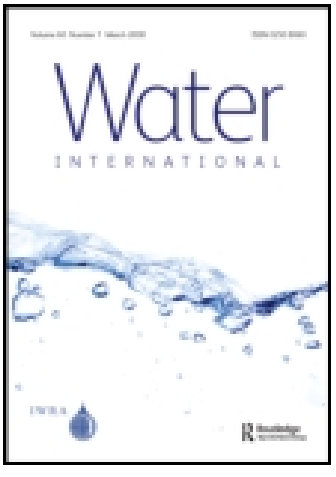

Water International
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/rwin20

Do good fences make good neighbours? Canada-United States transboundary water governance, the Boundary Waters Treaty, and twenty-first-century challenges

Emma S. Norman[a] & Karen Bakker[b]
[a] Department of Science/Native Environmental Science Program, Northwest Indian College, Bellingham, WA, USA
[b] Department of Geography/Program on Water Governance, University of British Columbia, Vancouver, Canada
Published online: 27 Nov 2014.

To cite this article: Emma S. Norman & Karen Bakker (2015) Do good fences make good neighbours? Canada-United States transboundary water governance, the Boundary Waters Treaty, and twenty-first-century challenges, Water International, 40:1, 199-213, DOI: 10.1080/02508060.2014.978973

To link to this article: http://dx.doi.org/10.1080/02508060.2014.978973

Water International, 2015
Vol. 40, No. 1, 199–213, http://dx.doi.org/10.1080/02508060.2014.978973

Do good fences make good neighbours? Canada–United States transboundary water governance, the Boundary Waters Treaty, and twenty-first-century challenges

Emma S. Norman[a]* and Karen Bakker[b]

[a]*Department of Science/Native Environmental Science Program, Northwest Indian College, Bellingham, WA, USA;* [b]*Department of Geography/Program on Water Governance, University of British Columbia, Vancouver, Canada*

(*Received 11 September 2014; accepted 17 October 2014*)

This article analyzes the rescaling of transboundary water governance and explores challenges and opportunities for the twenty-first century. The analysis is grounded in the example of the Canada–United States transboundary water governance regime, and asks two questions: What are the lessons learned since Canada and the United States first signed the Boundary Waters Treaty 100 years ago? And what is the potential of rescaling to influence the tension between the 'sovereign rights' of a nation and transboundary water governance protocols based on 'good neighbourliness'?

Keywords: governance; transboundary water cooperation; Canada-United States

Introduction

A fundamental tension characterizing transboundary water governance is the interplay between the sovereign rights and responsibilities of the state and incentives to consider one's upstream or downstream neighbour(s). Canada and the United States have more than 100 years of experience in negotiating these issues. The Canada–US transboundary water governance regime – notably, the 1909 Boundary Waters Treaty (BWT) and the subsequent creation of the binational International Joint Commission (IJC) – is frequently praised as a leading global example of constructive governance of transboundary waters. The regime has been of particular interest given the longevity of the BWT and the relatively high degree of cooperation between the two countries (no doubt facilitated by the fact that Canada and United States are both upstream and downstream from each other, depending on the water body under consideration).

This article analyzes key aspects of the Canada–US transboundary water governance regime, with particular attention to the recent trend of the rescaling of transboundary water governance to local (and often informal) actors, which we argue is relevant to global debates about good governance in transboundary water management. The trend of rescaling governance – in which a shift or a widening of actors in the decision-making process occurs – may at first seem surprising. Until recently, scholars of transboundary water governance focused primarily (if not exclusively) on nation-states and formal, legal water governance regimes. Historically, international water law dictates that the relationships between sovereign nations be defined through formal, nation-state-driven governance mechanisms, e.g. treaties and agreements (Furlong, 2010; McCaffrey, 2006). Traditionally, scholars have focused on these

*Corresponding author. Email: enorman@nwic.edu

nation-state mechanisms, and have often emphasized questions of state security and environmental security (Hirsch & Jensen, 2006).

However, in the last 30 years, the Canada–US regime of transboundary water governance has undergone a shift – or 'rescaling' – downwards to the subnational and upwards to the supranational scale, in a process sometimes termed 'glocalization' (Swyngedouw, 1997, 2004). In more recent years, this rescaling has also taken a postcolonial turn, in which Indigenous–led transboundary mechanisms have been conceived to actively 'decolonize' transboundary water governance mechanisms, both in discourse and practice (Norman, 2015; Norman, Bakker, & Cook, 2012). Accordingly, scholars have begun analyzing the rescaling of environmental governance and policy harmonization (Cash et al., 2006; Lebel, Garden, & Imamura, 2005; Mirumachi, 2013; Sayre, 2005), water governance (Budds & Hinojosa, 2012; Newig & Fritsch, 2009; Norman, Cohen, & Bakker, 2013; Norman, Cook, & Cohen, in press; Perreault, 2005; Sheppard & McMaster, 2004) and, more specifically, the rescaling of *transboundary* water governance (Chen, Rieu-Clarke, & Wouters, 2013; Cohen & Harris, 2014; Cohen & McCarthy, 2014; Feitelson & Fischhendler, 2009; Furlong, 2010; Norman, 2015; Norman & Bakker, 2009; Sneddon & Fox, 2006; Zeitoun, Eid-Sabbagh, Talhami, & Dajani, 2013).

Concurrent with this rescaling, a shift from government to governance has occurred, in which nonstate actors (e.g. environmental non-governmental organizations, citizen groups, regional actors, Indigenous groups) have greater involvement in transboundary water governance (Norman & Bakker, 2009; Norman et al., 2013; United Nations, 2008) through 'soft-path' approaches (Brooks, Brandes, & Gurman, 2009; Gleick, 2002, 2003; Sandford & Phare, 2011). These actors participate in transboundary water governance through a proliferation of regional agreements and programs (provincial–state agreements, citizen coalition groups, intertribal agreements, etc.) and through engagement in supranational mechanisms such as the United Nations Economic Commission for Europe (UNECE). This 'thickening' of the governance regime parallels broader debates in water and environmental management regarding the desirability of delegating decision making to 'lower' scales of governance (state, provincial, municipal) and to nonstate actors (citizen groups, industry groups, etc.) (Bulkeley, 2005). In addition, the thickening has implication for the First Nations and Native American tribes (Indigenous Communities), who have both inherent rights to the land and water, and treaty rights through negotiated federal treaties. However, these inherent and treaty rights were not included in the original transboundary water treaties (such as the Boundary Waters Treaty and the Columbia River Treaty) – which were conceived as bi-national, rather than multi-national.

Given the global relevance of these trends, this paper analyzes the rescaling of transboundary governance in the case of Canada–United States transboundary waters. The analysis builds on earlier analyses of transboundary water cooperation, which quantified the extent and scale of rescaling, to explore changes in governance processes, as well as the challenges, successes and lessons learnt. The analysis is structured around two questions: What lessons can be learned from the trend of rescaling governance over the last 100 years? And what is the potential of rescaling to influence the tension between the 'sovereign rights' of a nation and transboundary water governance protocols based on 'good neighbourliness'?

The Boundary Waters Treaty and the duty to cooperate

When the BWT was signed, on 11 January 1910, by representatives of the US government and the Crown (on Canada's behalf), it reflected a mutual desire of the federal

governments to cooperate on transboundary water issues. One hundred years later, much has changed in terms of the make-up of the actors involved in the governance and the expectations for public involvement. The pages that follow explore the widening of participation (or expected participation) in the governance process and link that to wider trends of rescaling transboundary water governance. First, though, it will be useful to provide historical context for the signing of the BWT.

The BWT represented the culmination of years of diplomatic negotiations to ensure friendly relations between countries, as well as increased public pressure to address transboundary water issues. The BWT achieved two crucial goals. It established a core of legal principles to govern the management of internationally shared waters between Canada and the United States, and it established an institutional framework to supervise the implementation of the principles. The treaty is not without its problems, but in the context of its era it represents an important achievement in international cooperation on shared water resources.

A central component of the BWT was the creation of the IJC, a governing body established to mediate conflict between the two federal governments. Given the extraordinary length of the international border, this mediation was considered both inevitable and long-term. As US secretary of state Elihu Root stated prior to signing the treaty (as quoted by Munton, 1981): "I do not anticipate that the time will ever come when this Commission will not be needed. I think that as the two countries along this tremendous boundary become more and more thickly settled the need for it will increase."

Despite the relatively widespread agreement on the need for a formal cooperation arrangement, the settlement of the treaty was delayed as government representatives debated a critical point in the negotiation: the relative strength of the IJC. A key issue was the question of whether to assign the commission "real arbitral power or merely to assign a more limited mandate to recommend courses of action, which the governments could accept or reject as they saw fit" (Carroll, 1981, p. 44). Canada advocated a 'stronger' version (the Gibbons-Clinton draft), which allowed for a commission with authority over the final decision and the creation of a supranational court to adjudicate boundary water disputes. The United States opted for a 'weaker' version (Dreisziger, 1981). Root articulated this preference in a letter to British ambassador James Bryce in 1908:

> The difficulty of the United States in assenting to an agreement that all questions within the broad field described by the Gibbons-Clinton draft shall be referred for final determination to such a commission as is proposed, is in the main that such questions necessarily involve, not merely questions of fact and of law suitable for the determination of a commission or arbitral tribunal, but many questions of policy, of mutual concession and of the give and take which is in so great a number of cases the efficient means of reaching possible settlement of difficult controversies. Such questions of policy, of concession, of discretion make it impossible for the Government of the United States to commit to any commission under our system of government. (quoted in Carroll, 1981, p. 44)

Ultimately, the version with less authoritative power prevailed.

The US position is unsurprising given that during the time of treaty negotiation, the Harmon Doctrine – which maintains that a country is sovereign over the portion of an international watercourse within its borders (McCaffrey, 1996) – was at the forefront of American thinking. US attorney general Judson Harmon, in response to Mexican protests, noted that "the fundamental principle of international law is the absolute sovereignty of every nation, as against all others, within its own Territory" (21 Op. Attorney General,

281–282, 1895). This historical negotiation is important context in the contemporary discussion of 'sovereign reach'. In essence, the tension was around where the power of adjudication lay – in the commission, or in the country itself. The fact that the power balance was seen as an 'either-or' rather than a 'both-and' is an important point to consider for contemporary transboundary water governance mechanisms.

Although the balance between sovereign rights and the need to cooperate with neighbours continues to evolve, Secretary Root's prediction held true: along the Canada–US border, the need remains for federal governments to address issues of shared concern, communicate intentions, and mediate potential as well as actual conflicts. However, some key factors have changed. First, a greater range of types and numbers of actors have become involved in these discussions. At the time of the treaty signing, the governance structure was envisaged as nation-to-nation. Although the six commissioners (three from each country) are asked to act in their professional capacity, rather than representing 'national interests', the structure of the IJC remains distinctly binational. Second, the trend towards rescaling has caused the IJC – which remained largely federally oriented until the past decade – to rethink its approach and role. Below, we deal with each of these issues in turn.

Analyzing the rescaling of transboundary water governance

Few studies have attempted to comprehensively analyze the rescaling of water governance and to use both qualitative and quantitative data to analyze the effectiveness of the changes. To address this gap, a comprehensive survey/historical review was conducted of the governance mechanisms across the Canada–US borderland over the course of 100 years (see Norman and Bakker (2009) for full results). The study found that an increasing number of nonfederal transboundary water governance mechanisms (substate, citizen, and regional) have emerged since the 1980s – although the majority (57%) of transboundary governance mechanisms between Canada and the United States remain federally oriented because of the historic legacy of nation-to-nation governance. Table 1 shows the trend of declining new mechanisms designed at the federal level and an increased involvement of local mechanisms, in terms of number of organizations and mechanisms. Even when solely evaluating governance mechanisms (excluding organizations), the trend clearly indicates a rise in local participation over the past two decades.

Another key finding from the analysis is the identification of a trend in the creation of provincial–state agreements, which marked the beginning of subfederal, government-to-government agreements. These agreements appear in the form of memoranda of understanding (MOUs) and memoranda of agreement (MOAs) – nonbinding and collaborative in nature – between provinces and states. Whether the increase in subnational mechanisms is a reaction of nonfederal actors to a downshifting of federal responsibilities, an empowerment of regional actors, or a lessening of authority of federal transboundary mechanisms remains unclear – and can be likened to the question of the chicken and the egg.

The number of provincial–state agreements between Canada and the United States peaked in the mid-1990s, with agreements particularly prevalent along the East and West Coasts. However, despite the increase in number of provincial–state agreements and organizations, the institutional capacity to maintain the binational governance structure is highly variable. For example, the British Columbia–Washington Environmental Cooperation Council, created in 1992, was one of the first binational provincial–state organizations and was initially considered one of the most active groups (Jolly, 1998). The

Table 1. Relationship between scale of governance and type of governance instrument.

	Federal		State–Provincial		Multi-level		Local		Total subnational	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Binding	73	76.84	15	42.86	0	0	0	0	15	20.55
Nonbinding	3	3.16	12	34.29	2	6.45	1	0.17	15	20.55
Organization	19	20	8	22.86	29	39.55	5	0.83	42	57.33

Source: Canada–US Transboundary Water Governance Instruments Database (2007); Norman and Bakker (2009).
Note. Binding: a formal mechanism such as treaty, agreement, order, or exchange of notes. Nonbinding: a memorandum of understanding, memorandum of cooperation, or memorandum of agreement. Organization: multi-stakeholder and local (subnational) transboundary groups.

council was developed as part of an MOU signed between the governor of Washington and the premier of British Columbia, who, at the time of signing, had similar political views on the environment. The political climate at the time (in the wake of two disastrous oil spills, one in Greys Harbor, Washington, and the other in Alaska from the infamous Exxon Valdez) paved the way for tremendous support of binational environmental agreements at a 'lower scale' (the provincial–state scale). Thus, this rescaling of transboundary water governance occurred because of a combination of political will, public awareness (piqued by the crisis of the oil spills), and the growing expectation for greater public involvement in environmental governance. However, the political will to support the Environmental Cooperation Council waned, particularly as leadership changed and as the provincial and state governments faced budget cuts and increased demands for border security (which became reprioritized after 9/11). In addition, the lack of consistency of counterparts across the border provided difficult conditions in which to sustain professional relationships. This is particularly detrimental for transboundary water governance because strong personal relationships between counterparts (knowing who to call on the 'other side') has consistently been seen as an antidote to asymmetries in governance mechanisms, where state and provincial regulatory responsibilities often do not match up. Thus, change in leadership, staffing, and reduced funding took a toll on the momentum of the group, and after 15 years of steady biannual meetings, the Environmental Cooperation Council took a several-year hiatus. However, as of January 2014 the council has re-formed under new leadership. Thus, subnational transboundary governance mechanisms can provide flexibility to fill gaps in governance, but their non-treaty nature (MOUs and MOAs) can make the relationship more susceptible to changes in political will and budget priorities.

A counter-example to this, however, is the Atlantic region's Gulf of Maine Council, which has maintained a steady meeting schedule despite changing political climates. The geographic focus of the respective groups may be an important explanatory factor. Where the Atlantic group is focused solely on marine waters, the British Columbia–Washington council includes both marine and freshwater, adding geopolitical and environmental complexity, which adds financial costs. In addition, the border between Washington and British Columbia became heavily scrutinized, particularly after 9/11, in a way that the border in Maine was not (perhaps due to the remote nature of the Maine–New Brunswick border and its distance from urban centres).

A parallel trend has been the increase in application of supranational groups such as the Convention on the Protection and Use of Transboundary Watercourses and International Lakes. An example of rescaling at the supranational level is the 2003 amendments to this convention that allowed states *outside* the UNECE region to become party to the convention. (The UNECE has 56 members, and its region covers more than 47 million km^2. Its member states include the countries of Europe, but also countries in North America (Canada and the United States), Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) and Western Asia (Israel) (UNECE, 2013)). The decision to open up the convention beyond the UNECE member countries is reflective of a broader trend: the rescaling of water governance, in which supranational and global actors (as well as local actors) are playing more important roles than in the past (Bulkeley, 2005). According to Norman, Cohen, and Bakker (in press, p. 2), "Rescaling the Convention by including new actors thus holds significant promise both practically – in terms of the creation of a network for information related to transboundary water governance – and conceptually – in terms of envisioning the

world's water sources as interconnected, nested, and both politically and hydrologically 'border*less*'."

Rescaling the IJC

With the rescaling of environmental governance over the last 30 years, even federal organizations such as the IJC have begun to shift their governance approaches to reflect greater inclusion of nonstate actors. For example, the creation of the International Watersheds Initiative enabled the IJC to be proactive rather than reactive in its approach, and to include actors that live within specific watersheds in the governance process. That is, rather than wait for a formal request from the federal governments to mediate conflict (through what is called the reference system), the initiative was designed to work proactively at a watershed level, to sustain communication between actors living within the watershed (the need for which is exacerbated at the site of the international border). It is important to note that the BWT and the IJC were not originally set up to look at large-scale watersheds, so this is a distinct shift in focus. Currently, there are four official international watershed boards along the Canada–US border, governing the St. Croix River (spanning New Brunswick and Maine), the Red River (spanning Minnesota, North Dakota and Manitoba), the Rainy River (spanning Minnesota and Ontario) and the Souris River (spanning Saskatchewan, Manitoba, and North Dakota), with other pilot boards under consideration (see Figure 1). Although the initiative is not without its critics (see

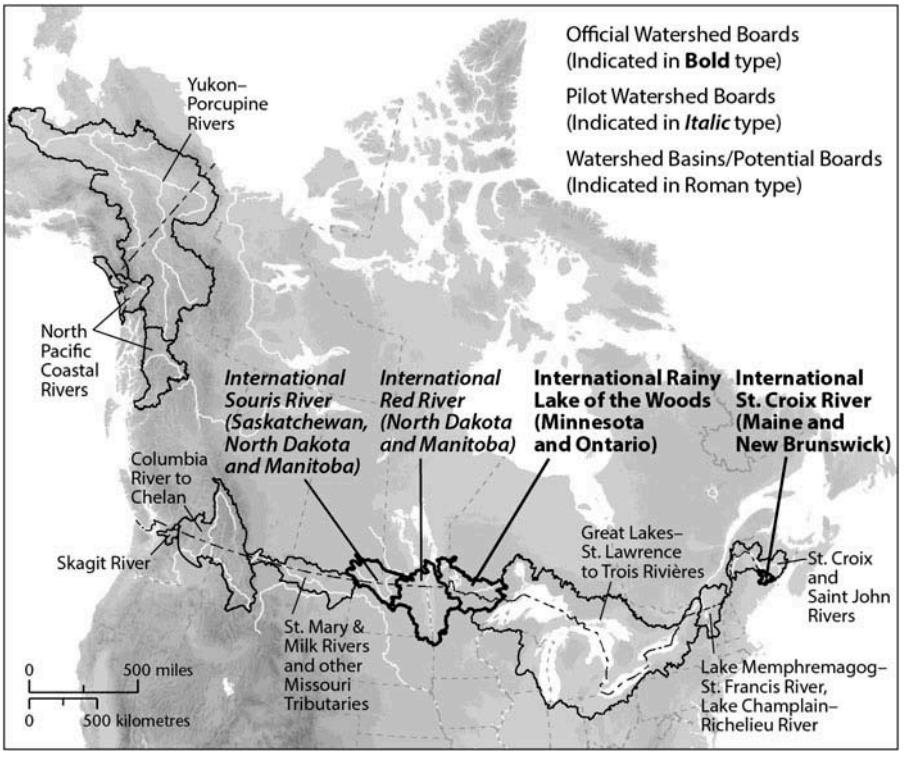

Figure 1. Map of official and proposed international watershed boards.

Source: Adapted from IJC (2014). Reprinted from Norman (2015) with permission from Routledge.

Table 2. Eras of Canada–US transboundary water governance, 1945–2015. Adapted from Norman & Bakker (2009).

Era	Period	Role	Example
Cooperative development	1945–1965	Projects of mutual benefit Federal government encourages hydroelectric development	Columbia River Treaty; St. Lawrence Seaway and Hydropower Development; Niagara Treaty
Comprehensive management	1965–1985	Issue-based Comprehensive river basin planning and more 'environmentally conscious' framework Water expertise built up at federal level	Great Lakes Water Quality Agreement
Sustainable development	1985–2005	Linking of economy and environment Issues more integrative, anticipatory and preventive	Great Lakes Annex
Participatory	2000–present	Increased citizen participation in established frameworks	IJC International Watersheds Initiative
Postcolonial	2000–present	Increased involvement of Indigenous actors in established frameworks Development of Indigenous-led governance in transboundary water issues	Coast Salish Gathering/ Yukon River Inter-tribal Watershed Council

e.g. Cohen & Davidson, 2011), the new governing body represents flexible and innovative institutional thinking that responds to growing expectations for greater involvement of nonstate actors in environmental governance.

A new era of postcolonial water governance?

Surprisingly, analysis of rescaling revealed that the role of federal actors in transboundary water governance peaked in the 1940s, during what Pentland and Hurley (2007) refer to as the Cooperative Development Period (Table 2). During this post-war era, an emphasis on hydroelectric power facilities in both Canada and the United States presented opportunities to create large-scale projects that required binational cooperation. Furthermore, the creation of hydropower facilities in Canada exceeding domestic need (because of 'pre-build' policies) led to creation of export markets in the United States, thereby committing the two countries to decades of cooperation over water- and energy-related issues.

In fact, the trends found in this analysis coincide closely with different eras of management style and priorities, as outlined in Table 2. During the Comprehensive Management Era, in the late 1960s to early 1980s, local governance instruments become more prevalent and the federal role begins to decline. Comprehensive river planning and more 'environmentally friendly' projects typify this period. The creation of the Great Lakes Water Quality Agreement in 1972 (revised in 1978) is a leading example of comprehensive-style governance.

A growing number of Indigenous-led mechanisms have emerged along the Canada–US borderland, which continues to contribute to the growing rescaling and the new era of postcolonial governance discussed in the previous section. In particular, Indigenous,

transboundary water governance mechanisms have become established in the Great Lakes basin (Ontario and Minnesota, Wisconsin, Michigan, New York), the Yukon River basin (Yukon Territory and Alaska) and the Salish Sea basin (British Columbia and Washington). In this postcolonial era, not only are Indigenous communities working collaboratively to address environmental issues facing their communities, but they are also working on strengthening traditional lifeways and promoting self-governance. In essence, Indigenous-led initiatives are serving as mechanisms to both decolonize governance and provide means for self-determination. Arguably, the socio-cultural and political impacts of colonial occupation are exacerbated at the borderland, where Indigenous homelands were bifurcated by the demarcation of the international border and the subsequent creation of Native reserves – reservations, in the United States (Norman, 2014). The emergence of a postcolonial era in North American transboundary water governance has international relevance, because it gives question to the context of sovereignty and cooperation.

For example, the recent move to designate membership of First Nations, Metis, and Tribal members in the Rainy Lake board is precedent-setting for the IJC. Although there has been an increasing move to include representation of Indigenous actors on other IJC boards, this practice has not been consistently applied. The explicit inclusion of Indigenous actors in transboundary water governance activities – which had previously been reserved for federal actors – points to the beginning of a new postcolonial era of governance (see Table 2) (Norman, 2014).

International relevance

What are some of the key lessons learned since Canada and the United States first signed the BWT more than 100 years ago? And how might these lessons be internationally relevant? This question is arguably highly relevant to regions, like East Asia, in which rapid development is occurring, transforming both biophysical landscapes and governance frameworks. Below, we explore some key lessons learned, including the importance of symmetry in governance frameworks, the need for built-in flexibility, the importance of 'basin-wide' vision, and the opportunities and challenges posed by the rescaling of water (and indeed environmental) governance.

The first issue – of symmetry in governance frameworks – has been one of the major challenges with which those engaged in administering the BWT have had to grapple. One of the primary limitations of the BWT is the asymmetrical treatment of boundary waters (i.e. waters that form part of the international boundary) versus rivers *crossing* the boundary or waters that are *tributary* to boundary waters. The principle that obtains for boundary waters is one of 'equal and similar rights' on the part of each nation; for tributary or transboundary waters, each nation retains in general a sovereign right to use or divert the waters as it sees fit. In practice, this has meant that integrated water resources management (see Falkemark, 2011) – which is premised on basin-wide water management – cannot be comprehensively implemented within the original scope of the BWT.

A second, related issue is the need for built-in flexibility to deal with changing environmental and social contexts. The hierarchy of water uses established in the BWT reflected the priorities of 1909, which are different from contemporary priorities. For example, the order of precedence listed in the BWT is: domestic and sanitary uses; navigation; power and irrigation. Considerations such as in-stream uses (central to aquatic and wildlife health) are not mentioned. Equally, the emphasis of the BWT on water

quantity issues, and the relative neglect of water quality issues, does not reflect contemporary priorities. There is one reference to water quality in the treaty: Article IV provides in part that "waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other". There is, however, no elaboration on this obligation. Moreover, the high degree of public participation now expected (and in some cases required) for environmental decision making was not envisioned in the BWT. Building in flexibility to deal with changing environmental and social issues is key to the longevity of the instrument.

The third point pertains to the limits potentially imposed by sovereignty concerns on a basin-wide vision for water management. For example, the IJC does not have the power to initiate an investigation of transboundary water issues; its role in investigating and reporting on these matters is limited by the requirement of a formal request from both the Canadian and American governments. (The treaty also provides for the possibility of an arbitral function if both governments consent; in practice, however, this has never been invoked.) This has limited the role of the IJC, which does not have an independent power of investigation, allowing some transboundary disputes to fester, such as that of Devils Lake, in which the US state of North Dakota acted unilaterally to divert water that eventually flows into the Canadian province of Manitoba, raising concerns for water quality and lack of regard for international protocol (Brandson & Hearne, 2013).

The original framework of the IJC thus perpetuates a reactive rather than proactive approach to transboundary water governance, which limits the ongoing cooperation at a subnational/regional level. Now that the 'cooperative development' phase has seemingly ended, the IJC's previously important role as a quasi-judicial body charged with approving (or denying) obstructions or diversions of boundary waters (and, in more limiting circumstances, for works in transboundary or tributary waters) is of diminishing relevance. Pollution and water quality issues have come to the fore; but the sovereignty card trumps basin-wide thinking in some cases. Judicial decisions, such as the Trail Smelter Arbitration in early 1900s, may alter this situation, but creating a treaty that requires recourse to the courts may be suboptimal, given that legal timeframes may not be congruent with the speed required for decision making in ecologically sensitive areas and cases.

This in turn suggests that it might be useful to pursue an explicit strategy of rescaling of water governance, in which a 'thickening' of transboundary water governance (which has happened organically, with little federal oversight or encouragement in the Canada–US case) may be a useful counterweight to the sovereign rights of nation-states – or indeed a useful impetus to fulfil commitments based on legal norms such as good neighbourliness. This is the basis of the common law maxim *sic utere tuo* (which was the legal precedent formed from the Trail Smelter Arbitration in the early 1900s), but the key point is that one should not use one's property in a way that is injurious to another.

This is of course relevant to more general debates over environmental governance (Hirsch, 2001; Jonas & Gibbs, 2003; Kramsch & Mamadouh, 2003; Kramsch 2002; Maddock 2004; Munton, 2003; Paehlke, 2001; Parson, 2001; Verchick & Hulen, 2003; Wismer & Mitchell, 2005), in which there is a growing expectation of public participation and regional participation in environmental issues. The tension for *transboundary* issues, however, remains as a tug of war between sovereign rights and responsibilities and the duty to cooperate.

What international governance regimes and 'soft-path' governance approaches provide, however, is a changing expectation for behaviour at the start. Amory Levins first coined the term 'soft path' in the context of energy use; however, the term has

increasingly been applied to describe a movement in water governance, particularly in Canada. Soft-path approaches offer a more integrative and holistic alternative to supply-side water management models, which often focuses on large-scale, centralized, physical infrastructure to meet growing demands. The soft-path approach suggests that water issues should be framed not as 'how to meet growing demand' but as 'how to reduce demand' and 'how to achieve long-term sustainability'. Thus, it adopts a longer-term and more integrated approach, in which addressing water-related issues requires multiple entry points, including policy, education, and economic incentives, in addition to technical solutions.

Thus, changing the culture of how we address water-related issues is as important as changing the culture of water cooperation, particularly in water issues that span international borders. The postcolonial era of governance described above provides an opportunity to rethink transboundary water governance, as integrated water resources management did 25 years ago. But in this case, besides the opportunity to find basin-wide solutions to long-term management of transboundary watersheds, it also actively attempts to decolonize the borderland by creating indigenous-led mechanisms that rely on traditional networks and protocols. In cases throughout the Canada–US borderland this approach is having very real impacts on more traditional federally run mechanisms. In the Pacific Coast region, Coast Salish Gatherings and intertribal Canoe Journeys are raising public awareness of water-related issues – particularly ocean acidification, declining marine habitat and resources such as salmon, and impacts of water pollution. In the Great Lakes, the Grandmother Water Walkers and the Great Lakes Indian Fish and Wildlife Commission are working on issues related to declining water quality and fish contamination due to extraterritorial pollutants such as PCBs and mercury. And in the Yukon Basin, the Yukon River Inter-Tribal Watershed Council is working towards protecting one of North America's last 'wild rivers' and to continue to maintain the priorities of the Indigenous peoples who rely on the river for subsistence. In all three cases, the preservation of these waterways is also explicitly linked to cultural preservation, economic vitality, self-determination and self-governance (Norman, 2015).

Thus, in rethinking environmental governance – and transboundary water governance more specifically – we suggest that there is a need to support communities and activities that have historically been absent from formal binational treaties. Indigenous peoples had little presence in the original treaty-making process in North America related to transboundary waters. Court cases and treaties between tribes and governments have had increased presence in water governance. The North American example provides an opportunity to learn from retrofitting treaties or, as in the Columbia River renegotiation, 'modernizing' the treaty. Thus, for countries and regions that are currently creating or updating their transboundary water governance mechanisms, a key consideration is to look at the cultural politics associated with the act of creation of the border. The design of the mechanism should reflect historical 'upstream' and 'downstream' relationships and provide avenues for regional mechanisms to take leading roles in long-term governance (Cohen, Norman, and Bakker, 2014).

Conclusion and discussion

This paper has analyzed the rescaling of transboundary water governance between Canada and the United States. We asked: What are the lessons learned since the Canada and the United States first signed the Boundary Waters Treaty 100 years ago? And what is the

potential of this rescaling to influence the tension between the 'sovereign rights' of a nation and transboundary water governance protocols based on 'good neighbourliness'?

Some of the key lessons gleaned from past experience with transboundary water cooperation across the Canada–US border include: the challenges which arise from asymmetrical governance frameworks; the importance of embedding flexibility into governance frameworks, with recognition that decision-making processes and relationships will evolve in the future; the opportunities (and challenges) posed by rescaling of water governance; and the importance of 'thinking like a watershed'.

In addition, the trend of rescaling governance, in which local and nonstate actors are more present in environmental (particularly water) issues, has the potential to influence how sovereign rights and good neighbourliness play out in transboundary water governance. The Canada–US example suggests that pursuing an explicit strategy of rescaling of water governance, in which a 'thickening' of transboundary water governance may be a useful counterweight to the sovereign rights of nation-states, or indeed a useful impetus to fulfil commitments based on legal norms such as good neighbourliness, is a potentially powerful approach. As explored above, the tension between sovereignty and collaborative cooperation continues to evolve, as federal governments renegotiate (or reconfirm existing) processes for communication, addressing issues of shared concern and mediation of potential as well as actual conflicts.

A key question from the Canada–US example remains: How do the movement from 'government' to 'governance' in transboundary water management and the increased role of nonstate actors impact the ability to cooperate? Our qualitative research found that although regional and subnational mechanisms have increased over time, this trend did not necessarily translate to increased decision-making capacity. Thus, although the trend is promising, we caution against the conflation of creation with capacity. We suggest that the need to support soft-path approaches remains a central component in promoting transboundary water cooperation, particularly in light of rescaling from government to governance.

Another key insight is the possibility that we are entering a new 'decentred' – and, in some cases, potentially postcolonial – era of water governance. Within the IJC, two notable examples of rescaling include the creation of the International Watersheds Initiative and the explicit inclusion of First Nations governments – 'third sovereigns' – in international watershed boards. The former reflects a shift to include actors in the governance process who live and work within the said watershed; the latter reflects a growing movement for the enactment of Indigenous-led governance.

Lastly, the concept of 'soft-path' approaches, in combination with a 'postcolonial' era of transboundary water governance, provides a critical step towards working beyond the inherent tension between sovereign rights and transboundary water governance protocols based on good neighbourliness. The soft path approach is a holistic framework for managing water resources, which differs from traditional ('hard path') approaches in its emphasis on institutional and governance innovation to meet users' water-related needs (rather than fixed water demands) – thereby creating potential for increased water efficiency and improved socio-hydrological relationships. When rooted in a binational approach, in which the locus of power remains with the federal governments, whose responsibilities intrinsically stop at the international border, the ability to work collaboratively, long-term, across the border is limited. However, if the starting point in the collaborative approach deemphasizes the international border rather than reifying it, the starting point is intrinsically more cooperative. Interestingly, the soft-path approaches that have less 'state-run' influence may be in a better position to work in this postcolonial

context. For example, even provincial–state agreements wax and wane with political support and climate. The grass-roots, Indigenous-led mechanisms, however, are likely to be less subject to these fluctuations, as the starting point is based on historical, pre-colonial connections and the governance structures take on both environmental and social issues, which widen the approach to address regional issues.

Our survey of 100 years of North American, Canada–United States transboundary governance suggests that the rescaling of governance provides an opportunity to rethink how to best govern transboundary waters. This issue is of international significance, given widespread interest in rescaling (also referred to as 'devolution' or 'delegated water governance').

References

Brandson, N., & Hearne, R. (2013). Devils Lake and Red River Basin. In E. S. Norman, A. Cohen, & K. Bakker (Eds.), *Water without borders: Canada, the United States and shared waters*. Toronto: University of Toronto Press.

Brooks, D. B., Brandes, O. M., & Gurman, S. (Eds.). (2009). *Making the most of the water we have: The soft path approach to water management* (pp. 195–204). London, UK: Earthscan.

Budds, J., & Hinojosa, L. (2012). Restructuring and rescaling water governance in mining contexts: The co-production of waterscapes in Peru. *Water Alternatives*, *5*(1), 119–137.

Bulkeley, H. (2005). Reconfiguring environmental governance: Towards a politics of scales and networks. *Political Geography*, *24*(8), 875–902. doi:10.1016/j.polgeo.2005.07.002

Carroll, J. E. (1981). Patterns old and new. In R. Spencer, J. Kirton, & K. R. Nossa (Eds.), *The International Joint Commission seventy years on* (pp. 43–59). Toronto: University of Toronto.

Cash, D. W., Adger, N. W., Berkes, F., Garden, P., Lebel, L., Olsson, P., … Young, O. (2006). Scale and cross-scale dynamics: Governance and information in a multilevel world. *Ecology and Socieity*, *11*(2), 8. Retrieved from http://www.ecologyandsociety.org/vol11/iss2/art8/

Chen, H., Rieu-Clarke, A., & Wouters, P. (2013). Exploring China's transboundary water treaty practice through the prism of the UN Watercourses Convention. *Water International*, *38*(2), 217–230. doi:10.1080/02508060.2013.782134

Cohen, A., & Davidson, S. (2011). The watershed approach: Challenges, antecedents, and the transition from technical tool to governance unit. *Water Alternatives*, *4*(1), 521–534.

Cohen, A., & Harris, L. M. (2014). Performing scale: Watersheds as 'natural' governance units in the Canadian context. In M. Glass & R. Rose-Redwood (Eds.), *Performativity, politics, and the production of social space.* New York, NY: Routledge.

Cohen, A., & McCarthy, J. (2014). Reviewing rescaling: Strengthening the case for environmental considerations. *Progress in Human Geography*, 7 March, doi:10.1177/0309132514521483

Cohen, A., Norman, E. S., & Bakker, K. (2014). *Renegotiating boundaries: Political ecologies of shared waters*. Paper presented at the Dimensions of Political Ecology Conference, University of Kentucky, Lexington, Kentucky, February 28.

Dreisziger, N. (1981). Dreams and disappointments. In R. Spencer, J. Kirton, & K. R. Nossal (Eds.), *The International Joint Commission seventy years on* (pp. 8–23). Toronto: University of Toronto.

Falkemark M. (2011). Early focus on water strategies for the twenty-first century: IWRA as an interdisciplinary forerunner. *Water International*, *36(7),* 776–781. doi:10.1080/02508060.2011.630577

Feitelson, E., & Fischhendler, I. (2009). Spaces of water governance: The case of Israel and its neighbors. *Annals of the Association of American Geographers*, *99*, 728–745. doi:10.1080/00045600903066524

Furlong, K. (2010). Neoliberal water management: Trends, limitations, reformulations. *Environment and Society: Advances in Research*, *1*, 46–75.

Gleick, P. H. (2002). Water management: Soft water paths. *Nature*, *418*, 373. 25 July. doi:10.1038/418373a

Gleick, P. H. (2003). Global freshwater resources: Soft-path solutions for the 21st Century. *Science*, *302*, 28 November, 1524–1528. doi:10.1126/science.1089967

Hirsch, P. (2001). Globalisation, regionalisation and local voices: The Asian Development Bank and rescaled politics of environment in the Mekong region. *Singapore Journal of Tropical Geography*, *22*(3), 237–251. doi:10.1111/1467-9493.00108

Hirsch, K., & Jensen, M. (2006). *National interests and transboundary water governance in the Mekong*. Australian Mekong Resource Centre. pp. 199. Retrieved from http://www.envirosecurity.org/actionguide/view.php?r=422&m=publications

IJC. (2014). *International Joint Commission's international watershed initiative*. Retrieved from: http://www.ijc.org/en_/IWI

Jolly, C. (1998). The BC-WA Environment and the founding of the ECC. Lecture notes from International Environmental Law Class. Seattle: University of Washington.

Jonas, A. E. G., & Gibbs, D. C. (2003). Changing local modes of economic and environmental governance in England: A tale of two areas. *Social Science Quarterly*, *84*(4), 1018–1037. doi:10.1046/j.0038-4941.2003.08404011.x

Kramsch, O., & Mamadouh, V. (2003). Crossing borders of political governance and democracy. *Journal of Borderlands Studies*, *18*(1), 39–50. doi:10.1080/08865655.2003.9695600

Kramsch, O T. (2002). Reimagining the scalar topologies of cross-border governance: Eu(ro)regions in the post-colonial present. *Space & Polity*, *6*(2), 169–196. doi:10.1080/1356257022000003617

Lebel, L., Garden, P., & Imamura, M. (2005). Politics of scale, position and place in the governance of water resources in the Mekong Region. *Ecology and Society*, *10*, 18.

Maddock, T A. (2004). Fragmenting regimes: How water quality regulation is changing political-economic landscapes. *Geoforum*, *35*, 217–230. doi:10.1016/j.geoforum.2003.09.004

McCaffrey, S. (1996). An assessment of the work of the International Law Commission. *Natural Resources Journal*, *36*, 297–318.

McCaffrey, S. (2006). *Understanding international law.* Elsevier: LexisNexis.

Mirumachi, N. (2013). Transboundary water security: Reviewing the importance of national regulatory and accountability capacities in international transboundary river basins. In B. Lankford, K. Bakker, M. Zeitoun, & D. Conway (Eds.), *Water security: Principles, perspectives and practices* (pp. 166–177). London: Earthscan Series in Water Management.

Munton, D. (1981). Dependence and interdependence in transboundary environmental relations. *International Journal [Canada]*, *36*, 139–184. doi:10.2307/40201941

Munton, R. (2003). Deliberative democracy and environmental decision-making. In Negotiating environmental change: New perspectives for the social sciences. In F. Berkout, M. Leach, & I. Scoones, (Eds.), *Negotiating environmental change: New perspectives for the social sciences.* (pp.137–152). Cheltenham, UK: Edward Elgar.

Newig, J., & Fritsch, O. (2009). Environmental governance: Participatory, multi-level - and effective. *Environmental Policy and Governance*, *19*(*3),* 197–214. doi:10.1002/eet.509

Norman, E. S. (2015). *Governing transboundary waters: Canada, the United States and indigenous communities*. London: Routledge, Earthscan Series in Water Management.

Norman, E. S., & Bakker, K. (2009). Transgressing scales: water governance across the Canada–U.S. borderland. *Annals of the Association of American Geographers*, *99*(1), 99–117. doi:10.1080/00045600802317218

Norman, E. S., Bakker, K., & Cook, C. (2012). Introduction to the themed section: Water governance and the politics of scale. *Water Alternatives*, *5*, 52–61.

Norman, E. S., Cohen, A., & Bakker, K. (2013). *Water without borders? Canada, the United States, and shared waters*. Toronto: University of Toronto Press.

Norman, E. S., Cohen, C., & Bakker, K. (in press). The water convention from a North American perspective. In A. Tanzi, O. McIntyre, A. Kolliopoulos, & A. Rieu-Clarke (Eds.), *The UNECE convention to the protection and use of transboundary watercourses and international lakes: Its contribution to international water cooperation*. Boston: Brill Press.

Norman, E. S., Cook, C., & Cohen, A. (in press). Introduction: Why the politics of scale matter in the governance of water. In E. S. Norman, C. Cook, & A. Cohen (Eds.), *Negotiating water governance: Why the politics of scale matters* (pp. 1–25). London: Ashgate.

Paehlke, R. (2001). Spatial proportionality: Right-sizing environmental decision-making. In E. A. Parson, (Ed.), *Governing the environment: Persistent challenges, uncertain innovations* (pp. 73–125). Toronto: University of Toronto Press.

Parson, E. A. (2001). Environmental trends: A challenge to Canadian governance. In E. A. Parson (Ed.) *The environment: Persistent challenges, uncertain innovations* (pp. 3–30). Toronto: University of Toronto Press.

Pentland, R., and Hurley, A. 2007. Thirsty neighbors: A century of Canada–U.S. transboundary water governance. In K. Bakker (Ed.), *Eau Canada: The future of Canada's water* (163–184). Vancouver: University of British Columbia.

Perreault, T. (2005). State restructuring and the scale politics of rural water governance in Bolivia. *Environment and Planning A*, *37*(2), 263–284. doi:10.1068/a36188

Sandford, R. W., & Phare, M. A. (2011). *Ethical water: Learning to value what matters most*. Toronto: Rocky Mountain Books.

Sayre, N. F. (2005). Ecological and geographical scale: Parallels and potential for integration. *Progress in Human Geography*, *29*, 276–290. doi:10.1191/0309132505ph546oa

Sheppard, E., & McMaster, R. B. (2004). *Scale and geographic inquiry. Nature, society, and method*. Oxford: Oxford University Press.

Sneddon, C., & Fox, C. (2006). Rethinking transboundary waters: A critical hydropolitics of the Mekong basin. *Political Geography*, *25*, 181–202. doi:10.1016/j.polgeo.2005.11.002

Swyngedouw, E. (1997). Neither global nor local: 'Glocalization' and the politics of scale. In K. Cox (Ed.), *Spaces of globalization: Reasserting the power of the local* (pp. 137–166). New York/London: Guilford/Longman.

Swyngedouw, E. (2004). *Social power and the urbanization of water: Flows of power*. New York, NY: Oxford University Press.

United Nations. (2008). United Nations Task Force on Transboundary Waters. *Transboundary waters: Sharing benefits sharing responsibilities*. Geneva, Switzerland.

UNECE. (2013) United Nations Economic Commission for Europe, 'Implementation Committee'. Retrieved from http://www.unece.org/env/eia/implementation/implementation_committee_meetings.html

Verchick, R. R. M., & Hulen, R. M. (2003). Why the global environment needs local government: Lessons from the Johannesburg Summit. *Urban Lawyer*, *35*(3), 471–494.

Wismer, S., & Mitchell, B. (2005). Community-based approaches to resource and environmental management. *Environments: A Journal of Interdisciplinary Studies*, *1* (33), 1–18.

Zeitoun, M., Eid-Sabbagh, K., Talhami, M. & Dajani, M. (2013). Hydro-hegemony in the Upper Jordan waterscape: Control and use of the flows. *Water Alternatives*, *6*, 86–106.