

The Implementation of the Western Climate Initiative: How North American States and Provinces Lead International Climate Negotiations

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Received 23 April 2016; accepted 28 November 2016

Abstract

The Western Climate Initiative is internationally recognized as a success story in global climate negotiations. However, between the first expression of the idea of a cap-and-trade system in 2007 and the launch of carbon trading in 2013, the number of participating Canadian provinces and US states fell from 11 to 2, and important hurdles risked derailing the project completely. The trajectory of this innovative cross-boundary policy holds important lessons for the prospects and pitfalls of green paradiplomacy in North America. This paper examines the impetus for subnational efforts to combat climate change in the face of federal inaction, and, through detailed examination of the WCI, looks at jurisdictional, administrative, legal, political, social and economic factors that complicate the implementation of these initiatives. The analysis enables a better understanding of prospects for the establishment of norms, rules and institutions among North American federated states that can provide durable environmental regimes.

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Keywords

Western Climate Initiative – Canada – United States – cap-and-trade – carbon market

The last fifteen years have seen a significant shift in climate governance in North America. After years of tension around federal inaction in Canada and the United States (US) regarding the mitigation of greenhouse gases, an increasing number of states and provinces (and even municipalities) decided to take leadership and develop their own initiatives to fight global warming. Transboundary initiatives, including regional carbon markets, such as the Western Climate Initiative and the Regional Greenhouse Gas Initiative (RGGI), were adopted. These actions demonstrated the capacity of federated states to act on a global collective problem and shed light on the reconfiguration of authority in the North American context associated with the creation of international climate regimes (Chaloux 2012; Bruyninckx et al. 2012; Selin & Vandever 2009).

Today, one of these initiatives, the Western Climate Initiative (WCI), is internationally recognized as a “success story” in global climate negotiations, despite the agreement’s many ups and downs.² The WCI initially had strong leadership from US states and Canadian provinces, however, enthusiasm waned when it came time to making real commitments. Political, social and economic opposition was evident throughout the negotiating process. One of the most important challenges was in gaining acceptance by the different jurisdictions for the holistic approach of this market-based policy instrument targeting CO₂ emissions (Klinsky 2013; Hamilton 2011; Kahn 2011; Mercure 2011; C2ES 2013). Although the provinces of British Columbia, Ontario, and Manitoba maintained their interest in the initiative, in the face of opposition from powerful business concerns and dissenting views across political parties, they decided in 2011 to postpone implementation of the cap-and-trade system (Vaillancourt 2011; Hamilton 2012). Only Québec and California ended up implementing the full cap and trade system beginning in January 2013.

While early negotiations around the WCI revealed the difficulties in achieving agreement among sub-state actors, now that it has been in force among the two remaining parties for three years, there is an opportunity to examine how such initiatives fare during the implementation phase, and identify the main

2 All side events that were organized at COP21 in Paris in 2015 recognize the relevance and significance of the Québec-California cap-and-trade system.

challenges faced by sub-state governments. This paper examines what prospects this cap-and-trade system holds out for the development of new norms, rules and institutions among sub-national North American jurisdictions. More specifically, it clarifies their potential for setting up long-lasting and constraining environmental regimes, given the practice of federalism in Canada and the United States. This research is based on a qualitative analysis of primary sources (i.e. laws and decrees, formal internal documents, meeting minutes, press releases and government papers), and scientific literature.

Green Paradiplomacy and Multi-level Governance in North America

Public concerns about environmental issues began to emerge in the early 1960s, at about the same time that green paradiplomacy made its appearance in North America. New concerns about environmental problems affected different parts of the continent, and citizens became aware of the transboundary nature of environmental issues and their effect on large territories (Karkkainen 2008). Issues such as acid rain, mercury levels in fish stocks, and water quality fostered the development of cross-border cooperation between different levels of government in the 1970s. Environmental hazards encouraged federated states to implement innovative transboundary environmental policies, which we call green paradiplomacy, and contributed to the development of cross-border institutions and regimes involving different levels of government (Bruyninckx et al. 2012; Chaloux 2010; Chaloux & Paquin 2012).

Within the federal structure of both Canadian and American political systems, the development of green paradiplomacy relied on the expanding role of states and provinces in environmental issues. Their constitutional powers enabled them to assume a certain leadership on these issues, and gave them an opportunity to develop cooperative and collaborative strategies (Chaloux 2012; Vannijnatten 2004; Selin & Vandever 2009; Blatter 2001). In time, the bilateral and multilateral interactions that developed along the Canada-US border became institutionalized through organizations such as the Conference of New England Governors and Eastern Canadian Premiers (NEG-ECP), the Council of Great Lakes Governors (CGLG), the Western Climate Initiative and several other organizations (Chaloux & Séguin 2012; Chaloux 2012; Vannijnatten 2006; Selin & Vandever 2009). Green paradiplomacy has therefore contributed to the institutionalization of subnational regimes that can significantly influence global environmental governance. It thus appears pertinent

to examine the new regimes that have appeared in North America, and look particularly at the first three years of the WCI to understand how effectively these regimes are implemented.

Climate Change Issue in the North American Context

In recent years, popular concern about global warming has grown considerably in North America. But even as the proliferation of extreme weather events has made threats more tangible, polarization among political parties at federal level persists (Lachapelle et al. 2012; Inshtrix Research 2012). In response, states and provinces assumed leadership early on to develop policies to fight climate change and counter the relative paralysis at the federal level (Rabe 2005; Doran 2006; Tomblin & Colgan 2004; Engel 2009).

Global warming became a priority for states and provinces, which developed unilateral and multilateral cooperative actions both within and across their borders. The development of climate paradiplomacy evolved in this context, and followed a path similar to green paradiplomacy in North America, relying mainly on multilateral channels and the creation of multilateral organizations representing both sides of the border (Chaloux 2010; Vannijnatten 2006; Selin & Vandever 2009; Blatter 2001).

The overlapping nature of jurisdictional powers related to climate change has contributed to legitimizing state and provincial roles in climate governance, and to promoting their international activities (Eatmon 2009; Andonova et al. 2009; Vannijnatten 2006). There is now greater recognition of the importance of states and provinces in the regulation of environmental and climate issues, since they have constitutional authority over areas such as public transportation, urban planning, health, energy and natural resources management where climate policies have significant effects. With the intermestic nature and increasing complexity of environmental issues, green paradiplomacy has become a new trend for federated states (Chaloux & Paquin 2012) in a period when federal governments often lack the willingness and capacity to implement nation-wide climate policies.

Subnational leadership in the area of climate change has been exercised in a pragmatic way. At first, the objective of federated states was to move beyond federal inaction. Federal governments did not attempt to inhibit these subnational and cross-border activities, and states and provinces were able to act quite autonomously. More recently, states and provinces have responded to public opinion favorable to action on climate change and greenhouse gas (GHG) emissions by contemplating reductions in imports of and dependence on fossil fuels, as well as by developing new economic opportunities. In doing so, they positioned themselves at the forefront of the debate and became key

players in any future federal regulations with regard to climate change in North America (Klinsky 2013; Andonova et al. 2009).

Effectiveness of Environmental Regime Implementation

Before looking specifically at the effectiveness of wCI implementation as an example of sub-state green paradiplomacy, it is important to recognize that implementation has been somewhat left out of public policy literature. Public policy scholars concede that the focus in their discipline was initially on decision-making and not on the implementation stage (Bernier 2010; Birkland 2001; Garon & Dufour 2010; Howlett et al. 2009; Pal 2001). According to Hassenteufel, this is in large part because researchers have minimized the importance of this stage of the policy cycle, “as though the implementation of decisions were taken for granted” (translated from Hassenteufel 2008). While the stage of implementation is being given more attention recently in some policy research areas, it remains ignored in the research on paradiplomacy, which is itself a relatively new area of study. (Criekemans 2010; Chaloux 2010; Chaloux 2016). The multiplication of international agreements by federated states has not yet been accompanied by extensive research on the outcome of these tools. Seeing non-central states participating in international agreements³ as rational actors seeking to promote their interests, scholars have neglected to examine interdependencies between politics, public administration, and civil society/private sector at the implementation stage that may contribute to the success or failure of a particular public policy (Lipsky 1980; Howlett et al. 2009; Matland 1995; O’Toole 2000).

In this article, we focus on four particular aspects of the implementation process. First, we analyze the legal and administrative aspects of each official partner’s implementation of the cap-and-trade system. Second, we focus on the political consequences arising from the choice of instruments by legislators and governmental actors. Third, we examine economic and social considerations that may have affected implementation of the wCI carbon market. Analysis of these multiple dimensions allows us to go beyond the top-down and bottom-up approaches of the implementation literature, and better explain the implementation of the wCI as a cross-border environmental regime.

3 It is important to note that the term “international agreement” refers here to a generic term related to paradiplomatic agreements, but these agreements have no binding force in international law, since most subnational governments, with the notable exception of Belgian subnational governments, cannot sign binding agreements under international law.

The Western Climate Initiative: An Overview

The WCI is the first cross-border cap-and-trade scheme in North America, the second-largest carbon market in the world after the EU-ETS (C2ES 2013), and the second carbon market on the continent, after the Regional Greenhouse Gas Initiative, founded in 2003 to focus specifically on emissions from power plants in the Northeast of the United States. The scope of the WCI is much larger than these other initiatives as it aims to mitigate greenhouse gas emissions from multiple economic sectors (i.e. industries, energy, and transportation) and set a GHG emissions reduction target of 15% below 2005 levels for 2020 (WCI 2010).

The Emergence of a Cross-border Organization

Founded in February 2007, the WCI originally involved just US states: Arizona, California, New Mexico, Oregon, and Washington. However, it quickly attracted the attention of other federated states in Canada and Mexico. Canadian provinces gradually joined the initiative in the subsequent months, transforming the WCI into a cross-border initiative. British Columbia (April 2007) and Manitoba (June 2007) were the first Canadian provinces to join the WCI. They were followed by the states of Utah (May 2007) and Montana (January 2008), and then two other provinces: Québec (April 2008) and Ontario (July 2008) (Associated Press, 2008). Thus, by 2010, the WCI had 11 official members and a further 14 federated states, with observer status from the three countries (see Fig. 1). If all participants had pursued the initiative, it would have affected more than 25% of the population of both countries when fully implemented, making the WCI the largest carbon market in North America (Hight & Silva-Chávez 2008).

The central objective of the initiative was to create a wide-ranging cap-and-trade system. States and provinces wanted to establish a broad regulatory framework covering a large part of the GHG emissions produced within their borders from electricity generation, transportation, residential and commercial fuel use, and industry. Two main reasons made this choice of policy instruments attractive. First, it reflected the 'polluter pays' principle. Second, it gave the private sector flexibility in application, as it allowed firms to choose the most cost-effective means of achieving the limits fixed by each jurisdiction. As of 2015, the program has been fully implemented in Québec and California and covers 85% to 90% of GHG emissions (California 2011; Québec 2012b; WCI 2010).

The WCI goes beyond creating a carbon market to impose additional requirements on members. First, states must adopt their own GHG emission

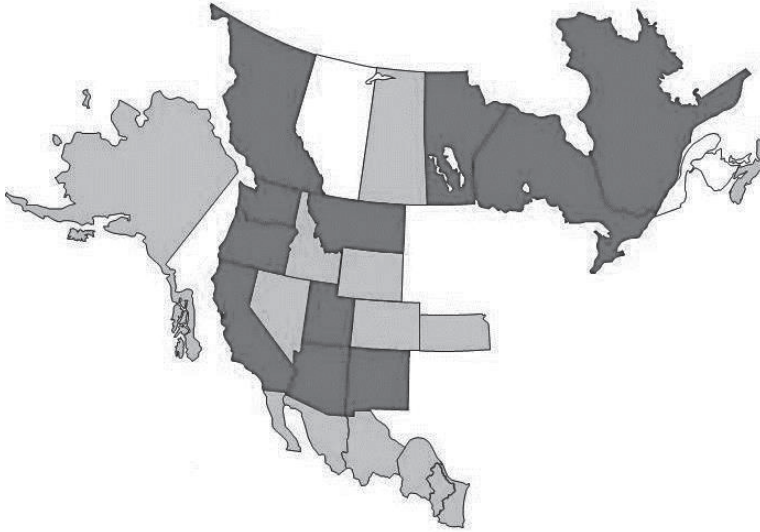


FIGURE 1 *WCI members and observers in 2009*

SOURCE: CENTRE FOR CLIMATE AND ENERGY SOLUTIONS, *WESTERN CLIMATE INITIATIVE*, AT <http://www.c2es.org/us-states-regions/regional-climate-initiatives/western-climate-initiative>

reduction targets. Second, they must implement an action plan to achieve their GHG emissions goal. Third, states must adopt California Vehicle Greenhouse Gas Emissions Standards, and finally, they must be part of the Climate Registry (WCI 2007).

The WCI is a highly decentralized organization. Each partner fixes its own GHG emissions reduction target, and the collective goal becomes the sum of its parts. There is no imposition of a common target, but rather a target fixed by each jurisdiction to better represent its own particularities. Therefore, it provides a flexible platform for federated states wishing to limit their GHG emissions, while participating in the creation of a new carbon market in North America (Western Climate Initiative 2010).

The program was designed to begin in January 2012, with the ultimate GHG reduction target reached by 2020. The first year served as a transition period where businesses and industries, covered by the cap-and-trade system had to register with the Compliance Instrument Tracking System Service (CITSS), a joint registry developed by Québec and California (Québec 2012b). The first compliance period of GHG emission reductions was to begin in January 2013. For this first period (2013–2014), the WCI covered emissions from power generation, large industrial facilities and mining extraction. These emissions

corresponded to approximately 40% of the total GHG emissions covered by the cap-and-trade program when fully implemented (C2ES 2013). In 2015, the program expanded to cover providers of residential and commercial fuels and their transportation, which emit over 25,000 metric tons of CO₂ in the atmosphere.

In order to achieve 2020 GHG emissions targets, the number of allowances issued (carbon credits) is reduced each year. Where some of the allowances are given to different emitters, a minimum of 10% of the allowances is sold through an auction system. It is anticipated that the minimum auction level will increase to 25% by 2020 (see Table 1).

Disenchantment at the Starting Line

As the official start of the carbon market in January 2012 approached, the picture for this new initiative changed considerably. The disappointingly slow pace of economic recovery in North America following the market crash of 2008, the difficult financial situation of several federated states, the arrival of new governors and legislators in some US states, and the revival of debates on climate science all played an important role in lowering the priority accorded to the issue of global warming and the establishment of a carbon market (Klinsky 2013). As a result, most US states withdrew either permanently or temporarily from the initiative, leaving California and the four Canadian provinces.

TABLE 1 *Implementation of the wCI phases*

Phases	Sectors covered	GHG Reduction targets
Phase 1: 2013–2014	Power generation Industrial facilities	California: 2%/year Québec: stabilization
Phase 2: 2015–2017	Power generation Industrial facilities Distributors of transportation fuel Distributors of natural gas Distributors of other fuels	California: 3%/year Québec: 3%/year
Phase 3: 2018–2020	Same as phase 2	California: between 3%/year Québec: 4%/year

Among these five remaining members, only the province of Québec and the state of California had met the WCI requirements on schedule for the launch of the carbon market, on January 1, 2013, creating some uncertainty about the future of other provinces' participation in the cap-and-trade system (Klinsky 2013). While Québec and California were much further advanced, they also experienced delays in the implementation process (Mercure 2011; Kahn 2011).

The next section thoroughly details the elements that contributed to difficulties in implementation seen in the two partners, Québec and California, which were able to meet WCI requirements and begin with carbon trading in 2013. It focuses on four main aspects of implementation: jurisdictional and administrative, political, economic and social acceptability.

Jurisdictional and Administrative Implementation Aspects

To a greater extent than other transboundary agreements on environmental issues adopted by federated states in Canada and the US, the implementation of a carbon market involves a multitude of carefully coordinated steps. As the main objective of a cap-and-trade system is to internalize the costs of GHG emissions, a framework must be developed to accurately measure the emission allowances that will subsequently be exchanged. Each member sets a limit or cap on the GHG emissions allowed for its jurisdiction. They then adopt regulations to ensure the compliance of economic sectors touched by the cap-and-trade system. Equivalence must be established between tons emitted by each jurisdiction to permit trading by tons of GHGs in the market. In other words, a ton of GHG emitted in Québec must be exactly the same as a ton of GHG emitted in California. Finally, regulations must be harmonized and an organization established to assure the monitoring, verification and coordination of GHG emissions. This organization ensures transparency and consistency in the allocation of quotas and the exchange of emission credits. These requirements distinguish the WCI cap-and-trade initiative from other environmental agreements and create particular implementation difficulties at the subnational level in North America.

Looking back three years after the official beginning of the WCI, a number of legal and administrative considerations appear to have influenced the effectiveness of the implementation process, notably with regard to timelines. The linkage between the two markets was completed in April 2013, almost a year later than originally planned (Québec 2012a). The next section looks at the legislative implementation process in each jurisdiction to better understand where difficulties arose.

California

Since the turn of the millennium, California has adopted laws and regulations to enhance its ability to fight climate change through GHG reduction. In relation to the WCI, the state adopted, in 2006, the California Global Warming Solutions Act (AB32), which set the 2020 greenhouse gas emissions reduction target into law (California 2006). In October 2011, the California Air Resources Board (CARB) adopted regulations related to the implementation of the cap-and-trade program. In January 2012, the cap-and-trade program became effective in the state of California and, following a transitional period, the first carbon market auction took place in November 2012 (California 2013).

A number of elements slowed the linkage between markets in California and Québec. Notably, in June 2012 California's legislature adopted the Senate Bill 1018, "which requires CARB to notify the governor of any potential linkage with other states or Canadian provinces" (C2ES 2013). This law slowed the implementation of linkage, which was only finalized in April 2013 (Mercure 2013).

Québec

Considered one of the most proactive provinces on the issue of climate change, Québec joined the WCI in April 2008 and rapidly began the legislative and administrative implementation process. In 2009, the provincial legislature modified the *Environmental Quality Act* in order to implement a cap-and-trade system (Québec 2009). At the Copenhagen climate conference, Québec adopted its GHG emissions reduction target for 2020, which fulfilled the WCI requirement. This target, enshrined in law through decree 1198–2009 (Québec 2012b), consisted of a 20% reduction below 1990s levels by the year 2020. In December 2011, the Québec government adopted a new regulation concerning the cap-and-trade program; this was amended in December 2012 to harmonize with the California regulation.

Jointly

While the linkage between the two markets was completed in April 2013, after gaining the approval from the governor of California, further delays occurred in implementing monitoring and management structures. California and Québec created the general structure — Western Climate Initiative Inc. (WCI Inc.) — in November 2011 that would be in charge of monitoring cap-and-trade activities. WCI Inc. is responsible for managing allowances and offsets during auctions and the GHG emission futures trading programs of each member, as well as providing a system to track allowances (WCI 2011). In doing so, Québec

and California institutionalized a pillar in the cross-border climate regime and laid the foundation for the development of a carbon market. Both Québec and California adopted regulations to delegate the management of some aspects of the cap-and-trade program to this organization (Québec 2012b).

Political Implementation Aspects

Political tensions, polarization and changes in government at federal and state/provincial levels had significant impact on the willingness and ability of many states and provinces to achieve the requirements for adhesion to the WCI, contributing to the attrition seen in the lead-up to the opening of the carbon market. On the American side, the arrival of Barrack Obama at the White House in 2009 affected state government willingness to maintain leadership on climate change issue. Many wanted to wait for the new president to spell out future orientations on the issue before taking the next steps in implementing the WCI instrument. In 2010, a number of significant changes in state legislatures and governors further diminished commitment. As explained by Klinsky (2013):

At the time of joining, most WCI state governors were Democrats. The only two exceptions were Governors Schwarzenegger and Huntsman in California and Utah, respectively, both recognized as climate policy supporters [...]. By 2010–2011, Arizona, Utah, and New Mexico had Republican governors who did not have strong climate commitments. All these states (plus Montana) had Republican legislative majorities, and all pulled out of cap-and-trade (effectively stopping all climate policy) and crafted legislation that made future climate policy more difficult. In these cases, governors who had championed the climate were replaced, or a wider change in government took place.

In California, the change of governor did not result in reduced commitment to the WCI. Outgoing governor Arnold Schwarzenegger, a Republican, was in fact the initiator of the WCI in 2007, and the new governor Jerry Brown, a Democrat, continued to carry the project. Despite a certain polarization of ideas around the issue between Democratic and Republican legislators in California, the carbon market initiative moved steadily forward. Some delays related to administrative impediments and lawsuits from environmental groups seeking more local action have occurred (Kahn 2011). In June 2011, they forced California to push back implementation of the cap-and-trade system by one year. Québec also delayed its entry into force; moving its first compliance period ahead to January 1, 2013 (Mercure 2011).

On the Québec side, there has been less political polarization around the creation of a regional cap-and-trade system. There appears to be consensus among political parties on climate change issues and on the value of the WCI instrument. Bills related to the establishment of the carbon market were unanimously adopted, which reflects the low polarization of climate change regulations in the province (Québec 2012b). Provincial consensus around the issue has certainly facilitated the acceptability of this policy instrument.

Social and Economic Implementation Aspects

When analyzing the implementation process of a public policy, and more specifically a cross-border environmental regime, it is important to go beyond comparing results with the initial intentions of policy makers in isolation from the larger policy formulation process (Sabatier 2005). Recent literature in this area acknowledges the importance of other factors in the implementation process, including the policy's impact on economic actors and public opinion, which can facilitate or hinder the implementation process (Garon & Dufour 2010; O'Toole 2000). These aspects warrant attention as successful implementation of a regime depends to some extent on the acceptability to the stakeholders involved of rules and procedures introduced or modified by the policy.

California

The choice of a cap-and-trade instrument to reduce greenhouse gas emissions was not wholly uncontroversial in California. Prior research has found public acceptability to be a key factor in adoption of carbon market instruments. In the US, despite a notable increase in public concerns about climate change (Klinsky 2013), the issue has been divisive among the political class and representatives of business and civil society. In California, where climate change has been widely discussed since the early 2000s, Governor Arnold Schwarzenegger made the issue a priority, and California has adopted innovative and progressive policies to fight global warming. However, some stakeholders from the business community attempted to stop the development of the carbon market, suggesting that a ballot proposition be included on the question during midterm elections in 2010. The goal of Proposition 23 was to suspend the *Global Warming Solutions Act* until the unemployment rate fell under 5.5%. The proposition was defeated by a majority of 61.1% against 38.9% (Roosevelt 2010). Referendum results showed that, despite some divergences within the population, an important majority supported implementation of the carbon market instrument in the state of California.

However, months after the referendum, a number of environmental groups tried to block the implementation of the cap-and-trade system, for quite different reasons. They initiated a lawsuit against the California Air Resources Board, stating that the carbon market did not reduce GHG emissions locally and that, consequently, the carbon market was not an appropriate solution to reduce pollution. The Supreme Court of California defeated the lawsuit, but, according to Klinsky (2013), “the case brought attention to the political importance of local co-benefits and alternative policy goals.” The tensions that arose between economic and environmental groups and the WCI delayed the implementation process, but did not prevent the carbon market in California from moving ahead.

Québec

In Québec and Canada, the debate on climate science has been less contentious. While there are concerns about the possible economic costs related to a carbon market, there is consensus at a population level on the importance of taking action against global warming. A survey conducted in June 2012 showed that 98% of Canadians acknowledged the reality of climate change, and its relation with human activity (54% of Canadians believe climate change is partially related to human activity and partially to natural climate variation and 32% believe that climate change is occurring because of human activity) (Insightrix Research, Inc. 2012). This consensus is strong in Québec. Civil society and the private sector have supported the policymaking process around the creation of the cap-and-trade system. In 2009, briefs presented during the parliamentary committee on Bill 42 showed that businesses and environmental groups favored the establishment of a carbon market under certain conditions (CPEQ 2009; FCCQ 2009; Équiterre et Fondation David Suzuki 2009). However, after Ontario’s decision to delay WCI implementation in 2011 and the withdrawal of most US states from the initiative, some business representatives started advocating for Québec to put the project on hold as well. Québec’s Manufacturers and Exporters representatives felt the process of consultation with industry was too short and they were afraid that non-participation by industry in other significant jurisdictions, notably Ontario, might harm the competitiveness of Québec’s industries (MEQ 2013). The Federation of Chambers of Commerce of Québec echoed these concerns, arguing that partnership with California in the cap-and-trade system was not sufficient to protect the competitiveness of Quebec companies, as trade with California was far less important than trade with northeastern states who had not joined, or had interrupted adhesion to, the WCI (FCCQ 2012). Despite the

concerns outlined by the representatives of the industry and business, Québec's government continued to move forward.

Moving Forward: Highlights of wCI's Recent Developments

As implementation of the wCI was completed, any remaining clouds hanging over the agreement in Québec and California gradually dissipated, and the cap-and-trade now has wind in its sails. First, an evaluation of the first compliance period showed high levels of conformity in GHG emitters on both sides of the border. Second, several states and provinces have since shown renewed interest in joining the cap-and-trade over the short term. Third, the Paris Conference on climate change (COP21) in 2015 generated increased interest across the globe for this carbon market, which was recognized as a success story. It is worth looking more deeply into these recent developments to see how the success of this phase of implementation was achieved and what it might mean for future expansion of the wCI and green paradiplomacy more generally.

Evaluation of the First Commitment Period (2013–2014)

One of the first elements that appeared to enhance confidence through the cap-and-trade system, and legitimate the choices made by Québec and California, was the conformity report produced at the end of the first commitment period in 2013–2014. Emitters were under obligation to submit, by November 2, 2015, the number of compliance units (credits) equal to their GHG emissions for the first compliance period. This deadline was met and reports indicated a high level of conformity. In Québec, all 55 entities covered by wCI targets met the market's first two compliance targets (Québec 2016a). In California, 99.8% of companies were on target (California 2015), with only two entities not fulfilling their requirement in time.

This success sent a strong message to both carbon market critics and potential partners. First, almost all industries had committed to the system and made no attempt to bypass it. This demonstrated their willingness to comply with the regulations in place, and showed that they were really in the process of planning and internalizing the costs of carbon emissions in their business models and production plans. Second, the price of GHG emission units was maintained, and even increased, and there is no sign of market collapse as occurred in the European carbon market. This first report therefore showed the regime to be robust, and proved its potential to reduce GHG emissions on the North American territory.

New Players in the Cap-and-Trade Regime

Another recent development is the renewed interest of several states and provinces from Canada, the US and Mexico to join the WCI cap-and-trade system. In April 2015, the government of Ontario officially announced that it would join the WCI by 2017 (Ontario 2015a). This was followed by an announcement from Manitoba, in December 2015, during the Paris Conference on climate change (COP21) (Ontario 2015b). These two new members will increase the WCI's GHG emission coverage and economic influence in North America. When fully implemented by those new members, the WCI will cover more than 65% of Canada's population and 1.156 trillion dollars in GDP, or about 60% of Canada's GDP (Ontario 2015b).

New and renewed interest in the WCI has also emerged in several states on the East and West coast of the US, which are now considering joining or rejoining the WCI. In October 2015, the Governor of New York announced that, alongside its partners of the Regional Greenhouse Gas Initiative (RGGI), it would explore the possibility of collaboration and even linking with the WCI carbon market, which would enhance the stability and the cost-effectiveness of this economic tool in North America (New York 2015). Interest has also been expressed by the states of Washington and Oregon to explore the possibility to rejoin the initiative in the future (Szabo 2015).

In sum, the arrival of two new official provincial members, as well as renewed interest from certain US states, has enhanced the relevance of this subnational cap-and-trade system. More importantly, it has contributed to justifying the central role of federated states in North American climate governance.

COP-21 and the International Recognition of This Success Story

Recognition of the WCI as an effective tool to mitigate greenhouse gas emissions has come from beyond North American borders. As the world converged in Paris for the 21st Conference of the Parties of the UNFCCC (COP-21) in late 2015, several actors (i.e. IISD, IETA, ISO, UNFCCC/NAZCA, etc.) organized conferences and side events to learn more about this particular cap-and-trade system,⁴ which was regarded as a success story by many observers (Gavel, 2015). Developed at subnational level, the regime was seen as a credible effort to mitigate greenhouse gas emissions at the global level. Three years after its official launch, this cap-and-trade system could demonstrate its relevance, and there are now strong signals that it will continue to operate in the coming decades.

4 For more details of the numerous side events, see online at: http://unfccc.int/meetings/paris_nov_2015/meeting/8926/php/view/seors.php.

Conclusion

The 2007 plan for a multisectoral cap-and-trade system at subnational level was an ambitious idea put forth by subnational actors to counter what they saw as federal inaction on an important issue. However, despite strong initial interest from 25 jurisdictions, and early adhesion by 11, most states and provinces then abandoned the wCI, leaving California and Québec alone in the elaboration of what would become the largest carbon market in North America. These actors might have followed the pack and abandoned the idea as less relevant or impactful without other members. They also might have succumbed to the political, administrative, legal, social and economic challenges to implementation of the wCI. In short, the initiative could well have resulted in failure. In fact, it has done the opposite, overcoming obstacles that produced delays and officially launching the cap-and-trade system in 2013. Most importantly, the achievement of early targets and buy-in by affected GHG emitters in these two jurisdictions has sent strong encouraging signals to other potential subnational partners.

While it remains impossible, for the moment, to thoroughly evaluate the robustness of this cap-and-trade system, this article has highlighted some key elements that further studies might pursue in analyzing the implementation of subnational initiatives to combat climate change. It is evident that states and provinces want to be at the forefront of climate action, and implementation of the wCI demonstrates the potential of green paradiplomacy to durably reconfigure North American climate and environmental governance.

References

- Andonova, L. B., M. M. Betsil and H. Bulkeley (2009). "Transnational Climate Governance." *Global Environmental Politics* 9, 2: 52–73.
- Bernier, L. (2010). "La mise en oeuvre des politiques publiques ou pourquoi ne pas être compliqué?" in S. Paquin, L. Bernier, and G. Lachapelle, editors, *Analyse des politiques publiques*. Montréal: Presses de l'Université de Montréal.
- Birkland, T. A. (2001). *An Introduction to the Policy Process: Theories, Concepts, and Models of Public Policy Making*. Armonk: M. E. Sharpe.
- Blatter, J. K. (2001). "Debordering the World of States: Towards a Multi-Level System in Europe and a Multi-Polity System in North America? Insights from Border Regions." *European Journal of International Relations* 7, 2: 175–209.
- Bruyninckx, H., S. Happaerts, and K. Van den Brande, editors (2012). *Sustainable Development and Subnational Governments. Policy-Making and Multi-Level Interactions*. New York: Palgrave Macmillan.

- C2ES (2013). *California Cap-and-Trade Program Summary*. Arlington: Center for Climate and Energy Solutions.
- Global Warming Solutions Act 2006* (2006). Online at: https://en.wikipedia.org/wiki/Global_Warming_Solutions_Act_of_2006.
- California (2011). *California Air Resources Board adopts key element of state climate plan, News Release*. Sacramento (October 20). Online at: <https://www.arb.ca.gov/newsrel/newsrelease.php?id=245>.
- California (2013). *Assembly Bill 32: Global Warming Solutions Act* [online]. Sacramento: California Air Resources Board. Online at: <http://www.arb.ca.gov/cc/ab32/ab32.htm>.
- California (2015). *Cap-and-trade Program*, Sacramento: California Air Resources Board. Online at: <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>.
- Chaloux, A. (2010). "Le Québec, les États-Unis et l'environnement," in G. La-chapelle, editor, *Le destin américain du Québec: américanité, américanisation et anti-américanisme*. Québec: Presses de l'Université Laval.
- Chaloux, A. (2012). *Fédéralisme, relations transfrontalières et changements climatiques: Le cas nord-américain de la CGNA-PMEC*. Sarrebruck: Éditions Universitaires Européennes.
- Chaloux, A. and S. Paquin (2012). "Green Paradplomacy in North America: Successes and Limits of the NEG-ECP," in H. Bruyninckx, S. Happaerts and K. Van den Brande, editors, *Sustainable Development and Subnational Governments. Policy Making and Multi-Level Interactions*. New York: Palgrave Macmillan.
- Chaloux, A. and H. Séguin (2012). "États fédérés et mise en oeuvre de traités climatiques internationaux: le cas du Québec." *Revue de droit de l'Université de Sherbrooke* 41, 3: 607–632.
- Conteh, C. (2011). "Policy implementation in Multilevel Environments: Economic Development in Northern Ontario." *Canadian Public Administration* 54, 1: 121–142.
- Criekemans, D., editor. (2010). *Regional Sub-State Diplomacy Today*. Leiden: Martinus Nijhoff.
- DeLeon, P. and L. DeLeon (2002). "What Ever Happened to Policy Implementation? An Alternative Approach." *Journal of Public Administration Research and Theory* 12, 4: 467–492.
- Doran, K. L. (2006). "U.S. Sub-Federal Climate Initiatives: an Irrational Means to a rational End?" *Virginia Environmental Law Journal* 26: 181–217.
- Eatmon, T. D. (2009). "Paradiplomacy and Climate Change: American States as Actors in Global Climate Governance." *Journal of Natural Resources Policy Research* 1, 2: 153–165.
- Engel, K. H. (2009). "Whither Subnational Climate Change Initiatives in the Wake of Federal Climate Legislation?" *Publius* 39, 3: 1–23.
- Équiterre and F. D. Suzuki (2009). "Projet de loi 42 Loi modifiant la Loi sur la qualité de l'environnement et d'autres dispositions législatives en matière de changements climatiques," in Mémoire présenté par Équiterre et la Fondation David Suzuki à

- la Commission des transports et de l'environnement de l'Assemblée nationale du Québec, Québec, p. 16.
- FCCQ (2012). *Consultation publique sur les orientations gouvernementales et les enjeux en matière de changements climatiques*. Montréal.
- Garon, F. and P. Dufour (2010). "Comprendre la mise en oeuvre différenciée d'une politique publique: Le cas d'une politique de gouvernance au Québec." *Revue canadienne de science politique* 43, 3: 607–631.
- Gavel, Doug (2015). "COP21 Panel Focuses on Greenhouse-Gas Emission Reductions and Trade Issues." *Harvard Kennedy School at COP21*, December 5. Online at: <http://www.hks.harvard.edu/news-events/news/articles/hpca-cop21-china-side-panel>.
- Hamilton, G. (2011). "Six U.S. states abandon carbon-trade partnership." *The Vancouver Sun*, November 18.
- Hamilton, G. (2012). "Carbon credits could be a billion-dollar industry." *The Vancouver Sun*, April 19.
- Hassenteufel, P. (2008). *Sociologie politique: l'action publique*. Paris: Armand Colin.
- Hight, C. and G. Silva-Chávez (2008). *Du changement dans l'air: les bases du futur marché américain du carbone*. Paris.
- Howlett, M., M. Ramesh, and A. Perl (2009). *Studying Public Policy. Policy Cycles & Policy Subsystems*. Toronto: Oxford University Press.
- Kahn, D. (2011). "California Delays Cap-And-Trade Auctions, Citing Potential Gaming." *The New York Times*, June 30. Online at: <http://www.nytimes.com/cwire/2011/2006/2030/2030climatewire-california-delays-cap-and-trade-auctions-cit-96440.html>.
- Karkkainen, B. C. (2008). "The Great Lakes and International Environmental Law: Time for Something Completely Different?" *The Wayne Law Review* 54: 1571–1590.
- Klinsky, S. (2013). Bottom-Up Lessons Emerging from the Western Climate Initiative's Development Challenges. *Climate Policy* 13, 2: 143–169.
- Lachapelle, E., C. P. Borick, and B. Rabe (2012). "Public Attitudes toward Climate Science and Climate Policy in Federal Systems: Canada and the United States Compared." *Review of Policy Research* 29, 3: 334–357.
- Lipsky, M. (1980). *Street-level Bureaucracy*. New York: Russell Sage Foundation.
- Matland, R. E. (1995). "Synthesizing the Implementation Literature: The Ambiguity-Conflict Model of Policy Implementation." *Journal of Public Administration Research and Theory* 5, 2: 145–174.
- Mercure, P. (2011). "Marché du carbone: Québec inc. souffle le chaud et le froid." *La Presse*, July 6, 2011. Online at: <http://affaires.lapresse.ca/economie/quebec/201107/201106/201101-4415561-marche-du-carbone-quebec-inc-souffle-le-chaud-et-le-froid.php>.
- Mercure, P. (2013). "Marché du carbone: la Californie et le Québec enfin liés." *La Presse*, April 13.

- New York (2015). "Governor Cuomo, Joined by Vice President Gore, Announces New Actions to Reduce Greenhouse Gas Emissions and Lead Nation on Climate Change": News Release, October 8. Online at: <https://www.governor.ny.gov/news/governor-cuomo-joined-vice-president-gore-announces-new-actions-reduce-greenhouse-gas-emissions>.
- Ontario (2015a). "Cap and Trade System to Limit Greenhouse Gas Pollution in Ontario." News Release, April 13. Online at: <https://news.ontario.ca/opo/en/2015/04/cap-and-trade-system-to-limit-greenhouse-gas-pollution-in-ontario.html>.
- Ontario (2015b). "Ontario, Québec and Manitoba Form a Dynamic Alliance to Fight Climate Change." News Release, December 7. Online at: <https://news.ontario.ca/opo/en/2015/12/ontario-quebec-and-manitoba-form-a-dynamic-alliance-to-fight-climate-change.html>.
- O'Toole, L. J. (2000). "Research on Policy Implementation: Assessment and Prospects." *Journal of Public Administration Research and Theory* 10, 2: 263–288.
- Pal, L. A. (2001). *Beyond Policy Analysis*. 2^e ed. Scarborough: Nelson Thompson Learning.
- Québec (2009). *Loi modifiant la Loi sur la qualité de l'environnement et d'autres dispositions législatives en matière de changements climatiques*.
- Québec (2012a). *Québec donne le feu vert au marché du carbone: Press Release*. Québec.
- Québec (2012b). *Regulation Respecting a Cap-and-Trade System for Greenhouse Gas Emission Allowances*. Québec.
- Québec (2016a). *Marché du carbone, couverture des émissions*, Ministère du Développement durable, de l'Environnement et de la Lutte aux changements climatiques. Online at: <http://www.mddelcc.gouv.qc.ca/changements/carbone/Couverture.htm>.
- Rabe, B. (2005). "Climate Change Policy and Regulatory Federalism: The Divergent Paths of Canadian Provinces and American States in Greenhouse Gas Reduction." *Annual Meeting of the American Political Science Association*. Washington.
- Roosevelt, M. (2010). "Proposition 23: Backers were outspent, out-organized" *Los Angeles Times*, November 2.
- Sabatier, P. A. (2005). "From Policy Implementation to Policy Change: A Personal Odyssey," in Å. Gornitzka, M. Kogan and A. Amaral, editors. *Reform and Change in Higher Education: Analysing Policy Implementation*. Berlin: Springer.
- Saetren, H. (2005). "Facts and Myths about Research on Public Policy Implementation: Out-of-Fashion, Allegedly Dead, but Still Very Much Alive and Relevant." *The Policy Studies Journal*, 33, 4: 559–582.
- Selin, H. and S. D., Vandever, editors (2009). *Changing Climates in North American Politics. Institutions, Policymaking and Multilevel Governance*. Cambridge: The MIT Press.
- Szabo, M. (2015). "Four US states have expressed interest in joining wCI, says Quebec's Heurtel." *Carbon Pulse*. Online at: <http://carbon-pulse.com/12794/>.

- Tomblin, S. G. and C. S. Colgan, editors (2004). *Regionalism in a Global Society: Persistence and Change in Atlantic Canada and New England*. Peterborough: Broadview Press.
- Vaillancourt (2011). *Un marché de carbone réglementé aux portes du Québec!* McCarthy Tétrault. Online at: http://www.mccarthy.ca/fr/article_detail.aspx?id=5523.
- Vannijnatten, D. L. (2004). "Canadian-American Environmental Relations: Interoperability and Politics." *The American Review of Canadian Studies*: 649–664.
- Vannijnatten, D. L. (2006). "Towards Cross-Border Environmental Policy Spaces in North America: Province-State Linkages on the Canada-U.S. Border." *AmeriQuests* 3, 1.
- wCI (2007). *Statement of Regional Goal*. Western Climate Initiative.
- wCI (2010). *Design for the wCI Regional Program*.