Great Lakes Governance Reform for Place-based Regeneration of the Natural and Built Environment

Principal Investigator – Dr. Gail Krantzberg, McMaster University, 2012-2014

Challenge

Canadian municipalities are confronted by challenges related to continued growth, climate change and aging infrastructure, and the increasingly limited ability of receiving waterways to absorb the impact of stormwater runoff and pollution. There is increased recognition that integrated water, wastewater and stormwater management is required to ensure cost-effective water services as well as sustainable water resources to support public health, economy and environment now and in the future. In particular, this is a defining moment for the Great Lakes St. Lawrence region, with the opportunity to update the approaches taken for ecosystem improvement and protection in the region. The outcome of a 2007 review of the binational Great Lakes Water Quality Agreement resulted in a broad call for revisions to the Agreement, so that it can once again serve as a visionary document driving binational cooperation to address both long-standing and emerging Great Lakes environmental issues in the 21st century. The focus of the new agreement emphasizes the creation of a nearshore framework. While this term is still undefined, it reflects a policy need for a framework for scientific cooperation in the nearshore zone. In parallel, there is a need for a governance framework that enables place-based decision making for appropriate interventions, in order to promote resilience at the land-water interface. Governance frameworks for integrated water management are limited in Canada, and this research seeks to identify the most promising models.

Project

Restorative development involves renewing or reusing the health, beauty, quantity, and functionality of natural, built and socio-economic assets, to enhance their value without depleting or destroying other assets of long-lasting or irreplaceable quality. It is central to sustaining a revitalized Great Lakes basin ecosystem. This project identifies governance models that integrate these concepts of development, revitalization and integrated water management to enable communities to contribute to achieving sustainable, economic, social and environmental well being in the Great Lakes St. Lawrence region. Issues of environmental degradation are considered through the practical applications of governance principles, along with regeneration, protection, and soft approaches to sustainable water quality and quantity to cities and towns in the Great Lakes region. The project will capture new knowledge about the past performance of the Remedial Action Plan program and other integrated water resource management experiences, and use this knowledge to inform future approaches to governing human-environment interactions in the nearshore zone.

Outputs

This research has resulted in scholarly books and end-user reports:

- Urban Regeneration: the Hamilton Brand. 2014. Krantzberg, G., B. Humber and V. Grover. Regeneration Institute for the Great Lakes and Renew Hamilton

- Water Co-Management. 2013. Grover, V. and G. Krantzberg (eds.) CRC Press
- The Remedial Action Plan Program, Historical and Contemporary Overview. In Great Lakes Lessons in Participatory Governance. 2012. V. Grover and G. Krantzberg (eds.). Scientific Research Publishing. pp 245-256.

In order to disseminate information to end-users, researchers have created several case studies:

- The health hazards associated with different water governance methods, regulations and policies. Case Study of Halifax.
- Policy Direction to Fast-Track Low Impact Development Adoption
- Upper Tier and Lower Tier Municipality Integration to Collaborative Address Population Growth, Aging Infrastructure and Climate Change

Outcomes

Outcomes include:

- Increased knowledge and through research and collaboration and the provision of an Urban Regeneration Handbook.
- Strengthened relationships with partners by hosting workshops surrounding the Great Lakes Water Quality Agreement and application of the project's research outputs.

Research Team and Partners:

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