

THE VITAL COMMONS

AN AGENDA FOR THE GREAT LAKES-ST. LAWRENCE REGION



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An Agenda for the Great Lakes - St. Lawrence Region

Joshua Hjartarson
Matthew Mendelsohn
Allison Bramwell
Kelly Hinton

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School of Public Policy & Governance
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EXECUTIVE SUMMARY

Regions will be just as important as nation-states in ensuring the well-being of communities in the coming decades. The Great Lakes - St. Lawrence Region (GLSLR)—made up of the eight states and two provinces (Quebec and Ontario) that surround these great waters—has everything necessary to succeed in this new world.

Regions are becoming more important because capital and talent tend to cluster geographically so that employers have easy access to potential partners and employees. Clusters emerge in regions that possess natural, cultural, and place-defining attributes that make them attractive places to live and work. They also emerge near centres of public and private research and education.

The conventional narrative about the region has been of a “rust belt” and the decline of heavy industry. Many communities in the region have not fared well during the past three decades as globalized patterns of production and trade fundamentally restructured whole industries, including autos, steel, chemicals, machine tools, electronics, paper, and durable goods manufacturing.

However, this storyline ignores the fact that the production and trade models of the 20th century generated the wealth and infrastructure on which a new economy is being built. The capital, talent, and innovation produced in the 20th century has been deployed in the past two decades and has produced clusters of new industries in the financial services, health services, food processing, energy, aerospace, ICT, transportation, and pharmaceutical sectors, among many others.

The conventional narrative also misses the educational facilities, research institutions, skilled human capital, and global knowledge and connections found in the region. The wealth and infrastructure built over the 20th century created the foundations for new emerging sectors.

These realities can, if leveraged, turn the conventional narrative on its head. But to do so requires that we recognize our common regional history and interdependence, and think more consistently, and act much more purposefully, like a cross-border region with common interests.

One obstacle to achieving this vision is an inability to imagine our shared future. Other cross-border regions are beginning to act and think collectively, transcending national boundaries to address shared problems, manage shared resources, and take advantage of new economic opportunities.

A second obstacle is the thickening of the border, which has caused hardship for communities and businesses on both sides. Federal governments are taking action. The Beyond the Border Working Group and the Regulatory Cooperation Council are working on harmonization and easing border traffic without undermining security or sovereignty.

At the same time, other actors—provincial, state, and municipal governments, the private sector, civic organizations, and research institutions—are not sitting back waiting for the outcomes of these federal processes. There are things that all of us can do to strengthen the cross-border region.

This white paper is intended to facilitate the discussion about what we can do to strengthen the region. This paper outlines the shared challenges and opportunities facing the cross-border region. It also outlines a series of initiatives for government, business, and civil society that have been proposed to deepen cross-border collaboration. A final paper will be published in fall 2011.

Communities across the Great Lakes - St. Lawrence Region share common challenges. They are also rich with the assets needed to succeed in the global economy. Overcoming these challenges and leveraging those assets won't be easy. This paper is built around a basic premise—we can achieve more by working together than alone.



JOHN AUSTIN
Nonresident Senior Fellow,
Metropolitan Policy Program,
Brookings



MATTHEW MENDELSON
Director, Mowat Centre



SOMMAIRE EXÉCUTIF

Dans les décennies à venir, les régions seront aussi importantes que les États-nations pour assurer le bien-être des collectivités. La région des Grands Lacs et du Saint-Laurent — formée de huit États et de deux provinces (le Québec et l'Ontario) entourant ce grand bassin hydrique — détient l'ensemble des atouts afin de réussir dans ce monde nouveau.

Les régions gagnent en importance, car le capital et le talent tendent à se regrouper géographiquement de façon à ce que les employeurs aient un accès facile à des partenaires et à des employés potentiels. Les réseaux émergent dans des régions qui possèdent des attributs naturels, culturels et particuliers faisant d'elles des endroits attirants où vivre et travailler.

Le récit traditionnel à propos de la région des Grands Lacs raconte le déclin de l'industrie lourde qui a propulsé la région pendant des décennies. Les trente dernières années ont été plutôt défavorables pour plusieurs collectivités de la région alors que la mondialisation de la production et du commerce a entraîné une restructuration profonde d'industries entières, telles que l'industrie de l'automobile, de l'acier, des produits chimiques, de la machinerie, de l'électronique, du papier et de la fabrication de biens durables.

Toutefois, ce récit ne tient pas compte du fait que les modèles de production et de commerce du 20^e siècle ont généré la richesse et l'infrastructure sur lesquelles s'est érigée la nouvelle économie. Le capital, le talent et l'innovation, produits durant le 20^e siècle, ont été déployés au cours des deux dernières décennies et ont engendré de nouveaux réseaux d'industries dans le domaine des services financiers, des services de santé, de la transformation des aliments, de l'énergie, de l'aérospatial, des TIC, du transport, des pharmaceutiques et plusieurs autres.

De plus, le récit traditionnel fait fi des établissements d'éducation, des institutions de recherche, du capital humain qualifié ainsi que de la connaissance et des connexions que l'on retrouve dans la région. La richesse et l'infrastructure développées durant le 20^e siècle ont créé les fondations des secteurs émergents.

Ainsi, en tirant profit de ces réalités, il est possible de changer ce récit traditionnel. Mais pour ce faire, nous devons reconnaître notre histoire régionale commune et notre interdépendance. Nous devons aussi penser de façon plus cohérente et agir de façon plus ciblée, soit comme une région transfrontalière partageant des intérêts communs.

Un obstacle à cette idée est l'incapacité de s'imaginer un futur commun. D'autres régions transfrontalières commencent déjà à agir et penser collectivement, transcendant ainsi les frontières nationales dans le but de s'attaquer aux problèmes communs, gérer les ressources communes et profiter de nouvelles opportunités économiques.

Un autre obstacle est le durcissement de la frontière qui nuit aux collectivités et aux entreprises de part et d'autre. Les gouvernements fédéraux agissent. L'initiative Par-delà la frontière sur le périmètre de sécurité et le Conseil de coopération en matière de réglementation visent à promouvoir l'harmonisation sans porter atteinte à la sécurité ou à la souveraineté.

De façon concomitante, d'autres acteurs—les gouvernements des provinces et des États ainsi que les municipalités, de même que le secteur privé, les organisations civiles, les institutions de recherche et d'autres—ne se contentent pas d'attendre les résultats des initiatives fédérales. Il y a des gestes que chacun d'entre nous peut poser pour renforcer la région transfrontalière.

Ce livre blanc a pour but de faciliter la discussion à l'égard de ce que nous pouvons faire pour renforcer la région. Ce document décrit les opportunités et les défis communs qui ont trait à la région transfrontalière. Il présente également une série d'initiatives pour les gouvernements, les entreprises et la société civile qui ont été proposées pour approfondir la collaboration transfrontalière. Une version revue de ce document sera publiée à l'automne 2011.

Les collectivités dans la région des Grands Lacs et du Saint-Laurent partagent de nombreux défis. Elles bénéficient également des atouts pour réussir dans une économie mondiale. Relever ces défis et tirer profit de ces atouts ne sera pas facile. Ce document est construit autour d'une prémisse bien simple: ensemble, nous pouvons faire plus encore.



JOHN AUSTIN
Nonresident Senior Fellow,
Metropolitan Policy Program,
Brookings



MATTHEW MENDELSON
Director, Mowat Centre



INTRODUCTION

The Great Lakes - St. Lawrence Region (GLSLR) is poised for a comeback. The region could be the most attractive place in North America to live, work, and invest in the coming century. The Great Lakes and St. Lawrence Basin possesses a healthy ecosystem and is rich in physical, educational, financial, and human capital.

Some communities in the region have not fared well during the past two decades for multiple reasons, most notably due to the industrial decline brought on by globalized production and trade. But these production and trade models have also produced a concentration of new industries, talent, and capital that can be harnessed to advance the transition to the Next Economy.

The Next Economy is driven by exports, powered by low carbon, fuelled by innovation and rich with opportunity. This is a vision where we export more and waste less, innovate in what matters, produce and deploy more of what we invent, and ensure that the economy actually works for working families

- Bruce Katz

The region's success in the 20th century produced legacies that can be leveraged to address the challenges of the 21st century. The hurdles are apparent. Zero-sum competition between jurisdictions and companies during a period of economic difficulty risks derailing the region's promise. There is only a very weak sense of regional consciousness or identity. The international border is an obstacle to mobilizing the collective action necessary to seize common opportunities. The list of obstacles is well-known and lamented.

But the re-organization of the global economic and environmental order and the opportunities this presents for the region are less well-known and not universally celebrated. These new realities include, but are not limited to:

- the growing importance of healthy ecosystems for prosperity;
- the importance of water stewardship, in particular, to the future health of communities;
- the growing importance of regions due, in part, to the growing environmental and financial cost of global transportation; and
- new opportunities in Asia, fuelled by consumer demand and a growing middle class.

These are all disruptions to conventional wisdom and they challenge old assumptions about how to advance prosperity in the region. They also represent huge opportunities, if we are able to take advantage of them.

Given its assets, the GLSLR should be among the world's most successful global regions, built on a foundation of economic prosperity and sustainability. Sustainability is the marriage of economic and environmental objectives. Sustainable development requires coming up with innovative ways that support long-term economic prosperity, healthy ecosystems, and communities.

Deeper regional partnership and networks would accelerate this progress. Research for this paper is grounded in input from over 50 leaders across the region (see back inside cover). Seven conclusions emerge that should shape the cross-border dialogue that needs to take place.

First, the various jurisdictions in the region share a common interest in collaboration. While competition between provinces, states, and cities is inevitable, the region's best chance for success lies in cooperation and partnership.

Second, globalization has made regions more rather than less important. Regional economies are emerging globally. Many are on par with the GLSLR in terms of size. Some cross international boundaries. These competitors are working hard to manage their economic, social, and environmental challenges. The GLSLR must do the same.

Third, many communities in the region have been understandably focused on getting through tough times. For many of these communities, the economic difficulties have lasted for two decades or more. The leaders consulted for this study did not want to minimize these realities. But at the same time, they wanted to highlight the enormous assets of the region, which include the legacy of earlier prosperity that can be found in educational institutions, infrastructure, a well-established industrial base, a diverse population, and human and financial capital.

Fourth, capital and talent tends to cluster—and the GLSLR has many clusters that are contributing to a sustainable prosperity. Emerging clusters include financial services, health services, food processing, ICTs, transportation, pharmaceuticals, and aerospace, among many others.

Fifth, the region will be strongest once we acknowledge that economic/environmental trade-off no longer exists. One of the key elements of the Next Economy is the shift away from fossil fuel-reliant mature manufacturing industries to sustainable, innovative, energy efficient and exportable advanced manufacturing activities.

Sixth, what binds us most closely together is our shared stewardship of the Great Lakes and our freshwater resources.

Seventh, the biggest obstacle to collaboration is the international border.

The region has a history of success in cross-border collaboration, most prominently on the management and protection of the Great Lakes and among firms that manage cross-border supply chains. But more can be done. An agenda for the GLSLR would include specific projects and initiatives that could lay the foundation for closer cross-border collaboration and the emergence of a regional lens and approach to shared challenges.

“It’s two countries...but one region. We have a single natural economic region divided by a border.”

- Stephen Blank

OBJECTIVES

The purpose of the GLSLR Summit is to define an agenda to strengthen cross-border networks and social capital, hasten economic transformation, and address shared environmental challenges.

The purpose of this paper is to structure a conversation that will catalyze this agenda. As one anonymous interviewee noted, “policy-making has lacked a regional lens.” This paper outlines the shared challenges and opportunities facing the cross-border region. Specific sectoral initiatives that could provide the foundation for collaborative action are identified in the IdeaLabs Appendix on page 32.

The goal is to stimulate discussion that will deepen and refine an agenda that can be implemented across the region. Feedback from the summit will be aggregated and integrated into a final publication that will further define the agenda for the GLSLR. This final agenda will include actions for governments, non-governmental organizations, the private sector, academia, and other actors working in the public interest.

One question that hovers over the discussion of a cross-border agenda is whether, collectively, we have the most effective institutional mechanisms and processes in place to move it forward. The summit will encourage all of us to consider this question deeply. One outcome could be the simple acknowledgement that we have work to do together. More ambitious conclusions could emerge around the need for: working groups in sectoral areas, shared legislation, deeper and more formalized sectoral partnerships, or more formal processes to manage the international relationship with dedicated resources and personnel. Alternatively, a consensus may not emerge at all.

DEFINING THE REGION - WHAT IS THE GLSLR?

The GLSLR comprises two provinces, eight states, over forty first nations/tribal communities, and numerous Canadian and US regional authorities.¹



¹ The description and corresponding new original data generated for this report describes the eight state, two province region that directly links the Great Lakes themselves and the St. Lawrence River. Brookings Institution's Great Lakes Economic Initiative and its reporting on the region described the Great Lakes region to include the metropolitan communities and shares of 12 US states that surround the Great Lakes themselves, as well as the Upper Mississippi and Ohio watersheds.



| A World-Leading Economy... |

Rank	Country or Region	Gross Product (2009 \$ billion)
1	United States	\$14,119
2	Japan	\$5,069
3	China	\$4,985
4	Great Lakes - St. Lawrence Region	\$4,627
5	Germany	\$3,330
6	France	\$2,649
7	United Kingdom	\$2,175
8	Italy	\$2,113
9	Brazil	\$1,573
10	Spain	\$1,460
11	Canada	\$1,336

World Business Chicago, 2011

| ...That Punches Above Its Weight |

Rank	Country or Region	Population (2009 millions)
1	China	1,331
2	India	1,155
3	United States	307
4	Indonesia	230
5	Brazil	194
6	Pakistan	170
7	Bangladesh	162
8	Nigeria	155
9	Russian Federation	142
10	Japan	128
11	Mexico	107
12	Great Lakes - St. Lawrence Region	105

What we don't do well as a region is talk and think like a region.

- Chris Sands, Hudson Institute

There should be opportunities to link and align assets in ways that enable us to achieve more together than we can do separately.

- Chris Thompson, Fund for Our Economic Future

It will take a broad network of actors — corporate, civic, university, philanthropic, elected, federal, state, and local — to create the Next Economy in the Great Lakes region.

- Brookings Institution 2010



THREE DIMENSIONS THAT FRAME THE AGENDA

Transition to the Next Economy, Sustainability, and Partnership

Economic transformation and sustainability will be crucial to the region's success. Both will be accelerated by deeper partnerships across the Canada-US border.

Recent findings about social, environmental, and economic change suggest that:

- **If you do not innovate, you cannot compete globally.** Economic growth and prosperity require continuous innovation to generate new technologies, products, processes, and new ways of collaborating.
- **An innovative economy is a networked economy.** Innovation happens when people, capital, and ideas connect freely.
- **An innovative economy is a sustainable economy.** Quality of life, social inclusiveness, and environmental sustainability are necessary to attract the people to drive prosperity.
- **Healthy metropolitan economies are the drivers of regional prosperity.** Prosperous, dynamic cities have positive economic spin-offs well beyond the city boundaries themselves.

Shaping and delivering on a new vision for the GLSLR requires three broad, related conversations:

How to build the Next Economy, which requires a realistic understanding of the region's existing assets and the region's comparative advantages in the global economy.

How to build sustainability in the GLSLR, which requires acknowledgement that economic growth and sustainability are mutually inclusive, and must be pursued together.

How to enhance partnerships in the GLSLR, which requires the leadership to bring key actors and organizations from different sectors together in new ways.

The rest of this paper is dedicated to these conversations.

ASSETS

The GLSLR is rich with a variety of assets.

The region contains the largest freshwater deposit in the world, nearly 84 per cent of North America's freshwater supply and 18 per cent of the world's surface freshwater stores. The Great Lakes provide drinking water for over 40 million people (Brookings Institution, 2008).

The GLSLR is a **huge marketplace** boasting a \$4.6 trillion regional GDP and nearly 36 per cent of the population of both countries. If the region was a country, it would be the 4th largest economic unit on earth. Over 30 per cent of North America's and 11 per cent of the world's top 2000 firms are headquartered in the region (World Business Chicago, 2011).

The regional economy is **highly integrated**. For example, the provinces and states in the region are each others' biggest trading partners.

The GLSLR is also a **growing global trade hub** accounting for 39 per cent of total US and Canadian exports to the rest of the world. Two-hundred million tonnes of cargo are shipped annually out of the region (Brookings Institution, 2008).

The GLSLR is an **innovation and R&D powerhouse**. The region accounts for 29 per cent of R&D done in the US and 77 per cent of R&D done in Canada (ibid).

The GLSLR has **immense human capital**. The region has 20 of the top 100 universities in the world. These universities perform 38 per cent of all academic R&D in Canada and the US combined. They generate nearly 33 per cent and 70-80 per cent of the patents in the US and Canada respectively. Taken together, the GLSLR produces 41 per cent of university graduates in both countries (ibid).

Some of the world's most **dynamic and diverse metropolitan areas** are housed in the GLSLR. Although some cities have suffered from industrial decline, the region maintains a large, rich metropolitan foundation on which to build and re-industrialize.

The **Great Lakes and St. Lawrence river themselves are great economic assets**. They provide the North American interior with direct access to global ports. Water from the lakes and river are a key input into many industries. The lakes and river also enhance the quality of place and make the region a great place to live.

CHALLENGES

The GLSLR also faces a number of challenges. Our interviews reveal consensus that both sides of the border will have better outcomes as a result of collaboration.

Well-functioning supply chains and the ease of movement of both goods and people across the border are essential to both economies. However, since 9/11, **the border has thickened**. Crossing the border has become more time-consuming, inefficient, and expensive.

Non-tariff barriers resulting from a **lack of regulatory harmonization** have now surpassed customs duties on goods as the most significant intra-North American trade barrier. Much work needs to be done on mutual recognition, adoption of common standards, and in some areas, establishing regulatory alignment (Canadian Chamber of Commerce, 2010). One could also add that **creeping protectionism** on both sides of the border threatens to erode some gains from free trade.

The GLSLR **ecosystem is under threat**. New alien invasive species continue to arrive, adding to the ecological and economic damage being caused by the 180 others that are already here. Pollution continues to affect water quality. Contamination remains in sediments and wildlife throughout the system, and mercury and other toxins continue to enter the Great Lakes (Great Lakes Regional Collaboration Strategy, 2005). In addition, climate change impacts water quality and quantity.

Both countries face similar challenges from the dynamics of **industrial transformation** and the shift to **carbon-neutral industries**. Changing patterns in global energy use are driving the demand for low carbon technologies.

Though the region remains a major centre for R&D, it suffers from **slumping investment in basic R&D, insufficient human capital** in science, technology, engineering and math disciplines, and **poor rates of commercialization and new job creation** (Council of Canadian Academies, 2009; Brookings Institution, 2008).

Both countries are also facing **increasing global competition** from economies such as China, India, Brazil, and Germany, which are investing heavily in knowledge-intensive industries.

De-industrializing US cities have suffered from the social and economic effects of **urban decay**. Cities on the Canadian side of the border, however, are also struggling with **crumbling infrastructure, a declining tax base, and unemployment**.

Because they are renewed so slowly (1 per cent per year), the Great Lakes and the St. Lawrence are **vulnerable to the impacts of climate change and pollution**. Great Lakes water levels are projected to drop up to a full meter in this century under some scenarios.

OPPORTUNITIES

While the region faces a number of challenges, it also is rich with numerous opportunities. These opportunities, if “fully exploited and built upon, can help spur the type of transformative changes needed to create an ... economy that is export orientated, low carbon, innovation-fuelled, and opportunity rich” (Brookings Institution, 2010).

Regions are becoming more important. Many manufacturers that source components from all over the world are starting to re-examine the benefits of global supply chains and focus instead on organizing production on a more local basis. This potential ‘neighbourhood effect’ presents an excellent opportunity for reinvestment in manufacturing clusters, as long as the cross-border transaction costs do not become too high.

Unlike oil, there are no substitutes for freshwater. Given that the Great Lakes contain 18 per cent of the world’s surface freshwater, the region is in the position to **leverage a water economy**. This does not mean the bulk export of water or diversion. The lakes are positioned to supply water-intensive industries, such as agriculture, food processing, and semi-conductor manufacturing.

Also, due to its growing research and production capacity in water treatment and wastewater conservation, the region is a **burgeoning Blue Economy hub**. The Blue Economy is defined as the development of technologies for water conservation, management, cleaning, and treatment. Likewise, the region’s **developing know-how in ecosystem restoration** can underpin a next generation of service exports.

The BIC (Brazil, India and China) economies account for almost 20 per cent of global GDP. By 2015, they will account for 25 per cent of global GDP, surpassing the US (IMF World Economic Outlook Database, 2010). Much of this growth is from the growing middle class concentrated in these countries’ metropolitan regions. The BIC countries represent huge export potential for the GLSLR.

The *Joint Declaration on a Shared Vision for Perimeter Security and Economic Competitiveness* indicates renewed US and Canadian **federal government engagement** in the challenges confronting the GLSLR and represents a window of opportunity for deepening cross-border collaboration (see textbox on page 18).

Economic growth in the future will be driven by **metropolitan areas**; the GLSLR is rich with cities and all of their advantages.

The GLSLR has **the research capacity, human capital, and manufacturing prowess to build global competitive advantage in low carbon industries**, such as alternative energy and advanced manufacturing. The region is already emerging as a leader in wind and solar renewable component manufacturing, new technologies in battery power, hybrid systems, fuel cells, and the use of non-toxic renewable chemicals and bio-fuels in the auto industry.

DIMENSION 1

Building the Next Economy: Re-Industrializing the GLSLR

The Council of Great Lakes Governors and the Government of Ontario observed in the 1990s that the region was well-placed to develop a globally competitive, export-oriented regional economy focused on ‘high-performance manufacturing’ in emerging sustainable and clean technology industries (Council of Great Lakes Governors and Government of Ontario, 1994.)

The argument still holds true 20 years later. However the urgency and the scope of the challenge have intensified, in large part due to structural changes in the global economy. These structural changes include increased competition from BIC economies for export markets and for human and financial capital, the emergence of a consumer class in these same countries, low growth in mature industrial economies, and the transition away from labour and energy intensive manufacturing processes to high-value added, innovative, and low-carbon processes.

China, Germany, Brazil, and India are rising to the challenge and are investing heavily in their innovative capacity and in greening their economies. As the centre of North American manufacturing, the GLSLR must do the same or risk being left behind.

Fortunately, the GLSLR has numerous assets required for the transition to the Next Economy, including extensive infrastructure, growing capacity in carbon neutral industries, high levels of human capital, emerging clusters in R&D and advanced manufacturing, and a critical mass of world-class universities.

Furthermore, while many view the region’s industrial history as a barrier to the Next Economy, it is actually a foundation on which to re-build. The integration of traditional assets with new ideas is evident throughout the GLSLR. Existing processes are continuously being upgraded and are integrating new materials and techniques. The auto sector increasingly utilizes robotics and bio-materials to improve efficiency and quality, to cite just one example.

New transformative technologies built on our old industrial assets “offer the region comparative advantage” that can extend “its high-value manufacturing in new directions” (Brookings Institution, 2008). While the region has become a global leader in the financial and other service industries, advanced manufacturing in polymers, advanced biochemicals, robotics, electronics, health and medical devices, agri-food products are now big contributors to employment and growth (Brookings Institution, 2008).

The Blue Economy is particularly promising for the GLSLR. “Clean water supplies and sanitation remain major problems in many parts of the world, with 20 per cent of the global population lacking access to safe drinking water” (UNEP Brief, 2011). The Great Lakes has a vast comparative advantage in this growing \$500 billion industry.

As of 2007, 2.7 million jobs on the US side of the border were linked to Great Lakes water (Brookings Institution, 2010). With the right mix of government, business and civil society actors, the number of jobs should grow substantially.

FUTURE WATCH

Collaboration, Innovation, and Sustainability in the Auto Sector

The Ontario BioAuto Council is an industry-led organization that links the chemicals, plastics, manufacturing, auto parts, automotive assemblers, agriculture, and forestry industries to support innovation in renewable bio-based materials. The Council supports the development of high risk transformative technologies in bio-based products and processes that use emerging green technologies such as biotechnology and green chemistry. Much of North American vehicle interiors are now made from bio-based materials. All Ford vehicles now have foam seats made from soy bean oil which is renewable, non-toxic, and reduces CO₂ emissions.

The Council is Ontario-based and is reaching out to firms in Michigan and Ohio to develop, expand, commercialize, and integrate these new technologies into automotive supply chains.

We have already identified many of the challenges to the region’s prosperity on page 13. Among them are barriers to cross-border trade and human capital flows.

The Great Lakes states and provinces are each other’s most important trading partners. Policy-makers, business leaders and civil society have a shared interest in ensuring that the gains from trade are maximized and the exchange and the flow of ideas and innovations are facilitated and not unnecessarily hindered.

Some practical ideas are identified in the IdeaLabs section (attached as an Appendix). We preview one idea on the next page.

“Small businesses are particularly hurt by the border process.”

- Catherine Gervais

ONE IDEA

Cross-border Innovation Fund and Strategy

Given the scale and quality of research and commercialization potential in the Great Lakes in several emerging fields, the Brookings Institution proposed that both governments jointly develop a Cross-border Great Lakes Innovation Fund and Strategy to identify opportunities to build cross-border networks, link policy capacity, and leverage additional investment in research and innovation (Brookings Institution, 2008).

This would involve identifying and supporting sectors and clusters in which the Great Lakes region has expertise and a critical mass of public and private research capacity such as alternative energy technologies, freshwater research, management and technology, and advanced manufacturing such as materials science, ICT, medical health, and bio/life sciences. Governments could support these investments and priorities with appropriate trade, education, workforce, and human capital development policies.

“Virtually every challenge faced in the GLSLR has a bi-national component... and dealing with them collaboratively will help enhance the quality of the solutions.”

- David Ullrich

BORDER, TRADE, AND REGULATORY ISSUES AND THE JOINT DECLARATION ON PERIMETER SECURITY AND ECONOMIC COMPETITIVENESS

In February 2011, Prime Minister Harper and President Obama announced a Joint Declaration on a Shared Vision for Perimeter Security and Economic Competitiveness.

The joint declaration created three important mechanisms to address cross-border challenges. The Regulatory Cooperation Council will be working on ways to harmonize and align cross-border regulatory regimes. The Beyond the Border Working Group will focus on trade and border issues. The Clean Energy Dialogue will support expanded research and development in bio-energy and carbon capture and storage.

Our interviews reveal that regulatory and trade issues remain a vital concern among regional stakeholders.

This high-level cross-border declaration indicates federal government engagement with the challenges confronting the GLSLR and represents a window of opportunity for deepening cross-border collaboration in the areas of border security, regulation, and alternative energy infrastructure and capacity.

U.S.A.



CANADA



“The border serves important positive functions for Canada (and the US), including ability to enforce laws and standards (e.g. gun control for Canada), and to demonstrate sovereignty. And at any rate it is a fact of life.”

- Jim Stanford

DIMENSION 2

Sustainability: Stewarding Our Natural Assets

Canada and the US have a long history of economic, political, and social interdependence. But in the GLSLR, the Great Lakes and the St. Lawrence River binds us together most of all.

Surrounding the lakes are vibrant ecosystems that include boreal forests, thousands of inland lakes, and vast networks of wetlands and marshes that together sustain one-fifth of all fish species in North America, and hundreds of millions of migratory birds. Thousands of kilometres of beaches, coastlines, and sand dunes make up a vast ‘freshwater coast’ that provides habitats for plants and animals, as well as countless recreational activities for 105 million people who live, work, and play in the region. In both countries, we too often overlook our “fourth coast” (Great Lakes Regional Collaboration Strategy, 2005).

Apart from its natural beauty, the GLSL Seaway has long been a critical element of the region’s transportation infrastructure that allowed its early settlement and subsequent economic growth. Shipping, however, has introduced invasive species that alter the Great Lakes ecosystem and threaten the survival of indigenous species.

At the same time, many of the manufacturing giants of the previous era located their factories on waterfronts to ensure ease of access to the water for industrial uses leaving a legacy of abandoned industrial sites that obscure coastlines and urban waterfronts. Toxic pollution threatens water quality.

The contrast between economic growth and environmental damage, so prevalent during the region’s previous era of economic prosperity, is a relic of the past. A healthy ecosystem is increasingly understood to be crucial to the region’s future economic success.

According to several econometric studies, quantifiable economic returns from Great Lakes restoration are estimated to be \$30 to \$50 billion USD in short term multiplier effects and \$50 billion USD in long-term benefits (Brookings Institution, 2010). According to a recent discussion paper published by the Government of Ontario, restoring the Great Lakes delivers a two-to-one long-term return on investment. “That’s on-top of the short-term economic stimulus benefits” (Government of Ontario, 2009).

More fundamentally, the talented people that will drive innovation and prosperity will want to live in healthy, sustainable, vibrant communities.

As Table 1 demonstrates, there are a large number of cross-border agencies, non-governmental organizations, and government partnerships that are addressing environmental issues like water quality, invasive species, and toxic substances. However, these efforts are issue-driven. Collaboration across these initiatives is ad hoc.

TABLE 1 | Examples of Collaboration in the GLSLR

	Great Lakes Fisheries Commission	International Joint Commission (IJC)	Great Lakes & St. Lawrence Cities Initiative
Mandate	<p>Develop coordinated programs of research and recommend measures for sustainable productivity on fish stocks.</p> <p>Formulate and implement a program to eradicate or minimize sea lamprey.</p>	<p>Help the two countries manage the water and river systems along the border. Deal with everything from the regulation of water levels to Great Lakes water quality.</p>	<p>Advance the protection and restoration of the Great Lakes and the St. Lawrence River.</p>
Membership	<p>8 Commissioners (4 appointed from each the United States and Canada) and one US Alternate Commissioner.</p>	<p>6 members. 3 are appointed by the US President, and 3 are appointed by the Governor in Council of Canada. Advisory boards with representatives from state, provincial and nongovernment members.</p>	<p>A coalition of US and Canadian mayors and other local officials. There are 71 member cities in both Canada and the US.</p>
Activities	<p>The Commission coordinates fisheries research, controls the invasive sea lamprey, and facilitates cooperative fishery management among the state, provincial, tribal, and federal management agencies.</p>	<p>Review water levels and flows regulation for the Lake Ontario - St. Lawrence River system and review governments' progress.</p>	<p>Works actively with federal, state, and provincial governments to advance the protection and restoration of the Great Lakes and the St. Lawrence River.</p>
Governance	<p>The Commission executes its management responsibilities with a Secretariat staff located in Ann Arbor, Michigan. The Secretariat serves as the primary interface between the Commission and others, and directs program and business management efforts, and provides decision support on a wide range of issues.</p>	<p>1909 Boundary Waters Treaty established the Commission, which has 6 members.</p> <p>The Commission has set up more than 20 boards, made up of experts from the United States and Canada, to help it carry out its responsibilities. The Great Lakes Regional Office, a binational entity was established in 1972 to advise on the GLWQA implementation.</p>	<p>The Cities Initiative is a 501(c)3 organization in the US and a registered corporation in Canada. Members of the Cities Initiative pay dues according to city size.</p>

Great Lakes Commission

Help its Member states and provinces speak with a unified voice. Focus on communication and education, information integration and reporting, facilitation and consensus building, and policy coordination and advocacy.

8 Great Lakes states with associate member status for the provinces of Ontario and Quebec.

Communications, policy research, and advocacy.

Committee and task force structure is the primary vehicle for identifying and addressing issues and recommending the adoption of policy positions by the membership. Observer organizations—including US and Canadian federal, regional and tribal governments—participate extensively in Commission activities.

Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement

'Good faith' agreement details how the States and Provinces will manage the use of the Great Lakes Basin's water supply, prohibit and manage diversions.

Signatories include the Premiers of Quebec and Ontario and the Governors of the 8 Great Lakes states.

The agreement provides a framework for each Great Lakes state and province to enact programs and laws protecting water quantity in the Basin

States are meeting the agreement's commitments through the companion Great Lakes Compact.

Ontario and Quebec will amend their statutes and regulations as appropriate. Council of Great Lakes Governors serve as secretariat to the Governors' and Premiers' Regional Body and the Governors' Compact Council.

Great Lakes Water Quality Agreement (GLWQA)

Restore and maintain the chemical, physical and biological integrity of the Great Lakes basin ecosystem.

The US Government and the Government of Canada, in cooperation with state and provincial governments.

Parties meet semi-annually to coordinate policies and programs and biennially report to the IJC. Annexes are also added to incorporate the development and implementation of remedial action plans for Areas of Concern and lakewide management plans.

Subject to review every 6 years. Monitors and assesses progress and advises governments. The IJC assists with joint programs under the Agreement. 2 binational boards advise the IJC. The Council of Great Lakes Managers was added as a third advisory board in the 1990s.

Cross-border attention to environmental protection in the region began with the far-sighted and historic Boundary Waters Treaty signed between Canada and the United States in 1909 and the establishment of the IJC to jointly manage Great Lakes water quantity and quality. Environmental protection has been a priority in the region for over 100 years.

Based on the interviews conducted for this study, there is a general consensus that greater collaboration between federal, provincial, local, and first nations/tribal policy-makers on both sides of the border is necessary to protect the region's ecology and to maximize the economic opportunities afforded by this vast resource.

However, there is a lack of consensus on how to advance collaboration and whether the region needs to link existing efforts under a formal institutional umbrella(s) or process(es). This question is taken up in the next section.

We also identify several steps that could be taken in the IdeaLabs Appendix to advance a cross-border sustainability agenda. We preview one on the next page.

“Water is a unifying theme. It is what binds us all and what we share in common.”

- Thomas Crane



ONE IDEA

Expanding the Great Lakes Regional Collaboration Strategy Across the Border

The Great Lakes Regional Collaboration Strategy is a collaborative initiative of US federal, state, local, and tribal government officials, and private sector stakeholders. The initiative developed a comprehensive strategy for restoring the Great Lakes to better ensure the long-term sustainable development of the region.

The strategy emphasizes the significant direct economic benefits from water-based recreation, recreational and commercial fishing, and wildlife tourism, as well as increases in coastal property values due to reduction of real and perceived health risks of living near contaminated areas.

The Great Lakes Restoration Initiative (GLRI) was an unprecedented commitment by the US federal government—\$475 million USD in fiscal year 2010 and \$300 million USD in fiscal year 2011 (Great Lakes Legislative Caucus, 2011). However, comparable investment and a comparable plan are lacking on the Canadian side.

As the region's water is a shared resource, we need a strategy for governments at all levels on both sides of the border to collaborate and invest in the protection and restoration of our lakes. This could be achieved through an official agreement, an MOU, and/or greater effort to align policies. This could also mean linking up with other funding mechanisms such as the aforementioned GLRI, or the US Great Lakes Protection Fund.

WHAT'S HAPPENING NOW?

Cross-border industry initiatives - Green Marine/Alliance Verte

Green Marine is a cross-border, industry-led initiative made up of shipping companies and port and terminal operators aimed at voluntarily implementing a marine industry environmental program that exceeds regulatory requirements. The main purpose is to reduce the environmental footprint of the marine industry.

Unique in the global shipping industry, Green Marine was started in the GLSLR in 2008 but is expanding rapidly to include members across North America. Governments and environmental groups are active members. Green Marine has been formally endorsed by the World Wildlife Fund and Ducks Unlimited.

DIMENSION 3

Building Cross-Border Partnership(s) in the GLSLR

New cross-border processes, relationships, governance, and institutions may be needed in the region. Governance relates to how decisions are made, either by government, or by private actors, or some combination thereof. In a cross-border, regional context, governance is not necessarily about building another layer of government, but could be about bringing together actors, “each with their own mandates and accountabilities, for joint work on common, long-term challenges” (Bradford and Wolfe, 2010).

The economic benefits of cross-border collaboration are well-known. Cross-border regions develop integrated supply chains and industrial clusters that enhance the gains from trade.

Similarly, cross-border regional relationships enable federal, state, provincial, municipal governments, and non-governmental actors to coordinate policies and pursue common interests without the need to necessarily reorganize their structures or compromise national or state/provincial sovereignty.

For illustrative purposes, Table 2 on page 26 depicts five models of regional collaboration. A dynamic common to all of them is that ‘top-down’ and ‘bottom-up’ forces interact and are both present, albeit in different proportions.

In some models, government is the primary driver. In others, civic organizations and the private sector are primary. There is also variation in the extent to which initiatives are issue and sector driven (the current situation in the GLSLR) or centrally coordinated (as in the macro-regions of the European Union referenced in Table 2).

As one interviewee noted, “there are a number of governance models that exist, but they involve trade-offs” (Kathryn Friedman, University of Buffalo Regional Institute). They also rest on particular sets of cultural, economic, and geo-political foundations and may not be easily exportable beyond their current contexts.

Unlike cross-border regional linkages in Europe that are driven by the EU and national and sub-national governments, linkages across the Canada-US border are mostly a bottom-up, sectoral phenomena. Successful formal cross-border organizations in North America are built on positive, pre-existing and informal relationships between different levels of government and private and other public sector representatives on both sides of the border (Policy Research Initiative, 2008; Friedman and Foster, 2010). Government is typically one of several partners in these initiatives, but not necessarily the leading or driving partner.

The Pacific North West Economic Region (PNWER) represents the closest North American approximation to a centrally coordinated multi-jurisdictional entity. Its

existence and mandate is legislated by its member states, which include Idaho, Montana, Oregon, Washington as well as Alberta, British Columbia and the Northwest Territories. However, its governance also includes an official role for the private sector.

Despite common regional issues, interests, and levels of socioeconomic integration, a comparison with the PNWER region reveals more differences than similarities with the GLSLR. Private and government networks are much more developed in PNWER. Furthermore, the economies of the PNWER members are resource driven and there is less zero-sum competition for investment. There is also a much greater sense of ‘remoteness’ or ‘distance’ from the respective federal governments and much greater incentive to collaborate in order to exert influence at the federal level. Some suggest that there is a shared regional identity. Many of those who were interviewed for this study argue that the foundations necessary to support a PNWER model are absent in the GLSLR.

WHAT'S HAPPENING NOW?

Windsor - Detroit Collaboration

These two cities have a long history of cross-border collaboration and partnerships. For example, swift cross-border action through the Northern Border for Economic Security and Trade coalition quickly re-opened the border in the wake of 9/11. There are numerous partnerships in other areas.

Universities in Detroit and Windsor have joint research and education programs such as the North American Public Health Institute and the Great Lakes Environmental Law Centre. The University of Windsor's Centre for Enterprise and Law assists start-up firms in Detroit's TechTown, a business incubator associated with Wayne State University.

Most recently, Detroit announced the opening of a \$21.5 million USD port for cruise ships, ferries, tall ships, and tour boats. The port will help attract tourists to both Windsor and Detroit. “We are hoping to establish Windsor and Detroit as a destination again” (David Cree, Windsor Port Authority, 2011).

Local water utilities consult on projects and water quality issues. The Detroit-Windsor Tunnel Corporation manages the tunnel. Translinked is a regional transportation and logistics strategy driven by the Detroit Regional Chamber of Commerce and that includes input from Canadian officials.

Over \$600 million has been invested in the University of Windsor/Chrysler Automotive Research Centre. More collective work needs to be done to address the economic decline of the region following the restructuring of the auto industry since trade relationships in the auto sector remain deeply integrated (Nelles, 2011).

TABLE 2 | Examples of Regional Collaboration and Governance

Model	Ad hoc, issue-by-issue relationships; no central coordination	Civil society lead in coordinating initiatives; broad-based consultation with the public, private, and non-profit sectors	Private sector initiative with government support; sector driven	Legislated mandate from member states/provinces; permanent secretariat; input from private sector	Multilevel governance: institutionalized policy networks of national, regional, and local governments; legislated mandate
Example	Great Lakes - St. Lawrence Region	Toronto CivicAction Alliance	Quebec - New York Corridor Coalition	Pacific NorthWest Economic Region (PNWER)	European Union Macro-Regions
Mandate	Improving the region's social, economic, and environmental future by convening individuals and organizations from all sectors.	A private-public partnership to broaden and deepen economic connectivity between Quebec and New York, with a special focus on the cross-border corridor region from Quebec City and Montreal through Plattsburgh to Albany and New York City.	Developed the first cross-border, community bio-event resilience action plan; helped facilitate new Amtrak train service, in cooperation with over 35 partner organizations; and led a coordinated effort to improve border crossing speed in advance of the 2010 Winter Olympics.	Promote greater regional collaboration; enhance the competitiveness of the region in both domestic and international markets; leverage regional influence in Ottawa and Washington DC; achieve continued economic growth while maintaining the region's natural resources.	A group of regions or countries that share geographical characteristics, as well as common challenges. Member governments discuss regional priority issues and ways to address them.
Membership	Varied	"a coalition of thousands of civic leaders".	State of New York, Province of Quebec, Plattsburgh-North Country Chamber of Commerce, and the Federation of Chambers of Commerce of Quebec.	Idaho, Montana, Oregon, and Washington, Alaska, British Columbia, Alberta, Saskatchewan, Northwest Territories, Yukon.	Baltic Sea: Sweden, Finland, Estonia, Latvia, Lithuania, Poland, Germany, Denmark. Danube: Germany, Austria, Hungary, Czech Republic, Slovak Republic, Slovenia, Bulgaria, Romania, Croatia, Serbia, Bosnia, Ukraine, Herzegovina, Montenegro, Moldova.
Activities / Outcomes	Over a dozen projects to improve the social and economic future of the Toronto region, including the Emerging Leaders Network, Toronto Regional Research Alliance, and the Toronto Region Immigrant Employment Council.	The creation of a Quebec-New York Green Corridor Council; MOU between Hydro Quebec and the College of Nanoscale Science and Engineering in Albany; MOU between the Quebec Ministry of Economic Development and NYSTAR, establishing guidelines for collaboration in research and innovation.	Developed the first cross-border, community bio-event resilience action plan; helped facilitate new Amtrak train service, in cooperation with over 35 partner organizations; and led a coordinated effort to improve border crossing speed in advance of the 2010 Winter Olympics.	Several clean water initiatives; closer collaboration in large scale projects related to energy and transport infrastructure; discussions how to improve tourism, cross-border trade and maritime circulation surveillance.	

WHERE DO WE GO FROM HERE?

Views and Opinions

Although there is a wide consensus on the need for stronger networks across the region as demonstrated in the textbox below, there is no consensus on what institutional form, if any, deeper partnerships should take. The models in Table 2 provide a useful starting point for discussion. The descriptions and suggestions in the IdeaLab section later in this paper provide a useful inventory of some of the sector projects and initiatives that have been proposed.

In terms of cross-sector initiatives, expert opinion converges on the need for leadership to identify what's happening now, to strengthen existing partnerships, and to build new ones where they do not yet exist.

1. LEADERSHIP

Of all the key ingredients for successful cross-border collaboration, one of the most indispensable is leadership. Effective leaders set and achieve goals, seize opportunities, and broker conflicts. They have wide networks and act as 'boundary crossers' who make connections between people who would not normally talk to each other but who can collectively contribute to building a regional agenda. They are good at getting political buy-in from different levels of government and from the private sector and other organizations.

It is not yet clear where the leadership will come from to build the momentum for a strategic agenda for the sustainability and economic transformation of the GLSLR.

2. MAPPING OUT WHO IS DOING WHAT IN THE REGION

There are many people and organizations doing cross-border work in the GLSLR, but we do not really have a good sense of who is doing what. An inventory is necessary in order to identify gaps and mobilize resources appropriately.

3. ORGANIZE ISSUES INTO WORKABLE IDEAS

Big challenges need to be broken down into manageable parts in order to identify projects that are doable in the short-term and those that might take longer. In both the Pacific Northwest and the Quebec-New York Corridor regions, working groups made up of people with relevant interests and expertise have identified actionable ways to address different issues and have achieved major accomplishments in areas such as transportation, critical border infrastructure, and energy planning, among others. Identifying comparable projects is crucial for the GLSLR.

4. FIND RESOURCES

Improving networks and partnerships in the GLSLR does not mean creating another layer of government. It also does not always require new resources. Resources can often be identified from within existing organizations or budgets that can be deployed in new ways.

5. REPORTING ON OUTCOMES

At a minimum, a commitment to report regularly on outcomes and initiatives is essential. In the absence of formal governance structures or institutions responsible for the GLSLR as a whole, it is not clear who will do this reporting or who they would be reporting to.

CONCLUSION

The GLSLR is experiencing significant challenges. However, the region boasts numerous assets that should enable it to rank among the global economic leaders for generations to come. But now is not the time for complacency.

The region is at a critical juncture. The goal of this paper has been to advance discussion of a cross-border agenda for the GLSLR that will ensure it becomes the most attractive place in the world to invest, live, and prosper.

There are tangible steps that need to be taken to deepen trade, facilitate the exchange of ideas and innovations, and enable sustainable prosperity. Some potential steps are identified in the IdeaLab Appendix attached. We want your views on these. And, we want to hear your views on what other steps should be taken. The results of these discussions will be released in a final publication in fall 2011.





The Great Lakes region has a solid foundation for moving ahead and building more solid institutional governance structures — moving from ad hoc, loose networks, to a more centralized entity.

- Kathryn Friedman

The creation of bilateral structures could be an opportunity to deepen cross-border collaboration. Even in the absence of formal structures, there are opportunities to create more forums in which to engage and interact.

- Linda Ewing

There is a tremendous advantage to having an ongoing structure to facilitate regular interaction on a host of issues to improve cross-border regional competitiveness.

- Matt Morrison

Anticipating a broad-based North American regional governance regime may be unrealistic. Instead it is more likely that sector-specific regional regimes will be created, as in the transportation sector.

- Clarke, 2010

A commitment to active political leadership does not require the creation of large centralized institutions. Political leadership is crucial, however, in injecting urgency and providing clear direction to the complex network of existing institutions and arrangements that manage the bilateral relationship.

- Canadian Council of Chief Executives

Regional bodies, commissions, and summits are indispensable tools for working on the many important and shared challenges facing our countries. They provide the institutional framework for effective coordination.

- Diane Wilhelmy

We need to institutionalize cross-border problem-solving.

- George Kuper

The state and provincial level is where effective leadership can really make a difference.

- Don Alper

The best solutions are predictable frameworks that are transparent and designed in cooperation with industry.

- Leah Littlepage

We need to focus on particular problems and then, if successful, we could move towards a robust institutional mechanism.

- Barbara McFadden Allen

A renewed Great Lakes Water Quality Agreement could provide a forum for cross-border work on issues of mutual concern.

- Tim Eder

Avoid the assumption that existing bi-national ecosystem protection and restoration efforts are adequate... but there is a great deal of stakeholder will for improvement.

- Joel Brammeier

There is a remarkable contradiction between the reality of the North American economy, which is deeply integrated, and North American governance, which is weak, fragmented and often uninformed.

- Stephen Blank

You need visionary leadership; leadership that gets it; leadership that sees the bigger picture; leadership that sees the benefits of the collective over going it alone.

- Kathryn Friedman



APPENDIX

The Great Lakes - St. Lawrence Region Summit IdeaLabs

A large portion of the GLSLR Summit will be organized around IdeaLabs.

An IdeaLab is an interactive session where ideas, trends, and concepts are discussed among policymakers, academics, civil society leaders, and business. The goals are to identify challenges and trends and to propose and troubleshoot potential solutions.

In this section, we introduce ten IdeaLabs on cross-border issues in the GLSLR. We provide a problem statement and background information. We then present some that have been proposed to address the issues.

Are the challenges identified accurate/the most important? Are the proposed solutions viable? Are there better ways of looking at and addressing these challenges? What other solutions exist? These are the questions that will be addressed at each IdeaLab.

FORMAT

The IdeaLabs will last approximately 75 minutes each.

The format will be an interactive conversation facilitated by a Chair and two or three expert panelists.

Panelists in each IdeaLab will be asked to identify the challenges and opportunities for the GLSLR in the cross-border context and identify specific actions that could be undertaken to enhance sustainability and economic transformation in the region.

The panelists will each give a five minute opening statement to animate the conversation. The objective is to put one or two compelling ideas and/or actionable items on the table.

The remaining time will be dedicated to discussion among participants. A notetaker will record the results of the conversation, on a “not for attribution” basis.

The Chair of each IdeaLab will participate in the summit’s closing plenary discussion following the conclusion of the IdeaLabs. This discussion will focus on identifying an overarching, cross-sectoral agenda for cross-border collaboration.

The outcomes of the conversations will be compiled, analyzed and included in the final paper to be published in fall 2011.

IDEALAB 1

Human Capital and Post-Secondary Education

Innovation is built on ideas that come from people. Universities generate new knowledge and ideas in the form of basic and applied research. They also educate and train the scientists and researchers who generate these ideas, as well as the highly educated people who work in knowledge-intensive industries.

Canadian colleges and American community colleges train the technicians who work with advanced technologies in a variety of industries. They also provide career pathways for unemployed workers to obtain the credentials that will get them jobs in the Next Economy.

As flows of ideas and knowledge become more global, the people who generate and share them are becoming more mobile. One of the simplest and most powerful mechanisms to promote cross-border flows of people and ideas is to promote the mobility of researchers and students. There are different ways to implement trans-national education programs, including student and faculty exchanges, franchising or branch campuses, program articulation, and distance learning.

For example, the TEMPUS and ERASMUS programs in the EU encourage the mobility of students and researchers across national borders and the Bologna Process promotes interchangeability among Europe's national higher education systems.

Several Ontario universities already offer joint or combined degrees with partnering US institutions, most notably in faculties of law. These opportunities for regional integration of higher education should be expanded to other disciplines.

How do we encourage cross-border collaboration and exchange among students, researchers, and post-secondary institutions in the GLSLR?

SOME IDEAS

- Establish a TEMPUS and ERASMUS equivalent in the GLSLR to encourage mobility of students and researchers.
- Establish in-region comparable tuition compacts and portability of learning credits among post-secondary institutions (Brookings Institution, 2008).
- Establish cross-border acceptance and portability of degrees, credential, and professional licensure (Brookings Institution, 2008).
- Expand on the scope and number of existing cross-border education opportunities and joint programs offered by post-secondary institutions (e.g. Dual J.D./LL.M. programs between Osgoode Hall and New York University, University of Windsor and Detroit Mercy University).

IDEALAB 2

Transportation and Infrastructure

There has been much discussion about ‘border thickening’ and the need for more effective border management to improve transportation flows across the border. But the need to improve transportation infrastructure on, and between, both sides of the border is just as critical. Efficient transportation corridors are vital to the health of cross-border regions. Poor transportation infrastructure could be a serious barrier to deepening cross-border linkages.

The transportation system in the GLSLR is ‘maxed-out,’ and is impeding the ability to move people and goods efficiently within, across, and beyond regional borders. Overtaxed by ‘just-in-time’ deliveries and modern logistics systems, the transportation system in the GLSLR lacks sufficient freight and passenger rail networks, airports, and seaports.

This is most evident along the border between the Great Lakes states and provinces, through which the majority of trade passes and supply chains are most complex. The Great Lakes Gateway is the busiest section of the US-Canada border and includes only four major crossings at Detroit-Windsor, Port Huron-Sarnia, Buffalo-Fort Erie, and Niagara Falls.

Cross-border regions need to develop, fund, and implement smart spending strategies on transportation infrastructure to improve inter-regional links and access to global markets. But the region lacks mechanisms to do this on a cross-border basis.

How can we build world class and integrated transportation infrastructure for the GLSLR in an efficient and effective manner?

SOME IDEAS

- Establish a Joint Transportation Strategy for the GLSLR among the federal, state, provincial, and relevant local governments. The strategy would act as a framework for the development of new targeted infrastructure, including border crossings and other key transportation nodes. The strategy would integrate rigorous cost/benefit analysis to determine investment priorities.
- Connect the region’s large urban centres with high-speed rail.
- Develop a more extensive and integrated network for freight containers.
- Harmonize rules and regulations to enable cross-border public private partnerships.

IDEALAB 3

Water Stewardship

The Great Lakes and the St. Lawrence River are rich, dynamic ecosystems that form the backbone of the region. Boasting 18 per cent of the world's surface freshwater stores, the Great Lakes provide water for millions of people in the US and Canada, and are home to hundreds of native species.

However, the Great Lakes are increasingly stressed by climatic changes, aquatic invasive species, pollution, and contamination, all of which result in significant ecological and economic damage and affect the health of our communities. One of the more challenging problems is the impact of nutrients (fertilizer), pollution, and run-off on the “nearshore zone,” the biological basis of all life in the Great Lakes.

These challenges are both significant and shared; cross-border cooperation is necessary for a sustainable and healthy future for the Great Lakes region. Concern about both quality and quantity of the water is necessary. Fortunately, there is a successful history of working together on water stewardship issues with the IJC and the Great Lakes Fisheries Commission, as well as the Great Lakes Commission and Great Lakes & St. Lawrence Cities Initiative (these initiatives are outlined on p. 20 of this paper).

How do we build upon existing cross-border water stewardship initiatives?

SOME IDEAS

- Update and harmonize the legal frameworks for water in the GLSLR, particularly those that treat surface water and groundwater.
- Renew and strengthen the GLWQA.
- Create a Great Lakes Coast Development Authority by either re-purposing an existing organization or creating a new cross-border entity tasked with designing and implementing “an integrated (cross-border) economic development strategy for the Great Lakes ‘freshwater coast’” (Brookings Institution, 2008).
- Expand the Great Lakes Regional Collaboration Strategy across the border (see page 23 of this paper).
- Establish a cross-border park that is defined by the Great Lakes watershed and designate the basin or key areas as a world heritage biosphere (Enquist, 2010).
- Link the many cross-border initiatives by creating a secretariat to be a clearing house for the exchange of ideas and to organize meetings and summits. The mandate of such an organization could also extend beyond water stewardship issues.
- Develop cross-border initiatives to protect and sustain local watersheds that limit/prevent discharges that threaten nearshore water.

IDEALAB 4

Trade and Border Issues

In an era of international terrorism and illegal immigration, a well-functioning border is crucial to national security in both countries. But it is also crucial to national prosperity. A key challenge facing policymakers on both sides of the border is how to protect each other from harm and maintain national sovereignty, while at the same time enhancing economic prosperity and quality of life. Well-functioning supply chains and the ease of movement of both goods and people across the border are essential to both economies. However, since 9/11 the border has become thicker.

Many also see the lack of regulatory harmonization between Canada and the US as a major barrier to cross-border trade. Non-tariff barriers resulting from minor differences in product labeling, health and food safety standards, emission controls, and cross-border labour mobility are now the most significant intra-North American trade barrier.

Greater regulatory convergence and smarter ways of exchanging goods within the North American economy are achievable in North America but more work needs to be done on mutual recognition, adoption of common standards, and establishing regulatory alignment. This is particularly challenging in the face of creeping protectionism.

The Joint Declaration on a Shared Vision for Perimeter Security and Economic Competitiveness between Prime Minister Harper and President Obama announced in February 2011 created two important mechanisms to address trade and border issues. The Regulatory Cooperation Council will be working on ways to harmonize and align cross-border regulatory regimes, and the Beyond the Border Working Group will focus on trade and border issues at our shared perimeter.

How can we improve the flow of people and goods across the border?

SOME IDEAS

- Create a Permanent Joint Border Commission of federal, provincial, and state officials (with stakeholder representation) to recommend policy initiatives for improving the efficiency and security of border crossings and coordinate the implementation of new border security measures (Kergin and Matthiesen, 2008).
- Develop a trusted shipper program to provide pre-clearance of US and Canadian goods (Canadian Chamber of Commerce).
- Expand the NEXUS trusted traveler program to facilitate the movement of people across the border (Canadian Chamber of Commerce).
- Develop a border contingency plan to manage the movement of goods and people in the event of a border closure (Canadian Chamber of Commerce).

IDEALAB 5

Agriculture

Agriculture and forestry are the primary land uses in the Great Lakes Basin and have always been a critical component of the region's economy. Agriculture generates \$84.9 billion in GDP annually and includes over 600,000 farms and 110 million acres of cropland (World Business Chicago, 2011).

The shape of agriculture is changing in the GLSLR. Food processing is a growing industry and combines advanced processes with agricultural products. Growth in urban agriculture driven by the local food movement has resulted in numerous social, economic, and environmental benefits. These benefits include local job creation, the development of new industries, improved food safety, more green spaces, and reduced carbon footprints.

But the sector still faces significant common challenges. Food processing is, for understandable reasons, a heavily regulated sector, which impedes the efficient production and movement of food within the region. Agricultural production is responsible for a significant portion of the pollution in the region but states and provinces have different strategies, indicators, and policies to address this problem.

Additionally, agricultural production uses a substantial amount of water but the efficient use of water has not been addressed in the cross-border context, even in the current Great Lakes Water Quality Agreement.

How can we facilitate the cross-border flows of agricultural goods and new technologies, while addressing the sustainability challenges of the sector?

SOME IDEAS

- Harmonize cross-border policy and regulation to eliminate non-tariff barriers and facilitate a regional food economy.
- Develop a cross-border strategy to eliminate polluting farmland runoff.
- Develop and market a Great Lakes brand for food.
- Develop a strategy for increased food production to meet the world's growing demands.

IDEALAB 6

Innovation, R&D, and Emerging Clusters

One of the more influential ideas on economic growth and innovation to emerge in recent years is that of economic ‘clusters’—geographic concentrations of interconnected firms and organizations that generate knowledge and talented people, such as universities, community colleges, public research institutions, and business associations that coordinate and broker these linkages. At the same time, innovative clusters draw on world leading knowledge and are integrated into global supply chains.

There is already significant innovative, R&D-intensive economic activity going on in many sectors in the GLSLR. The region also possesses major assets on which to build capacity for innovation including existing clusters of large and small firms in related industries on both sides of the border. The GLSLR is also home to a critical mass of world-class research universities.

How do we strengthen existing linkages and build new cross-border networks between firms, universities, colleges, and business associations?

SOME IDEAS

- Establish a cross-border Great Lakes Innovation Fund and Strategy to identify opportunities to encourage cross-border research collaboration, the construction of cross-border networks, and leverage investment in research and innovation in the GLSLR (Brookings Institution, 2008).
- Establish a cross-border, water-based research and innovation centre to capitalize on the GLSLR’s supply of freshwater, research capacity and growing expertise in water technologies (Brookings Institution, 2010).
- Governments should commission an updated audit of clusters on both sides of the border to broker relationships across related industries. This would build on the work of the Great Lakes Governors and Government of Ontario in the 1990s.

IDEALAB 7

Manufacturing

While manufacturing industries in the GLSLR continue to face many challenges they also possess many assets on which to re-build.

Many manufacturers that source components from all over the world are starting to re-examine the benefits of global supply chains and to focus instead on organizing production on a more local basis. Increasing wages, regulatory costs, transportation and fuel costs, quality issues, supply chain disruptions and other issues in emerging markets may create new opportunities to expand and re-industrialize in North America.

This potential ‘neighbourhood effect’ presents an excellent opportunity for reinvestment in trans-border manufacturing. According to a recent survey of manufacturers in the US, Canada, and Mexico, almost 50 per cent of respondents indicate plans to expand production in the US in the next 3 years, followed by plans for expanded production in Mexico and Canada (Deloitte Research, 2008). How can the GLSLR ensure that it is a destination of choice?

Clusters of advanced manufacturing industries already exist on both sides of the border in mature manufacturing industries such as automotive and steel, and are emerging in a number of Next Economy sectors. Traditional industries are also now employing advanced manufacturing processes, including, for example, robotics or the use of bioproducts.

How do we ensure that the GLSLR is a destination of choice for new and advanced manufacturing investment and production?

SOME IDEAS

- Federal governments need to ease congestion at the border. Post 9-11, slower crossings have impacted many manufacturing supply chains (See Trade and Border Issues IdeaLab on page 36).
- Build the network of manufacturing laboratories in the GLSLR and expand commercialization and innovation. This could focus “on early stage applications” that are useful in a range of manufacturing processes, “but that no one else is doing right now” (Brookings Institution, 2008).
- Government should commission an updated audit of clusters on both sides of the border to broker relationships across related industries. This would build on the work of the Great Lakes Governors and Government of Ontario in the 1990s.

IDEALAB 8

Clean Energy and Electricity

Clean energy technologies can be used to achieve environmental goals without sacrificing economic prosperity. The combination of the global climate challenge and rapidly growing energy demand in newly industrializing countries means that the clean energy market opportunities are enormous.

At the same time, different clean energy technologies are at different levels of maturity and cost. They can bring with them unique reliability and environmental challenges of their own. Furthermore, it seems that every region in the world is competing to be a clean energy hub. In developing clean energy, all regions must be aware of potential ‘dead end’ technology paths, global pressures that tend to move manufacturing to low wage regions, regardless of where the technology originated, and the costs of being an early adopter.

The 2003 Northeast Blackout emphasized that the GLSLR is part of one of the most interconnected cross-border electricity networks in the world. One segment of clean energy development concerns smart grids—the use of information and communications technology within the transmission and distribution network to improve information-gathering, increase reliability, reduce losses and more effectively target maintenance.

**How should the GLSLR improve its cross-border energy infrastructure?
How could the region become a leader in clean energy technology?**

SOME IDEAS

- Strike a task force involving regulators, governments, generators, and distributors to:
 - identify how the region can lead North America in developing technical standards for best-practice smart grid equipment, systems, and interoperability;
 - examine mutual clean energy goals and identify the policy tools required to achieve them;
 - identify current and potential cross-border conflict; and
 - propose a roadmap for cross-border clean energy policy alignment and cooperation.
- Start an arms-length GLSLR energy research and innovation centre tasked with a similar mandate.
- Set and realize cross-border Great Lakes Carbon Goals and Renewable Energy Standards to protect freshwater resources, reduce pollution and GHGs, and enhance the development of green technology (Brookings Institution, 2008).
- Create a regional highway network for the use of natural gas in the trucking industry.
- Collaborate on a regional strategy for hydrogen fuel cells.

IDEALAB 9

The Blue Economy

There is a tremendous opportunity to develop the Blue Economy in the GLSLR, given the amount of freshwater resources, the caliber and extent of the human capital and post-secondary institutions, and the infrastructure already in place.

The Blue Economy is defined as the development of technologies for water conservation, management, cleaning, and treatment. Many countries are struggling with polluted waters, which mean there is a growing market for water treatment and monitoring technologies.

“Water technology and tools to conserve, treat, measure, monitor, and smartly manage this precious, finite fuel for life is growing... it’s a \$500 billion global business” (Lt. Governor John Cherry). The Great Lakes should be leading the way in “solving problems of water and sustainability and developing new technologies and jobs based on cleaning and stewardship.”

How do we build a world-leading Blue Economy cluster in the GLSLR?

SOME IDEAS

- Establish a cross-border, water-based research and innovation centre to capitalize on the GLSLR’s supply of freshwater, research capacity, and growing expertise in water technologies (Brookings Institution, 2010).
- The Blue Economy Initiative will provide information to Canadians and key decision-makers about the economic benefits of protecting Canada’s freshwater, and the economic risks of neglecting the health of our watersheds. This initiative could be expanded across the border to include the US.

IDEALAB 10

Tourism

Tourism is the world's fastest growing industry. However, it has been one of the sectors hurt most by border thickening in the GLSLR.

Fewer than 40 per cent of Americans have passports—a requirement for travel to Canada (State Department, 2011). While these numbers are slightly higher for Great Lakes states, on average they still hover around 50 per cent. While many Canadians see American cities as tourist destinations, fewer Americans see Canada as a destination.

Substantial wait times are also a disincentive to cross the border. Parents sending their kids to camp, booking a family vacation, or simply going shopping are often dissuaded by the uncertainty and variability of the border.

However, there are opportunities for more collaboration on cross-border tourism. In Detroit, a new port opening promises to attract tourists to both cities. The Niagara International Peace Park represents an integration of the Canadian and US economies and joint stewardship of the Great Lakes.

The 2015 Pan/Parapan American Games in Toronto are expected to draw in millions of spectators. There is an opportunity to market the Games as a regional event.

How do we encourage cross-border tourism and draw more tourists to the region? What specific initiatives could be championed jointly?

SOME IDEAS

- Build better linkages between tourism agencies in the region.
- Market and promote large-scale events as regional tourist attractions. The 2015 Pan/Parapan American Games represents such an opportunity. Are there others?
- Federal, provincial, and local governments should focus on leveraging and marketing the Great Lakes - St. Lawrence region as a tourist attraction. This could be done by establishing a cross-border park that is defined by the Great Lakes watershed and designating the basin or key areas as a world heritage biosphere (Enquist, 2010).

BIBLIOGRAPHY

- Anderson, G. and Sands, C. 2007. "Negotiating North America: The Security and Prosperity Partnership", Washington: Hudson Institute.
- Austin, J., Dezenski, E., and Affolter-Caine, B. 2008. "The Vital Connection: Reclaiming Great Lakes Economic Leadership in the Bi-National US-Canadian Region", Metropolitan Policy Program, Washington: Brookings Institution.
- Austin, J., Anderson, S., Courant, P., Litan, R. 2007. "Healthy Waters, Strong Economy: The Benefits of Restoring the Great Lakes Ecosystem", The Metropolitan Policy Program. Washington: Brookings Institution.
- Bizikova, L., and Crawford Boettcher, E. 2011. "Review of Key National and Regional Policies and Incentives to Support Adaptation and Adaptive Capacity in the Agricultural Sector", *Policy Research Initiative, Ottawa: Government of Canada*.
- Blatter, J. 2004. "'From Spaces of Place' to 'Spaces of Flows'? Territorial and Functional Governance in Cross-Border Regions in Europe and North America", *International Journal of Urban and Regional Research*, 28(3): 530-548.
- Blatter, J. 2001. "Debordering the World of States: Towards a Multi-Level System in Europe and a Multi-Polity System in North America? Insights from Border Regions", *European Journal of International Relations*, 7(2): 175-209.
- Bowles, S. 2011. "Whose logo? Sustainable Consumption and Production in North America", *Policy Research Initiative, Ottawa: Government of Canada*.
- Bradford, N. and Wolfe, D. 2010. "Toward a Transformative Agenda for FedDev Ontario", Working Paper, Toronto: Mowat Centre for Policy Innovation.
- Brunet-Jailly, E. 2008. "Cascadia in Comparative Perspective: Canada-U.S. Relations and the Emergence of Cross-Border Regions", *Canadian Political Science Review*, 2(2): 104-124.
- Burton, G.A., Scavia, D., Luoma, S., Love, N., and Austin, J. 2010. "Leveraging the Great Lakes Region's Water Assets for Economic Growth", Metropolitan Policy Program. Washington: Brookings.
- Canadian Chamber of Commerce. 2010. *Strengthening Our Ties: Four Steps Toward a More Successful Canada-U.S. Partnership*. Ottawa: The Canadian Chamber of Commerce.
- Canadian Chamber of Commerce. 2009. *Finding the Balance: Shared Border of the Future*. Ottawa: The Canadian Chamber of Commerce.
- Canadian Chamber of Commerce and the U.S. Chamber of Commerce. 2008. "Finding the Balance: Reducing Border Costs While Strengthening Security".
- Chamber of Marine Commerce. 2010. "Defining the Great Lakes Regional Economy: The Blue Economy", presentation to the Great Lakes Commission Annual Meeting, Toronto, ON.
- Circle of Blue. 2009. *Michigan Looks Forward and Sees a New, Blue Economy*. Online: <http://www.circleofblue.org/waternews/2009/business/michigan-looks-forward-and-sees-a-new-blue-economy/>
- Clarke, S. 2002. "Spatial Concepts and Cross-Border Governance Strategies: Comparing North American and Northern Europe Experiences", Paper presented at the EURA Conference on Urban and Spatial European Policies, Turin, Italy.
- Clarke, S. 2000. "Regional and Transnational Discourse: The Politics and Ideas of Economic Development in Cascadia", *International Journal of Economic Development*. 2(3): 360-378.
- Commission on the Black Sea. 2010. "A 2020 Vision for the Black Sea Region". Germany: Commission on the Black Sea.
- Council of Canadian Academies. 2009. *Innovation and Business Strategy: Why Canada Falls Short*. Report of the Expert Panel on Business Innovation. Ottawa: The Council of Canadian Academies.
- Council of Great Lakes Governors and the Premier of Ontario. 1994. *North America's High Performance Heartland: Developing Sustainable Economic Advantage for the Great Lakes Region*. Chicago: Council of Great Lakes Governors.
- Deloitte Research. 2008. "Made In North America". Research report prepared by Deloitte Touche Tohamtsu (Canada and Mexico) in cooperation with the National Association of Manufacturers, The Manufacturing Institute, and Canadian Manufacturers and Exporters.
- Detroit Water and Sewerage Department. Winter 2010. "Potential of 'blue economy' may soften recession", *In the Flow*. 10(1): 1-3.
- Duderstadt, J. *A Master Plan for Higher Education in the Midwest: A Roadmap To The Future of The Nation's Heartland*. Chicago: The Chicago Council on Global Affairs.
- Duderstadt, J., Muro, M, and Rahman, S. 2010. "Hubs of Transformation: Leveraging the Great Lakes Research Complex for Energy Innovation", Washington: Brookings Institution.
- Enquist, Philip. 2010. "The Great Lakes: Taking a Big View". Presentation to the Arts Club of Chicago.
- Fleetham, C. 2010. "A Proposal for a Blue Economy", Project Innovations, inc.
- Forest, J. F. 2007. "Regionalism in Higher Education", Working paper. Boston: Boston College Center for International Higher Education.
- Friedman, K., and Foster, K. 2011. "Environmental Collaboration: Lessons Learned About Cross-Boundary Collaborations", Collaborating Across Boundaries Series, IBM Center for The Business of Government.
- Gagnon-Turcotte, S. and Pebbles, V. 2009. "The Energy-Water Nexus: Implications for the Great Lakes", Issue Brief, No. 1. Ann Arbor, MI: Great Lakes Commission.
- Goodman, R. 2010. "Power Connections: Canadian Electricity Trade and Foreign Policy", *Energy Report* for the Canadian International Council.
- Government of Ontario. 2009. "Healthy Great Lakes, Strong Ontario". Discussion Paper.
- Grafstein, J.S. 2006. "Combining Forces for a Dynamic Economic Nucleus: Along and Across the Border", Report to the Canada-U.S. Roundtable on Cross-Border Regions, March 6.
- Great Lakes Commission. "Defining the Great Lakes Regional Economy: Blue Economy". Presentation to the 2010 Great Lakes Commission Annual Meeting.
- Great Lakes Regional Collaboration. 2005. *Great Lakes Regional Collaboration Strategy To Restore and Protect the Great Lakes*.

- H. John Heinz III School of Public Policy and Management. 1993. *Reinventing the Heartland: A High-Performance Strategy for the Great Lakes Region*. Study sponsored by the Council of Great Lakes Governors and the Joyce Foundation.
- Hale, G. 2009. *In Search of Effective Border Management*. Ottawa: The Canadian International Council.
- Hand, C. 2010. *Great Lakes Water Quality Agreement: Sources of Nonpoint Source Pollution*. Online: http://www.greatlakeslaw.org/files/Hand_GLWQA.pdf
- Helper, S. and Wial, H. 2011. "Accelerating Advanced Manufacturing with New Research Centers", Project on State and Metropolitan Innovation, Washington: Brookings-Rockefeller.
- Hoberg, G. 2000. "Canada and North American Integration", *Canadian Public Policy*, 26(2): 35-50.
- International Joint Commission. 2006. "Synthesis of Public Comment on the Forthcoming Review by the Federal Governments of Canada and the United States of the Great Lakes Water Quality Agreement", A Report to the Governments of Canada and the United States.
- Jackson, J., and Kraft Sloan, K. 2008. *A Way Forward: Strengthening Decision-Making and Accountability Under the Great Lakes Water Quality Agreement*. Great Lakes United.
- Jacques, L., De Vit, C., and Gagnon-Lebrun F. 2010. "Status of Climate Change Adaptation in Canada's Agricultural Sector", *Policy Research Initiative, Ottawa: Government of Canada*.
- Jesuit, D. and Sych, L. 2009. "Globalization, Local Economic Development and Cross-Border Collaboration in a Comparative Perspective", Paper presented to the American Society of Public Administration Annual Meeting, Miami, FL.
- Juneau, A. 2004. "Quebec-New York Trade Corridors Initiative", Working paper series No. 2004-09p, Ottawa: Institute for Research on Public Policy.
- Kergin, M. and Matthiesen, B. 2008. "A New Bridge for Old Allies", Border Issues Report. Ottawa: Canadian International Council.
- Krantzberg, G., and de Boer, C. 2006. "A Valuation of Ecological Services in The Great Lakes Basic Ecosystem to Sustain Healthy Communities and a Dynamic Economy", prepared for the Ontario Ministry of Natural Resources.
- Lehman, M., Christensen, P., and Johnson, B. 2010. "Partnerships and Sustainable Regional Innovation Systems: Special Roles for Universities?", in Sarkis, B., ed. *Facilitating Sustainable Innovation Through Collaboration*. Springer Science+Business Media.
- Manufacturing Performance Institute. 2009. "Next Generation Manufacturing Study Overview and Findings." Research conducted for the American Small Manufacturer's Coalition.
- Meadowcroft, J., and Bregha, F. 2009. "Governance for Sustainable Development: Meeting the Challenge Ahead", Policy Research Initiative Research Paper. Ottawa: Government of Canada.
- Ministère des Relations internationales. 2010. *The Quebec Government's US Strategy*, Government of Quebec. http://www.mri.gouv.qc.ca/en/pdf/publications/Sommaire_QC_USA_en.pdf
- Mitchell, K. 2004. *Pathway to Peace: What Heritage-based Collaboration offers the Cross-border Niagara Region*. Canadian Consulate in Buffalo.
- Morin, A. and Cantin, B. 2009. "Strengthening Integrated Water Resource Management in Canada", Policy Research Initiative Discussion Paper. Ottawa: Government of Canada.
- Munroe-Blum, H. 2011. "Higher education and innovation: the Canada-U.S. story", *Policy Options*, March.
- Muro, M. and Katz, B. 2010. "The New 'Cluster Moment': How Regional Innovation Clusters Can Foster the Next Economy", Metropolitan Policy Program. Washington: Brookings Institution.
- Muro, M. and Fikri, K. 2011. "Job Creation on a Budget: How Regional Industry Clusters Can Add Jobs, Bolster Entrepreneurship, and Spark Innovation", Project on State and Metropolitan Innovation. Washington: Brookings-Rockefeller.
- Nelles, J. 2011. "Cooperation in Crisis? An Analysis of Cross-Border Intermunicipal Relations in the Detroit-Windsor Region", CEPS/INSTEAD Working Paper No. 2011-30.
- Patino, L. 2010. "Understanding Climate Change Adaptation and Adaptive Capacity". *Sustainable Development, Policy Research Initiative, Ottawa: Government of Canada*.
- Pebbles, V. 2010. "Siting Wind Farms in the Great Lakes Region: Policy Summary and Analysis", Renewable Energy World North America. Online: <http://www.renewableenergyworld.com/rea/news/article/2010/10/siting-wind-farms-in-the-great-lakes-region-policy-summary-and-analysis>
- Pebbles, V., and Gagnon-Turcotte S. 2009. "The Energy-Water Nexus: Implications for the Great Lakes", *Great Lakes Commission*, Issue 1, April.
- Policy Research Initiative. 2008. *The Emergence of Cross-Border Regions Between Canada and the United States: Reaping the Promise and Public Value of Cross-Border Regional Relationships*. Ottawa: Government of Canada.
- Robertson, C. 2011. "Taking the Canada-U.S. Partnership to the Next Level", *Policy Options*, March.
- Sands, C. 2009. "Toward A New Frontier: Improving the U.S. Canadian Border", Metropolitan Policy Program, Brookings Institution, Washington and The Canadian International Council, Ottawa.
- Theofrastous, T. 2008. "The Great Lakes Institute for Energy Innovation", Presentation to Case Western Reserve University, Cleveland.
- Thirlwell, G., Madramootoo, C., and Heathcote, I. 2007. "Energy-water Nexus: Energy Use in the Municipal, Industrial and Agricultural Water Sectors", Presentation to the Canada-U.S. Water Conference, Washington, D.C.
- Trippel, M. 2008. "Developing Cross-Border Regional Innovation Systems: Key Factors and Challenges", *Tijdschrift voor Economische en Sociale Geografie*, 101(2): 150-160.
- United Nations Environment Program. 2011. *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*. UNEP.
- U.S. Environmental Protection Agency and Environment Canada. 1997. *Great Lakes Binational Toxics Strategy: Canada-United States Strategy for the Virtual Elimination of Persistent Toxic Substances in the Great Lakes*. Online: www.binational.net
- Vey, J.S., Austin, J.C., and Bradley, J. 2010. "The Next Economy: Economic Recovery and Transformation in the Great Lakes Region", Metropolitan Policy Program. Washington: Brookings Institution.
- World Business Chicago. 2011. "Great Lakes & St. Lawrence Region". Dataset.

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LEADERS CONSULTED

Barbara McFadden Allen	Committee on Institutional Cooperation
Don Alper	Border Policy Research Institute
Joe Berridge	Urban Strategies Inc.
Stephen Blank	North American Transportation Competitiveness Research Council
David Bolduc	Alliance Verte - Green Marine
Joel Brammeier	Alliance for the Great Lakes
Andy Buchsbaum	National Wildlife Federation's Great Lakes Regional Center
Charles Campbell	United Steelworkers
Michael Cayley	Cdling Capital Services Inc.
Christine Chadwick	Focus St. Louis
Susan Clarke	University of Colorado
Thomas Crane	Great Lakes Commission
Craig Crawford	Ontario BioAuto Council
David Cree	Windsor Port Authority
Tim Eder	Great Lakes Commission
Linda Ewing	United Auto Workers
Rick Findlay	Great Lakes Futures Roundtable
Kathryn Foster	University at Buffalo Regional Institute
Kathryn Friedman	University at Buffalo Regional Institute
Marc Gaden	Great Lakes Fishery Commission
Catherine Gervais	Carrefour Québec International
William Hartman	Gensler
Jennifer Hill	Healing Our Waters Coalition/National Wildlife Federation
Howard Kelly	Thousand Islands Bridge Authority
Daniel Kolundzic	Canadian Consulate General in Buffalo
Gail Krantzberg	Centre for Engineering and Public Policy, McMaster University
George Kuper	Council of Great Lakes Industries
Louise Lapierre	Ministère du Développement durable, de l'Environnement et des Parcs
Anne Legars	Shipping Federation of Canada
Leah Littlepage	Canadian Chamber of Commerce
Robert Logan	University of Toronto
Melanie Napoleon	Shedd Aquarium
Roy Norton	Consul General of Canada based in Detroit
Lana Oleen	Midwestern Higher Education Compact
Michael Owen	University of Ontario Institute of Technology
James Phillips	Canadian/American Border Trade Alliance
Corinne Pohlmann	Canadian Federation of Independent Business
Andrew Rudnick	Buffalo Niagara Partnership
Christopher Sands	Hudson Institute
Roy Schrameck	Environmental Consulting & Technology Inc.
Daniel Schwanen	C.D. Howe Institute
Todd Scott	Michigan Trails and Greenways Alliance
Victor Serveiss	International Joint Commission
Jim Stanford	Canadian Auto Workers
Evelyn Strader	Council of Great Lakes Industries
Chris Thompson	Fund For Our Economic Future
Nicole Trépanier	Société de développement économique du Saint-Laurent
David Ullrich	Great Lakes & St. Lawrence Cities Initiative
Bill Wersell	Toledo Regional Chamber of Commerce
Arlene White	Binational Economic & Tourism Alliance
Diane Wilhelmy	Former Delegate General of Quebec in New York
David Wolfe	University of Toronto

6 individuals requested anonymity

