

The rise of cities in the battle against climate change

March 14 2018, by Allison Bridges

Cities, home to over half of the global population and responsible for more than 70 percent of global greenhouse gas emissions, are particularly vulnerable to the impacts of climate change. The undeniable imperative to consider climate change in urban planning and policy has inspired a small but growing groundswell of support for local action around the world.

This growing movement inspired over 750 delegates, from 75 countries, to attend the Cities and Climate Change Science Conference (Cities IPCC, #CitiesIPCC) held March 4-8, 2018 in Edmonton, Canada. The first summit to bring together urban (rather than national) representatives to address [climate](#) change, the conference aimed to identify knowledge gaps and review current strategies to fight and adapt to a changing climate. The research and discussions from the conference will contribute to the upcoming assessment reports of the Intergovernmental Panel on Climate Change (IPCC), and will consolidate past and ongoing research while advancing a global agenda for low-carbon, resilient urban growth.

Panel discussions and plenary sessions were populated by many of the conference organizers, including ICLEI – Local Governments for Sustainability, C40, Cities Alliance, Future Earth, Sustainable Development Solutions Network, United Cities and Local Governments, UN Environment, UN Habitat, World Climate Research Programme, and the City of Edmonton. Organized around four key thematic areas, the conference focused on:

1. the imperative to specifically address urban level action;
2. urban emissions, impacts and vulnerabilities;
3. the transition to low carbon, resilient cities; and
4. the creation of an enabling environment for transformative climate action.

To galvanize commitment to the immense challenge of limiting global warming to [1.5°C below pre-industrial levels](#), the unique effort brought together academics, local government representatives, the private sector, and practitioners in the co-generation of a global agenda for urban action.

Aromar Revi, director of the Indian Institute for Human Settlements, kicked off Day 1 by reminding participants of the need for rationality and solidarity in meeting the challenges of climate change. Discussions throughout the first day of the conference covered a range of topics including development of an integrated framework for both the Paris Agreement and the Sendai Framework for Disaster Risk Reduction, the need for social inclusivity in agenda setting, and sustainable consumption and production.

Mark Watts, executive director of C40 Cities—a network of 90 cities committed to addressing climate change—highlighted the importance of urban consumption patterns by referencing a new C40 report released during the conference. The report concluded that greenhouse gas inventories that only account for emissions within the [city](#) limits diminish the importance of consumption patterns as a driver of climate change. The new study suggests that mayors can make a large impact by considering the consumption of everyday goods and services, and their upstream emissions, and designing policies in support of a circular economy.

Cities are impact and action hotspots for climate change, as described by

Debra Roberts, chief resilience officer of the Sustainable and Resilient City Initiatives Unit in Durban, South Africa and co-chair of IPCC Working Group II. As emphasized during Day 2 of the conference, feedback loops from the scientific community can support effective, action-oriented, evidence-based policies. Discussion panels acknowledged the need for a multi-disciplinary approach as well as the generation of data from both the bottom-up and the top-down.

In following, Day 3 discussions addressed the challenge of urban complexity and called for a systems-based approach to strategic planning. Transforming urban systems will rely heavily on new technologies, smart city design, and the Internet of Things. It will also require the upgrading of existing infrastructure that is locked-in to inefficient design modalities.

Partnerships were underscored as critical in the creation of an enabling environment for climate action. Multi-stakeholder forums can enhance behavioral interventions, improve accountability, and work to maximize the potential contribution of cross-system urban mitigation and adaption initiatives. As good policy has not just co-benefits, but multiple benefits, city decision-makers must strive to identify policies and projects that meet multiple goals. Cities are challenged to decarbonize electricity generation, reduce energy usage, reduce dependence on fossil fuel-based transportation, work toward a circular economy, and find synergies between adaption planning, local needs, and development preferences. To achieve these multiple goals, Priya Kurian from the University of Waikato in New Zealand highlighted the need for a new architecture of deliberation that brings together stakeholders from public, private, and civic organizations and associations.

During the conference, the Earth Institute-based Urban Climate Change Research Network released its Second Assessment Report on Climate Change and Cities (ARC3.2), a report authored by more than 350

scientists from around the world. One of the lead authors and editors of the report, Cynthia Rosenzweig, head of the Climate Impacts Group at the NASA Goddard Institute for Space Studies, gave a keynote address on Day 3 summarizing the major strategic planning pathways that must be adopted by city leaders in the fight against climate change. These pathways include:

1. the integration of climate mitigation and adaptation initiatives;
2. the linking of disaster and adaptation planning;
3. generation of climate action plans in partnership with non-governmental stakeholders;
4. attention to the needs of the disadvantaged and most vulnerable; and
5. the advancement of good governance, partnership networks, and solutions to gaps in financing.

By identifying these pathways, the report aims to better inform urban policies that promote development and implementation of climate change and adaptation action plans.

For further information, several papers, written in anticipation of the conference, are [already available](#) on the conference themes and five more papers will be published in *Nature* and *Nature Climate Change* in order to catalyze new research on the role of cities in addressing and preparing for climate change. These articles summarize research gaps pertaining to the need for a novel climate change assessment framework for cities, a multi-level approach to data collection, attention to informality in mitigation and resilience planning, building an enabling environment, identifying effective financing mechanisms, and key lessons from the current state of urban [climate change mitigation](#) and adaptation planning.

This urban-focused conference was undoubtedly a significant step

toward consolidating ground-level action in the fight against [climate change](#) and meeting the targets of the Paris Agreement. As decision-makers, practitioners, and academics around the world work to address research gaps and forge lasting partnerships, urban policy makers finally have a long overdue seat at the global table. Through their efforts, evidence-based policy at the local level can provide the foundation on which to build ecologically coherent global systems in balance with the limitations of our natural resources.

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