

## CitiesIPCC in Edmonton turns the spotlight on urban areas



*The first IPCC-approved conference focusing on cities sets an agenda for recognizing the role of urbanization in future climate change assessment reports*

By James Voogt and Winston Chow

On March 4–7, the **CitiesIPCC** conference was held in Edmonton, Alberta. This first-of-its-kind conference was intended to inspire the next frontier of research focused on assessing the current state of cities and climate change. The primary goal of the conference is to assess the state of academic and practice-based knowledge pertaining to cities and climate change, and to establish a global research agenda based on the joint identification of key gaps by the academic, practitioner and urban policy-making communities.

Of interest is that the conference was approved by the Intergovernmental Panel on Climate Change (IPCC), and co-organised by a very wide range of organizations including UN-Habitat, UN Environment (UNEP), Cities Alliance, ICLEI – Local Governments for Sustainability, Future Earth, the Sustainable Development Solutions Network (SDSN) and United Cities and Local Governments (UCLG). The ultimate aim of the conference is to generate information and set the agenda for a greater focus on urban areas in future IPCC Assessment Report Cycles; starting from sixth (AR6) this year, and culminating in a Special Report on Cities and Climate Change that will be published as part of the seventh (AR7) cycle from 2023.

The conference was held in the Canadian city of Edmonton at the Shaw Conference Centre along the banks of the North Saskatchewan River in downtown Edmonton. Ed-

monton was an interesting choice of conference location given that, firstly, the weather during the conference was bitterly cold for many delegates (it was  $-22^{\circ}\text{C}$  on the first morning, which made the walk to the venue a rather interesting one for a correspondent based in tropical climes!); second, this is ‘fossil fuel’ country – Edmonton is located in the province of Alberta, a major producer of oil and gas, and serves as the gateway to northern Alberta which is home to major oil sands development. At the time of conference opening, an inter-provincial dispute between Alberta and the neighbouring province of British Columbia over increased transport of Alberta oil by a pipeline over the Rocky Mountains to a port in the Greater Vancouver area had been receiving significant media attention.

But the (relatively) more progressive provincial government in Alberta has recently put a price on carbon, is in the process of phasing out coal for electricity generation and is implementing a number of initiatives to help home owners improve energy efficiency. And Edmonton’s Mayor, Don Iveson, is a young, dynamic and popular civic leader who has made climate change and energy leadership one of his important policy objectives. His views on Cities and Climate Leadership and his opening remarks at the conference, suggest he is a mayor who ‘gets it’ and understands that bottom-up action in cities, combined with leveraging efforts from other levels of government, are important to making progress on climate change. The appearance of major political office holders at the municipal, provincial and federal level at the conference signified

the importance the event had been given by all levels of government.

The conference agenda was centred on 3 days, with a fourth day for fieldtrips within the city that showcased tangible evidence of Edmonton's climate change initiatives. In total, there were 800 attendees that included government leaders, climate scientists, policy researchers, policy-makers, policy influencers, city planners and technical experts from across the globe. Interest in the conference was high as reportedly the number of session proposals received by the organizers was much larger than the available number of session slots (35). The conference was clearly well supported by the various levels of government – there were no registration costs for invited delegates, and both breakfast and lunch was catered for. To help attendees cope with the local climate, toques were provided as part of the conference package – a first for both of us. The event was also well staffed – both correspondents are pretty certain we've not been to a conference with as many dedicated student volunteers!

The conference was organized using a combination of key morning and evening plenaries that were sandwiched by parallel sessions (seven in total). These plenaries were livestreamed on social media, and were archived ([available here](#)). The chief moderator throughout all plenaries was David Miller, C40 Regional Director, North America and C40 Ambassador for Inclusive Climate Action who was previously both Mayor of the City of Toronto and C40 Chair. The plenaries usually involved multiple short invited presentations, followed by a moderated panel discussion involving different members; not just prominent academics, but important stakeholders such as practitioners and elected officials.

Questions from the floor or from Twitter were taken towards the end of the panel discussion. This format was also popular within individual sessions in the parallel streams and was likely a product of the organizers desire to "seek sessions with innovative formats to help foster the delivery of the unique conference objectives" and their requirement that sessions "incorporate a clear and visible element of knowledge exchange or co-generation among the



**IAUC affiliated delegates (left to right): Winston Chow, Nigel Tapper, James Voog and Benedicte Dousset.**

scientific community and the practitioner and/or policy-making communities." While ambitious, and having some teething difficulties e.g. in selecting Twitterati questions, this format seemed to be a qualified success in practice particularly in the variety of questions that weren't restricted to purely science-based in theme (but which according to IPCC rules exclude questions of a political nature).

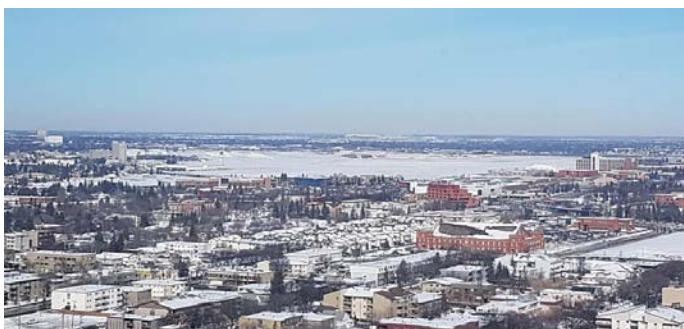
The sessions were organized around four themes that were treated sequentially through the conference:

Theme 1: Cities & climate change (Imperatives for action); in which local, regional and global scale action and commitments can set developmental agendas towards responding to the risks of climate change. These agendas incorporate multi-scale linkages between scientific research, with translating the academic information towards urban stakeholders, and effecting changes in behavior towards the aim of decarbonisation.

Theme 2: Urban emissions, impacts and vulnerabilities (Science and practice of cities); the focus was on how co-ordination and partnerships between agencies, practitioners, scientists and relevant stakeholders can effect reductions in urban exposure towards these emissions, impacts and vulnerabilities.

Theme 3: Solutions for the transition to low carbon and climate resilient cities (Science and practice for cities); Sessions and the plenary related to this theme dealt with approaches integrating nature with urban landscapes in order to increase urban resilience; much attention was placed in the emergence of disruptive technologies in cities e.g. autonomous cars, "smart" cities and the application of Big Data.

Theme 4: Enabling transformative climate action in cities (advancing science and advancing cities); Much attention was placed on how formal and informal sectors of cities – though a largely socio-economic and cultural perspectives – can find a roadmap towards keeping to emission pathways aspired to from the 2015 Paris Agreement.



**View of the planned Blatchford residential community (the current open space) that is developed from the former Edmonton International Airport.**



IAUC affiliated delegates in the atrium of Roger's Place at the conference dinner.

Parallel/Breakout session topics were wide-ranging, and were more reflective of the type of content at UN Habitat III than of typical urban climate science conferences. These sessions covered topics such as climate justice, climate finance, governance issues, smart cities, energy systems, health, and policy. But all 4 themes included sessions with topics of interest to IAUC members. A sampling of some that we attended included: Urban Heat Island Effect and Climate Change in Cities, Urban Climate Information to Support Decision Making: From Local to Global, and Initiating Climate Awareness in Urban Planning Practices Through Participatory Action Research. Furthermore, several IAUC members actively participated in sessions through convening or giving oral and poster presentations e.g., **Nigel Tapper, Rafiq Hamdi, Edward Ng, Benedicte Dousset, Alexander Baklanov, Julia Hidalgo, Evyatar Erell, Valéry Masson, Chao Ren**, and your correspondents.

The final day of the conference was for delegates to take part in urban sustainability tours and field trips that took place away from the conference venue. Up to two tours (one in the morning, one after lunch) could be registered for, and I (WC) went for one showcasing the planning and design of the Blatchford district that involved converting the old international airport north of Edmonton's downtown into an ambitious sustainable, low-carbon residential area.

A number of background papers were developed by the CitiesIPCC Scientific Steering Committee to inform the

conference discussions. Among these (for a full list and to access the papers [see here](#)) were Urban Climate Change Science, Impacts and Vulnerabilities: State-of-the-Art Findings and Key Research Gaps by Cynthia Rosenzweig et al., Urban Data Science for Global Climate Solutions by Felix Creutzig et al., and Towards a Novel Assessment Framework for Cities and Climate Change William Solecki et al. that may be of interest to IAUC members.

Also featured was presentation of the recent commentary in Nature by Bai et al. 'Six research priorities for cities and climate change'. Among the priorities are calls for developing remote sensing methodologies for monitoring dense urban fabrics, a global network of 'urban observatories, better understanding of climate interactions, incorporation of cities in climate modeling, and knowledge on "how urban morphologies, building materials and human activities affect atmospheric circulation, heat and light radiation, urban energy and water budgets". We are certain that these challenges are familiar to many IAUC members, but one of my (JV) lingering concerns from CitiesIPCC is the extent to which the field of urban climate science has been understood by those who have perhaps come at the problem from a larger scale perspective. But overall, CitiesIPCC provided us with a valuable experience as urban climate scientists to participate in a conference with the broader context of cities and climate change that will help set the agenda for future IPCC reports and which may help frame the important contributions that urban climate science can bring to this critical issue of our time.