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Commentary

Community engagement is critical to achieve a “thriving and prosperous” future for the Great Lakes–St. Lawrence River basin

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ABSTRACT

Despite the existence of agreements, legislation, and institutions at the international, national, and subnational levels within both Canada and the United States, significant policy implementation and reform challenges exist for the Great Lakes–St. Lawrence River basin. The Great Lakes Futures Project (GLFP) fostered collaboration among individuals from academia, government, industry, nongovernment organizations, and others to understand the past, present, and potential futures of the Great Lakes–St. Lawrence River basin, explore in what direction current policies are taking us, and assessing how potential changes in policies and approaches can move us toward the more desirable future. Participants within the GLFP emphasized the importance of stakeholder engagement within the policy recommendations and implementation strategies for reaching a “thriving and prosperous” future for the Great Lakes–St. Lawrence River basin. Here, we propose an implementation strategy founded on stakeholder engagement that 1) identifies clear basin-wide, cross sector, binational, and inclusive priorities, goals, objectives and tactics and 2) increases the roles and responsibilities of local actors and non-governmental sectors to provide a better balance between topdown and bottom-up efforts, all nested within a framework of strong stakeholder engagement. In taking such an approach, the GLFP presents an opportunity to implement mechanisms for fostering change to lead to a more sustainable future for the Great Lakes–St. Lawrence River basin.

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Great Lakes situational analysis

As consumerism and industrial production are on the rise, non-renewable and renewable natural resources are being used more frequently in order to satisfy human desires. As described by deBoer and Krantzberg (2013) “Robert Hennigan (1970) at the Thirteenth Conference on Great Lakes Research expressed that there is a requirement for understanding and reform of the Great Lakes institutional ecosystem

to establish an attainable and workable system for effective water management. Incorporation of the action elements of persuasion and education, legal action and economic incentives were noted as being particularly necessary for the success of this system.”

This prophetic insight still holds and calls on stakeholders to regard the water management issue as an integrated governance challenge and not a compilation of programs and policies applied reactively to address insults to the system.

Recent consensus opinion by hundreds of scientists studying the Great Lakes–St. Lawrence River basin is that the basin integrity is in danger and approaching a tipping point (Bails et al., 2005). Actions are needed to understand how to restore system elements where a chain reaction of cumulative responses to a suite of stresses are leading to catastrophic changes – referred to as ecosystem meltdown. Without at least partial restoration of these areas, the adverse symptoms being observed in the Great Lakes will intensify and to a large extent could be irreversible. Concurrently, governance reform and new policy

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responses are needed to control or eliminate sources of stress that represent basin-wide threats to the biological, physical and chemical integrity of the Great Lakes region that is necessary to move toward the stability and health of the ecosystem.

Project background

The Great Lakes Futures Project (GLFP) fostered collaboration among individuals from academia, government, industry, non-government organizations (NGOs), and others to understand the past, present, and potential futures of the Great Lakes basin, explore in what direction current policies are taking us, and assess how potential changes in policies and approaches can move us toward the more desirable future. Described by Friedman et al. (in this issue): “In this future, the Great Lakes–St. Lawrence River basin is adaptive and resilient. It is inhabited by a far-sighted community that is collective, inclusive, proactive, and has a positive vision and strong respect for the basin in which they live. This respect reflects the principle that the environment and the economy should be viewed holistically, resulting in a strong balance between the two. A ‘green–blue’ economy is prevalent and matched by appropriate economic incentives and legislation that protect the basin while also sustaining the economy.”

Unfortunately, workshop participants indicated not only that we are not heading toward that desired future, but we are heading away from it to a future characterized by poor human capacity for change and a poor environmental/economic balance. The sense was that although the Great Lakes region is rich with national and binational institutions, it appears largely devoid of strategic policy and programs to move us toward that desired future. Although binational partnerships were used to support domestic federal policy reforms in the US and Canada, what is needed to solve the region's current challenges is a combined basin-wide top-down and local, place-based bottom-up implementation initiative.

The good news is that the region is well positioned for significant policy reform. This is because the three key factors Kingdon (2003) identified as required for policy reform are converging. First, there is a problem to solve – the identification of the Great Lakes region as a system in crisis of reaching a tipping point beyond which restoration may not be possible has been recognized by the academic and agency science communities, the International Joint Commission (IJC), and environmental NGOs. Second, regional solutions exist – some are in place (e.g. removing beneficial use impairments in Areas of Concern), others are obvious technologically (e.g. reduction of nonpoint source pollution) but elusive politically, and others remain experimental (e.g. nutrient trading). Third, without political will, no potential solution will come to pass – that is, establishing public policies must be not only “technically sound, but also politically and administratively feasible” (Sallis et al., 2006). The US Great Lakes Restoration Initiative (USFG, 2010), the new Canada–Ontario Agreement (OMoE, 2010), and the recently signed protocols amending the Great Lakes Water Quality Agreement (GLWQA, 2012) are all examples of enhanced political will for action. So, although the region appears well-poised for key policy reform, meeting all three of Kingdon's principles, the challenge remains finding ways to enable place-based, bottom-up efforts to balance the more traditional and dominant basin-wide, top-down implementation.

Friedman et al. (in this issue) describe policy recommendations that evolved through the GLFP workshops from dozens of Great Lakes practitioners from US and Canadian federal agencies, state and provincial governments, municipalities, industry and nongovernment environmental associations. Briefly, practitioners agreed for the need to:

- Connect science to policy, education, and outreach to encourage stewardship and improve outcomes.
- Create and empower a place-based vision of the basin that reflects the voice of all constituents.

- Seek out opportunities to develop policies that are place-based and sensitive to the carrying capacity to the Great Lakes basin.
- Create policy incentives that encourage innovation and economic growth as well as ecosystem health.
- Develop and monitor indicators of comprehensive basin health.
- Create Great Lakes basin experiential programs.
- Develop stakeholder-driven planning that is legitimized by political leadership both before and after planning occurs to nurture a “Great Lakes Community.”

We need to tackle the collected set of recommendations in new ways, and this paper proposes mechanisms for doing so with a lens on “new public management” that more fully engages “place-based” initiatives led by individuals and organizations (Bulkeley and Kern, 2006). We need mechanisms for engaging and mobilizing the Great Lakes basin population to demand from the federal government collaborative programs and policies that build community capacity to make local interventions in a coordinated fashion.

Discussion

The following three sets of actions can help us move from where we are toward the desired future.

Identifying clear basin-wide, cross sector, binational, and inclusive priorities, vision(s), goals, objectives, and tactics

A critical role for federal and binational agencies is to create the conditions for a truly system-wide approach to setting visions for the region. Although government officials and experts have been the main actors in Great Lakes regional governance and in understanding technical aspects of public problems, increasing engagement of a more diverse set of stakeholders is required. This requires deliberate engagement, not superficial consultation on the part of government. It also requires that voices outside of government, that represent policy change implementation, are heard and addressed. This is doable. The Great Lakes Regional Collaboration that resulted in leading the Great Lakes Restoration Initiative through the effective lobby of the Healing our Waters Coalition is a concrete example. Stakeholder forums, such as the Great Lakes Executive Committee or the IJC, can bring together perspectives from all levels of government, business, environmental NGOs, academia, and the general public to establish priorities, goals, objectives, and tactics to support these visions.

Increasing the roles and responsibilities of local actors and NGOs to provide a better balance between top-down and bottom-up efforts

There is a need for federal government leadership, given overlapping jurisdictions of the states and provinces and the growing decentralization of environmental policy, to better engage subnational and local governments (CBC, 2007; CESD, 2005; GLU, 2007; IJC, 2006, 2011). However, in reality this may not be feasible, given the current trajectories of Canadian and the US federal governments. The Canadian government is retrenching on policies that protect the Great Lakes basin, e.g., Navigable Water Act and the Fisheries Act (CCPA, 2013), and the US government made a large contribution to the Great Lakes Restoration Initiative that may not be realized again in the future. We need to explore the roles of other levels of government and shift toward adaptive, multilevel, collaborative efforts that engage subnational public and private stakeholders (Blatter and Ingram, 2001; Finger et al., 2006; Sproule-Jones et al., 2008), and create space for a more substantive role for the academic community to support and inform policy. Federal roles can shift to building local capacity for place-based groups to develop and implement policy, which can result in more effective policy responses (Ostrom et al., 1994) as inclusiveness and empowerment of

place-based stakeholders often lead to significant benefits (Krantzberg, 2013). A possible role for the Great Lakes Executive Committee, structured as a consensus-building mechanism that requires input from outside of government, would be feasible if the final decision of this institution did not rely on the approval of the chairs (as currently structure, with Environment Canada and US Environmental Protection Agency as chairs), but a majority position from an inclusive membership.

Engaging the full regional citizenry in both of the above

We need a well-educated, engaged, and influential stakeholder community to sustain, if not enhance, the political will in federal, state, provincial, and municipal governments. The role of citizens and stakeholders in Canadian–US international environmental law compliance has strengthened over the past several decades (Hall, 2007), including formal roles in citizen monitoring (Silvertown, 2009) and informal roles through public opinion. There are also growing opportunities for public participation in the implementation of the GLWQA (Greitens et al., 2011), particularly related to increasing inclusion of non-government participation in the Annex subcommittees under the GLWQA. The effectiveness of community engagement can be measured both quantitatively and qualitatively (Table 1). Accordingly, more effective and coordinated citizen engagement should be established in communities across the basin.

Social media technologies hold great promise in terms of capacity to transform governance by increasing a government's transparency and interaction with citizens (Lambie and Michaluk, 2012; Timoshenko and Demers, 2012). Social media technology offers new mechanisms for governments and citizens to operate including: 1) democratic participation and engagement, e.g. using social media technologies to engage citizens in the government decision-making processes; 2) coproduction, through which governments and the public jointly develop, design, and deliver programs and services; 3) crowd-sourced solutions, through which governments seek innovation through public knowledge and experience and 4) transparency and accountability (Bertot et al., 2010). While social media is a valuable way to solicit input, it does not lead necessarily to consensus, and therefore other measures may be necessary.

Community-based social marketing (CBSM) is an effective tool because it can bring about behavior change, something that most

information-intensive campaigns are unable to do (McKenzie-Mohr and Smith, 1999). CBSM uses a systematic approach that involves 1) selecting a behavior to be encouraged; 2) identifying benefits and barriers to this behavior; 3) designing a strategy that uses “behavior-change tools” to address those benefits and barriers; 4) running a pilot of the strategy with a small representative community group and 5) evaluating the program post implementation (McKenzie-Mohr and Smith, 1999). CBSM could be used by NGOs within the Great Lakes region to advance “behavior change tools” such as having basin stakeholders commit to a new activity/behavior and developing community norms around that specific behavior (McKenzie-Mohr and Smith, 1999).

Conclusion and recommendations

As noted earlier, the time is now. We must not be complacent. We cannot wait for others to lead. The region is ripe for action. We must figure out a way to leverage the decentralized nature of the governance regime and coordinate the multiplicity of actors (many of whom change frequently) (Friedman et al., in this issue). In our view, the path forward lies in strengthening strategic planning and coordination among federal, state, provincial, and local governments, First Nations, tribes, NGO stakeholders, academics and citizens. This is the governance challenge for the region in the 21st Century, a challenge that we must respond to if we want to ensure the basin's thriving and prosperity.

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Table 1

Suggested areas of data collection and measurement that can provide both qualitative and quantitative feedback on community engagement.

Type of initiative	Evaluation questions	Evaluation methods
Awareness-raising campaigns	Which cluster groups(s) changed their attitudes toward Great Lakes Stewardship and in what ways? How many articles were published in the local media and what was the content?	<ul style="list-style-type: none"> • Cross-sectional surveys • Focus groups • Content analysis of media
Public participation	How can more people become engaged in place-based Great Lakes protection and restoration? Should senior orders of government be providing more advice?	<ul style="list-style-type: none"> • Focus groups • Questionnaire surveys
Interactive events (outreach, theater, demonstrations)	How many and what type of people attended the event? How engaged was the audience? In what ways did participants' views of Great Lakes priority actions change?	<ul style="list-style-type: none"> • Exit polls • Quota sample • Analysis of attendance records • Observation • Interviews
Education and training	How many government and nongovernment practitioners attended Great Lakes training courses? How many persons were provided with advice by impartial experts?	<ul style="list-style-type: none"> • Statistical analysis • Questionnaire surveys
Ongoing profile-raising	To what degree and in what way is Great Lakes improvement covered in the popular media? What contribution does profile raising investment make to policy and improving the knowledge base?	<ul style="list-style-type: none"> • Interviews • Content analysis of newspapers • Citation analysis of academic journals
Policy actions	Has the implementation of the consultation exercise created new partnerships?	<ul style="list-style-type: none"> • Focus groups • Documentation • Analysis
Horizontal and supporting actions	How many schools are taking part in Great Lakes protection projects?	<ul style="list-style-type: none"> • Statistical surveys • Documentation • Analysis
Operational reviews	Which public engagement approach is most cost effective?	<ul style="list-style-type: none"> • Process evaluation • Cost-effectiveness • Analysis

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