

# ONE

## Research on Transboundary Environmental Governance in North America

### *New Approaches to Existing and Emerging Challenges*

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#### INTRODUCTION<sup>1</sup>



North America territorially encompasses a diverse mosaic of interrelated ecosystems forming a larger and interdependent whole.<sup>2</sup> The Commission for Environmental Cooperation (CEC) counts 15 unique terrestrial ecoregions and 19 marine ecoregions, many of which cross national boundaries (CEC, 1997; Wilkinson et al., 2009). These ecosystems provide services vital to individual and community health, including an impressive array of fluvial systems, mineral and forest resources, and biodiversity. However, their management is complicated by the reality of multilayered territorial fragmentation, historical patterns of heavy industrialization, and oscillating levels of economic integration. The 1994 North American Free Trade Agreement (NAFTA) codified integrative processes that were already underway and have since intensified, and which have considerable implications for the living standards experienced by the inhabitants of the three nation-states. More than US\$2.5 billion in merchandise crosses between Canada, the United States, and Mexico every day, and hundreds of billions of dollars of foreign direct investment have flowed into each country from the NAFTA trading partners since the treaty went into effect (NAFTANOW.org, 2013). This integration has evolved with limited explicit regard for the known ecoregions, yet it has substantial ecological implications. For example, electricity is often generated from natural resources in one country and consumed in another, the extraction and processing of petroleum for sale on the

global market is continentally integrated, and toxic materials are regularly transported across the two borders.

While Canada, the United States, and Mexico have complex regulatory regimes for managing a wide range of environmental challenges, there is limited policy congruence and, of course, territorially demarcated policy realms limit administrative and regulatory reach. To address problems related to managing transboundary environmental issues in North America, governments have ratified agreements and created bilateral and trilateral organizations to ostensibly facilitate collaboration and policy coordination among stakeholders. Similarly, many transnational policy networks have evolved in the nonstate sectors as well. Yet the function of these organizations and networks in the broader policy process, and their geographic reach, is not always entirely clear. This volume sheds light on these evolving networks with academic rigor and empirical scope.

Specifically, this book examines the binational and trinational governance of transboundary environmental issues in North America. Given the proliferation of the international organizations and transnational networks with ostensive potential to facilitate continentally integrated policy making, we ask whether a transition is occurring “towards continental environmental policy.” Do we see what Stephen Mumme and Pamela Duncan (1997) call “fragmented bilateralism” (p. 43) or is there increasing evidence of the “sub-state actor hypothesis,” which is especially popular among North American climate change policy studies and posits that subnational actors (states and provinces, cities and towns) have become, by default, the key actors in transborder environmental governance today (Betsill & Bulkeley, 2004; Boychuck & VanNijnatten, 2004; Fry, 2004; Rabe, 2008; Selin & VanDeveer, 2009)? Similarly, has the “downscaling” observed by scholars of transboundary water governance, and the concomitant expansion of nongovernmental actor participation, occurred equally across binational relationships and in other environmental policy issue areas (Norman, 2015; Norman, Cohen, & Bakker, 2013)?<sup>3</sup> While seeking to answer these broad questions, the contributions provide tentative answers to the following questions:

- What transnational networks and international organizations are significant in the governance of transboundary environmental issues in North America?
- Has the proliferation of these networks and intergovernmental organizations facilitated a transition of North American environmental governance towards integrated continental environmental policy? And,

- o To the extent this has happened, what is its scope in terms of stakeholder inclusion, organizational and network activities and functions, and issue comprehensiveness?
- o To the extent this has *not* happened, what alternatives have proliferated, and which policy directions can take us closer to realizing coherent, sustainable arrangements?

Scholars studying North American environmental policy have asked these questions—increasingly—in recent years, and have begun to provide tentative answers for this evolving policy domain. This research has reflected a healthy coalescence in approaches to a perennial set of environmental problems (Temby, 2015). Drawing on literatures developing concurrently in both international relations (IR) and public administration on collaborative networks and governmental organizations as interactive bureaucracies (Agranoff & McGuire, 2001; Barnett & Finnemore, 2004; Biermann & Siebenhüner, 2009; Heckscher, 1994), recent studies underscore the role network participants perform in sharing knowledge and developing, coordinating, and implementing policy, and focus on the network and organizational properties likely to bring about successful outcomes (McLaughlin & Krantzberg, 2012; Pacheco-Vega, 2015; Temby, Rastogi, Sandall, Cooksey, & Hickey, 2015). They identify a place for subnational and federal government agencies, binational and trilateral organizations, scientists, and economic stakeholders in governance arrangements facilitating mutual learning and adjustment so that complex environmental problems can be managed in an integrative, inclusive, and sustainable fashion (Craig, Studer, & VanNijnatten, 2013; Healy, VanNijnatten, & Lopez-Vallejo, 2014; Norman, Cohen, & Bakker, 2013).

In this book, we seek to advance this discourse by presenting current research on binational and trilateral environmental policy in North America on a wide range of topics. These include the “commons” issues of transboundary biodiversity and natural resource governance on which so much recent research has focused, and also the related issues of transboundary energy policy and climate change mitigation. The latter retain special contemporary salience given the expansion (and, more recently, the productivity contraction) of the Canadian tar sands and the stated commitment of the United States, Canada, and Mexico to address planet warming greenhouse gas emissions (GHGs). Yet energy and climate change adaptation appear to be unique policy areas in relation to the others, with their own peculiar constellations of actors and governing arrangements at differing levels of development; accordingly, there is a clear need for variance in the analytical frameworks that can help us understand how they

operate on a continental scale (Studer, 2013; Temby, 2015). We return to this issue later in this chapter and in these authors' respective chapters, as they seek to spell out the roles for the diversity of implicated actors in specific policy areas.

We introduce this edited collection by providing an overview of some of the recent conceptual innovation relevant to the study of North American environmental politics, including research represented by chapters in this volume. These are the "new approaches" referred to in the title. First, however, we briefly discuss some of the salient environmental issues for which continental governance is actively practiced and that are driving experimental governance arrangements. As the title of this chapter suggests, overlaying and interacting with the longstanding environmental issues are "emerging challenges" calling for institutional innovation in addressing them and developments in the scholarly understanding of how these institutions operate.

#### EXISTING AND EMERGING CHALLENGES: THE NORTH AMERICAN ECOPOLITICAL CONTEXT

The environmental challenges with continental and transboundary implications are numerous and relevant at different scales, from the management of transboundary ecoregions to "glocal" issues in which global economic processes entailing cross-border transactions degrade local environmental conditions. In North America there are several categories of natural resources and wildlife that cross political borders and for which management is a challenge of bilateral and potentially trilateral collaboration. Many of these are related to cross-border resources, and migratory species such as the gray whale and the monarch butterfly, and the intentional and incidental introduction of invasive alien species (IAS). Shared water resources are a primary example, and climate change further challenges the fragile governance structures that have been erected in this area during the past century. Problems include increases and decreases of water supplies, including new drought and flood patterns (Kling et al., 2006); the demand for more diversion projects with trans-border consequences; increased ranges of IAS; shifts in fish habitat; and other threats to future water resources, riparian peoples, and relations between Canada, the United States, and Mexico.<sup>4</sup>

At the same time, perhaps more than any other area, binational institutionalism has been fairly strong in water relations, most notably in the Great Lakes region: the International Joint Commission (IJC) retains its reputation as a model of shared resource management (though see

Parrish, 2006), and the partial success of the Great Lakes Water Quality Agreement is encouraging. However, there are simmering and newly emerging transborder water disputes from the Pacific to the Atlantic (Banks & Bourget, 2013; Brandson & Hearne, 2013; Locke & McKinney, 2013) as well as along the U.S.-Mexican border (Gerlak, Zamora-Arroyo, & Kahler, 2013; Mumme, 2003), and climate change promises to pose especially acute challenges in this issue area. Subnational units are certainly playing an important role in developing water management (Brown, 2015; Hall, 2006; Norman, 2015) and adaptation policy, but water is such a high priority for all three national governments we may see their influence diminished as adaptation needs are recognized.

In one of the nastier positive feedback loops that we face today, climate change poses a fundamental threat to biodiversity (Smith et al., 2012), the further loss of which drives continued climate change. We need to assess continent-wide policy responses, including cross-border habitat protection and peace parks, migratory wildlife conservation, border control for unwanted pests and other efforts to curtail the spread of IAS, such as Asian carp, purple loosestrife, pine beetles, zebra mussels, and others (Sanders & Stoett, 2006). Such policies will need to be particularly sensitive to the Canadian-U.S.-Mexican relationship and to communities dependent on wildlife and other forms of biodiversity in natural settings. We can expect to see the emergence of subnational units playing key roles here across the border regions, including scientists, farmers' associations, First Nations and American Indian communities, and voluntary recreational groups.

Beyond water and wildlife, other cross-border issues will continue to influence network development and political activity, including forestry, land degradation and desertification, mountain range conservation, and others. In the U.S.-Canadian case, uniquely, the question of Arctic resources is gaining prominence. More than just another shared border between the two countries, the Arctic bioregions represent one of the greatest challenges related to climate change and the pursuit of environmental justice, since the inhabitants of the Arctic have contributed so little to the risks they now face as ice sheets melt, sea levels rise, tundra softens, keystone species are displaced, and persistent organic pollutants continue their northward journeys (see Koivurova, Keskitalo, & Banks, 2009). The Arctic has also been a source of both prolonged territorial conflict and sustained cooperation between Canada, the United States, and other circumpolar states (Huebert, 2006). One would not anticipate subnational units having a great deal of influence in the development of bilateral Arctic relations, since they are relatively powerless communities; however, land claims processes have given First Nations new weight in negotiations, and

Alaska remains a decidedly powerful state within the American federation, due primarily to its oil wealth.

On the U.S.-Mexican border, the industrialization accompanying economic integration during the past 30 years has brought about substantial water and soil pollution and natural habitat loss. Making matters worse, the economic marginalization of the borderland inhabitants suffering this environmental degradation presents a challenge to the binational and trinational environmental organizations purportedly designed to integrate them into formal decision-making processes (Simon, 2014). The reluctance of the three governments to facilitate more inclusive environmental governance, coupled with the borderland region's pressing challenges, has called into question the legitimacy of the relevant regional binational and trinational institutions. This has improved only slightly in recent years with the increased transparency of the famously insular binational water management organization, the International Boundary and Water Commission (IBWC), to the involvement of nongovernmental stakeholders. Yet the extent of the unresolved challenges to habitat and public health that this organization must address (e.g., water allocation and quality) promises to keep it under increased scrutiny.

Finally, there are the considerable challenges associated with the regional (transboundary and continental) distribution of energy production and consumption. Outside of regional markets for electricity sales and distribution (e.g., Quebec and the northeast United States), little binational or trinational regulation of energy takes place. Yet the transmission of oil, coal, uranium, liquefied natural gas, and other energy resources is a constant issue and will remain so as long as, for example, Mexico's oil supplies deplete, Canada's become more available, substantial refining capacity remains in the United States, and all three countries participate in the extraction of natural gas from shale formations. The BP oil spill of 2011 provided ample evidence of the continued threat to biosafety presented by deepwater oil drilling platforms, and pipeline leaks and tragic train derailments further amplify legitimate concerns about the sustainability of energy resource transport systems (see Merry, 2014). Integrated efforts to move towards renewable energy resources, are occurring, however, and provide evidence of shared concerns and goal setting (Etcheverry, 2013; Rabe, 2013).

Understanding how Canada, the United States, and Mexico have responded to these complex sets of issues, what actors are important in the process, and where the deficiencies and opportunities for improvement exist requires enhanced analytical tools. We turn to the most significant recent conceptual developments by scholars working on these new approaches in the next section of this chapter.

NEW APPROACHES: CONCEPTUAL DEVELOPMENTS IN  
NORTH AMERICAN ENVIRONMENTAL GOVERNANCE

This book's subtitle, *North American Transnational Networks and Governance*, reflects significant conceptual developments in the study of North American politics and, more specifically, environmental governance. Largely extraneous to national regulatory processes, alternative "governance" arrangements are in play in binational, trilateral, and international efforts to coordinate programs and share knowledge. They typically take the form of "networks" of actors, whose members are often state, provincial, or federal government agencies, municipal governments, scientists, economic stakeholders and, at times, multinational corporations. Given the arguable democratic deficit in the process, a more appropriate characterization is perhaps "(semi-) inclusive technocracy." Furthermore, often such networks feature the participation of one of the many North American international environmental organizations created and funded by two or three of the continent's nations.

In a recent volume marking the 20th anniversary of NAFTA, titled *Regional Governance in a Post-NAFTA North America*, Brian Bow and Greg Anderson (2015) observe that much of the early scholarly literature aimed at understanding the development of this trilateral institution was "looking in the wrong places and expecting the wrong things" (p. 1). Their point is that research using the lens of international negotiation and formal policy infrastructure development failed to capture the wealth of changes in North American governance occurring during the past 20 years. However, more recent conceptual developments, occurring largely outside the study of North American politics, have revealed that actually quite a bit happened. Bow and Anderson specifically highlight the research commonly categorized under the label "multilevel governance" as important for locating governance and accounting for change.

Multilevel governance (MLG) was popularized by Liesbet Hooghe and Gary Marks (2003), who used the term to organize different approaches to research on governance "dispersed among multiple centers of authority" (p. 233). They classified contemporaneous literature depicting a disaggregated state and responses to the resulting coordination challenges into two categories, unimaginatively titled "Type I" and "Type II." Type I governance represents federally structured systems that include general-purpose jurisdictions (in particular, local jurisdictions), jurisdictionally defined (nonintersecting) organizational membership for policy actors, a limited number of jurisdictions, and a durable architecture that persists beyond the circumstances justifying its establishment (Hooghe & Marks, 2003). Type II governance represents shorter-term and more flexible

arrangements. Here, governance operates on more scales, networks are formed around specific problems and may cease to exist when the problems are sufficiently addressed, they have overlapping members, and relationships are more informal. In Type II governance, working groups of bureaucrats from different organizations are one form of an evolving, depoliticized underbelly of governance.

These are, of course, ideal types, as Bow and Anderson point out. In the North American context, transnational networks address transnational issues, but it happens within the constraints of international treaties and with the participation of international organizations and federally arranged national and subnational agencies. And, as the contributions of this volume on environmental governance show, sometimes adaptive networks can reshape the durable bi- or trinational architecture. Given this dialectical relationship underpinning the “new mode of regional governance in North America,” Bow and Anderson (2015, p. 3) observe that the extent to which binational relationships exhibit Type I or Type II arrangements should be a priority for empirical investigation.

Fortunately, recent research in the field of IR, augmented by studies of public administration, has provided useful concepts for making sense of this complex political space.<sup>5</sup> While these multilevel governance approaches to policy making have been applied to many different issue areas, their application in the environmental governance issue area has been particularly fruitful, and provides a conceptual basis for this volume’s analyses. In IR, constructivist theory has expanded the field’s research program by examining questions about the role of government agencies, intergovernmental institutions, and global activists in diffusing norms and framing knowledge (Finnemore & Sikkink, 1998; Hoffmann, 2005; Litfin, 1994; Price, 1998; Wapner, 1995). A common concern for scholars adhering to this approach involves examining who establishes rules used for governance and who is viewed as having authority to do so. For example, Peter Haas (1990), in a well-known study of Mediterranean Sea environmental management, discusses the role of “epistemic communities” providing technical expertise and framing scientific knowledge. These experts in government agencies, universities, and activist organizations facilitate the management of shared natural resources by filling a technical gap and enhancing government capacity by disseminating a shared understanding of how to address specific environmental challenges. The epistemic community’s authority is derived from its perceived expertise and knowledge of the issue area. The recent establishment of the UN-based Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is an example of an epistemic community asserting policy relevance.<sup>6</sup>



Of late, an important branch within IR constructivist scholarship has examined international organizations and their secretariats as *bureaucracies*, exploring the ways in which this understanding can contribute to a research program examining international organizational dynamics and influence (Barnett & Finnemore, 2004; Biermann & Siebenhuner, 2009; Jinnah, 2014). These scholars argue that international organizations, as bureaucracies, derive their authority from their capacity to expertly develop impartial and technocratic rules governing their own behavior and the behavior of relevant external actors. This rational-legal authority is supplemental to (and potentially interacts with) whatever delegated authority such organizations explicitly receive from the governments that created them. It has several implications for the behavior of international environmental organizations (including the transboundary environmental institutions in North America). It grants them a degree of autonomy in relation to the governments that created them. Obviously North American transborder environmental organizations have *some* measure of autonomy, as the statutes creating the organizations typically outline the specific tasks that have been delegated to them by member states. However, as Finnemore and Barnett explain, international organizations possess a degree of discretion in exercising their authority by virtue of the fact that understandings of the complex problems they are expected to govern are often underdeveloped; and they tend to develop their own cultures and internal processes in carrying out their delegated tasks, which can lead them to pursue their own distinct interests (see also Jinnah, 2014). For example, as Stephen Mumme (1984) illustrates, the U.S. Section of the IBWC has exercised “substantial institutional autonomy” in mediating between the U.S. Department of State and the states along the U.S.-Mexican border in their relations with Mexico (p. 115). Despite being formally overseen by the U.S. Department of State, the IBWC’s influence is a result of its clientele relations with the states and specialized expertise. Rational-legal authority also grants transboundary environmental organizations types of power that understandings based on regulatory capacity or the mere provision of information do not capture. International organizations can “use their authority to orient action and create social reality” by classifying information, defining concepts, constructing problems, and identifying actors (sometimes themselves) as qualified to address the problem (Barnett & Finnemore, 2004, p. 6).

This IR constructivist understanding of organizational influence permits consideration of the possibility that organizations’ actions can contribute to policy innovation through interaction with other implicated public agencies and a contribution to learning through collaboration.

Indeed, the “new public management” scholarship has explicated a “post-bureaucratic” way for government organizations to function (Aucoin, 1995; Hecksher, 1994; Kernaghan, 2000). According to this view, postbureaucratic organizations operate on the basis of consensus rather than hierarchy, are concerned with relationships rather than specific tasks, and seek to innovate rather than maintain the status quo. Subsequently, a robust literature on policy networks developed into a mainstay of the public administration field, with scholars observing that environmental policy (among other complex issue areas) is increasingly formulated by diverse actors operating within such networks (see Isett, Mergel, LeRoux, Mischen, & Rethemeyer, 2011, for the state of the art).

Networks arguably fitting the postbureaucratic mold tend to be issue specific and include both public and private sector participants (such as public agencies from multiple levels of government) as well as arms-length nonprofits (Agranoff & McGuire, 2003; Edelenbos, van Buuren, & van Schie, 2011; Giebels, van Buuren, & Edelenbos, 2015; Imperial, 2005). They are utilized by governments to respond to complex and cross-cutting environmental issues in which the knowledge needed to inform decision making is highly specialized yet fragmented across bureaucratic agencies, and when regulatory jurisdiction is shared both horizontally (i.e., across governments and agencies within governments) and vertically across levels of government (Agranoff, 2007; Berardo, Heikkila, & Gerlak, 2014; Imperial, 2005). These networks enable agencies to share and integrate specialized knowledge and develop institutional capacity to address what Rittel and Webber (1973) refer to as “wicked” problems of modern governance. Their membership tends to be overlapping among issue areas, with public agencies typically participating in networks on a wide range of topics. For example, as Christopher Brown (2015) has shown, a network of more than 20 federal and state or provincial agencies and local governments formulate policy for the management of the transboundary Abbotsford-Sumas aquifer in the Salish Sea region on the U.S.-Canadian border. These environment, health, and agriculture departments operate at two levels of government and also with indigenous tribal governments. Moreover, not all of those involved are even formal governmental agencies; also participating are staff from Washington State University, nonprofit organizations, and industry groups with a stake in decision making on aquifer use.

The emergence of environmental management through issue-specific collaborative networks, and the ability of transboundary North American organizations to participate in them, suggests that bilateral and trilateral environmental governance may be a multiagency and multistakeholder affair. Rather than evaluating individual organizations or regimes for

their effectiveness in compelling states to behave differently (i.e., as independent variables), we should consider the possibility that they operate within and thereby contribute to the construction of these networks: defining problems, framing knowledge, categorizing information, dedicating specialized personnel, and playing an intrinsic, if not a defining, role in the development of policy. Regulatory authority often rests with domestic agencies, but even then it is a decentralized array of agencies at several levels of government that (ideally) seek to coordinate policy making in addressing highly complex problems. In these situations, good information is in demand and in perpetually insufficient supply, and intergovernmental organizations and activists with technical expertise potentially play an important part.<sup>7</sup>

While this volume contains several examples of scholarship within this theoretical orientation, some recent attempts to specify loose conceptual frameworks are worth highlighting because they evidence the recent coalescence in approaches to North American environmental policy. First, in a recent special issue of the journal *Review of Policy Research* on North American natural resource and biodiversity governance, we proposed using two dimensions to distinguish between and categorize international environmental organizations: the extent to which they behave postbureaucratically, and whether their dominant function is regulatory or aimed at building capacity by channeling funds or information (Stoett & Temby, 2015). Following Charles Hecksher (1994), we called the bureaucratic/postbureaucratic dimension “interactiveness” (Table 1.1), and assessed in which of the four categories the binational and trinational North American environmental organizations examined in the special issue belong. We found organizations fitting into each of the four of the quadrants, albeit with a trend towards more postbureaucratic behavior.

Second, in their recent work, *Environmental Policy in North America: Approaches, Capacity, and the Management of Transboundary Issues*, Robert Healey, Debora VanNijnatten, and Marcela Lopez-Vallejo (2014)

Table 1.1  
A Typology of International Environmental Organizations

Dominant Function	“Interactiveness”	
	Bureaucratic	Post-Bureaucratic
Regulatory	Siloed Regulator	Participatory Regulator
Capacity Building	Resource Depot	Collaborative Facilitator

Source: Stoett and Temby (2015).

engage in the ambitious project of circumscribing and defining North American environmental governance, and exploring the relevant domestic, bilateral, and trilateral institutions already in place. They argue that despite different legal frameworks and political cultures among Canada, the United States, and Mexico, their approach to addressing the diversity of environmental issues is not so pronounced that it presents a substantial hindrance for trilateral cooperation. Rather, the problem is one of environmental governance *capacity*, defined as “the ability to propose, plan, choose a course of action, implement, and evaluate an effective policy” (p. 6).<sup>8</sup> To enhance capacity and, to the extent necessary, bridge national policy differences, the authors propose three “critical functions for transboundary governance mechanisms” (i.e., organizations), namely, (1) creating comprehensive and stable transboundary networks, (2) enabling mutual learning and information exchange, and (3) facilitating the provision of resources (p. 7). The authors then proceed to assess the extent to which this has happened in four topical environmental issue areas: biodiversity, smog, greenhouse gas reduction, and genetically modified organisms (GMOs).

Third, Debora VanNijnatten and Neil Craik (2015) have recently shown that North American transgovernmental networks are often “bundled” by domestic leaders or international organizations seeking to harness this form of governance. Network bundling, they observe, “mobilizes bureaucratic resources toward network activities,” and offers “considerable potential in terms of enabling higher levels of environmental policy coordination” (pp. 42–43). VanNijnatten and Craik give examples of formal plans or forums, presently underway, that bundle working groups under a moniker, specifically the 2009 U.S.-Canada Clean Energy Dialogue, Border 2020 (the U.S.-Mexican environmental plan), and working groups organized by the CEC.

These recent examples are indicative of the coalescence in approaches to the study of North American environmental policy (represented well by several contributions to this volume), especially with their focus on learning and capacity building through policy networks. However, evidence suggests that, despite its utility, this approach also has notable limitations in locating governance where it occurs. In a provocative study of indigenous communities and U.S.-Canadian water governance, Emma S. Norman (2015) underscored the deep normative and epistemological divides between these communities and policy makers. Norman’s analysis takes the unraveling state and downscaling of governance as a given and explores the efforts of binational international institutions to adapt to these changes. But her main concern is to examine the activities of indigenous communities living in the borderland areas as they seek to reclaim and govern their traditional water resources while concurrently

strengthening community bonds. Her expressed hope is that the ongoing transition in water governance, coupled with indigenous communities' empowerment, will contribute to the decolonialization of the boundary region—in particular, the dissolution of unjust scalar constructions such as national borders cutting across tribal land. However, insofar as this is happening and will happen, it does so outside the normal technocratic networks that govern these resources. Tellingly, Norman locates indigenous water governance through accounts of community gatherings and acts of defiance to scientists and government officials. Insofar as the influence of these important sovereign political actors is channeled through the networks governing transboundary aquatic ecosystems (and it is not entirely clear that it is), conceptual approaches illustrating how this occurs need to be developed.

Moreover, the cases of successful governance through networks and international organizations in North America that have been described are mostly in the areas of biodiversity and natural resource management (such as water and fisheries). Healey et al. (2014) found that biodiversity governance in particular exhibits well-developed networks facilitating the exchange of information and provision of resources. Their existence and effectiveness in the areas of smog and GHG abatement are more mixed; and in the area of GMO governance they are almost nonexistent. This is partially reflective of regulatory reluctance or gaps, but also suggests that some transboundary environmental issues are more apt to be examined with the “networks” lens than others (at least, networks consisting of government agencies and international organizations). Similarly, in a recent assessment of the extent to which such networks have worked to develop a continental climate change regime, Isabelle Studer (2013) observed:

In the absence of both supply and demand for a climate change regime, bottom-up, transgovernmental collaborative networks are not strong enough to push for the emergence of such a regime, even if there were high levels of energy interdependence and strong linkages between energy security and vulnerabilities to climate change. (p. 58)

Analyzing these institutions to understand North American environmental policy appears to work well when policy coordination necessitates that transboundary interagency networks integrate scientific knowledge across organizational boundaries to manage a definable commons (land use policy, for example), and less well when the important actors operate outside of these networks and sidestep the relevant binational/trinational

organizations (as in the case of greenhouse gas mitigation and energy policy). The contributions in this volume enable a further clarification of the utility of these organizations and networks, and of analytical frameworks that can enhance our understanding of their function, scope, and potential.

### ORGANIZATION OF THE BOOK

The volume is divided into three parts, each briefly described below.

#### *Part I: Bilateral and Trilateral Institutional Effectiveness*

The first part of the book assesses the effectiveness of existing institutions and the political and organizational challenges they must overcome to bring about coordinated and inclusive international governance. Chapters 2 and 3 both focus on institutions created through the NAFTA environmental side accords, in particular the CEC, the continent's prime example of a trilateral environmental organization. Chapter 2 employs a similar approach to the one used in Sikina Jinnah's (2014) notable recent book on international organization influence and biodiversity governance, *Post-Treaty Politics*, but here it is applied to a North American institution addressing a broader suite of issues. Jinnah and Lindsay examine how the CEC's secretariat exercises influence through the production and dissemination of independent reports. Exploring this mechanism of technocratic governance illustrates the importance of North American international organizations in sharing information and building capacity within policy networks, despite an absence of regulatory authority, as in the case of the CEC.

In Chapter 3, Simon offers a striking alternative account of the CEC, as well as two other institutions established under the auspices of NAFTA: the North American Development Bank (NADB) and the Border Environmental Cooperation Commission (BECC). She highlights the side accords' objectives of more participatory environmental governance on the North American borderlands and the practical challenges the organizations have faced in integrating grassroots activists into the policy process. Using a case study of a failed attempt to involve a citizens' group in a grant proposal to the BECC and NADB, Simon highlights the barriers (in particular, the "digital divide") that hinders public participation in the organizations and networks at issue in this volume. It is a sobering account

of some of the most important limitations of policy networks in North American environmental governance.

Chapter 4 highlights another shortcoming, namely the lack of transboundary environmental impact assessment processes and the problems caused by this lacuna. Collins and Kennedy explore Canada's and the United States' domestic policy regimes, highlight past binational disputes that could have been better addressed with more developed institutions, and argue for the desirability and feasibility of a bilateral transboundary environmental impact assessment agreement. They contend that North America should look to an existing international agreement, the Espoo Convention on transboundary environmental impact assessment (to which Canada is a party), for an example of how a successful systematic binational framework could operate, and suggest that projects along the U.S.-Mexican border would similarly benefit from such a framework. The end goal is not to curb development, but to enhance its legitimacy through public accountability and discourse.

## *Part II: Biodiversity and Natural Resource Governance*

The second part contains contributions focused specifically on the governance of living natural resources and ecosystems. In Chapter 5, Mumme offers a "big picture" view of the bilateral and trilateral agreements facilitating the development of natural resource conservation capacity on the U.S.-Mexican border since the mid-1980s. These include not only executive agreements, such as the 1983 La Paz Agreement and the NAFTA environmental side accords, but also the binational and trinational organizations that have evolved through them. Focusing on capacity gains facilitated by these organizations, Mumme assesses them on multiple dimensions relevant to the study of transboundary environmental networks, including public participation inclusiveness, intersectoral integration, information sharing, and the provision of financial resources. He contends that while recent capacity gains have improved the management of transboundary natural resources, security measures taken post-9/11 have redirected funding away from conservation measures and led to activities that threaten transboundary wildlife (an issue to which he and Brown return in Chapter 10).

Olive delves into a more specific issue area in Chapter 6: the conservation of endangered species in Canada and the United States. Despite historical similarities and federal governments, two distinct regulatory regimes have evolved over the last five decades, and Olive's work, much of

it based on numerous interviews with landholders in both countries, suggests that human–land relationships and culture play a pivotal role in the implementation and success of conservation programs. She emphasizes differences in approach to listing species as endangered as an obstacle to effective bilateral policy development. She identifies one issue, however, that is very congruent: the steady decrease in resources devoted to endangered species protection. While some readers may disagree with her characterization of the inherent differences between Canada and the United States, few would argue that there is both an urgent need for increased, as opposed to decreased, attention to the wildlife protection issue area. The need for more collaboration between Canada and the United States—and for this to extend to Mexico, which has a strong record of at least rhetorical prioritization of biodiversity protection—has never been stronger in light of the additional strain presented by climate change, continued land use intensification, and urbanization experienced across the continent.

Chapter 7 provides an overview of binational institutions participating in U.S.-Canadian transboundary fisheries governance. (Mexico and the United States, while claiming waters shared by various fish stocks, lack such institutions.) As Song, Temby, Krantzberg, and Hickey show, fisheries governance is unique as a wildlife stewardship challenge because fish stocks are managed differently depending on whether they are inland or in the marine environment, and also because of their commercial value (extending beyond the harvest value of the fish to that of the tourism industries supported by recreational fishing). In their contribution, the authors examine the networks and organizations managing the Pacific salmon fisheries, the Great Lakes fisheries, and the ground fisheries of the Atlantic northeast. They show that the informal character of relationships among civil servants and other stakeholders represents a critical dimension to how these networks and organizations function, pointing to the need for further research on this topic.

In Chapter 8, VanNijnatten and Stoett examine the policy networks that have developed during the last century in the fight against invasive alien species (IAS) across the continent. IAS are a pernicious threat to biodiversity, human health, the economy, and community identity. As major trading states, all three North American countries are highly vulnerable to their introduction in waterways and along other transportation corridors. Improper disposal of exotic pets and plants are further challenges. VanNijnatten and Stoett focus primarily on aquatic invasive species, and also delve into the more coherent network on plants. They find that extensive networks for collaboration exist, along with some formal and globally linked institutions such as the North American Plant Protection Organization. While Canada and the United States have made significant



progress in moving towards the common goals of invasive species management, there is a great deal to be done as climate change and other emerging complications present new challenges, and some of the more fragile and isolated ecologies (such as the Arctic and the island state of Hawaii) face special threats to biosafety. Mexico has an enviable devotion to biodiversity in global terms, but can only advance its own counter-bioinvasion strategies with closer integration with its NAFTA partners' policies (and, of course, Mexico must look southward in a preventive fashion as well). A promised North American IAS strategy is in the works. The authors conclude that the interactions between networks and institutions in the prevention and early detection architecture for invasive species might be characterized as recursive and iterative in nature, a common pattern identified in other chapters as well.

The next two chapters offer case studies of recent political events affecting ecosystems on or near the U.S.-Mexican border. In Chapter 9, Gerlak examines the successful efforts of a transboundary network, the Delta Restoration Network, in addressing water governance issues in the binational Colorado River. Because the water in the river has been mostly diverted to cities and for agriculture, it no longer reaches the ocean. The area where it had connected with the ocean in the past, the Colorado River delta, nevertheless remains a wetlands ecosystem rich in biodiversity, serving as a habitat for numerous species of plants and birds. A substantial challenge for the network, as Gerlak explains, is that the binational organization governing U.S.-Mexican transboundary water utilization, the IBWC, is insular and bureaucratic. In this contribution, Gerlak traces the development of the network, including its changes in membership, and provides an account of how it was able to influence the IBWC and other policy makers to develop an international agreement to restore water to the delta.

In Chapter 10, Mumme and Brown present a less rosy view of binational environmental cooperation (or lack thereof) between Mexico and the United States. Their contribution covers the politics of the security fence on the U.S.-Mexican border. As they explain, this environmentally destructive project was not a result of bilateral policy coordination or cooperation, nor was it resisted or even problematized by environmental interests when it was under consideration. The authorization and regulatory path for this physically and symbolically imposing barrier occurred in an ironically stealthy way, with protests occurring only afterwards. This case study serves as an important reminder that, at times, security and immigration policy trump sound wildlife policy, and that the policy process can take place outside the reach of the environmentally concerned networks that have a stake in it.

*Part III: Energy and Climate Change Mitigation*

The third and final part of this volume contains contributions on energy governance, including the presently salient issues of sustainable energy and greenhouse gas mitigation. Chapter 11 describes a different role for government and the types of networks discussed elsewhere in this book. Gonzalez argues that the Canadian oil sands have been integrated into the American energy system through the efforts of elite policy-planning networks seeking to maintain low liquid fuel prices in the United States. He outlines these networks' operations at two different scales. First, during the early and middle years of the 20th century, a network consisting of the Alberta government and elites within the province developed the oil sands as a source of energy. Second, following World War II, as American oil demand increased—and especially following the 1973 oil shock—elite policy networks identified Alberta oil as a solution to supply shortages. As Gonzalez contends, this is important for the American understanding of its global hegemonic role. These networks sought to secure Alberta's unconventional oil as a way of fueling U.S. urban sprawl and consumption, a substantial source of U.S. global clout. This chapter suggests that some environmental issues (such as unconventional energy), while potentially employing the language of networks, beg for a political economy approach to understanding their political dynamics.

In Chapter 12, López-Vallejo examines the U.S.-Mexican energy relationship, in particular the extent to which programs in place for sustainable energy development are robust or instead relegated to the transnational production and distribution processes for fossil fuels. The chapter's central argument is that the relationship consists of two different "types, intensities, and rhythms," for fossil fuels and sustainable energy. In both cases a disparity in available technological capacity sets the tone, but is manifest in different ways. In the former, Mexico exports (like Canada) a substantial amount of its crude oil to the United States for refining, and then imports refined petroleum for consumption. Here the energy relationship develops as the industry adjusts to the evolving global demand and technological context for their product, which includes bilateral trade when expedient (as in case of different technologies and natural resources on either side of the border). In the latter, the two governments have created bilateral agreements ostensibly to facilitate the development of sustainable energy in Mexico, in part so that American states can purchase this electricity and satisfy their renewable energy quotas. As López-Vallejo shows, the technological capacity gap has manifested itself as Mexico has fallen behind in the development of these technologies—despite the

organizational infrastructure appearing to be in place. The binational integration of sustainable energy development between Mexico and the United States has failed to materialize as promised, with clean energy addressed only tangentially in existing programs. López-Vallejo and Gonzalez paint a bleak picture of the prospect for environmentally concerned energy relations in North America.

The next two chapters return the focus to the U.S.-Canadian energy relationship but, rather than focusing on fossil fuels specifically, discuss electricity relations on the border. In Chapter 13, Macfarlane examines hydroelectric developments and the role of the IJC in approving them and mediating conflicts between the two countries. This is achieved through a historical overview of four regional groupings of border hydrostations, namely Great Lakes–St. Lawrence, Pacific Northwest, Maine–New Brunswick, and Rainy River/Lake of the Woods. As Macfarlane shows, the hydroelectric developments and the binational organization they necessitated have had substantial influence on U.S.-Canadian environmental and energy policy, particularly on the role of subnational governments. Furthermore, while bilateral relations have been “fluid,” consisting of both conflict and cooperation, Canada’s confrontational “hydro nationalism” has been a persistent trait with contemporary relevance.

Chapter 14 focuses on contemporary electricity relations in the Manitoba/Midwest and Québec/New York–New England regions. This is important because electricity generation is the United States’ largest source of greenhouse gases, and thus opportunities for more efficient distribution systems (including efficiencies from buying and selling from cross-border neighbors) should be seized upon. In this chapter, Rowlands offers a review of the actors involved in the process of transboundary electricity trade and transmission, their interests, and the means through which they communicate. Similar to Song et al. in Chapter 7, Rowlands explores the extent to which stakeholders communicate through informal and formal means, and the conditions that lead to cooperation and conflict. This is of particular significance given that, as Rowlands notes, conflict is more common than cooperation, even though there are potential joint gains that could benefit both sides. He concludes with suggestions for managing these conflicts and improving the potential for the utilization of transboundary electricity transmission.

In Chapter 15, Huff offers a “case for continental” climate change policy integration. As noted elsewhere (see Studer, 2013; VanNijnatten & Craik, 2013), the case is not obvious or necessarily intuitive. After all, fossil fuel markets are *globally* integrated and electricity markets are mainly subnational. Huff acknowledges these and other drawbacks, yet contends

that there is both a rationale and potential for an integrated North American climate regime. In making the case, he reviews existing domestic programs, regional initiatives, and multilateral institutions that might be implicated in the process, and constructs an account of a halting, piecemeal, yet potentially emergent and integrated system that might lower mitigation costs, facilitate the development of policy capacity, and improve the three countries' negotiating position in global abatement talks. Recent trilateral commitments are an exciting development, though seasoned observers will advise caution lest we become overly optimistic, especially after the election of Donald J. Trump to the presidency of the United States in 2016.

Finally, in Chapter 16, we conclude by reviewing our guiding questions and assessing the lessons learned from the contributions herein. We also point the way to potentially fruitful directions for future research on North American environmental transnational environmental governance.

## CONCLUSION

If there is a "North American idea" premised on a continental future (Clarkson, 2008; Pastor, 2011), then the ecologically sustainable governance of the continent's ecosystems and energy systems is not optional. They are central to the project, and play a fundamental role in defining the thousands of communities that are found on the continent, including those located in the cross-border regions. While it is premature to speak of an integrated North America as one might refer to the European Union, economic and demographic trends indicate that, despite relatively rigid borders after September 11, 2001 (and ongoing border-related controversies on all three borders, including the Alaska-Canadian borderline), the continent can be viewed as integration in progress (on 9/11, see Farson, 2006; Konrad & Nicol, 2008). Mexico is culturally tied to its southern neighbors, Canada is similarly entwined with its European cousins, and the United States faces unique challenges as the most powerful state in the international system (and its power is partially a reflection of its northern and southern neighbors; see Clarkson & Mildenberger, 2011). Indeed there are vast cultural differences between citizens of these countries and, of course, equally pronounced differences within them (Adams, 2003). Yet the natural ties that bind are undeniable, and the institutional architecture that the three governments, substate political units, and transnational experts form today will affect the collective fate of all North Americans tomorrow, despite