

Environmental Collaboration: Lessons Learned About Cross- Boundary Collaborations



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FOREWORD

On behalf of the IBM Center for The Business of Government, we are pleased to present this report, *Environmental Collaboration Across International Boundaries: Lessons Learned About Cross-Boundary Collaborations*, by Kathryn Bryk Friedman and Kathryn A. Foster, both at the University at Buffalo Regional Institute, State University of New York.

Retired Coast Guard Admiral Thad Allen — a well-respected “collaboration expert” — says that “we’re good at creating ‘unity of effort’ in crisis situations, but not in day-to-day operations.” Friedman and Foster examine eight case studies that illustrate both formal and informal ways of collaborating in day-to-day operations to address environmental issues across international boundaries between the United States, Canada, and Mexico.

Their report identifies the necessary conditions, capacities, organizational models, and experiences that drive successful collaborative ventures resulting in cleaner water, air, and land. They talk about what it takes to start such a collaborative initiative and — more importantly — how to sustain an initiative over time.

While they find that many of the elements necessary for effective collaborative ventures are critical — such as a clear purpose, dedicated staff, and the willingness to be flexible — they conclude that a bilateral collaborative venture is often more effective when it has a formal legal structures in place that enhance its legitimacy in the eyes of various stakeholders. Informal collaborations are often useful precursors to more formal efforts. These informal efforts are often not seen as having the necessary legitimacy and resources in order to be as effective as their more formal counterparts.

This report continues a series of research efforts sponsored by the IBM Center that examines multi-stakeholder collaborative efforts in different policy arenas that are “day-to-day efforts” and not crises. These include: *Designing and Managing Cross-Sector Collaboration: A Case Study in Reducing Traffic Congestion*, by John Bryson, Barbara Crosby, Melissa Stone, and Emily Saunoi-Sandgren, and more recently *Strategies for Supporting Frontline Collaboration: Lessons from Stewardship Contracting*, by Cassandra Moseley.



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Each of these reports highlight a common success factor: the need for leaders who are passionate about reaching a common goal, have a broad network of peers, and the respect and trust of various stakeholders. As Admiral Allen says, “What’s needed are people who are adaptable, flexible, and engaged in life-long learning, and are capable of understanding the problem.” These characteristics are frequently seen in each of the IBM Center’s recent reports on collaboration.

These reports point to the importance of developing a governance framework that is seen as legitimate, so stakeholders can then collaborate rather than compete. This factor may be key to sustaining successful “day-to-day” collaborative efforts over time. We trust that this report will be helpful to government executives as they continue to work with and form collaborative initiatives across a variety boundaries.



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Introduction

Collaboration across any boundary—across sectors and across government levels (municipal, regional, state, or international)—is necessary and desirable in today’s networked, cost-cutting, efficiency-oriented world (Bryson, et al. 2009). Knowing that connections must be made, though, and actually engaging with counterparts across a boundary are two different things. Collaboration across boundaries often requires autonomous decision makers with different preferences and perspectives to jointly manage resources, make collective decisions, and determine fair and efficient processes for resolving disputes.

This report looks at one type of cross-boundary collaboration—international environmental collaboration between the United States and its Canadian and Mexican neighbors, respectively. How do multiple, autonomous international actors successfully share a single environmental region? Who engages in effective international environmental initiatives? What are the necessary conditions, capacities, organizational models and experiences that drive success?

Environmental collaboration across international boundaries was chosen for analysis because it serves as an apt metaphor for complex cross-boundary collaboration generally. As difficult as it can be to achieve effective collaboration across municipal or state lines, it is even more difficult across international boundaries. In these bi-national areas, deliberating and effectively managing issues requires navigating and finding common purpose within two or more political, legal, social, cultural, and fiscal regimes. Collaborating across an international boundary means that every process, policy, decision, and action must plot a course through at least two federal, state/provincial, and local systems, all with

different sets of priorities, resource bases and laws, policies and institutions. In addition, these collaborative initiatives confront different political cultures, social systems, media outlets, and national identities. Thus, insight into what makes or breaks an international cross-boundary collaboration in a complex subject area like the environment can be instructive to collaboration across any jurisdictional boundary and in other functional areas such as transportation, education, and drug enforcement, for example.

A rich literature on cross-border management exists, spanning political science, urban planning, international relations, international law, sociology, geography, and economics. A wide range of theoretical frameworks for approaching collaboration across boundaries—international or otherwise—have been identified, including top-down approaches, pluralistic models, public choice theory, diplomacy and law, new regionalist approaches, and those involving expert decision makers.

Researchers often focus on foundational aspects of cooperation: what is the nature of collaboration and how does it evolve (Axelrod 1984)? Other researchers focus on forms of collaboration and the relative benefits of alternative collaborative arrangements (Slaughter 2005). Also highlighted by academic researchers are the nuts and bolts or the “how” of collaboration across boundaries actually works (McKinney and Johnson 2009). Recent research has observed that capacity and experience are attributes of cross-boundary collaboration, reflecting how actors make the decision to organize, determine means of collective action, accumulate appropriate resources, and act on a specific problem or issue (Foster and Barnes 2010).

Project Methodology

Eight case studies were selected to illustrate environmental collaboration across an international boundary. The organizations selected were varied in their structures, missions, participants, and capacity. The cases also vary in the scale of the collaboration (federal, state or regional/local), as well as their geographic location. Four operate along the U.S. border with Canada, and four along the border with Mexico.

The analysis draws from a review of relevant collaboration materials, supplemented by confidential interviews with 21 stakeholders, each of whom provided candid assessments and first-hand knowledge of the case example of international environmental collaboration being examined.

participants typically bring ample capacity in staff, expertise, and money.

This report examines eight case studies of international environmental collaboration which focus on the four key factors discussed above. The case studies are categorized as formal and informal examples of collaborations across boundaries. Six of the case studies are examples of formal collaborations, that is, they have organizational structures, codified missions, and staff. Two of the case studies are examples of informal collaborations, representing efforts that are ad hoc and less institutionalized in nature, with no codified mission and few, if any, staff dedicated solely to the collaboration under examination.

A review of the literature suggests four key factors that shape successful cross-boundary collaboration:

- **A codified and purposeful mission**, particularly one framed by a legal instrument, such as a treaty, Memorandum of Understanding or another type of formal document, which formalizes tacit understandings among participants.
- **The institutional and organizational structure** of the collaboration is an important factor. There is no single optimal institutional and organizational structure for successful cross-border collaboration. Rather, the structure of governance, rules and operations may take a variety of forms, ranging from those grounded in formal international and/or domestic legal orders to structures that are more ad hoc and fluid in nature.
- **Having the right actors** at the table increases the odds of achieving group goals. Successful international collaboration usually has as its backbone large, complex networks of local, state, and federal government actors (Neuman 2007; Slaughter 2005). Local officials are essential to bring front-line knowledge and legitimacy to the process. Participants from outside the public sector, too, can be essential assets, bringing expertise and credibility to a collaboration.
- **The capacity** of a group is an important consideration, represented by sufficient resources, expertise, leadership, external connections, and social capital. Federal and state government

Case Studies of Formal Collaboration

International Joint Commission (IJC)



Established in 1909 by the Boundary Waters Treaty between Canada and the United States, the IJC jointly manages issues involving trans-boundary water resources, such as water scarcity in the prairie regions and water quality in the Great Lakes.

Background

At the turn of the 20th century, increased industrialization on both sides of the border intensified existing water-related conflicts between Canada and the United States. This necessitated collaboration and served as the genesis of the IJC. At the urging of a Canadian delegate in the late 1800s, the International Irrigation Congress adopted a resolution urging the United States to appoint an international advisory commission to work with Canada and Mexico on the issue of conflicting rights to transnational rivers. In 1896, a Canadian-British governmental proposal was drawn up; however, the U.S. Secretary of State responded that the U.S. could not implement the proposal at the time.¹

Despite this initial reluctance on the part of the United States, by 1907 it became apparent on both sides of the border that establishing procedures for

dealing with conflicts over use of shared waterways was imperative. A mere advisory commission and diplomatic representations on a case-by-case basis were deemed insufficient.² During the first decade of the 20th century, negotiations between the two countries burgeoned. The Boundary Waters Treaty established the IJC in 1909; one year later, President William H. Taft and Prime Minister Wilfrid Laurier exchanged formal ratifications.³

While the IJC initially served an investigative role, in the 1970s its purpose changed as it assumed responsibilities for facilitating activities of the 1972 Great Lakes Water Quality Agreement. Prior to this, collaboration was primarily limited to the IJC board. When an issue was referred to it, the IJC established a temporary scientific task force staffed by experts from governmental agencies on both sides of the border.⁴ However, the passing of the Water Quality Agreement broadened the IJC's mandate and structure and led to the establishment of permanent research advisory boards. Unlike the previous temporary advisory boards, the permanent ones involve members from NGOs and other interested parties outside of government.⁵

Of the 100-plus cases that the IJC has presided over since 1912, it has been divided along national lines or failed to reach an agreement only three times.⁶ The IJC is currently holding consultations on the future of the Great Lakes Water Quality Agreement.

Mission

The IJC's mission is set forth in international legal instruments including the 1909 Boundary Waters Treaty, the 1972 and 1978 Great Lakes Water Quality Agreements (GLWQA), and the 1987 Protocol that amended these agreements. According

Overview: Formal International Environmental Collaborations

Name	Date Established	Established By	Governing Structure	Staffing*
International Joint Commission (IJC)	1909	1909 Boundary Waters Treaty; 1972 and 1978 Great Lakes Water Quality Acts; 1987 Protocol	Six members, with equal representation from Canada and the United States	43 dedicated staff
Pacific Northwest Economic Region (PNWER)	1991	Legislation in original 7 jurisdictions	Executive Committee, Delegate Council and Private Sector Council with equal representation from Canada and the U.S.	8 dedicated staff
BC-WA Environmental Cooperation Council (BC-WA)	1992	Environmental Cooperation Agreement	Equal representation from Canada and the U.S.; chaired by the Deputy Minister, British Columbia Environment, Lands and Parks, and the Director of the Washington Department of Ecology	No dedicated staff, but responsibilities split between international and domestic portfolios
International Boundary and Water Commission (IBWC)	1944	The Water Treaty of 1944	A U.S. Section and a Mexico Section, with equal representation from Mexico and the U.S.	More than 80 dedicated staff in the U.S. Section
U.S.-Mexico Border 2012 Program (Mexico 2012)	2002	Federal government programming	Equal representation from the U.S. and Mexico, with 2 National Coordinators and 2 staff leads	4 senior-level dedicated staff with equal representation of the U.S. and Mexico, with more than 60 other program participants
Arizona-Mexico Commission	1971	Agreement; 501[c][4] status	Chaired by the Governor of Arizona; governed by a Board of Directors	4 dedicated staff drawn from the Arizona executive branch; 2 in the Hermosillo office

* Staffing figures reflect latest information as of December 2010.

to its founding document, the IJC's mission is to "prevent and resolve disputes between the United States of America and Canada under the 1909 Boundary Waters Treaty and pursue the common good of both countries as an independent and objective advisor to the two governments. In particular, the Commission rules upon applications for approval of projects affecting boundary or trans-boundary waters...assists the two countries in the protection of the trans-boundary environment...and [it] alerts the governments to emerging issues along the boundary that may give rise to bilateral disputes."⁷

The GLWQA Agreements express the commitment of each country to restore and maintain the chemical, physical, and biological integrity of the Great Lakes Basin Ecosystem and include a number of objectives and guidelines to achieve these goals. The Agreements reaffirm the rights and obligation of Canada and the United States under the Boundary Waters Treaty and have become a major focus of Commission activity.⁸ The 1987 Protocol aims to strengthen the programs, practices, and technology described in the 1978 Agreement and to increase accountability for implementation. It sets timetables for implementation of specific programs.⁹

Cross-Boundary Collaboration: Examples from the International Joint Commission

In April 1999 the IJC informed the U.S. and Canada that it was becoming increasingly urgent to review the regulation of Lake Ontario outflows in view of perceived environmental and other problems with that system. The review was necessary because more than 50 years had passed since a comprehensive assessment of water levels and flow regulation in the Lake Ontario-St. Lawrence River system.

In December 2000, the IJC established the International Lake Ontario and St. Lawrence River Study Board to undertake the studies needed to evaluate options for regulating levels and flows in the Lake Ontario-St. Lawrence River system. A five-year, \$20 million study was undertaken, involving representatives from the United States, Canada, the State of New York, Provinces of Quebec and Ontario, Native American tribes, and local governments. In addition, the IJC encouraged academic experts and the public to participate. A study with recommendations was released on May 31, 2006.

The IJC considered the options in the report and the public's comments on them, and consulted the governments of the U.S. and Canada. On March 28, 2008, the IJC released a proposed new Order of Approval and regulation plan for public comment. Commissioners considered the views submitted and concluded that regulations should be based on a revised set of goals, objectives, and criteria, specifically moving towards more natural flows to benefit the environment, while respecting other interests.

In September 2008 the IJC proposed a working group comprised of Canada, the United States, New York, Quebec, and Ontario to resolve the outstanding issues and secure the assent of the two federal governments. The working group then established bi-national technical groups with a diverse range of participants from all levels of government and the private, non-profit, and academic sectors. Today, the Canadian public sector working group representatives include the Coast Guard, Environment Canada, Hydro Quebec, and the Ontario Ministry of Municipal Affairs and Housing, among others. The U.S. public sector is represented by a host of agencies, including the Army Corps of Engineers, National Oceanic and Atmospheric Administration, and New York Power Authority. Finally, non-profit and academic working group participants include representatives from the University at Buffalo, Clarkson University, Cornell University, and the Nature Conservancy, among others.

In addition to engaging participants from across sectors on specific IJC initiatives, cross-sector engagement is institutionalized in the IJC through its general consultative boards. According to interviewees, these consultative boards are critical to the success of the IJC. Separate boards are responsible for particular waterways issues. Currently 17 general boards and 4 task forces and study boards exist to assist the IJC in its functions.

One highly successful example cited by interviewees as a model of cross-sector engagement is the Great Lakes Science Advisory Board. Comprised of experts drawn from the academy, NGOs, and private sector representatives, this board was established pursuant to the 1978 Great Lakes Water Quality Agreement (GLWQA). Under the GLWQA, the parties are obliged to maintain and restore the chemical, physical, and biological integrity of the Great Lakes Basin ecosystem. Good science is critical to the success of this enterprise, which is why the Great Lakes Science Advisory Board is charged with developing recommendations to identify, evaluate, and resolve current and anticipated problems. The Science Advisory Board provides the commission with objective research and analysis to aid in decision-making. According to one interviewee, this has been essential to the IJC's success.

Institutional Structure

Comprised of a total of six members with equal representation from both Canada and the United States, the IJC Commission has three members appointed by the President of the United States, with the advice and approval of the Senate, and three appointed by the Governor in Council of Canada, on the advice of the Prime Minister.¹⁰ Upon appointment, commissioners take an oath to uphold the terms and conditions of the Boundary Waters Treaty,

thus setting aside national interests in trans-boundary water management issues. There is a United States Section and Canadian Section, which collaborate frequently across the border.

Actors

Public Sector: The U.S. Department of State and the Canadian Department of Foreign Affairs and International Trade jointly oversee the IJC. Experts

from other governmental agencies at the federal, state and local levels in both countries are often called upon to serve on boards and task forces (currently there are over 20) to consult on a given matter. These entities are organized by area of focus or geography (e.g., International Niagara Board of Control or International Air Quality Advisory Board).

Private Sector: IJC boards and task forces incorporate various private entities, such as local marina operators and construction agencies, among others, to assist in the initiative at hand.¹¹

Academic/NGO Sector: Many of the IJC's boards and task forces leverage the expertise of academic institutions as well. For example, recently the State University of New York at Buffalo, Cornell University and Clarkson University participated in the International Lake Ontario–St. Lawrence River Study Board.

Capacity

The IJC has a joint dedicated budget provided by the U.S. Department of State and the Canadian Department of Foreign Affairs and International Trade. In addition to the six commissioners, the IJC has a core support staff of 43 members split between offices in Washington, D.C., Ottawa and Detroit/Windsor.

Observations

- The IJC's structure equally reflects and reinforces Canada and United States' interests, giving each side equal clout and authority at the table.
- The IJC's mission is codified in several legal instruments, thus formalizing tacit understandings and lending legitimacy, credibility and authority to initiatives.
- Although public sector stakeholders from all levels of government play a role in IJC initiatives, the "heft" of the United States and Canadian federal governments contributes greatly by bringing dedicated staff and financial resources to the table.
- Cross-sector collaborations involving representatives from the interested public, NGOs, experts and higher education are important to sustaining international environmental collaborations under the auspices of the IJC.

- The leadership of the IJC—politically appointed commissioners, staff that work solely for the Commission, and task forces and boards comprised of experts from several sectors—is broadly connected, enabling the Commission to galvanize support for international cross-boundary collaborations.

The Pacific Northwest Economic Region (PNWER)

A public-private transgovernmental network, PNWER was established in 1991 by statute in seven jurisdictions:

- Washington
- Oregon
- Idaho
- Montana
- Alaska
- Province of British Columbia
- Province of Alberta



Canada's Yukon Territory joined PNWER in 1994, Saskatchewan followed in 2008 and the Northwest Territories came on board in 2009.

PNWER's Environmental Working Group is currently focused on climate change. The Environmental Working Group also tracks the development of energy policy in the U.S. and Canada and encourages the bilateral sharing of technologies such as carbon sequestration.

Background

PNWER emerged out of the 1988 Pacific Northwest Legislative Leadership Forum (PNLLF), a bi-national leadership network with six working groups focused on areas such as environmental technology, tourism, recycling, value-added timber, workforce training, and telecommunications. Legally established in each of the member states in 1991, PNWER was the inspiration of former Washington State Senator Alan Bluechel, who saw the value of addressing common

issues and interests in a collaborative, region-wide organization. Bluechel's counterpart in the formation of this regional network covering a vast geographical area was Jim Horseman, then Deputy Premier and Minister of Federal and Intergovernmental Affairs for Alberta.

Currently, "[i]f it were a nation, PNWER would rank 11th among the world's leading industrial economies, with combined population of more than 18 million and an annual gross regional product of over \$350 billion."¹² Most recently, PNWER worked to promote the Pacific Northwest leading up to, and during, the 2010 Winter Olympic Games in Vancouver.

Mission

PNWER's stated mission is "[t]o increase the economic well-being and quality of life for all citizens of the region; to coordinate provincial and state policies throughout the region; to identify and promote 'models of success;' and to serve as a conduit to exchange information."

PNWER aims to:

- Promote greater regional collaboration
- Enhance the competitiveness of the region in both domestic and international markets
- Leverage regional influence in Ottawa and Washington, D.C.
- Achieve continued economic growth while maintaining the region's natural beauty and environment¹³

Institutional Structure

PNWER has a mirror image structure, with equal representation of Canadian and United States interests. The organization has an Executive Committee, a Delegate Council, a Private Sector Council (PSC), established in 1994, and 18 issue-based working groups supported by a central office in Seattle.

Actors

Public Sector: PNWER is composed of five U.S. states (Washington, Oregon, Idaho, Montana, and Alaska), three Canadian provinces (British Columbia, Alberta and Saskatchewan), and the Yukon and Northwest Territories. Representatives

from each of these state, provincial, or territorial governments serve in some capacity in the PNWER hierarchy.

Private Sector: The private sector participates in PNWER via the Private Sector Council. The PSC includes any "business, non-elective public sector, NGO, and other non-profit organization."¹⁴ Private sector members may join PNWER by paying dues on a sliding scale according to size. PNWER also encourages the participation of the private sector through its Private Sector Board of Directors, comprised of a select few members from the PSC. The Private Sector Board of Directors represents the interests of the private sector and encourages private sector participation in PNWER working groups.

Academic/NGO Sector: The PNWER structure allows for academic and NGO participation as part of the PSC, or as members of PNWER working group meetings.

Capacity

In 2006, the organization's annual budget was U.S. \$900,000, with approximately one third each coming from state and provincial dues, private sector sponsorship and dues, and public and private grants.¹⁵ In addition to a large number of public and private members, PNWER has a dedicated staff of eight members working out of their Seattle offices.¹⁶

Observations

- PNWER is the oldest and most elaborate example of cross-boundary collaboration between states and provinces on the U.S.-Canadian border. Its longevity and institutionalized structure have made it a frequently cited model of international collaboration at the sub-federal level.
- PNWER's structure includes equal representation of Canadian and United States counterparts across all sectors, public, private and non-governmental, providing participants with an equal say in collaborations.
- The fact that PNWER has a legal mandate legitimizes its activities and lends the organization clout in cross-boundary issues.
- Because PNWER's primary function is to serve as an economic advocacy organization, its

ability to become substantively engaged in environmental issues affecting the Pacific Northwest is limited.

- PNWER provides a forum for governors and premiers of border states, provinces, and territories to exert influence on cross-boundary issues.
- PNWER's missions in Washington, D.C. and Ottawa, coupled with political connections in these capitals, give the organization an extensive network and influence at all levels of government.

The BC-WA Environmental Cooperation Council

The Governor of the State of Washington and the Premier of the Province of British Columbia in 1992 founded the BC-WA Environmental Cooperation Council to address a series of environmental concerns impacting the quality of life of residents on both sides of the border.



Formally established by the Environmental Cooperation Agreement on May 7, 1992, the BC-WA Environmental Cooperation Council ensures coordinated action and information-sharing on environmental matters of mutual concern. Such issues include flooding of the Nooksack River, the Abbotsford Sumas Aquifer, air quality in the Fraser Valley/Pacific Northwest airshed, and water quality in the Georgia Basin, Puget Sound, and the Columbia River Basin.

Background

To address environmental concerns on both sides of the border in a cooperative manner, the Governor of Washington and the Premier of British Columbia entered into an accord on May 7, 1992. The Environmental Cooperation Agreement established the Council.

The Environmental Cooperation Agreement and the Council provide a framework and forum for the functioning of several task forces dealing with

trans-boundary issues. In 1996, the British Columbia and Washington environmental agencies signed a Memorandum of Understanding (MOU) to provide an administrative framework for cooperative initiatives.

Mission

As set forth in the Agreement, the Council seeks "to ensure British Columbia and Washington State promote and coordinate mutual efforts to guarantee the protection, preservation, and enhancement of our shared environment for the benefit of current and future generations."¹⁷

Institutional Structure

The Council, chaired by the Deputy Minister for Environment, Lands, and Parks of British Columbia and the Director of the Washington Department of Ecology, includes equal representation from each side of the border.

Actors

Public Sector: In Canada, the Council is currently comprised of public sector actors including the BC Ministry of Environment, Land and Parks; Environment Canada; and Fisheries and Oceans Canada, Pacific Region. In the United States, the Washington State Department of Ecology and the United States Environmental Protection Agency sit on the Council.

Private Sector: Private sector participation on the Council has been limited to attending selected meetings of interest to them.

Academic/NGO Sector: The Council involves academic groups and NGOs at the task force level as information providers, analysts, and unbiased assessors of progress. In the past, the University of Washington and the University of Victoria have contributed to the Council.

Capacity

There is no dedicated funding or staff per se, as Council leadership must respond to the agendas and directives of their own state and province. Connections to federal government expertise are sporadic and formed on an as-needed basis. For example, on the topic of flooding, the Council sought the assistance of the United States Federal Emergency Management

Agency (FEMA). There are limited connections to other organizations in the region.

Observations

- The Council demonstrates that sub-federal entities can themselves act as agents for change in cross-boundary environmental collaborations.
- Given the Council's limited staff, capacity, and competing state and provincial priorities, it primarily reacts to environmental issues rather than being proactive about them.
- The Council is well connected to state/provincial and local agencies, but its connections at the federal level vary, depending on issue, as the example of FEMA demonstrates.
- The Council's legitimacy is drawn from its knowledge and resource base and its connection to the expertise of the state/provincial governing bodies.

The International Boundary and Water Commission (IBWC)



The International Boundary and Water Commission was established in 1944 to provide bi-national solutions to issues that arise during the application of United States-Mexico treaties regarding boundary demarcation, national ownership of waters, sanitation, water quality, and flood control in the border region. The IBWC owns, supervises and/or operates significant infrastructure facilities across the southern border.

Background

While the International Boundary and Water Commission can trace its roots back to the 1848 Treaty of Guadalupe Hidalgo and the Gadsden Treaty of 1853, the direct predecessor to the current organization was the International Boundary Commission

(IBC), established between the United States and Mexico on March 1, 1889. The IBC was initially designed to be a temporary body for enforcing the rules adopted by the Convention of 1884, which addressed boundary-line questions provoked by increasing settlement during the latter part of the 19th century.

On March 1, 1906, the U.S. and Mexico agreed to the first water distribution treaty in their nations' histories. The accord allotted to Mexico 60,000 acre-feet annually of the waters of the Rio Grande to be delivered in accordance with a monthly schedule at the head gate to Mexico's Acequia Madre just above Juárez, Chihuahua. In order to facilitate such deliveries, the U.S. constructed, at its expense, the Elephant Butte Dam on U.S. soil.

The Water Treaty of February 3, 1944 expanded the duties and responsibilities of the IBC, addressing use of the waters of the Colorado River and the Rio Grande from Fort Quitman, Texas to the Gulf of Mexico, and renamed the organization the International Boundary and Water Commission.

The Treaty of November 23, 1970 resolved all pending boundary differences and provided for maintaining the Rio Grande and the Colorado River as the boundary between the two nations. Furthermore, this Treaty also charged the IBWC with greater authority and control in carrying out its provisions.¹⁸

Mission

As discussed above, the mission of the IBWC is codified in international law and related agreements. Its mission is to apply the numerous boundary and water treaties and agreements of the United States and Mexico to benefit the social and economic welfare of the peoples on the two sides of the boundary, while improving relations between the two countries.

As set forth in the treaties and agreements, the IBWC:

- Oversees the distribution of the waters of the Rio Grande and of the Colorado River between the two countries
- Maintains responsibility for the regulation and conservation of the waters of the Rio Grande for their use by the two countries

Cross-Boundary Collaboration: Examples from International Boundary and Water Commission

Myriad cross-sector initiatives exist under the auspices of the International Boundary and Water Commission. One example noted by interviewees is the Nogales International Wastewater Treatment Plant.¹⁹ As background, the adjacent communities of Nogales, Arizona, and Nogales, Sonora are located in a narrow valley with high hills. In 1944 the government of Mexico began preparations for a sewer system in Nogales, Sonora, however, due to urban development and the slope of the terrain, a prime location for the plant did not exist on the Mexican side of the border. After discussing the location of an international plant on the U.S. side of the border, Mexico and the United States established the initial plant in 1951. This plant provides secondary treatment for wastewater generated in Nogales, Arizona and Nogales, Sonora. Owned by the U.S. Section of the IBWC and the City of Nogales, Arizona, the plant is operated by the IBWC. Operating costs, in turn, are shared by the Mexico Section of the IBWC, the government of Mexico, and the City of Nogales, Arizona. The state of Arizona has played a key role in upgrades over the years, particularly with regard to environmental permitting. In addition, the U.S. Environmental Protection Agency, Santa Cruz Health Department, Comisión Nacional del Agua, Gerencia de Aguas Subterráneas, Gerencia de Saneamiento y Calidad del Agua, and Gerencia Regional Noroeste participate.

The IBWC involves other sectors in its work—including in the Nogales project—through its citizen participation forum. For decades, the IBWC was reluctant to involve the interested public in issues under its jurisdiction. The commission perceived demands for public participation as “interference in their affairs” (Sanchez 1993). Based on a growing recognition that conditions along the border had changed and that the technical expertise of IBWC engineers alone was insufficient, the citizen forum program was established for five regions along the U.S.-Mexico border.

The IBWC forums aim to bring diverse interests to the table to exchange information and views. There is an open application process for positions with competitive selection for a two-year term. Boards have included active participation by NGOs and interested citizens some of the time, and other times less so. Over the years, these boards have been comprised of diverse representatives from local government, unions, the private sector, NGOs, neighborhood associations, and higher education. Today these boards serve as examples of cross-sector collaboration.

- Operates and maintains international storage dams, reservoirs, and plants for generating hydroelectric energy
- Regulates the Colorado River waters allocated to Mexico
- Protects the lands along the river from floods by levee and floodway projects
- Manages border sanitation and solves border water quality problems
- Preserves the Rio Grande and Colorado River as international boundaries
- Demarcates the land boundary²⁰
- Operations
- Administration

The Engineering and Operations departments carry out the day-to-day tasks to meet the goals of the IBWC, while the Administration department provides organizational support. A similar structure exists on the Mexican side.

The IBWC provides for joint actions and agreements as well as reports, studies or plans to be handled by or through the U.S. Department of State and the Ministry of Foreign Relations of Mexico, respectively.

Actors

Public Sector: The U.S. Department of State and the Mexican Ministry of Foreign Affairs jointly oversee the IBWC, which is led by one appointed commissioner from each side of the border. These departments draw on expertise from a variety of international, federal, state, and local government agencies in both countries, including the North American Development

Institutional Structure

The IBWC has a United States Section and a Mexico Section with equal representation. On the United States side, the IBWC is organized into three departments:

- Engineering

Bank and the Mexico 2012 Program. Border states also play an important role in implementation of projects, such as those related to the Tijuana River.

Private Sector: The IBWC works closely with many private sector firms, specifically in the Engineering and Operations departments, in order to develop, construct, maintain, and manage a vast system of flood control levees, dams, power plants, and wastewater treatment facilities that span the U.S.-Mexico border.

Academic/NGO Sector: Involvement of academic groups and NGOs in the IBWC is expanding. In contrast to the International Joint Commission, which fills international advisory committees with agency and academic experts, the IBWC owns and operates the facilities it oversees, resulting in less room and need for input from these organizations. Additionally, the IBWC is legally responsible, under U.S. law, to maintain the infrastructure it oversees. The IJC does not maintain any infrastructure. The IBWC also makes use of Citizens' Forums that add value and expertise in certain areas to the agency.

Capacity

The U.S. funding for the IBWC is provided by the U.S. Department of State, while Mexico funds the IBWC through its Ministry of Foreign Affairs. Funding for joint efforts along the border is split between both governments. Interviews suggest that the U.S. contributes around \$30 million annually to the IBWC. The IBWC has recently benefited from an influx of stimulus funds that have provided for infrastructure upgrades and supplemental staffing. Each country's branch of the IBWC employs a dedicated staff. In addition to the above three departments, the U.S. IBWC structure includes dedicated positions for legal counsel, foreign affairs officers, and a Washington, D.C. liaison.

The IBWC leadership is well connected to the federal, state, and local public sectors in the U.S. and Mexico.

Observations

- Like its counterpart on the northern border, the IJC, the IBWC embodies an equal representation structure.

- States serve as conduits for programming and coordination in complex subject areas tackled under the auspices of the IBWC.
- The U.S. and Mexican federal governments provide capacity in terms of resources and dedicated staff.
- Cross-sector collaboration involving representatives from the interested public, NGOs, experts, and higher education are critical to the work of the IBWC because these representatives bring legitimacy and knowledge to international cross-boundary environmental issues.

The U.S.-Mexico Border 2012 Program (Also known as Border 2012)



The U.S.-Mexico Border 2012 program was established in 2002. It is a 10-year bi-national cooperative plan to protect public health and the environment along the 2,000-mile border region that is home to approximately 12 million inhabitants. It will expire at the end of 2012 unless extended.

Background

The Border 2012 Program is rooted in the 1983 Border Environmental Agreement signed in La Paz, Baja California, which responded to the rapid growth of companies located in the border region. Industrial growth along the border combined with differing environmental policies brought to light the need for collaboration. The La Paz Agreement defined the United States–Mexico border region as a 62.5-mile area on either side of the border that stretches from the Gulf of Mexico to the Pacific Ocean. It provided a forum for addressing environmental problems and environmental-related health problems in this region, and served as a legal foundation for Border 2012.^{21,22}

Cross-Boundary Collaboration: Examples from the Mexico 2012 Collaboration

An example of the difference cross-sector networks can make is the Mexico 2012 collaboration. Interestingly, although this program is frequently considered as taking a “bottom up” approach in that local officials set the agenda, the U.S. federal government and sometimes international institutions provide much-needed capacity in terms of staff, expertise, and monetary resources that enable locally-designed programs to get off the ground. For example, one Mexico 2012 programmatic aim is to provide adequate clean water to residents along the U.S.-Mexican border. Initiated and operated under the auspices of the Mexico 2012 Program, interviewees cited the involvement of the International Boundary Water Commission, Mexico 2012 Program, North American Development Bank, and Border Environment Cooperation Commission—two international institutions—as critical to the success of upgrading sewage treatment and sanitation systems in Mexicali. With funding, expertise, and capacity provided by these national and international institutions, along with the Mexican National Water Commission and state and local officials in Mexico, 93 percent of residents now receive proper sewage and sanitation services.²³

The Border 2012 tire pile cleanup is also seen as a success of collaboration across public sector levels and sectors.²⁴ Millions of scrap tires contaminate the U.S.-Mexico border, posing a serious threat to the environment and public health. These tires are improperly managed in stockpiles, illegal dumps, and scattered along the sides of the road, serving as an ideal breeding ground for mosquitoes, rats, and other disease carriers. Additionally, tire piles are fire hazards that, if set ablaze, can generate acute air, water, and land contamination. Under the auspices of the Mexico 2012 program’s Tire Initiative Collaborative Effort, four million scrap tires have been cleaned up in the U.S.-Mexico border region since 2004. Cross-sector partners include the Mexican environmental agency SEMARNAT, the U.S. Environmental Protection Agency, ten border states from both countries (California, Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon, Tamaulipas, Arizona, New Mexico, and Texas), local governments (Nogales, Arizona, Sonora, and San Luis, Sonora), as well as the private sector and local citizens.

In 1990, stakeholders from the U.S. and Mexico expanded La Paz by creating the Integrated Border Environmental Plan (IBEP), which focused on trade-related environmental impacts. In 1995, the first multi-year, “results-oriented” program (similar to Border 2012) was instituted in “Border XXI.” Given the criticism of IBEP for lacking public involvement, Border XXI involved a significant public participation process.²⁵ Border 2012 was subsequently established.

Mission

The Border 2012 Program’s mission, codified in law, is to achieve six goals related to environmental and public health challenges in the border region:

- Reducing water contamination
- Reducing air pollution
- Reducing land contamination
- Improving environmental health
- Improving emergency preparedness and response
- Improving environmental stewardship

Institutional Structure

The organizational structure includes equal representation of U.S. and Mexican interests. National Coordinators for the U.S. and Mexico, along with staff leads, operate out of their respective federal-level environmental departments: the U.S. Environmental Protection Agency and Mexican SEMARNAT.

Actors

Public Sector: The Border 2012 program involves active participation of the 10 border states (four from the U.S., six from Mexico), 26 U.S. tribal governments, the U.S. Environmental Protection Agency and Mexico’s Secretariat of Environment and Natural Resources (SEMARNAT), in partnership with the U.S. Department of Health and Human Services, the Mexican Secretariat of Health, and other federal, state, and local agencies.

Though the program is coordinated at the federal level by National Coordinators comprised of representatives from the U.S. EPA and Mexico’s SEMARNAT, it emphasizes a “bottom up” approach in which issues and projects are identified and

implemented at the local level. Thus, local stakeholders are said to guide “decision making, priority-setting, and project implementation.”²⁶ This approach encourages stakeholder involvement in a variety of opportunities, and provides funding for projects that meet the objectives of the program.

Private Sector: The private sector participates through one of four mechanisms:

- Regional workshops divided into four sub-regions
- Cross-border, broadly-based working groups focusing on issues such as environmental health, emergency preparedness, etc.
- Policy forums focusing on more specific issues such as air pollution, water quality, etc.
- Task forces or site-specific projects

Academic/NGO Sector: Because Border 2012’s precursor (Border XXI) was criticized for not involving NGOs in the implementation and information dissemination process,²⁷ the current program incorporates NGOs at the task force level.

Capacity

The Border 2012 Program has a joint dedicated budget provided by the U.S. EPA and the Mexican SEMARNAT, allocated annually upon requests to national legislatures and executive approval. In addition to federal funding, Border 2012 receives funding from state and local governments, the private sector, the North American Development Bank, and the World Bank.

In addition to two dedicated National Coordinators and two staff leads, the program has a senior-level dedicated staff of four and approximately 60 other program participants, including task force chairs and national, regional, state, and tribal contacts.

Observations

- The Border 2012 Program has a formalized, equitable structure and a coherent, codified mission, both of which provide it with authority on cross-boundary environmental issues.
- The bottom-up, locally-driven approach of Border 2012 to setting priorities and implementing goals lends it legitimacy.

- Representatives from the interested public, NGOs, experts, and higher education also give the program legitimacy and knowledge.

Arizona-Mexico Commission (AMC)

Established in 1971, the Arizona-Mexico Commission is a public-private, membership-driven, bilateral partnership at the state level that promotes a strong, cooperative relationship between the U.S. state of Arizona and its neighboring Mexican state of Sonora. Through advocacy, trade, networking, and information-sharing, the AMC concentrates on water management planning.



Background

The governors of Arizona and Sonora established the Arizona-Mexico West Trade Commission in 1959 to increase social interaction and commercial activity, including trans-border trade, on both sides of the border, and establish a platform for strategizing on collaboration for the greater good of the region.²⁸ This initial commission was charged with addressing topics of common interest in the economy, education, health and communications. In 1971, the organization became a not-for-profit and was renamed.²⁹

The AMC hosts a biannual Plenary Session in Arizona to connect communities; boost business; influence state, federal, and international policy development; and formulate programs to advance its mission throughout the year.³⁰ The event was cancelled in 2010 due to controversy over Arizona’s proposed law targeting illegal immigrants.

Mission

The mission of the AMC is “to improve the economic well-being and quality of life for the residents of Arizona through a strong cooperative relationship with Mexico and Latin America through advocacy, trade, networking, and information.”³¹

Institutional Structure

The Governor of Arizona chairs the AMC. The organization has a president and is governed by a Board of Directors drawn from the public and private sector. Its membership includes approximately 600 governmental and private sector organizations. It also has 14 committees dedicated to cross-border issues, including one on the environment.

Actors

Public Sector: AMC public sector actors are drawn from the state of Arizona and include members of the Office of the Arizona Governor, Department of Agriculture, Department of Commerce, Department of Environmental Quality, and Department of Health.

Private Sector: The board of directors, committees, and members of the AMC are drawn from the private sector.³²

Academic/NGO Sector: Committees also benefit from the membership of individuals from non-governmental organizations such as academic institutions and non-profit organizations.³³

Capacity

Members and sponsors provide the AMC's budget. Staff members are seconded from Arizona governmental offices. Leadership has strong ties to the public and private sectors. Public sector connections include those across the border.

Observations

- The AMC is primarily an economic advocacy organization, with limited ability to focus on cross-boundary environmental issues.
- However, like PNWER, it plays the role of facilitator and champion, with governors lending influence and clout to cross-boundary environmental initiatives.

Case Studies of Informal Collaboration

Overview: Informal International Environmental Collaborations

Name	Date Established	Established By	Governing Body	Staffing
San Diego/Baja Region	1990s	Primarily ad hoc networks and coalitions responding to a pressing issue	None; various ad hoc initiatives underway at the regional level	Flexible, depends on initiative
The Niagara 10	2007	Joint statement of municipal leaders	None	No dedicated staff; rather, municipal staff share portfolio with domestic issues

San Diego, California and Baja California, Mexico

Due to the diverse economic and political systems in the U.S. city of San Diego and the Mexican state of Baja California, cross-boundary environmental issues in this region are dealt with in an ad hoc and diffuse manner, with numerous autonomous actors engaged in myriad, decentralized initiatives.



Background

Cross-boundary environmental collaborations in the San Diego/Baja region are varied, with autonomous actors operating to further particular agendas. Effective collaboration at the regional level is impeded by several factors:

- The Mexican system of government is much more centralized than the U.S. one. Thus, decisions that may be made at the local or state level in the U.S. are often made at the federal level in Mexico.

- The U.S. has a merit-based civil service system, with governmental actors remaining in place for longer periods of time. In Mexico, local officials are more tied to political regimes. Hence there is more turnover in local entities that may collaborate on a given initiative.

Both of these forces make it difficult for cross-boundary environmental collaboration to take place.³⁴ In addition, economic disparity between the two border regions complicates effective collaboration.

Mission

Heavily dependent upon academic and NGO work, messages are framed and communicated in terms of what is important to individual actors. For example, although the environment, infrastructure, and health are interrelated concerns, these are expressed and prioritized differently across the region.

Institutional Structure

Efforts in the San Diego/Baja region are best characterized as clusters of ad hoc networks, highly diffuse, with little formal structure. Individual entities tend

to be responsive and adaptable to cross-boundary environmental challenges.

Actors

Public Sector: In 1996, the cities of San Diego and Tijuana entered into an agreement that committed their mayors to cooperate on waste reduction, pollution prevention, and recycling. In addition, the San Diego Association of Governments (SANDAG), comprised of the 18 cities and county government of San Diego, plays a role in some bi-national efforts. It has a “Borders Committee” that serves as a forum engaging authorities from Mexico and tribal governments.

Private Sector: The San Diego/Baja region struggles to achieve private sector participation because the private sector frequently does not perceive environmental issues as affecting their immediate interests.

Academic/NGO Sector: Leadership from academic institutions in the region is significant. The San Diego Dialogue, a public policy initiative of the University of California at San Diego, seeks to find solutions to cross-border regional environmental challenges. San Diego State University’s Institute for Regional Studies, as well as the Regional Workbench Consortium, spearheaded by an urban planning professor at the University of California at San Diego, also participate.

Capacity

Cross-boundary environmental initiatives that are able to achieve significant capacity in terms of funding and staff are usually tied to broader efforts led by the IBWC and the Mexico 2012 program. Funding is generally difficult to obtain without this support on the Mexican side. Public sector leadership connections tend to be varied and diffuse, while the academic sector plays a prominent role in serving as a catalyst for action.

Observations

- Cross-boundary environmental collaborations in San Diego/Baja are highly autonomous and diffuse, which allows actors a certain amount of flexibility to adapt to changing cross-boundary environmental needs.
- A local perspective provides legitimacy to San Diego/Baja cross-boundary environmental

initiatives; however, weak state and federal government involvement, and hence, lack of dedicated funding and staffing, leads to challenges.

- The academic sector provides a certain amount of moral authority, and hence, plays a prominent role in collaboration in the region.
- Different political systems and priorities on each side of the border impede collaboration.

The Niagara 10

Public sector leaders from local municipalities bordering the Niagara River in Canada and the U.S. created the Niagara 10 in 2007 to expand the geographic scope and importance of the Cross Border Mayors network and clean up the Niagara River watershed.



Background

As in the San Diego/Baja region, cross-boundary environmental collaborations in the Buffalo/Niagara region are decentralized and flexible. Though the implementation track record of the Niagara 10 is thus far limited, it played a strong role in commemorating the 100th anniversary of the 1909 Border Waters Treaty that founded the IJC.

Mission

The Niagara 10 seeks to find common ground among public sector officials on both sides of the border in order to address key issues such as international trade, the environment, water quality, and security.

Institutional Structure

The Niagara 10 is a bi-national network of local government leaders, with equal representation of Canadian and United States interests.

Actors

Public Sector: Public sector leadership is comprised, on the Canadian side, of actors from Fort Erie, Niagara Falls, Niagara-on-the-Lake, and the Regional Municipality of Niagara, all in Ontario. On the U.S. side, Buffalo, Niagara Falls, Lewiston, and Youngstown, all in the state of New York, as well as Erie and Niagara Counties, participate.

Private Sector: Although the Buffalo/Niagara Partnership is periodically invited to meetings, there are no formal private sector members of the Niagara 10.

Academic/NGO Sector: Although representatives of the University at Buffalo and Brock University periodically attend meetings, the Niagara 10 has not yet tapped the resources of the local academic or NGO sector in the bi-national region.

Capacity

As there is currently no budget for the Niagara 10, funding for Niagara 10-sponsored initiatives tends to come from the budgets of individual municipalities. The Niagara 10 currently does not employ any full- or part-time dedicated staff members, but rather relies on staff of member governments and the Canadian Consulate in Buffalo.

The Niagara 10 has been increasing its connections with larger groups such as the International Joint Commission and the Great Lakes Mayors.

Observations

- The authority and legitimacy of the Niagara 10 comes from common interests and goals and a sense of shared responsibility.
- The perspective of local public sector actors is important because they sit on the front lines of these issues, although local entities themselves lack capacity to solely address environmental issues that cross an international boundary.
- Without state and federal involvement, including funding and staff resources, and with little input from NGOs or the academy, local actors will find cross-boundary environmental collaborations challenging.

Findings: Cross-Boundary Collaborations

This section presents insights into achieving success in environmental collaboration across international boundaries, based on an analysis of the case studies described in the previous section. These insights may be applied to collaborations involving complex subject matters across any jurisdictional boundary.

Finding One: Successful collaborations are institutionalized in a way that allows for equal representation of participants on both sides of a geographic or other type of boundary.

Referred to by one interviewee as “the Noah’s Ark principle,” long-lasting and successful collaborations are structured to ensure equal representation and thus equal authority. A mirror image structure also allows stakeholders to work with their direct counterparts across a boundary, facilitating trust and action.

Five of the six case studies of formal collaboration have equal representation, mirror-image structures to ensure equal distribution of power between the United States and its Canadian or Mexican counterparts. For example, of the International Joint Commission’s (IJC) six members, three are appointed by the President of the United States (with the advice and approval of the Senate), and three are appointed by the Governor in Council of Canada (on the advice of the Prime Minister). This structure ensures that no one country has more clout than the other.

The International Boundary and Water Commission (IBWC), too, has a symmetrical structure. With the status of an international body and consisting of a United States Section and a Mexico Section, each Section is headed by an Engineer Commissioner. Wherever there are provisions for joint action or joint agreement of the two governments or for the furnishing of reports, studies or plans to the two

governments, it is understood that those matters will be handled by or through the U.S. Department of State and the Ministry of Foreign Relations of Mexico.

Another case that illustrates this principle is the Mexico 2012 Program, under which national coordinators for the U.S. and Mexico, along with staff leaders, operate out of their respective federal departments (the United States Environmental Protection Agency and Mexican SEMARNAT) to solve international environmental issues along the U.S.-Mexico border. According to one interviewee, these counterparts interact on a daily basis.

The BC-WA Environmental Collaboration Council also reflects this type of joint leadership structure. The Council’s structure is rooted in collaboration between Washington State and British Columbia. The task forces, too, are constructed similarly, with equal representation on each side of the border.

Pacific Northwest Economic Region’s (PNWER) unusually elaborate structure ensures balanced representation with an aim toward achieving consensus. Its components include an executive committee, consisting of one legislator from each PNWER jurisdiction; one private sector board member chair from each jurisdiction; four governors/premiers (or their designee); and the PNWER executive director. PNWER also has a delegate council, which serves as the founding entity of PNWER, and consists of the governors/premiers (or their representatives) from each of the state/provinces, as well as four legislators (and four alternates) from each state/province. The delegate council is encouraged to hold meetings of the delegates and alternates within each jurisdiction to discuss implementing legislative policy forwarded

by PNWER working groups. The council is responsible for coordinating the agendas from the public sectors of each jurisdiction, promoting participation in each working group, as well as ensuring that PNWER continues to adhere to its original mission and regulations as outlined in its founding statutes. It actively encourages bilateral and regional interaction between legislative members. The council is by design bipartisan, its members being chosen by all four party caucuses in the U.S. states, with Canadian provinces encouraged to include opposition party delegates. Additionally, there is a Private Sector Council (PSC), for which each state/provincial delegation selects four members from its jurisdiction to sit on the Private Sector Board of Directors.

Mirror image structure is, according to many interviewees, essential for success in nearly all international environmental collaborations. The only exception cited was the BC-WA Cooperation Council's Nooksack River Task Force, which was formed to address concerns about flooding in both British Columbia and Washington State. Because "any solution necessarily entailed one community winning and another losing," in the words of one interviewee, with flood waters diverted to one side or the other, a plan to address this issue was never accomplished, notwithstanding the organization's equal representative structure. Instead, the parties engaged in discussions and environmental modeling for 18 years without a real result.

Finding Two: While informal collaborations lack in institutional structure, they have flexibility to adapt to the most pressing issues of the day.

This finding is perhaps best illustrated in the case of San Diego/Baja, where the decentralized and ad hoc nature of cross boundary collaborations allow stakeholders on both sides of the border to respond to issues and galvanize support as needed.

Finding Three: Mission codification is important to cross-boundary formal and informal collaborations in terms of setting expectations, anticipating needs, establishing priorities, and achieving goals.

The eight case studies of cross-boundary collaboration suggest that a mission framed and codified by a legal instrument—either a treaty, Memorandum of

Understanding (MOU) or another formal document—is important for implementing cross-boundary initiatives. According to interviewees, a legally mandated mission makes it easier to establish a work plan with goals and performance measures because expectations are clear. That is, when actors are aware of the rules of the game, they can better anticipate what needs to be accomplished and move ahead to set priorities and achieve goals.

Formalizing missions and relationships through legal instruments sends a signal that an issue is important. Codification indicates, in the words of one interviewee, "we've arrived." Formalization also normalizes talking to counterparts across a border about topics of common concern. It allows for continuity as elected officials and their staff come and go, and issues change. A legally codified cross-boundary collaborative endeavor has staying power.

For example, the Great Lakes Water Quality Agreement of 1978, which built upon the 1972 agreement of the same name, was credited by one interviewee with "saving the relevance" of the IJC because it framed its mission and hence, focused its purpose and agenda. As "one of the most radical and comprehensive experiments in ecosystem management yet articulated for trans-boundary water resource management" (Becker 1993), the 1978 Agreement contained numerous amendments that explicitly framed the IJC's mission by addressing all sources of pollution to the lakes; focusing attention on remediation, control, and prevention of toxic contaminants from all sources; and specifying the implementation process of the Agreement.

The Mexico 2012 program's clearly articulated mission also helped it achieve success. As one interviewee said, all stakeholders "know exactly what to do" because of the program's formalized nature. Programmatic goals are in synch with the mandates of the 1983 La Paz Agreement between the United States and Mexico. For example, as the program was designed, 10 principles and six goals were identified, which ultimately became the action plan contained in U.S. law Title 22 of the United States Code, Section 277.

In contrast, in the San Diego/Baja California region, cross-boundary collaboration is ad hoc, with the absence of a "good mechanism for prioritizing [...]"

a regional environmental mission.” This inhibits concerted action. However, in the absence of a formalized mission, authority beyond the state has emerged. That is, the moral authority and clout of higher education in the region play a critical role in mission-framing. The relative lack of results of this collaboration, however, suggests that this authority is not enough in international environmental collaboration.

Finding Four: In formal cross-boundary collaborations, mission codification provides participants with legitimacy and authority.

Interviewees suggested that the fact that an international treaty or other foundational document exists is important to providing participants with the legitimacy and authority to make decisions and act. One interviewee said it was crucial to have a foundation that:

- Allows for staff mobilization
- Institutionalizes cooperation
- Provides a forum for actors to convene

All but one interviewee stated that it would be “highly desirable” to have collaboration codified in a legal instrument.

Finding Five: Formal and informal collaborations require the right mix of participants. Federal, state, and local government participation is important to cross-boundary collaborations involving complex subjects like the environment.

Our research suggests that cross-boundary collaborations in complex subject areas are successful when they involve large institutional networks and actors from all levels of government. According to one interviewee, “no single public sector actor can do it alone.”

Participation of local, state, and federal government officials is necessary for successful cross-boundary collaborations in areas such as the environment. However, if an issue transcends an international boundary, it may become problematic for local officials to engage in “international diplomacy.” Although local government actors bring legitimacy to an issue as front-line players, as one interviewee noted, “local public officials are not elected to engage in international negotiations. They are

elected to fill potholes, maintain parks, and fix roads.” Local officials lack capacity to address complex issues that cross an international boundary. Thus, linking local and federal-level governmental actors and bringing them together in the same room can make the difference between progress and stagnation.

Important as the public sector is for complex cross-boundary collaborations, it cannot achieve its goals alone. Successful bi-national environmental collaborations are cross-sectoral, involving the public, private, NGO, and academic sectors. Although the public sector has the authority to act on these issues, it lacks legitimacy that others bring to the table.

The IJC, IBWC and Mexico 2012 program serve as models for successful environmental collaborations, involving public sector actors at every scale and across myriad sectors. Several initiatives illustrate this point. Interviewees cited the International Lake Ontario-St. Lawrence River initiative undertaken by the IJC as one such example.³⁵ (See page 12 for an extended discussion of this initiative.)

Local efforts with weak state or federal government involvement, and with little input from NGOs or the academy, have met with minimal success. This is seen in the cases of San Diego/Baja and Niagara 10. Because the San Diego/Baja projects are ad hoc and decentralized, it is difficult to get all relevant actors to the table. For example, according to one interviewee:

In the San Diego/Baja region, addressing environmental issues is extremely complex because of the lack of coordination across governments and sectors. For example, for almost a generation, networks have been built and nurtured across the border, which enabled progress on certain issues. Progress was ad hoc, but it was progress nonetheless. However, international environmental collaboration has become even more difficult in the post 9-11 environment, with the swinging of the pendulum back from collaboration, making engagement more difficult because of transaction costs. Everything about the border is more difficult because of the border. Many of the environmental issues are quickly compartmentalized, with

public sector officials not talking to each other. So while government is fractured at all levels in terms of responsibilities for addressing environmental problems, the public sector doesn't talk very well to corporations, and it doesn't listen to academics in the region.

The Niagara 10, too, has met with minimal success. Though interviewees agreed this effort had potential, they were doubtful that it could thrive without participation of state, federal, NGO and/or higher education actors.

Finding Six: In complex cross-boundary formal and informal collaborations, U.S. states play multiple roles as facilitators, conduits, and agents of change.

Although environmental programming is the domain of the federal government, state governments in the U.S. are leading actors for facilitating, channeling, and acting on international cross-boundary initiatives.

First, states play the role of facilitator and champion.

Interviewees commented that as political and advocacy organizations, PNWER and the Arizona-Mexico Commission have met with minimal success when it comes to a substantive, programmatic focus on international environmental issues primarily due to the fact that these entities are not set up to focus exclusively on these efforts. Rather, these organizations, by providing regular meetings and forums for policymakers, serve to keep international environmental issues at the forefront of policy discussions. In essence, they provide a context for state governments to engage in foreign collaboration. Although PNWER and the Arizona-Mexico Commission are not involved in international environmental programs per se, in the words of one interviewee, border state governors "have tremendous influence" when it comes to setting international environmental priorities. They channel this influence through these organizations. Another interviewee noted that direct state-to-state or state-to-province engagement helps states assert their right to act on bi-national environmental issues.

Second, states serve as conduits for programming and coordination in complex cross-boundary environmental issues. For example, under the terms of the 1944 Treaty relating to the Tijuana River, the

IBWC in 1967 recommended and approved a joint project for the control of floods on the Tijuana River in the United States and Mexico to protect developments near the border in San Diego, California and Tijuana, Baja California.³⁶ A joint project was essential because coordinated flood control works were required in each country to protect developments in the other country. The project consisted of a concrete-lined channel for the Tijuana River, extending 2.7 miles upstream from the boundary in Mexico, and of a concrete and rock-lined channel in the U.S. extending 0.9 miles downstream from the boundary. The levees in the U.S. tie into high ground to protect the community of San Ysidro on the north and the City of Tijuana on the south. According to one interviewee, the State of California played a pivotal role in this project by providing the right-of-way for the channel and the levees. Without state officials' cooperation, this initiative "would have been dead in the water."

States also serve as conduits in international environmental initiatives through the IJC working groups. For example, according to one interviewee, the IJC is currently reviewing water level- and flow-regulations for the Lake Ontario-St. Lawrence River system.³⁷ Previously the IJC approved the construction and operations of the Moses-Saunders Dam, located at Massena, New York, and Cornwall, Ontario under the Boundary Waters Treaty of 1909. Regulation of the flow of water through the dam affects levels and flows on Lake Ontario and the St. Lawrence River downstream to Trois Rivières, Quebec. The IJC has been working to find an approach to regulating levels and flows that takes multiple stakeholders' interests into consideration. After considering public comment on a draft proposal released in March, 2008, commissioners proposed that a working group, composed of senior representatives of the IJC and the governments of Canada, the U.S., Quebec, Ontario, and New York be established to assist with developing a mutually acceptable approach to regulation, including mitigation and adaptive management. The working group also is to provide advice in response to commission proposals on the future regulation of water levels and flows in the Lake Ontario-St. Lawrence River system.

Third, states act as change agents in international environmental collaborations. The BC-WA Environmental Collaboration Council is a prime

example. The State of Washington established it to increase cross-border environmental cooperation with little involvement from the federal government. According to one interviewee:

The BC-Washington Environmental Cooperation Council was the right vehicle at the right time. In the early days, although federal representatives knew what the state and province were doing and attended meetings for informational purposes, it was important for the state and province to take the lead role in solving problems like Puget Sound and the Georgia Basin water quality issues. The problems were perceived not really so much as a federal government problem, but a problem for Washington State and British Columbia to solve. Leadership drew upon a history of linkages between the state and province to take concrete action in a way that was unprecedented at the time.

Finding Seven: Formal collaborations tend to have secure financial resources and staffing, whereas informal collaborations secure these on an ad hoc basis.

A key component of capacity is financial resources. All interviewees suggested that there is frequently a lack of adequate funding to completely tackle the environmental issues on the table. However, five of the six formal cross-boundary collaborations evaluated had dedicated staff and budgets. Because the BC-WA Council has neither, its response to problems is more reactive, as opposed to the proactive stance taken by its formal collaboration counterparts.

Neither of the two examples of informal collaboration—San Diego/Baja Region and Niagara 10—have staff dedicated solely to international environmental collaborations. Hence, informal collaborations tend to be ad hoc, addressing issues on an as-needed basis.

Finding Eight: In both formal and informal collaborations, leadership from any sector must be able to make connections to move collaborations forward.

Another key feature of capacity is the ability of leadership to forge the right connections to “get the job done.” According to interviewees, effective leaders

make connections to establish a vision, set and achieve goals, seize opportunities, and broker conflicts. Interviewees suggested that such leadership makes the difference between success or failure. Interviewees described such leaders as having “clout,” “sufficient juice,” “empathy and sensitivity,” being “inspirational,” “getting it,” and “empowering action.” In addition, leaders must be able to work with people from different backgrounds. In the words of one interviewee, “style matters.” Visionary leadership, not necessarily from the public sector, can lead to greater resources, political buy-in from all levels of government and across sectors, and staying power.

The case studies suggest that well-connected leadership can emerge from a variety of sectors. Oscar Romo, a watershed coordinator for the U.S. National Oceanic and Atmospheric Administration in the Tijuana River Estuarine Research Reserve, is one such example. Romo’s ability to identify areas of mutual interest, coordinate programs, provide opportunities for networking and educating local leaders, and forge connections was cited by interviewees as critical in securing participation of the Mayors of Tecate and Tijuana and the State of California in a regional erosion-control project.

The Arizona-Mexico Commission emerged from another example of connected leadership. In the late 1950s, Arizona Governor Paul Fallin reached out to Sonora Governor Alvaro Obregon Tapia through a “first-of-its-kind university-sponsored conference.” From the beginning, this collaboration extended beyond the public sector.³⁸ Professor Paul Ganster at the University of California at San Diego, who is bilingual, was seen as pivotal in forging connections. According to one interviewee, Ganster typifies the following attributes:

Sometimes it is better to be a sensitive outsider conveying respect for how things function, yet not be considered so conversant that you are aligned with a given group. Key in brokering relations is empathy, the ability to convey respect, and a willingness to learn.

Conversely, the inability of leaders to forge connections was cited as a reason for the lack of progress made by Niagara 10. According to one interviewee,

The Challenge of International Cross-Boundary Collaborations

International cross-boundary collaborations fundamentally involve consensus and diplomacy, and hence, these kinds of collaborations provide a unique challenge. Consensus is de rigeur in international negotiations. As a result, bi-national institutions tend to reflect the principle of consensus, as seen in the formal collaborations of the IJC and IBWC. However, as one interviewee noted, consensus is not without a cost. Several interviewees noted that the “creative juice” that comes with conflicts can “sometimes get lost” in forging agreement and building consensus.

Additionally, international environmental collaborations, whether formal or informal, inevitably confront the following unique challenges.

Challenge of domestic priorities: International collaborations, like their domestic counterparts, are infused with politics. Nonetheless, international environmental collaboration is challenged by the lack of a constituency to which political leadership is responsive (what one interviewee called the “homelessness of constituencies”). At the end of the day, political livelihoods depend on domestic—not international—constituencies. Thus elected officials maintain a focus, understandably, on domestic priorities.

The revolving-door nature of electoral politics presents challenges as well. Public officials at all levels of government in the three countries covered by this report are subject to different electoral cycles. Politicians typically show little commitment to international collaborative efforts unless they address a short-term interest. There is, however, one caveat: if the mission and structure are formalized in a legal instrument, this places political capital on an international environmental issue, which is very difficult for local officials to do on their own. The issue then receives priority and may garner votes.

Challenge of capacity: The capacity of government at any level to engage in international environmental collaboration ultimately depends on financial resources, staff, and expertise. Not surprisingly, interviewees unanimously said that funding international environmental initiatives is a perennial problem, particularly in the current economic climate. Several interviewees noted that formal entities like PNWER, the BC-WA Environmental Cooperation Council and the IJC have recently suffered because government agencies have cut back on international travel. As a result, U.S. officials and their staff cannot attend meetings held in Canada or Mexico. Additionally, according to one interviewee, if an international program is part of a public sector employee’s portfolio, it tends to be the first to be cut when budget crises arise because domestic issues receive priority.

Furthermore, without dedicated staff, international environmental projects can often falter for years. Interviewees across the board noted this challenge in virtually every case study, formal and informal alike.

Finally, local governments’ lack of capacity presents challenges to progress on international environmental issues. Local government officials generally lack sufficient environmental expertise and focus on issues directly impacting their constituents, such as roads, parks, and sewers. Local officials often have insufficient access to experts and research to guide them.

Challenge of different governance and perceptions: Three types of differences between countries can thwart progress on international environmental initiatives:

- The way government is organized
- The manner in which environmental issues are defined and understood
- The perception of interests and values

These differences manifest along the U.S.-Canadian and U.S.-Mexican borders. For example, several U.S. interviewees cited Mexico’s tradition of centralized government as a challenge for finding the right local partners. Additionally, differences are found in defining the environmental problems. In San Diego, for example, residents are concerned about beach pollution; in Tijuana, concerns focus on intestinal diseases caused by poor water quality. Differences in interest or perceived value are illustrated by the case of the Niagara 10. One interviewee noted that the City of Buffalo, as the largest local government member of the Niagara 10, is not convinced that international collaboration is worthwhile. This may be so, even though southern Ontario is much stronger economically than western New York State.

the Cross Border Mayors Group, the coexisting network from which the Niagara 10 was born, had this kind of leadership from Anthony Masiello, then-mayor of Buffalo. “In the early days, that made attending meetings exciting. No one has picked up the ball and taken on the role of connecting the dots for the Niagara 10.”

Finding Nine: Social capital or trust is important for connected leadership in formal and informal collaborations.

Our research suggests that social capital or trust is important to actors’ ability to forge relationships. Interviewees unanimously stressed that building trust and establishing relationships is essential to their collaborative enterprises. Nonetheless, social capital, while necessary in successful international environmental collaborations, is not sufficient, as demonstrated by the cases of the Niagara 10 and the San Diego/Baja region.

Recommendations

The following recommendations apply to any complex, cross-boundary collaboration.

Formal Collaborations

Recommendation One: Set up a legal structure that allows for equal participation on both sides of the border. Whether the collaboration is at the international, state or local level, ensure that each side has equal representation to allow for equal authority.

Recommendation Two: Legally codify your mission. Establish principles and goals to provide the cross-boundary initiative with authority. A legally codified mission helps establish priorities, timetables, and a path for action.

Informal Collaborations

Recommendation Three: Be flexible and willing to adapt. Flexibility will allow you to focus on the most pressing issues and gain traction in a direction that has the most buy-in from participants.

Recommendation Four: Commit expectations, needs, priorities, and goals to writing. Although a legally codified mission is not the norm in informal collaborations, a clear mission is essential. Clarifying your mission in writing at minimum ensures that participants are on the same page, provides some direction, and manages expectations accordingly.

Formal and Informal Collaborations

Recommendation Five: Engage in front-end planning to ensure the right mix of participants is at the table. As this report demonstrates, local, state, and federal actors provide different value to an enterprise. Local

government officials can provide legitimacy. Federal officials can provide staff capacity and resources. State involvement may be necessary as a conduit for programmatic funding, advocate in Washington, D.C. or initiator of collaboration. Additionally, private sector, NGO, and academic participants can offer legitimacy based upon expertise. If there is a less substantial role to be played by the public sector, encourage leadership from these other sectors. In particular, the academic sector can provide an unbiased view that can be important for moving a cross-boundary collaboration ahead. Organizers should ask themselves which stakeholders would be most appropriate for a given collaboration.

Recommendation Six: Dedicate staff to the endeavor. Whether in a formal or informal collaboration, having someone dedicated to the cross-boundary issue will encourage more progress than if it is one of many tasks that a person has to address.

Recommendation Seven: Recruit leaders who have a broad network and social capital in the subject area and who are willing to bring other relevant people on board. Because complex international collaboration falls outside of the jurisdiction of any one individual or agency, it is important that leadership has the willingness, and the ability, to reach out to a broad network and bring other like-minded individuals to the table. Respected leadership can move a cross-boundary collaboration along with fewer pitfalls. Think about individuals in the field who have “juice,” initiative, and the ability to bring people to the table and strengthen relationships. Call that person to provide insight into the issue, and then ask whether he or she is interested in participating.

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5. The IJC and Public Participation, p. 145
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