

THE LAND|TERRE DESIGN RESEARCH NETWORK

Landscape Architecture Research and Climate Change

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with input from Kaja McDonald, Jamie Redford + Taya Kehler

LANDSCAPE ARCHITECTURE RESEARCH

in Canada is as diverse as the country's topography. The landscape is a complex cultural and environmental entity in a constant state of flux. Resource extraction and site contamination have impacted our varied regional and urban contexts. Our historical use of the land, along with population and climate fluctuations, including urban growth, influence how we evaluate the health and well-being of the nation and its users, then design for the future. These problems occur, at different scales, across the country and there is a wealth of knowledge held in separate institutions. Until now, research in landscape architecture has happened in isolated islands across the country.

The Land|Terre Design Research Network (LTD Research Network) is a new forum for Canadian landscape research that works to unite researchers with a common interest in the landscape to appraise and generate methodologies related to common research questions. The LTD Research Network aims to overcome the challenge of relying on communication networks in the United States and Europe by providing an opportunity to engage researchers with interest in what is unique about the Canadian landscape and the collective problems we face.

Researchers in landscape architecture address complex cultural and environmental issues that bridge social, cultural, scientific, political and economic knowledge. Collaboration is crucial. Academics and practitioners arrive at the discipline with backgrounds ranging from arts and philosophy to pure and technical science. The approaches to such a multifaceted discipline vary widely as well, and climate change is central to all work in landscape architecture.

The impacts of climate change on the land and our built environments are undeniable and increasing. Research in landscape architecture resides at the interface of these two worlds – the natural and the built – to develop knowledge and shape resiliency strategies. Scholars investigate climate change by modelling coastal areas, creating approaches to flood mitigation and drought, partnering with community groups in forming programs to reduce carbon emissions, and examining how residents in northern regions address the impacts of rising temperatures. Landscape architecture research contributes to our knowledge of the effects of climate change by collaborating with scientists and the public in understanding the interdependence of environmental processes.

The LTD Research Network seeks to assemble critical mass, build on established methodologies, and draw attention to pressing research questions to advance and mobilize knowledge founded in landscape architecture research in Canada. A three-day colloquium held from October 25 to 27, 2018, at the University of Manitoba, brought together a core group seven researchers to introduce the new national research network. Researchers from east to west included Heather Braiden (Dalhousie U.), Nicole Valois (U. Montréal), Alissa North (U. Toronto), Karen Landman (U. Guelph), Marcella Eaton (U. Manitoba), Enrica Dall'Ara (U. Calgary), and Susan Herrington (U. British Columbia). Generously funded by a Social Sciences and Humanities Research Council Connections Grant, a Landscape Architecture Canada Foundation research grant and contributions from participating academic institutions, this initial LTD Research Network event invited experts and assembled critical scholarship. The event and the Network intend to build research relationships across each of the seven academic institutions, allied disciplines, professions and the public. The sessions promoted mentor-mentee opportunities. Graduate students, under the mentorship of their supervisors, were central to the colloquium.

1 LTD RESEARCH NETWORK COLLOQUIUM, U. MANITOBA, SPEAKER HOPE PARNHAM, DV8 CONSULTING; KEES LOKMAN, UBC **2** LTD RESEARCH NETWORK COLLOQUIUM, U. MANITOBA, SPEAKER NICOLE VALOIS, UNIVERSITÉ DE MONTRÉAL
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Each of the three days invited discussion on building the LTD Research Network and addressing research questions in three focal areas: 1) Indigenous matters; 2) urban, rural and industrial heritage; and 3) climate change.

On the topic of climate change, the colloquium examined cross-disciplinary research strategies and how landscape architects can lead climate change research that considers both environmental and human health. The discussion addressed how to bridge the gap between research and professional practice with land-based solutions. The focus was on communication tools and how to widely disseminate this critical area of research.

The student research assistants Kaja McDonald, MLA candidate (U. Guelph), Jamie Reford, MLA candidate (U. Toronto), and Taya Kehler, B. Tech in Landscape Architecture candidate (Dalhousie U.), summarized the session on Climate Change, noting: "Canada's diverse landscape with three surrounding oceans are, and will continue to experience various effects of climate change, providing opportunities for research collaboration across the country... Coastal erosion, storms, fires, permafrost melting (methane release), etc. will have an impact across the country."

Noting that the two invited researchers on climate change reside on opposite coasts, the research assistants report:

- Kees Lokman, Assistant Professor at SALA, UBC, presented his research work on river deltas and coastal areas surrounding Vancouver. Lokman demonstrated how visual modelling can be used to communicate design challenges and solutions of climate change to develop adaptive strategies. Climate change can be viewed as a catalyst for change in design and how we think about landscape architecture and our roles in the field.
- Hope Parnham, Landscape Architect, Urban Planner, and Principal of DV8 Consulting, presented her work on coastal erosion on Prince Edward Island (PEI). Parnham argued that the story of PEI coastline lays with the people and residents of PEI. She found research opportunities within the personal accounts and public experience/response across Canada and proposes new approaches to defining the responsibility of coastline protection strategies, including community-led construction and maintenance.

The research assistants note:

- Landscape Architects play an essential role in designing climate interventions and reimagining flood infrastructure along Canada's coastlines, where hard edges and traditionally engineered solutions begin to fail;
- In the field of research around climate change, there's a need to frame the "risk"

as an "opportunity" and move towards language and attitudes that support proactive (versus reactive) research on the topic to counteract feelings of immobilization around the issue;

- As Landscape Architects, we need to pilot projects to envision other strategies for infrastructure in a changing climate;
- There is a need to establish steering committees that bring together different players that are all looking at the same issue, including interdisciplinary research networks; and
- There is a narrative around how we value social layers and perspectives emerging in climate change research – what are the human stories versus just the economic values or "the numbers."

This student summary begins to illustrate how important it is for academics and professionals to work together and engage in interdisciplinary questions and proposed methods to the complex and very serious issue of climate change in Canada. The Land|Terre Design Research Network will continue to address research in climate change and provide a platform for scholars, professionals, and members of industry to discuss pressing issues, the role of design in climate change adaptation, and inroads to research and practice. The Network aims to hold annual meetings, and future plans include developing professional and industry partnerships to advance all three themes.

Again, we would like to thank the Canadian Government and LACF for their generous contributions. For more information on the LTD Research Network and the Colloquium, please see landterre.ca.

Heather Braiden is an Assistant Professor at Dalhousie University and Program Coordinator of the Bachelor of Technology in Landscape Architecture. Her doctoral research explores Montréal's mid-to-late-nineteenth century cultural landscapes, as recorded by engineers during major bridge construction.

Marcella Eaton, Associate Professor in the Department of Landscape Architecture at the University of Manitoba, collaborated with Alan Tate on *Great City Parks* (Routledge, 2001, 2015). Current research focuses on beauty, ethics, and regional design issues, and the interpretation of the Truth and Reconciliation Commission Principles into landscape architectural education.