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Climate Change Law and Policy: Mexico-California/United States Governance Efforts and Prospects for their (More Effective) Implementation

White Paper for the Environmental Working Group of the UC-Mexico Initiative

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Synopsis

Cooperation exists between Mexico and the United States to address climate change. However, it has not successfully addressed either *mitigation* of emissions of sources of greenhouse gases nor *adaptation* to climate change. Reasons for this failure to more fully reach on-the-ground results of bilateral cooperation are many, but this project focuses on the potential for more effective cooperation and concomitant results.

This project summarizes the latest knowledge about U.S.-Mexico regional effects of climate change; it is also an updated survey of the current bilateral initiatives aimed at emission reductions in the two countries and it will review joint adaptation activity. The goal is to assess the nature and potential role of regional climate change law and policy within the broader global framework. The project analyzes the governance structures and institutions that may be drawn upon to create and more fully implement additional and more effective regional cooperation on climate change.

Existing regional environmental institutions and bilateral climate change projects offer opportunities for the development of shared environmental goals and reduction of barriers to cooperation by providing forums for regional negotiation and mechanisms to jointly develop law, policies, and implementation measures. The opportunity exists by means of joint work to identify promising areas of implementation of existing obligations including legal requirements and areas where new legal initiatives can be pursued. These can focus on priority climate change problems, both those of mitigation and adaptation. The goal is to move beyond the promises of dialogue about and continued study of climate change and make selective choices where short term solutions, including those that are law based, can be effected.

Introduction

The environmental and social ecological context

Despite talks about more walls and sealed borders between Mexico and the United States and existing massive infrastructure to control cross boundary movements, the southwest of the United States and some of Mexico are very much one ecological and social ecological region. They share a common history in many areas and at least one similar in others. Increasingly they share language and culture. Their economies are highly dependent upon one another. The natural characteristics of Mexico and California are the same, similar, or at least continuous. What is done to the water and air of one directly affects those resources in the other. This is true worldwide but very relevant in the southwest US/Mexico context. In fact, the U.S-Mexico border has been called a “third country” and been identified as a distinct region (Wilder et al 2013 @341 citing Anzaldúa, 1987). The U.S and Mexico with Canada, compose one of the largest trade partnerships in the world.

These characteristics lead one to ask: do they share approaches to governing? To some extent they do in many areas of societal regulation resulting in part from the development of transnational and international law. In one sphere, climate change, commonalities are quite high, although not always effective.

This chapter, after briefly summarizing U.S.-Mexico regional effects of climate change, updates inventories of initiatives aimed at climate change mitigation in the two countries; and it reviews joint adaptation activity¹. The goal is to assess the nature and potential role of US-Mexico climate change law and policy within the broader global framework. We describe these initiatives as the *governance* structures and institutions that may be drawn upon to create and more fully implement additional and more effective regional cooperation on climate change. A special focus is on the important Mexico/California relationships.

The presence of existing regional environmental institutions provides opportunities for the development of shared environmental goals and reduction of barriers to cooperation by potentially providing for regional negotiation and mechanisms to jointly develop law, policies, and implementation measures. Regional cooperation can allow the two countries and constituent sub national jurisdictions to pool *mitigation* opportunities. In the case of emissions trading, for example, it can lead to an increase in the size of the carbon market. Similarly, regional cooperation can allow the two countries to better pool *adaptation* opportunities.

Governance. The concept of governance is increasingly employed to understand the approaches used to regulate and manage a social phenomenon. Governance, for the purpose of this chapter, is the totality of activities that seek to provide rational effective management of climate change in the California [and, more generally, US Southwest] and Mexico region. The activities we include within governance come from various institutions, broadly defined, including the law.²

Governance involves the activities of a number of international, regional and domestic [in this context nation or state] regimes. By regimes we mean the aggregation of laws and policies, rules, norms, and institutions that work to achieve a common objective. These partly or fully established systems make up the context from which climate management must be derived.

We also employ the term “Cluster” to denote that collection of initiatives and regimes that target a particular international objective. There are many meanings in the social sciences and policy analysis of this term. For the purpose of our discussion of environmental governance, Cluster describes the aggregation of attempts to improve the regional climate. This is the collection, sometimes coordinated, sometimes less so, of international environmental institutions, regimes, and complexes (See Young, 1998, 1999 a, b; Oberthur, 2002; von Moltke, 2005; Oberthur and Gehring, 2006; Biermann, 2007; Chambers, 2008; Gehring and Oberthur, 2009; and Keohane and Victor, 2011). Raustiala and Victor (2004) [not using the term cluster] speak of a regime complex as, “a collective of partially-overlapping and non-hierarchical

¹ We wrote in 2009 that “the differences in vulnerability [among the three NAFTA (Canada, Mexico, and the United States) countries] have implications for the relative priorities of mitigation and adaptation, with Mexico needing to direct greater resources to improving its resilience towards climate change than Canada and the United States. Such differences do not undermine regional cooperation, but are likely to influence its form” (Craik and DiMento, 2009 @ 8).

² Lemos and Agrawal (2006) define environmental governance like many other scholars: “synonymous with interventions aiming at changes in environmental related-incentives, knowledge, institutions, decision making, and behaviors. More specifically.....the set of regulatory processes, mechanisms and organizations through which political actors influence environmental actions and outcomes” (298). Kenneth Benedict offers a description of global governance as “...a purposeful order that emerges from institutions, processes, norms, formal agreements, and informal mechanisms that regulate action for a common good. Global governance encompasses activity at the international transnational and national boundaries” (2001:6232).

regimes... [that] develop in special, often path-dependent ways...” They note that they are “laden with legal inconsistencies because the rules in one regime are rarely negotiated in the same institution or at the same time as rules in related regimes”³ (DiMento and Hickman, 2012 @ 8).

We describe in the cluster a dense web of overlapping policy initiatives and a growing network of officials familiar with climate change initiatives and broader sustainability agendas within North America.

The environmental challenges

Shared negative impacts of climate change are experienced worldwide and differentially by region. Although there are “no comprehensive studies that encompass the western portion of the U.S.-Mexico border” (Wilder et al, 2013 p. 343) several climate vulnerabilities are known in the general region. [The U.S. Southwest and northwest Mexico has been called “the front line of ongoing climate change” (Wilder et al, 2010 quoting Harrison 2009. 1).

Among the effects:

-Agricultural losses and other changes in land use and the economic costs associated with them.

-Depletion in fisheries stocks and coral reef destruction and other effects of ocean acidification.

-Stress on shared freshwater resources, including ground water, both its quality and quantity

-Air pollution.

-Wetland ecosystem stress

-Extreme droughts, higher water and energy demand, decreased inflow to rivers and streams, and increased urban-agricultural conflict over water (Wilder et al, 2010).

-Projected additional effects are more frequent extreme precipitation events; declines in river flow; flooding; more severe droughts; changes in distribution of plant and animal species; land cover changes; coastal system disruptions; and human health changes including worsening allergies and asthma (Garfin et al, 2013).

A more specific focus: the U.S. Mexican border.⁴

The U.S. Mexican border is a specific area of climate change attention. The region has a common climate, culture, economy, and similar problems of poverty, pollution, and social inequity. A striking example of this similarity is the even population dispersion along the 2,000-mile stretch: “Today, the border region is home to more than 14 million people, with about 7.3 million living in the United States and 6.8 million in Mexico. Some 90% of the population resides in the 15 pairs of border “sister cities” (US EPA and SEMARNAT, 2011). Mexico and

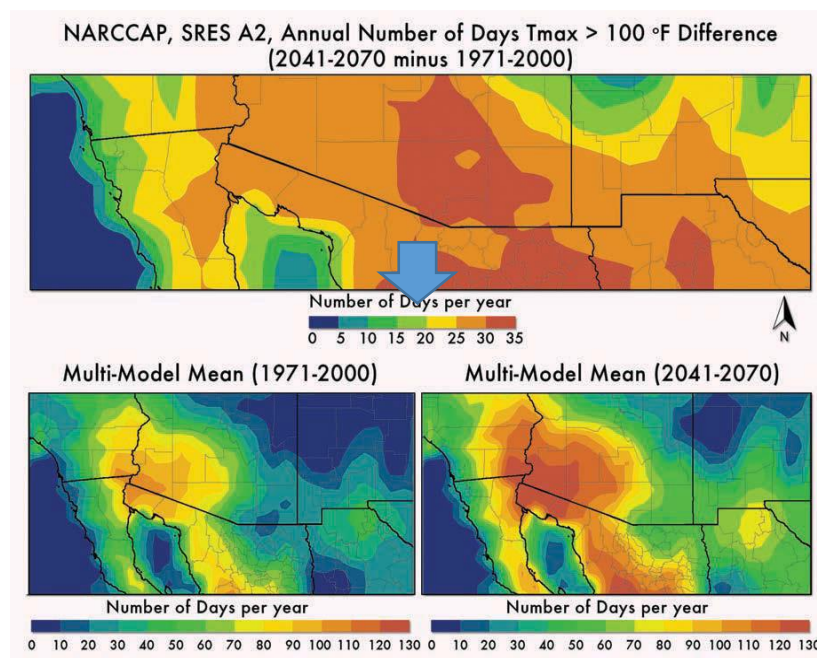
³ Raustiala and Victor’s work includes applications to plant genetic resources and other intellectual property.

⁴ This section calls on the work of Mr. Mark Newman

the US share twin air and watersheds. What one country does to its natural resources in this area greatly affects the other.

Climate change at the border is exacerbated because the area is high-risk, low resource which creates considerable vulnerability (Wilder, et. al, 2013). The resources in question are both natural and societal. Social capital, i.e. the networks of people interacting to improve their conditions, is also scarce.

The border regions are known for their arid landscapes, dust clouds, very limited water resources, low humidity, and high heat. In this area (stretching from San Diego/Tijuana to El Paso/Ciudad Juarez) temperatures have risen year after year since measurements began in 1971 (Wilder, et. al, 2013). Summers and winters are both getting hotter while droughts and heatwaves are increasing in duration and severity. For instance, the Colorado River, a main water source, is becoming dryer and annual precipitation is declining (Wilder, et. al, 2013). According to *Climate Change and US-Mexico Border Communities*, “For the border region, average annual temperatures are projected to increase on the order of 2 degrees Fahrenheit to 6 degrees Fahrenheit (1C to 3.5C) during the midcentury time frame (around 2041–2070, according to the high-emissions scenario), with the greatest increases inland” (Wilder, et. al, 2013). To put this in perspective, the UN is committed to limiting global temperature rises to no more than 2 degrees Celsius to avoid catastrophic consequences such as sea level rise and Arctic ice cap melt (United Nations, 2012).



Map Showing Projected Increase in the Number of 100 °F days in the Sonoran Desert from 1971-2071 (Wilder, et. al, 2013)

Additional risks that accompany increased temperatures are longer droughts, less precipitation, and more humid heatwaves. These extreme conditions will lead to more wildfires which will damage bi-national wetlands and ecosystems, destroy crops and property, strain financial resources, and leave the region even more water scarce than before (Wilder, et. al,

2013). Effects can ultimately lead to inefficiencies or even collapses in a stable food supply, energy system, and the financial investment needed to sustain the region.

Transportation-Induced Problems

As is true world-wide, a large percentage of greenhouse gas emissions comes from the transportation sector. The catalyst for the recent high growth of the border region began with the 1994 North American Free Trade Agreement (NAFTA)⁵ “Between 1990 and 1999, southbound truck crossings from Texas into Mexico—where a large proportion of U.S.–Mexican trade crosses the international boundary—increased by 278% while rail car crossings increased by 179%” (Clement, et. al, 2002). This NAFTA-driven growth led to an economic dynamic in the border but it has also contributed to high carbon emissions. The NAFTA-induced economic program saw the proliferation of maquiladoras, and their accompanying supply-chains: the heavy diesel trucks needed to transport finished goods from the US to Mexico and Mexican migrant workers who cross the border daily to work in the United States.⁶

Chapter Task and audience

One goal of this chapter is to identify for policy makers, agency members, and public officials the law and policy on climate change in the California/Mexico region. Some of this information is likely familiar to the reader; other may be new information, as the proliferation of actions in a multi-level multi-jurisdictional context like the US/California-Mexico is astounding. Another goal of the chapter is to put this considerable inventory into the context of understandings of environmental governance and approaches to make its implementation more effective.

Scope of coverage

We include here law adopted or considered on mitigation and adaptation and initiatives that address those responses to climate change that are aimed at influencing or directing behavior but do not have the force of law. Doing so has its risks; because of the absence of recognized legal institutional boundaries for the latter, the product could be under or over inclusive. There are no doubt activities which we have overlooked and we welcome suggestions to expand the inventory, already large, which we present. Some initiatives in the cluster are not specific to Mexico and California but they apply to that region, as well as to others.

⁵ In the years just before NAFTA, total foreign direct investment (FDI) averaged \$3.7 billion; during the 1994–1998 period, they averaged \$11.4 billion. There was a slower growth rate in the 2000s that was possibly due to the downturn caused by the 2008 global financial crisis and the increased violence in Mexico. <https://www.fas.org/sgp/crs/row/R42965.pdf>

⁶ The San Ysidro border crossing which links San Diego to Tijuana is, “the busiest land border crossing in the Western Hemisphere; currently processing an average of 50,000 northbound vehicles and 25,000 northbound pedestrians per day. The San Diego Association of Governments (SANDAG) projects an 87% increase in vehicle traffic in San Ysidro by the year 2030” (San Ysidro LPOE Project Facts, 2016).

Methods

We undertook literature and website searches of activity that falls within the category of California/Mexico climate change governance. We did internet searches of several kinds: in legal data bases and in the social and policy sciences. We consulted both published and grey literature. We consulted with a few leading experts who focus on climate change governance in the California/Mexico region.⁷

Results

Environmental governance in North America includes formal environmental institutions and less formal institutions, such as the constellation of transgovernmental networks and working groups addressing environmental issues (Craik and DiMento, 2009).

National law: Our focus is on cooperative activities between California and Mexico. These cannot be decoupled from the domestic laws of Mexico and the federal, regional, and California laws of the United States which remain part of the governance framework for climate change in the region.⁸

These fall into the category of hard law, by which we mean legislative and executive actions that are formally adopted by law making institutions and are legally binding. Soft law,

⁷ Based in the initial review of this paper we are considering a survey of California and Mexican experts to address the comprehensiveness of the results and to solicit ideas on useful categorization.

⁸ In Mexico see General Law on Climate Change, considered the first climate laws passed by a developing country. The law included four objectives:

1. A reduction of CO2 emissions by 51 million tons by 2012
2. A 30% reduction in greenhouse gas emissions by 2020
3. A 50% reduction in greenhouse gas emissions by 2050
4. 35% of electricity from renewable sources before 2024

It established legally binding metrics for both renewable sourcing and emission reduction. It also supports future research, climate change adaptation and mitigation policies, and national databanks to quantify and track the metrics. The law also mandated funding and development of programs to support several climate change related goals.

Mexico presented its National Climate Change Strategy in 2013, which is a part of the General Law on Climate Change. The National Climate Change Strategy sets out the main activity areas concerning cross-sectoral climate policy, adaptation to climate change, and reduction of greenhouse gas emissions.

On March 28, 2015, Mexico submitted its Intended Nationally Determined Contribution (INDC) within the requirements of the United Nations Framework Convention on Climate Change, proposing to unconditionally reduce its emissions of greenhouse gases and black carbon by 25% below baseline emissions in 2030. Mexico also proposed a 40% reduction by 2030 conditional on certain requirements for the global agreement and international support. Mexico aims at reducing greenhouse gasses by 22% below baseline unconditionally, and 36% conditionally by 2030. This INDC proposal is consistent with the original General Law on Climate Change. California has been a leader in climate and policy for years, both under Democratic and Republican administrations. See Appendix 1.

referring to statements emanating from institutions that are not presently legally binding but describe goals to be sought, norms articulated, principles aspired to, is an influential part of the government cluster as well.

The La Paz Agreement as precursor. The United States-Mexico Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Areas was signed at La Paz August 14, 1983 and entered into force February 16, 1984. It called for cooperation for the protection and improvement of the environment in the border area on the basis of equality, reciprocity and mutual benefit. The objectives of the Agreement were to develop inter alia measures to prevent and control pollution in the border area. It is considered “a stable element of binational relations and the institutions, resources, initiatives, and reforms that have been mobilized under its diplomatic umbrella are vital to

managing the adversities of urbanization and rapid growth that so define today’s border region” (Mumme and Collins, 2014).

Bi-or tri-jurisdictional initiatives: NAFTA, BECC, NADBANK. Among the most institutionalized sets of commitments are found in the regime centered on the *North American Agreement on Environmental Cooperation (NAAEC)*, the so-called *NAFTA* environmental side agreement.⁹ The *NAAEC* creates the North American Commission on Environmental Cooperation (CEC), which is governed by a Council consisting of the environment ministers from Mexico, the United States, and Canada.¹⁰ It also has a permanent secretariat and opportunities for civic engagement.¹¹

Despite having a broad mandate to improve environmental quality,¹² the CEC at first had been engaged in climate change policy only in limited ways. In 1995, the Council did adopt a Statement of Intent to Cooperate on Climate Change and Joint Implementation, which set out a number of areas of cooperation for the states to pursue, including joint pursuit of GHG mitigation technologies, conservation and enhancement of carbon sinks, improving the GHG emission inventory, and forecasting methodologies and climate change research.¹³ Significantly, the Statement of Intent specifically references the United Nations Framework Convention on Climate Change (*UNFCCC*), including the common but differentiated responsibilities of the parties, and “joint implementation”. The Statement of Intent appears only to have resulted in a small number of climate change policy between the two nations. More recently the Commission has undertaken projects on adaptation [“A Pilot Syndromic Surveillance System for Extreme Heat Events”], mitigation [“Integrated Modeling and Assessment of Climate Change Mitigation in the North America Forest Sector”], blue carbon, transportation; and others. www.cec.org/our-work/climate-change accessed October 15, 2016.

⁹ (1993), 32 ILM 1480.

¹⁰ *Ibid.* at art.9.

¹¹ The structure of the CEC includes the Joint Public Advisory Committee, and allows for citizen initiated reviews of enforcement failures.

¹² *Ibid.* at art. 1.

¹³ North America Council for Environmental Cooperation, Council Resolution #95-6, *A Statement of Intent to Cooperate on Climate Change and Joint Implementation* (13 October 1995).

Border Environment Cooperation Commission and North American Development Bank

In 1993 the Governments of the United States and Mexico created the bi-national institutions the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADB), under the side agreement to the North American Free Trade Agreement (NAFTA). Both are headquartered in San Antonio, Texas. They are charged with helping to improve the environmental conditions of the U.S.-Mexico border region in order to advance the well-being of residents of both nations. The scope of their mandate and the specific functions of each institution are defined in the agreement between the United States and Mexico (the “Charter”).

The stated purpose of the BECC is to “help preserve, protect and enhance the environment of the border region;” it carries out this purpose by cooperating with the NADB and other national and international institutions, and with private sources supplying investment capital for environmental infrastructure projects in the border region. The BECC functions by developing and certifying environmental infrastructure projects that incorporate innovative sustainability and public participation concepts. It operates in an area 100 kilometers wide in the United States and 300 kilometers wide in Mexico. Projects it certifies are eligible for loans from the NADB; these funds are supplemented by aid from state, federal and local governments. To be eligible for certification a project must be considered an “environmental infrastructure project,” one that will “prevent, control or reduce environmental pollutants, or improve drinking water supply, or protect flora and fauna.” Projects must be consistent with the original Charter. The BECC and NADB prioritize projects that provide maximum environmental benefits to the border community.

From 1995 through 2014, the BECC certified 243 environmental infrastructure projects—131 in Mexico and 112 in the United States—with an estimated total cost of \$8.3 billion. Twenty-six projects were related to clean air and efficient energy and 28, to air quality. Twenty projects were completed in 2014; 114 megawatts of new renewable energy capacity resulted, and 210,094 metric tons of carbon dioxide emissions were displaced annually. An example project certified in 2014 that focused on climate change is the Ventika Wind Energy Project. It is in General Bravo, Nuevo Leon, and involved the construction and operation of a 126-megawatt wind farm “to increase the installed capacity of renewable energy and reduce the demand on fossil-fuel energy.” This project was expected to displace approximately 303,518 metric tons per year of carbon dioxide, 1 metric ton per year of sulfur dioxide, and 751 metric tons per year of nitrogen oxide—all considered greenhouse gases.

The BECC continues to certify projects. In 2015, it approved an additional 14. BCC is the longest running of all of the bilateral institutions focused on combating environmental and climate change issues.

Regional or binational policy initiatives¹⁴

“[B]ilateralism has the longest track record” of environmental cooperation in North America.¹⁵

¹⁴ This section builds heavily on the contributions of Mr. Justin Martin.

¹⁵ ROBERT G. HEALY ET AL., ENVIRONMENTAL POLICY IN NORTH AMERICA 52 (2014).

Border 2012 Program

In April 2003, the United States Environmental Protection Agency (EPA) and Mexico's Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT) began the Border 2012 program. Border 2012 was a comprehensive program of bi-national network-building; it aimed to bring many previously disparate environmental management efforts under one framework.¹⁶ Border 2012 approached border cooperation as activity of governments, and of government and nongovernmental entities.¹⁷ It brought together federal, state, and local governments; United States border tribes; Mexico's indigenous communities; and stakeholders and border communities of both countries, to address the largest shared border issues.¹⁸ Task Forces set up by the 2012 Program, which included representation from local communities and relevant local, state, federal and tribal governments or organizations, were the main mechanisms for involvement.¹⁹

Among the bilateral program environmental focuses, one was related to climate change—to reduce air contamination.²⁰ The EPA's closeout report of the Border 2012 Program noted several successful air contamination reduction projects. A California linked example: in 2012 the Mexican state of Baja California instituted a mandatory vehicle smog-check program with support from Border 2012. The program required the owners of the 1.4 million cars, pickups, and vans to have annual vehicle inspections and to complete required repairs. The program was expected to reduce statewide vehicle emissions by 12-24% annually once fully implemented.²¹

The Border 2012 Program was said to have “achieved its goals and objectives by completing approximately 200 environmental projects.”²² The EPA reported that Border 2012 “promoted and fostered a strong bi-national partnership that has allowed us to achieve concrete and measurable results and adopt an effective bottom up approach for decision making and priority setting.”²³ The Border 2012 Program was succeeded by the Border 2020 program. Under Border 2020 which has an eight-year implementation horizon emphases are regional, bottom-up approaches for decision making, priority setting, and project implementation and a focus in regions where environmental improvements are needed most. Among its goals is the reduction of air pollution in cities that share common airsheds; these include San Diego/Tijuana and Imperial County/Mexicali.²⁴

¹⁶ HEALY, *supra* note 1, at 56.

¹⁷ *Id.*

¹⁸ ENVIRONMENTAL PROTECTION AGENCY, BORDER 2012 ACCOMPLISHMENTS REPORT (2010-2012), available at https://www.epa.gov/sites/production/files/documents/b2012closeout_eng.pdf.

¹⁹ HEALY, *supra* note 1, at 56.

²⁰ ENVIRONMENTAL PROTECTION AGENCY, *supra* note 18.

²¹ *Id.*

²² BORDER 2012 PROGRAM, <http://www.becc.org/funding-programs/technical-assistance/border-2012>.

²³ ENVIRONMENTAL PROTECTION AGENCY, *supra* note 18.

²⁴ Border 2020's goal to reduce air pollution in cities that share common airsheds includes several objectives. One objective is by 2020, in accordance with NAFTA, to promote the reduction of the number of vehicles operating in the border region that do not comply with vehicle emissions standards as well as reduce vehicle emissions at ports of entry (pg. 17). Another objective is by 2020 to reduce pollutant emissions in order to approach attainment of respective national ambient air quality standards in airsheds such as San Diego/Tijuana and Imperial County/Mexicali. (pg. 18) A third objective is by 2018, to maintain effective air monitoring networks and provide air monitoring data in areas including California/Baja California and Arizona/Sonora. (pg. 18). California, Arizona, and New Mexico have completed Climate Change Action Plans and a fourth objective is by 2015, to support the

U.S.-Mexico Bilateral Framework on Clean Energy and Climate Change

In April 2009, President Obama and President Calderon announced plans to strengthen and deepen bilateral cooperation by establishing the U.S.-Mexico Bilateral Framework on Clean Energy and Climate Change (the “Bilateral Framework”).²⁵ The leaders agreed on the importance of promoting clean energy and combating climate change and the value of joint and practical collaboration in achieving these goals.²⁶ The Bilateral Framework established a mechanism for political and technical cooperation and information exchange, and to facilitate common efforts to develop clean energy economies.²⁷ It was to complement and reinforce the existing bilateral climate change-related work already underway in the two countries.²⁸

The Bilateral Framework was focused on “renewable energy, energy efficiency, adaptation, market mechanisms, forestry and land use, green jobs, low carbon energy technology development and capacity building.”²⁹ It was to build upon the previous cooperation in the border region by promoting efforts to reduce greenhouse gas emissions, to adapt to the local impacts of climate change in the region, and to strengthen the reliability and flow of cross border electricity grids and facilitate the ability of neighboring border states to work together to strengthen energy trade. The Bilateral Framework envisioned specific areas of joint cooperation which included training and workshops among government officials, promoting academic and scientific exchanges on renewable energy, and pursuing projects on adapting to climate change, including coastal and disaster risk reduction activities. In January 2010, the U.S. Department of State hosted the first bilateral meeting of the U.S.-Mexico Framework on Clean Energy and Climate Change.³⁰ The two governments considered addressing climate change as an economic opportunity, not a burden, and aimed to demonstrate that economic development and environmental stewardship are not mutually exclusive.³¹

The second Bilateral Framework meeting was held in Mexico City in May 2011.³² Both sides agreed on the importance of widening and deepening existing cooperative arrangements and seeking potential new opportunities for collaboration.³³ Resulting was an overview of areas where Mexico and the United States were already cooperating and highlights of future areas for

completion of climate action plans in each of the six northern Mexican Border States. (pg. 19) A fifth objective is by 2020, to reduce emissions and associated impacts through energy efficient and/or alternative/renewable energy projects that could include financing of solar energy projects or alternative sources of energy in various border regions (pg. 19). https://www.epa.gov/sites/production/files/documents/border202summary_0.pdf

²⁵ THE WHITE HOUSE, U.S. MEXICO ANNOUNCE BILATERAL FRAMEWORK ON CLEAN ENERGY AND CLIMATE CHANGE, <https://www.whitehouse.gov/the-press-office/us-mexico-announce-bilateral-framework-clean-energy-and-climate-change>.

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

³⁰ Roberta Jacobson, *U.S.-Mexico Framework on Clean Energy and Climate Change* (2010), <https://blogs.state.gov/stories/2010/01/26/us-mexico-framework-clean-energy-and-climate-change>

³¹ *Id.*

³² U.S DEPARTMENT OF STATE, PUBLIC SCHEDULE, <http://m.state.gov/md163617.htm>.

³³ Georgina Scarlata, *U.S.-Mexico Bilateral Framework on Clean Energy and Climate Change* (2011), https://www.epa.gov/sites/production/files/documents/2011_0616_scarlata_presentation.pdf.

collaboration.³⁴ Noted collaboration included: U.S.-Mexico cooperation in the development of Mexico's Transporte Limpio program; U.S. support to Mexico for refining and implementing its low-emissions development strategy (LEDS); implementation of pilot projects to reduce emissions from deforestation and forest degradation; and advancement in the promotion of regional renewable energy markets between the two countries through the Cross-Border Electricity Task Force [A third annual Bilateral Framework meeting was planned for mid-2012].

In July 2014, California and Mexico signed the Memorandum of Understanding (MOU) to Enhance Cooperation on the Climate Change and The Environment. Its four priority areas are climate change, air quality, wildfires, and clean vehicles. In the MOU the parties articulate the goal of working "toward development of rigorous monitoring, reporting and verification to support carbon pricing or regulatory mechanisms including potential linkage of carbon markets."

³⁵

In the Memorandum, the governments recognized their common border of 136 miles, recalled the La Paz Agreement, and identified approaches to addressing the priority areas. These include "[s]haring information and experiences about policies and programs that have effectively reduced greenhouse gas emissions and strengthened climate change mitigation and adaptation efforts [s]haring policy design and providing capacity building and technical support to develop and implement climate change policies, including emissions trading programs; [i]nvolving the other Participant to comment on program and policy design and rule-making processes it has developed and/or is developing" and other forms of cooperation.

To meet the objectives of the MOU the participants may create a Joint Action Plan and annual work plans focused on priority areas. The MOU looks to additional collaboration between California and individual States within the United Mexican States. The MOU states that it does not create any legally binding rights or obligations.

In 2010, a tri party memorandum of understanding was signed among the state of Acre, Brazil, the state of Chiapas, Mexico and California. It provides that, among other things:

"Considering the opportunities for collaboration between the State of Acre, the State of Chiapas, and the State of California in combating climate change" and "recognizing the importance and value of implementing climate mitigation and adaptation actions at Sub-national levels...The countries "express their willingness to cooperate, in the search of joint actions that improve environmental quality."

A specific goal is to reduce greenhouse gas emissions from deforestation and land degradation. Relevant to our recommendations below on next steps for cooperative climate change work, a focus is on implementation. The Memorandum aims "to ensure that ... reductions and sequestrations ... will be real, additional, quantifiable, permanent, verifiable and enforceable, and capable of being recognized in compliance mechanisms.... And on actual programmatic influences relevant to this the aim, Article 3 notes a recommendation for an eventual submittal to the California Air Resources Board, as defined in California's cap and trade program. As is the case with much soft law the parties acknowledge that the MOU "does not

³⁴ *Id.*

³⁵ Both Mexico and California have carbon markets. See

<http://www.calepa.ca.gov/Border/Publications/2015/JActionPlan.pdf>

create any legally binding rights or obligations.³⁶

On the political side AB 3021 (2006, Nuno) recognizes the large number of existing relations between California, Baja, other border states, and other states of Mexico. It establishes a California/Mexico relations council to coordinate activities of state agencies that are related to cross border programs and to establish policies to coordinate information and recommend needed legislative changes to achieve the goals of the legislation.³⁷

On March 27, 2015, the day that Mexico submitted its Intended Nationally Determined Contribution (INDC) to the UN Framework Convention on Climate Change (UNFCCC), President Obama and President Peña Nieto reaffirmed their commitment to addressing global climate change.³⁸ The leaders once again recognized the importance of jointly addressing climate change in their integrated economy. The countries decided to launch a new high-level bilateral clean energy and climate policy task force to “further deepen policy and regulatory coordination in specific areas including clean electricity, grid modernization, appliance standards, and energy efficiency, and others.

Other bi-lateral activities. The U.S. and Mexico have developed a number of bilateral climate change projects under the auspices of the USAid Global Climate Change Program. The funding is largely project based.

Administrative initiatives. A number of federal programs address regional climate change topics. An example is the United States’ Environmental Protection Agency’s SmartWay, instituted in 2004. The program aims to assist companies to assess carbon emissions from freight transportation, providing tools to measure emissions from freight operations and uncover inefficiencies that produce excess carbon emissions. (EPA Office of Transportation and Air Quality, 2016). The program’s effect is the equivalent of, “taking more than 14 million cars off the road for an entire year” (EPA Office of Transportation and Air Quality, 2016). The EPA cooperates with Mexico in this initiative in Mexico through “Transporte Limpio” to have Mexican companies integrate into SmartWay, (SmartWay, 2015). 98% of all freight moves across the border through diesel trucks from maquiladoras in Mexico to their warehouse destinations in the US (California DOT, 2014). Also, The U.S. joined with 13 other countries in a multilateral initiative uniting public and private interests to fight climate change by advancing the recovery and use of methane as a clean energy source. The Partnership develops projects in four methane emissions source areas: coal mines, agriculture, landfills, and oil and gas systems. US EPA held grants competitions to support the projects of Methane to Markets Partners. Mexico was one of the countries awarded the grant in 2008.

(https://www.epa.gov/sites/production/files/2016-01/documents/m2m_08_accomplishments.pdf)

³⁶ The implementation of the MOU remains a question. See Kaln, Debra, “Has a decade of Golden State climate diplomacies made a difference?” Climate Wire, September 23, 2016 www.eenews.net/stories11060043294 accessed October 15, 2016.

³⁷ The statute noted that The California Research Bureau had identified in an inventory of Mexico related projects conducted by California State Agencies over 100 programs, initiatives, projects, and partnerships within state government administered by 12 departments and agencies, eight boards and commissions, and various campuses of the University of California, the California State University, and the California Community Colleges SECTION 1.

³⁸ THE WHITE HOUSE, JOINT STATEMENT ON U.S.-MEXICO CLIMATE CHANGE POLICY COOPERATION, <https://www.whitehouse.gov/the-press-office/2015/03/27/joint-statement-us-mexico-climate-policy-cooperation>.

Comments on the record and its gaps

Quantitatively, responses to the shared concerns with border climate change adaptation and mitigation have been several: national, bilateral, as well as through the trilateral efforts under NAFTA. However, on the ground success is more questionable. Wilder et al (2010) concluded “developing national adaptive responses to climate change, without reference to political and social regimes across the 2,000-mile border, has often yield less-than-optimal, even harmful outcomes” (@919). Implementation has been lacking. Some initiatives such as the SPP [The Security and Prosperity Partnership] which among its priorities for cooperation among Mexico, the United States and Canada, included sustainable energy and the environment seem to simply have stopped (Villarreal and Lake, 2009). However, it seems that the North American Leaders’ Summit (current name) was started under the name of SPP in 2005 (<http://www.coha.org/three-amigos-convene-again-the-2016-north-american-leaders-summit/>). The purpose of North American Leaders’ Summit has been to bolster cooperation and sharing of information between Mexico, United States, and Canada. The underlying principle is the same as SPP but it seems that the name has changed. Instead of a trilateral model it is a dual-bilateral structure where Obama set up a separate [U.S.-Canadian and U.S.-Mexican] on border security and on regulation and clean energy (see <https://www.csis.org/analysis/2016-north-american-leaders-summit>).

However, within the Cluster of initiatives, successes in some programs, while likely not sufficient to mitigate and adapt to climate change in the region, can provide learning that translates to better implementation of existing elements of the governance regime and suggests ideas for additional cooperative programs.

Recommendations

We are at an information gathering stage of our work, so recommendations must be tentative.

1. A major focus of official activity now might best be on *implementation* of existing law and policy. The opportunity exists by means of joint work including through existing cooperative initiatives to identify specific promising areas of implementation of *present* commitments. These can focus on priority climate change problems, both those of mitigation and adaptation. The goal is to move beyond the promises of dialogue about and continued study of climate change and make selective choices where short term solutions can be effected.
2. Environmental law is more than “environmental law;” that is, some of law’s effects on the environment, both positive and negative, derive from legal actions regulated by law that is not labeled environmental. Relevant law includes trade law, tax policy, agricultural regulation—many others. Regional policy makers may do well for climate change by considering the side effects of legal changes in “non environmental areas” on the climate, often unintended. They might also explore the potential to explicitly add climate mitigation and adaptation to changes in other areas of law. Both of these goals can be operationalized through the use of environmental impact analysis on border and other California/Mexico projects which can be applied to legislation as well as for major

governmental actions of other kinds.

3. In general, policy makers could explicitly treat the border states as a unique collective region that is tied together on both sides of the US and Mexico; that region requires its own policy initiatives, especially in terms of combating global climate change.

While regionalism in climate change law and policy has not reached the goals some hoped for [and the interconnections that others feared] the elements exist for an effective California /US and Mexico regional strategy for climate change mitigation and adaptation. The pluralist trajectory of climate change governance provides greater scope for regional initiatives that are oriented towards specific national and regional conditions. When one considers the multi-level aspect of climate change governance, improved opportunities for actors, such as sub-national governments and non-state actors, who are not formally recognized in international law, can assist in responding to global climate change in accordance with their preferences, without necessarily having those preferences aggregated and possibly subsumed by national governments (Craik and DiMento, 2009@ 4).

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Appendix 1

California Climate Change Legislation

Date	Legislation	Description
October 7, 2015	<u>Senate Bill 350 (De León, Chapter 547, Statutes of 2015)</u>	Clean Energy and Pollution Reduction Act of 2015 Establishes targets to increase retail sales of renewable electricity to 50 percent by 2030 and double the energy efficiency savings in electricity and natural gas end uses by 2030.
September 21, 2014	<u>Senate Bill 605 (Lara, Chapter 523, Statutes of 2014)</u>	Short-lived climate pollutants Requires the State Air Resources Board to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants by January 1, 2016.
September 21, 2014	<u>Senate Bill 1275, (De León, Chapter 530, Statutes of 2014)</u>	Charge Ahead California Initiative Establishes a state goal of 1 million zero-emission and near-zero-emission vehicles in service by 2020. Amends the enhanced fleet modernization program to provide a mobility option. Establishes the Charge Ahead California Initiative requiring planning and reporting on vehicle incentive programs, and increasing access to and benefits from zero-emission vehicles for disadvantaged, low-income, and moderate-income communities and consumers.
September 21, 2014	<u>Senate Bill 1204 (Lara, Chapter 524, Statutes of 2014)</u>	California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program Creates the California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program funded by the Greenhouse Gas Reduction Fund for development, demonstration, precommercial pilot, and early commercial deployment of zero- and near-zero

		emission truck, bus, and off-road vehicle and equipment technologies, with priority given to projects benefiting disadvantaged communities.
September 28, 2013	<u>Assembly Bill 8 (Perea, Chapter 401, Statutes of 2013)</u>	<p>Alternative fuel and vehicle technologies: funding programs</p> <p>Extends until January 1, 2024, extra fees on vehicle registrations, boat registrations, and tire sales in order to fund the AB 118, Carl Moyer, and AB 923 programs that support the production, distribution, and sale of alternative fuels and vehicle technologies and air emissions reduction efforts. The bill suspends until 2024 ARB's regulation requiring gasoline refiners to provide hydrogen fueling stations and appropriates up to \$220 million, of AB 118 money to create a hydrogen fueling infrastructure in the state.</p>
September 28, 2013	<u>Assembly Bill 1092 (Levine, Chapter 410, Statutes of 2013)</u>	<p>Building standards: electric vehicle charging infrastructure</p> <p>Requires the Building Standards Commission to adopt mandatory building standards for the installation of future electric vehicle charging infrastructure for parking spaces in multifamily dwellings and nonresidential development.</p>
September 30, 2012	<u>Senate Bill 535 (De León, Chapter 830, Statutes of 2012)</u>	<p>Greenhouse Gas Reduction Fund and Disadvantaged Communities</p> <p>Requires the California Environmental Protection Agency to identify disadvantaged communities; requires that 25% of all funds allocated pursuant to an investment plan for the use of moneys collected through a cap-and-trade program be allocated to projects that benefit disadvantaged communities and 10 those 25% be use within disadvantaged communities; and requires the Department of Finance to include a description of how these requirements are fulfilled in an annual report.</p>

<p>September 30, 2012</p>	<p><u>Assembly Bill 1532 (J. Perez, Chapter 807, Statutes of 2012)</u></p>	<p>Greenhouse Gas Reduction Fund in the Budget</p> <p>Requires the Department of Finance to develop and submit to the Legislature an investment plan every three years for the use of the Greenhouse Gas Reduction Fund; requires revenue collected pursuant to a market-based compliance mechanism to be appropriated in the Annual Budget Act; requires the department to report annually to the Legislature on the status of projects funded; and specifies that findings issued by the Governor related to “linkage” as part of a market-base compliance mechanism are not subject to judicial review.</p>
<p>April 12, 2011</p>	<p><u>Senate Bill X1-2 (Simitian, Chapter 1, Statutes of 2011)</u></p>	<p>Governor Edmund G. Brown, Jr. signed Senate Bill X1-2 into law to codify the ambitious 33 percent by 2020 goal. SBX1-2 directs California Public Utilities Commission's Renewable Energy Resources Program to increase the amount of electricity generated from eligible renewable energy resources per year to an amount that equals at least 20% of the total electricity sold to retail customers in California per year by December 31, 2013, 25% by December 31, 2016 and 33% by December 31, 2020. The new RPS goals applies to all electricity retailers in the state including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators. This new RPS preempts the California Air Resources Boards' 33 percent Renewable Electricity Standard.</p>
<p>September 29, 2011</p>	<p><u>Assembly Bill 1504 (Skinner, Chapter 534, Statutes of 2010)</u></p>	<p>Forest resources and carbon sequestration. Bill requires Department of Forestry and Fire Protection and Air Resources Board to assess the capacity of its forest and rangeland regulations to meet or exceed the state's greenhouse goals, pursuant to AB 32.</p>
<p>September 30, 2008</p>	<p><u>Senate Bill 375 (Steinberg, Chapter 728, Statutes of 2008)</u></p>	<p>Sustainable Communities & Climate Protection Act of 2008 requires Air Resources Board to develop regional greenhouse gas</p>

		<p>emission reduction targets for passenger vehicles. ARB is to establish targets for 2020 and 2035 for each region covered by one of the State's 18 metropolitan planning organizations.</p> <p>For more information on SB 375, see the ARB Sustainable Communities page.</p>
October 14, 2007	Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007)	<p>Alternative Fuels and Vehicles Technologies The bill would create the Alternative and Renewable Fuel and Vehicle Technology Program, to be administered by the Energy Commission, to provide funding to public projects to develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change policies.</p>
August 24, 2007	Senate Bill 97 (Dutton, Chapter 187, Statutes of 2007)	<p>Directs Governor's Office of Planning and Research to develop CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions."</p> <p>For more information see the OPR CEQA and Climate Change page.</p>
July 18, 2006	Assembly Bill 1803 (Committee on Budget, Chapter 77, Statutes of 2006)	<p>Greenhouse gas inventory transferred to Air Resources Board from the Energy Commission.</p>
August 21, 2006	Senate Bill 1 (Murray, Chapter 132, Statutes of 2006)	<p>California's Million Solar Roofs plan is enhanced by PUC and CEC's adoption of the California Solar Initiative. SB1 directs PUC and CEC to expand this program to more customers, and requiring the state's municipal utilities to create their own solar rebate programs. This bill would require beginning January 1, 2011, a seller of new homes to offer the option of a solar energy system to all customers negotiating to purchase a new home constructed on land meeting certain criteria and to disclose certain information.</p>
September 26, 2006	Senate Bill 107 (Simitian, Chapter 464, Statutes of 2006)	<p>SB 107 directs California Public Utilities Commission's Renewable Energy Resources Program to increase the amount of renewable electricity (Renewable Portfolio Standard) generated per year, from 17% to an amount</p>

		that equals at least 20% of the total electricity sold to retail customers in California per year by December 31, 2010.
September 27, 2006	<u>Assembly Bill 32</u> (Núñez, Chapter 488, Statutes of 2006)	California Global Warming Solutions Act of 2006. This bill would require Air Resources Board (ARB) to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020. ARB shall adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with this program. AB 32 directs Climate Action Team established by the Governor to coordinate the efforts set forth under Executive Order S-3-05 to continue its role in coordinating overall climate policy. See <u>more information on AB 32 at ARB</u> .
September 12, 2002	<u>Senate Bill 1078</u> (Sher, Chapter 516, Statutes of 2002)	This bill establishes the California Renewables Portfolio Standard Program, which requires electric utilities and other entities under the jurisdiction of the California Public Utilities Commission to meet 20% of their renewable power by December 31, 2017 for the purposes of increasing the diversity, reliability, public health and environmental benefits of the energy mix.
September 7, 2002	<u>Senate Bill 812</u> (Sher, Chapter 423, Statutes of 2002)	This bill added forest management practices to the California Climate Action Registry members' reportable emissions actions and directed the Registry to adopt forestry procedures and protocols to monitor, estimate, calculate, report and certify carbon stores and carbon dioxide emissions that resulted from the conservation-based management of forests in California.
July 22, 2002	<u>Assembly Bill 1493</u> (Pavley, Chapter 200, Statutes of 2002)	The "Pavley" bill requires the registry, in consultation with the State Air Resources Board, to adopt procedures and protocols for the reporting and certification of reductions in greenhouse gas emissions from mobile sources for use by the state board in granting the emission reduction credits. This bill requires

		<p>the state board to develop and adopt, by January 1, 2005, regulations that achieve the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks.</p> <p>For more information on AB 1493 Pavley I, see the ARB Clean Car Standards page.</p>
October 11, 2001	Senate Bill 527 (Sher, Chapter 769, Statutes of 2001)	<p>This bill revises the functions and duties of the California Climate Action Registry and requires the Registry, in coordination with CEC to adopt third-party verification metrics, developing GHG emissions protocols and qualifying third-party organizations to provide technical assistance and certification of emissions baselines and inventories. SB 527 amended SB 1771 to emphasize third-party verification.</p>
September 30, 2000	Senate Bill 1771 (Sher, Chapter 1018, Statutes of 2000)	<p>SB 1771 establishes the creation of the non-profit organization, the California Climate Action Registry and specifies functions and responsibilities to develop a process to identify and qualify third-party organizations approved to provide technical assistance and advice in monitoring greenhouse gas emissions, and setting greenhouse gas (GHG) emissions baselines in coordination with CEC. Also, the bill directs the Registry to enable participating entities to voluntarily record their annual GHG emissions inventories. Also, SB 1771 directs CEC to update the state's greenhouse gas inventory from an existing 1998 report and continuing to update it every five years.</p>
September 28, 1988	Assembly Bill 4420 (Sher, Chapter 1506, Statutes of 1988)	<p>The California Energy Commission (CEC) was statutorily directed to prepare and maintain the inventory of greenhouse gas emissions (GHG) and to study the effects of GHGs and the climate change impacts on the state's energy supply and demand, economy, environment, agriculture, and water supplies. The study also required recommendations for avoiding, reducing, and addressing related impacts - and required the CEC to coordinate</p>

		the study and any research with federal, state, academic, and industry research projects.
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Appendix 2

Global Initiatives

	Canada	US	Mexico
UNFCCC	<ul style="list-style-type: none"> – Submitting a national inventory of emissions and removals of greenhouse gases. – Implementing national programmes to mitigate climate change and adapt to its impacts – Strengthening scientific and technical research and systematic observation related to the climate system, and promoting the development and diffusion of relevant technologies. – Promoting education programs and public awareness about climate change and its likely effects. – Periodically submitting comprehensive National Communications (ie reports) on activities to implement commitments under the Convention. – Developing a national policy and specific commitments. – Assisting developing countries to meet their goals through financial aid, technology transfer and research support. 		Same as Canada and the US, however, Mexico is NOT required to develop a national policy and specific commitments nor to assist developing countries through financial aid, tech transfer or research support.
Kyoto Protocol	-6% below 1990 levels by 2008/2012	-7% below 1990 levels by 2008/2012	NONE

		[has not yet ratified Kyoto Protocol so not legally bound by target]	
CDM	Assisting with 22 projects, none with Mexico (11 in South America, 4 in China, 6 in Malaysia and 1 in Egypt)	None	118 projects, most in conjunction with UK and Switzerland, some with Spain and 14 simply Mexico [11 climate change projects approved through GEF]
NAAEC	<p>The NAAEC requires that each Party ensure its laws provide for high levels of environmental protection without lowering standards to attract investment. Each Party agrees to effectively enforce its environmental laws through the use of inspectors, monitoring compliance and pursuing the necessary legal means to seek appropriate remedies for violations. Each Party must also provide a report on the state of its environment, develop environmental emergency preparedness measures, promote environmental education, research and development, assess environmental impacts and promote the use of economic instruments. Parties may also appoint National Advisory Committees composed of private sector representatives to assist in implementing the Agreement domestically. [from Canadian website]</p>		
SPP	<ul style="list-style-type: none"> - working towards a joint vision of biofuels for transportation by 2020 - shared information on policies and programs on vehicle fuel efficiency, standby power consumption, and the potential for natural gas to support optimal energy use for the future - harmonize a number of energy-using consumer products, such as central air conditioners. 		

- new suite of products, including clothes washers and water heaters, are being assessed under the new framework to systematize energy efficiency harmonization between all three countries
- undertook a comprehensive analysis of various emissions inventories among the three countries to prepare a trilateral strategy to achieve comparability
- road tested emissions estimation methodologies for nine energy generating facilities to improve and harmonize emissions calculations in the energy power
- enhance our electricity networks
- collaboration to further reduce barriers to expanding clean energy technologies, especially carbon dioxide capture and storage to mitigate greenhouse gas emissions
- working together to improve the safety of chemicals in the marketplace [from “Bali Action Plan” down from Orleans meeting; first section from “key accomplishments since 2007”]