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CLIMATE CONSORTIUM

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# Adaptive Urban Habitats by Design

## *2018 Ontario Climate Symposium*

Summary Report  
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## Introduction

Adaptive Urban Habitats by Design, hosted at OCAD University, marked the 6<sup>th</sup> Ontario Climate Symposium. With the goal of showcasing real-life examples of how technology, policy, green infrastructure and strategic design can transform cities, the 2018 Symposium brought together over 170 individuals across Canada to engage in important discussions surrounding the role that art and design plays in developing adaptive, low-carbon cities.



*"It was a really nice event with lots of great speakers and attendees. It was a nice surprise to see such a mix of NGO, academic, and municipal staff attend. I hope the event grows with time to an even broader network."*  
– Symposium Attendee

*"The organizers were great and directed an extremely well-planned event that went smoothly."*  
– Symposium Attendee

*"It was a very good experience! I really appreciated how much emphasis Jenessa and Nishal put on making sure that the volunteers were able to integrate into the symposium as well and have our own time to enjoy the events and workshops and the networking events!"*  
– Symposium Volunteer

*"It was amazing! I got the opportunity to network with some professionals I had been hoping to talk to throughout the day so I really appreciated the networking portion of the day."*  
– Symposium Attendee

For a complete list of topics and presenters visit <https://climateconnections.ca/symposium/2018-proceedings/>



## Opening Ceremonies

*Written by: Andrea Papillon*

### **Chief R. Stacey LaForme Mississaugas of the New Credit First Nation**

In a compelling opening ceremony, Chief R Stacey LaForme proclaimed that if we do not act now, our children will inherit irreversible climate change. Unfortunately, love and hugs will not sustain our children or guarantee their existence should we fail to take care of the future. Unless people believe this, society will choose chaos versus understanding and change. A noted poet and storyteller, the Chief recited two sacred Indigenous poems that opened the symposium with a vision of hope that encouraged the audience to become meaningful and contemplative caretakers of the Earth.

### **Keynote address: Recognizing the True Value of Nature in the Age of the Anthropocene Dr. Faisal Moola, Associate Professor, University of Guelph and Former Director General, David Suzuki Foundation**

Dr. Moola opened the symposium by highlighting the term ‘anthropocene’, popularized by Paul Crutzen, as the age where man-made greenhouse gas emissions have produced a biological force affecting Earth like never before. According to Moola, we must recognize the true value of nature in fighting climate change. Ecosystem services, along with investments in things like green infrastructure show correlation with improved health and well-being and lower mortality rates, stress levels, and obesity rates all while helping to reduce public health care costs. The total value of ecosystem services supported by nature and farmland in the Greenbelt is \$2.6 billion per year. Dr. Moola went on to emphasize the important fact that our forests and wetlands sequester and store carbon from the atmosphere, while riparian ecosystems help to store, filter and regulate flood waters. Unfortunately, wetlands have declined approximately 70% in southern Ontario over the past century. The Earth’s carbon cycle is being altered and we are already seeing our vulnerability to the impacts. The time to act is now.



## Panel Summaries

### Panel 1: Whose Vision, Whose Voice, Whose City: Creating Possibility Through Engagement

Written by: Jenessa Doherty

**Moderator: Amanda Kennedy**

#### **Panelists Part 1:**

- **Dr. Kirby Calvert** | Assistant Professor, University of Guelph
- **Dr. Craig Johnson** | Professor, University of Guelph
- **Laura Tozer** | Postdoctoral Research Associate, Durham University

#### **Panelists Part 2:**

- **Julius Lindsay** | Community Energy Specialist, City of Mississauga
- **Liz Couture** | Activist, Unify Toronto
- **Peter Jones** | Managing Partner, Redesign Network
- **Kevin Best** | Consultant, Rivercourt Engineering

This seven-person panel, moderated by Amanda Kennedy, emphasized the importance of collaboration and consultation in community land-use planning. Laura Tozer from Durham University kicked off Part I of the panel by advocating for the inclusion of marginalized, racialized communities in the mitigation of climate change – an arena that is often dominated by elite and business interests. Inclusive governance and structural change, she argued, is central in promoting the participation of marginalized people in the continued development of the areas in which they live. The reality of this is evidenced in current work being done by Dr. Kirby Calvert. *“In many cases, public opposition is about the process, and not the outcome,”* Dr. Calvert stated as he highlighted the ongoing importance of acknowledging rural communities’ input and resource production in the development and design of nature-based solutions in urban areas. Having conversations about everyday physical spaces will help planners improve their understanding of the importance and emotional connection and result in reduced push-back and public rejection of proposed policies and plans.

So what role can municipalities play? Dr. Craig Johnson, Professor at University of Guelph, argued that cities play an important one. Municipalities in transnational networks such as the C40, a group of cities all over the world who prioritize climate change leadership, can act as agents mitigating climate change. Transnational networks allow them to share information, evaluate, and implement urban planning that promotes environmental sustainability. Dr. Johnson stressed the importance in acknowledging poverty issues and structural inequality in the process of urban planning. He



challenged audience members to think about how they might enhance participation of civil society and promote the inclusion of average citizens in the decisions made around land use. Following a round of interactive questions between the audience and panelists concerning how public awareness surrounding sustainable urban planning can be achieved, Part II of the panel commenced with remarks from Julius Lindsay, a Climate Change Specialist at the City of Mississauga, who addressed local strategies for improving municipalities' resiliency and capacity to respond to climate events through the integration of an engagement framework aimed at ameliorating public participation and support towards climate action policies. A task that will be essential if we are to transgress the media's often incorrect and negative labelling of climate change, argued Liz Couture,



environmental activist and lobbyist from Unify Toronto. Ms. Couture, who discussed the psychology behind the words we use to talk about climate change, highlighted how public perception can be manipulated through the use of language and called for a less-divisive political culture to engage and build trust across partisan lines. Dr. Peter Jones, Managing Partner at Redesign Network, added it is equally as important to take history into account when creating policies that have the future in mind. Thinking creatively when developing and implementing solutions

will help achieve better outcomes, he argued. A thought echoed by Kevin Best, who called for cultural transformation that re-orient society towards the acknowledgement of intersectional identities and values that prioritize the environment. Mr. Best left us with the final thought, if we are to have truly effective environmental policies, society needs to radically change.





## Panel 2: Frugal Food and Sustainable Cities: How Resilient Thinking Can Transform Future Cities and Urban Practices

*Written By Sharon Lam*

### Panelists:

- **Alex Chapman** | Manager of the Climate Change Office, City of Guelph
- **Alia Weston** | Assistant Professor, Faculty of Liberal Arts and Sciences, OCAD University (Business Management and Design)
- **Helen Kerr** | Assistant Professor, Master of Design in Strategic Foresight and Innovation, OCAD University; Co-President of [KerrSmith](#)
- **Ian D. Clarke** | Associate Dean of Research and Academic Affairs, Faculty of Liberal Arts and Sciences and School of Interdisciplinary Studies, OCAD University
- **Selmin Kara** | Associate Professor, Faculty of Liberal Arts and Sciences, OCAD University (Film and New Media)

The panel on “Frugal Food and Sustainable Cities” was led by a diverse array of professionals who shared many practical examples of how to transform future cities, and produce, consume and value food more sustainably. As a fundamental part of life, food sits within the nexus of the economy, society and the environment, and opens a channel for thinking about alternative pathways of production, consumption and societal organization. The session began with brief presentations by each speaker, followed by a round of audience-driven questions, culminating in an engaging panel discussion.



Dr. Selmin Kara discussed visions of the future from different forms of art and cultures through the lens of film and new media. Helen Kerr presented five futures of how people would eat 50 years from now in Southern Ontario – visions which were developed for a strategic foresight project. Alex Chapman shared examples of what the City of Guelph is undertaking to address climate change, and Guelph and Wellington County’s aim to become Canada’s first technology-enabled circular food economy through Infrastructure Canada’s [Smart Cities Challenge](#). Ian Clarke discussed low-cost and low-carbon strategies for producing food year-round in cities such as passive solar-heated greenhouses, which present viable and more resilient alternatives to current food production



systems that are dominated by industrial farms. Finally, Alia Weston shared examples of different forms of engagement to encourage alternative ways of thinking about food and food waste, and opportunities to leverage businesses and garner positive environmental and social impact.

The discussion that followed explored a variety of topics including: effective communication strategies (e.g. fostering trusted voices through community leaders or celebrities), the scalability of solutions, and ways to overcome stigma around particular food and food practices (e.g. foraging). Some common threads emerging from this discussion were the importance of diversity for resilience, including the diversity of solutions and approaches; how thinking about the future can help us adapt; and the continual need for learning and sharing of experiences. Taken together, the panel offered many different visions and strategies towards achieving sustainable food systems, and demonstrated that changes can be made in people's daily lives that do not necessarily cost more, but rather can often result in cost-savings.



### Panel 3: Greening the Grey: Climate Change and the Future of Urban Development

*Written by Jenessa Doherty and Andrea Papillon*

**Moderator: Dr. Usman T Khan** | Assistant Professor in Civil Engineering York University

**Panelists:**

**Michelle Sawka** | Program Manager for Toronto and Region Conservation Authority (TRCA)

**Lorraine Johnson** | Author and Editor

**Dr. Ioannis Tsanis** | Professor in the School of Environmental Engineering at Technical University of Crete (TUC)

**Ian Roul** | Ecologist, GeoProcess Research Associates

**David Waverman** | Senior Landscape Architect, Stantec

**Heather Whitehouse** | Senior Ecologist and Project Director, Savanta

**Alice Dixon** | Sustainability Analyst, Infrastructure Ontario

Moderated by Dr. Usman Khan, *“Greening the Grey: Climate Change and the Future of Urban Development”* brought together a diverse group of professionals focused on identifying pathways for natural solutions to climate change that result in greener, healthier and more livable cities. According to Michelle Sawka, Program Manager at the Toronto and Region Conservation Authority, many people erroneously believe that green infrastructure means green energy or that it translates to stormwater management exclusively. In fact, green infrastructure encompasses green roofs, natural heritage sites, agriculture, parks, and soil quantity and quality – critical forms that contribute to rural, suburban and urban development. A concept that is highlighted in the work of Dr. Ioannis Tsanis, Professor in the School of Environmental Engineering at the Technical University of Crete. Examining the impact that urbanized areas have on CO<sub>2</sub> output, Dr. Tsanis highlights that in the absence of climate change mitigation efforts and green infrastructure development, climate disasters will continue to intensify on both ends of the hydrological scale and will be accompanied by incidences of extreme precipitation, flooding, soil erosion and drought.

To mitigate these extreme weather events, Ian Roul, Ecologist at GeoProcess Research Associates, argues that replicating natural stormwater management in forests is one potential way forward. Forests, he argues, intercept flow through tree barks, into tree roots, through shallow soil and finally into leaf litter before any runoff takes place. On the contrary, runoff – the main cause of flooding - is the first thing that happens to stormwater in a city. Fortunately, natural models can demonstrate ways of retrofitting our cities to protect against floods. This will be an important avenue to pursue as each year brings heavier rains and higher temperatures, echoes Heather Whitehouse, Senior Ecologist and Project Director at Savanta. Looking to examples of the Corktown Common along the





Rouge River, which was designed for flood protection and stormwater management and the Bain Apartments Co-Operative in Toronto – a low-rise apartment complex situated around wide green courtyards, designed to offer maximum solar access – both Heather Whitehouse and Alice Dixon, Sustainability Analyst from Infrastructure Ontario, stress the importance of connecting social values and land-use planning. Natural systems and outdoor greenspaces, they both contended, can play an integral role in providing cooling, and outdoor spaces can be designed to better ventilate indoor spaces with pathways meeting breezeways to conduct passive airflow – all contributing to climate resiliency and quality of life.

We often see these natural systems in effect in historical neighbourhoods, highlighted David



Waverman from Stantec. Mr. Waverman's 15 years as a senior cultural heritage landscape architect has informed his study of historical and heritage neighborhoods throughout Ontario as models for sustainable communities. According to David, historical neighbourhoods, provide essential ecosystem services that contribute to health and wellbeing. He maintains that having the right soil conditions and oxygenation levels is imperative in order for new trees to thrive. These things are often found in historical neighbourhoods because

they consist of original soils. New developments have soils scraped away, which can impact the success-rate of tree growth and the subsequent development of tree canopies – naturally occurring green infrastructure.



## Networking, Cocktail and Film Screening

*Written By Nishal Shah*



The evening networking and cocktail event, co-sponsored by Climate Action Network/Réseau Action Climat, provided a fun-filled activity where participants, speakers and volunteers were able to network, reflect, and speak to Symposium panelists, presenters and keynote speakers. Attendees had the opportunity to kick back and enjoy some tasty, locally-sourced vegetarian hors d'oeuvres catered by Vert Casse Croute. Our MC, Jenessa Doherty, concluded this session with a word of thanks to our partners, participants, speakers and volunteers.

The networking event culminated with a public screening of the documentary *Call Of The Forest: The Forgotten Wisdom Of Trees*, narrated by botanist, medical biochemist and author, Diana Beresford-Kroeger. The documentary, which follows Diana through the most beautiful forests of the northern hemisphere, tells the amazing stories behind the history of ancient trees and the science behind the role they play in protecting the planet.

Following the screening, Diana held an enthralling Q&A period that further examined her unique experiences while also delving into the science of trees and the irreplaceable roles they play in protecting and feeding the planet. The film screening was in support for Healing Gardens for Children with Anxiety and thanks to the generous donations of the 55 attendees, a sum of \$260 was collected toward this project.



## Workshops and Tours

### Medicine Walk in High Park with Diana Beresford- Kroeger

*Written By Nishal Shah*

Diana Beresford-Kroeger, recognized globally for her work with natural sciences and medicine, hosted a Medicine Walk in High Park, Toronto. There were 50 participants who enjoyed the opportunity to hear Diana speak on the healing properties of trees and plants and develop an understanding of how to measure a tree to determine its age. Diana also drew upon the use of traditional knowledge, or ancient “ways of knowing” for the medicinal uses of plants. According to Diana the Forest bathe conducted protects an individual’s immune system for 30 days and should be done regularly in order to keep your immune system protected. The medicine walk raised \$880 towards Healing Gardens for Children with Anxiety.

### Measuring Impact of Low Carbon Social Mobilization Initiatives

*By Nishal Shah*

The purpose of the workshop was for academic researchers and social change practitioners to come together to explore approaches to evaluating the impact of low carbon social mobilization initiatives, as well as explore what role academic researchers could play to support and/or enable ongoing experimentation and measurement of impacts of existing and emerging models. The 50+ workshop attendees represented a diverse group of non-profit organizations, local government, academic researchers, consultants, and others involved in the low carbon social innovation space. The workshop began with a series of context setting presentations from leading scholars and practitioners in the low carbon/sustainability social mobilization space.

The workshop began with a series of context setting presentations from leading scholars and practitioners in the low carbon/sustainability social mobilization space.

- Dr. John Robinson, University of Toronto – Social Mobilization and Sustainability Transitions
- Sonya Meek - Senior Manager, Sustainable Neighbourhoods, Toronto and Region Conservation Authority – Sustainable Neighbourhood Retrofit Action Plan (SNAP) – Measurement Strategies and Needs
- Katie Harper – Executive Director Project Neutral – The Practitioner’s Dilemma
- Dr. Stephen Sheppard, UBC Centre for Advanced Landscape Planning – Learning from BC’s Social Mobilization Research
- Steve Williams, UBC – A Framework to Evaluate Low-Carbon Energy Transition Learning Projects

Following the presentations, workshop participants were asked to reflect on a series of questions related to measuring impact of low carbon social mobilization initiatives individually, and in groups:

1. How can we foster effective community action and scale it up?



2. How do we evaluate not just short-term proximate effectiveness, but longer term impact in terms of systemic social-cultural change?
3. How can we report on impact for multi-objective projects?
4. If you have experience trying to evaluate contribution to systemic change or scaling up impact, what kinds of methods, data and approaches did you find useful?

The full report and presentations can be found here <http://www.cekap.ca/resources-workshops.php>

## Valuing the Benefits of Green Infrastructure

“Valuing Green Infrastructure” was hosted by Green Infrastructure Foundation. The goal of this course was to help individuals, especially those in the public sector, to value the benefits provided by green infrastructure in their communities and to equip them to defend capital and maintenance budgets, manage facilities in a more cost-effective and sustainable manner, identify the best alternative among infrastructure options, justify the cost to preserve or acquire green space/parks, community, improvement projects, incorporate values into climate change planning and lower costs and improve quality of new developments.

Some of the take a ways from this workshop included understanding the range of cost & benefits possible to use in different types of green infrastructure, learning the principles behind economic valuation of these costs & benefits, understanding the methods used to monetarily value the benefits of green infrastructure, learning how to apply these methods to generate values for the benefits of planned and existing green infrastructure in your community and learning how to utilize these valuations to educate decision makers about the benefits of green infrastructure protection, development, maintenance and management

## Reimagining Sustainable Food Systems

Written by Sharon Lam

### **Workshop Facilitators:**

- Selmin Kara, Associate Professor, Faculty of Liberal Arts and Sciences, OCAD University (Film and New Media)
- Alia Weston, Assistant Professor, Faculty of Liberal Arts and Sciences, OCAD University (Business Management and Design)

Through this interactive workshop on “Reimagining Sustainable Food Systems”, participants engaged in a world-building activity where they worked in teams to imagine a future world and actively create a green product using discarded materials. Drs. Selmin Kara and Alia Weston, who led the workshop, encouraged participants to think holistically and consider whether ideas made sense economically, politically, culturally and ecologically. At the end, each team presented their



product and future scenario, sharing the results of their collaboration and creativity. The products included: a waste-to-food kit that will be available 100 years from now that turns food waste into food; a virtual reality-enabled pod that will be available in libraries 15 years into the future that transforms the content of books into virtual reality; and a terrarium exhibit that will be available in the next 60 years that can be used to educate children about species and natural habitats that have become extinct. Through this exercise and discussion that followed, this workshop helped to shift the conversation away from the common doom-and-gloom mentality and sense of helplessness when tackling issues such as climate change, towards optimism, imagination and innovation. Furthermore, participants were engaged in the process of giving new purpose to discarded materials, enacting how we can all think and live differently.





## Closing Keynote – Climate Action in Ontario: What’s Next?

*Written by Jenessa Doherty*

Dr. Dianne Saxe, Environmental Commissioner of Ontario, closed the 2018 Ontario Climate Symposium with a compelling keynote address that highlighted the findings of her office’s most recent greenhouse gas report. Held in the Great Hall at OCAD University, Dr. Saxe drew the rooms attention to the staggering fact that Ontario is warming faster than the rest of the world. *“Ontario has already (reached) 1.5°C in less than a century”* she proclaimed, and extreme events have already tripled - the effects being felt across the province. 2016 saw severe drought that stressed emergency services. 2017 experienced significant flooding that wreaked havoc on infrastructural systems and the recent 2018 forest fires in Parry Sound burned more than 100 square kilometres - all contributing to insured losses in the billions – higher than any other recorded period of time. It is not all doom and gloom however. Moving forward, we need to think more broadly about how to create laws and generate stability that will survive political change. However, in the absence of provincial support, Commissioner Saxe called upon municipalities to lead the way, leaving us with the resonating idea that consultation with Ontarians is key and local action is tremendously important.



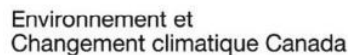
To watch Commissioner Saxe’s full keynote address, please visit:

<https://climateconnections.ca/symposium/2018-proceedings>





# Thank you to all our supporters!



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For more information visit [www.climateconnections.ca/symposium](http://www.climateconnections.ca/symposium)

