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Continental Climate Governance Challenges for North America

Henrik Selin and Stacy D. VanDeveer

EXECUTIVE SUMMARY

Over the past decade, policymakers in Washington, D.C., Ottawa, and Mexico City generally failed to take meaningful action to reduce global greenhouse gases (GHGs), even as leading municipalities, states and provinces and firms worked to move forward with climate policy making. With ongoing global climate change negotiations and climate policy debates heating up in the United States Congress, it is time to think more seriously about North American climate change governance. To date, North American politicians, and particularly those in the United States, have paid little attention to continental options to reduce GHG emissions.

© Reuters/Ho New – A photo of the polar ice cap.

If North American GHG emissions are to be reduced efficiently and effectively across public and private sector entities across the continent, with the fewest trade distortions and other economic consequences possible, federal authorities in all three countries will need to realize and act on these shared interests. In this paper, we explore North America's current GHG output and policy actions to date, examine four possible multilevel climate governance scenarios and extol the benefits of continental climate change cooperation.

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Climate Change Governance in North America

Stacy D. VanDeveer is Associate Professor in the Department of Political Science at the University of New Hampshire.

Henrik Selin is Associate Professor in the Department of International Relations at Boston University.

Global greenhouse gas (GHG) emissions cannot be reduced to levels necessary to avoid widespread and costly impacts of climate change without significant reductions in North American emissions. This requires both short-term and long-term cuts in GHG emissions. Even fairly ambitious policies may not be enough to meet the goal that average global temperatures should not increase by more than +2 degrees Celsius beyond pre-industrial level endorsed by the three North American leaders in August 2009. To stand a chance to meet this target, experts estimate that industrialized country GHG emissions need to be reduced by at least 80 percent below their 1990 levels by mid-century. This is, by all accounts, a steep decline in GHG emissions to be met in 40 years, not least since GHG emissions remain on an upward trajectory in all three North American countries. Thus, North American societies can bring down their GHG emissions individually, or they can develop collective approaches.

Table 1: GHG Emissions Data for North America, the EU and Selected Countries

Country	Percent of Global Cumulative CO2 Emissions from Energy 1950 to 2005 (Global Rank)	Percentage Change in Total GHG Emissions 1990 to 2005 (Excluding Land Use Change)	Total GHG Emissions MtCO2e (Excluding Land Use Change) 2005	Percent of World Total GHG Emissions MtCO2e (Excluding Land Use Change) 2005 (Global Rank)	Metric tons CO2e Per Person 2005 (Global Rank)
United States	26.53% (1)	+16.54%	6,963.8	18.44% (2)	23.5 (7)
Canada	2.23% (11)	+26.44%	731.6	1.94% (9)	22.6 (8)
Mexico	1.20% (15)	+37.08%	629.9	1.67% (11)	6.1 (65)
China	10.08% (3)	+100.90%	7,219.2	19.12% (1)	5.5 (72)
Germany	5.58% (5)	-18.11%	977.4	2.59% (8)	11.9 (25)
United Kingdom	3.53% (7)	-10.56%	639.8	1.69% (10)	10.6 (36)
EU-27	22.39% (2)	-6.43%	5,047.7	13.37% (3)	10.3 (39)
Japan	4.73% (6)	+13.79%	1,342.7	3.45% (6)	10.5 (37)
Australia	1.20% (16)	+36.03%	548.6	1.45% (17)	26.9 (5)
Russia	9.28% (4)	-33.35%	1,960.0	5.19% (4)	13.7 (18)
India	2.63% (8)	+67.88%	1,852.9	4.91% (5)	1.7 (120)

Source: The Climate Analysis Indicators Tool (CAIT 6.0), see http://cait.wri.org

North Americans have used more than their fair share of the atmosphere and biosphere as repositories for anthropogenically generated GHG emissions (see table 1). Contemporary U.S. and Canadian per capita emissions remain quite high in a global comparison, including when compared with other industrialized countries. The average Canadian and American is responsible for the release of more than double the amount of GHG emissions than people living in European Union (EU) member states and Japan, even as these countries have similar levels of economic wealth. In addition, North American GHG emissions (like those in all consumer societies) are even higher if the GHGs emitted during the production and transport of millions of imported consumer goods manufactured in developing countries are factored in when calculating the national carbon footprint.

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To promote North American trade and economic growth, the North American Free Trade Agreement (NAFTA) created a single trilateral marketplace. The agreement has governed continental trade for over 15 years. By 2008, all remaining duties and quantitative restrictions covered in the NAFTA agreement had been eliminated. The free trade agreement covers electricity, as well as the trade in tens of thousands of goods and services which create and use energy. The NAFTA market now includes more than 440 million people producing $17 trillion in goods and services every year. These economic activities also generate over 8,300 million tons of GHG emissions, constituting about 22 percent of global emissions. Yet there remains remarkably little trilateral cooperation and debate among Canada, the United States, and Mexico around important climate change issues.

Since Canada, Mexico and the United States share an economic market, it makes little sense for the three countries to move ahead independently to mandate controls on GHG emissions, expand renewable energy generation, and regulate fossil fuel consumption and technology standards. In this respect, federal and local authorities and many firms in Canada, the United States and Mexico share an interest in greater continental climate change cooperation and standardization of a still growing set of differing sub-national policies and regulatory standards. If North American GHG emissions are to be reduced efficiently and effectively, with the fewest trade distortions and other economic consequences possible, federal authorities in all three countries will need to realize and act on these shared interests.

North American federal governments face major challenges in engaging a large and diverse number of states, provinces, cities, and firms, many of which have been engaged in climate policy making and standard setting since the early 2000's (Rabe, 2010; Selin and VanDeveer, 2009). Public and private sector entities are already collaborating on climate issues across national and other jurisdictional borders. Existing initiatives among states, provinces, cities, and

firms offer federal governments lessons on which to build as politicians and policymakers develop national and continental policies and standards. Furthermore, the "bottom-up" dynamics of environmental federalism often results in a diverse of set of influences of sub-national actors on federal policymaking (Selin and VanDeveer, 2007). This diversity of policy preferences and interests ranging from the local to the regional makes the necessary expansion of multilevel climate change governance more than a little challenging.

Four Multilevel Governance Scenarios for North America

Multilevel governance – minimally defined as policy actors and stakeholders operating across horizontal and vertical levels of social organization and jurisdictional authority around a particular issue – is already emerging in North America around climate change. However, because all three federal governments have been slow to engage climate change policymaking, current North American multilevel climate change governance consists of a multitude of generally uncoordinated policy efforts as federal authorities, states, provinces, and municipalities adopt different sets of policy goals on different time frames, and applying a multitude of different political and technical means for cutting GHG emissions and expanding renewable energy generation (Rabe, 2010; Selin and VanDeveer, 2009; Gallagher, 2009).

One way to think about possible futures for North American multilevel climate governance is to explore combinations of federal and sub-national climate change politics and policy making efforts – along two axes of institutional authority and political activity. Four combinations, or scenarios, of high or low federal policy engagement with high or low sub-national involvement in continued climate change governance can be outlined (Selin and VanDeveer, 2009) (see Table 2).

Table 2: Four Scenarios for North American Multilevel Climate Governance

		Federal Policy Making	
		Low	**High**
Sub-national Policy Making	**Low**	*1. Federal Inertia* ·Federal governments remain passive, or even obstructive, of sub-national action ·Sub-national policy making declines, due to a lack of federal support, active federal opposition, or a failure to realize GHG reduction goals	*2. Federal Resurgence* ·Federal governments enact policy ceilings, prohibiting sub-national jurisdictions from exceeding federal policy ·Sub-national policy making becomes more reactive due to federal limits, dependent on federal monetary support, or because federal actions is aggressive enough to make additional sub-national policy efforts unlikely
	High	*3. Bottom-up Expansion* ·Federal governments remain passive but are not overtly obstructive of local-level action ·Sub-national policy making and implementation accelerates in response to a continued lack of federal leadership ·Sub-national authorities work to expand multi-jurisdictional collaboration and policy diffusion	*4. Complex Multilevel Coordination* ·Federal governments set mandatory policy floors of minimum regulations and standards, allowing actors and jurisdictions to exceed federal policies in some areas ·Sub-national policy making continues apace among leaders who exceed federal requirements ·Continental climate change governance is characterized by debates about appropriate levels of policy making and implementation

Future coordinated and expanded continental climate change governance seems most likely to develop in accordance with scenarios two and four, given that a greater degree of federal engagement would be required for the establishment of bi- and/or trilateral policies among the NAFTA states. Federal resurgence (quadrant 2), includes a number of possibilities for more aggressive federal policy making in conjunction with a decline of sub-national policy efforts.

In this case, federal policy may override all, or large portions of, existing and ongoing sub-national policy making by effectively setting national policy "ceilings," as is common in U.S. environmental federalism (Rabe, 2008; Savacool and Barkenbus, 2007).

In the case of complex multilevel coordination (quadrant 4), growing federal action, individually or in conjunction with other nation-states, establishes minimum standards with which public and private sub-national actors must comply. Simultaneously, sub-national authorities would be allowed to exceed many areas of federal policy, as federal action establishes policy "floors" without enacting any restrictive policy "ceilings." In the U.S., this approach is used in many economic, social, and environmental areas, including minimum wage legislation, civil rights issues as well as regulations on clean water, toxic substances, and brownfields (Rabe, 2008; Savacool and Barkenbus, 2007). On climate change, federal policy makers may set mandatory minimum goals for GHG mitigation or renewable energy generation while giving states the right to exceed these goals.

Three institutionally distinct North American federal systems have innumerable opportunities to support substantial national and sub-national policy experimentation, from which actors across the continent can learn and potentially benefit.

Benefits of Continental Action

North American public officials, firms and citizens could reap a host of benefits from the development of more comprehensive continental climate change governance. There are at least four different categories of potential benefits for North American societies of enhanced continental climate change governance: gaining from policy learning, capturing economic efficiency gains, meeting adaptation challenges, and exercising global leadership.

Gaining from Policy Learning

More institutionalized and coordinated continental cooperation would provide new avenues of policy learning and diffusion across the continent. Enhanced experimentation across multiple jurisdictions with different policy solutions in search of appropriate and cost-effective measures to address particular economic and social issues is an oft-cited benefit of federalism (Rabe, 2009a). Three institutionally distinct North American federal systems have innumerable opportunities to support substantial national and sub-national policy experimentation, from which actors across the continent can learn and potentially benefit. Furthermore, North American efforts to promote policy learning do not have to start from scratch. Such policy learning is already increasingly institutionalized.

Hundreds of North American cities use organizations such as International Council on Local Environmental Initiatives (ICLEI), the U.S. Conference of

Mayors, and the Federation of Canadian Municipalities to share information, knowledge and ideas (Gore and Robinson, 2009). The Climate Registry, an effort to harmonize technical standards for calculating and reporting GHG emissions, had 61 member states, provinces and tribes from all three North American countries as of Fall 2009. Data diffused through The Climate Registry aid members' efforts and serves as a basis for continental standardization of GHG estimation and reporting in the years to come. The Climate Registry is already cooperating with ICLEI to reach a growing number of cities, and its members are working with U.S. and Canadian federal officials to develop national reporting standards.

In integrated energy markets, provinces and states around the Canadian and U.S. border and states on both sides of the U.S. and Mexican border share common energy futures. Patt (2009) argues that regional climate governance would help facilitate the long distance movement of energy generated from a diversity of renewable sources (wind, solar, hydro, etc.). Cross-border collaboration and policy learning around common renewable energy policies would facilitate energy trade along both borders, enhancing opportunities for things like Mexican exports of wind and solar power to the U.S. and Canadian exports of hydropower and other renewably generated power to the United States. As it stands now, state and provincial level renewable portfolio standards contain a plethora of differing mandates and definitions which can obstruct trade in renewable energy (Rowlands, 2009).

Many policy leaders in the public, private and civil society sectors actively work to disseminate their policy initiatives to other jurisdictions, processes Rabe (2009b) calls policy proliferation and diffusion. Policy leaders also use organizations and professional networks to move information about climate policies and management actions across public, private, and civil society sectors. This may help foster a necessary normative change in political and public expectations that GHG emissions should decline (Selin and VanDeveer 2007). Without such a normative foundation, it is very difficult to enact effective long-term climate change policy.

Capturing Economic Efficiency Gains

Continental climate cooperation would afford greater opportunities to increase economic efficiencies and reduce the costs of clean energy development and GHG emission reductions in all three countries. Economies of scale are important in the development of renewable energy sources and the introduction of less-carbon intensive technologies. It is one of the simple basics of economics 101: average cost per unit falls as the size of the market and competition increase. Furthermore, the formulation of continental minimum regulations and standards

help prevent a "race to the bottom." That is, a common regional standard applying equally to all lower-level jurisdictions means that a North American firm cannot decide to relocate from one NAFTA jurisdiction to another simply to avoid compliance with stricter GHG controls.

Two energy and climate change policy areas illustrate the benefits of common standards: product efficiency standards and the creation and expansion of markets for trading pollution allowances. The development of shared North American standards for energy use on a host of common products would expand the continental markets for more energy and fuel efficient products such as automobiles, home appliances, office equipment, heating and air conditioning equipment, for example. Raising such standards on both domestically and imported goods may also have added benefits of using the large size of the NAFTA market to push North American manufacturers to innovate and develop new products that can be sold in other foreign markets as well as driving foreign firms to make more efficient products for the NAFTA market.

Rather than building three (or more) separate markets, creating a continent-wide carbon market would capture efficiency opportunities and lower transaction costs.

Rather than building three (or more) separate markets, creating a continent-wide carbon market would capture efficiency opportunities and lower transaction costs. If energy flows across borders, often by publicly traded companies with shareholders from multiple countries, what sense does it make for such firms to try to operate within multiple trading schemes? Furthermore, Mexican federal officials remain likely to embrace at least some aspects of shared continental and/or global climate governance if such a move holds the prospect of driving additional investment into Mexican infrastructure or environmental protection. Recent reports estimate that Canadian GHG reduction efforts need connections to international markets, if prices are to remain below $100 per ton in 2020 (Point Carbon, 2009a). A World Bank report indicates that Mexican emissions could be brought down by over 40 percent with relatively low investment costs and little negative impact on the nation's economy (Point Carbon, 2009b).

At even the very low average price of $5 or $10 per ton of carbon, North America's 8.3 billion metric tons of annual carbon equivalent emissions suggest that the value of a regulated continental carbon market could quickly grow to several hundred billion dollars per year. Of course, the carbon trading is likely to cover only a portion of total emissions. One recent estimate suggests that the U.S. (domestic) carbon market might would likely grow from an initial $45 billion per year to about $300 billion in ten years, based on legislation under consideration in the U.S. Congress (Point Carbon, 2009c). In short, a North American carbon market is likely to be quite large – with tremendous potential for profit and substantial incentive to find and exploit efficient GHG reductions.

More aggressive climate change policy switching away from coal and other

kinds of fossil fuels and ineffective technologies as an added benefit could help target additional air pollutants through co-benefits on more stringent emission controls. This would reduce human health consequences and economic costs as many air pollutants harmful to the environment and human health associated with the combustion of fossil fuels, including mercury, sulfur dioxide, nitrogen oxide, and particulate matter, travel through the air on regional and sometimes even global scales (Selin 2009; Mickley 2007). One modeling study suggests that by 2020, Canadian pollution influence on ground-level ozone in the Northeast U.S. could become comparable in magnitude to that from domestic power plants. The same study identifies a noticeable Mexican influence on air quality in southeastern United States (Wang et al., 2009).

Expanded continent-wide climate governance will help North American societies to prepare for common climate change adaptation challenges, including those related to ecosystem health, freshwater, coastal erosion, forestry, agriculture, and fisheries.

Meeting Adaptation Challenges

The sooner the United States, Canada, and Mexico start addressing regional adaptation issues together, the better citizens in all three may prepare for different kinds of possible changes and challenges. Expanded continent-wide climate governance will help North American societies to prepare for common climate change adaptation challenges, including those related to ecosystem health, freshwater, coastal erosion, forestry, agriculture, and fisheries (IPCC, 2007). Building on existing regional, national, and local assessments of consequences of climate change, policy makers and researchers from all three countries should conduct assessments and design contingency plans. North American policy makers can also use regional forums to support the diffusion and implementation of effective adaptation policies at state, provincial, and municipal levels, and to ensure that these are coordinated across national borders.

A growing number of intelligence and military analysts, including many associated with the National Security Council, furthermore argue that climate change creates new long-term security challenges. Several of these issues, including consequences of draught, immigration, and the opening of Arctic sea lanes and new opportunities for natural resource exploitation, demand regional attention. Also, the situation of Arctic indigenous communities raises questions about human security. It is also likely that there will be competition among countries for access to natural resources in the Arctic region, even if military conflicts seem unlikely at present (ACIA, 2004; Borgerson, 2008). These kinds of issues demand regional attention.

Exercising Global Leadership

Climate change-related politics, policymaking and innovation – with explicit attempts to reduce GHG emissions and adapt to climate change – will continue

for decades. So too will political and economic competition between firms and workers in the NAFTA region and other major markets. Greater institution building in North America can help the region's societies meet political and economic challenges posed by the EU, China, India, and other countries and enhance the global leadership position of the U.S., Canada, and Mexico. Uniting North American efforts, with its associated learning potential and efficiency gains, offers increased opportunities to catch up and to more significantly shape global climate and energy policy making.

Greater North American cooperation offers similar opportunities for climate change cooperation between wealthy and developing countries. Mexican officials have long wanted greater cooperation with U.S. climate policy goals, as illustrated by their interest in joining the Kyoto Protocol's Clean Development Mechanism (Pulver, 2009). When the U.S. elected not to ratify that agreement or to enact any significant federal climate policies, Mexican interest in climate policy waned absent incentives from the U.S. North American public and private sector actors would also have an interest in working with their trading partners around the world, as EU officials do already to facilitate adoption of these common standards in other countries. EU officials, NGOs and firms have already demonstrated the power of positioning one's regulations as the de facto global standards (Selin and VanDeveer, 2006; Schreurs, Selin and VanDeveer, 2009).

Drawing on European lessons and benefits of regional cooperation, expanded North American climate change collaboration might serve as a model for expanding the list of countries engaged in GHG reductions and adaptation measures. If NAFTA states can agree on common institutions for a carbon market, Latin American and other states engaged in free trade with the NAFTA region might be invited to negotiate entry into a growing carbon market (as they have used the NAFTA agreement for the basis for free trade negotiations with the U.S.). Or, if NAFTA states agree to implement a common set of energy efficiency standards for products, these regulations will drive some change in product manufacture in a host of countries exporting to the NAFTA market.

Continental Governance as the Way Forward

Canadian, U.S., and Mexican federal political systems do not divide decision-making authorities regarding energy, environmental and product standards in the same ways. In all three countries, many issues of authority also remain unsettled as federal, state, provincial and municipal officials and organizations struggle over policy making and leadership rights. Nevertheless, enhanced North American continental cooperation offers tremendous opportunities for mutual short and longer term benefits. For example, in terms of reducing the

costs of climate change policy action, a debated concern in all three capital cities, efficiency gains and the avoidance of NAFTA region trade obstacles stand out.

North American agreement around the treatment of renewable energy sources – including ways to support the expansion of such sources domestically – would not only help establish basic definitions of what constitutes a renewable energy, create a level playing field among firms in all three countries, but also help provide stability in domestic policy and applicable standards. Academics and commentators have noted how a lack of long-term thinking in federal policy around subsidies for the development of renewable energy has severely hampered planning and actions by firm and local government all over America. Regional rules and standards prevent national political leaders from taking disruptive decisions for short-term political gains favoring particular constituencies.

Political scientist Michele Betsill (2009) argues that NAFTA's institutions may be ill-suited for climate cooperation because of a lack of regional consensus on climate change policy goals and the absence of joint, authoritative policymaking institutions. Yet, a growing body of evidence suggests that political leaders in all three states may be moving toward greater consensus about the need for GHG reduction and adaptation preparation. Greater attention to building shared climate policy goals and realizing shared interests could serve as the foundation to build greater, joint institutional capacities around energy efficiency gains, renewable energy development and carbon markets, to name only three possibilities.

Future climate change cooperation within North America and between North American and the rest of the world will not be seamless. The climate change challenge is enormous, and governments and stakeholders differ substantially in their views about the most appropriate ways to meet this challenge. It is, however, time for American, Canadian, and Mexican political leaders and policy makers to work more closely together to increase the efficiency and effectiveness of emission reduction efforts, and to minimize the adverse effects of a changing climate. This cooperation would demonstrate that North American countries can and will curb their GHG emissions. Expanded multilevel continental governance can aid important transitions in all three North American countries.

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The Brookings Institution
1775 Massachusetts Ave., NW
Washington, DC 20036
Tel: 202.797.6090
Fax: 202.797.6144
www.brookings.edu/governance.aspx

Editor
Christine Jacobs

Production & Layout
John S Seo

About the Authors

Henrik Selin is Assistant Professor in the Department of International Relations at Boston University.

Stacy D. VanDeveer is Associate Professor in the Department of Political Science at University of New Hampshire. Their co-edited book, *Changing Climates in North America Politics: Institutions, Policymaking and Multilevel Governance*, is published by MIT Press.

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