 150," Government of Canada, accessed March 1, 2017, <http://www.ic.gc.ca/eic/site/028.nsf/eng/home>.

²⁵⁴ "Budget 2016," Government of Canada, accessed March 12, 2017, <http://www.budget.gc.ca/2016/docs/plan/toc-tdm-en.html>.

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government to prioritize digital policy because Canada needs to use its advantage to compete in the global economy.

Policy Recommendations for Bolstering Economic Competitiveness

Skills Gap – Domestic Talent

Although Canada has a productive ICT sector, there is a skills gap that needs to be addressed to maintain competitiveness in the digital economy. By 2020, Canada will need more than 200,000 ICT workers to meet the needs of an increasingly digitized business environment.²⁵⁵ In order to address the skills gap, Canada needs to spur domestic talent and attract global talent. Domestically, women need to be engaged and youth need to be supported to pursue ICT careers. The level of engagement of women in ICT has been 25% for the last decade.²⁵⁶ The Government of Canada should provide and support targeted programs and scholarships for more women to enter the ICT sector. Moreover, Canada needs to invest in digital literacy in early education to ensure that the youth are prepared to grow and support an economy based on foundational digital technologies.

Skills Gap – Global Talent

Attracting global talent is another area where Canada has an advantage and solidifies the national economy in the short-term. While fostering domestic digital talent, it is important to attract global digital talent in order to retain the best and brightest minds to support Canada's digital economic competitiveness. In general, Canada is already considered one of the best places to live, which ensures there is foreign demand for immigration. From 1998-2010, the Facilitated Processing for Information Technology Workers Program produced an expedited process for highly-skilled foreign workers and it did so without negative effects on wage rates or unemployment.²⁵⁷ Given the large demand of ICT workers by 2020 and the domestic skills gap, attracting global talent remains a foreign policy priority to ensure economic prosperity in the short-term. This will lay the foundation for a smooth transition to a digital economy in the long-term.

Digital Infrastructure

²⁵⁵ Information Technology Association of Canada, "ITAC on Talent," December 6, 2016, accessed March 10, 2017, <http://itac.ca/wp-content/uploads/2016/03/ITAC-on-Talent-November-2016.pdf>.

²⁵⁶ Ibid.

²⁵⁷ Jeremy Depow, "Thoughts on the Global Race for Digital Skills," Canada's Digital Policy Forum, July 13, 2016, accessed March 11, 2017, <http://cdpf.ca/publications/#>.

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In addition to digital talent, creating and maintaining a strong digital infrastructure is foundational for Canada's economic competitiveness. The 2014 Digital Canada strategy provided numerous households with access to broadband internet; however, there were no set targets and the internet speed was a mere 5 megabits per second.²⁵⁸ While the initiative was a step in the right direction, the Canadian Radio-television and Telecommunications Commission (CRTC) produced an improved strategy in December 2016 by treating broadband access as a basic essential service.²⁵⁹ This plan has much higher internet speeds (50 mbps) and unlimited data allowance, making the quality of service more useful than its predecessor. Quality of data speed is not hard to achieve, but "the diffusion of additional high speed subscriptions in developed countries open up new markets," especially in underserved areas in Canada.²⁶⁰ Therefore, it is highly recommended that the Government define specific targets and install review mechanisms in order to ensure successful implementation of this initiative.²⁶¹ By doing so, it would also ensure more trust and reliability in the project from an investor's perspective. This is important because attracting foreign investment for the National Broadband Plan, especially from foreign stakeholders in Canadian markets, would help Canada connect to the global digital economy. Therefore, attracting foreign investment in Canada's digital infrastructure should be a priority in foreign policy.

Digital Trade

As mentioned earlier, the Canadian ICT sector exports the majority of its products. Therefore, it is essential that Canada removes trade barriers for digital technologies and helps Canadian companies compete in the global economy. Canada must eliminate tariffs and regulations that hinder Canadian companies from adopting and selling digital technologies with the aim of easing access.²⁶² Canada should support initiatives like the proposed International Digital Economy Agreement, which aims to liberalise

²⁵⁸ "Digital Canada 150," Government of Canada, accessed March 1, 2017, <http://www.ic.gc.ca/eic/site/028.nsf/eng/home>.

²⁵⁹ "Closing the Broadband Gap," Canadian Radio-television and Telecommunications Commission, accessed March 11, 2017, <http://www.crtc.gc.ca/eng/internet/internet.htm>.

²⁶⁰ Ana L. Abeliasky and Martin Hilbert, "Digital technology and international trade: Is it the quantity of subscriptions or the quality of the data speed that matters?" *Telecommunications Policy* 41 (2017), 42.

²⁶¹ Chris Gray and Kristina Proulx, "Canadian Business Speaks Up: An Analysis of the Adoption of Internet-based Technology," The Canadian Chamber of Commerce, February 2017, accessed March 11, 2017, <http://www.chamber.ca/download.aspx?t=0&pid=be66f511-02f3-e611-ad7d-005056a00b05>.

²⁶² Danielle Goldfarb, "Canada's Trade in a Digital World," The Conference Board of Canada, April 2011, accessed March 10, 2017, <http://www.conferenceboard.ca/reports/briefings/tradingdigitally/pg3.aspx#ftn43-ref>.

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trade for all ICT and digital technologies by eliminating tariffs and non-tariff trade barriers.²⁶³ By removing trade barriers, Canada can allow greater access for companies to engage foreign markets. Furthermore, Canada should increase help in facilitating trade missions for small and medium-sized enterprises (SMEs) to create business relationships abroad. Currently, the Canadian Technology Accelerators program provides a good foundation for trade facilitation initiatives for the ICT sector.²⁶⁴ Currently, it has programs mostly based in North America, while only extending outwards to the UK, France, and India. The Canadian Trade Commissioner Service should seek to expand the destinations that this program is offered and partner with Canadian ICT associations that already undertake such missions. For example, the Information Technology Association of Canada conducts ICT trade missions to places like Dubai and Bengaluru, which are tech hubs in their respective countries.²⁶⁵ These missions provide Canadian SMEs an opportunity to be guided to the relevant conferences and events for making business relationships with foreign companies that lead to market breakthroughs. By providing trade relief and business opportunities, Canada has the opportunity to elevate Canadian businesses to become more competitive in the global economy.

POLICY RECOMMENDATIONS FOR PURSUING SUSTAINABLE DEVELOPMENT

ICT and digital technologies provide a significant opportunity to decouple economic growth from environmental harm to ensure long-term sustainability. This section will present two examples of areas where Canada can provide policy initiatives in harnessing these technologies to achieve a more sustainable future. The first is smart grid technology and the second is dematerialization of information. Both show that it is possible to reduce unsustainable practices while improving economic efficiency.

Smart Grid

Smart grid technology addresses energy usage and provides a solution to optimize efficiency, which in turn leads to financial savings and reductions in carbon emissions. Smart grid is an interconnected set of software and hardware tools that provides specific and real-time information to end-users and grid operators.²⁶⁶ This means consumers would have access to specific data on their energy usage, which allows

²⁶³ EU Trade Policy Study Group, "A Modern Trade Policy for The European Union," European Centre for International Political Economy, January 2010, accessed March 12, 2017, 17-18.

²⁶⁴ "Canadian Technology Accelerators," The Canadian Trade Commissioner Service, accessed March 12, 2017, <http://tradecommissioner.gc.ca/world-monde/cta-map-atc.aspx?lang=eng>.

²⁶⁵ "International Business Development," Information Technology Association of Canada, accessed March 11, 2017, <http://itac.ca/smeportal/foreign-business-development/>.

²⁶⁶ Eli M. Noam and Lorenzo M. Pupillo and Johann J. Kranz, *Broadband Networks, Smart Grids and Climate Change* (New York: Springer, 2013), 194.

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them to consume energy more efficiently.²⁶⁷ By engaging in smart grid, consumers would be able to accurately tailor their usage to maximize efficiency, thereby saving money and reducing wastage of energy. Also, smart grid technology would enable a smoother process of integration for renewable energy sources as they become more prevalent.²⁶⁸ Through these two benefits, governments could use this technology to meet their carbon emission reduction goals.

SmartGrid Canada is an NGO working with Canadian utility companies to help transform the current state of energy usage in Canada. It is also conducting trade missions abroad with Canadian companies and Global Affairs Canada (GAC) to research global markets for Canadian smart grid technology companies.²⁶⁹ There have been trade missions to Turkey, India, Brazil, and the Nordic countries so far. GAC should continue to support these kinds of initiatives and expand the foreign markets that Canadian companies are catering to. The federal government should also invest further in making smart grid a success at home because it is a prerequisite for providing foreign countries with Canadian smart grid technology. By implementing policies friendly towards smart grid technology, Canada not only reduces the dependence on non-renewable energy sources but also provides a more efficient alternative to current energy usage patterns.

Dematerialisation

As part of the transition to a digital economy, dematerialisation of information will play a considerable role. There are still vast amounts of publishers and information services that continue to conduct business in the traditional practice of producing printed material. Over the lifetime of a single printed book, it was estimated that about 7.46 kg to 10.2 kg of CO₂ is produced including everything from initial production to long-term preservation costs.²⁷⁰ This would include costs related to printing, transportation, energy use mostly. By implementing a transition to electronic journals, Curtin University (in Australia) would save 730 000 tonnes of CO₂ emissions from its 18 250 annual subscriptions to various titles.²⁷¹ Although, this study was conducted in universities across Australia and New Zealand, the findings are relevant and applicable globally. With the increased availability and widespread use of digital technologies, Canada should encourage and support academic institutions to shift from printed journals to

²⁶⁷ Ibid, 195-196.

²⁶⁸ Ibid, 197.

²⁶⁹ "Global Markets," SmartGrid Canada, accessed March 12, 2017, <http://www.sgcanada.org/global-markets/>.

²⁷⁰ Gobinda Chowdhury, "How digital information services can reduce greenhouse gas emissions," *Online Information Review* 36 (August 2011), 491.

²⁷¹ Ibid, 499.

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digital versions. If a few academic institutions can contribute significantly to GHG emissions, enforcing this shift at a national level across all sectors and industries would ensure a significant decline in CO₂ emissions. This shift would not only be effective in reducing GHG emissions but it would also increase revenues, and as a result, cost reductions from transportation, printing, and storage. There are financial incentives inherently in place for businesses, universities, and other organizations to make this shift. The government needs to provide a strategic framework to effectively manage the different actors engaging in this transition.

CONCLUSION

The realities presented by climate change require a revolution in the way different policies are prioritized in Canada. Instead of viewing environmental concerns and economic priorities as oppositional, this section of the report is advocating for a far more cooperative approach. Canada's carbon-intensive economy and poor environmental record presented the authors with many challenges when compiling this section. In an attempt to address these challenges head-on, the authors decided to merge the environmental strategies with the economic strategy in an attempt to rethink the ways in which Canada can transition to a low-carbon economy through sustainable development initiatives.

There are serious challenges associated with transitioning to a low-carbon economy. This section identified what are considered to be the most important obstacles, and provided ambitious yet attainable potential solutions in each challenge's corresponding policy recommendations. Analyzing the harsh realities of the current lack of progress toward emissions reduction goals, identifying the primary tensions emanating from Canada's massive Oil Sands projects, and developing a strategy to bolster Canada's role within the international climate change regime represent three initial steps to be taken on the road to a less carbon-intensive future.

The four specific policy areas identified as particularly relevant to the overarching goal of the section serve to highlight the specific measures that can be taken starting in the next ten years, and fully materializing over a longer-term horizon. Improving Canada's international mining practices provides a much-needed reputational boost for a crucial sector of Canada's economy while reducing the environmental and social damages caused by extractive activities operating abroad. Assessing Canada's Arctic policy through the lens of economic potential as well as environmental concerns allows for a proactive approach to what will become a crucial policy area in the near and longer term. Evaluating the steps that need to be taken in order to modernize Canada's economy through the proliferation of greener technologies and further developing the digital economy both provide an alternative means of ensuring economic prosperity while offering viable alternatives to more carbon-intensive activities.

Security Policy

RATIONALE

The future of Canadian security policy is to support a liberal internationalist world order. Canada must be prepared for a wide variety of security threats that will impact the safety and security of Canadians, such as a sudden influx of migrants fleeing conflict zones, terrorist attacks, and the relative rise of state actors such as Russia and China. Canada must also be wary of the potential threats posed by the rise of non-state actors such as cyber-espionage. Despite increasing indications that global actors are moving away from multilateralism in favor of more isolationist policies, such as the Trump Administration, the British withdrawal from the European Union, and the general rise of right wing populism, Canadian interests are best served by a foreign policy focused on multilateral cooperation.²⁷² However, a stable, long-term foreign policy cannot exist without a strong contingency plan in the event that multilateralism fails to safeguard Canadian interests. This hybrid foreign policy prioritizes soft-power solutions to various global issues, while also recognizing the need for a unilateral contingency plan. A security and defense policy that complements this dual track foreign policy for Canada requires a transition into a more holistic approach.

How do Canada's security priorities and policies address the balance between hard power tools and soft power tactics?

Canadian security goals may not always be attainable through multilateral efforts and collective security. The changing leadership and interests of the international community, particularly on multilateral efforts, requires a Canada which is ready to act flexibly if any of its security relationships change.²⁷³ Should soft power fail, hard power action plans must be available. To improve hard power capabilities, Canada must modernize the state's naval and air forces, while also continuing to develop and enact liberal internationalist policies. Achieving a broader set of hard and soft power security options grants Canada a more versatile set of responses to the diverse security problems it confronts.

²⁷² James Masters and Katie Hunt, "Trump rattles NATO with 'obsolete' blast," *CNN*, January 17, 2017. <http://www.cnn.com/2017/01/16/politics/donald-trump-times-bild-interview-takeaways/>.

²⁷³ Colum Lynch, "White House Seeks to Cut Billions in Funding for United Nations," *Foreign Policy*, March 13, 2017. <https://foreignpolicy.com/2017/03/13/white-house-seeks-to-cut-billions-in-funding-for-united-nations/>.

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How do these security priorities and policies link to the overarching theme of liberal-internationalism & environmental-economic development?

To reinforce a liberal-internationalist global order and support the growth of sustainable economic and environmental development, we have highlighted six key security policies which are central to an effective Canadian long-term foreign policy. Maintaining sovereignty over Canadian Arctic territory permits control over the region's resources, allowing the region to be protected through further development and enforcement of environmental legislation. Revitalizing Canada's commitment to NATO through increased investment in specific sections of the Canadian defense budget strengthens Canada's ability to act multilaterally. Simultaneously, modernizing Canada's military will allow more effective enforcement of Canadian interests in the Arctic as well as in peace operations. Furthermore, because Canadian economic interests are directly threatened by industrial cyber-espionage, support for more effective cyber-governance policies must provide businesses in the country with the protection to maintain a competitive advantage in the global marketplace. In addition, as populist and authoritarian politicians prey on fears of terrorism to entrench illiberal practices and mass migrations are prompted by the destabilization of states, a commitment to reducing causal factors linked to radicalization serves to support a strong liberal international world order. To ensure greater global stability, a stronger Canadian contribution to UN peace operations also serves to strengthen Canadian multilateral and economic interests. A hybrid security policy made up of unilateral and multilateral initiatives balances the use of soft and hard power; and reinforces the policy priorities of economic-environmental development and liberal internationalism.

CURRENT PRACTICES

Current Canadian security policy is supportive of collective security mechanisms. Canada continues to support cooperation and collaboration based on shared security concerns with its allies, but Canadian contributions to specific security areas have been both positively and negatively received. The most significant cornerstone of Canadian security and defense policy is membership in the North Atlantic Treaty Organization (NATO). NATO is of vital importance to Canada for both domestic security and international security. NATO provides Canada with a host of allies whose support and resources provide Canada with numerous partners in the pursuit of multilateralism and international security. However, not only does the Canadian military budget hinder its ability to contribute to NATO and the UN peacekeeping force, but it compromises Canada's ability to enforce continental security, especially Arctic sovereignty. The most prominent overseas missions are Operation Artemis (counterterrorism and maritime security in middle eastern waters), Operation Impact (support for the coalition combatting ISIS), Operation Frequent

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(supporting French troops engaging in security operations in West Africa), and Operation Reassurance (promoting security in central and eastern Europe).²⁷⁴ Of the listed engagements, Operation Reassurance is the only NATO mission in which Canada has a leadership role. Canada is currently commanding the multinational battalion stationed in Latvia which is meant to demonstrate to Russia that NATO will defend the smaller states in Eastern Europe.²⁷⁵ In addition to these missions, Canada has troops committed to multiple UN peacekeeping operations and NATO missions.^{276 277} These commitments demonstrate the Canadian policy of multilateral cooperation in the promotion of international security, one that has been consistent in recent history.

Canadian policy towards terrorism has been far reaching and multifaceted. Domestically, Canadian counterterrorism policies have taken the form of a ‘resilience-based’ approach to prevent homegrown terror and radicalization.²⁷⁸ Canada has been involved in the fight against the Islamic State by assisting operations on the ground in Iraq, as well as in intelligence-sharing efforts.²⁷⁹ Recently, the Canadian Government passed Bill C-51 as a key part of its counterterrorism strategy. C-51 is an extension of the Anti-Terrorism Act, which first came into force after 9/11. The bill makes several broad changes to national security, anti-terrorism, and privacy law, creating a new terrorism offence that criminalizes the advocacy and promotion of terrorism. It also permits the pre-emptive arrest and detention of any person “likely” to commit a terrorist activity, that an officer believes “may” be carried out. In addition, C-51 gives the courts the authority to order the seizure and forfeiture of terrorist propaganda, including from Canadian websites, and allows government institutions to share information with each other about potential terrorist activities with a no-fly list. The biggest change under C-51 is the expansion in the powers of the Canadian Security Intelligence Service (CSIS), allowing it to take measures to reduce terrorist threats.²⁸⁰

Canada has welcomed refugees since the end of the Second World War, even being awarded the Nansen Refugee award by the United Nations High Commissioner for Refugees in 1986 – the only country ever to receive this award. Canada currently accepts refugees with an annual quota set at 13,500. The

²⁷⁴ "Operations Update - February 2017". *Government of Canada*. 3 February 2017.

²⁷⁵ "NATO: Rotating Battalions May Not Bolster Credibility," *Oxford Analytical Daily Brief Service*, September 22, 2016.

²⁷⁶ "Operations and Missions: Past and Present," *North Atlantic Treaty Organization*, December 21, 2016.

²⁷⁷ "Troop and Police Contributions," *United Nations*, August 31, 2016.

²⁷⁸ Government of Canada. *Building Resilience Against Terrorism: Canada's Counter-Terrorism Strategy*. <https://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/rsln-c-gnst-trrrsm/index-en.aspx>

²⁷⁹ Government of Canada. *Canada's Response to Middle East Crises and Violent Extremism*. http://international.gc.ca/world-monde/security-securite/middle_east-moyen_orient/index.aspx?lang=eng

²⁸⁰ Canadian Civil Liberties Association. *Understanding Bill C-51: The Anti-Terrorism Act, 2015*. <https://ccla.org/understanding-bill-c-51-the-anti-terrorism-act-2015/>

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screening process for refugees includes biometric and biographic screening, health screening and identity checks prior to and upon arrival in Canada. To continue providing security for refugees, Canada should continue the policy of increasing the quota in times of conflict around the world. With the Syrian crisis, the Trudeau government accepted 40,000 Syrian refugees, invested \$200 million for refugee processing and contributed \$100 million to the UNHCR. For a country with the landscape and economic capacity, it is recommended that Canada continues with the current refugee policy. Refugees have been included in the current practices because the sudden influx of refugees can be disruptive on both the lives of Canadians and Canada's economic security. The current quota set forth by Canadian officials has proven throughout the years to be the most effective. Furthermore, policymakers need to be wary of Canada's economic security. Accepting an unprecedented number of refugees will result in a need for increased government spending for social services to help these migrants transition into Canada. Thus, the current practices on refugees is the recommended policy that Canada should continue.

Canada is also a signatory to several international arms limitations treaties as a key part of its international security policy. Canada adheres to these agreements under the assumption that a world with fewer dangerous weapons is a safer world for Canada and the international community. As such, Canada has been a key player in the creation and implementation of key arms limitations treaties. Arguably, Canada's most important contribution to arms limitations has been in the realm of anti-personnel landmines. The Ottawa Convention signed in 1997 is considered by many to be the world's most successful disarmament treaty and has significantly limited the transfer, production, and use of anti-personnel landmines.²⁸¹ In the realm of nuclear weapons, Canada has ratified the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Comprehensive Nuclear-Test-Ban Treaty (CNTB), and the Fissile Material Cut-Off Treaty. Canada supports a pragmatic step-by-step approach to disarmament, the result of which would be a Nuclear Weapons Convention to ban the development, production, use, and possession of nuclear weapons.²⁸² In addition to nuclear weapons, Canada has ratified the Chemical Weapons Convention (1997) and the Biological Weapons Convention (1975), which ban the development, production, and transfer of chemical and biological weapons respectively.²⁸³ Canada has also taken significant steps to prevent the spread of weapons from falling into the hands of criminal and terrorist organizations. Canada is a part of the Global

²⁸¹ Global Affairs Canada. *Conventional Weapons*. 2016. <http://www.international.gc.ca/arms-armes/conventional-conventionnelle.aspx?lang=eng>

²⁸² Global Affairs Canada. *Nuclear Weapons*. 2016. <http://www.international.gc.ca/arms-armes/nuclear-nucleaire.aspx?lang=eng>.

²⁸³ Global Affairs Canada. *Chemical Weapons*. 2015. <http://www.international.gc.ca/arms-armes/chemical-chimique.aspx?lang=eng>

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Partnership Against the Spread of Weapons and Materials of Mass Destruction (GPP), which has undertaken projects to prevent WMD proliferation and terrorism. Canada, in 2012, announced a commitment of \$367 million over 5 years to enhance global WMD security.²⁸⁴ Since 2002, Canada has spent over \$1.2 billion on WMD threat reduction programming. Canada has and will continue to adhere to these crucial treaties and will actively support their further implementation and expansion.

Canadian Arctic territories continue to pose significant geostrategic, economic, environmental, and legal challenges for policymakers. Due to rapidly advancing climate change, the region has become a dynamic environment, with significant opportunities for shipping lanes and resource extraction being revealed as ice shelves retreat. Simultaneously, shifting landscapes pose security risks for communities in addition to threatening a destabilization of previously undisturbed relations in the region, such as with Russia and the United States.²⁸⁵ Currently, Canada's Liberal government prioritizes protecting the environmental integrity of the Arctic over potential economic developments in the region. Bilateral US-Canadian efforts in December 2016 resulted in a ban on oil and gas development in the region, with a joint statement by the two countries upholding sustainable shipping and resource extraction practices.²⁸⁶ Canadian policymakers further seek to encourage cooperation with Russian authorities on the Arctic by compartmentalizing issues in the north from events elsewhere in the world. The Government of Canada dismisses the need for military power in the region, aside from continuing the slow development of several heavy icebreakers in the region.²⁸⁷ Having already halted the purchase of Lockheed-Martin's F-35 fighters, citing the existence of more cost-efficient methods and the lack of a need for strike capabilities beyond Canadian borders, a representative for former Foreign Affairs Minister Stéphane Dion stated, "The North is not a place for military confrontation or buildup."²⁸⁸ Current Canadian disputes in the region are centered around territorial claims in the Beaufort Sea, and the legal status of the Northwest Passage. While Canadian authorities insist that the passage is sovereign territory, Canada faces international pressure from states

²⁸⁴ Global Affairs Canada. Global Partnership Against the Spread of Weapons and Materials of Mass Destruction. 2016. http://www.international.gc.ca/gpp-ppm/global_partnership-partenariat_mondial.aspx?lang=eng

²⁸⁵ Abbie Tingstad, "Will the Arctic Remain a Warm Spot in Chilly U.S.-Russia Relations?" (Santa Monica, CA: Rand Corporation, April 28, 2016) <http://www.rand.org/blog/2016/04/will-the-arctic-remain-a-warm-spot-in-chilly-us-russia.html>.

²⁸⁶ *CBC News*, "Trudeau announces review of Arctic strategy, joint drilling ban with U.S.," December 20, 2016. <http://www.cbc.ca/news/politics/trudeau-obama-arctic-1.3905933>.

²⁸⁷ Aurel Braun and Stephen Blank, "To Compete with Russia in the Arctic, Canada Will Need to Balance Hard Power with Soft Power," *Macdonald Laurier Institute for Public Policy*, February 28, 2017.

²⁸⁸ Pamela Goldsmith-Jones, "Modification - Address by Parliamentary Secretary Goldsmith-Jones, on behalf of Minister Dion, marking the 20th anniversary of the Arctic Council" (Speech, Ottawa, Canada, September 29 2016.) <http://news.gc.ca/web/article-en.do?nid=1131189>.

such as the US who consider it an international strait, seeking to bar Canada from putting restraints on passage. If Canada's goals of sustainability, environmental protection, sovereignty, and stability in the Arctic are to be achieved, a balanced and long term approach to the region is required. In summary, current Canadian practice emphasizes bilateral and multilateral solutions to pressing Arctic issues, while significantly downplaying the role of the military in asserting control over Canadian territory.

CRITICISMS

One criticism of Canada's current defense policy is the Canadian Armed Forces' (CAF) diminished capacity caused by low defense spending. The CAF are among the most engaged and responsive armed forces within NATO, and Canada has contributed to every NATO operation since the founding of the Alliance more than six decades ago. A frequent criticism of Canadian participation in NATO is the consistent failure for Canada to reach the required threshold defense spending of 2% of GDP. Canada only contributed 0.99% of GDP towards defense expenditures – 23rd out of the 28 members in NATO – of which 18.06% is spent on equipment as opposed to the required 20%, placing Canada 12th out of the 28 members in NATO.²⁸⁹ Regarding defense spending, Canada is objectively not meeting NATO commitments. The United States has previously criticized Canada's low levels of defense spending as free riding. Under President Trump, the US has underlined the long-standing problem, and insisted that other countries make a commitment to carry their share of the weight.²⁹⁰ While it must be noted that he did not specifically mention Canada, President Trump did infer that the United States may not honor its commitments to allies who fail to meet spending requirements.

Canada is not alone in failing to meet NATO targets. Many of Canada's closest allies have found it increasingly difficult to justify devoting 2% of their GDP to defense expenditures. Canada's inadequate defense spending has hampered our ability to contribute to overseas missions. This first became apparent in the 1999 air operations against the Federal Republic of Yugoslavia as part of Operation Allied Force.²⁹¹ However, the issue has not been resolved. In 2016, Canada withdrew from the air campaign under Operation Impact against the Islamic State, in part because of our limited ability to participate.²⁹² Even in missions where Canada was an active participant, the lack of capacity was apparent. The 2008 Independent Panel on

²⁸⁹ "Information on Defense Expenditures," *North Atlantic Treaty Organization*, December 8, 2016.

²⁹⁰ Donald Trump, interview by David E. Sanger and Maggie Haberman, *Transcript: Donald Trump on NATO, Turkey's Coup Attempt and the World* the New York Times, July 21, 2016.

²⁹¹ Richter, Andrew, "Sharing the Burden? U.S. Allies, Defense Spending, and the Future of NATO," *Comparative Strategy* 35, no. 4 (2016): 303.

²⁹² "Canadian Armed Forces Cease Airstrike Operations in Iraq and Syria". *Government of Canada*. 17 February 2016.

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Canada's Future Role in Afghanistan recommended that Canada improve military helicopter and unmanned aerial vehicle capacities, recommendations which were not acted upon.²⁹³ Canada must improve its military capabilities in order to be an active partner in multilateral security operations. The ability to participate in these operations makes Canada able to provide greater assistance when confronted by security threats.

Regarding a more specific lack of capacity, the Canadian Navy still lacks adequate icebreaker-class vessels. This is problematic given the large amount of Canadian territory in the Arctic, and the numerous Canadian claims to the areas of the Arctic Ocean. This issue must be remedied as many other countries have claimed the same areas, and the natural resources – primarily energy reserves – that they contain.²⁹⁴ If Arctic sovereignty is to ever become more than mere rhetoric, the Canadian government must remedy this absence.

The most significant criticism of Canadian counterterrorism policy has been directed against Bill C-51, which has faced intense scrutiny for the expanded powers it has given to CSIS and police agencies. Opponents argue that the Bill's wording is too vague, which could lead to dangerous and unlawful measures.²⁹⁵ The lack of specificity in the wording of the Bill opens it to a wide degree of interpretation, which could lead to unlawful measures being undertaken that would technically be allowed under the terms of the act. Individuals who hold controversial or even mainstream opinions about events may feel threatened to reveal their opinions at risk of being arrested for promoting terrorism. The people who choose not to communicate their views for fear of prosecution find their free speech at risk. Another criticism is that the bill undermines anti-terrorism efforts. By 'restricting' free speech, critics argue that the government will undermine its own efforts by forcing those with unpopular opinions to simply express their views elsewhere, through means that cannot to be easily monitored.²⁹⁶ The most significant criticism of the Bill comes from the fact that it expands the mandate of CSIS. CSIS was created as purely an intelligence gathering organization, and under C-51, it gets the power to disrupt suspected terrorist plots without being

²⁹³ Independent Panel on Canada's Future Role in Afghanistan, "Final Report," (2008): 37–38.; Kasurak, Peter, "Army Culture(s)," *Canadian Foreign Policy Journal* 22, no. 2 (2016): 173-83.

²⁹⁴ Kristin Bartenstein, "Flag-Planting: What Legal Framework Governs the Division of the Arctic Continental Shelf?," *International Journal: Canada's Journal of Global Policy Analysis* 65, no. 1 (2010): 187.

²⁹⁵ Hayden Watters, *C-51, Controversial Anti-Terrorism Bill Is Now Law: So What Changes?* <http://www.cbc.ca/news/politics/c-51-controversial-anti-terrorism-bill-is-now-law-so-what-changes-1.3108608>

²⁹⁶ The Canadian Civil Liberties Association. *Understanding Bill C-51: The Anti-Terrorism Act, 2015.* <https://ccla.org/understanding-bill-c-51-the-anti-terrorism-act-2015/>

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subject to the same checks and balances that the RCMP faces for doing the same things.²⁹⁷ There is significant worry that CSIS lacks the oversight to ensure their new powers are not abused.

Prime Minister Justin Trudeau gave his first speech as PM in front of the United Nations General Assembly on September 20, 2016 in which he announced that Canada's return to multilateral practices that had long defined Canadian foreign policy. He noted that "Canada's back" and "we're here to help." While Canada has had a significant role in peacekeeping in the past and is a signatory of the Responsibility to Protect, there are critics of an increased Canadian role in peacekeeping operations. Firstly, there is a cost associated with peacekeeping. Rather than military personnel, the United Nations requires equipment such as helicopters to ensure that the peace operations will be successful. Investing heavily in UN missions would degrade Canada's ability to invest in the modernization of the Canadian defenses and take away from budget increases to resources such as to NATO. The length of peacekeeping missions is another cause for concern. Taking the example of Cyprus, a country in which Canadian peacekeeping forces have served since 1964. Canada should not engage in peace missions which are long-term and without a definite exit plan. Second, Canada's role in peacekeeping has diminished significantly since 1956, decreasing to 29 soldiers as of December 31, 2015. As a member of this multilateral organization, Canada must reconsider and expand its role in peacekeeping to aid in humanitarian efforts as they arise.

Currently, Canada's cyber policy is mostly unilateral, relying on internal surveillance. Through legislation like Bill C-51, Canada can gather cyber intelligence within its own borders. Canada also has agreements to share intelligence with the United States, UK, Australia, and New Zealand, but there are no established best practices for sharing this information. Canadian cyber security policy is currently defensive rather than offensive. A major criticism of Canada's cybersecurity capabilities is that they are not innovative, instead being highly reactive to outside stimulus. This means that Canada is not on the forefront of discovering new technologies or threats, being heavily dependent on the US.²⁹⁸ Given that Canada is reliant on vulnerable communication networks to control water and nuclear power, it is crucial to protect Canada's online establishments from future attacks. So far, Canada's cyber security policy is on the right track, however due to the novelty and constant technological developments of cybersecurity, there is still have a great deal of progress to be made. Canada does not have strong intelligence sharing mechanisms with all allies, and has no legal recourse to protect itself against eventual and possibly inevitable cyber attacks.

²⁹⁷ Craig Forcese and Kent Roach, *Bill C-51: The Good, The Bad, and the Truly Ugly*. <https://thewalrus.ca/bill-c-51-the-good-the-bad-and-the-truly-ugly/>

²⁹⁸ <https://www.fraserinstitute.org/sites/default/files/cybersecurity-challenges-for-canada-and-the-united-states.pdf>

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Threats to Canadian cyber security include hostile states such as Russia and China, non-state entities such as Anonymous and other “hactivist” groups, and lone wolf actors. These threats primarily take the form of computer viruses which destroy files and software, as well as conduct cyber espionage and phishing scams to steal identities and passwords.²⁹⁹ Cybersecurity breaches could threaten the Canadian government, businesses operating in Canada, and Canadian citizens who have personal information on the internet. As such, more must be done to educate Canadians about cybersecurity and to protect businesses and online buyers. Over 85 percent of businesses in Canada rely on the internet, while 75 percent of Canadians use an internet connection out of their own home.³⁰⁰ Due to the volume of threats and increased cyberterrorism capabilities, the importance cybersecurity has escalated to a point where it can no longer be ignored. Cyber attacks have been estimated to cause over \$350 billion USD in damage worldwide.³⁰¹ CSEC intelligence is aware of at least 4500 federal cyber threats over 2016, but this figure does not include threats against provinces, private businesses, or individuals.³⁰² This shows that the government must continue to improve their cyber defenses and support agencies that share best practices with businesses and individuals.

Criticism has also arisen over Prime Minister Trudeau’s decision to remove Canadian fighter jets from operations against the Islamic State. The decision to remove Canada’s jets came in part due to Canada’s limited ability to make decisive contributions to operations, but also because of the belief that our allies can pick up the slack that Canada has left behind. Minister of Defense Harjit Sajjan has said that Canada’s allies have been looking to Canada to do more in the fight against the Islamic State.³⁰³ Although Canadian fighter planes are likely not going to be the factor that brings the Islamic State to its knees, they were still an important contribution. They were successful in assisting Kurdish Peshmerga militia to make advances against the Islamic State, and they had struck the oil fields that had been key in providing the Islamic State with funding.³⁰⁴

²⁹⁹ https://www.vice.com/en_ca/article/canada-dealing-with-cyber-attacks-on-a-daily-basis

³⁰⁰ Government of Canada. *Canada's Cyber Security Strategy: For a Stronger and More Prosperous Canada*. Ottawa: Government of Canada, 2010, 2.

³⁰¹ Moens, Alexander, Seychelle Cushing, and Alan W. Dowd. *Cybersecurity Challenges: For Canada and the United States*. Fraser Institute, 2015, 3.

³⁰³ Wark, Wesley. “Canada Increasing its Intelligence Efforts Against Terrorism a Good Thing.” *Centre for International Policy Studies*. Accessed January 12 2017. <http://www.cips-cepi.ca/2016/01/25/canada-increasing-its-intelligence-efforts-against-terrorism-a-good-idea>

³⁰⁴ Al-Fattal, Davidson, et al. “Canada’s Syria Dilemma: What to do In the Fight Against ISIS.” *Open Canada*. Accessed January 15 2017. <https://www.opencanada.org/features/canadas-syria-dilemma-what-do-fight-against-isis/>.

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Current policies in the Arctic fall short because the militarization of the region is proceeding without Canadian involvement. Russian authorities have been increasing their state's hard power in the region for several years, routinely patrolling their airspace while reinvesting heavily into Cold War era bases in Russia's northern regions. These military exercises, although not a violation of Canadian sovereignty, indicate that Russian forces are capable of securing their own territory in the Arctic while simultaneously displaying the ability to project Russian power beyond their own borders.³⁰⁵ This poses a significant challenge for Canadian air and naval forces utilizing outdated military equipment. The current Canadian decision to avoid significant military investment is likely based on two factors. Firstly, Russia's current goodwill, which stems from the state's desire to prevent heightened tensions in the region that would hamper economic development, results in their participation in a multitude of international organizations dedicated to Arctic stability. Russian cooperation is present within the Arctic Council, the International Maritime Organizations, the International Arctic Science Committee, the Arctic Security Forces Roundtable, and various forms of environmental legislation.³⁰⁶ Secondly, a close Canadian relationship with the US through organizations such as NORAD increases policymakers' confidence that in a sudden destabilization of relations in the Arctic, Canadian interests would be maintained by American military power, although such motivations would never likely be articulated publicly.

However, in seeking to establish a Canadian foreign policy that addresses long-term issues, both assumptions can lead to significant consequences for Canadian interests. In terms of current Russian cooperation, operating under the auspice that Canadian multilateral efforts in the region will be a catalyst for warm relations in the region rather than a product of them, is extremely dangerous. In the event of significant cooling of relations between the US and Russia, current Canadian efforts to isolate the Arctic from other relations would likely be compromised due to proximity with the US. Furthermore, with global resource scarcity becoming an increasingly likelier phenomenon, Russian goodwill cannot be guaranteed in

³⁰⁵ Frédéric Lasserre, interviewed by Joël Plouffe, "What Russian Air Patrols in the Arctic Mean for Canada's Security & Sovereignty," (New York, NY: The World Policy Institute, 2017) <http://www.worldpolicy.org/blog/2017/03/01/what-russian-air-patrols-arctic-mean-canada%E2%80%99s-security-sovereignty>.

³⁰⁶ Stephanie Pezard, Abie Tingstad, Kristin Van Abel, and Scott Stephenson, "Maintaining Arctic Cooperation with Russia: Planning for Regional Change in the Far North," (Santa Monica, CA: Rand Corporation, 2017) 21. http://www.rand.org/content/dam/rand/pubs/research_reports/RR1700/RR1731/RAND_RR1731.pdf.

a region that is projected to contain 30 percent of the world's undiscovered gas, and 13 percent of undiscovered oil.³⁰⁷

Further potential foreign policy blunders include the reliance on US military power to protect Canadian interests. Such a policy does not acknowledge differences of opinion the two states share within areas such as the Northwest Passage, which the US asserts is an international strait.³⁰⁸ Thus, a violation of sovereignty within the passage would require an independent Canadian intervention, which the current Canadian navy is under equipped to provide. Furthermore, Canada-US disputes on boundary lines in the Beaufort Sea also leave a significant bargaining chip for the Trump Administration, which may call for Canada to make territorial sacrifices in exchange for military support should it be needed. In summary, Canadian efforts to maintain sovereignty in the Arctic are balanced between multilateral engagements through organizations such as the Arctic Council, and bilateral cooperation with other Arctic states, especially Russia. However, the Canadian military is woefully unprepared to defend Canadian interests should diplomacy fail, and such a trend must be remedied in order to safeguard Canada's long term interests in the region.

³⁰⁷ Woodrow Wilson International Center for Scholars, "*Opportunities and Challenges for Arctic Oil and Gas Development*," (Washington, DC: 2017) 3.

https://www.wilsoncenter.org/sites/default/files/Arctic%20Report_F2.pdf.

³⁰⁸ Jonathan Masters, "*The Thawing Arctic: Risks and Opportunities*," (New York, NY: Council on Foreign Relations, 2013) <http://www.cfr.org/arctic/thawing-arctic-risks-opportunities/p32082>.

Security Policy Priorities

NATO

Canada's primary goal regarding NATO should be to increase defense spending to 2 percent of GDP, of which 20 percent would be reserved for equipment. This commitment should be spread out over a 20-year time period so as to minimize the short-term impact from these increases. This would allow Canada to meet its NATO commitments, and to avoid many of the operational problems discussed in the criticisms section. These spending increases would be best applied to updating and upgrading the military's equipment, a process that will be examined in greater detail in the next section. Further, some of this increased spending should be devoted to increasing Canadian information gathering capabilities. The National Intelligence Council identified information superiority as an area that would become increasingly important in the future, but one in which Canada is currently very reliant on allies.³⁰⁹ This would be an area in which it would be prudent to increase spending as it would allow Canada to increase contributions to intelligence sharing. This would increase the total amount of intelligence available, and allow Canada to avoid potentially being branded as a free rider. In terms of participation, Canada should strive to be an active member of the alliance, and continue to participate in missions. The equipment upgrades coupled with a continued participation in the alliance will increase Canada's effectiveness in promoting multilateralism, and global security. NATO has undergone many changes in the past 20 years, and taken a path that could not have been reasonably assumed in 1997. For this reason, this policy does not seek to plan the specifics of how NATO should develop, but instead recommends that NATO remain adaptable to meet the security concerns of the next 20 years. This involves continuing to focus on continental security, but also continuing with the recent changes to NATO's prerogative. This would involve continuing participation in UN authorized missions such as the International Security Assistance Force in Afghanistan, and the air campaign over Libya. Additionally, Canada should encourage NATO to continue humanitarian disaster relief such as NATO's assistance to Pakistan after the 2005 Kashmir Earthquake.³¹⁰ By continuing to aid these changes, Canada can remain involved with NATO and the UN towards increasing human security. Additionally, as Canada's troop contribution to the mission in Afghanistan helped boost its influence in the alliance, it would be inadvisable to squander this through low defense spending.³¹¹ An increase in defense

³⁰⁹ "Global Trends 2030: Alternative Worlds." *National Intelligence Council*. December 10, 2012.

³¹⁰ "Operations and Missions: Past and Present," *North Atlantic Treaty Organization*, December 21, 2016.

³¹¹ Jonathan Paquin, "Canada's International Security Agenda," in *The World Won't Wait: Why Canada Needs to Rethink Its International Policies*, ed. Roland Paris and Taylor Owen (Toronto: University of Toronto Press, 2016), 114.

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expenditures will allow greater Canadian participation in NATO, a situation that will allow Canada to further promote international security, and multilateral internationalism.

UPDATING THE CANADIAN ARMED FORCES

As was mentioned in the previous section on NATO, the increase of the defense budget to 2 percent of GDP will largely entail upgrades to the Canadian military's equipment. One issue that the increase will help remedy is Canada's limited fighter jet capacity.³¹² Given the long history of this problem, it is critical that it be remedied.³¹³ Additionally, it is crucial that this be done decisively to avoid the constant wavering on deals and incurring of penalties seen under past governments in their helicopter and fighter jet procurement.³¹⁴ It would also be beneficial for Canada to upgrade icebreaker capabilities given that the current fleet is below standard.³¹⁵ As a country with significant amounts of arctic territory, Canada must acquire the ships necessary to field a competent Arctic fleet. Functional icebreakers will become even more necessary in the future as competition increases for the Arctic's resources.³¹⁶ This report will limit itself to only recommending these two upgrades to conventional equipment as they are the most pressing concerns, and the future operational needs of the Canadian Armed Forces cannot be known now. However, the upgrading of equipment is a policy that should be utilized when equipment flaws arise. If there is a flaw in the equipment of the CAF then the government must seek to remedy it as an up to date military will allow Canada to be a more active partner in promoting international security, and participating in multilateral internationalism. Upgrading the CAF should not be limited to conventional equipment. It is a process that must be forward thinking. As this section is not about cyber security policy, it will be limited to recommending that part of the increase in the defense budget be used to improve Canadian cyber security capabilities. Doing so will increase Canadian security, protect government information, and help minimize economic loss caused by the theft of trade secrets.³¹⁷ Improving Canadian cyber security will benefit other areas such as the economy making it one of the most economically efficient areas in which to invest. Given

³¹² "Canadian Armed Forces Cease Airstrike Operations in Iraq and Syria". *Government of Canada*. 17 February 2016.

³¹³ Richter, Andrew, "Sharing the Burden? U.S. Allies, Defense Spending, and the Future of NATO," *Comparative Strategy* 35, no. 4 (2016): 303.

³¹⁴ Michael Byers and Stewart Webb, "A Government Blunder Teaches Us How Not to Buy Helicopters," *National Post*, February 11, 2013.

³¹⁵ Lee Berthiaume, "Canadian Coast Guard May Be Forced to Lease Icebreakers as Aging Fleet Increasingly at Risk of Breakdowns," *National Post*, November 18 2016.

³¹⁶ Kristin Bartenstein, "Flag-Planting: What Legal Framework Governs the Division of the Arctic Continental Shelf?," *International Journal: Canada's Journal of Global Policy Analysis* 65, no. 1 (2010): 187.

³¹⁷ Jonathan Paquin, "Canada's International Security Agenda," in *The World Won't Wait: Why Canada Needs to Rethink Its International Policies*, ed. Roland Paris and Taylor Owen (Toronto: University of Toronto Press, 2016), 118-119.

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that cybersecurity is an area where it would be beneficial for Canada to work with its allies, it would be prudent for Canada to improve its own capabilities to be a more attractive partner in promoting cyber security. Canadian capabilities in cyber security must improve so that Canada can improve the promotion of multilateral internationalism and international security.

ARCTIC SOVEREIGNTY

Within the Arctic, Canadian priorities reside in maintaining long-term access to the region's resources, controlling key shipping routes made possible by receding ice shelves, developing defense capabilities, and in retaining the right to enforce vital environmental legislation.³¹⁸ In order to accomplish such goals, Canada must maintain the ability to assert sovereignty over its Arctic territory through a long-term oriented foreign policy. Multilaterally, Canada must provide support for organizations dedicated to ensuring stability and cooperation in the region, and seek to develop them further through innovative policies and good-willed interaction.

Simultaneously, Canada must prepare for a contingency in which bilateral relations and multilateral

Figure 1: Beaufort Sea Territorial Dispute³¹⁹



³¹⁸ Seeking to maintain long-term access to Arctic resources is rooted in the assumption that more efficient and responsible extraction methods will be available to Canada in the long term. This report acknowledges that current practices are insufficient in terms of cost and potential risk to the environment.

³¹⁹ Randy Boswell. "Canada non-committal over U.S. position on Beaufort Sea dispute." www.ottawacitizen.com. September 03, 2010. Accessed March 15, 2017. [http://www.ottawacitizen.com/technology/Canada committal over position Beaufort dispute/2662672/story.html](http://www.ottawacitizen.com/technology/Canada%20committal%20over%20position%20Beaufort%20dispute/2662672/story.html).

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organizations such as the Arctic Council fail to safeguard Canadian priorities in the region. In such a situation, Canada requires a capable fleet of icebreaker-class vessels in addition to an effective air force capable of monitoring the region, enforcing regulations, and asserting sovereignty in instances of violations. As this report's section on military modernization outlines, Canada possesses neither. The development of icebreaker-class vessels is insufficient in scale and proceeding at a slow pace, and the Trudeau government continues its refusal to settle on a fighter jet after stating that Canada would not be purchasing Lockheed Martin's F-35 fighter jets.³²⁰

In maintaining long-term stability in the Arctic, which is estimated to contain a large portion of the world's undiscovered oil and natural gas reserves, Canada must seek to settle boundary disputes in the Arctic.³²¹ Such negotiations should be prioritized to produce binding resolutions affirming Canadian territorial boundaries before resource extraction in the region becomes a possibility. The Trump Administration, which does not prioritize environmental responsibility, has already iterated its desire to extract resources from the region. The most significant of these disputes center around the Beaufort Sea and the legal status of the Northwest Passage. Many analysts have noted that the current trends such as falling oil prices, a distracted Russia, and potential difficulties for President Trump in undoing the former administration's ban on drilling in the region provide a unique opportunity to make cooperative progress in the region, an opportunity that Canada cannot afford to lose given the possibility of an increased demand for what the region has to offer in the future.³²² The lack of a strong hard power option for Canada in the region also puts such territorial disputes into jeopardy. Should sovereign Canadian territory be questioned by an economically-starved Russia, the Trump Administration and future US administrations may be tempted to utilize disputes over the Beaufort Sea and the Northwest Passage as a bargaining chip in exchange for military support – that is, unless Canadian policymakers negotiate a long-term solution to such issues before a threat arises.

Canada must seek to strengthen organizations such as the Arctic Council to further promote stability and environmental protection in the region. The organization was initially founded seeking to

³²⁰ Jeremy Kinsman, "Arctic Sovereignty: Fear and Loathing Over Santa's Workshop," *OpenCanada*, July 7, 2014. <https://www.opencanada.org/features/arctic-sovereignty-fear-and-loathing-over-santas-workshop/>.

³²¹ "Opportunities and Challenges for Arctic Oil and Gas Development," (Washington, DC: *Woodrow Wilson International Center for Scholars*, 2017) 3. https://www.wilsoncenter.org/sites/default/files/Arctic%20Report_F2.pdf.

³²² Pavel K. Baev and Tim Boersma, "With Russia overextended elsewhere, Arctic cooperation gets a new chance" *Brookings Institute* (Washington, DC: *Brookings Institute*, February 18, 2016) <https://www.brookings.edu/blog/order-from-chaos/2016/02/18/with-russia-overextended-elsewhere-arctic-cooperation-gets-a-new-chance/>.

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promote cooperation on developmental and environmental issues in the Arctic, and would greatly benefit from an expanded mandate with mechanisms to prevent the escalation of security disputes.³²³ Although economic issues have been moved outside of the Council with the creation of the Arctic Economic Forum, attempts to bolster the Arctic Security Forces Roundtable have been met with less success, with Russian representatives boycotting the organization in 2014 and 2015.³²⁴ Hence, splintering various aspects of Arctic governance is unlikely to promote stability in the region. Instead, increasing the mandate of the Arctic Council would significantly decrease the likelihood of a Russian disengagement from the organization should security and defense issues be brought into its fold, as the state would be forced to abandon several initiatives in which it is currently participating.³²⁵

TERRORISM

In the last few decades, several hundred Canadians have been killed or injured in terrorist attacks.³²⁶ Historically, terrorism in Canada has been committed in the name of several ideologies, from Islamic to environmental, from nationalistic to right-wing.³²⁷ Canada has also been a victim of international terrorism. The worst attack in Canadian history was the bombing of Air India flight 182 in 1985, in which over 250 Canadians died.³²⁸ Since 9/11, Islamic extremists have become the most dominant international threat to Canadian national security. In October 2014, Canada was victim to two separate terrorist attacks, both carried out by individuals who were directly inspired by the radical ideology of the Islamic State.³²⁹ When faced with extremist violence, whether during the October Crisis, the Air India Bombing, or the

³²³ Heather Conley and Matthew Melino, "An Arctic Redesign: Recommendations to Rejuvenate the Arctic Council," (Washington, DC: *Center for Strategic and International Studies*, February 2016) 12. https://csis-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/160302_Conley_ArcticRedesign_Web.pdf.

³²⁴ Stephanie Pezard et al, "Maintaining Arctic Cooperation with Russia: Planning for Regional Change in the Far North," (Santa Monica, CA: *RAND Corporation*, 2017) 24.

http://www.rand.org/content/dam/rand/pubs/research_reports/RR1700/RR1731/RAND_RR1731.pdf.

³²⁵ *Ibid*, 24.

³²⁶ Government of Canada. *Building Resilience Against Terrorism: Canada's Counter-Terrorism Strategy*. <https://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/rsln-c-gnst-trrrsm/index-en.aspx>

³²⁷ Canadian Security Intelligence Service. *Terrorism*. 2014. <https://www.csis.gc.ca/thtrtnvrnmnt/trrrsm/index-en.php>

³²⁸ Azzi, Stephen. "Terrorism and Canada." *The Canadian Encyclopedia*. Accessed January 15 2017. <http://www.thecanadianencyclopedia.ca/en/article/terrorism/>.

³²⁹ Zekulin, Michael G. *Canada's New Challenges Facing Terrorism at Home*. Ottawa: Canadian Defense & Foreign Affairs Institute, 2014. Accessed January 12 2017. http://www.cgai.ca/canadas_new_challenges_facing_terrorism

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Islamic State inspired attacks in Ottawa, Canadians have expressed defiance, resolve, and an unwavering commitment to punish and deter those who would use violence against Canadians.³³⁰

Even though Canada has not been directly devastated by a terrorist attack, terrorism is a threat that must be taken seriously. Canada faces several challenges in the fight against international terrorism. Canada must be vigilant in the face of terrorist organizations operating overseas that have made Canada a target, and of homegrown terrorists that could be encouraged to carry out an act themselves³³¹. Terrorism threatens Canadians both at home and abroad, as well as innocent civilians all over the world. It is key that terrorism and its implications be addressed as part of a long-term strategy. The growth and expansion of terrorist organizations carries the potential to threaten the liberal internationalist order that Canada has a vital interest in protecting.

Canadian counterterrorism policy carries the potential to not only mitigate the threats that terrorism poses to Canada and its citizens, but, through a development-based approach, address issues that could lead to the prosperity and well-being of people all over the world. Terrorism in practice takes the form of violence, war, and destruction. In the fight against terrorism, Canada is not engaged in a fight against people, but an ideology, which is difficult to fight with guns and ships. Canada cannot take that approach. Canadian counterterrorism policy must take a soft power, developmental approach, directed at what causes states to be vulnerable to terrorist organizations and lead individuals to be indoctrinated by terrorist ideology. It must be kept in mind that Canada does not have the capacity to defeat terrorism through hard power. Canadian capacity and expertise fall in several other areas, such as capacity building and development assistance, areas where Canada can make a real difference.

Canada has proven to have very effective mechanisms in place to detect and deter terrorist attacks. In 2006, the RCMP prevented a large-scale attack from being carried out by the Toronto 18, and in 2013, the RCMP intercepted a planned attack on a Via Rail train in Montreal.³³² Maintaining Canada's ability to stand up to terrorism domestically should be a priority, but in today's world, our security is inextricably linked to that of other states. When other states lack the resources and expertise to prevent and respond to terrorist

³³⁰ Chenoweth and Dugan, "The Canadian Way of Counterterrorism: Introducing the GATE-Canada Data Set" *Canadian Foreign Policy Journal* 22, no. 3 (2016), accessed March 8, 2017. http://journals1.scholarsportal.info/details/11926422/v22i0003/316_tcwocitgds.xml, 316.

³³¹ Public Safety Canada. *2016 Public Report on the Terrorist Threat to Canada*, 2016.

³³² Zekulin, Michael G. *Canada's New Challenges Facing Terrorism at Home*. Ottawa: Canadian Defense & Foreign Affairs Institute, 2014. Accessed January 12 2017. http://www.cgai.ca/canadas_new_challenges_facing_terrorism

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activity, the security of Canadians and Canadian interests is at risk.³³³ Canada should use its expertise in terrorism prevention to assist its allies who are currently most vulnerable to terrorism. The Canadian government is currently providing Counterterrorism Capacity Building Assistance as a part of international terrorism prevention efforts. The program provides training, equipment, technical, and legal assistance to foreign states lacking the resources and expertise to prevent and respond to terrorist activity.³³⁴ In the Middle East, the program has worked to limit the movement of extremist travelers, in Africa it has worked on projects that strengthen community resilience to violent extremism, and in Southeast Asia has invested in law enforcement and military capacity building.³³⁵ The program enables Canada to share its expertise in areas such as border security, anti-terrorism financing, human rights counter-terrorism training, law enforcement, military and intelligence training, and critical infrastructure protection.³³⁶ This program is crucial because it builds capacity in developing countries to ensure they will have a stable and secure environment that is resilient in the face of terrorist activity. The program focuses on countries that are particularly at risk to expanding terrorist organizations, giving them a strong and effective security apparatus that allows them to remain stable in the face of terrorism. The stronger a state is, the less likely it is that its individuals would act out against it by joining a terrorist organization, and the less likely terrorist organizations will be able to take advantage of fragility to expand and grow in that country. Stability is required for these countries to develop. Canada needs to make this program a priority and that it continues to provide funds and maintain the program's effectiveness. Helping Canadian allies increases Canadian security.

³³³ Global Affairs Canada. *Counter-Terrorism Capacity-Building Assistance*. 2013. <http://www.international.gc.ca/crime/ctcb-rcat.aspx?lang=eng>.

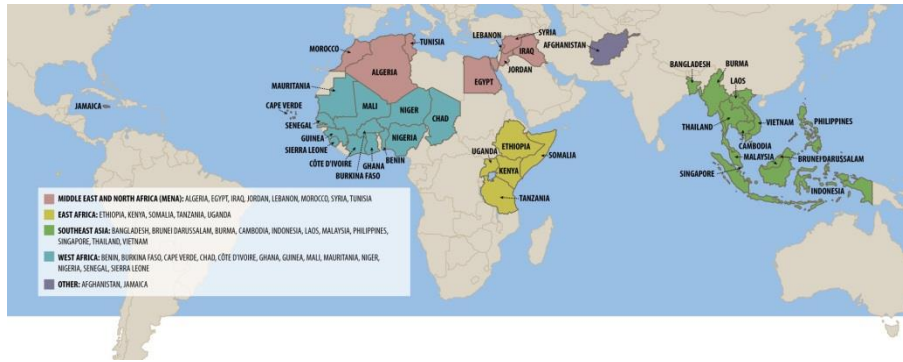
³³⁴ Ibid.

³³⁵ Global Affairs Canada. *Counter-Terrorism Action Group*. 2012. <http://www.international.gc.ca/crime/ctag-gact.aspx?lang=eng>

³³⁶ Global Affairs Canada, *Counter-Terrorism Capacity-Building Assistance*.

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Figure 2: Countries that Receive Funding from the Counter-Terrorism Capacity Building Program³³⁷



The only way to truly prevent terrorist organizations from expanding and becoming a larger threat to Canadian interests is to prevent individuals from joining them in the first place. The specific factors that create instability are those that terrorism policy will need to address. For a long-term counterterrorism strategy, the Counter Terrorism Capacity Building Assistance program could expand its mandate to address other causes of terrorism other than a weak defense system. The program could directly address the causes of radicalization. The most susceptible individuals to indoctrination are those who face deprivation, poverty, and inequality within their state and feel the need to act against the actors who put them in that dire situation – the state.³³⁸ Terrorist organizations have high recruitment in fragile and developing countries because those are the individuals who feel most disenfranchised and abandoned by their states. In places where poverty is extreme and widespread, little incentive is needed to motivate young people to risk their lives and join terrorist organizations that promise them a way out.³³⁹ In the long-term, Canada needs to combat terrorism by placing a large emphasis on development and aid. Developing countries can use Canada's help to build a stable and democratic society with the ability to prevent individuals from being radicalized and indoctrinated by terrorist organizations. The expansion of the program to include development initiatives is the most effective way to prevent terrorism in the long-term. A world made up of stable, fully developed democracies is likely to have a much lower incidence of terrorist organizations and attacks. A stable world means a stable and secure Canada.

³³⁷ Public Safety Canada. *2016 Public Report on the Terrorist Threat to Canada*, 2016.

³³⁸ Brynjar and Skjolberg, *Causes of Terrorism: An Expanded and Updated Review of the Literature*, 21.

³³⁹ *Ibid*, 2

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This policy should be pursued because it has the potential to achieve both of Canada's long-term goals. The Counter-Terrorism Capacity Building Assistance Program is, at its core, a multilateral initiative. Similar programs currently exist in the United Kingdom and United States. Canada uses the forum within Counter Terrorism Action Group, to further coordinate assistance for this program with several other allies.³⁴⁰ Canada cannot undertake the program alone. Multilateral contributions not only provide more expertise to help the vulnerable countries in need, but those same techniques could also be applied to Canada's own domestic counterterrorism strategies. By taking concrete steps to ensure the security and prosperity of people in various countries, Canada would be creating stability that is especially conducive to the establishment of new economic relationships. This policy recommendation is a soft-power approach that will directly work with Canadian development efforts, especially if the policy is directed at the 25 countries that Canada will include as its countries of focus and partner countries within its development policy. Although it is already being done as part of counterterrorism efforts, it needs to be made a priority as a key feature of Canadian counterterrorism policy. A soft-power, cause-based approach to terrorism carries great potential for success and achievement of Canadian long-term goals.

CYBER SECURITY

Canada's primary goal for its cybersecurity policy should be to centralize its cyber security and intelligence resources. Canada currently has no central department to handle domestic or international cybersecurity concerns, and instead has 12 different federal departments which each tackle a different aspect of cyber security. Given the increasing trends of technological advancement and the rising number of Canadian citizens, businesses, and services who use and rely on cellular and internet systems, establishing a Central Bureau of Cybersecurity is a necessary step in modernizing Canadian cyber-defense. Having a single central point of contact is crucial. The purpose of this Central Bureau is twofold: it would allow businesses and services within Canada to be able to discreetly and confidentially report cyber attacks, and it would serve as a communication base for intelligence-sharing with our allies, including NATO and Five Eyes members such as Australia and New Zealand. Giving Canadians access to a reporting structure for cybercrimes increases the likelihood that cyber attacks can be detected and neutralized. Businesses may be reluctant to report cybercrimes with the current system as it diminishes consumer confidence, however a federal support system would help mitigate this. Additionally, building a rapport for easy intelligence sharing with our allies allow us to keep abreast of potential threats and developments. Internal

³⁴⁰ Global Affairs Canada. *Counter Terrorism Action Group*. <http://www.international.gc.ca/crime /ctag-gact.aspx?lang=eng>

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development must be the keystone in Canadian cybersecurity policy as it creates the foundation needed to protect Canadians from cyber security threats.

Once Canada can establish a respectable Cyber Strategy Bureau, Canada should look towards joining multilateral global governance movements to address cybersecurity threats worldwide. Canada's greatest threats to cybersecurity come from Russia and China, and for an effective multilateral policy on cyber warfare to be established, those powers must be included. As such, forming an international regulatory body to develop and enforce codes of conduct should be a priority. This regulatory body should define cyber attacks in no uncertain terms and outline consequences for varying degrees of cyber attacks. By engaging cyber powers and actively staying abreast of cybersecurity developments and threats, Canada can benefit by learning and strengthening its defenses accordingly. Although forming an international regulatory body within the UN or other IGOs is theoretically costly, Canada is not considered a strong cyber power and does not have an offensive history in cyber warfare. As such, the economic demands of an intergovernmental system should not be detrimental. This international body is critical because not only will it add legality to an emergent global threat, it will engage our trade partners to help strengthen global economic security.

Additionally, Canada should do more to engage its allies for intelligence sharing. The "Five Eyes," made up of Canada, the United States, Australia, New Zealand, and the United Kingdom, are all sharing intelligence. However, for a comprehensive security policy, other NATO allies such as France and Germany should be engaged. By sharing intelligence about threats with our allies, we are able to develop a sense of understanding about new methods of cyber warfare and can prepare to defend against similar threats. Sharing surveillance information about terrorist threats will protect the lives of Canadians.

PEACE OPERATIONS

Historically, Canada has been an active member in United Nations Peacekeeping Operations, since 1956 when Lester B. Pearson initiated the first UN peacekeeping force to mitigate the Suez Crisis.³⁴¹ However, Canada's peacekeeping has gradually declined over the last several decades. In the report titled *Assessing Canada's Engagement Gap* released in January 2017, it was noted that in comparison to the remaining G7 nations, the Canadian government contributes the least in regards to military personnel. Prime Minister Justin Trudeau vowed that Canada would increase its commitments to international

³⁴¹ Pre-1956 UN Observer Missions, *Canada History*, last modified 2013, <http://www.canadahistory.com/sections/war/Peace%20Keepers/peacekeeping.html>.

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peacekeeping with a focus on aspects such as: providing more personnel and training to UN peace support missions; increasing conflict prevention; mediation and peacebuilding efforts; advancing the roles of women and youth in the promotion of peace and security; and supporting the UN reform efforts to make peace support initiatives more effective.³⁴²

In 2016, the Trudeau administration declared their intention to increase Canadian Peacekeeping operations by investing \$450 million to peacekeeping missions over a three-year period, which included 600 troops and 150 police officers.³⁴³ In July 2016, Defense Minister Harjit Sajjan announced that Canada will be considering 5 nations in Africa where Canadian forces would engage in peacekeeping missions: The Democratic Republic of Congo, Ethiopia, Kenya, Tanzania and Uganda.

This section will analyze the ways in which Canadian peacekeeping must be reworked to fit current contemporary issues, such as intra-state conflict, and to prepare for future conflicts that may arise, such as the displacement of people due to climate change. As Canadian policymakers will be launching a bid for a seat on the United Nations Security Council, the Canadian government must increase its engagement in peacekeeping to maintain its commitment to a peaceful world order.

The current training program for Canadian peacekeepers specializes in counter-insurgency warfare, an approach more focused on peacemaking, rather than traditional peacekeeping due to the NATO-led coalition in Kandahar, Afghanistan.³⁴⁴ However, in the coming decades, the traditional conception interstate warfare will not be the dominant international security threat. In 2015, the High Level Independent Panel on Peace Operations anticipated that conflict will spur from intra-state problems and consequences such as the displacement of people from conflict zones.³⁴⁵ In order to address these new conflicts, Canada's primary goal for modern day peacekeeping must include skills in negotiation and conflict management and resolution. Particularly, to prepare for a wide array of future conflicts, peacekeepers must be trained in

³⁴² Cohnen, Micheal, "Peacekeeping of the Future: Thinking through Canada's options in Africa," *OpenCanada.org*, last modified 12 August 2016, <https://www.opencanada.org/features/peacekeeping-future-thinking-through-canadas-options-africa/>.

³⁴³ Michelle Zilio, "Canada commits up to 600 soldiers for international peacekeeping," *The Globe and Mail*, last updated August 26, 2016, <http://www.theglobeandmail.com/news/politics/liberals-peacekeeping-mission/article31570609/>.

³⁴⁴ "Report of the High-Level Independent Panel on Peace Operations on uniting our strengths for peace: politics, partnership and people," *United Nations General Assembly and Security Council – Seventieth Session* (June 17 2015): 9.

³⁴⁵ "Report of the High-Level Independent Panel on Peace Operations on uniting our strengths for peace: politics, partnership and people," *United Nations General Assembly and Security Council – Seventieth Session* (June 17 2015): 9.

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“effective cooperation with the local police forces, civil affairs personnel and humanitarians, as well as UN agencies, non-governmental organizations and the local actors engaged in building a viable peace.”³⁴⁶ Once this is established, Canadian policymakers will be able to lead in peacekeeping missions while engaging in intelligence sharing with its allies. With the increase of the defense budget to two percent of Canada’s GDP, policymakers will have the resources allocated to provide such training, noting how vital such soft-power tactics will continue to be in the next 20 years.

The most anticipated driver of conflict in the coming decades will stem from natural disasters, climate change and migrant crises.³⁴⁷ At current rates of greenhouse gas emissions, if sea levels continue to rise, one fifth of the world will be covered with water, making once populated lands uninhabitable.³⁴⁸ Rising sea levels, soil erosion and earthquakes will inevitably create a human security crisis, as it is expected that by 2050, 20 million people, particularly from Asia, will be at risk of losing their homes.³⁴⁹ This matter is of grave concern to Canada as the displacement of such a volume of individuals will disrupt the stability of nations to where the migrants will be fleeing. As Canada has fully embraced the Responsibility to Protect Doctrine, policymakers must be prepared to aid those involved to protect the security of the fleeing migrants. As Canada cannot be the only nation addressing this problem, peacekeeping is the only mechanism where states can globally act together with the local governments to provide resources and intelligence during times of environmental catastrophes.

The Department of Peacekeeping Operations and the Department of Field Support have jointly established policies to deal with environmental issues, such as water scarcity in Darfur.³⁵⁰ However, as a long-term security policy goal, Canada must advocate for the creation of an emergency response team to be ready to engage in missions as conflicts occur. Currently, for a mission to be planned, prepared and executed, it can take UN policymakers up to 6 months until peacekeepers are ready to enter conflict zones.³⁵¹ A wait time of this length could lead to substantial loss of life. In 1992, Canada submitted a recommendation to establish such a team and it participated in the Standby High Readiness Brigade for UN peace operations. It

³⁴⁶ Murray Brewster, “Canadian military ill-prepared for modern peacekeeping: report,” *CBCNews*, Last modified 2 February 2016. Web.

³⁴⁷ Stefanos Nikitas, “Haunting Changes Show Effects of Climate Change in Bangladesh,” *Huffington Post*, last modified 28 January 2016, Web.

³⁴⁸ *Ibid.*

³⁴⁹ *Ibid.*

³⁵⁰ Environment and sustainability, *United Nations*, <http://www.un.org/en/peacekeeping/issues/environment/>.

³⁵¹ Peter Langille, “With a few bold steps Canada could help build a better foundation for the UN and improve the world’s prospects for sustainable common security,” *Policy Options*, last updated August 10, 2016, Web.

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is in Canada's long-term best interest to participate in the creation of a response team as conflicts will affect Canada's economic security and stability; considering that Canada is a favorable nation for migrants. In conclusion, peacekeeping is of vital importance to Canada's national identity and Canadian policymakers must increase Canada's involvement in peacekeeping to maintain global security through this multilateral institution.

CONCLUSION:

In the next 20 years, Canada must support a security policy which is a hybrid of soft and hard power to maintain and support the liberal internationalist world order while safeguarding Canadian priorities. Increasing the defense budget will allow Canada to maintain Arctic sovereignty, support NATO, modernize the Canadian Armed forces, invest in cyber-security and counterterrorism practices and increase Canada's commitment to UN peacekeeping.

A potential obstacle which could get in the way of the effective implementation of these security policies, specifically with regards to cyber-security, is the lack of cooperation with China. Considering that Canada has been a victim of Chinese cyber attacks, Canada will not be immune to future cyber attacks if an understanding is not reached with the Chinese authorities.

While analyzing the recommended policy for peacekeeping, a second obstacle to this priority may be maintaining security while simultaneously respecting human rights. This necessitates that Canadian officials balance the need to protect Canadians with the need to protect refugees and civilians.

The third prominent obstacle to Canadian security policy is maintaining the relevance of international security organizations in an era of increasing isolationism. Given that Canadian foreign policy is inherently tied to liberal internationalism, any increase of isolationism by other nations, such as the United States, is a detriment. With the increase of isolationist practices, the biggest obstacle facing Canadian policymakers would be the deterioration of the multilateral governance system. At its most extreme this could involve a withdrawal from international security regimes such as NATO. Consequently, to promote global governance, Canada must continue to promote a stable international system through multilateral security organizations. Doing this will not only ensure the security of Canadians, but it will also promote the stability of the liberal international world order.

Another prominent obstacle would be the specific percentage and rate of increase of the Canadian defense budget over the next 20-year period to inevitably reach the 2.0 percent goal. Given that the federal

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budget is contested over by all fields of policy, the allocation of Canadian dollars is always a complex process.

A fifth potential obstacle is that changing circumstances, and partisanship cause future Canadian governments to disregard this advice for scoring political points. This would be problematic as government indecisiveness, and political pandering have created many of the problems outlined in the criticisms section. Barring drastic changes in circumstances, the abandonment of these policies presents obvious challenges to the likelihood of achieving effective multilateralism, and increasing international security.

While these obstacles may produce issues through implementation or contested alternative views from within the policy making body, it is expected that successive governments will slightly modify the policies to suit the current situation.

Canada's threats to national and international security come in various forms: climate change, unstable migration, corporate and government data espionage/hacking, radicalization and terrorism, and the protection of its territory and resources. To remain an effective participant in the international community and through adopting these policies, Canada will both strengthen its ties to liberal internationalism through multilateral initiatives and secure its interests while promoting environmental and economic development.

Development Policy

RATIONALE

*"Wherever we lift one soul from a life of poverty, we are defending human rights.
And whenever we fail in this mission, we are failing human rights."
-- Kofi Annan Former United Nations Secretary-General*

Since its inception, Canada's development strategy has been grounded in the preservation of universal human rights and the protection of human dignity. These two concerns will form the foundation of this report's development strategy. According to the UN, one in five persons in developing regions live on less than \$1.25 per day, and many more who have risen out of extreme poverty are at risk of falling back.³⁵² Poverty deprives people of human dignity, and so Canada's development strategy will prioritize poverty alleviation as a long-term goal. Canadian efforts to reduce poverty will align with our central foreign policy goals by working within the liberal multilateral global governance system to coordinate assistance programs in developing countries. Targeting poverty also addresses the goal of maintaining a strong Canadian economy in the long term. By bolstering the global economy through development, the world will not only be more stable, Canada will also have more trading viable trading partners as a result.

Canada can spearhead meaningful change in poverty reduction within the next 20 years. Canada can help the world's most vulnerable nations alleviate poverty through 1) advocacy and participation in multilateral institutions, 2) promoting access to education and health services, 3) humanitarian assistance, 4) economic empowerment, and 5) food and water security.

The United Nations Sustainable Development Goals (SDGs) stimulate action in critical areas – people, planet, prosperity, peace, and partnership – between 2015 and 2030. These goals represent many of the policy areas Canada explores today, including poverty alleviation, maternal health, quality education and more.³⁵³ Canada will contribute to the realization of the goals associated with people. This means ending poverty and hunger and ensuring that all human beings can fulfill their potential.³⁵⁴

Not only will Canada's development contributions aid in lifting individuals out of poverty and moving populations toward the recognition of rights they deserve, it will also benefit Canada's economy. Investing in basic development focused on poverty reduction will expand consumer markets. This way,

³⁵² United Nations Secretary General. "Sustainable Development Goals: 17 Goals to Transform Our World." United Nations. Accessed March 14, 2017. <http://www.un.org/sustainabledevelopment/>.

³⁵³ Ibid.

³⁵⁴ Ibid.

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Canada can reduce global poverty and empower vulnerable individuals while advancing Canadian economic interests and security. Though these remain the central tenets of Canadian's development policy, the aims are not always achieved in reality. Through reviewing current policy, providing criticisms, and developing revised policy recommendations, a more coherent and attainable foreign policy will be proposed.

Canada's development plan will be realized through cooperation with other developed nations who are engaged in development assistance as well as with the multilateral organizations that support these initiatives. Strengthening the multilateral global governance system will ensure that Canada pursues high impact programs in select countries, while like-minded countries and institutions do the same. Canada has the ability to play a significant role in development, but we cannot do it alone. This must be a collaborative effort through multilateral institutions to ensure that development progresses. Canada must remain strongly committed to its development goals while recognizing that resources are finite. Strategic partnerships with organizations around the world, as well as with other nations committed to development, will help to ensure each nation and organization involved benefits from proposed policies.

With finite resources, Canada must strategize effectively so that its development objectives and overall foreign policy goals can be realized. By prioritizing development, a more stable and prosperous world can flourish. 52 percent of the countries that Canada has designated as countries of focus in its various developmental policies are Least Developed Countries (LDCs). The United Nations' LDCs are low-income countries confronting structural constraints to sustainable development and are therefore the most vulnerable to economic and environmental shocks.³⁵⁵ In the pursuit of poverty reduction, Canada must direct its aid towards the most vulnerable. As development policies are implemented, countries of focus will begin to grow, which could result in the need for policy to remain dynamic. Policies will be developed with effective exit strategies in mind that allow for the adjustment of programs in the countries of focus that are not LDCs by 2027. This will then allow for greater funds to be redirected towards poverty reduction measures in countries that need development assistance the most, both in countries that Canada already operates in as well as newly categorized LDC countries. Canadian policy should maintain the historical goal of 25 countries of focus during this transition in order to ensure that Canada is actively addressing global poverty to its full capacity.

Canadian foreign policy must be guided by the promotion of international stability through multilateral institutions and a sustainable economy. Development, therefore, represents an invaluable

³⁵⁵ United Nations Committee for Development Policy, "Least Developed Countries (LDCs)," United Nations, <https://www.un.org/development/desa/dpad/least-developed-country-category.html>.

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priority of Canadian foreign policy. Empowering individuals to grow their vulnerable nations promotes international stability and a strong, stable global economy. Canada will benefit from empowering vulnerable nations through coherent development policies that address poverty head-on. Education is central to individual empowerment, and Canadian policy will pursue enhanced implementation of rights and opportunities to recipient governments and civilians.

Canada should pursue a long-term approach to development policy in order to realize the forthcoming recommendations. Canadian development policy should pursue and maintain the central goals that this report recommends to remain consistent over the life of the development policies. If Canada adopts a long-term outlook and prioritizes policy coherence, sustainable engagement with developing countries is possible because Canadian policy will focus on long-term poverty reduction tactics, getting to the root of poverty through harmonized measures. All aspects of development policy will work together to address poverty reduction, in a way that benefits developing countries and still allows Canada to maintain a strong economy. These ideas will be expanded upon in each policy option.

CURRENT POLICY

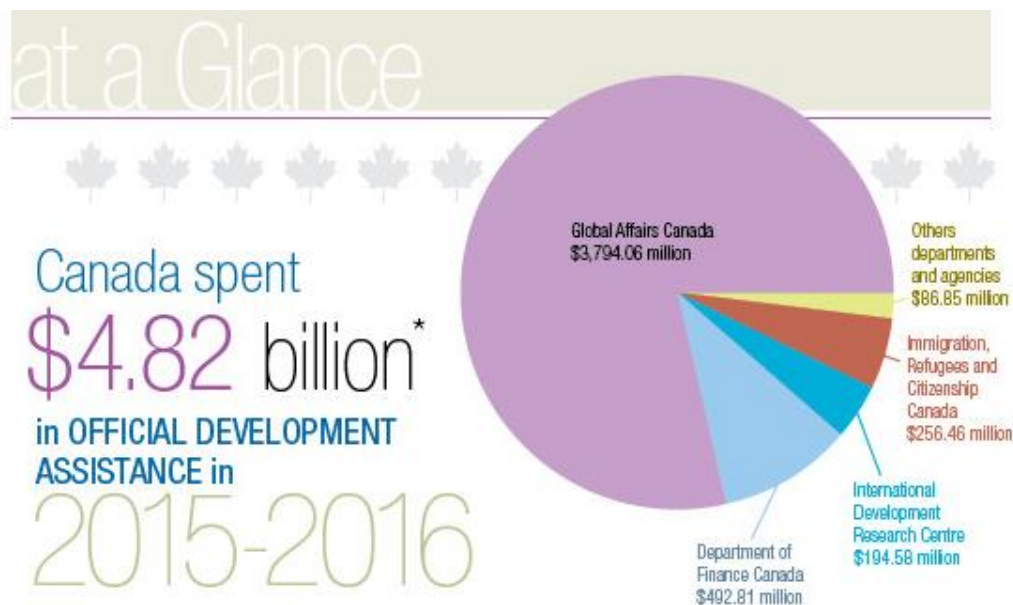
Current Canadian development policy operates under the umbrella of Global Affairs Canada, however Official Development Assistance (ODA) is disbursed through 17 federal departments and agencies. These include the Department of Finance, Immigration, Refugees and Citizenship Canada, the International Development Research Centre (IDRC), the Royal Canadian Mounted Police, and departments such as Public Health Agency Canada, the Department of National Defense, and Environment and Climate Change Canada.³⁵⁶ The budget is divided as follows³⁵⁷:

³⁵⁶ Government of Canada, *Report to Parliament on the Government of Canada's Official Development Assistance 2015-2016* (2016), accessed March 3, 2017, http://international.gc.ca/gac-amc/publications/odaaa-lrmado/daaa-lrmado_1516.aspx?lang=eng.

³⁵⁷ Government of Canada. *Report to Parliament on the Government of Canada's Official Development Assistance 2015-2016* (2016). Accessed March 3, 2017. http://international.gc.ca/gac-amc/publications/odaaa-lrmado/daaa-lrmado_1516.aspx?lang=eng.

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Figure 3: Canada's 2015-2016 Official Development Assistance Budget



Global Affairs Canada accounts for 65 percent of the overall international assistance budget, and addresses all of the thematic approaches – broad mandates including maternal health, environmental sustainability, crisis response, food security, and others outlined below – to international development that the Canadian government has identified as priorities.³⁵⁸ Three main milestones in 2015 have shifted Canada's approach to international development: the adoption of the United Nations (UN) 2030 Agenda for Sustainable Development producing the Sustainable Development Goals (SDGs), the adoption of the Addis Ababa Action Agenda for Financing Development, and Canada's official ratification of the Paris Agreement on Climate Change.³⁵⁹ Additional priorities have been added to the Canadian development strategy in the 2015-16 fiscal year, along with the priorities that Canada has pursued since 2009.

³⁵⁸ Government of Canada, *Statistical Report on International Assistance 2014-2015* (2015), accessed March 1, 2017, <http://www.international.gc.ca/gac-amc/publications/odaaa-lrmado/sria-rsai-2014-15.aspx?lang=eng>.

³⁵⁹ Government of Canada, *Report to Parliament*.

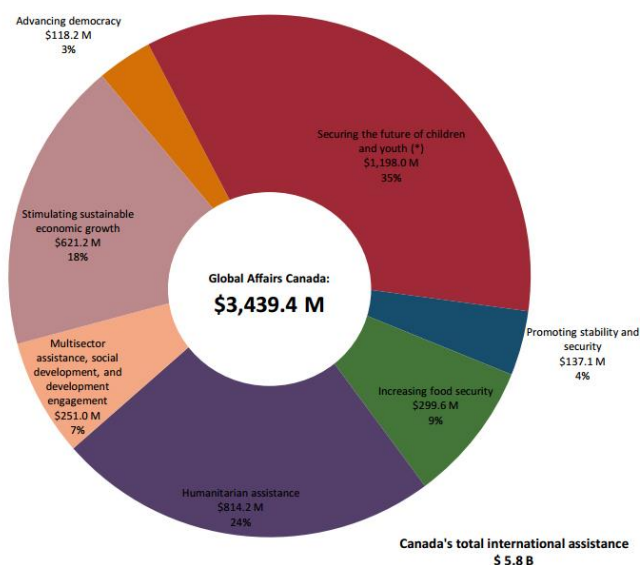
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The Total GAC Budget: \$3,439.4 M³⁶⁰ is broken down as such:

- Securing the future of children and youth (Includes spending towards Maternal, Newborn, and Child health (MNCH)): \$1,198.0 M (35%)
- Humanitarian assistance: \$814.2 M (24%)
- Stimulating sustainable economic growth: \$621.2 M (18%)
- Increasing food security: \$299.6 M (9%)
- Multisector assistance, social development, and development engagement: \$251.0 M (7%)
- Promoting stability and security: \$137.1 M (4%)
- Advancing democracy: \$118.2 M (3%)

Canada's total international assistance: \$ 5.8 B

International Assistance by Thematic Priority, Global Affairs Canada



Canada's main development priorities include Maternal, Newborn, and Child Health, Environmental Sustainability, and Humanitarian Crisis Response. Canadian commitments to Maternal, Newborn and Child Health have included programming for family planning, contraceptive supplies, institutional funding, family health practice training from health workers, increased healthcare services for women, and a focus on sexual and reproductive rights.³⁶¹ These programs can be found in specific countries that Canada partners

³⁶⁰ Copied from Deputy Minister of Foreign Affairs. "Internal Assistance Review: Discussion Paper." Global Affairs Canada. December 06, 2016. Accessed March 01, 2017.

³⁶¹ Ibid.

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with. Canada has moved towards adopting a gendered approach to international assistance.³⁶² Additionally, Canada works multilaterally to fight polio, has contributed to the Pan-American Health Organization (PAHO) to address preventative measures since the Zika virus outbreak, and is an active supporter in the Global Fund to Fight AIDS, Tuberculosis, and Malaria.³⁶³ Canada's second main priority is Increasing Environmental Sustainability. This is accomplished by contributing to multilateral climate financing, as well as through bilateral partnerships with Asian institutions and with countries such as Belize, the Democratic Republic of Congo, Ghana, and Jordan. Through Canada's 2009 Food Security Strategy, Canada has worked with farmers in countries of focus to mitigate effects of climate change on a smaller scale.

Canadian assistance aims to respond quickly and effectively to international humanitarian crises both bilaterally and through multilateral organizations. Quick response occurs primarily through the use of the Disaster Assistance Response Team (DART), a branch of the armed forces deployed by a joint decision from Global Affairs Canada and the Department of National Defense. This special division of the armed forces specializes in providing basic needs and rescue efforts within the first 60 days following a major disaster, until the local government can restore stability. Having assisted in many past disasters in Haiti, the Philippines, and Nepal, DART provides a range of emergency services including an engineering troop, medical platoon, logistics platoon, defense and security, and civilian advisors.³⁶⁴ DART primarily assists with water purification, primary medical care, and engineering help such as restoring roads and infrastructure. DART only deploys to countries in which the affected nation has requested assistance. This policy area encompasses many measures taken during humanitarian crises in the face of natural disasters, epidemics, and massive conflict and displacement. These are all areas in which Canada has demonstrated leadership.

In addition to these priorities, Canada has thematic priorities for international development assistance. They are as follows:

- Stimulating sustainable economic growth
- Increasing food security
- Securing the future of children and youth
- Advancing democracy

³⁶² Government of Canada, *2016 International Assistance Review: What we heard* (2016), accessed March 1, 2017, <http://international.gc.ca/world-monde/development-developpement/iar-consultations-eai/document.aspx?lang=eng>.

³⁶³ Government of Canada, *Report to Parliament*.

³⁶⁴ National Defense and the Canadian Armed Forces. *The Disaster Assistance Response Team (DART)* (2016). Accessed March 8, 2017. <http://www.forces.gc.ca/en/operations-abroad-recurring/dart.page>

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- Promoting stability and security

These are all accomplished through programming that includes agricultural work with smallholder farmers, business financing, nutrition education, basic education, civil society and electoral process support, and protection of civilians.³⁶⁵ These programs are varied and the specifics depend on the country being operated in.

Education is crucial to the mandate of poverty reduction. Canadian development programs focused on aid address barriers that prohibit children and youth from going to school. These obstacles include distant, overcrowded, or unsafe schools; poor quality of teaching or irrelevant curriculum; pressures from family members that children work instead of going to school; and school fees such as tuition, uniforms, and supplies.³⁶⁶ To address these realities in developing countries, Canadian assistance focuses on establishing strong education systems that enable children and youth to get a full ten-year cycle of education. Special attention is given to girls, considering lack of gender parity in education systems and historical exclusion.³⁶⁷ Canadian activities towards education in developing nations include:

- Building the capacity of government education officials
- Supporting new and existing teacher training institutes to create a professional accredited cadre of teachers
- Improving the development and distribution of relevant, gender-sensitive learning materials and curricula
- Supporting efforts to make schools responsive to girls' water, sanitation and hygiene needs
- Working to end school-related gender-based violence and harmful practices which keep girls out of school, such as child, early and forced marriage
- Providing support to meet the education needs of crisis-affected children³⁶⁸

Canada accomplishes these activities through partnerships with recipient governments in developing nations, Canadian-based NGOs, and organizations working globally. Key multilateral organizations that Canada works with are the Global Partnership for Education and the UNESCO Institute for Statistics.³⁶⁹ According to the Canadian project database, the vast majority of Canadian aid projects pertaining to basic

³⁶⁵ Government of Canada, *Report to Parliament*.

³⁶⁶ Government of Canada, *Education in developing countries* (2017), accessed March 8, 2017, <http://international.gc.ca/world-monde/aid-aide/education.aspx?lang=eng>.

³⁶⁷ UNICEF, *Girls' education and gender equality* (2015), accessed March 9, 2017, https://www.unicef.org/education/bege_70640.html.

³⁶⁸ Government of Canada, *Education in developing countries*.

³⁶⁹ Ibid.

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education are through international or nongovernmental organizations; few are in active partnership with the recipient governments.³⁷⁰ International scholarships are also funded by Canada aimed at developing countries, mainly for students wishing to study or research at a Canadian institution.³⁷¹ Market-based vocational training is also given in certain programs to youth and adults, primarily those who did not receive basic education.³⁷² Quality of education is considered to be a primary concern when allocating Canadian aid for education.

The bulk of Canada's projected international aid budget, \$3.44 billion, is largely committed to the continuation of the Maternal, Newborn, and Child Health (MNCH) initiatives (35 percent).³⁷³ The Canadian government has also pledged \$785 million to the Global Fund to Fight AIDS, Tuberculosis, and Malaria over the next three years [beginning in 2016].³⁷⁴ Though these efforts are important, it is crucial that the Canadian government does not limit its understanding of health and its corresponding policy promotion. The World Health Organization defines health as the "state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."³⁷⁵ Similarly, all policies pursued in Canada's foreign policy should align with the United Nations Sustainable Development Goals, specifically Goal 3; good health and well-being. This is defined as:

"Ensuring healthy lives and promoting the well-being for all at all ages is essential to sustainable development. Significant strides have been made in increasing life expectancy and reducing some of the common killers associated with child and maternal mortality. Major progress has been made on increasing access to clean water and sanitation, reducing malaria, tuberculosis, polio, and the spread of HIV/AIDS. However, many more efforts are needed to fully eradicate a wide range of diseases and address many different persistent and emerging health issues"³⁷⁶

³⁷⁰ Government of Canada, *Search Projects*, (2017), accessed March 10, 2017, <http://w05.international.gc.ca/projectbrowser-banqueprojets/filter-filtre>.

³⁷¹ Government of Canada, *International Scholarship Opportunities for Non-Canadians* (2017), accessed March 10, 2017, http://www.scholarships-bourses.gc.ca/scholarships-bourses/non_can/opportunities-opportunitites.aspx?lang=eng.

³⁷² Government of Canada, *Education in developing countries*.

³⁷³ Deputy Minister of Foreign Affairs. "Internal Assistance Review: Discussion Paper." Global Affairs Canada. December 06, 2016. Accessed March 01, 2017.

³⁷⁴ Deputy Minister of Foreign Affairs. "Internal Assistance Review: Discussion Paper." Global Affairs Canada. December 06, 2016. Accessed March 01, 2017.

³⁷⁵ "Constitution of WHO: principles." World Health Organization. Accessed March 05, 2017. <http://www.who.int/about/mission/en/>.

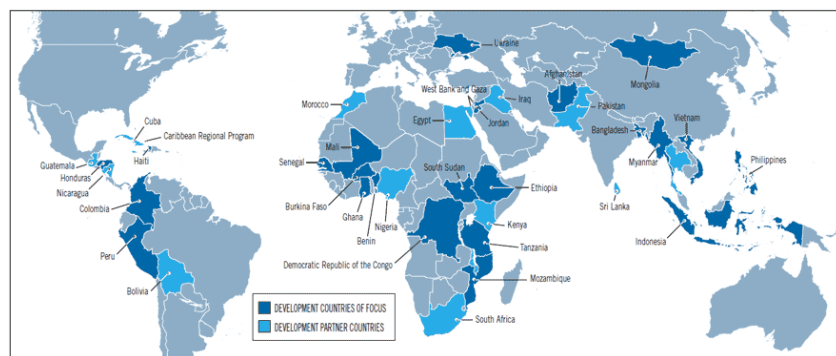
³⁷⁶ <http://www.un.org/sustainabledevelopment/health/>

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In pursuit of this aim, Canadian foreign policy should develop strategies that reframe and reallocate resources for a more holistic approach to health. Central to this is including health education within any health initiative promoted. The Canadian government cannot provide the necessary resources without having the recipient populations understand the intended use of these resources.

Canada actively contributes to multilateral and international funds and initiatives to accomplish certain goals, and works bilaterally with 25 countries of focus to promote the thematic goals that are outlined above. Particular themes are addressed in each country based on local circumstances. In February 2009 the Harper government announced that it would focus 80% of bilateral assistance on 20 countries, compared to 2006 when 142 countries received Canadian aid and CIDA worked with 77 bilateral partners.³⁷⁷ Five additional countries have been added to the Canadian development focus. Focusing aid was meant to maximize effectiveness, but there was a shift away from Sub-Saharan Least Developed Countries (LCDs) to middle-income countries not known to have high levels of structural poverty.³⁷⁸ Countries of focus were chosen based on need, their capacity to benefit from Canadian assistance, and alignment with Canada's foreign policy priorities.³⁷⁹

Figure 4: Canada's Bilateral Countries of Focus and Development Partner Countries³⁸⁰



³⁷⁷ Hunter McGill, "Canada Among Donors: How Does Canadian Aid Compare?" in *Struggling for Effectiveness: CIDA and Canadian Foreign Aid*, ed. Stephen Brown, 24-52 (Montreal: McGill-Queen's University Press, 2012): 34.

³⁷⁸ Hunter McGill, "Canada Among Donors: How Does Canadian Aid Compare?" in *Struggling for Effectiveness: CIDA and Canadian Foreign Aid*, ed. Stephen Brown, 24-52 (Montreal: McGill-Queen's University Press, 2012): 35.

³⁷⁹ Global Affairs Canada, *Where we work in international development* (2016), accessed March 1, 2017, <http://www.international.gc.ca/development-developpement/countries-pays/index.aspx?lang=eng>.

³⁸⁰ Copied from Deputy Minister of Foreign Affairs. "Internal Assistance Review: Discussion Paper." Global Affairs Canada. December 06, 2016. Accessed March 01, 2017.

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Canada disbursed \$4.82 billion CAD in international assistance in the 2015-16 fiscal year.³⁸¹ Global Affairs Canada leads Canadian international assistance efforts to reduce global poverty and inequality, and used \$3.79 billion CAD of this budget to accomplish tasks including international development, international humanitarian assistance, international security and democratic development.³⁸² The Canadian government has committed to allocate new funding to the International Assistance Envelope (IAE) in the 2016 budget, including \$256 million CAD in over two years (2016-17 to 2017-18).³⁸³ Between 2010 and 2015, close to \$500 million CAD was removed from the aid program, which leaves Canadian international development contributions at 0.27 percent ODA/GNI (gross national income), down from 0.34 percent ODA/GNI in the 2010-11 fiscal year and falling short of Canada's commitment to the Organization for Economic Co-operation and Development (OECD)'s long-standing target of 0.7 percent ODA/GNI.³⁸⁴

In the Least Developed Countries (LDCs), the school attendance expectancy was more than two years below that of the rest of the world; this is significant considering approximately 18 percent of the world's population of primary and secondary age children and youth live in the LDCs.³⁸⁵ UNESCO estimated in 2015 that developing countries themselves will bear 88 percent of costs if UN SDG #4, quality education for all, is to be met and universal education is realized.³⁸⁶ Canada has committed to the pursuit of the UN Agenda 2030 and the development goals that accompany the agenda, and so joining vulnerable nations to further develop the education sector will reduce the burden on fragile states and allow capacity building measures and knowledge sharing. Further, education is a fundamental human right, as outlined in the Universal Declaration of Human Rights (UDHR), Article 26.³⁸⁷

³⁸¹ Government of Canada, *Report for Parliament*.

³⁸² Government of Canada, *Report for Parliament*.

³⁸³ Department of Finance Canada, *Growing the Middle Class*, (Ottawa: Government of Canada), March 2016, accessed March 2, 2017, <http://www.budget.gc.ca/2016/docs/plan/budget2016-en.pdf>, 197.

³⁸⁴ Aid Watch Canada, *Canadian ODA Disbursements* (2016), accessed March 3, 2017, <http://aidwatchcanada.ca/canadian-aid-trends/canadian-oda-disbursements/>.

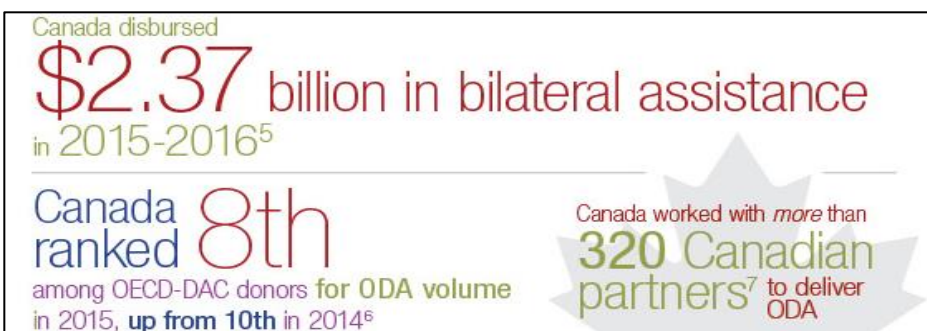
³⁸⁵ UNESCO Institute for Statistics, *Education in Least Developed Countries (LDCs)* (2015), https://sustainabledevelopment.un.org/content/documents/7780Education_in_LDCs_OL_final.pdf.

³⁸⁶ Charles Tapp, *The case for development aid for education* (2016), accessed March 9, 2017, <http://www.globalpartnership.org/blog/case-development-aid-education>.

³⁸⁷ United Nations General Assembly, *Universal Declaration of Human Rights*, 10 December 1948, 217 A (III), http://www.ohchr.org/EN/UDHR/Documents/UDHR_Translations/eng.pdf, 7.

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In addition to these current policies, Canadian Development achieved many commendable goals for the 2015-16 fiscal year. These include most notably³⁸⁸:




Currently, Canada takes on a confined approach to global development—prioritizing environmental sustainability, humanitarian crisis response, and Maternal, Newborn and Child Health. While Canada’s Development strategy has its strengths, this strategy is also heavily criticized. These criticisms will be addressed next.

³⁸⁸ Government of Canada. *Report to Parliament on the Government of Canada’s Official Development Assistance 2015-2016* (2016). Accessed March 3, 2017. http://international.gc.ca/gac-amc/publications/odaaa-lrmado/daaa-lrmado_1516.aspx?lang=eng.

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With Canada's support:

Gavi, the Vaccine Alliance,
has immunized



500 million children
and saved
7 million lives⁸

69% of girls



in Global Partnership for Education countries
now finish primary school,
compared with 56% in 2002

\$684 million in humanitarian assistance¹

Canada provided
humanitarian assistance in
57 COUNTRIES²
and responded to
27 NATURAL DISASTERS



Canada is matching
Canadians' contributions of
\$51.7 million
for the
NEPAL EARTHQUAKES³



Canada committed
\$221.1 million
for the
SYRIA CRISIS⁴



CRITICISMS OF CURRENT POLICY

Current Canadian development policy is afflicted by several problems. The three main problems are a diminishing aid budget, lack of clarity in priorities, and a lack of policy coherence. The budget for development policy has consisted of only a small portion of the national budget every year and has continually received the blunt of monetary cuts.³⁸⁹ The budget allocated to development, particularly the Official Development Assistance (ODA) budget, has been a common criticism of current and past development policies. In 2015 the ODA contributions comprised 0.28 percent of Canada's gross national income, ranking us 9th among 26 countries evaluated.³⁹⁰ This budget has been criticized for not meeting the growing demands for aid around the world and has been seen by allies as Canada failing to meet its share of the burden. Despite an already small development budget it remains among the first budgets to be cut and always disproportionately in comparison to other departments.³⁹¹ Our foreign policy proposal recommends moving away from cutting the development budget in order to adhere to policy coherence and strong implementation.

A lack of clear programs and priorities within Canada's development policy has been a continual criticism over the years by prominent think tanks, such as the Canadian Council for International Co-operation. The lack of clarity has caused Canadian development policy to be stretched thin, and many programs are not allocated enough funds to be effective. In the past Canada has taken some action to respond to these criticisms by cutting the number of countries that receive Canadian aid down to only 25.³⁹² While this was a step in the right direction, the aid budget is still spread too thin even across these 25 countries. By increasing development funding to the previously established amount, Canada will be able to adequately implement policy changes in these nations. The 25 countries chosen by the Canadian government have also been subject to criticism, as they do not represent the countries in most need of aid. Canada's decision to provide most of its aid to Afghanistan has been widely criticized for its ulterior motives.³⁹³ Likewise, Canadian aid provided to Latin American countries where Canadian business interests may be affecting aid priorities has also been critiqued in recent years.³⁹⁴

³⁸⁹ Walter and Duncan Gordon Foundation. *Modernizing Canadian Foreign Aid and Development: Challenges Old and New*. Toronto, Walter and Duncan Gordon Foundation. 2010, 18.

³⁹⁰ Canadian Foreign Policy Journal. *A Global Review for Canada: Options and Insights*. Ottawa: The Norman Paterson School of International Affairs, 2016, 6.

³⁹¹ Walter and Duncan Gordon Foundation, 18.

³⁹² Canadian Foreign Policy Journal, 6.

³⁹³ Walter and Duncan Gordon Foundation, 12.

³⁹⁴ *Ibid*, 15.

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Canadian policy on education has been reviewed and partially reformed recently, taking a more holistic approach to gender mainstreaming in education policy. Focusing on gender in education follows a trend in international development policy that emphasizes gender in areas such as education and health, as opposed to poverty reduction more generally. This perpetuates the trend of attending to gender in cases where the topic is seen to be more feminized.³⁹⁵ While the issue of gender parity in basic education stands, as mentioned previously, taking a more thematically gendered approach is not going to make education policy better, especially when in practice it is restricted to feminized areas. Education must be implemented in partnership with health and economic empowerment in order for policy recommendation to be most effective. By implementing a more holistically focused feminist international development policy, these pitfalls can be avoided.

When dealing with the combination of health, education, and other policy implementation, past policy must be more closely evaluated. Looking at Canada's aid programs focused on education, the primary concern is generally enrollment rates and a more abstract idea of quality education. Education outcomes in developing countries are profoundly influenced by less measurable factors such as the nature of the curriculum and appropriateness of learning materials, the leadership of school administration, school location, the effectiveness of teacher training, and the status given to the schools by the local communities.³⁹⁶ Quantifiers and statistics based on enrollment rates also fail to qualify whether education is reaching the poorest areas and marginalized populations, including girls and young women.

Additionally, while databases for national data revealing gaps in educational provision are available from international agencies, transferability of programs must encompass the political economy of the recipient country, local ownership and leadership, comprehensibility of the program, and flexibility based on the recipient country's needs are all considered.³⁹⁷ Research and recipient governments' expertise on local contexts can be used to inform Canadian policy and cause education capacity building to become more effective, however this requires a bolder approach in education-focused development than what Canada is currently doing. The following policy recommendations propose reform to current policy, however they will not suggest that Canadian international assistance towards education requires a complete overhaul. Working with the broad mandates outlined by the Government of Canada – mandates that often become

³⁹⁵ Ingrid Palmary and Lorena Nunez, "The Orthodoxy of Gender Mainstreaming: Reflecting on Gender Mainstreaming as a Strategy for Accomplishing the Millennium Development Goals," *Journal of Health Management* 11(1) (2009): 67.

³⁹⁶ Abby Riddell and Miguel Niño-Zarazúa, "The effectiveness of foreign aid to education: What can be learned?" *International Journal of Educational Development* 48 (2016), 23.

³⁹⁷ Riddell and Niño-Zarazúa, 26; 30.

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blurred when implementing real policies – it will be proposed that Canadian development should focus funds and efforts towards certain policies that address lifting people out of poverty and reaching those most vulnerable.

More general aid programs themselves also constitute a problem in current development policy. With hundreds of active aid programs ongoing the budget has become increasingly spread thin. Canada has been criticized by major think tanks, such as the Walter and Duncan Gordon Foundation, for attempting to implement many programs instead of focusing on and effectively funding a few.³⁹⁸ The large number of programs being pursued by the Canadian government has required a larger administrative sector than would not be necessary should the number of programs be cut down. This would enable more of the budget to go towards the actual programs instead of administrative fees, according to critics. Coherence has been a consistent critique of Canadian development policy. The lack of a clearly defined goal, or more so the lack of coherence between a stated goal and the priorities that are later discussed, has been a long-standing criticism that needs to be addressed. Beyond the lack of coherence in policy objectives there is also a lack of coherence over which department has jurisdiction over certain aid programs, causing confusion and further misdirection. Increased communication and cooperation between departments is needed. The policy priorities more generally have been criticized for lack of action on climate change and sustainable development in relation to aid programs.³⁹⁹

GLOBAL TRENDS INFLUENCING DEVELOPMENT

Development is an ever-changing field that must be constantly reevaluated. Changing global trends influence the effectiveness of policy implementation. Predicting global trends involves critical long term thinking and an evaluation of assumptions. Predicting emerging global trends and adjusting policy accordingly will improve Canadian development policy. The following four trends will impact development policy: climate change, demographic shifts, technology advancement and proliferation, and individual empowerment. The impacts of these global trends are felt worldwide, across nations of all sizes.

Development's relationship with climate change is becoming increasingly complicated as climate impacts more aspects of individuals' lives. As the climate continues to change and environmental developments begin to impact citizens' health, more policies will be needed to address the impact of a changing climate. Though collaborative action will be increasingly difficult, the hazards resulting from

³⁹⁸ Canadian Foreign Policy Journal, 7.

³⁹⁹ The Canadian Council for International Co-operation. *Towards a New Canadian Vision for Global Development Cooperation*. Ottawa: The Canadian Council for International Co-operation. 2016, 4.

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climate change pose a global threat. These global threats include, but are not limited to; more extreme weather, water and soil stress, sea-level rise, ocean acidification, glacial melt, pollution and resulting food insecurity as discussed later.⁴⁰⁰ These various influences will disrupt societies. These changes place a greater stress on not only the populations but on the existing biodiversity and ecosystems within each region.⁴⁰¹ Climate change will increase tensions as its effects will be felt across nations. An increase in migration is paired with global climate change due to its far-reaching effects. From governments to individuals, environmental commitments will need to be upheld. This includes embracing clean energy technology, and preparation for global disasters as a result of environmental change. Canadian policy will need to not only identify this global trend, but also adjust and address issues that result from changes in the climate.

A combination of higher life expectancy and falling birthrates increases the global population for those aged 65 or older and has created a demographic shift in developed countries. Global trends predict that the number of people over the age of 65 will double by 2030.⁴⁰² This is paired with youth bulges that are occurring in developing nations: 90 percent of the global youth population resides in developing countries.⁴⁰³ In India, for example, 1 million young people will enter the workforce each month for the next 20 years.⁴⁰⁴ Individuals entering the workforce are contributing to the rising middle class in India. This is paired with 300 million people in India still living in poverty. Technology and information proliferation throughout the country, however, transfers knowledge and has allowed for an increase in demand for fundamental human rights. Advancing technology impacts the methods by which development policy can be implemented. Increased connection to the Internet allows everyone to have a voice and for mobilize.⁴⁰⁵ Unfortunately, an increase in technology can also allow for a greater access to lethal and disruptive technology enabling organizations and individuals to perpetrate large-scale violence.

Perhaps one of the most important global trends is individual empowerment. An improvement on the status of women is central to this trend. In most cases, this is a positive influence that is both a cause and effect of other trends. It can result in greater individual initiative for solving global challenges, expanding economies, and rapid growth, especially in developing nations. There is also a potentially negative impact

⁴⁰⁰ "Global Trends: Paradox of Progress." Global Trends. January 2017. Accessed March 08, 2017.

<https://www.dni.gov/index.php/global-trends-home>. 6

⁴⁰¹ Ibid, 21.

⁴⁰² "Future State 2030: The Global Megatrends Shaping Governments." KPMG. Accessed March 14, 2017.

<https://home.kpmg.com/xx/en/home/insights/2015/03/future-state-2030.html>. 14

³⁹⁸ Ibid, 14.

⁴⁰⁴ Ibid, 14.

⁴⁰⁵ Ibid, 18.

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paired with advancing technology, that violence is no longer monopolized by the state. Poverty reduction is improving as a result of widespread economic development. Nonetheless, the average person living in extreme poverty will remain about 10% below extreme poverty threshold during the next 15-20 years.⁴⁰⁶ Thus, development policy centered around poverty reduction is crucial in order to respond to shifting global trends.

⁴⁰⁶ "Future State 2030: The Global Megatrends Shaping Governments." KPMG. Accessed March 14, 2017. <https://home.kpmg.com/xx/en/home/insights/2015/03/future-state-2030.html>. 8

Development Policy Priorities

PRIORITY: EDUCATION

Education is crucial to the mandate of poverty reduction. In the Least Developed Countries (LDCs), children are typically in school at least two years less than the rest of the world.⁴⁰⁷ Education is a priority in international development policy because enhancing the education sector within vulnerable societies will reduce the burden on fragile states and allow future generations to gain the opportunity to develop their own economies.

Support new and existing teacher training institutes to produce professional teachers:

Canadian commitment to supporting teacher-training institutes is essential to the quality of education provided. With enrollment rates increasing in developing countries, having enough teachers to maintain manageable class sizes will allow for a higher caliber of education that can cater to students' needs. Having more trained teachers also increases the number of schools that can be staffed, partly solving the problem of accessibility as outlined by the Canadian government.⁴⁰⁸

Improve the development of relevant curriculum that highlights gender issues:

Canada should work with recipient governments and national ministries of education to develop curriculum that highlights sexual health and reproductive rights, peer pressure, and empowerment. Informing children and youth of their rights and teaching each student about mutual respect will result in the creation of a safe school space, controlled youth pregnancy drop-out rates, and the spread of knowledge to families and communities. Gender-based violence will also be addressed by investing in both girls and boys.

Integrate business and leadership training into relevant curriculum:

Canadian development assistance should also be targeted toward curriculum building regarding business and leadership training. Secondary school-age youth specifically should be taught practical business skills and be involved in leadership workshops. This will foster entrepreneurship and resourcefulness among future generations, which will contribute to the stimulation of local economies.

⁴⁰⁷ UNESCO Institute for Statistics, *Education in Least Developed Countries (LCDs)* (2015), https://sustainabledevelopment.un.org/content/documents/7780Education_in_LDCs_OL_final.pdf.

⁴⁰⁸ Government of Canada, *Education in developing countries* (2017), accessed March 8, 2017, <http://international.gc.ca/world-monde/aid-aide/education.aspx?lang=eng>.

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Improve Canada's international scholarship program to target poverty reduction:

Canada funds many international scholarships that allow students from developing countries to study in Canadian institutions or further their studies in their home country. While still contributing to funds and scholarships that increase access to post-secondary education, Canada should invest more in scholarship programs that provide equal opportunities for young women and men to pursue higher education in areas that contribute to domestic growth. Shifting the Canadian approach to international scholarships should involve a move toward scholarships for students to study in their own countries. This will contribute to the development of post-secondary institutions in recipient countries and increase access to higher education for other students.

Invest in Conditioned Transfer for Education for the poorest families in marginalized regions:

Conditioned transfer for education (CTE) is something that Canada should pursue to ensure that the poorest are benefiting from development programs and the overall development of each country. Children from the poorest areas and households are further disadvantaged by low educational attainment and future low incomes, perpetuating the cycle of extreme poverty even as a nation develops and extreme poverty levels decrease. CTEs use methods to target the poorest households and give direct aid to these families, contingent on them keeping their children in school.⁴⁰⁹ Poverty reducing measures, as outlined in the policy section Economic Empowerment which discusses conditional cash transfers, are here linked with educational benefit. As of 2013, 59 million primary school age children were not in school, a number that has flat lined since 2007.⁴¹⁰ This is largely due to systemic poverty and attitudes toward education: if a family does not see the benefit of sending their children to school, chances are their children will not be enrolled or will drop out before finishing. CTEs seek to address this by giving an incentive to those who are poorest and actively investing in the next generation. Conditional transfers for education and similar programs will be addressed further in the economic empowerment recommendation.

Use the Sector-Wide Approach for educational development policies:

Canada's approach to education in developing countries should shift to a Sector Wide Approach (SWAs). This approach is flagged by the Organization for Economic Co-operation and Development (OECD) and

⁴⁰⁹ Samuel Morley and David Coady, *From Social Assistance to Social Development*, (Washington: Center for Global Development, 2003), 4.

⁴¹⁰ UNICEF, *Rapid acceleration of progress is needed to achieve universal primary education* (2016), accessed March 11, 2017, <https://data.unicef.org/topic/education/primary-education/>.

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UNESCO as an effective way for the execution of education sector development by donor states.⁴¹¹ SWAs in education aim at enabling all development partners at the country level to work jointly with the recipient government to review national sector plans and priorities. Support is then pooled through a general budget support process.⁴¹² The Canadian Government often works with the governments of recipient countries to build capacity of government education officials, however much of the aid given for education is in partnership with international or nongovernmental organizations. For curriculum building, training, capacity building, understanding national context, and reaching the most marginalized populations and spaces, Canadian aid must work closely with recipient governments in the education sector.

Working directly with the governments of developing nations will at times be inefficient due to weak institutions and high levels of corruption. With that said, capacity building for government officials will become crucial and ultimately benefit recipient countries in the long run. By working through institutions in developing countries, Canada would be legitimating these institutions, therefore strengthening them and contributing to long-term stability and accountability. It is also important to maintain the agency of recipient countries; governments of developing countries must also be empowered and held accountable.

Use United Nations Country Teams (UNCTs) as central coordinating bodies:

Canada should work in partnership with international and nongovernmental organizations to maintain and strengthen cooperation. To coordinate efforts and make communication easier for governments in developing countries, Canada should affiliate itself with the United Nations Country Team (UNCT) present in each country of focus. UNCTs exist in 131 countries and coordinate UN programs and agencies. This system ensures inter-agency collaboration and decision-making at the country level.⁴¹³ By affiliating itself with the already established UNCT in a country, Canada would signal a shift towards more centralized decision-making within developing countries that then work with local governments.

⁴¹¹ OECD Development Assistance Committee, *Harmonising Donor Practices for Effective Aid Delivery Vol. 2: Budget Support, Sector Wide Approaches and Capacity Development in Public Financial Management* (Paris: Organization for Co-operation and Development, 2006), 38; Abby Riddell, *Education Sector-Wide Approaches (SWAs): Background, Guide and Lessons* (Paris: UNESCO, 2007), 1.

⁴¹² Abby Riddell, *Education Sector-Wide Approaches (SWAs): Background, Guide and Lessons* (Paris: UNESCO, 2007), v.

⁴¹³ United Nations Development Group, *UN at Country Level* (2017), accessed March 10, 2017, <https://undg.org/home/country-teams/unct-home/>.

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PRIORITY: HEALTH

Maternal, New Born, and Child Health Initiative Improvements

Improving global health is central to development, and due to the nature of health, a majority of health risks do not adhere to traditional borders. This means that a multilateral approach is required to mitigate health risks globally. Since the adoption of the Millennium Development Goals (MDGs) in 2009, Canada has styled itself as a leader in Global Health. The development of the Maternal, Newborn, and Child Health (MNCH) initiatives became the first step. Over 8 years later, it is time to revisit the policy. Though proposed as an effort aimed at gender equality, it effectively silenced gender from the discussion around Canadian foreign policy. By focusing the primary share of Canada's International Aid into this area without proper support or understanding, the policy valued women's health as reproductive beings rather than as people who should be granted the chance to achieve health and well-being to the fullest extent. This initiative must be reoriented to address more of the underlying causes of gender inequality that perpetuate women's health risks in pregnancy, childbirth, and postnatal care.⁴¹⁴ If this initiative's goal was to solely focus on the welfare of the children, then the title and objectives should be altered to reflect that and allow for alternative budget allocation for women and reproductive care generally. If this initiative is to remain the Maternal, Newborn, and Child Health (MNCH) initiative, it must include education for all families to learn about family planning, birth control, and sexual health generally outside of purely childbirth. We recommend that the funding be divided in two, and that the first half continue to be devoted to child health and improving health care during the birthing process. The second half should be used to dismantle power structures so that women can make informed decisions about their health and wellbeing.

Knowledge Proliferation and the Pledge for Africa Act

The global health burden is shifting from communicable diseases (AIDS, malaria, diarrhea, etc.) to non-communicable diseases. Prevention and control of poverty-linked diseases is crucial to lessen strains on poor societies with weak governance. In partnership with the IDRC, creating health workshops that proliferate knowledge and technology is a way that Canada can use expertise and resources already available to ensure wider access to health.⁴¹⁵ Central to this knowledge proliferation includes educating

⁴¹⁴ Carrier, Krystel, and Rebecca Tiessen. "Women and children first: maternal health and the silencing of gender in Canadian foreign policy." *Canada in the World: Internationalism in Canadian Foreign Policy* (2013): 107

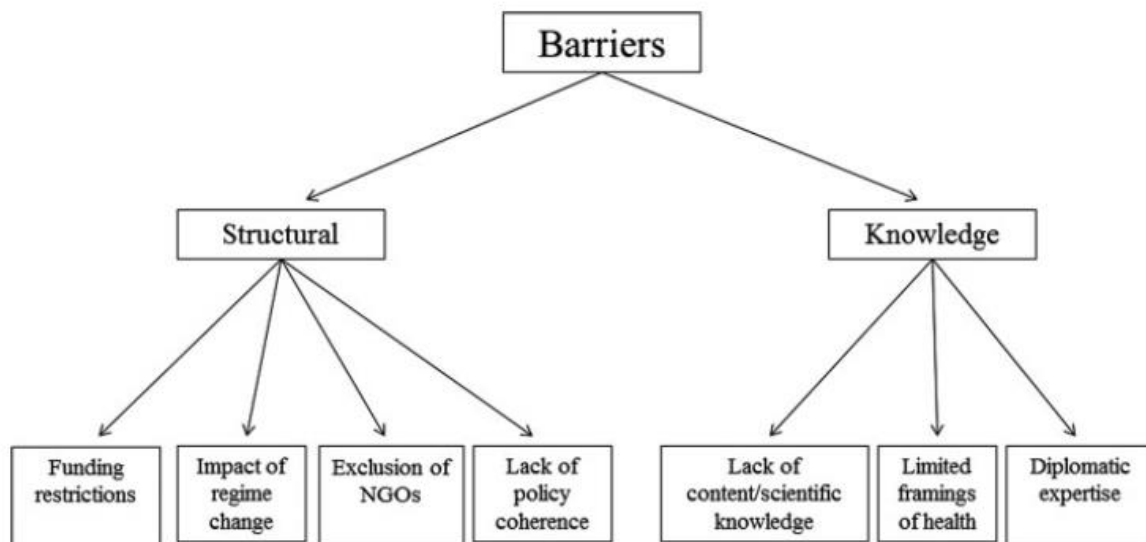
⁴¹⁵ Bruce Muirhead, "IDRC: Forty Years of Research for Development," in *Long Term Solutions for a Short-Term World: Canada and Research Development*, eds. Ronald N Harpelle and Bruce Muirhead, 27-47 (Waterloo: Wilfred Laurier Press, 2011), 32.

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developing governments on the resources that the Canadian government provides. For example, distributing more information on the Pledge for Africa Act, adopted in 2005. This act allows patents on drugs to be overridden so that generic versions can be sold in developing countries. By subsidizing costs for obtaining patent exemptions under the Act, the Canadian government can create more of an incentive for generic drug makers to distribute medicines that developing countries do not have the capacity to manufacture. This act has been in place for 12 years but it has only been used once.

Policy Writing and Development Improvements

Disjointed implementation and policy incoherence, particularly in health, can be improved by addressing the creation of policy internally. This leads to the discussion of the importance of health education as a component of foreign policy. A study conducted by Runnels et al. listed the following as barriers to including a comprehensive health policy into Canadian foreign policy⁴¹⁶:



As illustrated in the above diagram, knowledge is one of the largest challenges to health in foreign policy. In order to combat this, a more diverse team must be brought in when establishing new initiatives, including a variety of health professionals and experts on specific issue areas. Health care professionals must be consulted, as their input will allow for a more intersectional development policy. If this can become the goal for all policy creation within international aid, it will be held to a higher standard than previous policy.

⁴¹⁶ Vivien Runnels, Ronald Labonté, and Arne Ruckert. "Global Health Diplomacy: Barriers to Inserting Health into Canadian Foreign Policy." *Global Public Health* 9, no. 9 (2014)

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PRIORITY: ECONOMIC EMPOWERMENT AND FINANCIAL ASSISTANCE

It is in Canada's best interests to alleviate suffering and poverty worldwide for a variety of reasons. Intrinsically the suffering of our neighbor itself is reason enough to help those in need. Additionally, there are a great many benefits Canada can reap from bringing prosperity to others. In a prosperous world, Canada will find more allies, friends and a bigger global market for its goods.

Canadian financial assistance has two primary goals in terms of developmental aid. First and foremost, Canada should look to play its part in alleviating extreme poverty by 2030. Once this has been achieved or is well on its way to being achieved, Canada should undertake projects in least developed countries that look to bring about their long-term sustainability and prosperity. One of the best ways to foster this growth is through purposeful monetary aid, in a variety of forms.

This section is focused on a strategic plan for using financial aid as a powerful tool to directly fight poverty while reinforcing the other priority areas of health and education in the development report. Poverty will be combated in targeted developing countries by the dynamic use of conditional cash transfers, monetary grants, micro-credit and Community-Driven Development programs all with the aim of elevating people out of poverty and creating the best conditions for future prosperity. Thus, our assistance schemes should be focused on doing that as effectively as possible and not expecting our investments to be paid back but rather have gains be reinvested locally. In the long run this will better promote growth and alleviate poverty, which feeds into our greater goals of global stability, peace and prosperity. To achieve this sort of aid we have a variety of tools at our disposal.

Short Term Poverty Alleviation

Conditional Cash Transfers:

The set of policies for poverty alleviation that are most effective will be those that work in concert with each other. To this extent conditional cash transfers provide an opportunity to both alleviate poverty and to promote and enhance education and health policies. Conditional cash transfers (CCTs) are used in two main ways: to incentivize good behavior and/or to provide extra income to certain segments of a population.⁴¹⁷ The first objective is achieved by providing monetary incentives for families or individuals to

⁴¹⁷ Jishnu Das, Quy-Toan Do, and Berk Özler. "Reassessing Conditional Cash Transfer Programs." *The World Bank Research Observer* 20, no. 1 (2005): 64.

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commit to doing certain things, like sending their children to school. Such was the policy of the Brazilian program Bolsa Familia, which provided cash to parents of a lower income bracket when their children attended school at least 85 percent of the time.⁴¹⁸ This has the dual effect of increasing child enrolment in school as well as increasing the income of poorer families thus spurring economic growth. These CCTs have proven to be highly effective at decreasing the severity of poverty, in some cases by as much as 29 percent (Mexico).⁴¹⁹ While CCTs do not significantly lower the actual head count of poor people, this is counterbalanced by their ability to draw the poor into health and education services, which in turn will contribute to long-term poverty alleviation.⁴²⁰ As such, using health and education policies together as key tools for alleviating poverty has great potential to increase the range of said policies while further lowering poverty. In the creation of CCTs Canada should avoid making any conditional transfers that only apply to girls or boys in the realm of education as this can lead to adverse side effects, such as the case in Bangladesh where boy's education dropped 29 percent due to the sex-specific programs.⁴²¹ This occurred because when a girl's education is subsidized it makes parents feel more inclined to keep boys at home for labor while sending girls to school. Instead, programs such as the Food for Education that was inclusive to both sexes could draw in 15 percent more boys and girls, showing it to be more effective without negative consequences.⁴²²

Canada should pursue the creation of CCT projects in developing countries or increase the effectiveness of already active policies by increasing the funds allocated to individual programs. To do this it is important to partner with competent local governments as "good governance and a sound policy environment" are the most important determinants of aid effectiveness.⁴²³ With that said, Canada can also work to assist governments in the creation of good policies and take a more hands on role in countries with

⁴¹⁸ Ibid, 66.

⁴¹⁹Bastagli, Francesca. "Conditional Cash Transfers as a Tool of Social Policy." *Economic and Political Weekly* 46, no. 21 (2011): 62.

⁴²⁰ Ibid, 62.

⁴²¹ Jishnu Das, Quy-Toan Do, and Berk Özler, 69.

⁴²² Ibid, 69.

⁴²³ Easterly, William. "Can Foreign Aid Buy Growth?" *The Journal of Economic Perspectives* 17, no. 3 (2003): 24.

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less developed governance systems in the implementation of their CCTs. In addition to CCTs, which help the poorest of society get access to some capital and social services, Canada should work with international organizations to assist the development of business and economies via grants and microfinance.

Grants and Loans:

NGOs today are more valuable than ever and through them Canada can reach impoverished people around the world. By providing financial assistance to NGOs, Canada can avoid distributing money through weak government structures typical of poorer countries where funds could be lost to corruption.⁴²⁴ Working with NGOs that are engaged in micro-grant and micro-credit operations would be extremely beneficial in the effort to alleviate poverty. In Afghanistan, for example, grants were given to a variety of different agricultural businesses. These grants were used by local producers and business owners in a variety of ways, from buying new equipment to enrolling their children in school. The improvements made with the new equipment brought more money to these businesses and lowered the cost of their goods.⁴²⁵ Giving small business grants and credit to people in impoverished countries encourages economic growth. Further, many NGOs help women get access to money for starting businesses that they would otherwise be unable to acquire.⁴²⁶ By working through NGOs, Canada does not need to contribute extensive human capital but instead can work through pre-existing organizations on the ground. This is very important considering the limited development assistance Canada can offer. This method of sponsoring micro-grant and credit operations can effectively contribute to the alleviation of extreme poverty, particularly among women, in the short term and help reach the world 2030 goal by supporting individual businesses that also employ those around them. While helping NGOs provide funds to individuals will help reach our 2030 goal, following that Canada needs to look to long-term sustainability of the impoverished communities and countries.

Long Term Prosperity:

World Bank Reform:

⁴²⁴ Cordella, Tito, and Hulya Ulku. "Grants vs. Loans." *IMF Staff Papers* 54, no. 1 (2007): 152

⁴²⁵ Kock, Timothy, Sheyenne Krysher, and M. Craig Edwards. "The Use of Micro-grants to Mitigate Gender Inequity in Afghanistan by Empowering Rural Farmers and Agribusiness Entrepreneurs." *Journal of International Agricultural and Extension Education* 17, no. 1 (2010): 16.

⁴²⁶ Idris, Adama J., and Kenneth Chukwujioko Agbim. 2015. Micro-credit as a strategy for poverty alleviation among women entrepreneurs in nasarawa state, nigeria. *Journal of Business Studies Quarterly* 6, (3) (03): 125

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The major priority for Canada is not only to bring people and countries out of poverty but also to ensure their long-term prosperity. One of the best ways to do this is by encouraging international organizations to focus more on providing aid to LDCs. Canada can achieve this by working to reform the World Bank so that it better assists least developed nations, by advocating that a greater percentage of its funds go to poor countries and in the form of grants as opposed to loans. The World Bank now distributes most of its funds through loans, with only 15 percent of these funds being allocated in the form of grants.⁴²⁷ This is a major issue because loans have often been impossible for countries to repay, leading to debt crises, as was the case in Argentina in 2001.⁴²⁸ This is a double-barreled issue as money that is supposed to help the country often ends up hindering growth and causing stagnation. Additionally, market failures due to World Bank and IMF policies lead to a dramatic loss in credibility of these institutions. The World Bank understands this issue and gives countries at risk of “debt distress” more grants than loans. Due to the fact that the World Bank allocates most of its resources to loans it gives far less money to those countries that need it most.⁴²⁹ Canada should work to reform this system to be more centered on helping those countries that need assistance most. This will accomplish two things: it will work towards our goal of alleviating poverty internationally while at the same time strengthening and lending more credibility to the liberal international financial regime. While Canada should pursue such reforms in the World Bank, Canada should also engage on its own to develop the capacity of close partners to become independent in the long term. This can be done through Community Driven Development.

Community-Driven Development:

Community-Driven Development is a powerful and innovative idea that was first conceived by scholars and the World Bank in 2004, which views poor people as valuable assets, rather than targets, of poverty alleviation.⁴³⁰ It works by empowering local communities to have more direct control over their finances, thus being able to allocate resources where they are most needed. As the people who are most aware of many of the issues facing them this allows the communities to have a much greater say in what is done for them, while also allowing outside actors to act with them and not upon them. This structure is

⁴²⁷ World Bank, International Development Association, “Management’s Discussion & Analysis and Financial Statements” Washington, D.C.: World Bank, 2015. 9.

⁴²⁸ Bulow, Jeremy, and Kenneth Rogoff. “Grants versus Loans for Development Banks.” *The American Economic Review* 95, no. 2 (2005): 394.

⁴²⁹ World Bank, International Development Association, 16.

⁴³⁰ Dongier, Philippe, Julie Van Domelen, Elinor Ostrom, Andrea Ryan, Wendy Wakeman, Anthony Bebbington, Sabina Alkire, Talib Esmail, and Margatet Polski. “Community Driven Development.” *World Bank Poverty Reduction Strategy Paper* (2003). 303

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particularly useful in rural development and poverty alleviation, where weak and impoverished governments often are unable to provide public goods.⁴³¹ With much of today's extreme poor located in isolated rural areas this is one of the best ways of meeting their needs. Furthermore, one of the biggest problems facing poverty alleviation programs is that they create a level of dependency by doing things to people rather than with people. CCD programs help deal with this as they place local people in the driver seat. Such programs can have powerful impacts, improving education capacity, control over micro-finance, and the management of resources improves drastically while at the same time cutting costs by nearly half.⁴³² CCD programs play a large role in the capacity building of local governance structures, by providing recipients with the means to solve their own problems daily.⁴³³ Canadian financial assistance should go to the development of such community driven programs as they can lead to the long-term prosperity of local communities. This can be done in conjunction with NGOs on the ground that can facilitate the transfer of aid to the CDD programs as well as help build up the administrative capacity of the local communities.⁴³⁴ By contributing to these programs Canada would be ensuring the long-term viability of communities and moving past short-term poverty alleviation.

Canada can play a major role in the alleviation of poverty worldwide and the resulting creation of a more prosperous world. The immediate priority must be extreme poverty reduction, as every day that a person suffers in such circumstances represents a moral failure on the part of those able to help. Further extreme poverty has long term effects on the life of the children now living under those conditions. Eliminating extreme poverty globally is attainable if Canada works with the international community. Canada can contribute by investing its foreign assistance finances primarily in LDCs through programs known to help alleviate poverty, such as conditional cash transfers and micro-credit. These should be done where possible through NGOs or in partnership with NGOs to save money on administration and manpower, and to avoid placing too much money in the hands of ineffective central governments.

In the long run, Canada should hope to see the countries it works with prosper and grow independently. This should be tackled by working with the World Bank to see that more funds go to LDCs in the form of grants. This will achieve two things; first, it will make funds that are desperately needed for development available to those countries most in need and second, it will strengthen the liberal

⁴³¹ Ahmad, Muhammad Shakil, and Noraini Bt Abu Talib. 2015. Empowering Local Communities: Decentralization, Empowerment and Community Driven Development. *Quality & Quantity* 49 (2): 828.

⁴³² Dongier et al, 306-7.

⁴³³ Bado, Niamboue. 2012. Community-driven development: A Viable Approach to Poverty Reduction in Rural Burkina Faso: *Community-Driven Development*. *African Development Review* 24 (1): 38.

⁴³⁴ Dongiet et al, 312.

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international order. Canada should also engage in community driven development to empower the poor to help themselves, which builds up the capacity of individuals to see to their own needs and leads to independence from foreign aid. Pursuing these policies in the longer term will see to the creation of a safer and more prosperous world.

PRIORITY: FOOD AND WATER SECURITY

In 1996, the World Food Summit defined food security as the state “when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.”⁴³⁵

Around 800 million people in the world are chronically undernourished.⁴³⁶ Of this number, 60% are women or girls in the developing world.⁴³⁷ With recent trends in population growth and urbanization, climate change, and threats to global stability, hunger and malnutrition are increasingly pervasive problems. Lack of access to nutritious food and land degradation limit the likelihood of individuals to live a healthy and secure life.

This is why it is critical that Canada take on a more substantial role in ensuring food security in vulnerable societies. Reinventing Canada’s Food Security Strategy is long overdue, and in 2017 Canada is in the position to adopt a new, innovative approach towards global food security in order to achieve the UN’s SDG Goal #2: End Hunger by 2030.

First, Canada must increase its funding for agricultural development. From 2008-2010, Canada was recognized for giving the highest percentage of its aid to food security.⁴³⁸ Canada’s funding was also the largest per capita commitment to food assistance in those years. While Canada engaged in significant work with smallholders (some of the most food insecure people), its funding for agricultural development dropped by almost half over the years.⁴³⁹ Given that agriculture is central to the economy of many developing nations, and that economic growth in agriculture is twice as effective in reducing poverty,

⁴³⁵ FAO, 1.

⁴³⁶ "Report of The 41st Session of the Committee On World Food Security," 3.

⁴³⁷ Schutter, 1.

⁴³⁸ Fertile Ground, 3.

⁴³⁹ Fertile Ground, 3.

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funding must be reinvested in this area.⁴⁴⁰ Canada must restore at least 40% of the funding previously reduced in order to make a significant and positive change in agricultural development.

Second, Canada must promote effective measures that enable response to the damage climate change inflicts on agriculture-dependent economies. Canada must focus on providing developing nations with disaster risk reduction methods in order to prepare and prevent crippling damage from natural disasters and conflict. Food and Agriculture Organization conducted a study that found that the agriculture sector absorbs 25% of the total damage and losses in climate-only related disasters.⁴⁴¹ This is a massive hit to vulnerable nations that depend on agriculture as a primary source of income.

Promoting resilience against climate change within the ecosystems of these rural areas will increase productivity in agriculture. Practicing sustainable agro-ecological farming techniques will also improve soil and water quality and sustain on-farm biodiversity.⁴⁴² While Canada's response to humanitarian crises is exceptional, Canada should invest in preventative, risk reducing measures. This will materialize in the form of early warning systems to further protect food security.

Third, Canada must increase its investment in research and more accessible technologies. In the 2009 Food Security Strategy, the Canadian government does not refer to smallholder farmers, or farm organizations for their input. Dialogue and discussion between farmers and policymakers or representatives on the ground could enhance certain aspects of the development program. It would allow farmers to engage with the government on their pressing issues, "paving the way for stronger civil society participation."⁴⁴³ The funding of research will also contribute to enhancing the resilience of crops and agricultural systems to climate change.

In light of the international community's new vision for the future in the form of the SDG's, Canada must address global food security through an economically feasible, feminist, and environmentally conscious lens. Canada's Food Security Strategy must continue with its proactive initiatives on nutrition and food assistance funds while also addressing sustainable agricultural practices, gender equality, disaster risk reduction, and technological innovation.

⁴⁴⁰ Food Security Policy Group, 3.

⁴⁴¹ Trujillo, xxi.

⁴⁴² Food Security Policy Group, 4

⁴⁴³ Fertile Ground, 5.

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SEQUENCING PRIORITIES

Clear measurements of success are crucial to evaluating Canadian international assistance for development. Close alignment with the recipient country's objectives is necessary to retain the recipient government's autonomy and agency, and move away from preconceived Western prescriptions for success. Changing aid modalities and production of plans for international aid tend to be evaluated by closely following the guidelines prescribed by a particular project plan.⁴⁴⁴ Flexibility and country-level decision-making are therefore difficult to translate into development policies and projects. Canada should adhere closely to national research on systemic gaps leading to poverty, make decisions alongside local governments and relevant organizations, and walk the balance between having focused programs based on a core philosophy and central goals while also allowing flexibility based on the needs of countries of focus.

Development programs in non-LDCs will be discontinued after a ten-year period. This will allow aid to focus on poverty reduction. 12 of the 25 countries of focus that Canada gives development assistance to, or 48 percent, will therefore graduate above the grading of LDC. Throughout the process, Canada will still maintain 25 countries of focus, either phasing non-LDC countries of focus out or pursuing development partnerships with additional LDCs. After ten years, when Canada is focusing its development budget entirely on countries that are most vulnerable, with programs that target the most marginalized and the roots of poverty, such as conditioned transfer for education (CTE) and community-driven reform, will be implemented. These programs are more focused ways to ensure that the poorest in society are also given an opportunity to prosper in life, and should be used once more foundational development programs, like basic health and education services, are established. All other recommendations should be integrated into Canada's development strategy immediately in order to address poverty reduction.

Throughout this time, Canada should pursue a path that will lead it to an increased International Assistance Envelope (IAE) of 0.7 percent ODA/GNI. Prioritizing a strong internal economy means that Canada must take a conservative approach to development budget growth. However, it is important for Canada to increase its development budget to meaningfully contribute to the alleviation of global poverty. Canada's development budget should increase annually by 12 percent per year from 2017-18 to 2030-31. At this rate, Canada would reach 0.7 percent ODA/GNI by the 2030-31 fiscal year. It is estimated that for the

⁴⁴⁴Abby Riddell and Miguel Niño-Zarazúa, "The effectiveness of foreign aid to education: What can be learned?" *International Journal of Educational Development* 48 (2016), 26.

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first three years the cost of this increase would be approximately 1.9 billion CAD per year.⁴⁴⁵ Committing to a gradual budget increase allows Canada to expand its mandate to reduce poverty while maintaining a strong and sustainable domestic economy.

POSSIBLE COMPLICATIONS AND PREDICTING RESPONSES

Education Policy:

Education is fundamental to the creation of a developed nation. Thus, the focus on providing higher quality education to students in LDCs is crucial. There are, however, obstacles that can potentially prevent this from happening. Firstly, and perhaps most problematic, is that with a minimal budget Canada will be unable to keep up with a rising young population in the developing world.⁴⁴⁶ The primary issue in this regard comes from Africa, where extreme poverty remains high and is heavily concentrated.⁴⁴⁷ By the end of the 21st century, the population of the African continent is expected to increase from one billion people to four billion.⁴⁴⁸ Significant population growth could strain Canada's international assistance budget, especially considering programs such as conditional cash transfers (CCTs) and Canadian support for the training of high quality teachers. It is crucial, therefore, that we move forward with attaining the goal of 0.7 percent ODA/GNI. If Canada strengthens commitment to this target, our decision could serve as an example for other OECD nations that have committed to the 0.7 percent ODA/GNI target, especially since many OECD countries have not met the target for official development assistance.⁴⁴⁹

A second challenge is adequately reaching impoverished people in rural areas. Once quality teachers are trained, some may choose not to teach in the rural zones. Additionally, individuals with post-secondary education might feel more inclined to pursue their careers in a different country. However, since policy recommendations for education-focused development programs work alongside recipient

⁴⁴⁵ Fraser Reilly-King and Aniket Bhushan, *Getting to 0.7: Three Scenarios for Canada*, Ottawa: Canadian International Development Platform, October 2016, accessed March 13, 2017, <http://cidpnsi.ca/getting-to-0-7-three-scenarios-for-canada/>.

⁴⁴⁶ "Future State 2030: The Global Megatrends Shaping Governments." KPMG. Accessed March 14, 2017. <https://home.kpmg.com/xx/en/home/insights/2015/03/future-state-2030.html>, 14.

⁴⁴⁷ "Poverty: Overview." World Bank. October 2, 2016. Accessed March 16, 2017.

⁴⁴⁸ Baer, Drake. "'The biggest change of our time' is happening right now in Africa." Business Insider. August 18, 2015. Accessed March 16, 2017, <http://www.businessinsider.com/africas-population-explosion-will-change-humanity-2015-8>.

⁴⁴⁹ "Table 1: Net Official Development Assistance from DAC and Other Donors in 2014: Preliminary data for 2014," OECD (April 2015), accessed March 17, 2017, <https://www.oecd.org/dac/stats/documentupload/ODA%202014%20Tables%20and%20Charts.pdf>.

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governments and through established organizations, the above obstacles can be mitigated in part through multilateral collaboration and partnership.

Health Policy:

A healthy populace is fundamental to creating prosperous, stable societies in developing countries. Some obstacles also arise with the above recommendations for health-related policy. First, regarding the Pledge for Africa Act, Canada has limited control over patents in other countries and must work multilaterally to achieve these goals. The World Trade Organization (WTO) established the Agreement on Trade-Related Aspects of Intellectual Rights (TRIPS) in 1994. All WTO member countries must make generic drugs available to developing countries if they are requested.⁴⁵⁰ Consequently, Canada should work with WTO-member developed nations to make generic drugs more readily available by lifting patents.

Two additional obstacles facing health-focused development policy are the increasing population in developing countries and climate change. These trends could make providing adequate health care challenging. Canada can mitigate the challenges posed by these global trends by adhering to the central goals for foreign policy that are outlined in this report. Canada must actively partner with multilateral organizations and focus on the economic sustainability of its health policies, which are encompassed in the health policy recommendations.

Financial Assistance:

A key issue is that many LDCs have little access to capital, therefore, there is less opportunity for individuals to lift themselves out of poverty. Although the financial assistance policies look to address this, there will be obstacles. First, there is the issue of the accountability of the receiving government when the funds are not to be paid back. If there is less transparency within the receiving government, they might not distribute the funds as intended. This issue has been at the center of the grants versus loans argument. While accountability can be an issue, the avoidance of loan-induced economic collapse (i.e. Argentina or Yugoslavia) is far more important.

Furthermore, when dealing with LDCs, the issue of accountability is crucial. The recommended policies propose cooperation with NGOs and international organizations to avoid corruption. The interaction or focus on using the World Bank could also be a source of weakness to the policy. The World

⁴⁵⁰ Canadian HIV/AIDS Legal Network, *The Jean Chrétien Pledge to Africa Act and its Impact on Improving Access to HIV/AIDS Treatment in Developing Countries* (August 2006), accessed March 17, 2017, file:///C:/Users/Andrea%20Burke/Downloads/JCPA%20-%20ENG.pdf, 2.

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Bank and the International Monetary Fund (IMF) are not as dominant as they were in the past. Despite this decline in dominance, the World Bank is still a central global institution and further, it is an institution that we have more influence on due to our nature as a Western country. As such it is best to strengthen it rather than engage with other development banks with we would be in a weaker relative position. Like health and education, financial assistance could come under strain with an increasing population in the developing world. With that said, finance is more fluid and resources can easily be added to other programs that are deemed more efficient. By providing a wide variety of policy options, Canadian policy makers can implement the appropriate policy in each partnered nation. This allows not only for Canadian Foreign policy to cope with changes in demographics but to also support local businesses in the appropriate settings. By providing access to capital, local business growth can be assisted by larger populations and enhanced consumer markets in the domestic sphere.

Food and Water Security Policy:

Food and water security will be faced with two key problems. Population growth will cause more competition for resources, while climate change will contribute to the reduction of available supplies. This can lead to widespread famines and distribution difficulties. Combating these issues will get progressively more difficult as climate change progresses or weather becomes more extreme and the impacted populations grow. The proposed policies are grounded in research with a proven track record. Preparation for climate changes and food scarcity is key to combating these issues. As these recommendations suggest, the more food that can be produced in the LDCs and the more resistant it is to climate change the better off the populations will be. Furthermore, by utilizing the existing technology and techniques, farmers in Canada's partner countries will be able to increase short-term yields and the long-term fertility of land. Focusing on preparing farmers and nations to better withstand these issues will be paramount to success. The central concern, however, will be further addressed in the environmental section, which will deal with the ways in which Canada can contribute to the promotion of sustainable economic development initiatives and mitigate the effects of climate change.

CONCLUSION

The aforementioned development policy recommendations will help Canada realize its commitments to the promotion of human rights and human dignity by alleviating the major causes of poverty in LDCs around the world. Education has always been a focal point of Canadian development policy, however with a renewed focus on cooperation with local governments and communities to ensure more

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effective education curriculums and incentives to attend, Canada can address what is often considered the primary cause of global poverty.

By increasing investment and promotion of health initiatives in LDCs, Canada will not only help eradicate major health issues that contribute to widespread poverty, but will also reduce the likelihood of global epidemics, such as the Ebola Crisis. Such policy will improve global security and the health of Canadians in an increasingly globalized world. Developmental assistance within the economic framework will also focus on strengthening communities that will help ensure sustainable development and community empowerment in the long term, helping to eliminate structural causes of poverty instead of focusing on individual economic empowerment exclusively.

Policies that ensure food and water security are also crucial to the sustainability of individuals and communities considering climate change-related problems. Pursuing these policies through multilateral organizations and allies will also help strengthen the liberal multilateral global governance system as the elimination of poverty cannot be accomplished by Canada alone. Policy coherence has been a sustained criticism of Canadian developmental policy in the past, and with these recommendations Canada will be able to pursue the goal of poverty eradication with coherent and complementary priorities. Canada will gain greater global security and see the benefits of growing world markets in the long term, making immediate and sustained investment in development not only beneficial to countries receiving aid but also to Canada.

Conclusion

This report sets out to accomplish the difficult task of developing a foreign policy strategy for Canada to pursue over the course of the next two decades. The two overarching goals that we consider to be most significant are the development of a strong and sustainable Canadian economy, and the maintenance of the Multilateral Global Governance System. With these goals in mind, the authors also make note of the most pervasive criticisms of past Canadian policies within each major section: Economy and Environment, Security, and Development. In an attempt to rectify these criticisms while adhering to the two primary goals mentioned above, policy recommendations are carefully selected with the ultimate goal of devising a global strategy to drive Canada forward to 2037.

Recent administrations have emphasized the importance of trade to Canadian foreign policy. We recognize that Canada is heavily dependent on trade, however we suggest throughout the report that if priorities are to be ranked hierarchically, trade should no longer always take precedent over environmental concerns. If this continues to be the case, tangible progress will not be made on addressing the most important issue of our time: climate change. This reality requires a proactive, long-term strategy that incorporates environmental concerns into the decision making process on a level never before seen in Canadian foreign policy. The threat is unprecedented, and so it requires an equally unprecedented approach to the way policy is formulated and implemented in Canada. The consequences of constantly reacting to changes in the global landscape are too severe to avoid developing a more proactive, forward-thinking strategy.

When devising the sector-specific policies for both the Economy and the Environment, we believe that the two sections should merge in order to address the primary tension between these policy areas: the perceived incompatibility of economic growth and climate change mitigation. In an attempt to address this perception head-on, the policies are chosen to reflect the possibilities of a reimagined approach to sustainable economic growth that also considers the very real impacts of carbon-emitting activities that will continue for years in the future. Keeping our commitment to the Multilateral Global Governance System in mind, the report highlights the various obstacles on the long road to a green economy in Canada. We address the Paris Climate Agreement in detail, specifically the role that Canada can play in abiding by its own emissions reduction commitments, in order to determine the viability of Canada transitioning to a low-carbon economy in the near future.

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Sustainable economic development initiatives deal with the Arctic, the Oil Sands, Canada's International Mining Industry, the Digital Economy, and the Proliferation of Green Technologies. These specific policy areas are chosen as they each represent vital sectors of Canada's economy, sectors where the proposed recommendations could affect meaningful change. In terms of strategy, each section outlines the ways by which policies can leverage the Multilateral Global Governance System to accomplish stated goals. This system is an asset for Canada, and the report recognizes this by noting the different ways that it can be used to benefit our own policies while simultaneously strengthening the system itself. The ultimate goal of the merged Economics and Environmental Policy section is to provide the reader with a renewed strategy that embraces the perceived incompatibility of economic growth and environmental concerns. In order to accomplish this goal, the authors choose to seek the most constructive answer to the question of how to engage in sustainable economic development without ignoring the equally important obligation to address climate change in an honest, realistic, and actionable manner.

In order to develop a strategy to address the many security challenges Canada faces in an increasingly globalized world, the Security section isolates some of the most relevant global threats. These include: climate change, unpredictable or unstable migration, corporate and government espionage and hacking, radicalization and terrorism, and threats to both territory and its resources. To protect against these threats, we propose a hybrid liberal internationalist strategy involving an increase in the defense budget and a strengthened commitment to NATO. Modernization of Canada's armed forces, including substantial investments in cyber-security and counter-terrorism initiatives, is also critical. Without a stable situation in terms of security, it will be difficult for Canada to pursue any other objectives as outlined in this report. The Security section identifies the most significant threats facing Canada, and addresses these threats by proposing forward-thinking, practical policies in order to keep Canada safe.

In the past, Canada has prided itself on its global commitment to development initiatives, and the Development section of this report advocates for a renewed vision for Canada's role in alleviating poverty, and upholding human rights and dignity in the developing world. We propose policies that address the primary causes of extreme poverty, with a key emphasis on cooperative education initiatives. Health programs also represent a major pillar of the proposed development strategy. Reducing the likelihood of potentially catastrophic global epidemics reduces health risks for citizens of the developed world and Canadians alike. Furthermore, policies aim to encourage community engagement and empowerment and will allow areas in most need of assistance to address the most urgent development crises in a much more efficient manner. Food and water security are also essential components of the successful realization of development goals. All of these initiatives involve increased engagement with multilateral organizations and

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ultimately serve to strengthen the global governance system that Canada benefits from. Working in concert with other states makes Canada's individual contribution to development initiatives that much more impactful. Development does not have to come at the expense of other previously dominant policy areas; when developing states become developed, Canada benefits economically by gaining additional trading partners. Protecting human rights and dignity in the developing world should be viewed as essential to Canada's global strategy going forward, and this report recommends policies to renew Canada's commitment to development.

This report offers a foreign policy strategy that aligns with our overarching goals of maintaining a strong, sustainable Canadian economy and supporting the Multilateral Global Governance System. It is our hope that by offering the perspective of students from a generation who have interests and concerns that differ from those past that we can put forth an alternative path for Canada to pursue over the next two decades.

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