Governance along the St. Lawrence River: Expanding beyond Remedial Action Plans

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The formal history of water management and legislation within the Great Lakes-St. Lawrence River Basin begins in 1909. It was in this year that the Boundary Waters Treaty was signed between Canada and the United States. Besides delineating all navigable waters as 'free and open', the International Joint Commission (IJC), a commission with equal representation from Canada and the United States, was established to oversee disputes occurring within transboundary waterways. This framework persists to this day, and is the binational mechanism for border water issues (IJC 2009).

As development escalated throughout the past century, with such notable events as the construction of the Moses-Saunders power dam (1958), industrial facilities, intensive agriculture and the St. Lawrence Seaway, environmental degradation ensued. This arose from changes to the natural landscape including the hardening of shorelines and loss of wetlands, metal and chemical contamination such as mercury and polychlorinated biphenyls (PCBs), and the introduction of invasive species, among other issues. Consequently, the ecological characteristics of the Great Lakes-St. Lawrence River along with the residents' use values were affected by these tangible changes; changes that included bioaccumulation of contaminants, nuisance algal growth, and added costs to agricultural and industrial production. In 1972, the Basin community through the IJC resolved themselves to proactive actions to mitigate these problems. What resulted was the creation of the Great Lakes Water Quality Agreement (GLWQA).

Initially, the GLWQa focused on phosphorus loads, which was the nutrient principally responsible for eutrophication of lake water – one of the most publically visible consequences of water pollution. at that time, the IJC was the coordinating body tasked to collect, analyze, and disseminate water quality data, as well as to provide advice and recommendations to those areas not achieving the prescribed water quality standards. By 1978, concern expanded from bacterial and 'naturally' occurring contaminants to toxic and hazardous pollutants, which originated or were isolated to specific areas known as 'hotspots' of environmental contamination. In turn, those 'hotspots' were categorized as Areas of Concern (AOC). An AOC was formally described as "a geographic area that fails to meet the General or Specific Objectives of the Agreement [GLWQA] where such failure has caused or is likely to cause impairment of beneficial use or of the area's ability to support aquatic life" (IJC 1989). In total, forty-three locations throughout the Great Lakes-St. Lawrence River Basin were designated as AOCs, which spanned from Lake Superior to the St. Lawrence River (Fig. 1, US EPA 2009). In 1987, the GLWQA was amended to include a formal

Figure 1. Map of the 43 Areas of Concern for the Great Lakes St. Lawrence River Basin

commitment on behalf of both Canada and the United States to undertake Remedial Action Plans (RAPs)for each AOC in order to restore the ecological and, by extension, the social integrity of the affected places (IJC 1989).
Embedded within the RAP framework are two predominant concepts relevant to the following discussion. These are an ecosystem approach and an emphasis on public consultation. The ecosystem approach applied a systematic and comprehensive analysis to the restoration process reflecting the change from isolated forms of inquiry and remediation to that of complexity and interdependency. attention to public consultation was another shift from traditional forms of environmental management. As opposed to constraining the process to solely state and industry relations, those living within the AOCs were to be formally involved in the restoration process.

This article focuses on one specific AOC: the St. Lawrence River. This AOC is essentially one of a limited number of binational AOCs, which means that both Canada and the United states are subject to restoration efforts within that locale. It is unique amongst binational AOCs (Fig. 1) in that two different RAPs are involved: one on the Canadian side of the border and the other on the American side. There is added jurisdictional complexity due to the extension of the st. Lawrence River into the Province of Quebec and the presence of another nation, the Mohawks of Akwesasne, geographically located within the heart of the restoration area (Fig. 2, IJC 2003). And lastly, the Canadian RAP is presently in the consultation process

to determine whether the area should be submitted for delisted status and hence be removed as an AOC or become an Area in Recovery (Sproule-Jones 2002).

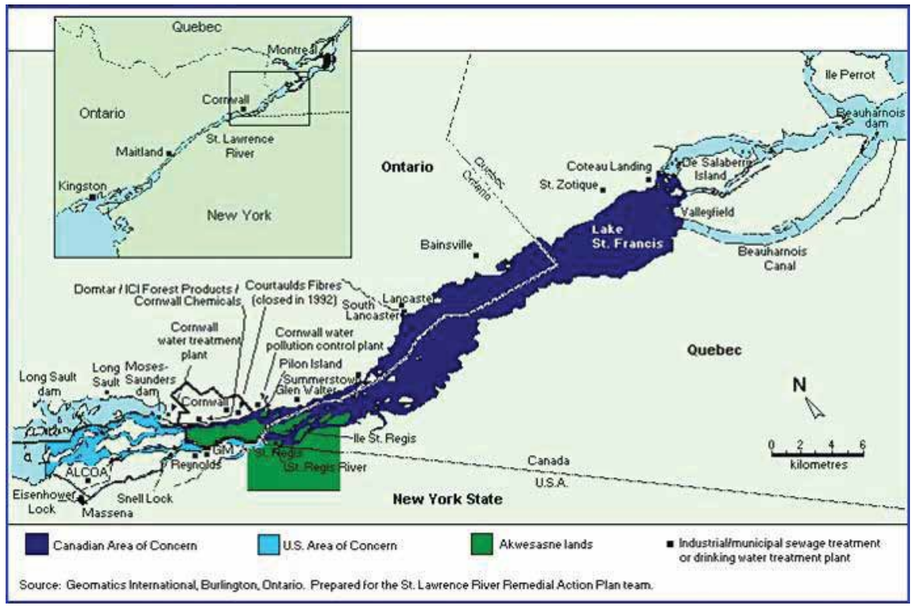

Figure 2. Map of the st. Lawrence River area of Concern.

For the analysis of this AOC, the chief sources of information came from government documents, reviews of journal articles on ecosystem-based approaches to environmental and watershed management, the Great Lakes Water Quality Agreement and remedial action plans, and environmental governance including adaptive management literature. The literature review was supplemented by participant observations at restoration council meetings, conferences, and workshops. Furthermore, interviews were conducted with members of the St. Lawrence River RAP who represented a diversity of interests involved in the RAP process. The interviews underwent content analysis as motivated by the literature review.

Development of the St. Lawrence River AOC

Although Canada and the United States were mutually mandated under the GLWQA to establish and execute RAPs, the domestic political structures shaped the restoration process. Under Canada's Constitution Act, provinces are granted rights over the land and water. Therefore, the binational agreement lacked force without the consent of the province, in this case, the Province of Ontario. Therefore, the federal and provincial governments created the Canada-Ontario Agreement (COA) as the formal mechanism committing the province to restoration activities (Environment Canada & Ontario Ministry of the Environment 2007). In the United States, rights are reversed. The federal government holds authority over the land and water thereby committing states to restoration endeavors without their individual consent. However, the governors of the eight states that bound the Great Lakes-St. Lawrence River Basin created the Council of Great Lakes Governors to jointly strive toward environmentally sound economic development (Durfee 1995).

Since the St. Lawrence River RAP is effectively a binational RAP, the Canadian lead agency was the federal government through Environment Canada (EC) with provincial representation from the Ontario Ministry

of the Environment (MOE). For the United States, the lead agency is the New York State Department of Environment Conservation (NYDEC) overseen by the United States Environmental Protection Agency (USEPA). With support from the Quebec region of Environment Canada and the Mohawk of Akwesasne government, the federal, provincial, and state agencies collaborated with one another on environmental contamination research within the St. Lawrence River. as the extent of the contamination became clearer among the parties, the RAP divisions along the River also became more pronounced.
While research was being conducted by the governmental agencies, the public on both sides of the St. Lawrence, in Cornwall, Ontario and Massena, new York, were informed of the RAP purpose and process. Upon completion of the initial consultations, citizens wanting to become active in the restoration process were assembled into advisory committees. Within Cornwall, it became known as the Public advisory Committee (PAC) and the Citizen Advisory Committee (CAC) in Massena. The committees consisted of individuals from industry, agriculture, education, landowner associations, anglers, concerned citizens, and so on. As the names suggest, the PAC and CAC were designed to advise the governmental RAP teams on the preferences for restoration. Initially, the PaC and CaC consulted with one another under the auspices of a St. Lawrence River Restoration Committee until disputes arose among members and the committee was disbanded. From then on, there was no formal mechanism bringing the public from Canada and the United States together.

By 1990, the U.S. RAP completed their background assessment with the publication of the Stage 1 report and the following year published the Stage 2 report delineating the actions for remediation. This included the disbandment of the Massena CAC since their advisory role was completed. Meanwhile, the Canadian RAP progressed at a slower pace publishing their Stage 1 report in 1992 and then five years later in 1997 their Stage 2 report. Therefore, the direct public engagement persisted for an extended 5 years on the Canadian-side of the border. Furthermore, the PAC motivated the creation of the St. Lawrence River Restoration Council, which became the decision-making forum for the Canadian restoration (New York State Department of Environment Conservation 1990).

While each of the RAPs created their own restoration recommendations, the end goal remained the same. This is to “restore, protect, and maintain the chemical, physical and biological integrity of the St. Lawrence River ecosystem… and protecting the downstream aquatic ecosystem from adverse impacts originating in the Akwesasne, Cornwall-Lake St. Francis and Massena Area of Concern” (St. Lawrence RAP Team 1992). Therefore, even though the impetus for restoration was binationally endorsed and created, the effect became a place-based restoration process with regional engagement. Even within the initial goal, there is a recognition that the effects are not isolated to the AOC region, rather it is connected to all those in the Great Lakes-St. Lawrence River Basin especially those at the receiving end.

A Perspective from Quebec on Regional Governance of the St. Lawrence River

Marc Hudon, Nature Quebec

Considering the size of territory that the Great Lakes-St. Lawrence River region represents it is only natural that in the early days, each jurisdiction took its own initiatives to manage this resources. Hence, Canada’s provinces of Ontario and Quebec along with the United States and its eight the Great Lakes states, engaged water-related issues primarily on a regional level when crises arose, notwithstanding the Boundary Waters Treaty of 1909 which required national accordance with proposed water resource regulation and management. It was only following the Brundtland Report in 1983 (Bruntland 1987) that governments woke up and decided to take action to restore and protect it. Nature Quebec, worked in unison with other large NGOs in the province to secure private funding to set up the Strategies Saint-Laurent, an NGO that would be dedicated to the waters of the St. Lawrence River. That organization would be responsible to get the shoreline populations in the province involved in the decision making and actions to come to restore, protect and promote the waters and uses of the St. Lawrence river for future generations. These governance groups formed Priorities Intervention Zone committees (Zone Intervention Prioritaire - ZIP committees). At present, there are fourteen active ZIP committees that cover 75% of the St. Lawrence River area in the Province of Quebec (see www.zipquebec.com/ for details).

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From Two RAPs to One River through Governance

As the Canadian RAP at Cornwall considers the culmination of a formal RAP process, questions begin to arise about what happens next. Besides devoting attention to the ecological restoration of a particular region, strong relationships have been formed, knowledge gained, and a desire to continually improve the regional ecological, social and economic prosperity of the region persists. However, beyond these integral features is the impetus to move beyond the confines of the RAP, beyond the set limits and borders, and in so doing integrate with other organizations and jurisdictions addressing similar concerns (Waltrner-Toews and Kay 2005).

Although the RAP process has not always been integrative, as is witnessed through the division of the two RAPs, the tug-of-war for the Mohawks of Akwesasne having to liaise with two RAPs, and the lack of coordination with the Province of Quebec, these shortcomings may be mitigated through a St. Lawrence River-wide governance structure.

Governance is the mechanism for change; in a broad conception, it is a decision-making process that is organizationally structured to support collective action among government and nongovernmental entities (Brandes, et al 2005). It facilitates an inclusive engagement among varying perspectives and positions surrounding a common issue (Plumwood 2002). In the context of RAPs, governance afforded those living within the region, federal, provincial and state governments, industries, First Nations, academics, and citizens the opportunity to construct and engage in the direction taken to maintain environmental integrity along the St. Lawrence River. Through an evolution of the present governance form, decisions all along the St. Lawrence River may be harmonized or at the very least presented and discussed among those that will or may be affected at present or in the future.

The concept of a St. Lawrence River wide organization was discussed at the Mighty St. Lawrence River workshop held in Brockville, ON, in December, 2009. Forty-eight individuals from federal, provincial, and municipal governments, research institutes, First Nation communities, non-governmental organizations, conservation authorities, and interested citizens converged to envision possibilities for an integrated future of the St. Lawrence River. Breakout-sessions addressed considerations for the process and content of a prospective St. Lawrence River strategy, and the future research needs to support and expand on the scientific monitoring efforts undertaken in the RAP processes (French Planning Services Inc. 2009). These issues were further discussed at the 18th Annual International Conference on the Great Lakes/ St. Lawrence River ecosystem in Cornwall, Ontario with representatives from Quebec, Ontario, new York, and First Nations. The next step is actualizing these discussions through the establishment of a river-wide network. Networks evolve with time, as the RAPs have, but what makes this network unique is the foundation in place-based, cross-boundary, jurisdictionally integrative coordination that relies on interested persons beyond government structures though working alongside them to effect change (Hahn et al. 2009).

Conclusion

This article began with a discussion of cross-jurisdictional water management through legislation. The prominent piece being the GLWQA, which was progressive for its time due to its inclusive and comprehensive nature. It was comprehensive through the ecosystem-based approach, and inclusive by its emphasis on public participation. From the formal arrangement, water management and specifically management of the St. Lawrence River resides in every individual and across spatial and jurisdictional scales. Rather than relying on a single unit of society, RAPs have shown that concerted effort builds solidarity and impetus for further change by not only focusing on the place one lives, but including those that live up and downstream.

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