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Climate Change and Foreign Policy in Canada: Intersection and Influence

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We dedicate this work to the memory of Peter Dickey, whose insights and contributions improved this paper. His memory is a continuing inspiration for our climate change and energy work.

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Executive Summary

While the Copenhagen Accord was far from the comprehensive agreement that many anticipated coming out of the 15th meeting of the Conference of the Parties (COP 15) in Denmark in 2009, one should not entirely discount the potential of the agreement to develop a solid foundation and framework to help countries begin to respond effectively to climate change. Significant elements for forging ahead were identified in the accord, including agreement to keep maximum global temperature increase to below two degrees Celsius; indications by major economies of targets (for developed countries) and nationally appropriate mitigation actions (NAMAs, for developing nations) to reduce emissions by 2020; the Copenhagen Green Climate Fund, with agreement to mobilize US$30 billion for the period 2010-12; and agreement to act on technology transfer, adaptation, and reducing emissions from deforestation and forest degradation in developing countries (a program known as REDD).

The process at Copenhagen, however, left much to be desired. The final deal was struck at a closed-door session of the United States with the four BASIC countries (Brazil, South Africa, India, and China). The accord was then trumpeted, particularly by the United States, as a *fait accompli*. This left many other countries—from the European Union to the least developed countries (LDCs)—extremely frustrated at having to accept the accord as a de facto agreement.[1] Canada did not appear upset at the turn of events because the core tenets of the accord—all major economies are to begin mitigation actions, and developed countries are to simply transcribe their national targets without any international discussion or approval of those commitments—were entirely consistent with the government's expectations. Prime Minister Stephen Harper called the Copenhagen Accord a "comprehensive and realistic" agreement; and Environment Minister Jim Prentice stated, "This government will act on the Copenhagen Accord because it is consistent with Canada's stated position on climate change."[2]

While the accord is considered consistent with the Canadian position, this result was not due to any specific initiatives or strategies on the part of the Canadian government at Copenhagen. Canada basically followed on the coattails of the United States and trusted that President Barack Obama would not venture too far from the deal that was (and is) being packaged in the American Congress.

That said, the successful implementation of the Copenhagen Accord is arguably more critical for Canada than for any other country, offering a potential opportunity to shift the focus from Canada's not meeting its Kyoto obligations to an interpretation where Canada plays a role as a constructive contributor to the new accord. Canada is beginning to move in this direction, as reflected in the June 2010 announcement of $400 million for its 2010 portion of the US$30 billion in fast-track financing promised under the Copenhagen Accord.[3] Developed countries have also committed to a goal of mobilizing US$100 billion a year by 2020 to address climate change in developing countries.

Canada's actions on the Copenhagen Accord have to be balanced against the other, and primary, driver of Canadian federal policy on climate change: namely, US federally legislated actions on climate change. Canada has decided that its climate change response will be closely linked to that of the United States. The decision is reflected in Canada's following the US lead on implementing fuel efficiency standards for passenger vehicles and light trucks; collaborating with the United States to develop regulations to reduce emissions from heavy-duty vehicles; and aligning any future cap-and-trade regulations with the system put in place in the United States. Canada has moved independently on the regulation of coal-fired electricity generation and new regulations requiring renewable content for gasoline and diesel fuel. Canada does not yet have a full elaboration of how it will meet its Copenhagen target of a 17-percent reduction from 2005 levels by 2020 (roughly equal to the 1990 level); and this is unlikely to be developed until there is further clarification on how the United States will meet its target. The United States has yet to legislate or implement any other regulations on greenhouse gas (GHG) emissions.

1 Taylor, "Snubbed in Copenhagen"; International Institute for Sustainable Development, "Summary."
2 CBC News, "Canada Part of Copenhagen Climate Deal"; Canada, Environment Canada, "Canada Lists Emissions Target."
3 Canada, Environment Canada, "Government of Canada Makes Major Investment."

Canada could face challenges in making the case that the country is moving in a clean energy direction if it falls short on climate change action. The world is heading in a very significant clean energy direction, driven not just by climate change but by energy security, trade relationships, investments, and jobs. Climate change is but one element of an integrated clean energy strategy, but an important one for Canada and for those concerned about Canada's profile—such as the United States, which accounts for 99 percent of Canadian energy exports.

Strong action is needed in Canada and other developed countries to demonstrate the feasibility of delinking GHG emissions growth from economic activity, or developing countries will not be persuaded to follow suit. There is an increasing realization in the international community that making that case requires putting climate change into a broader policy context. Climate change discussions do not occur in isolation from other developments on the global agenda, and many decisions critical for an effective transition to a low-carbon economy will take place outside the climate policy community. Canada's actions in the area of climate change can impact its profile and influence in other areas of foreign policy; and actions in foreign policy areas can influence climate change policy.

The June 2010 meetings of the Group of 8 (G8) and Group of 20 (G20) are an example of the intersection between climate change and foreign policy. Canada's hosting of the summits played a critical role in influencing the Canadian government to be more proactive on climate change. In the run-up to the summits, the government announced its financial contribution to international fast-start climate change efforts and domestic regulations on coal-fired electricity generation. Canada's leadership on deficit-reduction targets and maternal and child health was not to be diminished by non-action on climate change.

This paper explores ways in which an integrated approach to climate change and foreign policy might improve prospects for a more effective climate change regime in Canada. Recommendations for each of the areas explored in this paper are included in the relevant sections of the paper, and the most critical and pressing areas for action are listed below.

- *Federal-Provincial Relations*: A First Ministers' Meeting should be called to address Canadian energy and climate change policy, and Canada's profile in the North American energy picture. A focus should be positioning Canada for the future global energy picture, exploring the opportunities and challenges afforded by energy security, investment, jobs, and the environment.
- *International Relations and Diplomacy*: Canada needs to take steps to improve its international reputation on climate change issues, which in turn should have broader impacts for Canada's multilateral reputation. The first step is a credible and comprehensive plan that lays out how Canada intends to meet its target of a 17-percent emissions reduction below 2005 levels by 2020. A plan that addresses all GHG emissions—from both production and consumption—is crucial if Canada is to increase its leverage in the climate negotiations.
- *Energy Security and Trade*: Canada should seek to influence US legislation in regard to linking climate change regulatory frameworks. First, Canada needs to determine what it wants by way of a climate and energy regulatory regime—that is, what is in the Canadian interest—and work to make sure that this plan is acceptable under US law. The federal government needs to work with the provinces and stakeholders to identify the best way of going forward in Canada.
- *International Peace and Security*: To help prepare for the impacts of climate change, Canada should increase support for adaptation strategies and activities at home in the Arctic and in developing countries through bilateral and multilateral assistance. Bilateral channels can be used to deliver some of Canada's funding contribution, especially efforts related to adaptation capacity building, institutional support, and technology transfer.
- *Development Cooperation*: Canada's $400-million contribution under the Copenhagen Accord should give high priority to bilateral project assistance, including "signature" projects that can be identified with Canada and led by Canadians, recognizing that such projects should be defined by the needs of recipient countries.

The most effective way for Canada to address the linkages between climate change and foreign policy is to develop a substantial and informed domestic constituency. Building such a constituency begins with a dialogue that includes federal, provincial, and territorial governments at the core, but also key stakeholders across the country representing municipalities, business, non-governmental organizations, labour, consumers, and indigenous groups. A strong dialogue on a national clean energy strategy led by first ministers could be used to inform how the government can relate to and work with the United States, identify actions for Canada that do not carry strong competitiveness implications, enhance Canada's international profile on this issue, make a reasonable case for Canada's sovereignty over the Arctic, and implement effective overseas green investments to help put the planet on the path to low-carbon development. A new approach needs to be launched that is dead serious about Canada's climate change obligations, but also aware enough to acknowledge that such a transformation can be achieved only through a strong consensual base. Canada may need to wait for the United States before deciding on the most appropriate carbon pricing system, but that should not stop Canada from exploring other initiatives to reduce GHG emissions, particularly in the consumer sector.

Demonstrating seriousness on the climate change issue would help to improve Canada's international reputation and credibility and open the door to Canada having greater prominence in multilateral discussions in the United Nations Framework Convention on Climate Change (UNFCCC) and more broadly. But none of this is possible without high-level buy-in within the foreign policy community and from the Prime Minister's Office. Leaders and senior managers need to set the agenda and provide the commitment and resources to effectively push the agenda.

Résumé

Si l'Accord de Copenhague est loin de constituer l'entente globale que beaucoup attendaient de la 15e Conférence des Parties tenue au Danemark en 2009, on ne saurait en rejeter les éléments propices à l'établissement d'un cadre et de fondations susceptibles d'aider les pays à réagir efficacement aux changements climatiques. Parmi ces éléments, citons le consensus sur le maintien à moins de 2 °C de la hausse des températures mondiales ; la nécessité pour les pays développés d'indiquer leurs cibles de réduction d'émissions et pour les pays en développement d'indiquer leurs « actions d'atténuation appropriées au niveau national » (NAMA) à l'horizon 2020 ; la création du « Fonds climatique vert de Copenhague » chargé de réunir 30 milliards $US pour la période 2010-2012 ; et une entente favorisant le transfert de technologies, l'adaptation et la réduction des émissions causées par le déboisement et le dépérissement des forêts dans les pays en développement (programme REDD).

Mais il est clair que le déroulement de la conférence a laissé à désirer. L'accord final a ainsi été conclu lors d'une séance tenue à huis clos par les États-Unis en présence des quatre pays du BASIC (Brésil, Afrique du Sud, Inde et Chine). Et il a été présenté en grande pompe, notamment par les États-Unis, comme un fait accompli. Ce qui a vivement irrité de nombreux pays – tant au sein de l'Union européenne que des pays les moins avancés (PMA) –, contraints d'y adhérer comme une entente de facto. Le Canada n'a pas été contrarié outre mesure par la tournure des événements puisque les principes clés de l'accord – selon lesquels toutes les économies majeures devront entamer des mesures d'atténuation et les pays développés simplement indiquer leurs cibles sans autre forme d'approbation ou de débat internationaux – étaient en tous points conformes aux attentes d'Ottawa. Aussi le premier ministre Stephen Harper a-t-il qualifié l'accord de « global et réaliste » tandis que son ministre de l'Environnement Jim Prentice renchérissait en ces termes : « Notre gouvernement respectera l'Accord de Copenhague parce que celui-ci correspond à la position adoptée par le Canada en matière de changements climatiques. »

Cette « compatibilité » n'est pourtant le fruit d'aucune initiative ou stratégie particulière qu'Ottawa aurait menée à Copenhague. Le Canada s'y est essentiellement placé dans le sillage des États-Unis, misant sur le fait que le président Barack Obama ne s'engagerait guère au-delà du train de mesures qu'examinait (et examine toujours) le Congrès américain.

Pour autant, il est sans doute plus important pour le Canada que pour tout autre pays de mettre en œuvre l'Accord de Copenhague, puisqu'en s'affichant comme un contributeur actif à son application, il pourrait mieux faire oublier qu'il n'a pas atteint ses objectifs de Kyoto. Il commence d'ailleurs à agir en ce sens, comme en témoigne l'annonce faite en juin 2010 du versement de 400 millions de dollars correspondant à sa portion pour 2010 des 30 milliards $US promis en vertu de l'accord au titre de financement accéléré. Dans l'ensemble, les pays développés se sont ainsi engagés à consacrer 100 milliards $US d'ici à 2020 à la lutte contre les changements climatiques dans les pays en développement.

Mais il faut évaluer comment le Canada donnera suite à l'Accord en fonction de l'autre et principal moteur de sa politique climatique, à savoir les mesures assujetties à la loi fédérale américaine. Car le Canada a choisi de lier étroitement ses propres mesures à l'action des Etats-Unis, comme en fait foi sa décision de suivre la voie tracée par son voisin du Sud touchant l'application de normes d'efficacité énergétique pour les véhicules à passagers et les utilitaires légers ; de collaborer avec lui à l'élaboration des règlements sur la réduction des émissions des véhicules utilitaires lourds ; et d'aligner toute future réglementation de plafonnement et d'échange sur le système qu'il mettrait en place. Le Canada a cependant fait cavalier seul au chapitre de la réglementation sur la production d'électricité au charbon et des nouveaux règlements sur le contenu renouvelable de l'essence et du carburant diesel. Mais il n'a toujours pas détaillé comment il atteindra sa cible de Copenhague, qui prévoit pour 2020 une réduction de 17 pour cent de ses niveaux de 2005 (ce qui les ramènerait à peu près à ceux de 1990), et il est peu probable qu'il le fasse tant que les États-Unis n'auront pas précisé comme ils atteindront leurs propres cibles. Or ceux-ci n'ont toujours pas légiféré ou implanté de nouveaux règlements sur les émissions de gaz à effet de serre (GES).

Le Canada pourrait avoir du mal à démontrer qu'il s'oriente vers les énergies propres s'il rate sa cible en matière de changements climatiques. Cela à l'heure où le monde emprunte clairement la voie des énergies propres, non seulement pour combattre le réchauffement planétaire mais aussi pour renforcer la sécurité énergétique, les échanges commerciaux, les investissements et la création d'emploi. La lutte contre les changements climatiques n'est ainsi qu'un élément d'une stratégie intégrée axée sur les énergies propres, mais elle revêt une importance particulière pour le Canada et ceux qui sont concernés par son profil, les États-Unis par exemple, où s'acheminent 99 pour cent des exportations d'énergie canadiennes.

Pour convaincre les pays en développement d'emprunter cette voie des énergies propres, le Canada et les autres pays développés devront toutefois mettre les bouchées doubles pour démontrer la possibilité de différencier progression des émissions de GES et activité économique. La communauté internationale prend de plus en plus conscience qu'il lui faudra pour ce faire intégrer l'enjeu des changements climatiques à un cadre politique élargi. Le débat sur la question est en effet indissociable de l'évolution des priorités mondiales, et de nombreuses décisions indispensables à une véritable transition vers une économie à basse teneur en carbone seront prises hors du milieu des changements climatiques. L'action du Canada en la matière aura donc une incidence sur son profil et son influence dans d'autres domaines de politique étrangère, tout comme son action en politique étrangère pourra influer sur la politique climatique.

Les sommets du G8 et du G20 de juin 2010 ont mis en relief ce point d'intersection des changements climatiques et de la politique étrangère. Le fait que le Canada accueillait les deux rencontres a par exemple clairement incité son gouvernement à dynamiser son approche climatique. En préparation des sommets, il a ainsi annoncé sa contribution financière au démarrage accéléré des efforts internationaux d'adaptation aux changements climatiques et dévoilé sa réglementation intérieure sur la production d'électricité au charbon. Il faut dire que le Canada voulait à tout prix éviter que son inaction en matière de changements climatiques n'amoindrisse son leadership sur la réduction des déficits et la santé maternelle et infantile.

Ce document examine comment une approche intégrant politique climatique et politique étrangère permettrait de renforcer l'efficacité du train des mesures canadiennes relatives aux changements climatiques. Chaque domaine étudié fait l'objet de recommandations, qu'on trouvera dans les sections correspondantes mais dont voici les plus critiques et les plus urgentes :

- Relations fédérales-provinciales: Une réunion des premiers ministres doit être convoquée pour débattre de la politique canadienne en matière d'énergie et de changements climatiques, ainsi que du rôle du Canada sur l'échiquier énergétique nord-américain. Cette rencontre devra établir le positionnement du Canada sur le futur échiquier énergétique mondial tout en examinant les défis et possibilités suscités par la sécurité énergétique, l'investissement, l'emploi et l'environnement.
- Relations internationales et diplomatie: Le Canada doit prendre des mesures en vue d'améliorer sa réputation internationale sur les questions liées aux changements climatiques, ce qui renforcerait en retour sa réputation multilatérale. Pour ce faire, il doit d'abord se doter d'un plan global crédible qui établisse comment il atteindra d'ici à 2020 sa cible de 17 pour cent de réduction des émissions par rapport à leur niveau de 2005. Il lui est indispensable d'élaborer un tel plan, axé sur toutes les émissions de GES issues de la production comme de la consommation, pour raffermir son pouvoir de négociations sur les questions climatiques.
- Commerce et sécurité énergétiques: Le Canada doit tenter d'influer sur la législation américaine en vue de relier entre eux les différents cadres réglementaires sur les changements climatiques. Il doit d'abord déterminer ce qu'il attend d'un régime de réglementation sur l'énergie et le climat – c'est-à-dire ce qui correspond aux intérêts canadiens –, puis s'assurer que ce régime soit acceptable en vertu de la loi américaine. Et c'est en collaboration avec les provinces et les parties prenantes qu'il doit déterminer le meilleur moyen d'aller de l'avant.
- Paix et sécurité internationales: Pour se préparer aux répercussions des changements climatiques, le Canada doit renforcer son soutien aux activités et stratégies d'adaptation dans sa région arctique

et dans les pays en développement, cela en misant sur l'assistance bilatérale et multilatérale. Les réseaux bilatéraux peuvent servir à l'affectation d'une partie de sa contribution financière, notamment aux efforts de renforcement de capacités adaptées, de soutien institutionnel et de transfert de technologies.

- Coopération pour le développement: La contribution de 400 millions $ du Canada au fonds de 30 milliards $US créé par l'Accord de Copenhague doit prioritairement viser l'assistance à des projets bilatéraux, notamment des projets « identifiables » au Canada et gérés par des Canadiens, établis suivant les besoins des pays bénéficiaires.

Le meilleur moyen pour le Canada de gérer efficacement les liens entre politique étrangère et changements climatiques consiste à créer une structure de base nationale, à la fois substantielle et informée. Mais pour ce faire, il doit au préalable amorcer un dialogue qui inclut les gouvernements fédéral, provinciaux et territoriaux, mais aussi les parties prenantes représentatives des municipalités, de l'entreprise, des organisations non gouvernementales, des syndicats, des consommateurs et des organismes autochtones de tout le pays. Un solide débat dirigé par les premiers ministres en vue d'établir une stratégie nationale d'énergie propre pourrait servir à déterminer les moyens d'entrer en relation et de collaborer avec les États-Unis, d'identifier les mesures à faible incidence sur la compétitivité, d'améliorer son profil international sur la question, de faire valoir le bien-fondé de sa souveraineté dans l'Arctique et d'engager outre-mer des investissements verts axés sur le développement d'énergies à basse teneur en carbone. Bref, il doit adopter une nouvelle approche d'un sérieux à toute épreuve en ce qui a trait à ses obligations en matière de changements climatiques, tout en prenant conscience de l'impossibilité d'engager une telle transformation sans un vaste consensus national. Et si le Canada pourrait devoir attendre les États-Unis avant de décider du meilleur système de tarification du carbone, cela ne doit aucunement l'empêcher d'étudier d'autres initiatives de réduction des émissions de GES, notamment dans le secteur de la consommation.

En faisant la démonstration du sérieux avec lequel il traite l'enjeu des changements climatiques, le Canada renforcerait sa crédibilité et sa réputation internationales, et donc l'influence qu'il peut exercer dans les échanges multilatéraux de la Convention-cadre des Nations unies sur les changements climatiques (CCNUCC) et sur l'échiquier international. Mais aucune évolution en ce sens n'est possible sans l'appui au plus haut niveau des milieux de politique étrangère et du Cabinet du Premier ministre. Nos dirigeants politiques et principaux gestionnaires doivent sans tarder établir le programme à remplir et affecter les ressources nécessaires à sa pleine exécution.

Introduction

Climate change is one of the greatest global challenges of the 21st century, and increasing evidence of the present and anticipated impacts of climate change highlights the need for action. The 2007 Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) confirmed that warming of the climate system is unequivocal, and human actions are changing the Earth's climate and creating major disturbances for ecosystems, with major consequences for human development and well-being.[4] While there have been some highly publicized criticisms of the integrity of some IPCC research, particularly research focused on regional impacts in developing countries, the core message remains unchanged and is supported by the vast majority of climate scientists.

There is increasing clarity about the growing risk of not preparing for the eventuality of a carbon-constrained future. Canada—for reasons related to the environment, economic vulnerabilities, investment risks, its competitive edge in the clean energy future, and its international reputation—has little choice but to develop a credible response to the threat of climate change.

Dealing with climate change will require cooperation, commitment, and action from all major emitters. Over 100 world leaders, including Canada's Prime Minister Stephen Harper, participated in the climate change negotiations at the 15th meeting of the Conference of the Parties (COP 15) of the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen in December 2009. While the Copenhagen Accord was far from the comprehensive agreement that many anticipated coming out of COP 15, it has the potential to develop a solid foundation and framework to help countries begin to respond effectively to climate change. Significant elements for forging ahead were identified in the accord, including agreement to keep maximum global temperature increase to below two degrees Celsius; indications by major economies of targets (for developed countries) and nationally appropriate mitigation actions (NAMAs, for developing nations) to reduce emissions by 2020; the Copenhagen Green Climate Fund, with agreement to mobilize US$30 billion for the period 2010-12; and agreement to act on technology transfer, adaptation, and reducing emissions from deforestation and forest degradation in developing countries (a program known as REDD).

The process at Copenhagen, however, left much to be desired. The final deal was struck at a closed-door session of the United States with the four BASIC countries (Brazil, South Africa, India, and China). The accord was then trumpeted, particularly by the United States, as a *fait accompli*. This left many other countries—from the European Union to the least developed countries (LDCs)—extremely frustrated at having to accept the accord as a de facto agreement.[5] Canada did not appear upset at the turn of events because the core tenets of the accord—all major economies are to begin mitigation actions, and developed countries are to simply transcribe their national targets without any international discussion or approval of those commitments—were entirely consistent with the prime minister's expectations. Prime Minister Harper called the Copenhagen Accord a "comprehensive and realistic" agreement; and Environment Minister Jim Prentice stated, "This government will act on the Copenhagen Accord because it is consistent with Canada's stated position on climate change."[6]

The successful implementation of the Copenhagen Accord is arguably more critical for Canada than for any other country, offering a potential opportunity to shift the focus from Canada's not meeting its Kyoto obligations to an interpretation where Canada plays a role as a constructive contributor to the new accord. Canada is beginning to move in this direction, reflected in the June 2010 announcement of $400 million for its 2010 portion of the US$30 billion in fast-track financing promised under the Copenhagen Accord.[7]

4 Intergovernmental Panel on Climate Change, Climate Change 2007... *Contribution of Working Groups*, 30. Nevertheless there remains an active debate in some circles as to whether climate change is real and human-induced and about what the extent of the impacts is likely to be in different regions of the world.
5 Taylor, "Snubbed in Copenhagen"; International Institute for Sustainable Development, "Summary."
6 CBC News, "Canada Part of Copenhagen Climate Deal"; Canada, Environment Canada, "Canada Lists Emissions Target."
7 Environment Canada, "Government of Canada Makes Major Investment."

Canada's actions on the Copenhagen Accord have to be balanced against the other, and primary, driver of Canadian federal policy on climate change: namely, US federally legislated actions on climate change. Canada has decided that its climate change response will be closely linked to that of the United States; the decision is reflected in Canada's following the US lead on implementing fuel efficiency standards for passenger vehicles and light trucks; collaborating with the United States to develop regulations to reduce emissions from heavy-duty vehicles; and aligning any future cap-and-trade regulations with the system put in place in the United States. Canada has moved independently on the regulation of coal-fired electricity generation and renewable content for gasoline and diesel fuel. But Canada has yet to elaborate on how it will meet its Copenhagen target of a 17-percent reduction from 2005 levels by 2020 (roughly equal to the 1990 level); and the United States has yet to legislate or implement any other regulations on greenhouse gas (GHG) emissions.

Canada could face challenges in making the case that the country is moving in a clean energy direction if it falls short on climate change action. The world is heading in a very significant clean energy direction, driven not just by climate change but by energy security, trade relationships, investments, and jobs. Climate change is only one element of an integrated clean energy strategy, but an important one for those concerned about Canada's profile—such as the United States, which accounts for 99 percent of Canadian energy exports.

Climate change as a pre-eminent international policy issue may be on the wane. Indications of this decline include the relative debacle at Copenhagen; the new pieces of evidence on the work of the IPCC that *appear* to strengthen the contention that the science on climate change is far from clear;[8] and the apparent lack of legislative will in the United States to introduce any regulatory or fiscal measures that send a significant carbon price signal. The world may soon find itself in a situation similar to that of the Doha Development Round of trade negotiations under the World Trade Organization (WTO), where countries meet sporadically but are unable to break through critical logjams. Yet climate change remains a prominent policy issue; and Canada's positions on climate change impact its actions in other foreign policy spheres, just as foreign policy can influence climate change decisions.

Without strong action in Canada and other developed countries to demonstrate the feasibility of delinking GHG emissions growth from economic activity, developing countries will never be persuaded to follow suit. There is an increasing realization in the international community that making this case requires positioning climate change in a broader policy context. The climate change negotiations do not take place in isolation from other developments on the global agenda, and many of the decisions critical for an effective transition to a low-carbon economy will take place outside the climate policy community. Countries' actions in the area of climate change can have impacts on their profile and influence in other areas of foreign policy.

An integrated approach to climate change and foreign policy in Canada has the potential to improve prospects for more effective efforts to address climate change and strengthen foreign policy. This paper examines the Canadian climate change and foreign policy dynamic, analyzing strengths and failures of existing policy and prospects for new policy in the areas of federal-provincial relations, international diplomacy, energy security and trade, multilateral trade, international peace and security, and development cooperation. Linkages and intersections that exist or might develop between climate change policy and foreign policy are explored, and recommendations are put forward.

The Canadian Policy Context

Despite widespread acceptance that human activities are changing the climate, global GHG emissions are not abating. UNFCCC data indicate that aggregate GHG emissions (excluding land use, land-use change, and forestry) in Annex I parties declined by 3.9 percent from 1990 to 2007, but much of the reduction was due to the economic collapse of Communist regimes in central and eastern Europe. In other Annex I countries, which

8 Cookson, "Climate Skeptics."

are predominantly members of the Organisation for Economic Co-operation and Development (OECD), emissions increased by 11.2 percent from 1990 to 2007. Canada's emissions increased by 26 percent from 1990 to 2007.[9]

GHG emissions are also increasing in developing nations. Over half of GHG emissions in 2008 were accounted for by economic activities in developing countries; and this share is projected to grow significantly if no new policies and measures are implemented to limit the increase.[10] Much of this growth is expected to occur in a few major developing economies, notably China, India, Brazil, South Korea, Indonesia, and Mexico.[11]

Climate change impacts will affect all countries, and the poor, primarily but by no means exclusively in LDCs, will be disproportionately affected.[12] The poor are the most vulnerable and least able to adapt to the impacts of climate change because of their reliance on local ecological resources, coupled with existing stresses on health and well-being and limited financial, institutional, and human resources. The areas of the world least responsible for contributing to GHG emissions are the ones that stand to be the most immediately and significantly impacted by climate change.

Canada is one of the largest GHG emitters in the world, ranking fourth in per capita carbon dioxide emissions and total emissions among OECD countries, based on 2007 data from the International Energy Agency (IEA).[13] Canada's GHG emissions reached 747 megatonnes in 2007, 26.2 percent above 1990 levels and 33.8 percent above its Kyoto target.[14] A growing population and economy, thriving energy and natural resource sectors mostly geared for export markets, weather, consumption patterns and consumer preferences, and urban sprawl all contribute to Canada's high GHG emissions.

Climate change is often characterized as an issue of industrial emissions, but industry is just one of the major factors. Sixty-five percent of Canada's emissions comes from sectors other than the large final emitters—in the area of consumer behaviour and activities, such as transportation.[15] Industry in Canada, for the most part, equals its global peers in terms of energy efficiency and intensity of use in its operations.[16] Improvements in production processes in heavy industry and manufacturing as well as energy efficiency in the residential sector resulted in decreased emissions from these sectors between 1990 and 2007. Canada has continually lowered its emissions relative to GDP through technological and operational changes.

Emissions increases in Canada have been largest in the energy and transportation sectors, largely because of increased fossil fuel production and a greater number of motor vehicles on the road. In 2007, approximately 82 percent of Canada's emissions was in the energy sector, with transportation (a subsector in this sector) accounting for 27 percent of emissions.[17]

Emissions from fossil fuel industries experienced a 44-percent growth from 1990 to 2007, driven by an increase in total production of oil and gas (a 68-percent increase over 1990 levels).[18] Drivers of this growth include elevated demand, particularly in the United States, and a shift from conventional to non-conventional sources of energy, such as the oil sands and coal-bed methane. Petroleum extraction from the oil sands is expected to steadily increase, with 2015 production projected to be almost double that of 2005.[19] This will put

9 United Nations Framework Convention on Climate Change, *National Greenhouse Gas Inventory*, 5, 7, 16. Other OECD countries experiencing significant increases in GHG emissions between 1990 and 2007 include Spain (53 percent), Portugal (38 percent), Iceland (31 percent), Australia (30 percent), Ireland (25 percent), Greece (24 percent), and New Zealand (22 percent). Japan's emissions increased by 7 percent and those of the United States by 17 percent.
10 Netherlands Environmental Assessment Agency, *Global CO2 Emissions*.
11 Organisation for Economic Co-operation and Development, *Environmental Outlook*.
12 Intergovernmental Panel on Climate Change, *Climate Change 2007... Summary for Policymakers*, 20.
13 International Energy Agency, *Key World Energy Statistics*, 48-57.
14 Canada, Environment Canada, *National Inventory Report*, 4.
15 Large final emitters are those facilities that emit the equivalent of 100,000 tonnes or more of carbon dioxide per year. This threshold applies to about 300 facilities across Canada. In 2008, total greenhouse gas emissions from large final emitters represented 35 percent of Canada's total 2007 GHG emissions. See Canada, Environment Canada, *Greenhouse Gas Emission Reporting Program*, 2.
16 World Energy Council, *Energy Efficiency Policies*.
17 Canada, Environment Canada, *National Inventory Report*, 14.
18 Canada, Environment Canada, *National Inventory Report*, 14.
19 Tu and Nyboer, "Long Term Challenges Ahead."

strong upward pressure on emissions. The oil sands are an exceptionally carbon-intensive means of extracting oil and are used exclusively for meeting vehicular transportation needs in North America.

Emissions from the transportation sector increased by 38 percent from 1990 to 2007. Population has increased, kilometres driven per capita have increased, and a consumer preference for larger, less efficient vehicles in recent years has minimized the impact of increases in passenger vehicle efficiency over this period.[20] As well, freight transport emissions are up because most freight movement is undertaken using heavy-duty trucks, the most energy- and emissions-intensive mode of freight transport.[21]

Drivers of high GHG emissions in Canada include consumption patterns, an urban planning model characterized by sprawl, and mass transit systems that are of standards lower than those of most other OECD countries. The result is that Canada (like the United States) is among the largest consumers of energy on a per capita basis in the world, with a rate approximately twice the per capita energy consumption of other OECD countries in the European Union (EU) and 15 times the per-person energy use of India.[22]

Consumption practices have played a critical role in determining the carbon profile of industry, transportation, and personal energy use. A historic abundance of cheap, domestic energy has led to policies, lifestyles, and business models that largely do not emphasize energy conservation as a necessity. In Manitoba, to give but one example, where the province has the luxury of a renewable energy source, the Crown utility has traditionally used this advantage to maintain low industrial electricity rates and an inverse rate structure that makes power cheaper as consumption increases, which discourages conservation.[23] Since 2008, Manitoba Hydro has been working to introduce an energy-intensive industrial rate in order to address the consumption issue. An appropriate rate proposal has not yet been approved for implementation by the provincial utilities regulator.

While governments continue to make strides with legislation and consumer awareness initiatives, reductions in Canadian energy consumption will rely on behavioural shifts at the individual level. This will be a difficult transition. Most Canadians say they care deeply about the environment,[24] yet they appear unaware of the impact of the prevalent North American lifestyle on the global environment. This lifestyle is based on a development model of urban sprawl, individual vehicle ownership, and high consumer demand, with an industrial infrastructure built to support that model. High GHG emissions are a societal problem that requires transformational changes in lifestyles to bring about reduced energy consumption.

There is no easy fix, and Canada will continue to be seriously challenged to deliver on international expectations to significantly reduce GHG emissions. The mere fact that the federal government has been unable to put in place a regulatory framework to address GHG emissions speaks volumes about the enormity of the domestic challenge in Canada.

Climate Change Policy

In Canada, jurisdiction is shared and overlapped to a great extent in allocating roles and responsibilities on environment, energy, natural resources, and trade and investment policies—all areas related to climate change policy. Ottawa has the constitutional lead on negotiating a new international climate change agreement; but in political terms, moving ahead on this issue, which is fundamentally about energy and use of natural resources, requires provincial collaboration and partnership.

20 National Energy Board, "Canadian Energy Demand."
21 Canada, Environment Canada, *Canada's Greenhouse Gas Emissions*, 15-16.
22 International Energy Agency, *Worldwide Trends*, 22.
23 Manitoba Hydro, "Current Electricity Rates."
24 A 2009 poll from Nanos found that in the context of the potential prosperity from oil sands versus the potential environmental harm, most Canadians put environmental protection above economic prosperity. A Harris-Decima survey in October 2009 found that 56 percent of the public did not believe Canada's approach to climate change is ambitious or aggressive enough. See Nanos, "Nanos Poll"; Cheadle, "Tories Trail Public."

Federal Climate Change Policy

In February 2010, Environment Minister Jim Prentice announced Canada's new GHG reduction target: 17-percent reductions by 2020, from a 2005 base year. This new target is less demanding than the previous target of 20-percent reductions, and it precisely matches that of the United States. This is consistent with the government's desire to harmonize Canada's climate change strategy with that of its largest trading partner. Minister Prentice also announced that Canada is not prepared to implement a cap-and-trade system or significant climate change regulations in the absence of similar action in the United States. The government has proposed regulations for coal-fired electricity generation and renewable content in gasoline and diesel fuels, and will sustain programs that focus on technology and innovation relating to climate change, including biofuels and bioproduct development, energy efficiency, and transportation initiatives, and will continue to support provincial projects.[25]

There is widespread skepticism about Canada's ability to meet the emissions reduction target by 2020, not least because the government has no plan.[26] Changing the government's approach to climate change is difficult, and the first step is determining how it chooses to frame the issue. A senior government official described the climate change issue as akin to "walking on glass"—whatever step you take, you bleed (politically); so it is best to take as few and as small steps as possible.[27] For example, the government got little, if any, recognition for proposed actions in its 2008 document *Turning the Corner: An Action Plan to Reduce Greenhouse Gases and Air Pollution*, even though many industries argued that it set out a challenging target that would be tough to meet.[28] The government's response is understandable and unfortunate. Linking the Canadian response to action in the United States gets the same critical response from environmental groups as developing climate policy (but very little response from others, including voters).

As already noted, the world is beginning to head in a clean energy direction, driven by a wide range of considerations, including climate change, energy security, trade relationships, investments, and jobs. In that context, addressing climate change becomes a different animal. Climate change is one of a range of elements making the case for an integrated clean energy future, of which Canada needs to be at the forefront.

Provincial Climate Change Policy

All provinces and territories have, at least at some level, climate change initiatives in place. Detailed in appendix 1, many of these initiatives focus on energy conservation and renewable energy, consistent with the 2007 Council of the Federation agreement to reduce GHG emissions within provincial and territorial jurisdictions.[29] The extent and schedule of climate change measures vary, representing a wide range of views on how actively a strong mitigation regime should be pursued within Canada. These views reflect differences in reliance on fossil fuels, difficulties in reducing emissions, and projected economic growth and fiscal conditions.

Legislation in British Columbia and Manitoba includes climate change targets, aiming for GHG reductions in British Columbia of 33 percent by 2020 from 2007 levels, and a 6-percent reduction as soon as 2012 from 1990 levels in Manitoba. Quebec has a GHG reduction target of 20 percent by 2020 from 1990 levels; and British Columbia and Quebec have adopted carbon taxes. Ontario has feed-in tariffs for renewable energy and plans for community-based power support and development. Alberta was the first province to regulate its large emitters, in July 2007, using an intensity-based system that calls for 12-percent emissions reductions from large facilities. Alberta has launched a $2-billion fund for carbon capture and storage (CCS), and Saskatchewan has expressed a strong interest in CCS. Saskatchewan introduced legislation in 2009 that will allow the province to develop

25 Prentice, "Speaking Points."
26 Jaccard, Rivers, and Peters, "Assessing Canada's 2008 Climate Policy"; Bramley, "Far from Turning the Corner."
27 A government official who does not wish to be recognized made the statement to John Drexhage.
28 Canada, Environment Canada, *Turning the Corner*.
29 Council of the Federation, "Council of the Federation Commits."

intensity-based targets, regulate emitters, and establish a climate change fund. Nova Scotia has established absolute caps on its electricity sector, and Newfoundland and Labrador is forming a secretariat on climate change that will operate out of the premier's office and that is expected to roll out a provincial implementation plan over the next year. The territories and Prince Edward Island (and Nova Scotia to a certain extent) emphasize adaptation in their plans.

A number of provinces are developing cap-and-trade systems, although the details are far from being sorted out. Quebec (in June 2009) and British Columbia (in May 2008) adopted legislation that authorizes the government to implement a cap-and-trade system for GHGs in North America. In May 2009, the Ontario government introduced enabling legislation that, if passed, would allow the implementation of a cap-and-trade system. Manitoba is committed to passing similar legislation in the near future. The details of provincial legislation are expected to be worked out in cooperation with partners in the Western Climate Initiative (WCI), a collaborative venture of some US states and Canadian provinces that aims to reduce GHG emissions, including through a cap-and-trade system (see page 18 for more details).

An open question is how relatively moderate domestic targets (whether at the provincial or federal level) can credibly address the growing international concern about the scientific estimates. The IPCC indicates that preventing dangerous climate change will require, at the very least, halving global emissions by 2050 from 1990 levels, with developed countries reducing their emissions by at least 80 percent by mid-century.[30]

Foreign Policy

The federal government has constitutional authority for foreign policy and trade, and it negotiates and ratifies international treaties. Provinces have a high level of freedom to operate internationally; most provinces have a ministry responsible for international relations.

Federal Foreign Policy

Canada's foreign policy is intrinsically linked to that of the United States, and this relationship influences much of Canada's foreign policy decision-making. Foreign Affairs and International Trade Canada (or the Department of Foreign Affairs and International Trade, DFAIT) notes that Canada and the United States are "partners for security, in economic growth, for energy security, for a smart border and on environmental issues."[31] The trade relationship with the United States dwarfs all other considerations and frames other issues, including cooperation on environmental and energy affairs.

Foreign relations with other countries tend to be secondary to Canada's relations with the United States. Apart from the United States, priorities of DFAIT include the following:

- Pursuing economic opportunity for Canada, with a focus on growing and emerging markets such as China and India. Canada has identified 13 world markets where the potential for economic growth is greatest.[32]
- The Americas, including the trade opportunities with target markets and contributions to a more democratic, prosperous, and secure hemisphere that creates stability and opportunity for its citizens.
- Afghanistan, including in the context of neighbouring countries.[33]

30 Intergovernmental Panel on Climate Change, *Climate Change 2007... Summary for Policy Makers*, 20.
31 Canada, "Canada and the United States."
32 The United States, Mexico, the Association of Southeast Asian Nations, Australia and New Zealand, Brazil, China, Europe, the Gulf Cooperation Council, India, Japan, Korea, Latin America and the Caribbean, and Russia.
33 Canada, Foreign Affairs and International Trade Canada, "Our Priorities."

The Canadian International Development Agency (CIDA) is the main delivery agent of public development assistance. The federal government announced in February 2009 that it was focusing its aid program on three new development priorities—food security, sustainable economic growth, and children and youth—and on 20 focus countries (reducing the number of African-concentration countries from 14 to seven). In October 2008, the government announced $100 million in funding for international climate change adaptation to assist developing countries that are especially vulnerable to the adverse effects of climate change. This funding is delivered through the World Bank, thus weakening Canada's direct influence on the use of the funds and hurting its profile as a champion of a few discrete, but well respected, bilateral projects.

Canada hosted the G8 and G20 summits in June 2010. The G8 and G20 committed to work toward a successful outcome at the UNFCCC meetings to be held in Cancun in December 2010, and those countries that had associated with the Copenhagen Accord reaffirmed their commitment to its implementation and called on other countries to support the accord. The G8 reiterated its goal of developed countries achieving at least an 80-percent reduction of greenhouse gas emissions by 2050, and called on the major emerging economies to undertake quantifiable actions to reduce emissions. G8 nations noted that they are putting in place fast-start financial contributions to help developing countries.[34] Prior to the summits, Canada made two climate-change-related announcements: $400 million for climate change efforts in the poorest and most vulnerable countries, delivering on its commitment under the Copenhagen Accord; and the development of new regulations for coal-fired electricity generation.[35]

Provincial Foreign Policy

Many Canadian provinces are active in the field of foreign policy. (See appendix 2 for a list of provinces' trade offices and participation in international agreements.) Quebec is the most independent and active, having a bilateral assistance program and delegations or trade offices in many countries. Quebec has a permanent representative in Canada's mission to the United Nations Educational, Scientific and Cultural Organization (UNESCO); and Quebec and New Brunswick are full participating governments in the Francophonie.

While the vast majority of provincial foreign policy and trade relations are focused on the United States, some provinces including Alberta, British Columbia, and Ontario have developed international trade, marketing, and investment offices in several countries. Quebec has the most formal and extensive foreign presence with seven general delegations, five delegations, ten bureaus, and four trade offices across the continents of Asia, Europe, and North and South America. Alberta has developed an extensive campaign to strengthen Alberta-US relations and reinforce the province's commitment to environmentally sustainable development of the oil sands.

Three provinces provided international development assistance in 2007-08: Quebec ($47.4 million), Manitoba ($0.45 million), and Alberta ($1.68 million). This is a very small amount when compared with CIDA's spending of $3.126 billion in 2007-08.[36]

As with federal foreign policy, provincial external initiatives, particularly when it comes to trade and energy, are focused on opportunities in the United States. An example is the premiers' mission to Washington in February 2010, when eight provincial leaders met with the National Governors Association to discuss trade and border issues, as well as energy and the environment.[37] Since the North American Free Trade Agreement (NAFTA) entered into force in 1994, there has been a clear trend of trade flows, including energy, of an increasingly "north to south" character.[38] Canada's large geography and related transportation costs often deter east-west integration, in favour of more viable north-south trade options. For instance, despite decades of talks about

34 "Muskoka Declaration"; "The G20 Toronto Summit Declaration."
35 Canada, Environment Canada, "Government of Canada Makes Major Investment."
36 Canadian International Development Agency, *Statistical Report*, 10-11.
37 Council of the Federation, "Premiers Wrap Up."
38 Chambers, "An Evaluation," 4.

selling hydro power to Ontario, Manitoba Hydro has found it easier to sell to customers in Minnesota and Wisconsin, completing large sales to both in recent years.[39] Plans for an east-west power grid remain on the drawing board in Canada.

Intersections between Climate Change and Foreign Policy

Climate change policy and foreign policy are increasingly intertwined in Canada. Canada is a signatory to the UNFCCC and the Kyoto Protocol, and some provinces are engaged with American states in efforts to reduce GHG emissions.

Federal Level

At the federal level, the most prominent and apparent forum for connection between climate change and foreign policy is the UNFCCC negotiations. In January 2010, the Canadian government submitted its emissions reduction target of 17 percent below 2005 levels by 2020 to the UNFCCC, consistent with the terms of the Copenhagen Accord. The accord was the substantive outcome of the climate change conference held in December 2009. The accord does not impose binding emissions targets or set a deadline for forming an internationally binding treaty, but progress was made in many areas, including these main points:

- The objective of keeping maximum global temperature increase to below two degrees Celsius.
- A commitment to list developed countries' emissions reduction targets and developing countries' mitigation actions for 2020 (countries were to submit targets and actions to the secretariat of the UNFCCC by January 31, 2010).
- Developed countries' commitment to a goal of jointly mobilizing US$100 billion annually by 2020 from both public and private sources, and a collective commitment to provide "new and additional, predictable and adequate funding" amounting to US$30 billion for the period 2010-12 with a balanced allocation between adaptation and mitigation.
- Explicit acknowledgement to act on REDD, including the immediate establishment of a REDD-plus mechanism.
- Action and cooperation on adaptation, particularly in LDCs, small island developing states (SIDS), and Africa.
- Establishment of technology mechanisms to accelerate technology development and transfer.[40]

Many anticipated a more comprehensive agreement out of COP 15, but the Copenhagen Accord has the potential to be a foundation and framework for effectively climate change action. As of March 2010, quantified emissions targets for 2020 had been submitted by 14 Annex I countries and the European Union and its 27 member states; and NAMAs had been submitted by 35 non-Annex I parties, with a number of these countries noting their need for international support.

The process of negotiating the Copenhagen Accord, however, left much to be desired. The United States with the four BASIC countries (Brazil, South Africa, India, and China) reached the final deal at a closed-door session, which left many other countries—from the European Union to the least developed countries (LDCs)—extremely frustrated at having to accept the accord with no input to its development.[41] Canada appeared to accept the main principles of the accord—all major economies are to begin mitigation actions, and developed countries are to

39 The fact that the major urban centres of Manitoba and Minnesota are only about 750 kilometres apart, as opposed to the 1,300 kilometres from Manitoba to Edmonton or Calgary, or over 2,000 kilometres to Toronto or Ottawa, reinforces the reality that under NAFTA north-south trade not only is an option but can often be the preferred option.

40 United Nations Framework Convention on Climate Change, *Copenhagen Accord*.

41 Taylor, "Snubbed in Copenhagen"; International Institute for Sustainable Development, "Summary.

simply transcribe their national targets without any international discussion or approval of those commitments—as being entirely consistent with the government's position on climate change. The Canadian government has stated that it will work to implement the Copenhagen Accord and has announced a $400-million contribution for international climate change for 2010-11. The government supports the UNFCCC negotiations for a legally binding post-2012 climate change agreement, and has been more proactive in the negotiations, especially in the areas of REDD and agriculture.

The future of the Copenhagen Accord is far from assured, and indications of how the accord will be implemented will be critical over 2010 to ensure a viable international climate change regime remains in place. Canada should have a high stake in ensuring that the accord has legs, because it offers an opportunity for Canada to be a constructive contributor, shifting the focus from Canada's inability to meet its Kyoto target. Canada is the only country with an international binding target under the protocol that has indicated it does not intend to meet its obligations, and Canada is not likely to choose a Kyoto "path" that does not include the United States.

Canada can achieve only a limited amount in the negotiations if it does not have a credible plan that lays out how it will meet its target of a 17-percent reduction by 2020. This is particularly so in regard to the issue of enhancing developing countries' engagement in reducing their GHG emissions. Major developing economies can hardly be expected to agree to undertake significant emissions reduction actions when leading developed countries, like Canada, do not have a regulatory framework in place and have experienced significant emissions growth. In other words, until such time that countries like Canada are able to demonstrate that emissions can be delinked from economic growth, developing countries are unlikely to agree to consider mitigation targets.

The expectation of leadership from developed countries also stems from the concept of historic emissions. GHGs are cumulative, and industrialized countries are responsible for approximately three-quarters of GHGs in the atmosphere. Developed countries, including Canada, need to demonstrate a willingness and ability to reduce emissions before insisting that developing countries take on similar commitments.

Long before the current government, other Canadian governments have not always made good choices in the climate change negotiations. Examples include proposing a Kyoto Protocol target more stringent than had been agreed to by federal and provincial energy and environment ministers. Perhaps even more damaging was Canada's decision, after the Bush administration made it clear that it would not be ratifying the protocol, to ratify Kyoto and then work to weaken the international regime (through sinks accounting regimes and, most infamously, by attempting to obtain "credits" for green energy exports to a country that was not a party to the protocol). Many in the international community believe that Canada is trying to undermine progress on a post-2012 international agreement by refusing to meet its Kyoto targets, while offering no explanation of how it will deal with the penalties under the Kyoto Protocol. Of course, there is only so much a mid-level power like Canada can achieve. Much of the criticism that Canada is "sabotaging" the negotiations is inaccurate—Canada does not have the weight to do so.

Provincial Level

The delay in implementation of federal emissions regulation in Canada has led most provinces to take action themselves, often engaging US counterparts directly or acting to protect their own interests in the face of future regulations that could affect international trade. The provincial responses to the intersection of climate change and foreign policy can be broken down roughly into three groups.

The first group of provinces are linked by their shared membership in the WCI. These provinces—British Columbia, Manitoba, Ontario, and Quebec—have strengthened their ties with American states through climate change initiatives, including working toward the establishment of a cap-and-trade system. These provinces have positioned themselves to address potential barriers to trade by working with trade partners on climate change policy.

Launched in 2007, the WCI includes the four Canadian provinces mentioned above and seven American states, with two provinces (Saskatchewan and Nova Scotia), seven American states, and six Mexican states participating as observers.[42] In 2007, the four member provinces represented roughly 79 percent of the population, 76 percent of national GDP, and 53 percent of GHG emissions in Canada.[43] The WCI collaboration aims to cut emissions to 15 percent below 2005 levels by 2020 and includes the development of a regional cap-and-trade system to help attain that goal. In addition to the WCI target, each of the provincial members has set more stringent unilateral targets that are outlined in appendix 1.

Manitoba is a member of and Ontario an observer to the Midwestern Greenhouse Gas Reduction Accord (MGGRA), another regional emissions reduction and cap-and-trade collaboration of states and provinces. The MGGRA focuses on the needs of the industry-intensive Midwest region of North America. Ontario and Quebec are observers to the Regional Greenhouse Gas Initiative (RGGI), a cap-and-trade initiative of northeastern and mid-Atlantic American states.

The second group—representing 14 percent of Canada's population, 17 percent of GDP, and 43 percent of GHG emissions in 2007—is Alberta and Saskatchewan.[44] Foreign policy (the protection of trade relations with the United States) is the driver of climate policy in Alberta, which has taken a unilateral but extensive and active approach in response to climate change. Alberta's motivation to act early and decisively is the need to protect trade interests for the oil sands, particularly with the United States, which has expressed concern about the carbon intensity of the Alberta oil industry. In response to internal and external economic and environmental concerns, Alberta has developed a climate change approach that includes regulation of large emitters and a $2-billion fund to support the development and deployment of CCS technology. The regulations for large emitters include an emissions intensity target (i.e., GHG emitted per unit of economic output) that can be met through operational improvements, the purchase of offsets, or payments to a Technology Fund (at $15/tonne of GHG). Alberta has an international lobbying campaign in the United States geared at protecting oil exports. Saskatchewan is still developing its climate change plan, with enabling legislation introduced but no firm regulations in place. Its investment in the oil industry and early policy signals (including support of federal GHG targets) indicate that the province will likely move in a policy direction similar to Alberta's. Saskatchewan has a 2009 memorandum of understanding with Montana to demonstrate and test large-scale post-combustion CCS.

The remaining, less active provinces make up the third group. Nova Scotia is an observer to the WCI process and has introduced a cap on emissions for its electricity sector. New Brunswick is an observer to RGGI. Newfoundland and Labrador and Prince Edward Island have not participated in any regional initiatives, but Newfoundland and Labrador does have a particular interest in fossil fuel regulations due to offshore oil development and is developing its climate change policy. While these provinces have not been as active as others, that is likely to change over the next few years, with increasing interest and engagement emanating from the Atlantic region.

The provinces are interested in and follow the UNFCCC negotiations, with a number sending representatives to the multilateral discussions as members of the official Canadian delegation. The premiers of Manitoba, Nova Scotia, and Quebec attended COP 15 in Copenhagen.

42 The seven American states are Arizona, California, Montana, New Mexico, Oregon, Utah, and Washington. Saskatchewan has been only minimally involved in the WCI since the change of government following the 2007 provincial election.
43 Canada, Environment Canada, *National Inventory Report*, 519, 524, 530, 545.
44 Canada, Environment Canada, *National Inventory Report*, 538, 539.

Linkages between Climate Change and Foreign Policy: Critical Areas

The milieu of foreign relations is dynamic, offering opportunities for actions that can meet foreign policy objectives and deepen commitments to meet the global threat of climate change. Six specific areas where foreign policy and climate change intersect in significant ways are explored: federal-provincial relations; international relations and diplomacy; energy security and trade; multilateral trade and investment; international peace and security issues; and development cooperation.

Federal-Provincial Relations

Linkages with Climate Change

Federal-provincial relations are a critical variable in the context of Canadian climate change policy and foreign policy. The overlapping jurisdictions between federal and provincial fields of powers often, but not always, present constraints in achieving integration between climate change and foreign policy objectives. Sometimes these shared jurisdictions can loosen constraints, an example being the provincially driven cross-border WCI and the RGGI.

Climate change demonstrates the potential for conflict between these levels of government in policy (which is not always bad) and implementation. A complication is the different climate change strategies and priorities of provinces, which are based on particular socio-economic circumstances that are generally defined by natural resources. Hydro-powered provinces like Manitoba and Quebec have different perspectives than fossil fuel producers like Alberta and Saskatchewan (in climate change, where you stand depends on where you sit). This variety has led to differing, and at times conflicting, approaches to addressing climate change and fostering trade among the provinces, with a particular tension between the Alberta-Saskatchewan group and the other provinces. Some suggest that the current federal and Alberta governments philosophically agree on climate change; but the federal government has to respond to other regional sensitivities and perspectives, particularly those of Ontario and Quebec. For these reasons, climate change can exacerbate an already sensitive federal-provincial dynamic.

The federal-provincial dynamic in regard to climate change policy creation has changed from a top-down to a bottom-up approach. At the time of the development of the Kyoto Protocol, the federal government took the lead in addressing climate change and tried to get provinces on side, yet some provinces were left out of the policy development loop.[45] The adoption of the national target for GHG emissions reductions by the Chrétien government at COP 3 in 1997 demonstrated this approach. Despite agreeing to a 1990 emissions stabilization target with the provinces in November 1997, at the December negotiations Prime Minister Jean Chrétien unilaterally upped that target to emissions reductions of 3 percent below 1990 levels.[46] This infuriated the provinces, which accused the federal government of bad faith in the negotiations.

Twelve years later the roles have changed. British Columbia, Manitoba, Ontario, and Quebec have decided to take on the climate change issue and are developing long-term strategies to cut GHG emissions, including targets, timetables, regulations, and systems for pricing carbon in coordination with influential American states. These actions will help address climate change, help ensure their provincial interests are accounted for at early stages of policy development, and, perhaps more importantly, help prepare provincial economies for the carbon-constrained economy of the 21st century. Even Alberta is preparing for this future, having enacted a regulatory package for large emitters. Whether born of a desire to protect their economic interests, to pick up the slack for lack of regulation at the federal level, or to take advantage of regional clean energy and green investment opportunities, a bottom-up approach to climate change policy is evident in Canada in 2010. The provinces are pressuring the federal government and trying to define overall policy.

45 Stilborn, "Canadian Intergovernmental Relations," 4.

46 Canada was the last G7 party to come in with a target proposal. Chrétien's starting proposal of a reduction of 3 percent ended up at 6 percent once the United States, the European Union, and Japan had agreed to their targets.

The advanced policy positions of the provinces mean that it will be difficult for the federal government to impose national regulations that push provinces in different directions. The federal government has adopted a wait-and-see approach to its regulatory framework, opting to have a system that is in lockstep with the US system—essentially being a policy taker. Alberta has adopted an intensity-based approach, different than the absolute cap on emissions present in the WCI provinces and proposed in bills by the US government. If the federal government abandons its proposed intensity-based system for an absolute system, Alberta—the first regulator of large emitters—will be the only jurisdiction with an intensity-based approach, and could use this position to seek allowances for the oil sands in the development of a national cap-and-trade system.

Strengths, Failures, and Prospects for Policy

Unfortunately for Canada, the situation in the provinces is not widely known in international climate change discussions. Most countries in the UNFCCC negotiations look to the federal government in order to assess the entire national situation. Canada should promote provincial-level successes to demonstrate positive action on climate change, helping to counter Canada's reputation as doing nothing on climate change. That said, Canada still requires a credible, detailed climate change plan. As already mentioned, the government's scope and ability to influence the international negotiations, including the implementation of the Copenhagen Agreement, will be significantly curtailed if a comprehensive plan for meeting Canada's 2020 target is not rolled out over 2010.

Alberta has increasing motivation, i.e., protection of its international trade relations, to ensure its policies on climate change are sound (it is noteworthy that Alberta's counter-lobbying in the United States emphasizes the energy security provided by the oil sands). Further, programs at the state level in the United States, such as the California fuel efficiency standards, can have a huge impact on the sources of these fossil fuels, hindering the export capabilities of jurisdictions like Alberta. CCS will be an increasingly important technology for the province. That said, there is also a growing awareness of the limitations of CCS in addressing GHG issues arising from the oil sands. Many in situ activities, for example, do not lend themselves to CCS, at least at an affordable price. These difficulties necessitate a broader carbon management approach in Alberta that includes robust participation in global and regional carbon markets as a short-term bridging strategy to help move to a different technology future.

There are also opportunities to broaden climate change and clean energy discussions. While there are legitimate concerns about the potential impact of Canadian and American climate change policy on oil sand exporters, it is important to emphasize clean energy. Canada is a leader in the export of hydro, natural gas, and uranium, all cleaner energy sources than coal and oil sands. Canada needs to accentuate the positive in its climate and clean energy discussions.

With no strong national framework to address climate change or energy, it should not be a surprise that provinces have decided to act independently on these issues. A Canadian dialogue would begin to more effectively address climate change issues in Canada, including discussions on how Canada can meet its international target and what Canada can offer in the way of technology transfer and capacity building. Such a dialogue could emphasize each province doing their fair share, and development of a Canadian market for carbon credits that is compatible with a US approach and perhaps with existing cross-border initiatives. The transformational shift in energy systems required to address climate change will require a Canadian strategy, and a federal-provincial energy dialogue would also be useful given the close linkages between energy and climate change. The development of a comprehensive strategy must also engage stakeholders.

A Canadian strategy must be proactive, not reactive. Climate change is a long-term issue, with national policies and targets for emissions reductions set out until the middle of the century. A long-term Canadian climate change strategy must go hand-in-hand with a long-term Canadian energy strategy with proactive goals and policies that address growing consumer concerns about energy security, trade protectionism, and environmental threats. Without a coherent approach to energy development, meeting our climate change goals is virtually

impossible. A reactive strategy may mean that Canada develops a system where provincial concerns come second to American interests. The development of a defined, coherent strategy can help Canada have a credible voice as the international climate regime develops and the global energy transition takes shape. Such a strategy can also assure trade partners of Canada's commitment to clean and sustainable energy development.

Recommendations

- Canada requires a credible, detailed domestic clean energy and climate change plan that includes coordination of federal, provincial, and territorial GHG emissions reduction policies.
- A First Ministers' Meeting should be called to address Canadian energy policy, climate change, and Canada's profile in the North American energy picture.
- Provincial achievements in the area of climate change could be showcased at the international negotiations to demonstrate Canadian action and intent.

International Relations and Diplomacy

Linkages with Climate Change

Canada pursues its interests through various dimensions related to international relations and diplomacy. Canada traditionally has a strong commitment to international law and the UN and is a member of a number of influential multilateral bodies, including the Group of Eight (G8), the Group of Twenty (G20), the Major Economies Forum on Energy and Climate (MEF), the North Atlantic Treaty Organization (NATO), the Commonwealth of Nations, and the Francophonie. Canada has traditionally relied on multilateral solutions to emerging threats and challenges. Climate change is one such example; the Canadian national approach to GHG emissions reductions cannot be effectively developed or implemented without a strong cooperative regime that addresses energy and climate change issues in cooperation with our neighbour to the south and more broadly around the world.

Canada's close relations and economic ties with the United States have provided the context for much of Canada's decision-making (or lack thereof) on climate change. The linkages with the US economy and the increasing integration of Canada-US energy systems have a major impact on Canada's GHG emissions. Competitiveness concerns have arisen in Canada, including when the Bush administration decided not to ratify the Kyoto Protocol and, of late, with discussion of a US cap-and-trade bill that could include provisions for border carbon adjustments.

The desire to engage the United States bilaterally on the issue of climate change gained prominence after the election of Barack Obama in 2008. In February 2009, the two countries signed the U.S.-Canada Clean Energy Dialogue, focused on clean energy research and development, clean energy technology, and a more effective electricity grid based on clean and renewable generation. Canada has expressed an interest in developing an integrated North American cap-and-trade system, and in 2010 Minister Prentice stated that Canadian regulations must be similar to those in the United States to avoid punitive measures on oil sands facilities and other large emitters.[47] No agreement has yet been reached with the United States in this regard. In addition, unlike the US bilateral framework agreement with Mexico, the Canadian bilateral agreement included no reference to cooperation on market mechanisms or other policies for addressing climate change.[48] Canada, the United States, and Mexico are members of NAFTA and the trilateral Security and Prosperity Partnership (SPP). A declaration on climate change and clean energy was signed at the annual leaders' summit in August 2009.

47 Prentice, "Speaking Points."
48 United States, White House, "U.S.-Mexico Announce Bilateral Framework."

Climate change has been prominent in other multilateral venues; it is a regular agenda item for the G8 and has been discussed at the MEF, the UN General Assembly, the Commonwealth of Nations, and the Francophonie. These processes have provided Canada an opportunity to discuss climate change policy and initiatives with other major emitters and will be central to effective multilateral action on climate change outside of the official negotiations process.

Canada is a member of several multilateral technology agreements, including the Asia-Pacific Partnership on Clean Development and Climate, the Carbon Sequestration Leadership Forum, the Generation IV International Forum, the Global Nuclear Energy Partnership, the International Partnership for the Hydrogen Economy, Methane to Markets, the Renewable Energy and Energy Efficiency Partnership, and the International Energy Agency Technology Agreements, including the Climate Technology Initiative.

Strengths, Failures, and Prospects for Policy

Canada's positions on climate change have an impact on international relations beyond the UNFCCC. Climate change requires a multilateral solution, yet the Canadian government demonstrates a waning interest in multilateral issues, focusing instead on bilateral relations with the United States. This incongruence is a serious challenge for Canada's profile not only in the climate change negotiations but in the multilateral world more generally. The foreign priority areas of the Canadian government in 2010 reflect little attention to multilateral institutions and Canada's traditional role as a helpful facilitator in those contexts. The focus is on economic and trade expansion opportunities with major economies (the additional priorities in Latin America and Afghanistan notwithstanding).

The lack of credibility and engagement on the climate issue has implications for Canada's broader international reputation and credibility. A recent BBC World Service survey found that perceptions of Canada's influence in the world worsened in 2009 both at home and among Canada's major trading partners. There is speculation that negative media coverage of Canada's environmental policies could be partly responsible for part of the drop.[49] Prime Minister Harper attracted negative coverage in the British and African press for a decision at a 2007 Commonwealth meeting in Uganda to block a draft agreement that called for developed countries to meet GHG targets.[50] The United Nations Development Programme (UNDP) criticized Canada for failing to address climate change, describing Canada as an "extreme case" of enacting stringent Kyoto targets and then not meeting them.[51] This and other criticisms, whether justified or not, affect the reputational and brand value of Canada and detract from more meaningful dialogues.

There is speculation that Canada's bid to seek a UN Security Council seat in 2011 is being undermined by a decision to transfer aid from Africa, as well as by its resistance to climate change initiatives. Robert Fowler, a former Canadian ambassador to the UN, notes that SIDS are "unlikely to find Canada's position on climate change overly inspiring," although he notes there is time to change that.[52]

In July 2009, the leaders of the MEF, which includes the G8 and the major developing economies, recognized the scientific view that global temperature must not rise more than two degrees Celsius above pre-industrial levels. At the G8 Summit in July 2009, Canada agreed to and praised the G8 countries' climate change goal of reducing their GHG emissions by 80 percent by 2050 (although no baseline was agreed to), with the global goal of a 50-percent cut. Canada attracted criticism the next day, when Minister Prentice stated that the G8 targets are "aspirational," fit Canada's target of cutting emissions by 60 to 70 percent below 2006 levels by 2050, and

49 CBC News, "Canada's Reputation Worsens." The report notes that despite the general decline, Canada remains one of the most positively viewed countries in the world.
50 Canadian Press, "Canada Gets Its Way."
51 United Nations Development Programme, *Human Development Report 2007/2008*, 10.
52 Fowler, "Canada's Bid."

do not necessitate a change in Canadian policy.[53] An immediate backtracking on the target established at the G8 Summit did not put Canada in a favourable light.

Canada attracted criticism for failing to provide leadership on climate change as the host of the G8 and G20 summits in 2010.[54] The government included climate change on the agenda only after being pressed by world leaders, and no new initiatives or specific actions in regard to climate change were announced. Communiqués from both summits reiterated previous commitments and statements and called on countries that have not done so to associate with the Copenhagen Accord. The G8 encouraged the development of low-carbon technologies and recognized the role that carbon capture and storage, nuclear energy, and bioenergy can play in addressing climate change.

Yet Canada's hosting of the summits played a critical role in influencing the Canadian government to be more proactive on climate change. In the run-up to the summits, the government announced its financial contribution to international fast-start climate change efforts and domestic regulations on coal-fired electricity generation. Canada's leadership on deficit-reduction targets and maternal and child health was not to be diminished by non-action on climate change.

This leadership is important at a critical time when the G20 is taking on greater prominence in multilateral discussions. The Centre for International Governance Innovation (CIGI) argues there is a growing interplay between the two groups, and an increasing sentiment that the larger G20 is becoming the forum to discuss global issues.[55] Canada's influence in the G20 is less than in the G8 because of the additional competition from major developing economies, such as China. The June 2010 summits provided an opportunity to position Canada as a critical contributor to both processes.

An interesting opportunity lies in the composition of the next UN Security Council. Over 2011, there will be considerable overlap between the G20 and the Security Council (with both likely to include the four BASIC countries), and there may be a way to use this commonality to constructively address climate change.[56]

Recommendation

- Canada needs to take steps to improve its international reputation on climate change issues, which in turn should have broader impacts for Canada's multilateral reputation. The first step is a credible and comprehensive plan that lays out how Canada intends to meet its target of a 17-percent reduction in emissions from 2005 levels by 2020 (roughly equal to the 1990 level). Such a plan is particularly critical given that Canada is taking no explicit actions to meet its Kyoto targets. A clearly laid out plan addressing all related GHG emissions, in regard to both production and consumption issues, is crucial for Canada to have significant credibility and leverage in the negotiations.

Energy Security and Trade

Linkages with Climate Change

DFAIT notes that "energy security issues are being thrust to the forefront of foreign policy discussions."[57] Energy security is increasingly integrated with climate change, and energy security and energy trade are essential parts

53 Doyle, "G8 Makes Scant Progress."
54 Hurst, "G8/G20 Summits."
55 English, "CIGI and the G20."
56 The five permanent members of the Security Council are all members of the G20: China, France, the Russian Federation, the United Kingdom, and the United States. Brazil, also a G20 member, holds a non-permanent seat on the Security Council until December 31, 2011. India and South Africa, both G20 members, have announced their candidacies for a non-permanent seat for 2011-12. Canada, Germany, and Portugal are standing as candidates for the two non-permanent seats for 2011-12 allocated to the Western Europe and Others Group. The elections will take place in the autumn of 2010 during the 65th General Assembly of the UN.
57 Canada, Foreign Affairs and International Trade Canada, *Energy Security*.

of Canada's foreign policy. Some provinces, such as Manitoba and Quebec, point to opportunities to craft energy policy that takes climate change into account. Others, such as Alberta, see efforts to reduce GHG emissions targeted at certain industries as being in conflict with overall energy and trade policies intended to expand Canada's economy. Alberta's oil sands deposits are recognized as a legitimate part of the world's oil inventory, and Canada is listed as having the second-largest recoverable oil reserves in the world, trailing only Saudi Arabia. Finding a way to extract and export these resources in an environmentally responsible way is likely to remain essential to Canada's continued prosperity as well as to a credible international and environmental profile. An environmentally responsible manner likely includes a broad carbon management strategy that would address participation in the global carbon market. The Alberta government continues to have problems with international carbon offsets and is much more aligned with a carbon technology fund to help promote the required technological transformation.[58]

Canada's foreign policy relations in regard to energy are almost exclusively with the United States because the two countries enjoy a highly interdependent energy relationship. Canada is consistently among the top sources for US oil imports and is the largest source of US natural gas, uranium, and electricity imports.[59] Around 60 percent of all the crude oil, natural gas, uranium, and coal produced in Canada is exported, overwhelmingly to the United States, which accounts for 99 percent of Canadian energy exports.[60]

Canadian and US natural gas markets operate as one large integrated market, and electricity grids are interconnected and more likely to run north-south than east-west. In recent years, Canada has been a net exporter of electricity to the United States, and a number of producers are planning to increase generation capacity, primarily in the areas of hydro, nuclear, natural gas, and wind. Several large- and small-scale hydroelectric facilities are planned or under construction in Quebec, Manitoba, and Newfoundland and Labrador; and incentive programs for increasing wind capacity have encouraged robust growth in Ontario and Quebec. Other major long-term projects include the Mackenzie and Alaska natural gas pipelines, transmission lines from Newfoundland and Labrador to the eastern seaboard, and transport of liquefied natural gas by ship to the US coast.[61] A number of provinces plan to increase exports of surplus electricity to the United States; and the August 2009 North American Leaders' Declaration on Climate Change and Clean Energy supports collaboration to develop a smart grid in North America, among other areas of cooperation.

The linkages with the US economy and the increasing integration of energy systems have a major impact on Canada's GHG emissions. More than half of the oil and gas produced in Canada is exported for US consumption, meaning that Canada, as a net energy exporter, bears part of the GHG emissions burden for fossil fuel consumption in the United States. Significant increases in oil and gas production in Canada between 1990 and 2007 have resulted in an increase in the emissions associated with the production and transport of fuel for export. In 2007, total emissions associated with these exports were up 180 percent from the 1990 level.[62]

Energy security has different meanings in Canada and in its major trading partner. Both Canada and the United States consider it a priority to have access to reliable, affordable, and secure sources of energy.[63] Yet for influential regions in Canada, energy security is also a matter of secure access to US markets, as well as accepting the social and environmental impacts of energy production (for example, Alberta and oil exports, Quebec and hydroelectricity exports). For other provinces, energy security is associated with energy prices and the economic impacts on development because most energy must be imported (for example, the Maritime provinces).

58 Many see the two approaches as compatible, with the carbon market backstopping the technology approach, in case the latter does not deliver. Others see the technology fund approach as presenting limitations in regard to a price cap and linking with other systems.
59 United States, Energy Information Administration, "Country Analysis Briefs: Canada."
60 National Energy Board, *Canadian Energy Overview 2006*, 3.
61 McColl, "Toward North American Cooperation."
62 Canada, Environment Canada, *National Inventory Report*, 17.
63 Canada, Natural Resources Canada, "Overview."

Of interest in this paper is the relationship with the United States as an importer of Canadian energy. Canada wants a secure and guaranteed customer base for energy exports that supports Canada's national and provincial economies. If Canada were unable to maintain a secure demand for energy products (if, for example, the United States were reluctant to import products from the oil sands due to their carbon intensity), the impact on Alberta and the entire country could dramatically alter Canada's trade balance. Thus "greening" Canada's energy sector is not an altruistic alternative but an initiative that makes good business sense in securing access to our only substantial energy export market.

In the United States, energy security is linked to the maintenance of access to a secure supply of energy that is "clean, affordable, sufficient and sustainable."[64] The United States sees domestic renewable energy as a potential means to free itself from its dependence on foreign power sources, particularly fossil fuels from Middle Eastern sources. Environmental concerns also enter the energy security debate, with US and Canadian environmental non-governmental organizations pushing the US government to find alternatives to oil sands products that are particularly carbon-intensive, pressure that could put Canada's energy sector at risk.[65] California and Oregon have already enacted low-carbon fuel standards that would in effect prohibit imports of oil sands products, to take effect in 2011, and several bills have come before Congress aimed at promulgating a similar standard at the federal level.[66]

Considering the depth of the energy relationship, it should be no surprise that there are linkages with climate change policy and with climate change impacts. The former is often essentially economic policy, or at least environmental policy with significant economic impacts. A cap-and-trade regime or a carbon tax, for example, is looking to effect a fundamental shift in the way goods and services are produced and consumed. This in turn will affect comparative advantage and, through it, the patterns of international trade, as more GHG-intensive sectors and processes suffer at the expense of cleaner ones. This would hold true even if the United States and Canada were identical economies, but they are in fact quite different.[67] So even a completely harmonized Canada-US climate policy would affect the two countries differently, altering the competitiveness of various national sectors relative to their competitors across the border, and shifting patterns of production, trade, and investment. A different approach to climate policy in each country would probably have even greater impacts. Therefore, the details of policy design such as sectoral coverage of cap-and-trade, stringency of caps, and choices over safety valves and free allocation of allowances all become important influencers of comparative advantage.

A particularly salient example of climate-related border measures is border carbon adjustments, whereby a country that has imposed a domestic carbon tax or cap would charge on imported goods the equivalent of what would have been paid had the goods been produced domestically. The intent is to discourage free riders and prevent under-regulated firms from profiting from an uneven playing field at the expense of regulated US industries. Such policies in the United States are a concern in Canada. The Waxman-Markey bill that passed the House of Representatives and the cap-and-trade (Kerry-Lieberman-Graham) and cap-and-dividend (Cantwell and Collins) frameworks developed by senators have provisions to protect domestic industries by imposing fees on carbon-intensive imports from countries that do not limit emissions. While these measures ostensibly are intended to force countries like China and India to adopt similar emissions reduction measures, there are legitimate concerns in Canada also. If the United States adopts a cap-and-trade legislation that includes border measures and Canada is deemed not to be taking sufficient action on climate change, Canadian exports in sectors such as iron and steel, aluminum, cement, pulp and paper, and chemicals could be punished significantly.

Climate policy in the form of standards for goods (or the processes and production methods by which they are produced) will have even more direct impacts on trade and investment. A particularly important example is a national-level clean fuel standard; a stringent standard of this type would undoubtedly have critical impacts

64 Energy Diplomacy and Security Act of 2006.
65 Beaudin, "Greenpeace, Équiterre."
66 These include the Clean Fuels and Vehicles Bill, the Advanced Clean Fuels Act of 2007, and the National Low-Carbon Fuel Standard of 2007.
67 To cite a simple example, the United States depends on coal for roughly half of its electricity supply, while in Canada coal accounts for only 16 percent.

on Canada's energy exports from Alberta. US renewable electricity standards could have important impacts on Canada's hydro-based electricity exports to the United States. As noted earlier, Canada has locked its fuel efficiency standards to those set by the United States, largely a result of the two nations' integrated economies.

Another category of linkages will come through the impacts of climate change on trade flows. The predicted impacts are reduced hydroelectric generation in Canada (the result of lower rainfall) and changes in demand; there could be reduced demand for space heating and increased demand for electricity to power air conditioning in the United States.[68] Impacts will also see forest product supply fall in both countries, the result of increased moisture stress, pests, and forest fires (net of an increased fertilization effect). More research is needed to understand exactly how this would affect forest product exports from Canada to the United States.

Strengths, Failures, and Prospects for Policy

In the end, it is clear that Canada's climate policy cannot be created in a vacuum, but will depend to a large degree on the nature of the US energy and climate regime. Canada's policy will need to address both climate change and the competitiveness implications of US climate policy. From the Canadian perspective, in regard to energy security and trade, there is an urgent need for cooperation and dialogue, aimed at these goals, among other things:

- Discussion on standards that have trade impacts: for example, how will Canada's hydro power be treated under the national Renewable Portfolio Standards and what methodology will be used to calculate impacts in any national clean fuel standard?
- Discussion on climate policy that has trade and/or investment impacts: for example, agreed principles for elaborating and implementing border carbon adjustment, and agreed guidelines for cap-and-trade regimes with a view to linking/coordination of regimes.
- A forum for technical cooperation to underpin the above discussions, looking to harmonize or coordinate measurement and reporting standards, methodologies for offsets, bases for determining comparability, etc.
- Institutions for conciliation and dispute settlement.

In the dialogues that must take place, the classic institutions of foreign policy will become important as vehicles for coordination and for managing the trade and investment impacts and relationships of such policy. The major instruments at our disposal are the WTO, NAFTA, the SPP process, the Clean Energy Dialogue, and various ad hoc bilateral discussions.

The WTO and NAFTA are useful in that they provide a framework of agreed rules by which both countries will formulate and implement their trade-related policies. Both bodies of law, for example, lay down rules with respect to the promulgation of product standards, and with respect to tariffs and border tax adjustment. Both also provide bodies for consultations on any issues of contention, and facilities for resolving trade-related disputes and some investment-related disputes.

NAFTA has a stand-alone side agreement that relates to environmental matters: the North American Agreement on Environmental Cooperation; the secretariat charged with administering the agreement is the North American Commission for Environmental Cooperation (CEC). The CEC has recently been given a priority mandate to work on climate change in North America as part of its strategic direction for 2010-15,[69] but it is unclear what sort of efforts this mandate will comprise. At best, it might provide analysis and space for discussion aimed at policy coordination across the three countries. But it might also be much less than this; the CEC, after

68 Lemmen et al., *From Impacts to Adaptation,* ch. 9.
69 Commission for Environmental Cooperation, "Ministerial Statement."

all, was charged with fostering climate change cooperation as far back as 1995, to little final effect.[70] Although the CEC has achieved significant progress in coordination of data, reporting, and monitoring since its inception (notably in the areas of chemicals and state-of-environment reporting), it has never been a strong forum for policy coordination. And in recent years it has been invested with less and less political capital by its Council of Ministers, meaning its capacity to engage in meaningful action on climate change is uncertain.

Some argue that the absence of a national approach to energy in Canada, coupled with the chapter 6 energy and petrochemical proportionality provision in NAFTA, leaves Canada at risk in the event of an energy supply crisis, essentially causing Canada to lose sovereignty over its own energy resources.[71] NAFTA obliges Canada to trade its energy without excessive intervention, in that Canada is not allowed to enact measures that would decrease export flows of energy (including electricity) or basic petrochemical goods to the United States as a percentage of total production (based on a three-year historical average).[72] President Obama's interest in reopening NAFTA appears to have waned, and the United States announced in April 2009 that environmental provisions could be amended without reopening the core text of the agreement.[73] This might offer a strategic opportunity for Canada. The United States would staunchly resist any amendment to the energy chapter of NAFTA, since it was one of the key achievements from the US perspective. Canada could insist on amendments in its interest in return for its agreement to the US priority: amendments to the environmental provisions.

The Security and Prosperity Partnership was launched in March 2005 by the leaders of the NAFTA countries and aims among other things to foster cooperation and information sharing, improve productivity, reduce the costs of trade, and enhance the joint stewardship of the environment. Of its ten working groups, at least three are of interest: those focused on environment, energy, and manufactured goods and competitiveness. The SPP aims to play a role in integrating North American policies and institutions, and thus might be a candidate for some of the more technical work on climate change and regulatory frameworks. It has, for example, elaborated a set of guidelines for smart regulation and has begun work on harmonized consumer efficiency standards and emissions standards. To some extent the SPP has some of the same strengths as the CEC, though its legitimacy has been questioned by civil society voices from both ends of the political spectrum.

The leaders' meeting in August 2009 indicated that the Obama administration will invest in this institution, and use it as a venue for trilateral cooperation on a number of issues, including energy and climate change. The North American Leaders' Declaration on Climate Change and Clean Energy recognized the global goal of 50-percent emissions reductions by 2050 and a vision for a low-carbon North America.[74] A trilateral working plan will include actions in a number of areas, including facilitating future cooperation in emissions trading systems, technology collaboration including a smart grid and CCS, transportation, management of landscapes, and adaptation.

The Clean Energy Dialogue, established in February 2009, features regular high-level meetings focused on bilateral energy cooperation. The three areas of focus are clean energy research and development, developing a more efficient energy grid, and collaboration on CCS. It is too early to judge the capacity of the dialogue to serve as an adequate platform for policy coordination, but it has potential. The architecture to support collaboration is established; the key question is whether the required resources will be dedicated to this initiative. Canada is lagging behind the United States on per capita investments in sustainable energy, energy efficiency, and public transit.[75]

70 Commission for Environmental Cooperation, "Statement of Intent."
71 Laxer, "Presentation on the SPP."
72 NAFTA article 605(a). The obligation applies equally to the United States, but was clearly written with Canadian exports in mind.
73 Knowlton, "Obama Doesn't Plan to Reopen NAFTA Talks."
74 "North American Leaders' Declaration."
75 A study of the 2010 Canadian budget and the US Congressional Budget Request by the Pembina Institute and Environment Northeast determined that the United States plans to spend the equivalent of more than C$27.4 billion (US$26.692 billion) on green programs including renewable energy, efficiency, technology development, and public transit, compared with C$357 million in Canadian spending in 2010, for an overall ratio of 8.6:1. Weis and Malone, "Canada Falling Even Further Behind."

An item that is noticeably absent from the Clean Energy Dialogue agreement is an integrated cap-and-trade framework, although it was at the top of Canada's wish list going into the negotiations. The prevailing belief is that the US administration is facing such a massive task getting domestic climate change policy approved by Congress (including cap-and-trade) that it wishes to avoid any further complications for its yet unguaranteed passage. A solution that appears increasingly likely is that Canada would become a policy taker and simply design its own system to closely reflect that of the United States. This is reflected in Minister Prentice's announcement that Canada will adopt a cap-and-trade regime only if the United States does the same. Developing a regulatory system that is at odds with that of the United States (e.g., an intensity-based system as opposed to an absolute system) or not developing a system at all could be extremely damaging for Canadian investment and trade. Canada needs to develop a range of scenarios for collaboration on GHG mitigation with the United States.

A coherent climate change and clean energy approach could help Canada have a common front in climate change discussions and direct the energy dialogue with the United States. An area for expanded cooperation, and one that is stressed in the Clean Energy Dialogue, is joint action on energy technology. Both the United States and Canada have discussed the need to develop CCS as a means to reduce emissions from the energy sector. Funding made available through the Alberta budget, the Canadian federal government, and President Obama's "green" stimulus funds could support a team effort. Many of the potential carbon storage sites straddle the Canada-US border, pointing to the need for an integrated approach. Saskatchewan and Montana are moving in this direction, having signed a memorandum of understanding in 2009 for cooperation on CCS.

Speaking at a Western Governors Association meeting in June 2009, US Energy Secretary Steven Chu outlined the need for the oil sands to be developed in a more sustainable manner, while also recognizing that the diverse American energy portfolio will have to include the oil sands for the foreseeable future.[76] Nevertheless, Canada cannot assume that it can proceed with a target that does not address reducing emissions from the oil sands. Norway offers an important lesson in this regard. Norway benefits from fossil fuel revenues but recognizes that it has a responsibility to pay for its share of the global consequences, and is willing to do so by actively participating in the global carbon market.

Effective overall carbon management strategies will need to be part of the solution in Canada. The implementation of carbon management strategies, including CCS, could not only allow both sides to limit their domestic emissions but could also potentially "green" some of Canada's export power, making it more palatable to those in the United States currently critical of Canada's "dirty" energy exports.

While CCS receives a lot of attention in energy technology discussions, Canada-US opportunities also exist in regard to the electricity grid and natural gas systems, which tend to be linked in a north-south manner. Electricity trade is likely to become more intertwined with renewable energy development. The expected shift from conventional and fossil-fuel-fired resources to variable resources (wind, solar, ocean, and some forms of hydro), driven by new policies and climate change priorities, means that greater coordination efforts will be needed between the two countries to ensure a reliable supply of electricity.[77]

Current bilateral coordination processes focus on reliability standards. The Bilateral Electric Reliability Oversight Group (BEROG) is a forum established in 2005 for identifying and resolving reliability issues in an international, government-to-government context; the North American Electricity Reliability Corporation is an intergovernmental organization that monitors network reliability, settles trans-border disputes, and formulates common industry standards; and the Northeast Power Coordinating Council promotes reliable and efficient operation of the international, interconnected bulk power system in the Northeast. The latter two entities are represented by the provinces, while the BEROG is represented by the Federal-Provincial-Territorial Electricity Working Group of the Council of Energy Ministers of Canada. These forums reflect the need for increased cooperation and coordination because of the growing interdependence of the electricity networks, and they demonstrate the move to standardized grid reliability standards between the two countries.

76 Fekete, "Oilsands' Carbon Footprint."
77 North American Electricity Reliability Corporation, *Accommodating High Levels of Variable Generation.*

The key problem that none of these forums seem equipped to surmount is the fundamental asymmetry to the Canada-US relationship. The American policy-making process is, at the end of the day, very much inward-looking. There may be scope for cooperation and dialogue to optimize the implementation of such policies as cap-and-trade, but the basic design of the policy is so hotly contested within the United States, and involves such a delicate balancing of domestic interests, that Canada's chances of affecting the process are slim.

Canada needs to identify the potential in all the institutions discussed above to make progress within the boundaries of the US-determined playing field, and it must pursue these opportunities as a priority. For example, past experience shows that bilateral discussions can have an impact. The US Energy Independence and Security Act of 2007 included possible impediments to the import of oil sands products, which were subsequently watered down. A comprehensive Canadian climate change and energy plan could help, as could efforts to enhance Canada's brand in the United States by defining Canada's strategic role in North American energy security and climate change, and at the same time helping to protect Canadian interests. There is plenty of scope for bilateral cooperation on the key issues that will help advance both the trade and investment goals and the climate change objectives for both countries. In addition, it will be important for Canada to identify areas where action can be taken in Canada, with a particular focus on consumer awareness.

Recommendations

- Canada should seek to influence the US legislation in regard to linking regulatory frameworks. First, Canada needs to determine what it wants by way of a climate and energy regulatory regime—that is, what is in the Canadian interest, and where Canada will take unilateral action. Considerations include how current domestic programs at the provincial level (such as carbon taxes in British Columbia and Quebec and Alberta's intensity targets) will fit in a continental system. Then, Canada needs to attempt to work to ensure that plan is compatible with US law. Options include political influence sales efforts in the environmental community (the latter being a new face of foreign policy, not just state-to-state) and trade threats as a last resort.
- Bilateral discussions with the United States need to emphasize the broader "green" aspects of the energy relationship, such as Canada being a source of clean electricity, including hydro, and continued efforts to reduce the carbon intensity of oil sands products.
- Canada requires a coherent Canadian energy and climate change plan that includes actions to address production and consumption. Such a policy will assist with energy planning with the United States, including actions under the Clean Energy Dialogue and other bilateral and trilateral coordination processes (for example, technology cooperation including CCS, renewable energy development, and electricity transmission).

Multilateral Trade and Investment

Linkages with Climate Change

In the foreign policy context, multilateral trade and investment policy has the potential to affect the ways trading states can address adaptation and mitigation objectives. This is an issue gaining traction in the foreign policy community because a number of ongoing and planned negotiations cover issues that have a direct impact on countries' ability to act on climate change. Areas that have the potential to offer incentives for action in this area include trade liberalization for low-carbon goods, fossil fuel subsidies, subsidies for GHG reduction technologies and activities, intellectual property rights (IPR), and reduction of domestic barriers to investment in developing countries.

It will also be important to create avenues for Canadian companies with expertise in climate-friendly technologies to enter emerging markets as countries respond to climate change. Efforts will be needed to overcome barriers to trade in emerging markets.

Strengths, Failures, and Prospects for Existing Policy

Changes in the multilateral trading system could provide incentives for action on climate change, one example being lowering tariff and non-tariff barriers to low-emissions technologies and goods. To date most attention has focused on the ongoing WTO negotiations on environmental goods and services related to article 31(iii) of the Doha Ministerial Declaration: "the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services."[78] This has been a difficult debate, but one that could benefit from increased understanding of the implications of various proposals. Canada could support research to examine how such a regime could actually work, including examination of such issues as the type of regime needed to facilitate adding goods in the future, how to determine if a good is no longer "green," and including goods on the basis of methods of production.

Trade policy could make a valuable contribution to climate change policy through agreement to reduce or reorient certain types of fossil fuel subsidies, on both the production (predominantly OECD countries) and consumption (mainly developing countries) sides. The G20 Leaders' Statement from the 2009 Pittsburgh summit committed "to phase out and rationalize over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest."[79] This is an important step that could be politically difficult, and an area where consumers could be negatively impacted. This may argue for a gradual approach to reform and measures at the national level to avoid negative social impacts, especially on the poor. Efforts to tackle this issue would unfold over many years, but in the short term, a great deal of research is necessary as a prerequisite to any efforts in this area. Key elements of that research include collecting relevant data, identifying economic and environmental impacts of subsidies, analyzing potential areas for action, and determining best practice. Canada could assist in gathering data and undertaking research to determine if international efforts can facilitate national action.

Another potential incentive is subsidies for GHG reduction, where countries decide to reinstate flexibilities similar to those included in the Agreement on Subsidies and Countervailing Measures (SCM Agreement) that were created during the Uruguay Round of multilateral trade negotiations. This agreement created space for non-actionable subsidies, or subsidies that would be considered acceptable and beyond challenge in the WTO. This provides a small window—mostly available to developed countries with the wherewithal to exploit it—for supporting particular types of research and development (R&D) and the costs of stronger environmental protection. Trade policy might serve climate change goals by reinstating SCM flexibilities, recast in a way that focuses on climate change objectives. Research to underpin these efforts would include assessing the extent to which SCM flexibilities were used, determining if Canada might have the need and wherewithal to employ flexibilities, and identifying ways to protect the integrity of the SCM in any suggested new flexibilities.

Some firms argue that tough IPR regimes act as barriers to the transfer and dissemination of technology, including technology for lowering GHG emissions. Others argue that weak IPR legislation inhibits technology innovation. Any move to revise the applicable trade law on intellectual property to include a climate-focused initiative would need to be carried out in the WTO as a multilateral negotiation. This would be a very difficult negotiation, which suggests that research is needed to examine the sectors of climate change interests where IPRs are a barrier to technology transfer, the other elements that constitute barriers to technology transfer, and the forms of possible modalities for suggested reforms.

Most of the barriers to foreign direct investment in emerging markets are not directly amenable to trade policy solutions, but one area remains: domestic barriers to investment. These include customs procedures, licensing permits, and other procedural barriers. In the energy sector they also include domestic regulatory regimes that can act as strong disincentives to investors. These elements of domestic policy are in many respects unique to each country, which suggests that research in this area should focus on a small number of key emerging markets, characterized by high growth and volume of energy demand. Research into barriers and

78 World Trade Organization, "Ministerial Declaration."
79 "Leaders' Statement: The Pittsburgh Summit."

programs to help overcome these obstacles at the domestic level in key emerging markets could help open doors for Canadian companies.

Recommendation

- Canada could support a research program examining how trade policy can make a positive contribution to climate change efforts. The program could look at these issues from Canada's perspective, as well as helping developing countries build capacity in analyzing linkages between trade policy and climate change policy, and encouraging their active participation in designing solutions that adequately address their concerns. Support for developing countries and getting them involved could help to build goodwill and trust in the international climate change negotiations.

International Peace and Security

Linkages with Climate Change

Climate change and international peace and security are typically linked in five ways, all of which have implications for Canada's domestic and foreign policy-making.[80] First, it is possible that volatile weather patterns, coupled with changes in rainfall and temperature, could reshape the productive landscape of entire regions, exacerbating food, water, and energy scarcities. Second, an increase in the intensity and frequency of extreme weather events, combined with global sea-level rise and changes in the distribution of arable lands, could lead to destabilizing population movements, bringing different groups into competition over dwindling resources and land. Third, these factors, as well as an expected increase in vector-borne diseases, could stretch the coping capacity of developing countries, threatening economic and political stability and potentially turning fragile states into failed states. Fourth, dramatic rises in sea level and increased salinization could make entire areas uninhabitable, threatening some of the world's densely populated river deltas and challenging the very existence of some small island states. Finally, an increase in global temperatures, markedly higher at the poles, will increase access to and competition over valuable natural resources and shipping lanes previously made inaccessible by the (now melting) sea ice.

This last linkage is the most relevant to Canada's domestic security policy. Warming global temperatures are already changing the Arctic, both onshore and offshore. Shipping lanes across the region are becoming increasingly viable, valuable energy resources previously unreachable because of the sea ice are becoming more accessible, and lucrative fish stocks are moving with the warming waters. The increased potential for economic development in the region—along with the environmental risks that development may bring—has meant that the five littoral Arctic states (Canada, Denmark, Norway, Russia, and the United States) have increased military activity in the region and initiated or completed mapping exercises of the seabed floor to cement their sovereignty claims.

Canada has increased its military spending considerably in an effort to assert its sovereignty in the Arctic. The government has invested in yearly military patrols of its Arctic land and has earmarked spending for the construction of deep-sea ports and new icebreakers to increase its capacity to monitor and patrol the region. In doing so the government is attempting to strengthen its claim on shipping lanes in the region, particularly those of the increasingly accessible Northwest Passage. Canada contends that the passage is internal waters, and that, in the interests of national and North American security, it should control access and shipping throughout its Arctic archipelago. The United States and others say that the passage should be considered international waters, as the acknowledgement of Canadian control would set a dangerous precedent for other strategic waterways such as those in the South China Sea.

80 Brown and Crawford, *Assessing the Security Implications*.

Under the UN Convention on the Law of the Sea (UNCLOS), countries have the right to exclusive economic zones extending 200 nautical miles from their coastlines. These zones can be extended if a country can prove—through seabed mapping—that its continental shelf extends beyond this limit. Given the valuable fossil fuel resources believed to lie under the melting Arctic ice (the US Geological Survey, for example, speculates that the Arctic is the largest source of untapped oil on the planet), the Arctic five are keen to lay separate claims to areas as large as possible. This goal has led to a flurry of Arctic mapping activity and a number of overlapping claims, particularly relating to sovereignty of the Lomonosov Ridge and the North Pole itself. Canada's claims have frequently clashed with those of its neighbours (with Russia in regard to the pole, with Denmark in regard to Hans Island, and with the United States in regard to a section of the Beaufort Sea), but in the last few years it has turned more toward cooperative mapping exercises with the four other Arctic coastal states to resolve disagreements. All countries will have to submit territorial claims to UNCLOS by 2013, a deadline complicated by the fact that the United States is not a signatory to the convention.

Canada is not yet exposed to the other, often more serious security impacts of climate change: conflicts over resource scarcity, conflicts resulting from large-scale population movements, state failure, and threats to its territorial integrity. These threats to political and economic stability are more likely to be felt in countries already facing considerable development challenges.

It should not be assumed, of course, that climate change will automatically lead to violence; while climate change does set the parameters for such violence to occur, one should not discount the ability of countries and communities to adapt to these challenges in a peaceful way, avoiding conflict. However, when climate change occurs in a context of weak governance and poor adaptive capacity, and when it impacts communities and countries already experiencing considerable development challenges from economic, population, and environmental stresses, the risk of violent conflict increases. In addition, in many countries a legacy of existing conflict will weaken the ability of governments and communities to adapt to climate change and could reinforce the conditions for climate-related conflict.

Strengths, Failures, and Prospects for Existing Policy

A considerable amount of Arctic cooperation exists, as reflected by a number of treaties and institutions as well as non-governmental initiatives. These are mainly aimed at managing natural resources and creating frameworks for interaction at the regional and subregional levels. Some organizations have undertaken activities related to climate change, such as the Arctic Climate Impact Assessment (ACIA) that was carried out under the Arctic Council in 2004. The Arctic Council is the leading multilateral forum through which Canada advances its Arctic foreign policy. Climate change has been a common priority area for the Norwegian, Danish, and Swedish chairmanships of the council from 2006 to 2012.[81] Integrating climate change considerations into the work of the Arctic Council or other similar bodies can bring together countries that both have a stake in Arctic sovereignty and face similar impacts from climate change in Arctic regions. Canada can work to strengthen the Arctic Council's ability to address climate change issues in the Arctic by providing support for climate change research. There is room for joint actions with the United States as well as with other nations on climate change issues in the North.

In 2008, the Canadian government announced an integrated Northern Strategy that focuses on four priorities: economic and social development, governance, environmental protection, and sovereignty. The Northern Strategy includes an Arctic foreign policy, with sovereignty and security being top priorities. International priorities also include protecting Canada's environmental heritage, and the government is participating in international efforts to study the impacts of a changing climate in the Arctic, and helping Northerners adapt to the impacts.[82]

81 Arctic Council, "Norwegian, Danish, Swedish Common Objectives."
82 Canada, Foreign Affairs and International Trade Canada, "Protecting Our Environmental Heritage."

Canada is focusing on military investments. These are required, but military presence in the North is not an arena of competition in which Canada is likely to win against the United States and Russia. Canada might consider positioning itself as a sustainable development leader in the Arctic, cementing this leadership position through strong domestic actions on climate change, including work on adaptation in the Arctic; continuing support and leadership in the Arctic Council, which is the strongest forum for dialogue on Arctic security and cooperation; undertaking joint mapping exercises to reduce overlapping Arctic maritime claims; and continuing to rely on UNCLOS for decision-making.

Canada will have to work within UNCLOS mechanisms to seek protection for its Arctic waters; but open and honest dialogue between countries can help reach agreement on sovereignty issues. The Hans Island dispute has focused on the somewhat overblown diplomatic "tension" between Denmark and Canada over the ownership of the 1.3-square-kilometre barren rock island. What is often neglected is that this is a relatively minor leftover issue of a 1973 agreement between the nations delineating the continental shelf border between Canada and Greenland, largely settling the larger offshore border issues between the two countries.[83] The larger agreement is an example of bilateral negotiations offering a solution to sovereignty disputes outside of UN processes. This agreement helped lay the groundwork for further bilateral agreements between Canada and Denmark, such as the 1983 agreement to cooperate on marine environmental issues.[84] Productive bilateral discussions with Arctic states such as Russia, Iceland, Finland, Sweden, Norway, and the United States could not only lead to resolutions over sovereignty, but possibly lead to further environmental (or more specifically climate change) commitments, as they have with Denmark.

It should be noted that the security implications of a warming Arctic are not limited to the Arctic nations; the impacts of widespread melting at the poles will be felt the world over. The collapse of the Greenland ice sheet, for example, could lead to a global sea-level rise of up to seven metres.[85] To cement its position of leadership in the Arctic, Canada should also look beyond its Arctic neighbours and engage the international community in the debate on avoiding dangerous climate change in the North.

Dealing with instability and conflict in developing nations requires a multilateral approach. Climate change may play a role in future UN peacekeeping deployments, both as a reason for deployment and also potentially as an element of peace-building mandates. It is possible that future UN deployments may have to mediate access to water resources that are limited, in part, by climate change. Canada's peace-building tradition fits in with the need to reduce GHG emissions and avoid dangerous climate change, given its security implications. With respect to addressing conflict directly, Canada can work through the UN to provide support for security and peace-building initiatives. With enlarged peacekeeping deployments, Canada might consider helping regional organizations, such as the African Union, build their capacity to deal with security threats that may be exacerbated by climate-induced degradation and scarcity.

One of the most fundamental ways in which these issues can be addressed through foreign policy is through direct support for adaptation strategies in developing nations as a tool for peace-building and conflict resolution. Carefully designed and implemented adaptation strategies can help to address some of the key natural resource issues that might become contentious because of climate change (for example, food security and water allocation). Bilateral support for adaptation is a way that Canada can assist developing nations, but this will require an improvement in and greater focus on financing for adaptation.

A credible case for increasing support for adaptation and other climate change policy can be made with a correlation drawn between the benefits of tackling climate change and providing support for international peace and security. Canada also needs to weigh the potential impacts of security issues such as mass migration, poverty, and conflict on foreign policy. Decisions and priorities in the areas of security, defence, immigration, and

83 Côté and Dufresne, *The Arctic*.
84 *Agreement between the Government of Canada and the Government of the Kingdom of Denmark*.
85 Lowe et al., "The Role of Sea-Level Rise."

development will be impacted by climate change. As these issues are elevated from the desks of environment ministers to those of defence ministers, finance ministers, and heads of state, the issue will gain prominence and urgency.[86] Undertaking this analysis can be an effective way of justifying increases in financing commitments and other support for developing nations, both promoting Canada's international reputation for multilateralism and providing much needed support for developing countries.

Recommendations

- Position Canada as a sustainable development leader in the North, by acting on climate issues in the region (for example, impacts and adaptation), providing support and leadership for the Arctic Council, and continuing to work on joint mapping exercises.
- Promote cooperation on climate change issues in the Arctic as a means to improve bilateral relations with Arctic nations, such as Denmark and Norway.
- To help prepare for the impacts of climate change, Canada should increase support for adaptation strategies and activities at home in the Arctic and in developing countries through bilateral and multilateral assistance. Bilateral channels can be used to deliver some of Canada's funding contribution, especially efforts related to adaptation capacity building, institutional support, and technology transfer.

Development Cooperation

Linkages with Climate Change

Canada's development cooperation policy is closely linked to foreign policy. CIDA administers the majority of development assistance, leading Canada's effort to help people living in poverty.

Development assistance has the potential to help developing countries address mitigation and adaptation objectives. Financial support to developing countries plays a critical role in the international negotiations on climate change, and developed countries that sign on to the Copenhagen Accord commit to collectively provide new and additional resources of US$30 billion from 2010 to 2012 for mitigation and adaptation actions in developing countries. While mitigation targets for developed countries often capture the attention of the media in these negotiations, it needs to be appreciated that much of the multilateral process actually addresses issues of higher priority to developing countries, including technology transfer and financing for adaptation and mitigation actions.

Helping to meet the needs of less developed nations through development cooperation may encourage them to pressure the major developing economies to take more robust actions to reduce their contribution to GHG emissions. At the same time, if the needs and concerns of high-emitting developing countries can be met, they may be more open to being active participants in any new climate change agreement. Exerting pressure through development assistance is extremely difficult, and the significant new funding agreed to under the Copenhagen Accord means that developing countries expect such assistance; under the accord, this funding will be new and additional to official development assistance (ODA) budgets.

The UNFCCC post-2012 negotiations—which will continue through 2010 and likely beyond—include discussions on adaptation, mitigation, financing, technology, and capacity building. A range of funding proposals and options have been put forward for a post-2012 regime, including assessed contributions from developed countries; international levies (for example, on air or marine transport); an agreed share of proceeds from new market-based mechanisms, similar to the 2-percent levy on Clean Development Mechanism (CDM) projects

86 The alternative risk of this elevation is the possibility of these issues being addressed outside of the public sphere more often, as military and defence issues often are.

to support adaptation in developing countries; and a percentage of the auctioning of assigned amount units (AAUs) of developed countries at international and domestic levels.[87] A concern for Canada in the negotiations is that financial resources provided through mechanisms and institutions outside the UNFCCC not be regarded as fulfilling commitments under the convention.

Strengths, Failures, and Prospects for Existing Policy

Canada was an early mover in linking development funding and climate change. The Canada Climate Change Development Fund (CCCDF), established in 2000 and ended in 2006, provided $100 million to promote climate change activities in developing countries. The CCCDF established Canada as an early leader on the development and climate change agenda, and enhanced Canada's reputation and UNFCCC negotiating positions.[88] Canada used this fund to gain profile with developing countries in the negotiations; it was one of the first supporters of the LDC Fund (providing $10 million) and made contributions to the UNFCCC LDC Expert Group and the UNFCCC-LDC Group. Canada also contributed $13.5 million to the UNFCCC Special Climate Change Fund and in 2008 provided $100 million in development aid for climate change adaptation.[89]

Canada has allocated very little bilateral ODA for climate change programs and projects since the CCCDF ended in 2006. The CIDA Project Browser listed two operational climate change projects in February 2010:

- Nigeria—Building Response to Climate Change, 2007-12, $5 million.
- Sahel Countries—Climate Change Adaptation Capacity Support, 2002-09, $4.73 million.[90]

In June 2010, Canada announced $400 million for its 2010 portion of the US$30 billion in fast-track financing promised under the Copenhagen Accord. Much of it is expected to be delivered through the World Bank or other multilateral channels, a delivery process similar to the one applied to the $100 million for climate change adaptation announced in 2008. While this may be an efficient means of programming funds, it leaves little for locally managed projects that support sustainable livelihoods at the community level or for "signature" projects that are identified as Canadian initiatives.

A greater coherence between Canada's aid agenda and the climate change negotiations is needed. While it is recognized that Canada's bilateral aid program is donor driven, there is a need for a common front in the negotiations. Supporting climate change actions in developing countries, especially SIDS, LDCs, or African nations, could be an important step in building allies. For example, Canada might be able to generate support for its positions in the climate discussions by focusing attention on the needs of African nations, which have called for assistance to develop soil carbon sequestration programs. But, in reality, recent actions have jeopardized Canada's potential goodwill. Canada is not well placed to generate support in the climate change negotiations from African nations, having removed eight African nations that are LDCs or less developed nations from its list of focus countries in its bilateral aid program.[91]

CIDA could consider mainstreaming climate issues with development priorities. This means paying attention to the shared benefits of climate mitigation and adaptation projects and ensuring climate change initiatives effectively reflect mainstream priorities, such as sustainable energy systems and sustainable natural resource management. Of course, caution is needed when addressing the challenge of mainstreaming. On both sides, there are concerns that the climate change response competes with other development objectives for scarce funds. Recipient countries are worried that existing aid budgets will be cut to fund climate change actions.

87 Parties with commitments under the Kyoto Protocol have accepted targets for limiting or reducing emissions. These targets are expressed as levels of assigned emissions or "assigned amounts" over the 2008-12 commitment period. The allowed emissions are divided into AAUs, equal to 1 tonne of CO_2 equivalent.
88 Canadian International Development Agency, Canada Climate Change Development Fund.
89 Global Environment Facility, Status Report; Canada, Office of the Prime Minister, "Prime Minister Harper Calls Francophonie Summit a Success."
90 Canadian International Development Agency, "Project Browser."
91 The eight African nations removed from Canada's list of focus countries in February 2009 were Benin, Burkina Faso, Cameroon, Kenya, Malawi, Niger, Rwanda, and Zambia.

Canada may need to consider a broader technology cooperation strategy that would include a coordinated approach in regard to development aid, funding commitments to the UNFCCC, CDM investment, and trade promotion. This would include identifying climate change as a pillar in CIDA's Country Development Programming Frameworks and scaling up capacity building and institutional support for effective policy regimes (for example, regulatory frameworks, common product standards, IPR regimes, strategic frameworks for clean energy investment, and low-carbon development strategies).

Technology cooperation could be supported by broader funding programs, which might meet the definition of "new and additional." The scale-up of technology efforts could include involvement in technology agreements and cooperation schemes related to climate change, focusing on those technologies where Canadian industry has a competitive and technological edge, and where the developing nations have specific needs. For example, China and India have expressed interest in energy efficiency, clean coal, CCS, natural gas, renewables, and nuclear energy. Activities could include technology information centres, training programs, and joint R&D programs.

Increased scientific and technological cooperation could be used to strengthen Canadian companies' positions in the markets and vice versa, including the exchange of scientists and engineers, and training programs to promote best practices, standards, and technologies. Encouraging acceptance of Canadian standards and technologies in developing countries can best be accomplished if businesses in these countries are part of the development process and if demonstration and pilot projects are supported. An important first step will be scaling up R&D in Canada through direct grants or tax incentives.

Trade promotion activities are linked closely to technology cooperation because of the critical role of the private sector. Canada might consider the development of a climate change trade and investment promotion strategy that is closely linked to policy reform programs and technology cooperation activities. This could include establishing clean energy trade promotion centres to raise awareness and encourage export of leading-edge Canadian technologies. Important considerations include financial support for the purchase of technologies and improved financial or market instruments that encourage Canadian investment in climate change projects in developing nations. As noted earlier, a coordinated approach will use ODA to leverage these technology cooperation and export opportunities.

The strategy could include working with the major developing countries to help raise the standards of their domestically produced technologies, which are often exported to and favoured by other developing nations because of low costs. As emerging donors, major developing economies—particularly China and India—are providing grants and preferential lending terms for new resource extraction projects, power plants, and other energy facilities. In some cases, such grants and loans come without provisions to adhere to high environmental standards and may even include a requirement to buy outdated and inefficient equipment from the lending country, thereby precluding Canadian companies from selling into that market.

Recommendations

- Canada requires a strategy to encourage linkages between climate change initiatives and development policy. This would include ensuring that climate change considerations are mainstreamed in development assistance projects.
- Canada's $400-million contribution under the Copenhagen Accord should give high priority to bilateral project assistance, including "signature" projects that can be identified with Canada and led by Canadians. Such projects should be defined by the needs of recipient countries.
- Contributions to multilateral funds should remain an important and essential part of Canada's climate change support and should be concentrated in areas where Canada can be seen as a leader—such as support for initiatives with LDCs and SIDS.
- Canada requires a coherent climate change technology approach that links ODA, climate change funds, CDM investment, technology cooperation, and technology promotion to further technologies and know-how where Canadians have a competitive and technological edge.

Conclusions and Recommendations

This paper has discussed a number of linkages between climate change and foreign policy. An integrated approach to climate change and energy policy is essential, given the influence of US policy on Canadian decisions. It will be important to integrate climate change into trade and investment policy, so that regimes create incentives for low-carbon investment. While the nexus between security and climate change is yet to be fully defined, adaptation programming will help poor countries adjust to a range of development challenges, including those that arise as a result of climate change. Considerable work will be needed to incorporate climate change into development programming, regaining Canadian leadership in this field. It will also be important to link development assistance to a broader technology approach to promote Canadian expertise.

The Canadian government has a wide range of opportunities to use foreign policy as a way to influence climate change decisions; and climate change policy can influence action in the foreign policy arena. Recommendations for each of the areas explored in this paper are included in the relevant sections of the paper, and the most critical and pressing areas for action are listed below.

- *Federal-Provincial Relations*: A First Ministers' Meeting should be called to address Canadian energy and climate change policy, and Canada's profile in the North American energy picture. A focus should be positioning Canada for the future global energy picture, exploring the opportunities and challenges afforded by energy security, investment, jobs, and the environment.
- *International Relations and Diplomacy*: Canada needs to take steps to improve its international reputation on climate change issues, which in turn should have broader impacts for Canada's multilateral reputation. The first step is a credible and comprehensive plan that lays out how Canada intends to meet its target of a 17-percent emissions reduction below 2005 levels by 2020. A plan that addresses all GHG emissions—from both production and consumption—is crucial if Canada is to increase its leverage in the climate negotiations.
- *Energy Security and Trade*: Canada should seek to influence US legislation in regard to linking climate change regulatory frameworks. First, Canada needs to determine what it wants by way of a climate and energy regulatory regime—that is, what is in the Canadian interest—and work to make sure that this plan is acceptable under US law. The federal government needs to work with the provinces and stakeholders to identify the best way of going forward in Canada.
- *International Peace and Security*: To help prepare for the impacts of climate change, Canada should increase support for adaptation strategies and activities at home in the Arctic and in developing countries through bilateral and multilateral assistance. Bilateral channels can be used to deliver some of Canada's funding contribution, especially efforts related to adaptation capacity building, institutional support, and technology transfer.
- *Development Cooperation*: Canada's $400-million contribution under the Copenhagen Accord should give high priority to bilateral project assistance, including "signature" projects that can be identified with Canada and led by Canadians, recognizing that such projects should be defined by the needs of recipient countries.

But the first task at hand for Canada is putting its own house in order. The government of Canada has indicated that it is not prepared to implement a cap-and-trade system or climate change regulations in the absence of similar action in the United States. But there has been little discussion with provinces and stakeholders around this decision. Indeed, is this the best way to go forward in Canada? And what of those areas where the United States is taking action, particularly in policies and stimulus packages that support the penetration of renewables, energy efficiency practices, and other clean energy initiatives? How far does harmonization with the United States go? And what of actions that Canada might be able to take that do not carry strong competitiveness implications?

The most effective way for Canada to address the linkages between climate change and foreign policy is to develop a substantial and informed domestic constituency. Building such a constituency begins with a dialogue

that includes federal, provincial, and territorial governments at the core, but also key stakeholders across the country representing municipalities, business, non-governmental organizations, labour, consumers, and indigenous groups. A strong dialogue on a national clean energy strategy led by first ministers could be used to inform how the government can relate to and work with the United States, identify actions for Canada that do not carry strong competitiveness implications, enhance Canada's international profile on this issue, make a reasonable case for Canada's sovereignty over the Arctic, and implement effective overseas green investments to help put the planet on the path to low-carbon development. A new approach needs to be launched that is dead serious about Canada's climate change obligations, but also aware enough to acknowledge that such a transformation can be achieved only through a strong consensual base. Canada may need to wait for the United States before deciding on the most appropriate carbon pricing system, but that should not stop Canada from exploring other initiatives to reduce GHG emissions, particularly in the consumer sector.

Demonstrating seriousness on the climate change issue would help to improve Canada's international reputation and credibility and open the door to Canada having greater prominence in multilateral discussions in the UNFCCC and more broadly. But none of this is possible without high-level buy-in within the foreign policy community and from the Prime Minister's Office. Leaders and senior managers need to set the agenda and provide the commitment and resources to effectively push the agenda.

Appendix 1: Climate Change Plans and Strategies of Federal, Provincial, and Territorial Governments

Jurisdiction, Plans or Legislation, and Memberships	Goals or Targets	Main Initiatives and Other Aligned Programs
Canada Canada's submission to the UNFCCC, January 29, 2010 (http://unfccc.int/files/meetings/application/pdf/canadacphaccord_app1.pdf) Turning the Corner: Regulatory Framework for Industrial Greenhouse Gas Emissions, March 2008	Reduce GHG emissions by 17% below 2005 levels by 2020 (to be aligned with the final economy-wide emissions target of the United States in enacted legislation). Reduce GHG emissions by 60% to 70% below 2006 levels by 2050. Originally intended as an intensity-based system, but it is likely (but not yet confirmed) that this will be implemented as an absolute cap-and-trade system. The development of draft regulations has been postponed in order to harmonize with the emerging US system.	Compliance tools in the regulatory framework include an emissions trading system with offsets and access to the CDM, and a technology fund. EcoTRUST: support for provincial projects. EcoAGRICULTURE: biofuels and bioproducts development. EcoENERGY: renewable energy, heat, development, efficiency, technology. EcoTRANSPORT: fleets, public transport, technology.
British Columbia Greenhouse Gas Reduction Targets Act, 2007 Carbon Tax Act, 2008 Greenhouse Gas Reduction (Vehicle Emissions Standards) Act, 2008 Greenhouse Gas Reduction (Emissions Standards) Statutes Amendment Act, 2008 Greenhouse Gas Reduction (Cap and Trade) Act, 2008 Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act, 2008 Member of WCI (co-chair of Executive Committee, chair of Offsets Committee)	Reduce GHG emissions by 6% from 2007 levels by 2012. Reduce GHG emissions by 18% from 2007 levels by 2016. Reduce GHG emissions by 33% from 2007 levels by 2020. Reduce GHG emissions by 80% from 2007 levels by 2050. Carbon-neutral provincial government operations by 2010.	Carbon tax for virtually all fossil fuels sold in the province starting July 1, 2008. The tax will be phased in over five years. It started at a rate of $10 per tonne of carbon emissions, and is rising $5 a year to $30 per tonne by 2012. $25-million Innovative Clean Energy Fund for commercialization of clean technologies. BC Trust Fund to fund valid offsets for government travel. LiveSmart BC programs provide rebates and incentives for homes, businesses, transportation, and community projects. Emissions reduction strategies required in all community and regional plans. Adopt California tailpipe emissions standards and low-carbon fuel standards. 5% renewable fuel standard for diesel by 2010. Full implementation of a cap-and-trade program in accordance with WCI.
Alberta Responsibility/Leadership/Action: Alberta's 2008 Climate Change Strategy, 2008 Climate Change and Emissions Management Amendment Act, 2007 Regulations on Emitter Regulation, Reporting and Administrative Penalties	All of Alberta's targets are based on intensity, and reductions are from business-as-usual levels. 2010: Meet intensity target from 2002 plan (12% intensity-based reduction from industrial sources of greater than 100,000 tonnes): 20 Mt reduction. 2020: Stabilize GHG emissions: 50 Mt reduction. 2050: Emissions reduced 50% from business as usual: 200 Mt reduction. Reduce GHG emissions intensity relative to GDP by 50% below 1990 levels by 2020, which will bring Alberta emissions to 14% below 2005 levels.	200 Mt target is based on reductions from conservation and energy efficiency (24 Mt), CCS (139 Mt), and greening energy production (37 Mt). First province to regulate large emitters (2007). Alberta-based technology fund for emitters to pay into ($15 per tonne) if they are unable to reach reduction targets. Development of an Alberta-based offset credit system for compliance (as alternative to technology fund payments) based on 25 approved initiatives from agriculture, bio-energy, enhanced oil recovery, and renewable energy systems. $2-billion fund for CCS technology. Canada-Alberta ecoEnergy CCS Task Force.
Saskatchewan An Act respecting the Management and Reduction of Greenhouse Gases and Adaptation to Climate Change, 2009 Observer to WCI process (less active since government change to Saskatchewan Party in 2007)	Reduce GHG emissions by 20% from 2006 levels by 2020.	Strong focus on CCS, including a memorandum of understanding (MOU) with Montana on the development of a full-chain CCS project between the two jurisdictions. MOU with state of Victoria, Australia, for research and development of low-carbon technologies (including CCS), renewable energies, and adaptation plans. Saskatchewan Technology Fund to be developed on same model as Alberta's. Establishment of a Climate Change Foundation to research and develop low-carbon technology and foster public awareness and education on climate change. Go Green Fund for projects that can demonstrate emissions reduction.

Jurisdiction, Plans or Legislation, and Memberships	Goals or Targets	Main Initiatives and Other Aligned Programs
Manitoba The Climate Change and Emissions Reductions Act, 2008 Beyond Kyoto, Manitoba's Green Future, 2008 Member of WCI, MGGRA	Meet Kyoto targets, 6% below 1990 levels by 2012. Initial emissions reduction target is to reduce Manitoba's emissions by December 31, 2012, to an amount that is at least 6% less than Manitoba's total 1990 emissions.	Formation of Vehicle Standards Advisory Board that recommended adoption of California vehicle standards, among other recommendations to reduce emissions from transportation sector. Phaseout of only remaining coal-fired power plant. Methane capture initiative for landfill emissions. Seeking reductions from agriculture practices. Green building codes. Establishment of a cap-and-trade system under WCI.
Ontario Green Energy and Green Economy Act, 2009 Environmental Protection Amendment Act (Greenhouse Gas Emissions Trading), 2009 Go Green: Ontario's Action Plan for Climate Change, 2007 Member of WCI (chair of Markets Committee), observer at RGGI, MGGRA	Reduce GHG emissions to 6% below 1990 levels by 2014, 15% below 1990 levels by 2020, and 80% below 1990 levels for 2050. Commitment to reduce energy resource needs from 2011 to 2027 by 2.5% annually.	Closure of coal-fired power generation plants by 2014. MoveOntario 2020: $11.5-billion investment in public/rapid transit. $150-million investment in green power. Feed-in tariff for renewable energy. Adoption of smart grid technology. Establishment of a cap-and-trade system under WCI. Expert panel on climate change adaptation. Drive Clean program for vehicle emissions testing upon vehicle registration renewal.
Quebec Quebec and Climate Change: A Challenge for the Future, 2006 (revised 2008) An Act to Amend the Environment Quality Act and Other Legislative Provisions in Relation to Climate Change, 2009 Member of WCI (Chair of Cap Setting and Allowance Distribution Committee), observer at RGGI	Reduce GHG emissions level to 20% below 1990 levels by 2020.	In January 2010, adopted California's emissions standards for cars and light-duty trucks made between 2010 and 2016 and sold in the province. First province to tax carbon, in 2007, with funds directed to implementation of the province's climate change plan. Legislation passed to enable the province to develop a cap-and-trade system, enable the purchase of allowances, and establish a Green Fund for cap-and-trade payments. Continued pursuit of hydro (4,500 MW portfolio for further development by 2010), biomass (100 MW tender in 2008, 700 MW long-term), and wind (4,000 MW by 2015) power developments. Energy efficiency target of 11 terawatt hours by 2015. Improved building codes and energy efficiency of public buildings. Financial assistance to increase public transit use 8% by 2012. $2 billion for infrastructure and public transit improvements.
New Brunswick Climate Change Action Plan, 2007 Observer at RGGI	Reduce GHG emissions to 1990 levels by 2012 and 10% below 1990 levels by 2020.	Fuel efficiency and alternative fuels in the transportation sector. Improvements to building codes. Study of feasibility of small-scale hydroelectricity developments. Forest biomass policy. Encouragement of methane capture for landfills. Assess CCS opportunities.
Nova Scotia Environmental Goals and Sustainable Prosperity Act, 2007 Toward a Greener Future; Nova Scotia's Climate Change Action Plan, 2009 Observer at WCI	Reduce GHG emissions to 10% below 1990 levels by 2020 (5 Mt annually). Reduce emissions by 80% from current (2009) levels by 2050.	Cap on emissions from Nova Scotia Power Incorporated, which produces 46% of total GHG emissions in the province. Sustainable Transportation Strategy. Regulations for fuel consumption and emissions standards for new vehicles by 2010. 2013 Renewable Energy Standard. Adaptation Fund.

Jurisdiction, Plans or Legislation, and Memberships	Goals or Targets	Main Initiatives and Other Aligned Programs
Prince Edward Island Prince Edward Island and Climate Change: A Strategy for Reducing the Impacts of Global Warming, 2008	Reduce GHG emissions by 10% below 1990 levels by 2020. Reduce GHG emissions by 75% to 85% below 2001 levels by 2050.	Renewable Portfolio Standard of 15% by 2010 through Renewable Energy Act (achieved in 2007). 500 MW of wind energy by 2013. Support for small-scale solar and geothermal developments. Provincial E5 and B10 Renewable Fuel Standard to be introduced by 2013. Tax incentives for the purchase of hybrid vehicles. Support for implementation of California vehicle standards.
Newfoundland and Labrador Climate Change Action Plan, 2005	No province-initiated targets, but committed to targets set by Conference of New England Governors and Eastern Canadian Premiers Climate Change Action Plan of 1990 levels by 2010 and 10% below 1990 levels by 2020.	Discussions carried out with large emitters over possible regulations and reduction of GHG emissions. Funding for research into climate change adaptation. 2015 target to eliminate 1.3 million tonnes of annual GHG emissions from Holyrood Generating Station. Government House-in-Order strategy for reducing emissions from government activities. 40-point action plan from 2005.
Yukon Climate Change Action Plan, 2009	Government internal operations: Cap GHG emissions by 2010, reduce GHG emissions by 20% by 2015, and become carbon neutral by 2020. Establish a Yukon-wide emissions target by 2011.	Investment in tools and research for adaptation to climate change. Energy Strategy for Yukon contains principles for short- and long-term action on energy efficiency and renewables. Develop carbon offsets for government operations, and best management practices for industry to reduce GHG emissions. Study transportation sector for potential GHG reduction options.
Northwest Territories Greenhouse Gas Strategy: 2007-2011, 2007	Reduce GHG emissions in government operations to 10% below 2001 levels by the year 2011.	Support for wind, solar, mini-hydro, biofuels, and other renewable energy sources.
Nunavut Several regional studies of climate change impacts completed in 2005 Ikummatiit: The Government of Nunavut Energy Strategy, 2007	No specific GHG emissions reduction targets.	Save 10 Energy and Water Efficiency Program (public awareness and education). Creation of the Nunavut Energy Management Program. Government Services started testing hybrids for government use. Standing Offer Agreement for low-cost energy projects. Feasibility studies of alternative energy possibilities (hydro, solar, waste).

Appendix 2: Trade Offices and Other Foreign Policy Agreements of Canadian Provinces

Jurisdiction	Location of Trade Offices	Membership in Regional or International Organizations and Bilateral Agreements*
British Columbia	China (Bejing, Shanghai, Guangzhou), India (Bangalore), Japan (Tokyo), Korea (Seoul), Europe (London, Hamburg), US (California)	WCI, Climate Registry, Pacific Coast Collaborative, Pacific Northwest Economic Region. Twinning agreement with Guangdong Province (China), 13 municipal twinning agreements between BC and China, General Agreement on Cooperation with State of Punjab (India), BC-Philippines labour mobility agreement, sister-province agreement with Gyeonggi Province (Korea) to expand economic cooperation, 35 sister-city relationships with Japan, Pacific NorthWest Economic Region.
Alberta	US (Washington), Mexico (Mexico City), UK (London), Germany (Munich), China (Bejing, Hong Kong), Korea (Seoul), Japan (Tokyo), Taiwan (Taipei)	Special relationships (full-fledged multi-sectoral partnerships): Gangwon (Korea), Hokkaido (Japan), Heilongjiang (China), Tyumen Oblast (Russia), Khanty-Mansii (Russia), Yamal-Nenets (Russia), Jalisco (Mexico), Saxony (Germany), Ivano-Frankivsk (Ukraine), Lviv (Ukraine). Transboundary relationships (policy-oriented arrangements): Montana (US), Alaska (US), Pacific NorthWest Economic Region. Governance-focused twinnings (providing assistance to developing provinces): Mpumalanga (South Africa). Alberta also has ongoing relations with several Latin American, European, African, and Asian countries. Member of the Northern Forum.
Saskatchewan		WCI (observer), MOUs with Montana (US) and Victoria (Australia) on CCS, Pacific NorthWest Economic Region, Midwest Legislative Conference.
Manitoba		WCI, MGGRA, Southeastern United States-Canada Alliance, Joint Legislators Forum (US). MOUs with: • Iceland on hydrogen development • states of California, Georgia, Minnesota, Missouri, North Dakota, South Dakota, Texas, Iowa, Nebraska, mostly on economic development and information sharing (US) • Province of Anhui on information exchange, Province of Henan on economic development (China) • People's Republic of China, Saxony (Germany), and Spain on education • Philippines on labour and immigration • Yamal-Nents (Russia), South Australia (Australia), Victoria (Australia) on life sciences • Dnipropetrovsky Regional State (Ukraine), Orkney Islands Council (UK) on cooperation • Durango on agriculture, Jalisco on governing and development (Mexico) • Nuevo Leon (Mexico), Rio Grande do Sul (Brazil) on economic development Other relationships: • Working with Mexico on sustainable forest techniques • Good governance partnerships with North West Province (South Africa), and Trinidad and Tobago • Declaration of intent on agriculture with Chuvash Republic (Russia) • Letter of intent on polar air routes with Krasnoyarsk Krai (Russia) • Letter of intent on marine trading with Murmansk Oblast (Russia) • Letter of understanding with Israel on education and culture • Accord with Valparaiso (Chile) on economic development

*Each province categorizes these agreements and organizations differently, but the table presents them as comparably as possible.

Jurisdiction	Location of Trade Offices	Membership in Regional or International Organizations and Bilateral Agreements*
Ontario	International Marketing Centres: Bejing (China), London (UK), Los Angeles (US), Mexico City (Mexico), Munich (Germany), New Delhi (India), New York (US), Paris (France), Shanghai (China), Tokyo (Japan)	WCI, MGGRA (observer), RGGI (observer), Council of Great Lakes Governors, Southeastern United States-Canada Alliance.
Quebec	General Delegations: Brussels (Belgium), London (UK), Mexico City (Mexico), Munich (Germany), New York City (US), Paris (France), Tokyo (Japan) Delegations: Atlanta, Boston, Chicago, Los Angeles (US), Rome (Italy) Bureaus: Barcelona (Spain), Bejing (China), Berlin (Germany), Damascus (Syria), Hong Kong (China), Mumbai (India), Sao Paulo (Brazil), Shanghai (China), Vienna (Austria), Washington (US) Trade Branches: Milan (Italy), Santiago (Chile), Seoul (Korea), Taipei (Taiwan)	WCI, RGGI (observer), La Francophonie, UNESCO, Partner Regions Group, Assembly of European Regions, Conference of New England Governors and Eastern Canadian Premiers, Council of Great Lakes Governors, Southeastern United States-Canada Alliance. 635 various international agreements (federal and provincial level) with Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Panama, Peru, St. Lucia, various US states, various EU members, Russia, Turkey, Australia, Cambodia, China, Korea, Japan, Laos, Philippines, Thailand, Vietnam, various African countries. 27 international conventions.
New Brunswick		WCI (observer), MOUs with Montana (US) and Victoria (Australia) on CCS, Pacific NorthWest Economic Region, Midwest Legislative Conference.
Manitoba		Conference of New England Governors and Eastern Canadian Premiers, RGGI (observer), La Francophonie, Southeastern United States-Canada Alliance, cooperation with the Département du Nord (France), cooperation agreement with the Département de la Vienne (France), cooperation with Burkina Faso on education training and literacy, agreement with Mali on education and health, agreement with Brasov County (Romania) on education.
Nova Scotia		WCI (observer), Conference of New England Governors and Eastern Canadian Premiers, Southeastern United States-Canada Alliance.
Newfoundland and Labrador		Conference of New England Governors and Eastern Canadian Premiers, Southeastern United States-Canada Alliance, Newfoundland and Labrador's Partnership (MOU) with the Republic of Ireland.
Yukon		Yukon-Alaska rail link initiative (Alaska Canada Rail Link), Alaska-Yukon Intergovernmental Relations Accord, Northern Forum, Involvement in Arctic Council.
Northwest Territories		Involvement in Arctic Council.
Nunavut		Northern Forum, Involvement in Arctic Council.

Abbreviations List

AAU	assigned amount unit
ACIA	Arctic Climate Impact Assessment
BASIC	Brazil, South Africa, India, and China
BEROG	Bilateral Electric Reliability Oversight Group
CCCDF	Canada Climate Change Development Fund
CCS	carbon capture and storage
CDM	Clean Development Mechanism
CEC	(North American) Commission on Environmental Cooperation
CIDA	Canadian International Development Agency
CIGI	Centre for International Governance Innovation
CO2	carbon dioxide
COP	Conference of the Parties
DFAIT	Foreign Affairs and International Trade Canada, or the Department of Foreign Affairs and International Trade
EU	European Union
G8	Group of Eight
G20	Groups of Twenty
GDP	gross domestic product
GHG	greenhouse gas
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
IPR	intellectual property rights
LDC	least developed country
MEF	Major Economies Forum on Energy and Climate
MGGRA	Midwestern Greenhouse Gas Reduction Accord
MOU	memorandum of understanding
Mt	megatonne
MW	megawatt
NAFTA	North American Free Trade Agreement
NAMA	nationally appropriate mitigation actions
NATO	North Atlantic Treaty Organization
ODA	official development aid
OECD	Organisation for Economic Co-operation and Development
REDD	Reducing Emissions from Deforestation and Forest Degradation
RGGI	Regional Greenhouse Gas Initiative
SCM	subsidies and countervailing measures
SIDS	small island developing states
SPP	Security and Prosperity Partnership
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WCI	Western Climate Initiative
WTO	World Trade Organization

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