ICCCASU

4th International Conference on Canadian, Chinese and African
Sustainable Uranization

Density, Diversity, and Mobility:
The City in an Era of Cascading Risks

Montreal, Canada
Online Conference

CONFERENCE REPOROT
December 2022

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ICCCASU IV - Montreal, Canada

4th International Conference on Canadian, Chinese
and African Sustainable Urbanization

Density, Diversity, and Mobility:
The City in an Era of Cascading Risks

CONFERENCE REPORT
December 2022

International Council on Canadian, Chinese and African Sustainable Urbanization (ICCCASU)

ICCCASU

4ᵉᵐᵉ Conférence internationale sur l'urbanisation durable au Canada, en Chine et en Afrique

4ᵗʰ International Conference on Canadian, Chinese, and African Sustainable Urbanization

Densité, diversité et mobilité
les villes à l'ère des risques aggravés

Density, Diversity, and Mobility
The City in an Era of Cascading Risks

集聚、多元与流动：连锁危机下的城市反思与发展

Juillet / July 27 - août / August 1, 2021

MONTRÉAL, CANADA
IN-PERSON & ONLINE

45°30'32"N 73°33'42"W

LIVABLE CITIES **2021**
iCCCASU

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FOR A BETTER URBAN FUTURE

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UNIVERSITY

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Foreword from the Editor in Chief

On behalf of the ICCCASU organizing committee, it is an honour for me to present this final report of the fourth edition of the International Conference on Canadian, Chinese, and African Sustainable Urbanization (ICCCASU4) under the theme of "Density, Diversity, and Mobility: The City in an Era of Cascading Risks."

The fourth conference, funded by SSHRC, was successfully held virtually in Montreal, Canada, from July 28 to 31, 2021. The conference was staged in partnership with the United Nations Human Settlements Programme (UN-Habitat), McGill University, the University of Ottawa, and Carleton University, and operated by the ICCCASU secretariat. ICCCASU4 marked a major milestone as the first in a second rotation of conferences held among the three regions of interest. Additionally, ICCCASU4 was the only UN-sponsored conference in Canada re-examining cities within the context of the COVID-19 pandemic and attracted participants from 40 different countries and from diverse backgrounds and areas of expertise, including politicians, policymakers, scholars, practitioners, and more (www.icccasu2021.org). ICCCASU4 examined the opportunities and challenges of sustainable urbanization and its impact on the urban economy, society, and environment, particularly with regard to our most vulnerable populations in a post-pandemic era. Over the four-day conference, the participants engaged in discussions on the following themes: a) learning from and preparing for health crises in cities; b) preparedness and management of COVID-19 and climate change in cities; c) building more resilient cities worldwide; d) urban risk management; and e) privacy, surveillance, security, governance, and collective wellbeing. The presentations sparked lively debates and constructive discussions. Delegates' presentations were delivered as keynote remarks, panels, and round-tables. The participants particularly enjoyed the six remarkable keynote speeches by world-renowned experts and scholars. It is important to highlight that we are very pleased to welcome experts from Latin America and the Caribbean to this conference and to learn from their dynamic and unique experiences with urbanization. We will continue our efforts to include more regions in future ICCCASU dialogues.

Following four days of engaging discussions and presentations, ICCCASU4 concluded on July 31, 2021. Despite the unprecedented challenges of COVID-19, the conference was a resounding success, thanks to our participants.

We would like to express our most sincere thanks to the countless individuals, authorities, and institutions that have made ICCCASU4 possible. We are very grateful for the partnership between UN-Habitat, McGill University, the University of Ottawa, and Carleton University, which brings significant convening power, normative guidance, and expertise in this field. Moreover, this event would not have been possible without the counting support of the University of Ottawa, home of the ICCCASU permanent secretariat, and the personal and ongoing involvement and commitment of the ICCCASU organizing committee. We also extend our gratitude to the numerous institutions whose logos appear on the ICCCASU website. It is absolutely crucial that we acknowledge our many volunteers here in Canada as well as those in China, Africa, and other regions of the world. In fact, the inter- national e-castle team is composed of dedicated volunteers. We are extremely proud of our team, especially in light of the considerable challenges the team has negotiated and the heavy workloads so many have managed while working to make this conference a success. They have contributed their time, wisdom, and experience to bring ICCCASU to this stage.

A special thanks to our distinguished guests for their opening remarks and participation in the dialogues and keynote presentations. I know that all of you have fully targeted schedules. Your presence has added enormous value to the casual form. Likewise, to each of the panelists, local and international, for their interests and willingness to participate at such a difficult time.

This report is finalized at the moment where COVID-19 is coming to an end after 3 years of hard time. The pandemic era calls for better attention to the essence of planning and developing human settlements landscapes with public health and people's wellbeing at the centre to build inclusive and sustainable cities, including financial sustainability. Therefore, we are pleased to invite you to the ICCCASU5 in Nairobi, Kenya, in person or virtually, in June 2023, whose main theme will be directly related to "Financing African Cities."

Dr. Huhua Cao

Editor in Chief
ICCCASU Co-President
Full Professor
University of Ottawa, Canada

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Guest Speakers of Opening Ceremony

ICCCASU

4th International Conference on Canadian, Chinese, and African Sustainable Urbanization
4ème Conférence internationale sur l'urbanisation durable au Canada, en Chine et en Afrique

Density, Diversity, and Mobility: The City in an Era of Cascading Risks
Densité, diversité et mobilité: les villes à l'ère des risques aggravés

28 - 31 July/juillet, 2021
Montreal/ Montréal, Canada (virtual/virtuel)
English and French/Anglais et français
Coordinators/Coordonnateurs: David Covo, McGill University & Tonton Mundele, Global Affairs Canada

FREE

Webinar

Opening Ceremony/ Cérémonie d'ouverture
28 July/juillet, 2021, 8:00 - 9:30 AM ET

https://us02web.zoom.us/webinar/register/WN_Vw2oq8mJSTmMhGWgaFGoiw

MC:
Claude Ngomsi

UN-Habitat,
Kenya

MC:
Luisa Gomez

University of Ottawa,
Canada

Special Guests/Invités d'honneur

Maimunah Mohd Sharif

Executive Director,
UN- Habitat

Hon. Yuen Pau Woo

Senator,
Canada

Hon. Claver Gatete

Minister of
Infrastructure of
Rwanda

Suzanne Fortier

Principal and Vice-
Chancellor, McGill
University, Canada

Jean Pierre Elong Mbassi

Secretary- General,
UCLG Africa,
Morocco

Peter Guo-hua Fu

President, KFS
Architects,
China/Canada; Professor
of Practice, Peter Guo-
hua Fu School of
Architecture,
McGill University,
Canada

Matti Siemiatycki

Director, School of Cities,
University of Toronto,
Canada

Huhua Cao

Co-president of
ICCCASU

Maimunah Mohd Sharif

Executive Director, UN-Habitat

Ms. Maimunah Mohd Sharif (Malaysia) is the Executive Director of the United Nations Human Settlements Programme (UNHabitat), appointed at the level of Under-Secretary-General by the Secretary-General, following an election by the General Assembly on 22 December 2017. On 22 January 2018, Ms. Sharif assumed her post at UN-Habitat's Headquarters in Nairobi, Kenya. She succeeds Dr. Joan Clos of Spain. Prior to this appointment, Ms. Sharif was the Mayor of the City Council of Penang Island, Malaysia. In 2011, she became the first woman to be appointed President of the Municipal Council of Seberang Perai. As mayor, she led the Municipal Council of Seberang Perai to achieve its vision of a "cleaner, greener, safer and healthier place to work, live, invest and play." She is a champion of Gender-Responsive Participatory Budgeting and Planning, integrating gender perspectives into the governance process. During her tenure, the Municipal Council of Seberang Perai was the first Local Authority to implement and achieve six quality-based management ISO certifications. Ms. Sharif began her career as a town planner at the Municipal Council of Penang Island in 1985. In 2003, she was promoted to Director of Planning and Development, a position she held until November 2009. As Director, she was responsible for the preparation of structure and local plans and was directly involved in the development management of Penang City's projects and landscape. She also led a team which planned and implemented urban renewal projects in George Town. In November 2009, as its General Manager, Ms. Sharif established George Town World Heritage Incorporated and managed the George Town World Heritage Site, which was inscribed by UNESCO in July 2008. Born in Kuala Pilah, Negeri Sembilan, Malaysia, on 26 August 1961, Ms. Sharif holds a Bachelor of Science with Honours in Town Planning Studies from the University of Wales Institute of Science and Technology, UK and a Master of Science in Planning Studies from the Malaysia Science University. She has received several awards, including, "Planner of The Year 2014" by the Malaysian Institute of Planners, the 2016 Global Human Settlements Outstanding Contribution Award during Habitat III in Quito, for her contribution in sustainable planning in Seberang Perai and from the Penang State Government. On 11 January 2018, she received an award from the Malaysia Book of Records recognizing her for being the first Asian woman to be appointed as Executive Director of UN-Habitat. She is married to Mr. Adli Lai and has two daughters.

Hon. Yuen Pau Woo

Senator, Canada

Appointed to the Senate of Canada in November 2016, the Honorable Yuen Pau Woo sits as an independent representing British Columbia. He has been the Facilitator of the Independent Senators Group since 2017, and was re-elected for a second two– year term in December 2019. Senator Woo has worked on public policy issues related to Canada's relations with Asian countries for more than 30 years. From 2005-2014, he was President and CEO of the Asia Pacific Foundation of Canada, where he continues to serve as Distinguished East Asia Fellow. He is also Senior Fellow at Simon Fraser University's Graduate School of Business, and at the School of Public Policy and Global Affairs at the University of British Columbia. He is a member of the Trilateral Commission and on the board of the Vancouver Academy of Music. He also serves on the Advisory Boards of the Mosaic Institute, the Canadian Ditchley Foundation, and the York Centre for Asian Research. Senator Woo has been a member of the following Senate Standing Committees: Foreign Affairs and International Trade; National Finance; Energy, the Environment and Natural Resources; Selection; and Rules, Procedures, and the Rights of Parliament.

Hon. Claver Gatete

Minister of infrastructure of Rwanda

Amb. Claver GATETE was appointed as the Minister of Infrastructure on 6 April 2018. Prior to this appointment, he served as Minister of Finance and Economic Planning since February 2013. He had previously served as the Governor of the National Bank of Rwanda (2011 to 2013), having previously served as its Deputy Governor. Amb. Gatete also served as Rwanda's Ambassador to the United Kingdom, Ireland, and Iceland from November 2005 to December 2009. He is also currently a member of the Presidential Advisory Council. Prior to that, Amb. Claver Gatete had served successively as the Secretary General and Secretary to the Treasury in the Ministry of Finance and Economic Planning, Personal Representative of the President on NEPAD Steering Committee in the Office of the President, Coordinator of the National African Peer Review Mechanism (APRM), member of the APR National Commission; and Member of the NEPAD's African Partnership Forum (APF) and the Director General for Social and Economic Affairs. He also worked with United Nations Development Programme (UNDP) – Kigali-Rwanda, as a National Economist. Amb. Claver Gatete has held various positions on Key Boards of Directors including: Chairman of Rwanda Revenue Authority and School of Finance and Banking as Chairman; member of the Board of the National Bank of Rwanda; Chairman of National Privatization Technical Committee; and Vice-Chairman of Community Development Fund. He also held positions in other key taskforce committees serving as Chairman of the National Treasury Management Committee and Co-Chair of Development Partners Coordination Group. Amb. Gatete holds a Masters in Agricultural Economics from the University of British Columbia, Vancouver, B.C., Canada (1993) and an undergraduate degree from the same University (1991). Upon completion of his undergraduate and postgraduate studies, Amb. Gatete worked in Canada as an Economist; Agriculture and Agri-food Canada, Statistics Canada, University of British Columbia and Algonquin College.

Suzanne Fortier

Principal and Vice-Chancellor, McGill University, Canada

Suzanne Fortier has served as Principal and Vice-Chancellor of McGill University since September 2013. Prior to her appointment as Principal, Professor Fortier was President of the Natural Sciences and Engineering Research Council of Canada (NSERC) from 2006 to 2013, and held the position of Vice-Principal (Academic) from 2000 to 2005 and VicePrincipal (Research) from 1995 to 2000 at Queen's University in Kingston, Ontario, where she was a Professor in the Department of Chemistry and in the School of Computing (1982-2006). A native of St-Timothée, Québec, Professor Fortier graduated from McGill with a BSc (1972) and a PhD in Crystallography (1976). Her research work has focused in the development of mathematical and artificial intelligence methodologies for protein structure determination. She has also made contributions to the development of novel techniques in crystallographic data mining to gain new insights from the large structural databases. Professor Fortier was appointed an Officer of the Order of Canada in 2018. She is also an officer of France's National Order of Merit, a fellow of the American Association for the Advancement of Science, and was named a Specially Elected Fellow of the Royal Society of Canada (2015). She holds honorary doctorates from Thompson Rivers University, Carleton University, and the University of Glasgow. Professor Fortier currently serves as Chair of the World Economic Forum's Global University Leaders Forum (GULF), as a member of the HEC Paris International Advisory Board, on the Boards of the McCall MacBain Scholarships at McGill and the McGill University Health Centre (MUHC), and is an Academic Member of the Board of Governors of the Technion Israel Institute of Technology. She also serves on the Canadian Business-Higher Education Roundtable, the Catalyst Canada Advisory Board, as well as the Boards of Directors of Montreal International, and the Pierre Elliott Trudeau Foundation. She has previously served as a member of several boards and councils, including the federal government's Council of Science and Technology Advisors (CSTA), the Board of Directors of the Canada Foundation for Innovation, the Steering Committee of the Networks of Centres of Excellence, the Ontario Task Force on Competitiveness, Productivity and Economic Progress, Universities Canada, the Board of Trade of Metropolitan Montreal, the Canadian Federal Minister of Finance's Advisory Council on Economic Growth, the Conference Board of Canada, and served as a member and Vice-Chair of the Science, Technology and Innovation Council (STIC).

Jean Pierre Elong Mbassi

Secretary-General, UCLG Africa, Morocco

Jean Pierre Elong Mbassi is the Secretary General of United Cities and Local Governments of Africa (UCLG Africa) since 2007. He has been the Chairperson of the Cities Alliance Interim Management Board till April 2016. He is also Co-Chair of World Cities Scientific Development Alliance-WCSDA, and Deputy Secretary General of the China-Africa forum of local governments. Mr. Elong Mbassi is the man behind the Africities Summit, the largest event of cities, regions, and local communities in Africa, where he oversees the organization since the first edition in 1998. Mr. Elong Mbassi has a rich experience of nearly 40 years in the field of urban development and planning, urban services, local economic development, local governance, housing and of slum upgrading. From 1996 to 1999 he was the first Secretary General of the World Association of Cities and Local Authorities Coordination-WACLAC at the same time he held the position of Secretary General of the Municipal Development Partnership, MDP from 1992 to 2006. Previously, from 1981 to 1991, Mr. Elong Mbassi was the director of the first urban project financed by the World Bank in Cameroon, and which focused on the restructuring and development of a slums area of 300,000 inhabitants in the city Douala. Mr. Elong Mbassi began his career in Paris, France where he was responsible for research and project manager at the Agency of Cooperation and Planning ('Agence Coopération et Aménagement) from 1973 to 1980.

Peter Guo-hua Fu

President, KFS Architects, China/Canada

Peter Guo-hua Fu was born in Shanghai, China, he studied architecture and urban planning, starting from 1980 at College of Architecture and Urban Planning Tongji University and McGill University School of Architecture, Canada, received Ph.D. of architecture, Master of Urban Planning. For the first decade of his career, he started as architect at Pertroff Partnership Architects (Canada, Toronto) and then moved to Zeidler Roberts Partnership Architects (Canada, Toronto); after that, Peter joined B+H Architects, Toronto as senior architect, vice president. Today, he is president and chief architect at KFS Architects Inc. Canada; director of KFS Dance & Musical; professor of practice at Peter Guohua Fu School of Architecture, McGill University; professor at School of Design, Shanghai Jiao Tong University. For 20 years, Mr. Peter Guo-hua Fu has led many urban design projects, including one of the seven design proposals of 2010 Shanghai Expo, Shanghai "North American Style Town" Planning, Shanghai Qingpu Central Area Planning and Implementation, Russia St. Petersburg Baltic Pearl, Hainan Sanya 1# Yalong Bay Planning. Design projects led by him including public buildings, residential buildings, interior design located in many major cities in China like Shanghai. He has many extraordinary design works, acquired many noble awards: one of "Top 20 Most Influential Architects in China" by CIHAF, 2004; top one of "Most Welcomed Architects in Shanghai" by newspaper publisher in 2004. Since 2017, the famous McGill University, Canada, which has a history of over 200 years, named its school of architecture with 120 years history, as Peter Guo-hua Fu School of Architecture, permanently, and invited him as professor of practice. In 2014, Mr. Peter Guo-hua Fu participated in performing field, committed himself in combining architecture and drama, "drama" and "stage". Three years after he designed the Music Box by KFS using recycled containers and acquired national patent, he wrote and directed three musicals themed with architects, performed at the Music Box by KFS in Shanghai Culture Square, "Memories of the Valley", "My Albert", "Exchange Students". The performances obtained Shanghai Cultural Innovation Fund, as well as consequent top 3 to 5 box office China Small Theatre. In 2020, he cooperated with Shanghai Ballet as one of the chief directors, created one-act ballet "Cyan, Blue, Purple", with inspiration from "Memories of the Valley", "My Albert" and "Exchange Students".

Matti Siemiatycki

Director, School of Cities, University of Toronto, Canada

Professor Matti Siemiatycki is Associate Professor in the Department of Geography & Planning, and Canada Research Chair in Infrastructure Planning and Finance. His research focuses on delivering large-scale infrastructure projects, public-private partnerships, and the effective integration of infrastructure into the fabric of cities. Professor Siemiatycki was a faculty leader of StudentMoveTO, a joint initiative between the University of Toronto, York, Ryerson and OCADU that successfully developed a model for inter-university research collaboration and mobilization on city-building issues. Professor Siemiatycki is a highly engaged public scholar with a deep commitment to informing public discourse about city building. He regularly provides advice to governments, civic institutions and industry, and is a frequent commentator in the media and public realm on urban issues, with a honed ability to communicate with various audiences.

Huhua Cao

Full Professor, University of Ottawa, Canada
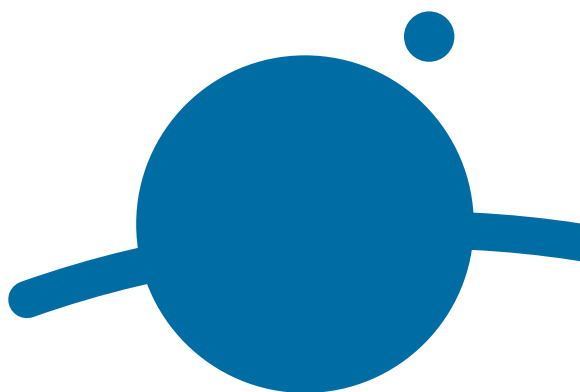
Dr. Huhua Cao is a cross-appointed Full Professor within the Department of Geography Environment and Geomatics and the School of International Development and Global Studies at the University of Ottawa in Canada. He has been developing his specialization in urban studies, particularly on topics related to city, population, mobility, and environment from an international perspective throughout the near 25 years of his university career in Canada. Professor Cao directed various national and international transdisciplinary research and training projects that have received significant funding from Canada, the European Union, China, and Cameroon. He has also written the near 100 of articles, chapters, books, and reports while collaborating with academics, professionals, and politicians all over the world. His research interests have been gradually shifted from academic studies to applying the research results to the policy-making process, and then became keen on dialogues between scholars, practitioners, representatives of civil society, politicians, and policymakers. Since 2014, as the founding copresident, Professor Cao has led a joint initiative with The United Nations Human Settlements Programme (UN-Habitat): The International Conference on Canadian, Chinese and African Sustainable Urbanization (ICCCASU). ICCCASU is an international think-tank for promoting sustainable and inclusive urban development in a forum based on the diverse but complementary experiences in the rapidly urbanizing areas of the world, with a particular focus on Canada, China, and Africa. Over the past six years, ICCCASU has proved to be a reliable and authoritative voice, developing networks among urban researchers and practitioners worldwide.

BIOGRAPHY

Guest Speakers of First Keynote Session

David Miller

Director of International Diplomacy, C40 Cities Climate Leadership Group & Former Mayor of Toronto, Canada

Like most Torontonians, Mayor David Miller immigrated to Toronto. He and his mother arrived from England in 1967 and moved to Toronto in 1981. As a high school senior, the mayor played hockey and was known to use his size to his advantage in the corners. Mayor Miller received a degree in economics from Harvard University and a law degree from the University of Toronto. Before running for public office, he was a partner at the Toronto law firm Aird & Berlis, where he specialized in employment and immigration law and shareholder rights. He became a Metro councilor in 1994, and in 1997 he was elected to the new City of Toronto council where he served two terms. In November 2003, Torontonians chose David Miller as their new mayor and in November 2006, he was re-elected for a second four-year term. His mandate is to make Toronto a city of prosperity, opportunity, and Liveability for all residents. He and his wife, lawyer Jill Arthur, are the parents of two children. Among his many accomplishments as mayor, securing a New Deal for Cities with senior orders of government is one of his proudest. Through the Deal, Mayor Miller has enabled Toronto to garner new powers, money, and respect from provincial and federal governments. Under his leadership, Toronto has become the only city in Canada with a direct agreement with the federal government on transit funding. In addition to advocating for the city of Toronto, Mayor Miller has also become one of the dominant voices for the national urban agenda. As the City comes into its own as a full-fledged government, it is reinvesting in Toronto's neighborhoods and communities through initiatives like the Mayor's Community Safety Plan, the Clean and Beautiful City Initiative, rejuvenation of parks and public spaces and through ongoing revitalization of the waterfront. Mayor Miller has also worked to make Toronto a world-leading city on environmental issues and on June 4, 2008, he was appointed chair of the influential C40 Group of World Cities leading the fight against Climate Change. These positive changes have inspired a new sense of civic pride, responsibility and belonging among Torontonians.

Leilani Farha

Global Director of NGO the Shift, Canada & Former UN
Special Rapporteur on the Right to Housing

Leilani is the Global Director of The Shift, an international movement to secure the right to housing and the former UN Special Rapporteur on the Right to Housing (2014- 2020). The Shift was launched in 2017 with the UN Office of the High Commissioner for Human Rights and United Cities and Local Government and works with multi-level stakeholders around the world including with several city governments in North America and Europe. Leilani's work is animated by the principle that housing is a social good, not a commodity. She has helped develop global human rights standards on the right to housing, including through her topical reports on homelessness, the financialization of housing, informal settlements, rights- based housing strategies, and the first UN Guidelines for the implementation of the right to housing. She is the central character in the award-winning documentary PUSH regarding the financialization of housing, directed by the Swedish filmmaker Fredrik Gertten. PUSH is screening around the world and to continue its momentum Leilani and Fredrik now co-host a podcast – PUSH-BACK Talks - about finance, housing, and human rights

Oumar Sylla

Director of UN-Habitat Regional Office for Africa, Kenya

Oumar is currently acting as Director for the Regional Office for Africa in the United Nations Human Settlements Program (UNHabitat) since January 2020. Before this position, Oumar was Branch co-ordinator, Urban Legislation, Land and Governance in UN-Habitat and Head of the Land and GLTN Unit in UN-Habitat since September 2015. Prior to joining Land and GLTN Unit, Oumar served as a Senior Advisor in UN-Habitat's Regional Office for Africa and focal point for francophones countries to support urban policies development and sustainable urbanization. Before that, he was appointed as Chief Technical Advisor for UN-habitat Land Program in DR Congo (from 2009 to 2014). He also has experience with the European Union framework, which he gained as a Land Policy Advisor in South Sudan and Burkina Faso (2006-2008) and he was a Researcher Fellow within the Laboratory of Legal Anthropology in Paris 1 Sorbonne, mainly working on land and decentralization policies in West Africa (1999-2005). In Senegal, He operated as a junior researcher within ILRI/ ISRA institutional coopera-tion framework (1998-1999) dealing with land and natural resources. (https://www.giminternational.com/content/author/oumar-sylla)

BIOGRAPHY

Guest Speakers of Second Keynote Session

Mario Polèse

Professor emeritus, Institut national de la recherche scientifique (INRS), Canada

Mario Polèse is professor emeritus at INRS, a research university, Centre Urbanisation Culture Societé in Montreal, his home base for more than forty years. He has written extensively on issues of urban economics and urban development. Books authored, solo or with others, include The Wealth and Poverty of Cities: Why Nations Matter (Oxford U. Press); The Wealth and Poverty of Regions: Why Cities Matter (U. of Chicago Press, plus Chinese translation); Connecting Cities with Macroeconomic Concerns (World Bank); The Social Sustainability of Cities (U. of Toronto Press); Économie urbaine et régionale (Economica, Paris), principal French-language university textbook in the field, now in its 4th edition (plus Spanish and Portuguese adaptations). Mario Polèse frequently acts as an advisor to local, national, and international agencies and has held research and teaching positions in the U.S., Latin America, Switzerland, Spain, and France.

Mimi Sheller

Inaugural Dean of the Global School at
Worcester Polytechnic Institute (WPI), USA

Mimi Sheller, Ph.D., was recently named Inaugural Dean of the Global School at Worcester Polytechnic Institute in the United States. Before joining the WPI she was a Professor of Sociology, Head of the Sociology Department, and founding Director of the Center for Mobilities Research and Policy at Drexel University in Philadelphia. She is founding co-editor of the journal Mobilities and past President of the International Association for the History of Transport, Traffic and Mobility. She helped to establish the "new mobilities paradigm" and is considered to be a key theorist in critical mobilities research and in Caribbean studies. She serves on many international Advisory Boards, including for the Society for Caribbean Research, the Center for Advanced Research in Global Communication at University of Pennsylvania, the Bauman Institute at the University of Leeds, the Asia Mobilities Research Network at Konkuk University, South Korea, and the Global Partnership for Informal Transportation. Sheller has published more than 125 articles and book chapters, and is the author or co-editor of fifteen books, including Advanced Introduction to Mobilities (Edward Elgar, 2021); Island Futures: Caribbean Survival in the Anthropocene (Duke University Press, 2020); Mobility Justice: The Politics of Movement in an Age of Extremes (Verso, 2018); Aluminum Dreams: The Making of Light Modernity (MIT Press, 2014); Citizenship from Below: Erotic Agency and Caribbean Freedom (Duke University Press, 2012); Consuming the Caribbean: From Arawaks to Zombies (Routledge, 2003); and Democracy After Slavery: Black Publics and Peasant Radicalism in Haiti and Jamaica (Macmillan Caribbean, 2000). She was awarded the Doctor Honoris Causa from Roskilde University, Denmark (2015). She has received research funding from the National Science Foundation, the British Academy, the Arts and Humanities Research Council, the Macarthur Foundation, the Mobile Lives Forum, and the Graham Foundation in Advanced Studies in the Fine Arts. She has held Visiting Fellowships at the University of Miami (2019); the Annenberg School of Communication at University of Pennsylvania (2016); the Penn Humanities Forum (2010); the Center for Mobility and Urban Studies at Aalborg University, Denmark (2009); Media@McGill, Canada (2009); the Davis Center for Historical Studies at Princeton University (2008); and Swarthmore College (2006-2009).

Zhi Liu

Director of China program, Lincoln Institute of Land Policy, Peking University, China

Zhi Liu, a specialist in infrastructure and its financing, is director of the China program at the Lincoln Institute of Land Policy and of the Peking University–Lincoln Institute Center for Urban Development and Land Policy in Beijing, China. Previously as an infrastructure specialist at the World Bank, he had operational experience mainly in East Asia and South Asia, where he managed investment lending projects and analytical and advisory activities in the infrastructure and urban sectors. Before joining the World Bank, he was a research associate with the Harvard Institute for International Development. He also taught city and regional planning as a faculty member at Nanjing University. He has authored and co-authored a number of academic papers and World Bank reports on topics including metropolitan infrastructure financing, low-carbon city development, sustainable urban transport, motorization, and poverty and transport. He holds a B.S. from Zhongshan University, an M.S. from Nanjing University, and a Ph.D. from Harvard University. In 2010, he served as vice chair of the Global Agenda Council for the Future of Transportation, World Economic Forum. In 2015–16, he served as a member of the Expert Committee for China's 13th Five-Year National Social and Economic Development Plan.

OVERVIEW OF
THE CONFERENCE

OVERVIEW

The International Conference on Canadian, Chinese, and African Sustainable Urbanization (ICCCASU) is a global forum for exchanging and cooperating on matters pertaining to sustainable urban development. ICCCASU focuses on Canada, China, and Africa, occurs every two years, and rotates between the three regions. Through a series of conferences and training workshops, it brings together politicians, policymakers, scholars, and practitioners to share the latest research and best practices on sustainable urbanisation. It was founded in 2014 as a collaboration between the United Nations Human Settlements Programme (UN-Habitat) and the University of Ottawa. Since then, it has grown to include a consortium of Canadian universities (Carleton University, Université de Montréal, and McGill University) as well as a number of prestigious Chinese and African universities. ICCCASU has hosted three conferences to date. ICCCASU I, which drew 200 attendees, was held in Ottawa, Canada in 2015, whereas ICCCASU II, a 500-person event co-sponsored by the government of Cameroon, was held in Yaoundé, Cameroon in 2017. ICCCASU III was held in Chengdu, China in 2019 and brought together people from a variety of backgrounds and fields of expertise, including politicians, policymakers, academics, and practitioners, to mark the beginning of the conference. It was attended by 157 representatives from 23 different nations, which is a great number.

Recently, ICCCASU and Springer signed an agreement to produce a new book series entitled City Development Issues and Best Practices. In other words, ICCCASU is more than the use of conferences and workshops; it serves as a forum for professionals and decision-makers interested in sustainable urban development or development skill to engage in an ongoing discourse through its programs and publications. The ICCCASU IV conference was successfully held in Montreal, Canada, with the theme "Density, Diversity, and Mobility: The City in an Age of Cascading Risks." During the four-day conference, over 200 scholars, practitioners, and policymakers from 39 countries and regions across many disciplines discussed, debated, and rethought post-pandemic cities in Canada, China, Africa, and other countries.

During the four-day conference, the following subjects and theme areas were discussed by delegates:

1. Towards More Resilient Cities Worldwide;
2. Preparedness and management of COVID 19 and climate change in cities;
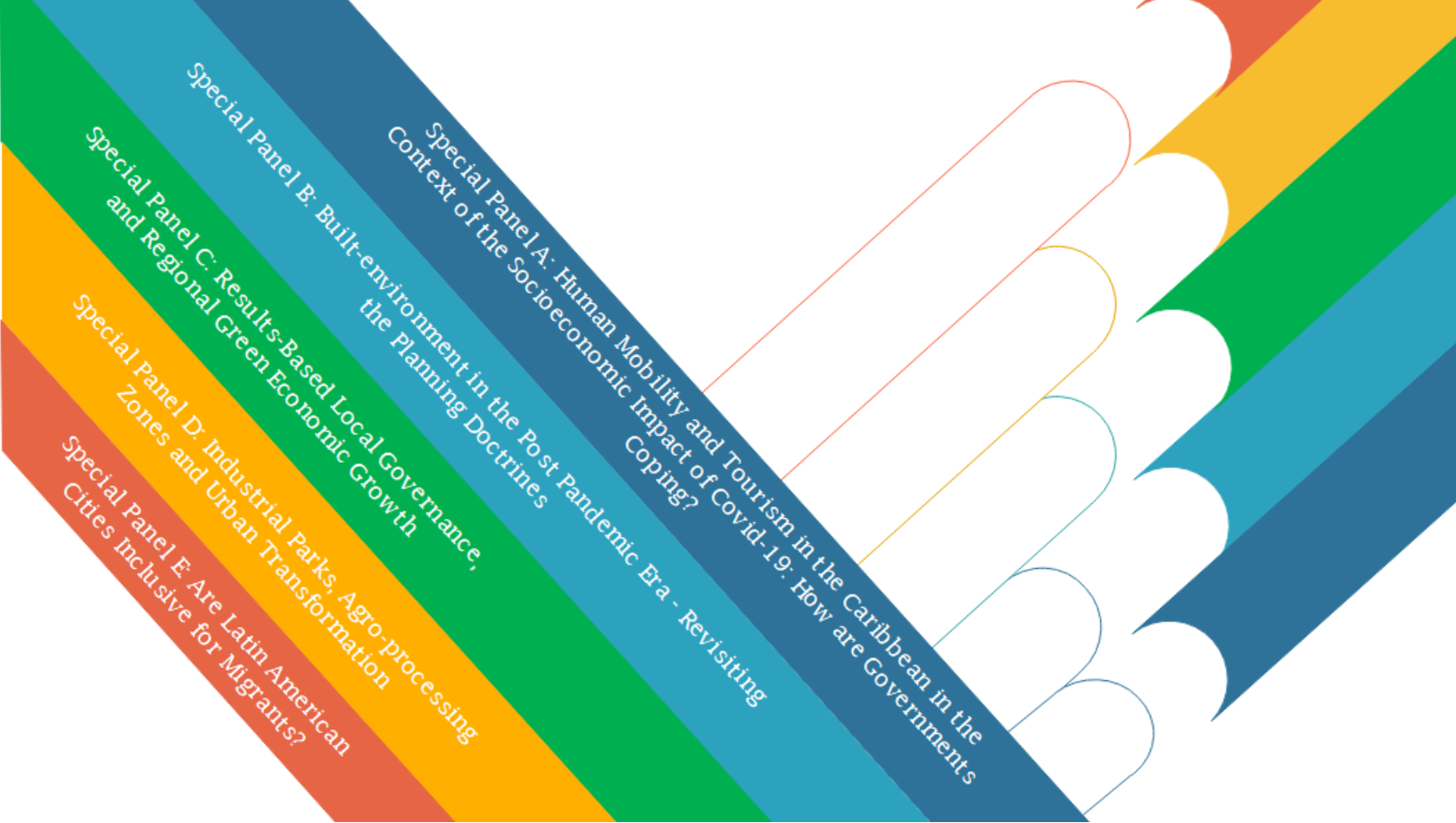3. Forecasting and Forward-Looking Urban Risks Management: Managing Increasing Density, Diversity, and Mobility;
4. Privacy, Surveillance, Security, Governance and Collective Wellbeing
5. Health Crises in Cities: Learning from the Past and Planning for the Future;
6. Housing: Access, Affordability and Informality.

Opening remarks were delivered by Ms. Maimunah Mohd Sharif, Executive Director at UN-Habitat , Mr. Hon. Yuen Pau Woo, Canadian Senator, Mr. Hon. Claver Gatete, Minister of infrastructure of Rwanda, Mrs. Suzanne Fortier, Principal and Vice-Chancellor of McGill University in Canada, Mr. Jean Pierre Elong Mbassi, Secretary-General at UCLG Africa in Morocco, Dr. Peter Guo-hua Fu, President, KFS Architects, China/Canada, Dr. Matti Siemiatycki, Director, School of Cities, University of Toronto, Canada, and Dr. Huhua Cao, Professor at University of Ottawa and Co-President of ICCCASU.

01 Thematic area 1	Towards More Resilient Cities Worldwide
02 Thematic area 2	Preparedness and management of COVID 19 and climate change in cities
03 Thematic area 3	Forecasting and Forward-Looking Urban Risks Management: Managing Increasing Density, Diversity, and Mobility
04 Thematic area 4	Privacy, Surveillance, Security, Governance and Collective Wellbeing
05 Thematic area 5	Health Crises in Cities: Learning from the Past and Planning for the Future
06 Thematic area 6	Housing: Access, Affordability and Informality

Special Panel A: Human Mobility and Tourism in the Caribbean in the Context of the Socioeconomic Impact of Covid-19. How are Governments Coping?

Special Panel B: Built-environment in the Post Pandemic Era - Revisiting the Planning Doctrines

Special Panel C: Results-Based Local Governance, and Regional Green Economic Growth

Special Panel D: Industrial Parks, Agro-processing Zones and Urban Transformation

Special Panel E: Are Latin American Cities Inclusive for Migrants?

This conference featured a variety of activities, including six keynote speeches, six special panels, a special event, a round tables, and, in addition to six thematic discussion panels and six speeches delivered at the opening ceremony, and an awards ceremony.

Three specialists in the disciplines of climate crises, policymaking, and city resilience provided the first keynote section. David Miller, Director of International Diplomacy at C40 Cities Climate Leadership Group and Former Mayor of Toronto, delivered a speech entitled "How the World's Largest Cities Are Resolving the Climate Crisis." Leilani Farha, Global Director of the Shift and Former UN Special Rapporteur on the Right to Housing, delivered a talk titled "What a Wonderful World It Could Be!" Director of the UN-Habitat Regional Office for Africa in Kenya, Oumar Sylla, presented his study on "Building resilient cities in the era of COVID 19 in Africa" at the conclusion of the session.

The second keynote section address was presented by three specialists in the domains of affordable housing, international policymaking, and city infrastructure. Mario Polèse, Professor emeritus at Institut national de la recherche scientifique (INRS) in Canada, made address on "What to do and what not to do to provide affordable housing. Lessons learned in Montreal and elsewhere" Mimi Sheller, inaugural dean of the Global School at Worcester Polytechnic Institute (WPI) in the United States, presented a speech entitled "Building a Thriving Caribbean Future: Resetting Policy with International Partners." Zhi Liu, Director of the China program at the Lincoln Institute of Land Policy at Peking University in China, delivered his research on "High-Quality Infrastructure Development in China" at the conclusion of the conference.

Opening Ceremony

The Executive Director of the UN-Habitat, Ms. Maimunah Mohd Sharif delivered the opening address at the fourth session of the international conference on sustainable urbanisation in Canada, China, and Africa, focusing on density, diversity, and mobility in an era of cascading risks. UN-Habitat conceptualized, planned, and organized the 2015 conference in Ottawa, the 2017 conference in Yaounde, and the 2019 conference in Chengdu. Since its inception, this international think-tank has provided technical assistance for establishing Africa's future regional centre of excellence for sustainable urban development. In this fourth conference she revisits the difficulties and solutions of living in societies with multiple and overlapping threats, and addresses the fifth anniversary of the new urban agenda and its midterm assessment. She believes that decision-makers and academics will inspire creative approaches to risk management and the development of resilient cities and communities.

The Honorable Mr. Yuen Pau Woo commends the event's organizers for assembling such an excellent slate of speakers and for overcoming obstacles to make this event happen. He wishes we could meet in person for this conference and that our friends could spend the summer in Montréal. He stressed that this conference rejects the assumption that developed cities cannot learn from developing nations. By knowing these situations, we may explore solutions to common problems. He expressed his concerns on homelessness, affordable housing availability, deteriorating infrastructure, and unequal access to public services. Covid-19 has worsened some of these issues and highlighted the varied geographical impact of a highly contagious virus. Large Canadian communities face a formidable obstacle in their limited capacity to make future decisions and raise funds for municipal services and infrastructure. Municipalities fund, among other city necessities, transit police and fire departments. In terms of greenhouse gas emissions and environmental deterioration, the ecological footprint of cities far exceeds their geographic imprint. It is hardly unexpected that the city's productive capability exceeds its physical footprint. Climate change is becoming an existential threat to mankind, and the ability of humanity to stop global warming is crucial to the survival of some cities. The conference sessions should be as loud, chaotic, full of surprises, and stimulating as the cities being discussed. This is how cities function and how you may help improve them.

The Honorable Mr. Gatete praised the Canadian government and people for hosting the fourth ICCCASU session physically and online. He also thanked ICCCASU, UN-Habitat, and the University of Ottawa for organizing this symposium despite the Covid-19 pandemic. The meeting will aid in the implementation of sustainable development goals and a new urban agenda by providing

a comprehensive grasp of sustainable urbanization. He anticipated the meeting to first discuss the assessment of the influence of Covid-19 on the global urban agenda, beginning with economic, social, environmental, and governance issues to assist countries in rethinking their resilient urbanization strategy; two, share best practices and approaches in Canada, China, and Africa, pertaining to city management in terms of density, diversity, and mobility, and exchange ideas and solutions for addressing existing problems; three, specific, applicable suggestions for African cities undertaking urban planning; four, create new alliances for the effective implementation of the outcomes and suggestions of these conferences, including a greater understanding of how Canada, China, and African nations may contribute to sustainable and resilient urbanization. These efforts will provide Canada, China, and African nations with the chance to establish appropriate policies, solutions, and interventions that can orient them toward sustainable urbanization in an integrated, inclusive manner.

The conference is particularly timely in light of the Covid-19 pandemic. Ms. Fortier stressed that the pandemic has had a dramatic impact on our increasingly urbanizing society and has altered how we live, work, and interact. Over the past year and a half, we have learnt about resilience, sustainability, and flexibility, as well as new ways to unite people around a single objective. We have also seen that our increasingly urbanized and interconnected world necessitates systemic approaches to

resilience. There is no universal answer, and these problems cannot be addressed separately. As the complexity and importance of our cities increase, collaboration between all stakeholders is important. She hopes that this meeting will provide everyone with the opportunity to form new relationships or strengthen current ones to face the risks to the resilience of our towns, nations, and the world. She greets and praises in particular all the students attending the conference who have the exciting but difficult task of constructing a better world. Over the past year and a half, we have learnt about resilience, sustainability, and flexibility, as well as new ways to unite people around a single objective. We have also seen that our increasingly urbanized and interconnected world necessitates systemic approaches to resilience. There is no universal answer, and these problems cannot be addressed separately. As the complexity and importance of our cities increase, collaboration between all stakeholders is important.

Dr. Peter Guo-hua Fu commends the organizer on the effective execution of ICCCASU 2021, particularly amid such a trying time. As ICCCASU did in the past, he emphasizes his delight that we are all able to focus on our common aim and generate positive change from Africa to Canada to China. In addition, as a professor at McGill University, he feels delighted that ICCCASU is being held at McGill University in Montréal, Canada. As we continue into the 21st century and face challenges such as resource scarcity and climate change, sustainability becomes even more important for

the developer. He looks forward to the sharing of knowledge and experience at this important ICCCASU conference and believes it will bring us all closer to constructing a better world.

In an era of cascading risk, Dr. Matti Siemiatycki underlines that attention to cities is timely and urgent. There are at least three crises that overlap. COVID-19 is a worldwide health emergency. It has caused millions of deaths and altered our world. Second, the planet is threatened by a climate emergency that could result in greater death, damage, and disruption than COVID-19. Third, racism and inequality are systemic crises. Garbage dumps, motorways, and polluted power plants are concentrated in low-income and minority neighbourhoods. Water contamination and digital disparities afflict indigenous communities, exacerbating job and service disparities. Inequitable policing results in the overpolicing of black, indigenous, and communities of colour, as well as a lack of safety and security. This is not a novel phenomenon; each crisis is accompanied by cascading and interrelated risk, with the most vulnerable suffering the brunt. It leaves us in a position where our scholarship and practice are more important than ever; a time for fearless scholarship that documents the origins and effects of the intersecting public health climate and crisis of racism and inequality we face; and a time for fearless city building that prioritizes diversity, a

clean environment, and freedom for all. No more half-measures or soothing language. We require difficult truths, awkward conversations, and courageous action. This event, which includes 200 people from 39 nations, is crucial for solving our grave concerns.

Dr. Huhua Cao stresses that the COVID-19 epidemic has provided us with a significant chance to re-examine and rethink our cities; only those competent to manage different threats can deliver the protection and well-being we seek and desire. Climate change and greater social and cultural diversity have intensified social and economic insecurity, rendering us all more susceptible. What can China, with its massive migrant flows and the local diversities of Africa with hundreds of people and language groups, and Canada, which is increasingly dependent on immigration and experiencing similar pressures related to urban density and quality of life, learn from sharing their experiences? ICCCASU-4 will focus on the opportunities and difficulties related to sustainable urbanization in the post-pandemic period, as outlined in the UN-Habitat 2020 World Cities report. He states that the purpose of the conference is to create a forum for the development of innovative and creative solutions for a more equitable, safe, and sustainable recovery from the epidemic, and to enhance the quality of life for all.
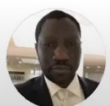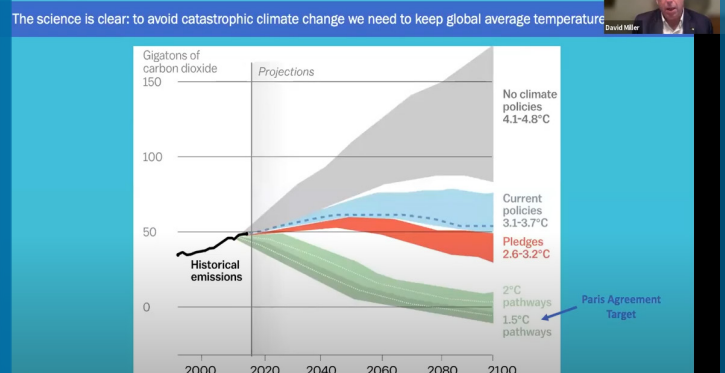
TOWARDS A MORE **JUST, HEALTHY** AND **GREEN** FUT
THROUGH

| **01** Rethinking the **FORM** and **FUNCTION** of the **CITY.** | **02** Addressing Systemic **POVERTY & INEQUALITY** in Cities. |
| **03** Rebuilding a 'New Normal' **URBAN ECONOMY.** | **04** Clarifying Urban **LEGISLATION & GOVERNANCE.** |

First Keynote Session

After the opening ceremony, ICCCASU's keynote session took place from 10:00 am to 11:30 pm, co-hosted by Dr. Benjamin Gianni, Professor of Carleton University, Dr. Allan Cain, CEO of Development Workshop, and Dr. Rong Yang, from UN-Habitat. Keynote speeches were delivered by three experts Mr. David Miller, Ms. Leilani Farha, Mr. Oumar Sylla.

While Nations Pledge, Cities Deliver, by David Miller:

In his presentation, Mr. Miller intended to illustrate how mayors and city governments are addressing climate change with an emphasis on equity. Other examples include work performed in Cape Town during food covet from an equitable perspective. Currently, construction is ongoing in five cities in South Africa. Due to the prevalence of coal in South Africa, the transition necessary to switch from coal to sustainable energy is extraordinarily difficult. The fact that these are well-paying jobs in the industry is a beginning point for the discussion, so how does everything operate? Using Toronto as an example, he explained why it works. In conclusion adopted in 2007, Changes in the Air was the name of Toronto's first climate strategy. It comprised a variety of initiatives, including the greatest transit expansion in North America and several programs to address building energy efficiency in the commercial, public, and not-for-profit sectors, such as museums. In response to this strategy, the provincial government closed a coal-fired power station.

What a Wonderful World it Could Be! by Leilani Farha:

Incongruously, the housing quality reality has emerged since the global financial crisis, aided by neoliberalism. At that time, private equity firms and pension funds dominated the financial landscape. Other investors saw that new financial products may be created. Blackstone, one of the largest private equity firms, earns a tremendous amount of money using real estate as collateral. The largest residential real estate investor acquired approximately 45,000 properties in a single deal. They were purchasing distressed assets, such as properties whose owners had defaulted on their mortgage payments due to predatory lending practices. Prior to focusing on Europe, Blackstone had become the largest single U.S. landlord. Commenced purchasing social housing, particularly in Spain. They developed the predominant residential real estate paradigm used globally. This is the financialization of real estate; this is the accumulation of assets. They acquire any asset from which they believe they can extract greater profits or leverage further capital; housing is reduced to a mere financial tool. This breaches two fundamental tenets of the right to affordable housing immediately. She was suggesting that when we observe an assault on human dignity or life, we should respond with a human rights response. Lastly, she said that the human rights approach is

Special Guests
Invités d'honneur

Moderator/Modérateur
Benjamin Gianni

Carleton University,
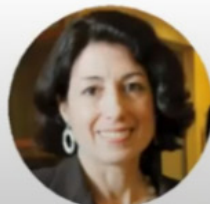Canada

Moderator/Modérateur:
Olivier Dehoorne

Université des Antilles,
France

Mario Polèse

Professor emeritus,
Institut national de
la recherche
scientifique (INRS),
Canada

Mimi Sheller

Director of Center for
Motilities
Research and Policy,
Drexel University,
USA

Zhi Liu

Director of China
Program, Lincoln
Institute of Land Policy,
Peking University,
China

valuable because human rights address the structural causes of rights deprivation.

African Urbanization as Conducive Factor for Spread of COVID-19, by Oumar Sylla:
He indicated that a lot of variables will contribute to an increase in informality due to climate change. He urged us to consider what occurred in Madagascar with the people fleeing this drought area to come to alternatives in search of food and shelter. This is very worrisome in the region, and we also have a number of people who have been displaced by violence, so he believes we should also consider these factors in relation to climate change. He stated that reflection is taking place, but a clear separation between territorial and urban growth is needed. This is an environmental displacement problem. From an African domestic strife developed the subject of movement. He claimed that density was initially believed to contribute to or even assist the spread of the Kobe sickness. He underlined that the link between density and volume is quite controversial. Also, there is a group that believes density promotes the most efficient use of resources, including infrastructure, which is accurate. However, he argues that it is more crucial to analyze congestion and how this factor has led to the spread of chronic diseases in informal settlements.

Second Keynote Session
ICCCASU's second keynote session took place on Friday July 30, 2021 from 08:00 am to 09:30 pm, co-hosted by Dr. Benjamin Gianni, Professor of Carleton University and Dr Olivier Dehoorne, Professor of Université des Antilles, France

Affordable Housing: What to do and what not to do. Lessons from Montreal and other places, by Mario Polese
The topic of affordable housing is quite difficult. In a nutshell, the issue of affordable housing has three dimensions: the affordable side, the supply side, and the demand side. First and foremost, households must have sufficient income to be able to afford housing; on the supply side, you need responsive, efficient housing markets that, ideally, produce housing at the lowest possible cost; and third, if the first two are insufficient, many developing nations will require publicly financed housing, also known as social housing. He concentrated on the functioning of property markets in a wealthy city in the globe, Montreal, which has been pretty successful in keeping house costs below the national average. Varied-density housing, also known as the "missing middle," has a long history in Montreal, as do zoning restrictions that favour mixed densities. It is crucial that pub-

lic housing receives funding that is as nonpartisan as possible. Cooperatives and other building groups have access to public finance under the same funding regulations. One should not mistake the responsibilities of the state with the capabilities of the market. The objective of markets is to maintain the most affordable housing and housing prices feasible. However, even the most efficient marketplaces will inevitably leave some people behind. We should not conflate the two by asking the market to perform government functions.

Building a Thriving Caribbean Future: Resetting policy with international partners, by Mimi Sheller

a large number of infrastructure developments and extractive industries are entering the region due to Chinese investment. US corporations such as Exon are developing massive deep sea oil fields off of Guyana and Suriname, opening a new fossil fuel frontier at a time when the world is pressing to reduce carbon emissions. While there is a lot of emphasis on the need for the US administration to rebuild key US alliances with the EU, Canada, and other nations that were severely frayed under the Trump administration, we have largely neglected our role in the Caribbean region. The Caribbean deserves better; it deserves the United States, Canada, China, and Africa, equality of gender and social justice housing safety fair migration policies preparedness for disasters and risk reduction. In her recent address to the United Nations, the prime minister of Barbados, Mia Motley, outlined a vision for digital investment, knowledge building, and creative cultural economies, as well as the kind of regenerative ecological economies.

We must also reject the Caribbean as a logistics hub where nature becomes global infrastructure, and she raised concerns that some Chinese belt and road initiatives in the region are transforming nature into infrastructure to serve the mobility of capital investment but not necessarily to help the communities and people in the Caribbean.

High-Quality Infrastructure Development in China, by Zhi Liu

China has undergone decades of strong of urbanization, is driven by rapid economic growth. According to China's most recent census data, China's urbanization rate in the early 1980s was roughly 20 percent, whereas it is today 63 percent. To reach a level of urbanization equivalent to OECD nations, but not the United States, China still needs to increase urbanization by an additional 50 percent. China has just announced that the country's carbon emissions will peak by 2030 and achieve zero by 2026. China urbanization will continue, as will the concentration of population in certain metropolitan zones and the megacity, which will be especially prevalent in the eastern coastal areas. Clearly, these places face COVID and other uncertainty, and China's populations are aging rapidly. The infrastructure for climate resilience includes a green infrastructure consisting of a greenway park, a rain garden, permeable pavement, and a storm water management pond, which we refer to collectively as a sponge city. In addition, there is a potential that the new infrastructure will be able to survive the effects of climate change. The new infrastructure consists of a 5G artificial intelligence internet and data centre, which combined are referred to as the infrastructure.
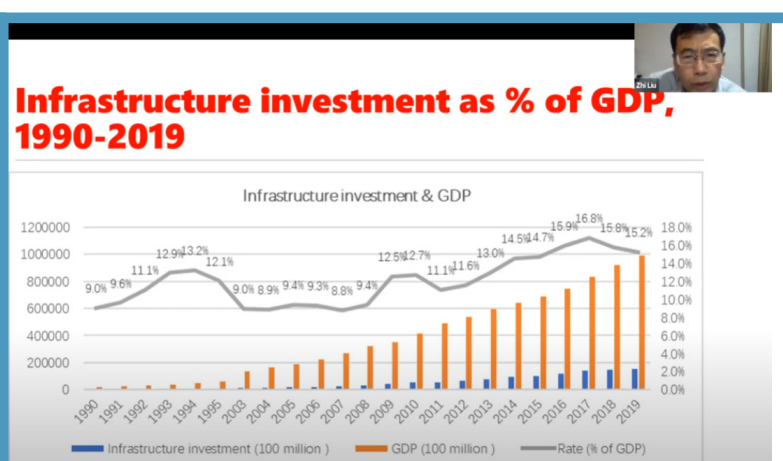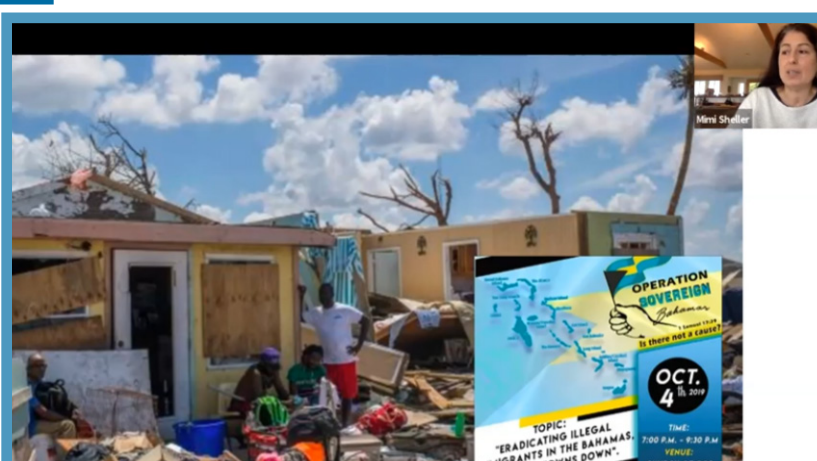
Summary of Panels

The following table summarizes ICCCASU IV's four-day events. This table consists of six unique thematic areas, five special panels, one special event, two dialogue sessions, and one award ceremony.

Thematic area 1: Towards More Resilient Cities Worldwide		
Coordinators: John Zacharias, Peking University, China and Inês Macamo Raimundo, Eduardo Mondlane University, Mozambique		
Names	Affiliation	Presentation
Panel A (T1Pa): Metropolisation and Urban Renewal Panel Chairs: Antoine Beaulieu, Université Laval, Canada and Yombi Ouedraogo, UN-Habitat, Kenya		
Dongmo, Christophe	Sonna Etienne Foundation, Cameroon	Urban Renewal and Intelligent Urbanism as Effective Town Planning Tools in Sub-Saharan Africa with Specific Reference to Uganda, Rwanda, and South Africa
Wint, Kimberley	Carleton University, Canada	Preserving the Heartbeat of Trench Town: A Vision for Urban Renewal
Timera, Aly Sada	Université Cheikh Anta Diop de Dakar, Sénégal	Metropolisation of the Dakar region: between urban issues and challenges of sustainable urbanization (In French)
Panel B (T1Pb): Displacement and Rural-Urban Development Panel Chairs: Liping Yue, Northwest University, China and George Onatu, University of Johannesburg, South Africa		
Loose, Stephanie Ouedraogo, Yombi Abdullahi, Sharmaarke	UN-Habitat Burkina Faso	Rapid urbanization due to displacement – the case of Burkina

Xue, Bing Rotter, Vera Susanne Larsen, Oliver Yang, Zheng Wang, Shuang	Technische Universität Berlin, Germany	Optimizing the Urban-Rural Material Cycles in China: Issues & Recommendations
Yang, Chen Qian, Zhu	University of Waterloo Waterloo, Canada	China's integrated rural-urban development: a development mode outside the planetary urbanization paradigm?
Yue, Liping Zhang, Meilin	Northwest University Xian, China	The Granary and the Ritual: A Study of the Settlement Intentions of New Urban Migrants under the background of Regional Competition
Panel C (T1Pc): Urban Resilience: from Theory to Practice Panel Chairs: Bing Xue, Technische Universität Berlin, Germany and Aly Sada Timera, Université Cheikh Anta Diop de Dakar, Sénégal		
Zhan, Zixin	Peking University, China	New conception system of six-dimensional framework for resilient city planning
Li, Yangfan	College of Environment & Ecology, China	Integrated ocean management and coastal urban transformation: towards resilience and SDGs
Chardon, Anne-Catherine	Higher School of Real Estate Professions-ESPI, France	From vulnerability to urban resilience, a transversal approach to a complex habitat exposed to risks (In French)
Panel D (T1Pd): Resilience and Sustainable Infrastructure Panel Chairs: John Zacharias, Peking University, China and Stephanie Loose, UN-Habitat, Burkina Faso		
Arrach, Riad El Jirari, Amal Benmakrane, Oussama	Institut National d'Aménagement et d'Urbanisme, Maroc	The transportation system as a process of territorial development or risk of social segregation (In French)

Tamo Tatietse, Thomas	Institut Universitaire de Technologie FV, Cameroun	A sustainable-based approach of urban infrastructure (In French)
Li, Amy Huangqing	Associated research Centers for Urban Underground Space, Canada	Re-promoting Sustainable Underground Urbanization for Developed and Developing Countries in Our Modern History

Panel E (T1Pe): Urban Resilience and Coastal Development

Panel Chairs: Amy Huangqing Li, Associated research Centers for Urban Underground Space, Canada and Andrea Brown, Wilfrid Laurier University, Canada

Zhang, Xueting Xiang, Zhiyuan Li, Yangfan	Xiamen University, China	Evaluating the dynamic effects of shoreline hardening on coastal community resilience
Xiang, Zhiyuan Li, Yangfan	Xiamen University, China	Equitable conditions reveal risks, opportunities, transitions for a resilient global coastal development
Liu, Lei Xu, Yue Yang, Zhaotian	Sichuan University, China	The interaction between environmental NGO development and environmental condition: Empirical evidence from China

Panel F (T1Pf): Education for Resilient Cities

Panel Chairs: Vincent Kitio, UN-Habitat, Kenya and Laïla Amraoui, Université IBN Zohr, Morocco

Ogunbayo, Babatunde Fatai Aigbavboa, Ohis Clinton	University of Johannesburg, South Africa	Maintenance Policy Elements Validation for the Maintenance Management of Higher Educational Buildings in the Nigerian Education Sector
Du, Ting	Beijing Foreign Studies University, China	Internationalization and Programmatic Diversity of Higher Education Institutions - A Case Study of University of Toronto with Organizational Theory

Sullivan, Jade	University of Ottawa, Canada	Social Barriers the Filipino Community Faces in Côte-des-Neiges, Montreal, Canada

Thematic area 2: Preparedness and management of COVID 19 and climate change in cities

Coordinators: Yangfan Li, Xiamen University, China and Tonton Mundele, Global Affairs Canada

Panel A (T2Pa): Covid-19 Breakout and Cities Preparedness

Panel Chairs: Yangfan Li, Xiamen University, China and Lolita Shaila Safaee Chalkasra, University of Ottawa, Canada

Raga, Douglas Mure-Ravaud, Amandine Tsaplina, Olga	UN-Habitat, Kenya	Youth as a Core of Community-led COVID-19 Response in Informal Settings: Lessons Learned and Way Forward (Case study on the Youth of Mathare, Nairobi, Kenya)
Sebola-Samanyanga, Kgomotso Jackson Phillip	University of Johannesburg, South Africa	The South African Government and its Preparedness in Response to the COVID-19 Epidemic: A Land Perspective
Ngombe, Miriam Domingos, João Cain, Allan	Development Workshop, Angola	COVID-19 and Angola's slums: A case for participatory slum upgrading in pandemic times

Panel B (T2Pb): Covid-19 and Climate Change

Panel Chairs: Tonton Mundele, Global Affairs Canada and Douglas Mure-Ravaud Raga, UN-Habitat

Omolabi, Ambilola	Yaba College of Technology, Nigeria	Appraising Covid-19 pandemic and the impact of climate change on urban residents: Implications for sustainable development of cities in Lagos State, Nigeria

Razavi, Kamyar	Simon Fraser University, Canada	Why solutions matter when communicating climate change
Amraoui, Laïla Laachir, Asia	Université IBN Zohr, Morocco	Urbanization and Climate: what roles the trees play in the modulation of the urban climate (In French)
Safaee Chalkasra, Lolita Shaila	University of Ottawa Ottawa, Canada	Gender and Climate Change Adaptation: Perspectives from Philippine cities
Panel C (T2Pc): Covid-19 Breakout and Risk Assessment Panel Chairs: Abimbola Omolabi, Yaba College of Technology, Nigeria and Dewei Yang, Southwest University, China		
Xiao, Tianyi Mu, Tong He, Jie	Tianjin University, China	Risk Assessment of Spatial Configuration on COVID-19 Transmission through Social Distance Model
Tandon, Antara Yu, Helen Mohn, Charlotte Edilbi, Ban	UN-Habitat, India	Spatial Patterns and Dynamics in the Face of the Pandemic: Towards Better Design, Density and Functionality of Human Settlements
Wu, Shaoyi Wang, Hong	Shanghai University, China	Digital City in Response to COVID-19 -A Comparative Study on Health Code between Wuhan and Daegu

Thematic area 3: Forecasting and Forward-Looking Urban Risks Management: Managing Increasing Density, Diversity, and Mobility

Coordinators: David Covo, McGill University, Canada and Dingping Guo, Fudan University, China

Panel A (T3Pa): Building Inclusive and Sustainable Cities		
Panel Chairs: Philippe Régnier, Université d'Ottawa, Canada and Dingping Guo, Fudan University, China		
Loose, Stephanie Ouedraogo, Yombi Abdullahi, Sharmaarke	UN-Habitat, Burkina-Faso	Integrated approaches for tackling rapid urban growth in Burkina Faso's cities
Nunes, Alice Mahoque, Mauro	University Eduardo Mondlane, Mozambique	Integrated context analysis of vulnerability in Pemba city
Bański, Jerzy	Polish Academy of Science, Poland	Small towns ageing - in search of links between population processes
Panel B (T3Pb): Urban Complexity and Urban Development		
Panel Chairs: David Covo, McGill University, Canada and Jerzy Bański, Polish Academy of Science, Poland		
Sagar, Abdinassir Bananayo, Philip	UN-Habitat, Kenya	Blockchain for Urban Development – Guidance for City Leaders
Zhao, Bingyu Li, Jingzhong Xue, Bing	University of Chinese Academy of Sciences, China	Urban Complexity Studies from the Perspective of Geography
Thiam, Adiaratou	Ministère des Affaires foncières de l'Urbanisme et de l'Habitat, Mali	Presentation of the project of Urban Renovation in the city of Bamako (In French)
Benhmade, Abdelhamid Régnier, Philippe	Université d'Ottawa, Canada	Canada and Emerging Markets: Analysis of the Role of Three major gateways to the African Continent Cities - (Johannesburg, Cairo, Casablanca) (In French)

Panel C (T3Pc): Environment Comfort and Urban Space Panel Chairs: Wang Hong, Shanghai University, China and Adiaratou Thiam, Ministère des Affaires foncières de l'Urbanisme et de l'Habitat, Mali		
Mu, Tong Jin, Zuo Xiao, Tianyi	Tianjin University, China	Assessment of Pedestrian Environment Comfort for Children Active School Travel
Lachir, Asia	National School of Architecture, Morocco	The impact of urban forms on thermal comfort in outdoor spaces: Case of Marrakech (In French)
Zhou, Hanlin Wang, Jue Wilson, Kathleen	University of Toronto, Canada	How Perceptions of Parks affect Times Spent in Parks? A study by Street View Imagery
Panel D (T3Pd): Cities facing Diverse Challenges Panel Chairs: Fachun Du, Yunnan Agricultural University, China and Kamyar Razavi, Simon Fraser University, Canada		
Takang, Emmanuel	University of Yaounde I, Cameroon	Solid Waste Management: Perspectives for Cities in Africa
Yang, Dewei	Southwest University, China	Conventional VS. Emerging Energy: Future City Transformation and Its Socio-environmental Benefits
Zhar, Mohamed	Université Hassan II de Casablanca Maroc, Maroc	Mobility of Ecological Refugees: The Case of the Nomads of Middle Moulouya (In French)
Zhou, Zixiang	Yunnan Agricultural University, China	Research on Ecological Relocation in Nujiang

Thematic area 4: Privacy, Surveillance, Security, Governance and Collective Wellbeing

Coordinators: Claude Ngomsi, UN-Habitat and Yuenan Li, University of Ottawa, Canada

Panel A (T4Pa): Politics and Urban development

Panel Chairs: Claude Ngomsi, UN-Habitat, Kenya and Yuenan Li, University of Ottawa, Canada

Brown, Andrea	Wilfrid Laurier University, Canada	Urban challenges to political authority in Uganda: Lessons from the 2021 elections
Liu, Xiaoxi Li, Qianning	Tsinghua University, China Nanjing University, China	Rescaling of Chinese Urban Space: from the Perspective of Spatial Politics
Mohamed, Atik	Université Ibn Zohr, Morocco	Rehousing policy and the rehabilitation of slums in Morocco, the case of Greater Agadir: Reflection on the methods, strategies and impacts (In French)

Panel B (T4Pb): Theoretical and empirical analysis of Urban development

Panel Chairs: Abdelhamid Benhmade, University of Ottawa, Canada and Asia Lachir, National School of Architecture, Morocco

Lubunga, Valio Ngomsi, Claude	ISP Bunia, RD. Congo UN-Habitat, Kenya	Conflict prevention through land use participatory planning in the DRC: Materialization process (computerization), lessons and implications of communities in crisis (In French)
Li, Yuenan Cao, Huhua	University of Ottawa, Canada	Human Mobility and Urban Crime Displacement in COVID19-Normal: A Case Study in the City of Ottawa

Kubwarugira, Gamaliel Mayoussi, Mohammed Khalki, Yahia El	Université Sultan Moulay Slimane, Maroc	Southern Hemisphere cities flood preparedness challenges: Geospatial analysis Contributions (In French)
Tchekemian, Anthony Bouyssou, Gerbert-Sylvestre	Université de Polynésie Française Faa'a, Tahiti	Historical perspectives of crises: towards a perpetual return to the local? Prospective study: a resilient example of urban agriculture through a collective garden of student residence in French Polynesia (In French)

Thematic area 5: Health Crises in Cities: Learning from the Past and Planning for the Future

Coordinators: Ian Cooper, Employment and Social Development Canada, Canada and Haotian Guan, University of Ottawa, Canada

Panel A (T5Pa): Urban Health in the Era of Covid-19

Panel Chairs: Ian Cooper, Employment and Social Development Canada, Canada and Antara Tandon, UN-Habitat, India

Cudjoe, Raynous Abbew Wang, Hong	Shanghai University, China	CSR Response to Covid-19 in Africa: Toward Healthy Cities
Ratnasapapathy, Thenushaa	University of Ottawa Ottawa, Canada	Vaccine Distribution in a Pandemic: Socio-economic Inequities in Neighbourhood-Level Vaccine Delivery
Biririza, Emmanuel Michael Kitio, Vincent	UN-Habitat, Kenya	Coping with the COVID-19 pandemic through enhancing sustainable energy access for the urban poor

Panel B (T5Pb): Urban Development in the Post-Covid Eras

Panel Chairs: Emmanuel Takang, University of Yaounde I, Cameroon

Togolo, Jean Pierre	University of Dschang, Cameroun	De-hierarchization of the spheres of influence of urban development in Africa during the Covid-19 Global Pandemic, the example of Yaoundé in Cameroon
Falahatdoost, Soniya Wang, Xingping	Southeast University, China	The Importance of Urban Resilience in the Covid-19 and Post-Covid Eras, Case Study: Tehran
Raimundo, Ines	Eduardo Mondlane University, Mozambiquo	African Cities under Cyclones, Floods, Landslide and Lethal Diseases: A threat to the Humankind caused by the Natural Disasters and COVID-19
Panel C (T5Pc): Health Issue and Urban Pattern Panel Chairs: Ines Raimundo, Eduardo Mondlane University, Mozambiquo and Abdinassir Sagar, UN-Habitat, Kenya		
Xiao, Xiao Xue, Bing	University of Chinese Academy of Sciences, China	Uncovering the Spatiotemporal Pattern and Geographical Equity of Pharmacies in Chinese Cities from 2008 to 2018
Colombo, Vitor Pessoa Utzinger, Juerg Koné, Brama Chenal, Jérôme	École Polytechnique Fédérale de Lausanne, Suisse Swiss Tropical and Public Health Institute, Switzerland Centre Suisse de Recherche Scientifique en Côte d'Ivoire Abidjan, Côte d'Ivoire École Polytechnique Fédérale de Lausanne, Suisse	Using open-access data to explore the relationship between urban morphology and diarrheal diseases in Côte d'Ivoire

Thematic area 6: Housing: Access, Affordability and Informality

Coordinator: Benjamin Gianni, Carleton University, Canada and Allan Cain, Development Workshop, Angola

Panel A (T6Pa): Affordability Housing and Informal Settlement Panel Chairs: Benjamin Gianni, Carleton University, Canada and Atik Mohamed, Université Ibn Zohr, Morocco		
Onatu, George Thwala, Didibhuku W. Aigbavboa, Clinton	University of Johannesburg, South Africa	Mixed-Income Housing Development Framework for South Africa using Delphi Method - A Case Study of Cornubia, Ethekwini and Cosmo City, Johannesburg
Mitchell, Kareem	Carleton University, Canada	Housing on the Horizon: Low-rise, High-density Housing Strategies for Luanda's Expanding Periphery
Liu, Ziyu	Southeast University, China	Yanghucang, a semi-informal settlement
Panel B (T6Pb): Urban Governance and Housing Cost Panel Chairs: Matti Siemiatycki, University of Toronto, Canada and Claude Ngomsi, UN-Habitat, Kenya		
Cain, Allan	Development Workshop, Angola	Housing for Whom? Building African cities on Chinese credit but who gets left behind
Mougoue, Benoît	Université de Yaoundé 1, Cameroun	Self-construction or affordable housing in Cameroon: financing, good practices and lessons learned (In French)
Zhang, Haonan Zhao, Hu	Shandong Jianzhu University, China	Analysis of spatial pattern of housing price in Shijiazhuang --based on geostatistical analysis
Panel C (T6Pc): Public Policy and Homelessness Panel Chairs: Allan Cain, Development Workshop, Angola and Benoît Mougoue, Université de Yaoundé 1, Cameroun		

Zhou, Nan	Employment and Social Development Canada, Canada	Homelessness Migration in Canada : 2008-2017
Cooper, Ian	Employment and Social Development Canada, Canada	Homelessness prevention and determinants of housing among first-time and recurrent emergency shelter users in Canada
Osunsanmi, Temidayo Aigbavboa, Clinton O. Thwala, Wellington Molusiwa, Ramabodu	University of Johannesburg, South Africa	Tiny Housing Development: A Vaccine for Unaffordable Housing Delivery in Africa

Special Panel (SPa): Human Mobility and Tourism in the Caribbean in the Context of the Socioeconomic Impact of Covid-19: How are Governments Coping?

Chairs: Mimi Sheller, Worcester Polytechnic Institute (WPI), USA and Olivier Dehoorne, Université des Antilles, French West Indies (FWI)

Session 1 (SPa01): Cruise Tourism: Interests and Limits of a Model

Moderator: Mimi Sheller, Worcester Polytechnic Institute, USA

Babinger, Frank Ines Martínez, Claudia	Complutense University of Madrid, Spain Universidad del Caribe Cancun, Mexico	The impact of cruises tour cancellation due to COVID-19 in an emerging markets. The case of Costa Maya, Mahahual, Mexico (In French)
Hernández González, Anallely Villaseñor Franco, Dra. Alma	Universidad Nacional Autónoma de México, México Universidad Autónoma de Guerrero, México	Perspectives for cruise tourism in the western Caribbean: the situation of the island of Cozumel in the face of Covid-19
Aragon Falomir, Jaime	Université des Antilles, FWI	Tourist mobility in the Caribbean coasts of Mexico: Why didn't the government close the border under COVID-19?

Dehoorne, Olivier Ilieş, Dorina Camelia Theng, Sopheap Xiao, Qiong	Université des Antilles, FWI University of Oradea, Romania Université des Antilles, FWI Southwest Minzu University, China	Cruise tourism facing health in the Caribbean. What lessons for what perspectives? (In French)
Session 2 (SPa02): Impacts of COVID-19 in Caribbean's Islands: Lessons and Perspective Moderator: Pascal Saffache, Université des Antilles, French West Indies		
Chapon, Laurine	Université Paris 3 Sorbonne-Nouvelle, France	Cruise tourism in Cuba: Context, challenges and perspectives in the light of a redefinition of tourism development models (In French)
Panades-Estruch, Laura	Truman Bodden Law School, Cayman Islands	The Cayman Islands' policy response to COVID-19: a critical assessment
Theng, Sopheap Dehoorne, Olivier Tatar, Corina	Université des Antilles, FWI Université d'Oradea, Roumanie	Saint-Barthélemy Island (Petites Antilles) facing the Covid health crisis (In French)
Dehoorne, Olivier Herman, Grigore Vasile Ilieş, Alexandru Wendt, Jan A.	Université des Antilles, FWI University of Oradea, Romania University of Oradea, Romania Gdańsk University, Poland	Tourism Challenges in the light of the COVID health crisis in the Caribbean islands: highlighting the limits of a development model (In French)
Session 3 (SPa03): Haiti's Dilemma, from One Crisis to Another Moderator: Jaime Aragon Falomir, Université des Antilles, French West Indies		
Dulience, Bazelais	Université des Antilles, FWI	Diaspora tourism in Haiti (In French)

Charles, Carlo Handy	McMaster University, Canada & Université des Antilles	Haitian Diasporas and in/mobility amid the Covid-19 Pandemic
Jérôme, Yolette Emmanuel, Evens Saffache, Pascal	Université Quisqueya, Haïti Université Quisqueya, Haïti Université des Antilles, FWI	From the earthquake of January 2010 to the achievement of the SDGs in 2030: the "sustainability-vulnerability" issue in the urban precariousness of Canaan, Haiti

Session 4 (SPa04): The Impact of COVID-19 on Tourism and Mobilities: Comparative Regional Approaches

Moderator: Olivier Dehoorne, Université des Antilles, French West Indies

Yameogo, Lassane	Université Joseph KI-ZER-BO, Burkina Faso	Tourist mobility in the Burkina-Ghana border areas faced with the dual security threat and Covid- 19
Diombera, Mamadou	Enseignant Chercheur Université Assane SECK de Ziguinchor Ziguinchor, Sénégal	Tourism challenges in Saly (Senegal) in the light of the COVID-19 health crisis: assessment and prospects (In French)
Sun, Yong Jing, Pei	Shandong Qilu University of Technology, China Shandong Qilu University of Technology, China	Research on the construction and Prospect of rural landscape and rural tourism under the background of Hainan free trade port construction

Special Panel B (SPb): Built-environment in the Post Pandemic Era - Revisiting the Planning Doctrines

Chair: Kh Md Nahiduzzaman, University of British Columbia (UBC) Okanagan, Canada

Session 1 (SPb01): Community-Based Initiative and Transformational Planning

Moderator: Tiziana Campisi, University of Enna KORE, Italy

Rahman, Md Ashiq Ur Astrid, Ley	Khulna University, Bangladesh University of Stuttgart, Germany	Gaining prominence while addressing uncertainties: role of community-based organisations during the covid-19 pandemic in Khulna city, Bangladesh
Nahiduzzaman, Kh Md	The University of British Columbia (UBC) Okanagan, Canada	Virtual demand and neoliberalism: transformational planning for the post-neoliberal and -COVID era
Session 2 (SPb02): Planning, Mobility, Built Environment and Real Estate Development **Moderator: Yeim Tanrvermi, Ankara University, Turkey**		
Tanrvermi, Harun Ahsani, Md Moynul Tanrvermi, Yeim	Ankara University, Turkey	The Probable Effects of COVID-19 on Urban Planning, Built Environment and Real Estate and Implications for the Post-COVID Period: An Assessment in Turkey Perspective
Tiziana Campisi, Kh Md Nahiduzzaman	University of Enna KORE, Italy The University of British Columbia (UBC) Okanagan, Canada	Beyond COVID-19: planning the mobility and cities following "city in 15 minutes" paradigm
Feroz Shahrul Ibney, Zahin, Md Ahnaf	Memorial University of Newfoundland, Canada Bangladesh University of Engineering and Technology, Bangladesh	Bullet train in Bangladesh: Necessity or ambitious?

Special Panel C (SPc): Results-Based Local Governance, and Regional Green Economic Growth

Chairs: Eric Champagne, University of Ottawa, Canada and Oliver Hillel, UN Secretariat of Biological Convention
Moderator: Jean-Marie Cishahayo, University of Ottawa, Canada

Champagne, Eric	University of Ottawa, Canada	Driving implementation in decentralization and local development reforms
Gonzalez, Andrew	McGill University, Canada	Nature-based solution for cities: ecological networks for biodiversity and ecosystem services robust to climate and land-use change, Case of the city of Montreal
Cishahayo, Jean-Marie	University of Ottawa, Canada & UN-Habitat /ICCCASU	Facing New Drivers for Green Economy Transformation: The Case of Shanghai and Yangtze Delta Cities
Kalisa, John	World Bank, Rwanda & University of Bonn, Germany	Rwandan Urban Governance: Case of Capital city of Kigali vs Secondary Cities

Special Panel D (SPd): Industrial Parks, Agro-processing Zones and Urban Transformation

Chairs: Xingping Wang, Southeast University, China and Sebastien Goethals, Citilinks, Belgian / Netherlands

Session 01 (SPd01): China-Africa industrialization, urbanization and planning experience and cooperative research

Moderator: Xingping Wang, Southeast University, China

Goethals, Sebastien	Citilinks, Belgian /Netherlands	Industrializing African Cities: Contrasted Perspectives and Challenges across African Megacities and Secondary Towns
Wang, Xingping Liu, Kai Yimer, Hayal Desta Wegayehu, Fisseha	Southeast University, China Addis Ababa University, Ethiopia	Integrated Development of Sino-Africa Cooperation Industrial Parks and Local Towns: Take the Eastern Industrial Zone in Ethiopia as an example

Wang, Duanyong	Shanghai International Studies University, China	Chinese Investment in African Industrial Parks: A Study Based on Fieldwork

Session 02 (SPd02): Development and planning of China's overseas industrial parks along the Belt and Road initiative

Moderator: Huang, Zhengli, Tongji University, China

Sinshaw, Abebe Delele, Aragaw	Injibara University, Ethiopia	Peri-Urban Land Expropriation and its consequences in Bahir Dar City, Ethiopia
Huang, Zhengli Goodfellow, Tom	Tongji University, China University of Sheffield Sheffield, UK	Manufacturing urbanism: improvising the urban-industrial nexus through Chinese economic zones in Africa
Zhao, Shengbo	Southeast University, China	Research on the development and planning of industrial parks in Kenya

Session 03 (SPd03): China and Africa industrial park development experience

Moderator: Qian, Zhu, University of Waterloo, Canada

Qian, Zhu	University of Waterloo, Canada	Location Choices of Micro Creative Enterprises in China: Evidence from Two Creative Clusters in Shanghai
Zhao, Hu Zhang, Yue Shang, Mingyu	Shandong Jianzhu University, China	Research on the Planning Strategy of National High-tech Zone Oriented by City-Industry Integration---A Case Study of Zaozhuang High-tech Zone
Chen, Xiao	Southeast University, China	Comparative Research on the "Ecology" Elements of Planning Standards for International cooperation Industrial Parks

Special Panel E (SPe): Are Latin American Cities Inclusive for Migrants?

Chairs: Elkin Velasquez Monsalve, UN-Habitat Regional Office for Latin America and Caribbean, Brazil and Luisa Gomez, University of Ottawa, Canada

Session 1 (SPe01): Inclusive Cities in Latin American

Moderator: Elkin Velasquez, UN-Habitat Regional Office for Latin America and Caribbean, Brazil

Velasquez, Elkin Chiti, Roi	UN-Habitat Regional Office for Latin America and Caribbean, Brazil	Inclusive Cities: Urban Planning and Social Construction of the Habitat
Dammert, Lucia	Universidad de Santiago de Chile, Chile	Insecurity and crime in the urban margins in Latin America
Rigon, Andrea	University College London, UK	Co-designing built interventions with children to foster social cohesion between displaced and host communities in Latin American neighbourhoods

Session 2 (SPe02): Urbanity and Governance in Brazil

Moderator: Anacláudia Rossbach, Cities Alliance, Mexico

Rodrigues, Lidiane	Universidade Federal de São Carlos, Brazil	Diversity and patterns of 'social isolation' among Brazilians
Kilina, Elena	University of Campinas (UNICAMP), Brazil	Place and Play in Urbanity of China and Brazil
Gomez, Luisa	University of Ottawa Ottawa, Canada	Urban Governance Theories in Developing Countries

Special Event (SE): Impact of the Urban Environment on Health and Wellbeing	
Moderator: Pamela Carbajal, UN-Habitat, Kenya	
Ying, Zhou	Planner, Wuhan Land Use and Urban Spatial Planning Research Center, China
Daniel, Kristie	Director of the Livable Cities program & Head of local office in Ottawa, Health bridge, Canada
Carbajal, Pamela	Urban health and regional planner consultant, UN-Habitat, Kenya

Dialogue session: Dialogue on Rethinking the Post-Pandemic City	
Moderators: David Covo, McGill University, Canada and Denise Piché, Université Laval, Canada	
Assako Assako, René Joly	Vice-Recteur, Université de Douala, Cameroun
Bhatt, Vikram	Professor Emeritus, Peter Guo-hua Fu School of Architecture, McGill University, Canada
Rowe, Mary W.	President & CEO, Canadian Urban Institute, Canada
Zacharias, John	Chair Professor, Peking University, China
Zhang, Li	Professor/ Dean of School of Architecture, Tsinghua University, China

ICCCASU Awards Ceremony
Presented by: Dr. Benjamin Gianni
ICCCASU Outstanding Partner Award
Peter Guo-hua Fu, School of Architecture at McGill University
ICCCASU Honor Awards
Senator Yuen Pau Wo

Joe Berridge, Partner and Urban Planner at Urban Strategies in Toronto
Leilani Farha, Global Director of Shift
ICCCASU Outstanding Dedication Awards
Rafael Tuts, Director of UN-Habitat's Global Solutions Division
David Covo, Professor at McGill University
ICCCASU Special Contribution Awards
Martin Bressani, Director of Peter Guo-Hua Fu School of Architecture at McGill University
Matti Siemiatycki, Director of School of Cities at University of Toronto
Jill Stoner, Director of Azrieli School of Architecture and Urbanism at Carleton University
Oumar Sylla, Director of Regional Ofiice for Africa at UN-Habitat
Denise Piche, Professor at Universite Laval
ICCCASU Excellence in Leadership
Jean-Marie Cishahayo, Researcher at University of Ottawa
Ian Cooper, Employment and Social Development Canda
Olivier Dehoorne, Universite des Antilles
Luisa Gomez, Student of University of Ottawa
Simon Huang, University of Ottawa
Elkin Velasquez Monsalve, UN-Habitat Regional Office for Latin America and Caribbean in Brazil
Claude Ngomsi, Regional Office for Africa, UN-Habitat
Peter Guo-Hua Fu, KFS Architects at McGill University

Ines Macamo Raimundo, Eduardo Mondlane Universtiy
YangFan Li, Xiamen University
Patricia Zander, Universite de Strasbourg
ICCCASU Excellent Secretary General
Haotian Guan, University of Ottawa
ICCCASU Excellent Web Developer Leader Award
Edward Ci Lin, University of Ottawa
ICCCASU Excellent Volunteer Award
Sherry Verma, University of Ottawa
Sana Ghouri, University of Ottawa
Andy Garcia Kaneza, University of Ottawa
Michele Michichiuc, University of Ottawa
Shengbo Zhao, Southeast University
Shuang Tan, Southwest University
Tea Agtarap, University of Ottawa
Bithja Tiendrebeogo, University of Ottawa
Yupeng Chen, University of Ottawa

REPORT ON THE PANELS

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ICCCASU

4th International Conference on Canadian, Chinese, and African Sustainable Urbanization
4ème Conférence internationale sur l'urbanisation durable au Canada, en Chine et en Afrique

Density, Diversity, and Mobility: The City in an Era of Cascading Risks
Densité, diversité et mobilité: les villes à l'ère des risques aggravés

28 - 31 July/juillet, 2021
Montreal/ Montréal, Canada (virtual/virtuel)
English and French/Anglais et français
Coordinators/Coordonnateurs: David Covo, McGill University & Tonton Mundele, Global Affairs Canada

Webinar | Keynote Session 1/Séance principale 1 | Keynote Session 2/Séance principale 2
28 July/juillet, 2021, 10:00 AM - 12:00 PM ET | 30 July/juillet, 2021, 8:00 - 10:00 AM ET

Keynote Session 1/ Séance principale 1

Moderator/Modérateur
Benjamin Gianni
Carleton University, Canada

Moderator/Modérateur
Allan Cain
Development Workshop, Angola

Moderator/Modérateur:
Rong Yang
UN- Habitat. Kenya

Keynote Speakers / Orateurs principaux

David Miller
Director of International Diplomacy, C40 Cities Climate Leadership Group, Former Mayor of Toronto, Canada

Leilani Farha
Director of NGO Make the Shift, Canada & Former UN Special Rapporteur on the right to Housing

Oumar Sylla
Director of UN-Habitat Regional Office for Africa, Kenya

Keynote Session 2/ Séance principale 2

Moderator/Modérateur
Benjamin Gianni
Carleton University, Canada

Moderator/Modérateur:
Olivier Dehoorne
Université des Antilles, France

Keynote Speakers / Orateurs principaux

Mario Polèse
Professor emeritus, Institut national de la recherche scientifique (INRS), Canada

Mimi Sheller
Inaugural Dean of the Global School, Worcester Polytechnic Institute (WPI), USA

Zhi Liu
Director of China Program, Lincoln Institute of Land Policy, Peking University, China

For more information, visit: icccasu2021.org

First Keynote Session

The first keynote session was held Wednesday, July 28 and moderated by Dr. Benjamin Gianni (Carleton University), Dr. Allan Cain (Development Workshop), and Rong Yang (UN-Habitat).

The speakers and their discussion topics were as followed:
- David Miller, Director of International Diplomacy, C40 Cities Climate Leadership Group & Former Mayor of Toronto, Canada, delivered a presentation entitled "Solved: How the World's Great Cities Are Fixing the Climate Crisis."
- Leilani Farha, Global Director of NGO the Shift, Canada & Former UN Special Rapporteur on the Right to Housing, presented on "What a Wonderful World it Could Be!"
- Oumar Sylla, Director of UN-Habitat Regional Office for Africa, Kenya, provided a presentation entitled "Construire des villes résilientes à l'ère du COVID 19 en Afrique."

While Nations Pledge, Cities Deliver, by David Miller:

Using examples from Los Angeles, New York, Toronto, Oslo, Shenzhen, and Sydney and other global cities, David Miller demonstrated how cities can lead the dramatic reduction of global emissions by 2030, demonstrating that the actions of leading global cities point the way to creating a more sustainable planet. Drawing on a factual analysis of what cities are doing today to mitigate harmful emissions and limit global warming to 1.5 °C, Mr. Miller presented a roadmap, "how to" guide for combatting climate change by taking the best global actions and showing how they can be replicated at pace and scale. This call to rapid action will draw on Mr. Miller's recent book, Solved: How the World's Great Cities Are Fixing the Climate Crisis.

Lesson learned:
- If we are to prevent catastrophic climate change, the voices of mayors and other municipal leaders are important.
- The pandemic has heightened the need to address all aspects of equity in cities located in the north, south, etc. In addition, the impact of urban innovation on these concerns was proven.
- A month ago, a forest fire in Canada devastated an entire small town, despite the pandemic absorbing the majority of our focus this year. It is a sort of forest fire that is unquestionably associated with climate change, as the weather has been hotter and drier for longer durations.
- It is necessary to acknowledge the relevance of cities' roles. For the first time in human history and the first time in the previous ten years, the majority of the world's population currently resides in urban regions.

- In metropolitan regions, the majority of greenhouse gases are produced. Depending on how they are calculated, this percentage is controversial; it might reach up to 75% of co2 emissions. This number includes emissions from power plants required to power cities, regardless of their location.
- In locations where they are occurring, the increasing frequency of storms inundating urban growth, particularly formal settlements, is a substantial risk factor for many climate change-related concerns.
- The fundamental requirements for membership in C-40 are that both the municipality and the mayor must demonstrate climate leadership. The municipality must have a climate change mitigation strategy.
- Austin, Texas employed an unusual method a few years ago; the city is now booming. Instead of constructing a new coal- or oil-fired power plant, it paid residents to insulate their homes.
- The heating and cooling of buildings is the primary source of greenhouse gas emissions in the majority of cities.
- Transportation is important not only because of transportation-related emissions, but also because ensuring that our cities are planned so that people can walk, cycle, and use public transportation contributes to the creation of energy-efficient communities.

Recommendations:
- There are actions taking place in a city somewhere in the globe that, if reproduced on a broad scale in the next very short period of time across several cities, may put the world on the very important first part of the trajectory to maintain 1.5 degrees Celsius of warming by 2030.
- If we are to limit the increase in global temperature to less than 1.5 degrees Celsius, the next few years are the most important.
- Mayors are not elected merely to combat climate change; they are elected to build thriving, inclusive cities. To accomplish this, climate action must be equitable.
- Importance of garbage management, especially in Africa; There is a large effort in Accra, including during Covid, to engage with the informal waste industry to regularize waste disposal. This is significant because it sequesters the extremely destructive greenhouse gas methane.
- Climate change encourages expansion and developing the city with a focus on equity.

What a Wonderful World it Could Be! by Leilani Farha:

One billion and eight hundered million people across the planet live without a roof over their head, or without access to basic services like water, toilets, and electricity, often living in danger-

ous locations or on the peripheries of cities. Many more than this live in overcrowded and run-down places, or under the constant threat of eviction because housing in every city is too expensive, used as a financial instrument or for speculation. And in most countries laws and policies fail to protect most people from losing their homes and do nothing to help them access better ones. Who lives this reality? The people who perform all the jobs that make our cities work -- the same people who have taken to the streets to protest gross inequality in Lebanon, Chile, Hong Kong, and Cape Town. Reflecting on these global housing conditions, Leilani discussed how the housing landscape has been fundamentally altered over the last decade, resulting in a global crisis and representing both a symptom and a driver of gross inequality in cities across the world. Leilani introduced the audience to the role that high finance, and global capital play in today's housing conditions – the subject matter of the documentary film PUSH – and the power financial actors have over governments and legislatures. Leilani closed by serving up some inspiration, discussing the transformative power of human rights principles like maximum available resources, non-discrimination, community participation and accountability when applied to housing, fiscal and monetary laws and policies. She closed with reflections on the many commitments being made by local governments to use a human rights framework to address poor housing conditions, demonstrating that the implementation of human rights can make the world a wonderful place.

Lesson learned:
- The cranes in the sky are a visible representation of the severe inequality that affects so many cities across the globe, including the discrepancy between the 1.8 billion people who reside in housing that is grossly inadequate.
- The United States, the wealthiest country in the world, has more than 500,000 homeless people. This does not account for all those residing in housing owing to housing circumstances or affordability.
- Homelessness are drastically inadequate living conditions have occurred in cities throughout the world for a very long time. The manner in which this is anchored in housing is striking, at least for some, despite the increasing riches of the world.
- Ironically, this reality of housing quality has emerged since the global financial crisis, encouraged by neoliberalism.
- Investors discovered that it was possible to build new financial products. Using real estate as collateral, Blackstone, one of the largest private equity firms, earns a huge amount of money. Approximately 45,000 properties were purchased in a single transaction by the largest residential real estate investor. They were acquiring distressed assets, such as properties whose owners had failed on their mortgages as a result of predatory lending

practices.

- Using this to leverage additional capital, they acquire any asset from which they believe they can extract larger profits or leverage additional capital; housing is reduced to a mere financial instrument. This immediately violates two essential foundations of the right to affordable housing. security of tenure
- China is an intriguing example of the property tax movement. In China's growing megacities, the construction of skyscrapers has been motivated by profits. Massive riches for developers and massive political power for developers at the price of displaced migrants whose agricultural fields are no longer viable.
- Land is considered as a commodity, thus in addition to the harm done to appropriate and affordable housing, the actors, including private equity firms, pension funds, foreign financial institutions, and real estate developers, acquire wealth at the expense of the poor.

Recommendations:

- Since the emergence of neoliberalism in the 1970s, 1980s, and 1990s, governments have basically handed over responsibility for housing to the private sector. The private sector is rarely controlled. No one has been held accountable for the housing problem, which is why there is a global housing shortage.
- It is evidently clear under international human rights law that governments are responsible to the public for ensuring that those in need have access to appropriate, affordable housing. Invoking a human rights framework enables us to demand that governments reenter the housing market in a meaningful way. preserve human rights norms acknowledged by human rights.
- Those who are homeless have the right to human rights if we can persuade governments to address the issue. Low-quality housing. Housing precariat precarity are genuine rights holders, thus they are neither criminal, encroachers, or unreasonable in their demands of informal settlement residents. homeless encampments
- Consider the tent on the sidewalk to be human rights claim rather than a criminal conduct. The expansion of informal settlements is unrelated to encroachment. criminality These assertions are grounded in human rights Homelessness is removed from the sphere of charity by the application of human rights claims to housing, health, and life itself.

African Urbanization as Conducive Factor for Spread of COVID-19, by Oumar Sylla:

The topic of health crises in cities has gained increasing attention in recent years due to the growth and urbanization of many regions around the world. The concentration of populations and unequal distribution or lack of resources augment

the risk and impact of these health crises. Globally, the covid-19 crisis has impacted the urban population the most. The inadequate responses showed the vulnerabilities of cities in responding to health crises. In Africa, countries are facing the adverse consequences of the crisis due to the largely unplanned and poorly managed urbanization process resulting in widespread informal settlements and severe infrastructure and service deficits. To address the challenges, six key responses are recommended: 1. Apply local communication and community engagement strategies; 2. Support SMEs and the informal economy; 3. Deepen decentralized responses to COVID-19 through strengthening local government capacities; 4. Target informal settlements through data driven contextualized measures; 5. Establish mechanisms to promote rapid access to housing and prevent forced evictions; 6. Integrate urban planning and management as key priorities for recovery and rebuilding strategies towards long-term resilience.

Lesson learned:
- In terms of economics, this Covid 19 has expanded an already considerable divide. Because you have been conducting activities in a particular style, the question of the day is which paradigm you should adopt to acquire new direction.
- Covid has revealed that there are numerous flaws in the way we see and manage our cities. Plan our cities, which requires original thought.
- COVID 19 is only an additional layer of complexity, but we investigate the early age response strategies that have been applied in so many African cities.
- 56% of the population of sub-Saharan Africa lives in informal settlements without access to water and sanitation.
- The pandemic is wreaking havoc, causing a decrease in gross domestic product in a number of African countries, consequently reducing their capability.
- The way we manage our cities and the population density in many of Africa's largest cities give the impression that our urbanization is more conducive to disaster and disease transmission.
- Emerging secondary cities in Africa with a population of 2.3 million or fewer represent both a challenge and an opportunity in terms of territorial balance, as well as the ability to build new economic centers, and must be included in the process of assessing long-term recovery.
- Initially, population density was believed to contribute to or possibly encourage the spread of the Covid illness.
- The market is dominated by real estate developers, while a substantial proportion of people cannot even afford to pay their rent. This Covid 19 has a high eviction rate, which is worrisome, as do the violation indicators.
- This diminishing local fiscal has repercus-

sions for both service delivery and the financial economy of local government, as well as monetary effects. Manufacturing is among the sectors significantly more affected.

Recommendations:
- To maintain our industrial system, which is dependent on well-managed cities. This increasing urbanization tendency has affected all of us. Regarding Covid 19, however, it is vital to be prepared.
- In informal settlements, it is particularly crucial to evaluate overcrowding and how it has contributed to the spread of these diseases.
- This housing sector in Africa has not yet reached its full potential since it may assist to create more jobs and provide chances to lessen social inequality, but we continue to rely on external maturity building and natural construction.
- There must be a balance between what must be manufactured abroad and what can be manufactured domestically.
- Real-time data is also crucial to the creation of our long-term recovery strategy. This was absent at the housing level, but we also need to formalize our data gathering and undertake a local economic study to establish degrees of economic development.
- When we harness the transformative power of cities and recognize the significance of national and local governance, the response to the pandemic is successful alongside medical responses.
- We must elaborate a new narrative on the pandemic that understands the trajectory of sustainable development is the well-planned and governed cities.
- We need an economic balancing system of the health response, the long-term health and greenery of cities.
- We need to establish a new social contract for collective recovery in which social, economic and political spheres of the society work together to achieve three rights-based responses: social protection, housing, and income.
- We need to review the crucial role of cities and the need for inclusive multilateralism.

Second Keynote Session

The second keynote session was held Friday, July 30 and moderated by Dr. Benjamin Gianni (Carleton University) and Dr. Olivier Dehoorne (Université des Antilles, France).

The speakers and their discussion topics were as followed:
Mario Polèse, Professor emeritus, Institut national de la recherche scientifique (INRS), Canada, delivered a presentation entitled "Affordable Housing: What to do and what not to do. Lessons from Montreal and other places."
Mimi Sheller, Inaugural Dean of the Global School, Worcester Polytechnic Institute (WPI), USA, presented on "Building a Thriving Caribbean Future: Resetting policy with international partners."
Liu Zhi, Director of China program, Lincoln Institute of Land Policy, Peking University, China, provided a presentation entitled "High-Quality Infrastructure Development in China."

Affordable Housing: What to do and what not to do. Lessons from Montreal and other places, by Mario Polese:

Ensuring that housing is affordable (for most residents, at least) remains of one the main challenges facing modern cities. In many cities in the "developed" world, housing prices have skyrocketed beyond control, further propelled by the Covid pandemic. The pandemic aside, the reason is often bad public polices, a useful waring for cities in the developing world. Canada presents an interesting case of extremes, Montreal one the hand with a relatively affordable housing market (so far) and Toronto and Vancouver, on the other, with among the highest housing prices in North America. What did Montreal do right and the others do wrong? We review Montreal's approach to housing, both with regard to public (social) and market-driven housing, policies that have succeeded in producing a generally "flexible" market where housing supply responds fairly rapidly to demand, middle-scale housing the dominant construction mode. Part of the secret lies in the "socialization" of infrastructure costs, financed via general property taxes, and parallel absence of infrastructure-linked development charges, which in turn facilitates the emergence of small contactors (builders) and real estate developers, creating a more competitive housing market. Social housing for low-income households is relatively limited; but has generally focused on spatially dispersed small and medium-sized projects, thus reducing both the likelihood of NIMBYs and the emergence of ghettos. However, providing a sufficient supply of publically-financed housing remains a challenge. Other measures include density-friendly zoning and a rental tribunal that avoids the pitfalls of rental control while allowing renters recourse against abusive price hikes.

Lesson learned:
- For housing to be affordable for all urban residents, at least three pre-conditions are required:

a) Households have sufficient resources (income).
b) Responsive, efficient, housing markets. Prices kept low.
c) Public (social) housing for households that do not have (a).

- Five pillars of Montreal's affordable housing [private sector =90%]:

1) A generally light regulatory framework, clear rules, with well-defined zoning ordinances [at least, until recently].
2) Absence of development charges for developers, except for limited proximate services and infrastructures (i.e., parks).
3) Urban services and infrastructures "socialized" (schools; police; water; fire department, etc....) financed through general revenue.
4) Tradition of mixed middle-density housing with corresponding zoning bylaws favoring mixed densities.
5) Almost no housing-related NIMBY's, little opposition to densification or public housing projects.

- Public participation in housing [less than 10% of the housing stock] has been a mixed success story:
- On the minus side, public funding (main-

ly federal and provincial) has lagged behind in recent years, mainly because of political squabbles, but also because private sector housing continued to be generally affordable.
- On the plus side, public housing (often managed by coops) has been of generally good quality, mainly small and mid-scale units, distributed across neighborhoods of varying social status.
- The latter largely explains the absence of NIMBY opposition to social housing.

Recommendations:
- Keeping prices Low: responsive, efficient, housing markets - 5 Rules

1. Make it easy (and profitable) to build; facilitate market entry for small developers, not just the rich and well-connected.
2. Keep bylaws and building codes simple, predictable, easy to understand. Getting approval should not be an obstacle course.
3. Urban infrastructures financed out of general revenue, not charged to developers, passed on to home owners and renters.
4. Zoning that encourages mixed mid and high residential densities along transport corridors, not dispersed low densities.
5. Local populations consulted on building projects; but not given absolute veto powers.

- Adequate, stable, public investment in social housing - 3 Rules: Some households, even in rich nations, will be left behind. Income trans-

fers aside, there will always be a need for public housing, its precise share varying across nations [a policy choice]:

1. Stable, predicable, funding, avoiding politicization as far as possible. Idem for funding rules (i.e., for building coops.)
2. Small and mid-sized projects across different neighborhoods, avoiding self-perpetuating concentrations of poverty.
3. For households, clear access criteria, occupancy, and resale rules, again avoiding politicization as far as possible.

Building a Thriving Caribbean Future: Resetting policy with international partners, by Mimi Sheller:

The Greater Caribbean region is closely involved in the economies of Canada and the U.S., with many countries reliant on tourism and the offshore financial services sector, with others sending temporary agricultural workers to the north, and much migration and mobility across the region. The Covid-19 pandemic has disrupted many of these mobilities, stopping tourism, interrupting migration patterns, and limiting both investment and remittances. The Caribbean region is also highly affected by climate change and the recurrence of natural disasters including hurricanes, earthquakes and volcanic eruptions. What does the future hold for the Caribbean region and how can

it not just survive, but thrive? This talk addressed the challenges facing the Greater Caribbean and the role that its international partners might play in supporting and advancing more sustainable futures that are being envisioned within the region. China is investing in several major infrastructure and real estate projects throughout the Caribbean as part of the global Belt and Road Initiative. Multinational corporations are pressing for new resource extraction projects around oil drilling and mining. As we all come out of the pandemic crisis and face the ongoing climate crisis, the US and Canada have an opportunity to reset their foreign policy with our neighbors. This talk argue that this is the time to build smarter, more cooperative international relationships that will support better policies. This requires a re-set around international relations, and new approaches to food sovereignty, sustainable tourism, renewable energy, ecological repair, coastal and ocean protection, gender equity and mobility justice.

Lesson learned:
- The Caribbean region is at a crucial crossroads of challenging environmental, political, and social transformations brought about by the conditions of climate change, climate displacement, as well as the travel-disruption of the pandemic.
- The Caribbean is also buffeted by changing political alignments of the "great powers" in the region and the vagaries of investment policies related to tourism, oil drilling, mining

extraction, as well as infrastructure development.

- As we all come out of the pandemic crisis and face the ongoing climate crisis, the US, China, Canada and African allies have an opportunity to reset their foreign policy with our neighbors.
- This talk argue that this is the time to build smarter, more cooperative international relationships that will support better policies for the people (and ecologies) of the Caribbean region.
- At no point in the historical records dating back to the late 1800s have two category five storms made landfall in the small Caribbean Island chain of the eastern Antilles in a single year.
- The intensification almost overnight from a tropical storm to a category five hurricane and the devastating intensity that lingered for several days are also unfamiliar, even to a region that is used to seeing hurricanes.
- Alongside other emerging climate patterns, there is a strong case to be made that there is something unfamiliar about the Caribbean's climate today.
- Haitian migrants and Haitian Bahamians are one of the most vulnerable and marginalized communities in The Bahamas, too often ignored and treated inhumanely by the state and Bahamians generally. It is likely that many undocumented Haitian migrants in this community in Abaco might have been fearful to seek shelter in the storm even with the mandatory evacuation. It is likely that we may never know for sure how many in this community lost their lives.
- If the current climate situation can be described by scientists as "unfamiliar" and "unprecedented," however, this does not imply that it does not have historical roots. How we conceptualize climate vulnerability has important implications for how we think about the recovery. It is crucial to recognize the complex historical factors that contribute to current vulnerabilities of Caribbean islands.
- Many now refer to seemingly "natural" hazards such as hurricanes as "unnatural disasters", because of the ways in which risk and vulnerability are structured by all too human structures of inequality.
- marginalized groups experience climate change effects differently from the wealthy and privileged, and this vulnerability must be adequately addressed both from a political and an ethical perspective.
- In the face of the climate emergency and pandemic recovery, a sustainable future for the Caribbean region requires a re-set of international relations around new approaches to food sovereignty, sustainable tourism, renewable energy, ecological repair, coastal and ocean protection, gender equity and mobility justice. We cannot afford to miss this moment. We must get it right before the Caribbean future slips away.

Recommendations:

- We must demand (as already begun by CAR-ICOM) the immediate payment by the USA, the UK and the EU of combined slavery reparations and climate reparations to the entire region. This can go into a reformed Caribbean Green Climate Fund and new financing mechanisms for all to draw upon.
- There must be international recognition of the protection that we owe to climate refugees. We must reject the depiction of climate refugees as a growing danger who will "flood" our borders, when in fact it is our way of life that has put these people in harm's way and excluded them from social protection.
- We must also reject the colonist's logic that jumps to relegate certain islands to extinction and depopulation, even as they eye these very places for valuable luxury real estate development.
- We must help break the cycle of extractive economies, fossil fuel and tourism dependence, labor exploitation, and unsustainability.
- We must reject the Caribbean as a logistics hub where nature becomes global infrastructure.
- We must imagine alternative futures for the entire region that will be more resilient and flexible, allowing for movement in the hurricane season, food sovereignty and security, protection of water sources, protection of coastal areas and fisheries, mangroves and coral reefs, as well as huge programs of re-planting and re-seeding both.
- We can open communication technology to connect people across the Caribbean and its Diasporas, and to allow for easier movement between places by reducing the cost of travel and opening borders.
- We can learn from agro-ecological projects how to expand Caribbean food sovereignty through regenerative low-till and no-till conservation agriculture, multi-strata agroforestry, silvo-pasture, tree intercropping, use of tropical staple trees, and multi-crop gardening systems known as conuco, an Arawak term, expanding prolific traditional root crops such as cassava/yuca.

High-Quality Infrastructure Development in China, by Zhi Liu:

The Chinese government recently adopted a new policy to promote high-quality development—a shift in development paradigm from one that emphasized quantity and fast pace. This paper discusses the implications of the new policy to the future of infrastructure sector. The paper first compares the level of infrastructure development between China and a few selected major economies, and identifies the key strengths and more importantly weaknesses that must be overcome in the short to medium-terms. Then the chapter ana-

lyzes the economic, technological, demographic, and climate change trends, as well as the global uncertainties that would shape the future of infrastructure demand and supply, and discusses the directions for infrastructure development in the next 20-30 years.

Lesson learned:
- We divide infrastructure into two categories:
1. Cross-regional infrastructure that provides inter-connectivity between regions/cities and between location of demand and location of supply, such as highways, rails, electrical grids, and telecommunications
2. Localized infrastructure such as urban streets, off-grid power supply, water and sanitation, solid waste disposal, waste water treatment, and so on.
- Cross-regional infrastructure development goes hand in hand with economic growth
- Access to the localized infrastructure services has been significantly improved among all provinces
- China has been able to maintain a high level of infrastructure investment
- The main factors influencing the future of infrastructure development:
1. Income growth: per capita income expected to double from US$10582 in 2020 Urbanization: from 63.9% in 2020 to 75-80% in 2035
2. Decarbonization: Reaching carbon peak by 2030 and net-zero by 2060
3. Concentration of population in urban regions and mega-cities
4. COVID and other uncertainties: ?
5. Aging of population: the share of population over 65 - 8.9% in 2010; 13.5% in 2020; and expected >20% in 2040
6. Climate resilience: Need to cope with climate change-induced coastal erosion, rainstorm, and internal flooding
7. Technological advancements: AI, 5G, internet of things, driverless vehicles.

- China recently adopted a development paradigm shift from rapid growth to high-quality development
- High-quality infrastructure development:
1. provision of universal access to basic services
2. meeting the changing and diversified needs of the population
3. achieving climate resilience, and
4. protecting the environment and ecology
- Challenges: integrated infrastructure planning, technological and institutional innovations, and improved sector governance.

Recommendations:
- Evolving Concept of Infrastructure:
1. Economic infrastructure: road and street, subway, public transport, airport, power, gas, telecommunications, water supply, sanitation, drainage, flood protection...
2. Social infrastructure: public school, public hospital, public rental housing, public nursing homes...

3. Green infrastructure: greenway, park, rain garden, permeable pavement, stormwater management pond, sponge city...
4. New infrastructure: 5G, artificial intelligence, internet, internet of things, data center, smart city...
5. Grand infrastructure: encompassing all above.

- Net-zero scenario for high-quality infrastructure development:
1. Electricity generation from renewable sources and nuclear power,
2. Electrification for the provision and operations of all infrastructure services,
3. Phasing out fossil fuels from infrastructure to the extent possible,
4. Carbon sinks through expanded and improved forests,
5. A great deal has to be done in land use, pricing, and governance.

Panel Sessions

Thematic area 1: Towards More Resilient Cities Worldwide

The Earth is under a new climatic regime. Human activity has devastated the earth's surface and degraded the atmosphere. This new regime has fundamentally altered the human-nature relationship, with consequences for the global community and its ability to manage the crises that emanate directly from climate change. Unsustainable forms of urbanization have been accompanied by an unprecedented attack on the biosphere, that has brought multiple risks at the same time: extreme weather conditions, water and air pollution, virus outbreaks and catastrophic species loss. Cities also face multiple challenges for their social sustainability, including a widening wealth gap, inaccessible housing, unstable employment and population migration at the international scale. Sustained urbanization to 2050 when 70% of the world population will be living in cities, offers a historic opportunity to deal with both these global and local issues at the same time. City agendas are adapting to this new reality of vulnerability to multiple threats, with systems reforms and physical infrastructure. The experience of disaster has also taught us that disadvantaged groups are more prone to the severe negative outcomes of disaster and systems need to be focused on their needs. Our systems are evolving to deal with the new tasks. Technocratic solutions have been replaced with approaches that involve the public actively in responses to potential threats. The climate agenda has largely reconstituted a new political capability to discuss the necessary energy transition and to do so in a multilateral way. A shared global agenda has implications for actions at the regional, national and local scales, not only to mitigate climate change but to continue to build cities adapted to the fundamental human needs of health, safety, social harmony, shelter and a life worth living. The triple challenges of sustained urbanization, globalization and climate change have shifted the focus to cities, in the shared effort to minimize the associated risks. The world has never experienced this combination of worldwide trends in which all cities are both the potential victims but also potential actors for change. Both the problems and the solutions now cross over the lines previously drawn to distinguish stages of development, regions and political systems. The shared future we are increasingly talking about is also a shared set of solutions that needs more attention. The twin goals of sustainability and resilience seems likely to involve some hard choices. We need to devote much more attention to what a future city will be like, that is both sustainable and resilient. ICCCASU panel discussion is intended to bring forth such narratives that are practical as well as most relevant to this COVID-touched world.

T1Pa: Metropolisation and Urban Renewal.
Kimberley Wint and Aly Saddiq Timera presented their study on the topic of "Metropolisation and Urban Renewal" during this session. This panel's primary topic was "new town development with social housing design strategy and challenges in urban renewal policy-making."

Lessons learned:
From Wint Kimberley's presentation, "Preserving the Heartbeat of French Town," we've learned how to devise strategies for building more sustainable homes while preserving the town's traditions. This requires a combination of architectural and urban design. Housing influences community transformation.

With Aly Sada Timera's presentation on the Metropolisation of the Dakar area. Due to the imbalance between urbanization, land development, and the gap between supply and demand, we learnt that city planning and housing production have become significant issues in Senegal. Mr. Timera recommends establishing a connection between dwelling and workspace to accomplish this. What are the concerns and challenges facing this city?

Environmental problems include occupied forest reserves and the possibility of coastal erosion. This Metropolisation dynamic encourages individuals to dwell inhospitable locations despite the inherent dangers. In addition to social and economic difficulties, the juxtaposition of contempo-

rary and historic cities will exacerbate socio-spatial division. He also highlighted the instance of a dysfunction involving hyper centrality, i.e., when several activities are concentrated in a single location; this phenomenon amplifies Metropolisation and the aforementioned problems.

Recommendations from discussions:
From the lessons drawn from Trench Town in Jamaica, the new "market-housing" design strategy aims to protect the community by providing a better visual quality of livelihood, as well as to preserve the essential culture of local market business. The two scenarios of "market-house" design type will help to optimize the land slot footprint of residential building, incorporating small retail business activities attached to families and their open space, incorporating residential and non-residential use, are cost-effective ways to provide housing, ownership and employment for Trench Town, an urban scale incremental redevelopment. Housing shortage issue was caused by insufficient formal housing due to the lacking in management and policies for informal housing, real estate development (in the case of Dakar) suffered inequal distribution issues and caused social frustrations, a societal danger for safety and security.

A debate should be established between rural development and new town planning, since the new town planning trend wants to create architectural beautiful housing design, but local response toward those new housing design is not always desirable. Therefore, architecture and social mor-

phology should be taken into account in urban renewal, for the aim to reduce the conflicts.

T1Pb: Displacement and Rural-Urban Development. Stephanie Loose, Chen Yang, and Meilin Zhang presented their study on the topic of " Displacement and Rural-Urban Development " during this session. This panel's primary topic was " Alternative urbanisation issues and solutions due to displacement of Internally Displaced Persons (IDPs), urban-rural integration and city migration."

Lessons learned:
• Climate change should be discussed more in the news, as it is now discussed just around 1% of the time. People are not concerned about climate change because we cannot see CO_2 because the topic is too complex and broad. People learn through seeing others; therefore, cities should set the pace and serve as a model. Women in developing nations are more susceptible to climate change, therefore cities should take this in mind.

Recommendations from discussions:
• Guided by UN-Habitat's action in Burkina Faso for assisting displaced habitants, inter-sectoral collaboration is vital to provide short-term humanitarian aid and long-term urban construction for the host communities for displaced population, which will contribute to establish the public trust during crisis.

• Industrialization will help developing countries to create more jobs and livelihood for rural zones and urban-rural integrated zones. The COVID pandemic has given us lessons to plan urbanization with "people-centric" policy. These two aspects (industrialization and people-centric policy) are of vital impact for enabling an urban-rural continuation.
• Village classification and mapping tool are highly recommended as research methodology, which helps to incorporate surveys and statistical data into urban administrative process.
• One of the main outcomes was the point that urbanisation should not be seen only as a problem and an acute challenge to the society but the need to tap into opportunities it provides. The need for social cohesion, multi-level governance and city resilience in tackling displacement and the crisis that results from this. The need for well-planned urban population to focus on improving the lives of the vulnerable group.
• The significance of integrated development of both the rural and urban areas using the Hanzhou as a case in point. The discussions also got additional clarity on a shared experience of how Villages are classified based on key priorities so as to target resources and development strategies to guide rural-urban migration. The socialist ideology that guides land and ownership is something to take home for all.

- The identification of the level of needs of migrant population using a Basic Model Econometric approach. The other recommendation is that settlements actions and decisions are guided by ecological, physical health and cultural life / values. The discussion also noted the need to weigh other methods of data analysis for PhD studies so that the findings can be properly validated.

T1Pc: Urban Resilience: from Theory to Practice

Lessons learned:
- Resilient cities are cities that can absorb external interference and maintain its structure and key functions.
- Strong cities were able to adapt to the covid pandemic. Resilience can depend on different factors such as technology and localization.

T1Pd: Resilience and Sustainable Infrastructure. Arrach Riad, El Jirari Amal, Benmakrane Oussama, Amy Huangqing Li, and Thomas Tamo Tatietse presented their study on the topic of " Resilience and Sustainable Infrastructure " during this session. This panel's primary topics was " The transport system as a process of territorial development or risk of social segregation (Morroco)" and also "Re-promoting sustainable underground urbanization for developed and developping countries in our modern history."
Lessons learned:

- Peri-urban landscapes and its inhabitants have interdependent ties (access to resources, jobs, etc.) with urban environments; transit is directly tied to this interdependence and contributes to spatial expansion.
- Transformations in travel networks result in an increase in automotive mobility and a fall in communal transport; this, in turn, produces an imbalance between housing and employment locations.
- The United Nations' first resolution on subterranean space potential in 1981 on Natural Resources was the impetus for raising awareness for sustainable underground development.
- It is necessary to analyze the need for underground space in emerging nations.
- Poorly planned subsurface systems, such as the sewage system, can result in catastrophic urban health catastrophes (for example, Ebola in Africa).

Recommendations from discussions:
- Morocco must develop a vision that connects urban planning politics with transportation politics.
- Africa's subterranean must be modernized by installing underground utility infrastructure.
- Nearly half of African towns have simple access to groundwater; thus, groundwater harvesting technologies should be pushed in sub-Saharan Africa (depth less than 25 meters)
- Africa has the potential to generate 900 MW

of electricity from hot water and steam-based geothermal resources.

- If the procedures of the supply chain are well-designed and organized, food production, warehousing, and distribution may ensure that all people have access to food.
- Consideration of climate change adaption in Africa is crucial for subsurface development.
- Global policies must be enacted in order to promote awareness regarding sustainable subsurface space.
- Local inhabitants must get assistance and training in subsurface space navigation from developed nations.

T1Pe: Urban Resilience and Coastal Development. Xueting Zhang, and Zhiyuan Xiang presented their study on the topic of " Urban Resilience and Coastal Development " during this session. This panel's primary topics was " multiple-scale evaluation of coastal urban development related to environmental, social and economic impacts, from municipal scale to global scale."

Lessons learned:
- Coastal areas globally have undergone rapid and profound change as a result of accelerating climate change, coastal and catchment development, and overexploitation of resources.

Recommendations from discussions:
- Using Shenzhen (Dapeng Bay) as a case study, it was determined that resilient city planning with pilot ecological civilization zones will help to improve the sustainability of megacities, and that green soft techniques should be encouraged during the construction of coastal urbanization to reduce shoreline hardening issues.
- Through research groups and working groups, academics, government agencies, and industry should establish multidisciplinary collaboration in order to improve city administration and scientific contribution. Local government might utilize the resilient index to formulate plans and assist decision-making.
- A way to improve the hardening of shorelines is to transform gray hard coastal structure to green soft living shoreline. Nature-based defenses contribute to higher coastal resilience, so coastal conservation and restoration actions should be taken to protect natural shorelines.

Thematic area 2:Preparedness and management of COVID 19 and climate change in cities

In addition to the impacts of climate change that are already being observed around the globe, recent pandemic caused by Covid-19 are affecting many spheres of our life and having an evident impact on carbon footprint of our cities. The sudden emergence of the pandemic and the evolving climate crisis are certainly two most important crises. Therefore, it is important to focus on proper planning and to implement efficient responses. It is necessary to have a collective understanding regarding the relationship between COVID and climate change so actions can be coordinated and efficient. It is a shared responsibility, because environmental impacts are transboundary. The corona virus affected everyone around the world and has also resulted in a cessation of trade, business and economic activities. Governments have responded to the pandemic in different ways. Hence, it is important to analyse the impacts of Covid 19 on environment and how it varies in different cities. Understanding this relationship can help approach the damage being caused by COVID in terms of climate change can save us from facing the consequences of inaction. The PanCanadian Framework on Clean Growth and Climate Change is Canada's plan that has been developed with the provinces and territories and in consultation with Indigenous peoples to meet emissions reduction targets, grow the economy, and build resilience to a changing climate. As for the impact of Covid 19, clear skies, reduced carbon emissions, and an improvement in air quality has been observed in some areas as consequences of quarantine. Whereas, some industries such as the aviation industry have been heavily affected by the global coronavirus pandemic. Because such industries and economic activities have come to a standstill, there is a potential positive impact on the environment. Similarly, the urban fabric of our regions is getting redefined majorly due to physical distancing regulations. The places, such as centers for social interaction that used to define the social life of a city are increasingly posing a question mark. This whole changing scenario clearly calls for construction industries to intervene. Beyond the next few decades, the largest uncertainty about the magnitude of future climate change is rooted in uncertainty about human behaviour, that is, how the world would choose to respond to COVID. This is why International Conference on Canadian, Chinese & African Sustainable Urbanization (ICCCASU) panel discussion seeks for us to be able to act as timely as possible.

***T2Pa: Covid-19 Breakout and Cities Prepared-
ness.*** Douglas Ragan and Miriam Ngombe pre-
sented their study on the topic of " Covid-19
Breakout and Cities Preparedness " during this
session. Co-design process with an eye on fu-
ture implications was the key focus of this panel,
which may help make the discussion more pro-
ductive.

Lessons learned:
*   Southern cities have been the most hit by
    COVID-19.
*   Forty percent of the population resides in
    slums, and many nations are susceptible to
    infection.
*   Programs are implemented to alter the per-
    ception of slums
*   The results of a questionnaire indicate that
    employment has not decreased as anticipated,
    and this high percentage of jobs that have not
    been lost is related to the prevalence of infor-
    mality.
*   Due to the application of limits, incomes are
    lower, and few individuals get government
    help.
*   The PSUP assists by providing options for
    pandemic response, as well as long-term mea-
    sures.
*   Handwashing was the most effective strategy
    to prevent the spread of COVID-19, thus sta-
    tions were established in Kenya and Uganda.
*   The organization and youth institution moved
    promptly to the pandemic: handwashing ini-

tiatives were able to reach a considerable por-
tion of the community within five months of
March 2021, particularly in Mathare.
*   Numerous priorities have been established
    (maintaining hygiene to prevent the spread of
    the virus, educating the public on the risk of
    a pandemic, improving the resilience of the
    local community, protecting human rights)
*   The construction of handwashing stations is
    overseen by a large number of young people
    who contribute to job prospects. This session
    allowed for the acquisition of knowledge re-
    garding the health situation.

Recommendations from discussions:
*   (1) UN-participatory Habitat's slum upgrad-
    ing project (PSUP) for a community-driven
    pandemic response comprises inclusive deci-
    sion-making, monitoring and evaluation, ca-
    pacity building, and enhancing resilience and
    knowledge co-production in Angola. (2) Ad-
    ditional development in informal settlements
    to enhance infrastructure and social amenities
    is essential for mitigating the impact of pan-
    demics and other possible catastrophes.
*
*   Community organizations in informal set-
    tlements in Kenya have a high capacity to
    respond to public health crises, and it is es-
    sential to incorporate youth-led groups inside
    communities. In addition to advancing and
    protecting human rights, it has been essen-
    tial to engage the community in sustaining

hygiene practices as a means of combating covid-19; to educate the public on the correct knowledge related to infection control; to increase youth livelihood and improve the resilience of the local community; and to increase youth employment. Disasters, such as the current pandemic, might be reacted to with more efficacy and responsiveness if communities are involved. In addition, a prerequisite for a successful community-led response is an effective multi-stakeholder cooperation.

T2Pb: Covid-19 and Climate Change. Ambilola Omolabi, Kamyar Razavi, Laïla Amraoui & Asia Laachir, Chalkasra Safaee, and Shaila Lolita presented their studies on the topic of "Covid-19 and Climate Change" during this session. Co-design process with an eye on future implications was the key focus of this panel, which may help make the discussion more productive.

Lessons learned:
- Urbanization is the root cause of urban climate
- Discussion of the difference between rural and urban heat islands
- Urban regions have greater surface temperatures than forested areas.
- Explanation of the causes behind these distinctions (albedo, absence of vegetation,)
- Argument against urbanization's impact on the urban climate (greening of urban areas, etc.)

- Creation of a territorial strategy in Morocco to fight the consequences of global warming
- Role of solutions pertaining to population engagement in the climate emergency
- Clarification of the causes and effects of climate change
- The intangibility of climate change explains why the majority of people did not believe in it.
- Not all reports on the climate problem have urged individuals to take action.
- Importance of connecting climate change to identifiable values, beliefs, attitudes, and social norms
- Growth of the social media element that promotes and celebrates excessive consumption
- Gender inequality can aggravate climate change risks
- Prominence in the institutional program that facilitates the formation of a women's group.
- Lack of knowledge among those responsible for executing gender-related activities, particularly at the village level
- The greatest impact of environmental climate change is felt by women in emerging cities.
- The significance of gender equality policies and strategies for their resolution
-

Recommendations from discussions:
- It is vital to provide the public with clear, reliable, and easily understood information on climate change. People must be able to relate climate change to their existing values, atti-

tudes, beliefs, and social norms. It is essential to consider gender equality when considering policy and practice.

- Do we observe tight relationships with the business sectors and environmental associations: a concentration on the primary sector, the ministries, and a belief that the greening of cities is helpful on many levels?
- Alternatives to planting trees: The most major factors affecting the water cycle, wind cycle, etc. There are several options, including aquatic solutions that allow the temperature to be lowered, solutions that include manipulating albedo to maintain the radiative balance, and the most successful solution, which is the solution using vegetation.
- Additional options for drought-stricken regions: ongoing development of remedies, desalination of saline water, but a compromise between watering trees and locating water.
- The reasons why the public does not comprehend the significance of climate change:
- Providing scientific knowledge on the climate catastrophe would be beneficial, but it is not the case.
- Because this issue is intangible, its impacts are not evident to the naked eye.
- To what degree do these ingrained male-centric perspectives inhibit these households' participation in climate action?
- Asia's policies on gender equality are quite progressive (men dominate)
- Due to the nature of their profession, some

women make little money and cannot support their families.

T2Pc: COVID-19 Breakout & Risk Assessment

Lessons learned:
- Having a proper plan for the layout where pedestrians typically travel (closed room, corridor, winding queue) can help reduce the rate of infection transmission.
- The way our urbanized cities are formed and function currently can be improved to help different scales of environments combat pandemics such as the one we are in today with COVID-19.
- Using the TOE Framework, it was shown how China had a better response to implementing health codes during COVID-19 due to the higher control of the government, more strictness, and more cooperative people.

Recommendations from discussions:
- For the environments simulated for this presentation, Tianyi Xiao recommended that:
- Closed rooms: Increasing entry and exit points can help reduce transmissions
- Corridor: Railings in the middle of the corridor can reduce contact and transmission
- Winding queue: Fewer corners and/or sideward separations between adjacent aisles can help reduce transmission.
- There needs to be more attention put towards the spatial inequalities during COVID-19

- More commitment towards long-term structural changes
- Evidence-based choices must be made so that health and wellbeing of cities can flourish.
- To have successful health code implementation to let citizens know if someone has COVID-19, there must be not only a high degree of technological advancement, but orderly management from the people and the government
- Without these two, the implementation of health codes would be ineffective

Thematic area 3: Forecasting and Forward-Looking Urban Risks Management: Managing Increasing Density, Diversity, and Mobility

The coronavirus disease (COVID-19) has been affecting cities and communities world-wide, threatening public health and upsetting the economic and social orders. Cities with similar densities and attributes of economic growth have had various degrees of success in limiting the spread of COVID-19. To effectively combat health emergencies such as that generated by COVID-19, risks associated with the management of density, diversity, and mobility must be identified. Many areas in developing countries with limited capacities, at all urban scales, require emergency responses to avoid the rapid spread of contagion. The urban poor are most vulnerable to risk in cities and are often left behind in emergency responses. Investing in urban risk management allows local authorities, organizations and policymakers to formulate efficient and effective strategies to strengthen preparedness for epidemics in cities and urban settings. The existing UNDP Strategic Plan (2018-2021) proposes a holistic approach to risk management, improved governance, multistakeholder engagement, and community participation. UNDP has implemented regional, multicountry, and national programmes on urban risk management with focused intervention in 75 countries. The Arab Cities Resilience Project is working on developing resilience indicators to measure progress in resilient building interventions in urban settings. Tomorrow's Cities focuses on reducing risks for the poor in 'tomorrow's cities' by catalyzing a transition from crisis management to multi-hazard, risk-informed urban planning and decision-making in the context of COVID-19. The expectation of the ICCCASU4 panel discussion is to establish a platform to discuss current urban risk management in relation to density, diversity and mobility. We will address a wide variety of concerns including the current lack of attention to the urban poor in emergency responses. It is hoped that the panel discussion will generate recommendations to local urban authorities.

T3Pa: Building Inclusive and Sustainable Cities
Yombi Ouedraogo, Alice Zua Nunes, and Jerzy Banski presented their studies on the topic of " Building Inclusive and Sustainable Cities" during this session.

Lessons learned:
*   Burkina Faso has a number of medium-sized cities and two large metropolitan areas, Ouagadougo being one of them. Over the past 50 years, Ouagadougou has experienced significant growth, which has resulted in spontaneous urban sprawl and a lack of upward growth within the city centre.
*   While many parts of the city centre of Ouagadougou have been well-planned to provide citizens with easy access to basic services, urban sprawl has resulted in the development of informal settlements devoid of such services. These informal settlements that are at high risk of flooding partly due to the buildup of garbage in drainage channels.
*   Many cities in Mozambique are vulnerable due to a lack of basic resources and services, including food, health, education, and transportation. When populations relocate into metropolitan centres, this places strain on the few services that remain.
*   The neighbourhoods of Pemba city are classified according to their socioeconomic characteristics, their susceptibility to natural calamities like as landslides, and their degrees of poverty. Comparatively, the neighbourhoods in the south of the city are extremely vulnerable, the neighbourhoods in the north have a moderate level of sensitivity, and just three neighbourhoods are less vulnerable.
*   Between 2008 and 2017, the number of small towns in Poland increased by 25%. The designation of small towns as settlement entities with town rights. While some municipalities are seeing population growth, the majority are experiencing population aging.
*   In Poland, population increase has been noted in and around major cities such as Warsaw and Kraków, whilst population decline has been observed in towns further from larger cities and closer to other regions' boundaries. The majority of population growth has been driven by the migration of older residents from cities to smaller towns, while many younger generations are leaving smaller towns for larger cities.

Recommendations from discussions:
*   Solutions to rapid urban growth in Burkina Faso must be localized to respond to regional needs, must be inclusive to implicate local residents in urban planning, and must go above and beyond administrative borders since growth is happening outside of city centres.
*   Planning for growth must incorporate economic, social and environmental protection and emphasize ensuring all populations in cit-

ies or in rural environments may benefit from this planning across Burkina Faso

- It is necessary to conduct fieldwork in the city of Pemba to validate the findings of stratified vulnerability between neighbourhoods and to engage local residents in understanding the challenges they face in order to inform policy responses to the situation.
- In order to reduce vulnerability and improve access to services, the local government of Pemba city should incorporate an analysis of the vulnerability of its various neighbourhoods into policy formulation.
- Possible investments could be made to improve transportation and social connections between densely populated and sparsely populated areas to encourage residents to remain in small towns.

T3Pb: Urban Complexity and Urban Development

Lessons learned:
- In urban infrastructure, the basis for achieving a balance between supply and demand is the demand structure, as well as the infrastructure's geographical and temporal arrangement.
- Population expansion, urban transportation, activity organization, pollution, and habitat degradation are all challenges associated with urbanisation in Mali.
- Bamako fails to ensure services to its popu-

lation
- The project intends to restore key locations of the state in order to decrease urban disfunctions and claim certain places for dynamic urban development
- The African business environment is more restrictive for Canadian businesses when compared to local business settings
- The majority of direct foreign investment in Africa is concentrated in four locations: Lagos, Tangier, Johannesburg, and Cairo.
- The majority of the African continent's global network connections are with Europe, as opposed to Asia and North America.

Recommendations from discussions:
- Solutions to demand in urban infrastructure include regional economic growth, policy consequences and coordination of network architectures
- The Schéma Directeur d'Aménagement et d'Urbanisme was put in place by the Mali government as a reaction to expanding urbanisation
- By enhancing the quality and quantity of its services, the government intends to densify the downtown area, boost Mali's attractiveness, and transform it into a premier destination for business, tourism, arts, culture, and international conferences.
- Canada should implement multidimensional initiatives in order to improve its economic position on the African continent.

T3Pc: Environment Comfort and Urban Space

Lessons learned:
- The planning of children active travel has been paid more and more attention, and children active school travel (AST) is an important part of children travel.
- A comfortable pedestrian environment can promote AST, and contribute to children's physical and mental health and development.
- Urbanization is a major anthropogenic transformation of land use.
- The built elements of the urban fabric strongly modify the amount of reflected or absorbed solar radiation, the distribution of wind flow and the water and energy balances at the earth's surface.
- Urban parks can be conducive to human health. A longer time spent in parks can reduce the risk for poor health.
- When collecting those perception measurements, the existing scholars usually employ the surveying approach. However, this traditional approach is costly and time-consuming, which limits the scalability to a few parks.

Recommendations from discussions:
- Strengthen the international significance of the case of Tianjing and make contribution to Assessment of Pedestrian Environment Comfort for Children Active School Travel.
- Approfondir les recherches de l'influence des matériaux de construction l'élévation de la température dans les trois cas de figure présentés.
- Clarify the definition of park, and make adequate dimensions to measure the park perceptions; Think about how to maximize the park benefits and make the community more harmonious and sustainable.

T3Pd: Cities facing Diverse Challenges

Lessons Learned:
Forecast decrease in coal consumption; increase in renewable energy generation in China
Employment in solar power sector expected to increase the most.
Peak emissions by 2030 forecast. Under business-as-usual scenario emissions will not peak by 2030.
Zhangjiakou taking actions to reduce carbon emissions through industrial/structural adjustments; transportation; through tourism sector.

Recommendations from discussions:
Promoting pro-environmental messages and discourses in China. China is the world's top emitter of CO_2 and addressing the climate crisis cannot happen without China. The presenters on this panel engaged with mitigation strategies on a national strategy level (Zhangjiakou and Beijing 2022 Winter Olympics) as well as on a hyper-local level (Nujiang Prefecture in Yunnan Province).

Thematic area 4: Privacy, Surveillance, Security, Governance and Collective Wellbeing

Privacy and security have become prominent issues in the 21st century, as rapid technological innovation outpaces our ability to absorb and adapt, while technologies themselves come to dominate many aspects of our lives. Personal data are collected everywhere and shared with those who have an interest. While personal data are tools for confronting new security threats at home and abroad, our sense of privacy is decreasing. The balance between personal privacy and collective security is increasingly important as we are integrating more technology into our lives. In this digital era, technology is used in almost every sphere of human activity. The adoption of the Smart City concept, intended to deliver more efficient urban services, and a safer and more ecologically balanced city, have technology integrated into city infrastructure, with information being collected and stored in every way possible. This explosive growth of data collection and storage have been heightened with urbanisation and the cities management. As people become more interconnected and populations more concentrated, they are subjected to a deeper level of (in)formal surveillance and control. Such information-gathering may be abused by governments' or private sectors' intent on public security and order in cities. While such information technologies may offer valuable tools for effective civic engagement and institutions' governance, they often infringe on the privacy and freedom of their citizens, ending the door to governments' intent on authoritarian control or market profiling. Privacy and security were discussed during the 73rd session of the United Nations General Assembly on Human Rights, which passed the resolution affirming the right to privacy in the digital age. They noted that all individuals, but especially children and women, are vulnerable and may have their privacy violated. It was also recognized that the right to privacy is particularly important for women and children, to prevent gender-based violence, abuse and sexual harassment, cyber-bullying, and cyberstalking. Striking the right balance between building and maintaining technologically advanced cities, while preserving the privacy of their citizens was recently developed in a 2018 article in Sustainable Cities and Society. Technology will only continue to evolve, and so will its use in cities and governance. Cities will continue to expand, and populations to grow, such that it becomes essential to establish sustainable and durable solutions to preserve citizens' and institutions' privacies in this increasingly technological world. ICCCASU4 panel discussion is an attempt to devise such solutions to make good use of new information by implementing technology in infrastructures in a way that

doesn't menace the wellbeing of citizens around the world.

T4Pa: Politics and Urban Development

Lessons learned:

- Social media has been utilized as a political weapon in Uganda, mainly during election years. While the government used social media to control the narrative during the 2021 election and has used tools to restrict its opponents' use of social media, opposition candidates also utilized social media to expand their movement.
- The use of social media by political opponents of the Ugandan government has provided a chance to strengthen democracy by giving a forum for the voices of activists and young people.
- Political spaces may also be understood and analyzed as geographical regions. In China, the Danwei system was created as a place for people to work and live and served as a mechanism to preserve social order, whereas the community system promoted community-led initiatives and a reorganization of citizens.
- Neighborhoods and community spaces can be a field of power interactions, and geographic rescaling has political and power distribution implications as well.
- Unhealthy living conditions and slums are an issue in Morroco which The Cities without slums initiative begun in 2004 has considerably decreased. Initiatives such as the successful mobilization of land reserves, a significant public budget and government compliance, revisions to the real estate tax system, and the establishment of public-private partnerships contributed to its success.

Recommendations from discussions:

- Social media can be understood as a vehicle for public interaction that may generate influence beyond the official civic arena, but its lack of verification processes and unequal access might be problematic.
- The experience of decreasing slums in Morocco can be replicated abroad, albeit certain prerequisites must be met, such as the state's willingness to intervene, adequate funding, and favourable real estate circumstances.
- The development of housing initiatives, such as the Cities Without Slums program, should use an academic/scientific approach to resolving housing concerns and involve citizens in this effort.
- Power and political decisions are crucial to growth and may produce either order or chaos. Power may be comprehended in both physical/geographical and online virtual realms.

T4Pb: Theoretical and empirical analysis of Urban development

Lesson learned:

- Covid 19 and the pandemic-related measures have displaced crime in the city of Ottawa.

Population mobility can be used as a proxy to identify crime pattern change.

- To show the dynamic mobility of the people, the traditional census data is not efficient. Other useful data that can be used is OPS 911 calls, land use, social media …
- Land information system can help resolve land conflicts in order to strengthen the access rights of rural actors to land and to promote the rational and sustainable management of natural resources in a more efficient coordination.
- Urban agriculture can be a resilient solution to face the sanitary crisis of covid 19: it can be a response to the increase in prices of food and creates a social link for peoples who are isolated and far from their families.

Thematic area 5: Health Crises in Cities: Learning from the Past and Planning for the Future

The topic of health crises in cities has gained increasing attention in recent years due to the growth and urbanization of many regions around the world. The concentration of populations and unequal distribution or lack of resources augment the risk and impact of these health crises. Amid the coronavirus, economic and social repercussions of health crises have become very apparent, especially if they aren't managed properly. These crises are often linked to loss of life, as well as deterioration of the overall health and economy across one or more geographic locations. Urbanization has amplified the problems caused by health crises; cities are growing at an alarming rate and this leads to an uneven distribution of populations and a disorganized urban landscape. It also often signifies that not everyone has equal access to resources to help mitigate challenges that result from these crises. Urban planning has become an important discussion in the midst of the coronavirus as many businesses around the world have been forced to shut down or operate at reduced capacity. However, the link between health and urban development has been known for some time. For example, the World Health Organization hosted a consultation in 2008 to discuss the role of cities and suggested guidelines for cities in case of an international infectious disease crisis. They are also responsible for the creation of the International Health Regulations, a series of regulations created to help prevent, control and protect against health risks that have been adopted by 196 countries around the world. As urban populations continue to grow, the development of cities can either help or hinder our response to health crises. Global experiences with the coronavirus have emphasized the need to incorporate a healthcare perspective into

urban planning and development in order to effectively deal with current and future health crises.

T5Pa: Urban Health in the Era of Covid-19

Lessons Learned:
- Corporate Social Responsibility (CSR): an element of company engagement with local communities
- There are other options for companies to use CSR, such as supporting local communities during crises and protecting human rights and the environment
- Companies in Africa face difficulties concerning CSR activities, where they lack social and environmental elements or face conflicting interests of local communities and government
- There are no African states with comprehensive approaches for the creation of cities with the use of CSR; Those who try have minimal effort
- There are little to no African companies/ companies headquartered in Africa that take significant efforts to help resolve COVID-19 related problems within the community; Construction companies in South Africa have shown to consider CSR
- Effective contact tracing is often inaccessible at the neighbourhood-level
- There is an inadequate amount of vaccines in hot spot regions
- There is a lack of education-oriented and culturally tailored programs

- With emerging urbanization, it requires pro- pre infrastructure to support it
- There is a lack of vaccine equity research for visible minorities that can contribute to future programming
- It is necessary to create an environment attracting new investment and practices where there are affordable financing mechanisms
- A shift from international import dependence to domestic can allow the government's development of its own industrial ability
- Decentralized/stand-alone energy systems can contribute to facilitating energy access to the urban poor; solar PV systems can be used in various facilities
- There should be a shift toward renewable energy, smart grids and energy storage
- Low energy consumption lifestyles, resilience, and a circular economy can contribute to more sustainable energy use for the urban poor

Recommendations from discussion:
- CSR drivers should be based on specific cultural traits – companies could better accommodate African cities during COVID-19 based on cultural needs
- Integrating social expectations into CSR initiatives could help companies provide the most demanded products and services
- Institutions should support local businesses – helps stimulate economy
- CSR disclosures should include COVID-19

related statements, as the companies are more likely to follow through on promises
- Companies should review their governance for quality based on societal expectations
- There should be increased routine and collection of socio-demographic data to better plan vaccine distribution to minimize inequities
- Precarious workers should be provided with greater accessibility to vaccines, rather than having them rely on 24-hour vaccination centres
- Areas most affected and with vulnerable populations should have targeted contact tracing and testing
- Multigenerational households should be a higher priority for vaccinations, as they are a more vulnerable group
- Vaccine efforts should engage local communities through policy-makers and scientists to build trust in a respecful/culturally-involved manner
- Vaccine efforts should be provided in all majority languages and translatable for minority languages in order for communities to fully understand the implications of the effort
- Improving and adding natural ventilation in new developments
- There is a need for proper planning by phasing out slums and preventing crowdedness
- There should be a proper handling of municipal waste
- Encourage local good production and consumption while promoting a zero km approach

- Encourage off-grid energy generation

T5Pb: Urban Development in the Post-Covid Eras

Lessons learned:
- Covid 19 affected all of the aspects of urban resilience in Iran and in metropolitan cities like Tehran.
- Economic resilience is the key to urban resilience in Covid-19.
- Recovery process diversity can also provide variety of economic resources and services support.
- The annual GDP of the assets object selected for representation and local fiscal budgets and total task revenue of the regime not only provide financial guarantee to prevent harm from pandemic and support urban recovery and construction but also help solve problem related to employment resilience especially after an emergency.
- There has been historically more foreign investments, the reduction caused by Covid-19 will increase the difficulty urban economic recovery.
- Most African cities share common post-independence challenges in relation to urban development issues shaped by low level economy and high level of poverty and employment rates among young.
- Conjoining urban rapid growth, natural di-

esters and Covid-19 pose a meaningful threat to progress towards achieving SDG 11, which is aimed at making cities and human settlement inclusive, safe, resilience, and sustainable.

Recommendations from discussion:
- Take advantage of a foreign urban resilience research such as the Rockefeller foundation
- The government should support the development of urban resilience by learning from other countries and working together to improve the overall resilience of the region and fully observe the challenges of international community.
- Need to actively take part in the construction of the pandemic related meetings and learn from latest research result and practical experience of their own urban past about the economy.
- Improve quality of the residential environment and improve the medical infrastructure and expertise the doctor to better address the pandemic by increasing physician literacy illustration and professional knowledge to promote metropolitan area.
- Region should straighten and interregional transportation and communication facilities to improve interregional road and information to ensure circulation and connection between areas of high resilience index and those with a low resilience index.
- Provide funds for technology with high qual-

ity information, privilege, and control experience to areas with low resilience in a timely manner to effectively respond to Covid-19.

T5Pc: Health Issues and Urban Patterns

Lessons learned:
Uncovering the Spatiotemporal Pattern and Geographical Equity of Pharmacies in Chinese Cities from 2008 to 2018
- Spatial pattern and changes characteristics:
o The average annual premises growth rate from 2008-2018 was 20 % in China.
o The number of pharmacies differed significantly on both sides of the Hu Line.
- Assessment of availability
o The NPP of Chinese pharmacies increase from 0.5 to 3.
o The NPP high value area shifted from economically developed cities to less developed.
o The NPP low value areas over the eight minority autonomous region in west China.
- Pharmacies availability (NPP) in countries:
o European countries; 0.5 in Denmark to 7.8 in Greece
o South African; advocated NPP is >1
o New Zealand; 2.2
- PDI
o Pharmacy statistic index annual growth rate is 19%.
o Urban PDI differs significant on both sides

of the Hu line.
- Spatial disparity and distribution
o In 2018, city level PDI showed a clustering pattern.
o 42 significant hotspot cities clustered in the pearl river delta region.
o 22 significant cold spots cities distributed in the middle and upper yellow river basins.
Using open-access data to explore the relationship between urban morphology and diarrheal diseases in Côte d'Ivoire
- The third settlement data are the nightlights captured by NASA earth observant, provides earth images at night for the year 2016 , contain intensity of night illumination, suggest infrastructure and human activity.
- High illumination low density = well structured.
- High density poor illumination =precarious areas.
- The correlations of precarious areas and croplands are impacted by the level of education and level of urbanization.
- Correlation get systemically stronger with lower level of education.
- Water and sanitary are not sufficient enough to prevent disease.
Appraising the impacts of covid 19 and climate change on urban residents in Lagos, Nigeria
- Socio-econ characterises summary:
o Occupation-highest (45%) engaged in informal activities.
o Income- 52% below the minimum wage of N30,000 app. $73 per month.
- Flooding issues
o High level of flooding caused mostly by man-made activities (88%).
o Coping mechanism: use of woods, desilting of across board individual, community, and government.
- Housing quality assessment
o Access to quality housing will migrate vulnerability.
o Lack of infrastructure and services aggravated by overcrowding associated with greater speed of Covid-19.
- Good urban governance
o Enables every citizenry to have access to necessities of urban life including adequate shelter, safe water, sanitation, a clean environment, and health.
o Ensure adequate preparedness against imminent disasters risk and pandemic reduction, measures such as establishment of emergency operation centers.

Recommendation:
Uncovering the Spatiotemporal Pattern and Geographical Equity of Pharmacies in Chinese Cities from 2008 to 2018
- The policy makers should implement differentiated pharmacy allocation strategies according to different regions.
- Should use POI because it provided accurate and real time support for the study of pharmacist distribution.

Using open-access data to explore the relationship between urban morphology and diarrheal diseases in Côte d'Ivoire
-        Should investigate land use and morphological indicators as potential risk factors for diarrhea.
-        If space reflects socio-economic and living conditions that are risk factors for many diseases, it should be looked at as a primary variable of exposure in health studies.

Appraising the impacts of covid 19 and climate change on urban residents in Lagos, Nigeria
-        Good urban governance:
o   Need to embrace urban goods about governance.
o   Urban regeneration: we need it and has to be put in place and we have to embrace the concept of the one stop shop.
o   Embrace the concept of greening the environment like parks, gardens, and more to control the maintenance of urban flooding at landscaping and then finally special planning.

Thematic area 6: Housing: Access, Affordability and Informality

Access to housing is among the most difficult challenges facing cities. Is housing a right or a commodity? Among the issues are supplied, quality, location, affordability, title, tenancy and security of tenure, and the infrastructure required to support housing. Problems of affordability are as likely to affect stable, wealthier cities as they are those in rapidly urbanizing countries. This session will compare housing access and affordability as they play out in cities in Canada, Africa, Asia and Latin America. The conclusions drawn and the strategies formulated will depend on how the issues are framed, i.e., whether housing is seen as primarily as a need, as a right, and/or a means of wealth creation and social mobility. Approaches will depend on those for whom the housing is intended, and whether it is considered a private/domestic affair, a matter of public concern and social responsibility or as a vehicle of speculation and a commodity to be traded in the marketplace. It will depend on whether housing is treated as a noun or as a verb. The session will distinguish between various categories of housing and the various agents that produce them.

T6Pa: Affordability Housing and Informal Settlement

Lessons learned:
- The housing sector has seen several paradigm shifts in its approaches to addressing informal settlements and provision of affordable housing. Mixed income housing emerged as a means of addressing shortages in affordable housing and poor quality subsidized housing.
- A Delphi approach to find consensus among housing experts from two mixed-income development projects in South Africa found large consensus that delays in town planning approvals and land use regulations affect these development projects heavily. There was also strong consensus that strong intergovernmental relations are a necessity in delivering mixed income housing development
- Urbanization is taking place rapidly around the world, and in areas like Angola it is happening in conjunction with a lack of a formal housing market. In Angola, past attempts to develop formal housing projects have benefitted the country's wealthiest residents and not the poorest majority.
- The settlement of Yanhucang located outside of the city of Ninjang in China is a demonstration of how the designation between informal and formal settlements is not always clear. This settlement has informal characteristics and those of a formal settlement including

regulations that govern it. This settlement can therefore be considered semi-formal.
- Due to the homestead certificate that initially governed the settlement, properties cannot be sold in a formal market in Yanghucang, instead they can only be rented through the informal market. As population increased, more properties were constructed, some illegal, to form a now compacted area.
- Chinas previously took the approach to impart with these forms of settlements in favour of higher density cities, but now does not plan to remove this settlement, and instead is working to remediate it
- The morphological structure of settlements is not always fixed, and it changes through time. Further, institutional causes should be considered as playing a role in the morphology of settlements.

Recommandations from discussions:
- Strong intergovernmental relations are required in developing mixed-income housing projects. Also, other challenges must be resolved to address housing challenges such as inclusion, good governance, and integration. Mixed-income housing can combat social and economic problems, and integrating very low-income individuals with mid-income individuals is recommended to promote social growth.
- Many recommendations can be made in constructing affordable housing in areas like An-

gola. One would be mid-density buildings of 5 stories with several blocks connected by pedestrian paths. Another is to accommodate incremental growth so that the aims of buildings can change to meet the needs of the community. An example of this would be parking garages that can be converted into retail space.

- Semi-formal settlements such Yanghucang in China could become valuable to the state and seen as worthy of preserving, but this could lead to gentrification and an expropriation of the low income residents who depend on the low-rent properties. Policies should consider where these often migrant populations will live and should consider the relocation rate of housing projects.

T6Pb: Urban Governance and Housing Cost

Lessons Learned:
- The National Program for Urbanisation and Housing (NPUH) in Angola relies heavily on conventional housing, which does not address the needs of the poor
- There is a lack of support for owner-builders responsible for delivering two thirds of NPUH housing – their financing comes from family or their own savings
- Social production of housing without the State's support has produced the same volume of housing as almost all other sectors combined
- Owner-builders do not hold a legal title or

regularized occupation, which takes years to obtain, disqualifying them from bank mortgages
- Angola's weakness lies in its poor evaluation for project performance as it fails to provide improvements to be used in future programs
- Real estate is an important pillar in China's economy, in which it continually increases in contribution to GDP over the years; Second-hand housing has become a large component of real estate market transactions
- Shijiazhuang is a second-tier city, whose development has attracted much attention
- The spatial distribution pattern of housing prices in Shijiazhuang is a single-centre concentric circular distribution pattern
- The housing price spatial distribution pattern is influenced by living environment, traffic and roads, as well as land use distribution and policy
- Factors for POI data in Shijiazhuang include basic education, business service, medical health, and financial insurance

Recommendations from discussion:
- Important urban reforms include the simplification of land administration and the approval of housing finance
- Monitoring needs to improve beyond tracking housing delivery in numbers
- It is necessary to question who benefits and who is left behind
- Evaluation and policy-making are essential to

improving housing
- The needs of the poor are best served by social production of housing and the upgrade of informal settlements
- There should be less reliance on foreign contractors as local employment can be generated through building trades
- It is necessary to support increasing populations through the development of denser housing and greater accessibility to first-tier cities and surrounding areas
- Facilities such as medical and commercial centres should be accessible from all areas to reduce housing price disparity
- Public transportation and education/schooling needs to be well developed and distributed to attract
- Studies and research demonstrating public housing and its pricing data can contribute to policy-making at the government level
- Since real estate is pillar of the Chinese economy, the government should invest more of its focus in that sector
-

T6Pc: Public Policy and Homelessness

Lessons learned:
- In the past, people who experienced homelessness were thought of as being transient, so it was thought that homeless migrants would deplete municipal resources and in response some communities adopted policies to limit homeless resources to local residents.

- Recent research on the migrant population of people experiencing homelessness in Canada from 2008-2017 found that large municipalities with populations of more than 300 000 accounted for roughly 64% of shelter users and that homeless migrants tend to move to similar or larger sized municipalities.
- Seasonal variation in homeless migration trends were minor but in general, migration of people experiencing homelessness in Canada is highest in the summer and lowest in the winter
- There are three key pillars of efforts to end homelessness. The first is called primary prevention and it aims to stop people from becoming homeless. The second is to stop people from returning to homelessness after experiencing it once and the third is to end long-term homelessness.
- The reasons for why first-time shelter users use shelters are more varied than for those who are chronic homeless shelter users. First time users are more likely to report eviction, broken relationships, being new to an area and abuse as reasons. Recurrent users are more likely to report a few reasons like lifestyle and substance use.
- The compositon of existing primary and secondary strategies to end homelessness in Canada are not sufficient to meet the needs of those experiencing financial and substance use issues.

Recommandations from discussions:
- Policies aimed at addressing homelessness need to understand the factors that contribute to the entry and exit pathways of people's first experience of homelessness
- Housing should be seen and treated as a basic human right. Everyone should have a home to live in.
- Emergency income benefits like CERB can help prevent homelessness during recessions, but more long term approaches are needed to combat homelessness.
- Housing first policies should be prioritized to help reduce homelessness rates. Housing first policy is where housing is provided to people epxeriencing homelessness in conjunction with support for other problems such as mental health and substnace use issues.
- Issues of poverty and rights are large factors that influence the right to housing and therefore the issue of homelessness, and should be addressed in order to end homelessness.

Special Panel a01: Cruise Tourism: Interests and Limits of a Model
Lessons learned:
- Cruise industry expanded before the pandemic
- Big competition between industries
- The Caribbean Sea is the first to welcome cruise tourism
- Preference of private islands for more security
- Dissatisfaction of the populations in regards to the monopolization of local tourism by the cruises
- Difficult negotiations between the public authorities and the cruise industry
- Cruise tourism presents many environmental challenges:
    Water pollution
    Emissions of atmospheric pollution

Recommendations from discussion:
- Build another model of tourism by involving local actors
- Take an interest in local tourism to benefit the populations
- Encourage domestic tourism
- Integrate local populations by consuming local food or doing local activities

Special Panel a02: Impacts of COVID-19 in Caribbean's Islands: Lessons and Perspective

Lessons Learned:
- There is a difference between a space and a place
    Space = abstract
    Place = how people see/experience a space
- A State of Play is when public spaces are used for activities that were not intended of the space specifically
- Public spaces hold many different meanings for different people
- Parque Minhocão in São Paolo and Redtown

in Shanghai were both public spaces where a State of Play occurred (different use of space than what was intended)
- Governance is not the same as governability, much broader
- Not much urban governance projects that are targeted at developing countries

Recommandations from discussions:
- Creating bigger ports in Cuba (however this brings up concerns and debates around whether this industry and form of tourism is sustainable)
- During the COVID-19 pandemic, public health must continue to be prioritized in the Caymen Islands
- The island's luxury tourism is heavily reliant on it's loyal clientele that return to the destination during it's peak seasons ; because luxury inherently has discriminatory pricing which is only accessible to the elite, this status must be maintained. The luxury status associated with Saint-Barthlémy's tourism has proven to be beneficial during the COVID-19 pandemic as the elite/loyal clientele have had enough confidence in the sanitary measures put in place to return during the pandemic
- Reinforcing exclusivity for certain zones and resorts
- Carribean countries turn to the diaspora for aid and ressources when tourism is significantly impacted (ex: due to the pandemic or natural disasters)

- Increasing eco-tourism which involves: preserving the environment (nature and culture), improving the quality of life for those involved in economic activities, educating tourists about respecting local societies (responsible tourists), increasing community based tourism which involves the implecation of host societies (participation of host societies), preserving ressources and respecting host societies through sustainable development (durability), establishing more equitable reports
- Parque Minhocão and Redtown show how definitions are fluid, public spaces are playful and can take on many characteristics usually rooted in arts and sports
- Analyze international development projects that claim to target urban governance
- Learn best practices from successful governance projects in the past
- Projects should create the best governance models for cities based on their context

ICCCASU

4th International Conference on Canadian, Chinese, and African Sustainable Urbanization
4ème Conférence internationale sur l'urbanisation durable au Canada, en Chine et en Afrique

Density, Diversity, and Mobility: The City in an Era of Cascading Risks
Densité, diversité et mobilité: les villes à l'ère des risques aggravés

28 - 31 July/juillet, 2021
Montreal/ Montréal, Canada (virtual/virtuel)
English and French/Anglais et français
Coordinators/Coordonnateurs: David Covo, McGill University & Tonton Mundele, Global Affairs Canada

Webinar

**Dialogue on Rethinking the Post-Pandemic City/
Dialogue pour repenser la ville postpandémie
29 July/juillet, 2021, 8:00 - 9:30 AM ET**

Moderator/ Modérateur
David Covo

McGill University,
Canada

Moderator/Modérateur:
Denise Piché

Université Laval,
Canada

Special Guests/ Invités d'honneur

Vikram Bhatt

Professor Emeritus,
Peter Guo-hua Fu
School of Architecture,
McGill University,
Canada

Mary W. Rowe

President & CEO,
Canadian Urban Institute,
Canada

John Zacharias

Chair Professor,
Peking University,
China

Li Zhang

Professor,
Dean of School of
Architecture,
Tsinghua University,
China

René Joly Assako Assako

Vice-Recteur,
Université de Douala,
Cameroon

For more information, visit: icccasu2021.org

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Webinar

Dialogue on Housing Access and Affordability /
Dialogue sur l'accès au logement et l'abordabilité
29 July/juillet, 2021, 10:00 - 11:30 AM ET

Moderator/Modérateur
Allan Cain

Development Workshop,
Angola

Moderator/Modérateur:
Benjamin Gianni

Carleton University,
Canada

Special Guests/ Invités d'honneur

Kecia Rust

Executive Director of
the Centre for Affordable
Housing Finance in Africa
(CAHF), South Africa

Zhi liu

Director of China Program,
Lincoln Institute of Land
Policy,Peking University,
China

Anacláudia Rossbach

Regional Manager for
the Latin America and
Caribbean, Cities Alliance,
Mexico

Patricia Roset-Zuppa

VP Policy, Canada Mortgage
and Housing Corporation,
Canada

For more information, visit: icccasu2021.org

Special panel a03: Haiti's Dilemma, from One Crisis to Another

Lessons learned:
- Highlighting Haiti's dysfunctions (security, nutrition, gangs).
- Study aimed at evaluating the role of the diaspora in the development of tourism in Haiti, especially the northern region and the northeast.
- Definition of the diaspora and tourism. Cultural attachment is also reflected in remittances from the diaspora
- Return of tourism growth with the arrival of the Haitian diaspora which represents a great contribution to the Haitian economy
- Haiti is experiencing natural disasters that have cost it lives as well as the destruction of several infrastructures
- Port-au-Prince is experiencing social but above all urban problems
- Cannan has no or very little urban development (no drinking water, health services, etc.)
- Structural, economic, health and environmental vulnerability exposing the population to unfavorable situations in Canaan

Recommandations from discussions:
- Statistics relating to the diaspora present in Haiti: The Haitian diaspora is around 1 million to 2 million

- The causes of the various vulnerabilities observed in the presentation:
- The country faces the hostility of foreign powers who tend to impoverish the country
- Construction of the country on the basis of the dysfunctions present there since the beginning of the country's independence
- The decision on the relocation of the inhabitants of the zone victim of earthquakes, was not prepared and thus led to the observed consequences
- No measure taken by the government for the development of the area which was to receive the victims of the earthquake, the population reorganized by themselves

Special panel a04: The Impact of COVID-19 on Tourism and Mobilities: Comparative Regional Approaches

Lessons learned:
- To revitalize ruralisation, there must be construction of ruralize cultural ecosystems
- There is still more work needed for the rural landscape construction
- Only in initial developments

Recommendations:
- To imporve rural landscape construction, there must be more practical, scientific, and sustainable decisions made
- Be more timely with planning and arrangements

Special Panel b01: Community-Based Initiative and Transformational Planning

Lesson learned:
- The need/possibility of spreading virtual workplaces and commerce
- the need to consider some restrictions produced by the pandemic in the coming years such as social distancing and in the economic sector the growth of e-commerce.
- the need to consider the benefits and criticalities of the above topic considering not only the spread in America but also in Europe and Asia.
- Normally, neoliberal planning depends on physical demand, whereby people move themselves to purchase items. The COVID-19 pandemic has changed this in favour of virtual demand through e-commerce.
- There is now a blending of physical and virtual demand that companies have to keep up with. Companies must be able to provide services online as well as sell goods at physical locations, at the threat of losing business. The closing of stores such as Sears demonstrate the necessity to cater to virtual demand
- The COVID-19 pandemic also prompted a shift to virtual work, allowing many people to stay at home. This will be a transformative force in spatial planning in the future and in terms of land use as there will be less of a need to invest in office spaces. This was demonstrated through the high vacancy rates in office buildings during the COVID-19 pandemic
- The rise in popularity of E-commerce is partially due to behaviour changing in response to COVID-19 restrictions. Despite this, has not been positive across the board. In some instances, local shops (for example, in Italy), are the lifeblood of communities and also serve as gathering spaces. Many of these shops are harmed by e-commerce, and community cohesion is threatened by this as well. Despite this, the pandemic has shown citizen's resilience and ability to find ways to gather and maintain relationships despite public health restrictions.
- This shift to e-commerce and virtual work may be compatible with the idea of 15 minute cities in that people can save time working from home and ordering goods virtually. These two things then may afford people the time to spend in their community on recreational activities, which could be centralized in nodes as opposed to fostering more urban sprawl.

Recommandations from discussions :
Increading Analysis of the benefits and criticalities of the diffusion of "virtual" workplaces and e-commerce
Definitions of the implications on the mobility and the urban planning

Definiton of the correlation with socio-cultural aspects

E-commerce and virtual work provide a number of benefits to many people, most notably through saving time, reducing emissions from commuting and travelling to purchase goods.

Research will need to consider the advent of e-commerce and virtual work and how these might impact land use and urban planning in the future.

Multi-modality, safe public spaces and active transportation need to be encouraged and invested in by municipal governments in order to foster sustainable means of transportation within cities.

Since roads are a large source of GHG emissions, alternatives should be supported and the number, size and development of roads should be downsized.

Since it is difficult to determine what the impacts of this shift to virtuality will look like across all cities, and a case-by -case examination of individual towns and citities is necessary. For example, large cities like Vancouver have seen a shift toward investments to cope with virtual demand, but this may not be the case across cities.

Special Panel b02: Planning, Mobility, Built Environment and Real Estate Development

Lesson learned:
• It should prioritise public health, disaster resilience, and environmental protection in future planning studies

• As livelihoods and lifestyles are changing due to COVID-19, existing urban plans and the real estate sector plans should revise to attain resiliency/sustainability in the future.
• Provide enough importance to landscape, aesthetics and nature based solutions in the sectors
• Government should delineate some priority projects (for instance contactless technology, information driven technology) as real estate sector is one of the highest contributing sectors in GDP in Turkey.
• The results lay the foundations for optimised planning, better management of the development of related technologies and services for sustainable transition and future.
• It seemed that city in 15 minutes" paradigm could be applicable not only in European cities but also in other Asian cities also.

Recommandations from discussions:
• There is a need for a clear mandate for the industry to transition to a future where future spatial planning, built environment and real estate are integrated with a sustainable, resilient and affordable manner.
• As covid 19 is slowing down all socio-economic development progress, therefore, there should action plan or business continuity plan to overcome the existing challenges as well as need to prepare strategic plan to overcome future uncertainties and challenges in the sectors/firms like real estate, urban planning and

built environment.
- Transportation systems and the existing urban plans should be reviewed.
- The "city in 15 minutes" paradigm for planning the mobility and cities is perceived a new way of living, both during and after the pandemic. Many big cities and smaller cities launched this new "trend" and it seemed that is based on the fundamentals of usefulness of time.
- Four key elements such as ecology, proximity, solidarity and participation are found effective in the city in 15 minutes" paradigm.

Special Panel d01: China-Africa industrialization, urbanization and planning experience and cooperative research

Lesson learned:
- The main results of the papers are about the governance of African Megacities, urbanization driven by industrialization, the development of local industrial parks in African countries, the evaluation and adjustment of industrial land, the micro-creative industrial enterprise locational choices, city-industry integration, and China supported overseas industrial parks in developing countries including a few African countries.

Recommendations from discussions:
- To understand the difference between larger cities and low-tier cities in their implementa-

tion of the city-industry integration strategy;
- To better integrate the element of people in China's city-industry integration;
- To advance the understanding of the challenges in exporting China's ecological industrial parks overseas;
- To advance the undertstanding of the major differences in building ecological indistrial park between China and industrialized countries;
- To give more consideration of the pandemic in the city-industry integration.

Special Panel d02: Development and planning of China's overseas industrial parks along the Belt and Road initiative

Lesson learned:
- China's industrial zones in Africa are key places where cities and industry encounter, but these dynamics are not primarily driven by the government, nor by Chinese state-owned enterprises.
- Private investors are dominant in the industrial parks. Investor influence on city-industrial integration thus unfolds through a gradual, piecemeal process.
- Partnerships between Chinese companies and African governments have created new urban forms and linkages. But cannot compensate for the governance of higher-scale city-industrial linkages.
- Industrial parks are mostly built around big

cities.
- SWOT Analysis is a good way to analyze the development of industrial parks.
- The prospect for the development of industrial parks in Kenya is a good description of how industrial parks evolved and developed to their final form. The number of industrial parks will increase, and then variants such as science and technology parks will appear, SMEs will exude vitality to attract domestic and foreign enterprises, the expansion of industrial parks will continue to develop business to secondary cities and small towns, and develop an economic corridor between cities, promoting urban exchanges between them.
- Transportation corridors are very important for industrial parks, because there is a need for communication with the outside world.

Recommendations from discussions:
- Railroads may cause concentration of population, but not necessarily concentration of capital.
- Some countries have different government coordination mechanisms than China. Some local governments do not directly follow orders from the central government, and some places do not have local governments.
- It should be noted that the administrative and practical methods of other countries may be different from those of China, and the Chinese model cannot be arbitrarily applied without understanding the political system and local situation of other countries.
- Communication is very important for urban development. Disagreement between two sides may cause a good plan to be abandoned, but the problem can be adjusted through some mechanisms.
- Transportation corridors (railways) and industrial parks do not develop independently. The interaction between them may affect the development of the political system, GDP, and population of the entire country.

Special Panel d03: China and Africa industrial park development experience

Lesson learned:
- The main results of the papers are about the micro-creative industrial enterprise locational choices, city-industry integration, and China supported overseas industrial parks in developing countries including a few African countries.

Recommendations from discussions:
- To understand the difference between larger cities and low-tier cities in their implementation of the city-industry integration strategy;
- To better integrate the element of people in China's city-industry integration;
- To advance the understanding of the challenges in exporting China's ecological industrial parks overseas;

- To advance the undertstanding of the major differences in building ecological indistrial park between China and industrialized countries;
- To give more consideration of the pandemic in the city-industry integration.

SPe01: inclusive cities in Latin American

Lessons learned:
- The arrival of people is characterized by large inequalities, processes of land dispossession, and violence.
- Lots of work at the municipal level have addressed the social diversity and complexity recognise need for service and important of understanding the tensions of the forced encounter between different groups of people in poor urban settlements.
- The state plays a major role in the root cause in displacement and using repression to criminalize and police these communities who sought refuge in cities; hard for local authorizes to gain trust that is needed for successful cooperation.
- High level of street and organized crime.
- Homicides are concentrated in poor urban areas.
- Many police institutions share:
- Low levels of citizens trust and efficiency in either crime control or prevention.
- High level of personal corruptions practices and discretionary use of force.

- Corruption is linked to inefficiency in crime control and protection.

Recommendations from discussions:
- Interventions should target both migrant populations and local communities to aim to create social cohesions and diffusing existing tensions.
- Design projects that put kids at the center have the potential to transform social relationships favouring social cohesion, child well-being and rebuilding trust between community and the local authorizes.
- Important to see how we can support municipalities in the region to address this situation and the challenges.
- Need to open up integration centers and incorporate new functions and services and these places are actors in community in the government, they are divers for neighbourhood transformation and spaces for social care and protection.
- Reconfigure existing road profiles to allow for different types of mobility and for changes of transport systems in an efficient grid.
- Need to measure the impact within those innovations, the marker, and the concrete ways to integrate the different communities.

SPe02: Urbanity and Governance in Brazil

Lessons Learned:
- The state of play in a space highlights its vi-

tality
- Public spaces accumulate memories, physical evidence of evolution in a city, and sites of people's pasts
- A taskscape changes over time with people, whereas a landscape fails to co-evolve with human activities
- Parque Minhocão evolved into a public space through the years with traffic elimination
- Elements of play are embedded in Parque Minhocão as signs of human presence, where interactions and habitual leisure patterns are happening
- Poorly governed cities create unfavourable conditions for all classes
- Informality, inequality, environmental degradation and poor economic development are all directly related to governance
- The size of a city does affect certain variable and income groups in different ways
- Good urban governance is crucial to bringing citizens out of poverty
- There are four concepts/perspectives of governance: State-centered, polycentric, neo-Marxist, and global governance
- International actors and context influence urban governance in developing cities (multinationals, international NGO's, terrorism and ideological pressures)

Recommendations from discussion:
- Public space needs to be perceivable as public by people to succeed

- One way to facilitate community actions and free play is through unplanned mixed-use heterogeneous urban space – its destruction lowers the likelihood of spontaneous play
- It is important to include local traditions and work with existing architectural elements when creating a space to avoid commonality
- Being culturally sensitive is necessary in place-making in order to create unique and authentic spaces
- Incorporating community values in the creation of a living space can reflect how users see the world as it is a manifestation of life experience
- Top-down and bottom-up approaches need to work together to contribute to decentralization
- Individuals must have a civil conscience to protect their own city
- Citizens' participation must be encouraged and considered in the decision-making process to have a voice in the governance of their own country
- International aid and support can contribute immensely to better accountability and governance in developing countries
- Urban governance theories for developing cities should address nepotism, cronyism, and clientelism

Conclusion

Conclusion

By Dr. John Zacharias
Chair Professor, Pekin University, China

Calls in recent years to address a growing number and severity of global crises failed to generate response in a time of "comfort and indifference", at least until the global health emergency generated by the pandemic. The retreat to isolation and the deferral of action until better days characterized much of the response from authorities, while mitigation measures attempted to minimize the fallout. It is precisely in such a time that societies need the long view, science and serious reflexion, yet many academic conferences that could have provided such insight were themselves postponed or cancelled. It was in this context that ICCCASU forged ahead with the preparations for a hybrid conference in the midst of a crisis that had no clear end in sight, with the precise intention of reflecting on response to global crises. Although COVID-19 dominated our thoughts, media feeds and public discourse, it is hardly the only crisis humankind is facing, nor perhaps the most threatening.

Conferences are opportunities to share analyses of deep and vexing problems, far from the one-off, targeted and quick-fix policy efforts that drive governments in times of emergency. They also offer the opportunity to launch new directions for action, based on a solid understanding of the complex and interrelated facts on the ground. They combine in one setting a vast array of problems to allow cross-fertilization when siloed solutions clearly fall short. Finally, they offer a forum for free expression and exchange that has no real

competitor in the modern world. ICCCASU4's direct address of a world of cascading risks set the tone for the submissions and presentations that addressed several of these cascading risks, as summarized below.

To address several and eventually a multitude of present and impending disasters (Raimundo) may seem too ambitious. Any one of these threats to humans deserves a proper response that is structured, comprehensive and objective. At the same time, it is increasingly clear that global threats to human existence are interrelated and any attempts to counter them necessarily spill over into other domains of concern. It is a reality that both academicians and politicians must face. ICCCASU proposed several themes to break down this complexity for the purposes of discussion, and proposed a view through the lens of cities and urbanization. The following is a narrative following the conference themes and with reference to conference paper authors who addressed those themes.

A first theme is understanding health crises in the context of cities. Cities, different by their social and urban geography, reveal different effects in

the context of the COVID-19 pandemic. The role of the individual and the collectivity underpinned authority's management of the public realm and controls over individual behaviour. Findings from this recent experience could help us prepare for the next health crisis. The deficiencies in city planning and management become clearer in Africa, and probably elsewhere as well, following the experience of the current health crisis (Sylla; Tandon et al.; Thiam). Qualities should prevail over quantities (Liu), while the local re-emerges as the locus of action (Bouyssou). The way we lay out cities can be related to the geography of contagion (Colombo, Utzinger, Koné & Chenal), while fundamental changes to how we plan cities can serve to improve citizen health (Campisi & Nahiduzzaman; Xiao et al.). Populations can be mobilized to address the health crisis locally by engaging youth (Raga et al.) and repurposing community-based organizations (Rahman & Ley). Access to vaccines made urban inequality more evident (Ratnasapapathy), while access to clean energy for the urban poor worldwide would improve immeasurably their health prospects (Biririza & Kitio).

The climate crisis has begun to inspire mitigation measures in cities which emit most of global carbon emissions and offer the best opportunity to reduce them. While many of the solutions are known (Miller, Dongmo, Lachir), the means to achieve them remain largely out of reach. Part of the problem is a failure of governance, partic-

ularly in the developing world (Gomez). At the level of individuals, we need to reconsider how we conceive of risk and our role in it (Chardon), while public education for direct individual behavioural change is also needed (Razavi). The climate crisis is generating problems of global significance, including firstly the displacement of populations, especially within Africa and between Africa and the Middle East, and Europe. Direct climate-induced migration is a phenomenon that not only affects Africa today, but may become more generalized as the impacts become more severe. Creating communities to house such migrants is a major challenge that has so far been poorly met (Loose et al.), leading to proposals for new approaches (Osunsanmi et al.; Thwala & Aigbavboa) and a better understanding of the migrants and their motivations (Zhar). The twin problems of a pandemic-ready city that also mitigates climate change has radically changed urban ideals (Omolabi; Tamo Tatletse).

Conflicts are often indirectly related to climate change and the competition for resources, prompting calls for better management (Lubunga & Ngomsi). Many cities in the developing world, particularly in Africa, will need to be mostly rebuilt (Mitchell), a massive effort that must have climate change as an overarching issue. That rebuilding will necessarily involve those who will be displaced and presumably rehoused. There are more calls for participatory approaches to such rebuilding (Ngombe & Cain; Mohamed) that may

Conclusion | By John Zacharias

involve residents in rehousing themselves (Mougoue).

But growing economic inequality within and between regions make all of these challenges more difficult. Lower socio-economic strata were more exposed to the COVID-19 virus, while vaccine roll-out lagged in disadvantaged communities worldwide (Ratnasapapathy). The ongoing rebuilding of cities, even when climatic and health concerns are championed, are generally leading to greater spatial and opportunities divides between upper and lower income populations (Sinshaw and Delele). Re-housing populations offer an opportunity to create a more inclusive city (Velasquez & Chiti; Yue) and re-urbanization in cities of the developed world hold the promise of reducing inequalities there (Zander).

Although housing provision is a mainstay of many developed and developing economies, it has failed the lower socio-economic orders, produced more inequality in living conditions as well as spatial segregation and now, in the context of the pandemic, is a co-factor in infection rates (Tandon et al.). Urban planning, re-tooled to address the housing challenge, can produce significant improvements in supply, quality and inclusivity of housing (Zhang and Zhao; Zacharias; Petrella). Urban infrastructure can guide the appropriate development of cities and is not merely a service (Tamo Tatietse). Urban planning can also promote a social divide when governments spon-

sor mega-projects designed to attract investment (Timera) and may deflect from ongoing concerns like the need for accessible housing. Homelessness is a universal problem and is related to the overall problem of housing provision (Zhou). A public role in housing provision seems destined for a return after an absence of forty years.

The above summary of the themes at ICCCASU4, with reference to some of the papers presented, illustrate the diversity and challenges of a world of cascading risks. A broad sweep of the issues, as intended in this meeting, allows us to see their interconnectedness. They also afforded the opportunity to point to ways forward.

Appendix

Appendix

OpeningCeremony Remarks

Maimunah Mohd Sharif

The fourth session of the international conference on Canadian, Chinese, and African sustainable urbanization centered around the topic of density, diversity, and mobility in the city in an era of cascading risk. UN Habitat has been actively involved in conceptualizing, planning, and organizing this important series of events, including the first session in 2015 in Ottawa, the second in 2017 in Yonde, and the third in 2019 in Chengdu. Since its inception, this international conference has provided technical support for the development of the business plan for Africa's future regional center of excellence for re-sustainable urban development. He went on to say that at the original level you occupied, in collaboration with UNECA, UCLG Africa, UNCF, and Shelter Effort, you developed the flagship program on COVID 19 and cities in Africa to guide policy response and green recovery in urban settings. This fourth conference on cascading risk is timely because the world is at the crossroads of searching for innovative ideas to find sustainable solutions for the urban poor, who are the most affected by unplanned and disorderly urban growth. This fourth conference is well suited to this perspective because it revisits the challenges and solutions of living in societies with multiple and overlapping risks, as well as the fifth anniversary of the new urban agenda and the midterm evaluation of its implementation. The outcomes of this conference will be a stepping stone for scholars and researchers to assess the progress made so far. This will be shared during the high-level dialogue on the new urban agenda next April in New York. I would like to invite all partners to attend this important event next year in New York to take stock of the new urban agenda and SDG 11. I thank the supporters and organizers of this event for their commitment to the new urban agenda and implementation of the Abu Dhabi declared actions following the World Urban Forum. UN Habitat will share highlights of its recent report on cities and pandemics, which will provide approaches for integrating help in urban and territorial planning. The training organized during the pre-event brought together scholars, local authorities, and students to exchange on the principles and preventive mechanisms to promote healthier and more resilient cities. I strongly believe that the debates between decision makers and scholars will inspire new ways to address the threat of risk and contribute to building resilient cities and communities.

Yuen Pau Woo

I'm pleased to open the castle conference. I applaud the organizers for gathering such an impressive roster of speakers and making this event possible despite challenges. I wish we could meet in person for this conference and that friends

could enjoy Montreal in the summer. Because of Montreal's attractions, holding a conference there has its downsides. It may be best to do this by video so we can focus on the important discussions. I'm glad that this conference rejects the idea that industrialized cities can learn from developing countries. It says that the urbanization challenges in our respective countries have unique geographic, historical, political, and social contexts, and by understanding those contexts we can look for solutions to common challenges. I'm not an urbanization expert, but I live in Vancouver, a large Canadian city, and I'm aware of its challenges. Homelessness, affordable housing congestion, crumbling infrastructure, and unequal public service access. Covert 19 has exacerbated some of these problems and revealed the differential impact of a highly contagious virus on different geographies. An overarching challenge for large Canadian cities is their limited ability to make future decisions and raise money for urban services and infrastructure. Municipalities fund transit policing and fire services, among other city essentials. Aid The provinces limit their fundraising for these activities. Our Canadian constitution states that municipalities are the provinces' responsibility. Provinces can determine what municipalities must provide and how they can raise revenue. Municipalities have responsibilities without commensurate power, while provinces have power without municipal service responsibility. The cascading effect of this governance deficit is that municipalities cannot collect corporate or sales

taxes and must rely on property taxes, making it difficult for cities to address housing affordability. This government's problem, combined with Canada's lack of large-scale public housing, has exacerbated the affordability problem in our major cities. The search for easy housing solutions has led to generalizations and simplistic solutions that can stigmatize visible minority communities. This has undermined social inclusion and cohesion, which is unfortunate because these cities have historically fostered innovation and creativity due to their diversity. My friends from Africa and China can also point to social policies and practices that lead to discrimination and repression of thought and action, undermining why cities matter. Lastly, sustainability. The ecological footprint of cities far exceeds their geographic imprint in terms of GHG emissions and environmental degradation. The city's productive capacity also exceeds its physical footprint, so that's not surprising. Climate change is now an existential threat to humanity, and some cities depend on humanity's ability to stop global warming. If our big city leaders don't leave, municipal leaders will have to reduce their carbon emissions. Small-town and rural residents won't act. This relates to municipal governance and, in the Canadian context, cities' limited ability to plan, act, and finance. Congratulations to conference organizers. I hope the conference sessions are as loud, chaotic, full of surprises, and exhilarating as the cities you'll be discussing. This is how cities work and how you can help make them better.

Claver Gatete

Mr. Hon. Gatete thanked the Canadian government and people for physically and virtually hosting the fourth ICCCASU session. I also want to thank ICCCASU, UN HABITAT, and University of Ottawa for organizing this event despite the Covid 19 pandemic. This will help implement sustainable development goals and a new urban agenda with a deep understanding of sustainable urbanization. Nine years remain. Participant excellences Rapid urbanization in many African countries needs to be directed and coordinated. Rwanda embraced sustainable urbanization as a socioeconomic and human settlement development engine. It aims to increase urbanization from 18.4% in 2017 to 35% by 2024. According to Vision 2050, the government plans to become a high-income country by 2050 with 70% urbanization and an upper middle-income country by 2035 with 50% urbanization. Growing understanding of urban development dynamics has led to innovative approaches and tools to solve urban expansion and climate change. Rwanda plans to reduce urban greenhouse gas emissions to combat climate change and build urban resilience. These include building energy efficiency, urban farm, urban transport, and urban employment. These will be addressed through various mechanisms, including green building minimum compliance requirements. Denser, mixed-use, socially inclusive urban development. Three, easing the transi-

tion from fear alliance urban transport to electric mobility, cycling, and pedestrian workers. Rwanda's economic growth and transformation depend on urbanization. In response, it established secondary cities to complement Chicago and satellite cities. Some border cities are expected to benefit from trade with neighboring countries. Providing these cities with basic social and economic infrastructure through urban development schemes attracts people to live and work there, improves their quality of life, and supports economic growth. As we begin this week of presentations, discussions, dialogue, networking, and knowledge sharing, I challenge you to examine issues that matter to the world today. I expect the conference to discuss Assessing covid 19's impact on the global urban agenda began with economic, social, environmental, and governance aspects to help governments rethink resilient urbanization strategy. Two, share good practices and approaches in Canada, China, and Africa, including Wanda, related to city management in terms of density, diversity, and mobility, and exchange ideas and solutions to tackle existing issues. Three detailed, practical recommendations for African cities undergoing urban planning. Four identify new partnerships for the effective implementation of these conferences' outcomes and recommendations, including a better understanding of how Canada, China, and African countries can contribute to sustainable and resilient urbanization. Finally, render an inclusive and immense opportunity to design appropriate policy, solutions, and interventions that can orient

Canada, China, and African countries to sustainable urbanization in an integrated, inclusive manner. Excellence shines. As I conclude, ladies and gentlemen, let me thank the conference organizers and the ICCCASU board and UN HABITAT.

Suzanne Fortier

While conference is especially timely in the context of the Covid 19 Pandemic. Ms. Fortier emphasized on the Pandemic has profoundly affected our rapidly urbanizing wool and has transformed how we live, work and interact with one another. Over the past year and a half, we have learned about resilience and sustainability, as well as adaptability, and we have found new ways of bringing people together around a common goal. We have also seen how our increasingly connected and urbanized world demands system wide approaches to resilience. There are no one size fits all solution, and these issues cannot be addressed in isolation. As our cities grow in complexity and influence, collaboration between all stakeholders is crucial. This conference, she hoped, will give everyone an opportunity to create new collaborations or to build on existing partnerships that threaten the resilience of our cities, countries and the world. She welcomed and thanked in particular, all the students participating in the conference who have the exciting but challenging role of building for what better our world.

Peter Fu

Dr. Fu congratulated the organizer for the successful holding ICCCASU 2021 especially during such a difficult time. He expressed his excitement that all of us are able to come together and focus on our common goal bring positive changes to Africa to Canada to China as ICCCASU did in the past. Also, as a professor of McGill university he felt especially so proud that ICCCASU is taking place here in Montreal in Canada in McGill university. As we continue into the 21st century facing challenges such as resource scarcity and the climate changes sustainability is even more crucial for the developer what he expected forward to the sharing of knowledge and experience on this important conference which is ICCCASU the very best and he believes this conference bring all of us closer towards building a better world faith.

Matti Siemiatycki

Dr. Siemiatycki emphasized that cities are timely and immediate in an era of cascading risk. At least three crises are overlapping. COVID-19 is a global health crisis. It's killed millions of people and changed our world. Second, the world faces a climate emergency that could bring more death, destruction, and disruption than COVID-19. Third, inequality and racism are systemic crises. Garbage dumps, highways, and polluting power

plants are disproportionately located in low-income and racialized communities. Unsafe water and digital divides plague indigenous communities. This will worsen employment and service inequality. Unequal policing causes over policing of black, indigenous, and people of color communities and a lack of security and safety. None of this is new; Each crisis involves cascading and interconnected risk, with the vulnerable bearing the brunt. It leaves us in a position where our scholarship and practice are more urgent than ever; a time for fearless scholarship that documents the origins and consequences of the intersecting public health climate and crisis of racism and inequality we face; and a time for fearless city building that prioritizes diversity, a clean environment, and freedom for all. No more half-measures and soothing words. We need hard truths, uncomfortable conversations, and bold action. This forum, with 200 participants from 39 countries, is essential for addressing our grave challenges.

Huhua Cao

Dr. Cao emphasized that the COVID-19 pandemic has provided us with an important opportunity to re-examine and rethink our cities; only those capable of managing multiple risks can offer the protection and well-being we require and desire. Climate change and increased social and cultural diversity have exacerbated social and economic instability, making us all the more vulnerable. What can be learned from sharing experiences from China, with its massive migrant flaws and the local diversities of Africa with hundreds of people and language groups, and from Canada, which is increasingly reliant on falling immigration and experiencing similar pressures related to urban density and quality of life? The theme of ICCCASU 4 is based on a call published in the UN Habit 2020 World Cities report, which highlights the opportunities and challenges associated with sustainable urbanization in the post-pandemic era. He mentioned that the conference has been designed to provide a group forum for the creation of innovative and creative solutions for a more equitable, safe, and sustainable recovery from the pandemic, as well as to improve the quality of life for all.

We are very pleased to welcome experts from Latin America and the Caribbean to this conference and to learn from their dynamic and unique experiences with urbanization. We will continue our efforts to include more regions in future ICCCASU dialogues. Over the next four days, more than 200 participants from 39 countries and regions will share their knowledge and best practices to help us to diagonal common challenges to effective and prosperous urbanization in our planning for a more resilient future. We are inspired by the devoted work of all those for whom building sustainable, equitable cities for all is not only an ideal but an imperative. It is absolutely crucial that we acknowledge our many volunteers here in Canada as well as in China, Africa, and other regions in the world. They have contribut-

ed their time with the wisdom and experience to bring ICCCASU to this stage. In fact, the international e-castle team is composed of dedicated volunteers. We are extremely proud of our team, especially in light of the considerable challenges the team has negotiated and the heavy workloads so many have managed while working to make this conference a success. A special thanks to our distinguished guests for their opening remarks and participation in the dialogues and keynote presentations. I know that all of you have fully targeted schedules. Your presence has added enormous value to the casual form. Likewise, to each of the panelists, local and international, for their interests and willingness to participate at such a difficult time.

First Keynote Session

While Nations Pledge, Cities Deliver, by David Miller:

Today, I will discuss city-based climate action in all its facets, focusing on its impact on equity and employment. However, I must note that this is occurring in the context of an ongoing global pandemic. continues to have a significant impact on people, cities, and city governments, particularly in Africa. In this context, I would like to acknowledge our C-40 colleague, the late mayor of Johannesburg, Jeff Makubo, who died of Covid two weeks ago. Two members of the Tshwane city

council also died of Covid. Keeping their families in mind, I will make two broad points in today's presentation, titled "While Nations Pledge, Cities Deliver." I'll explain that title momentarily.

The first point I'm going to make is that the climate risk requires immediate municipal action. The voices of mayors and other municipal leaders are essential if we are to prevent dangerous climate change. Secondly, the pandemic has heightened the need to address equity in all of its facets in cities between the north and south, and it has also demonstrated the impact of urban innovation on these issues.

The title of my talk is derived from a speech that the current council leader in Glasgow gave a few days ago at a C-40 100 days from COP event, in which she said that while nations pledged, cities deliver. I believe that effectively summarizes my philosophy: the strategy adopted by mayors of the world's largest cities to combat climate change inequity. This is all within the context of a Covid response. I do not believe it is necessary to emphasize the significance of climate change at this event. The severity, however, is comparable to last year.

In Canada, a month ago, an entire small town was destroyed by a forest fire, despite the pandemic occupying the majority of our attention this year. It is a type of forest fire that is definitely connected to climate change because the weather has changed, becoming hotter and drier for longer periods of time. In fact, only a year ago, experts predicted that exactly this type of event would oc-

cur in Canada, so it is extremely concerning that the impacts of climate change are getting worse and more visible. In this context, it is essential to recognize the significance of cities' roles.

The majority of the world's population now resides in urban areas for the very first time in human history. Our friends at UN Habitat would know the date more precisely than I do. In 2008–2009, however, for the first time in human history, urbanization surpassed ruralization. This trend will continue due to the expansion of megacities in Africa, India, China, and South America. What do we know about cities, given that the vast majority of growth in the African and Latin American contexts is in informal settlements?

The majority of the world's population lives in urban areas. The majority of the world's economy is created in urban areas. The majority of greenhouse gases are produced in urban areas. Depending on how you calculate them, this number is debatable; it could be as high as 75% of CO_2 emissions. This number includes emissions from power plants needed to power cities, even if they are located outside the city. Approximately two-thirds of the world's energy consumption occurs in urban areas.

Although I won't elaborate too much on this today from the perspective of resilience due to limited time, it is extremely important to note that the majority of urban expansion in developing countries is in proximity to hazard-prone areas; as sea level rises, this will become increasingly problematic. The increasing frequency of storms inundating urban expansion, particularly in formal settlements, is a significant risk factor for multiple climate change-related problems in regions where they are occurring. In this context, mayors demonstrate significant leadership in the fight against climate change, and our organization applauds their efforts.

Our organization, C-40, comprises 97 of the world's largest cities, of which roughly half are from the global south and the other half are from the global north. The basic rules for membership in C-40 are that the city must demonstrate climate leadership, the mayor must personally demonstrate climate leadership, and the municipality must have a strategy to combat climate change. In addition, if you are engaged in leading and live in a city in a region with at least three million inhabitants, you can join C-40. This includes the majority of the world's major cities, including Jakarta, New York, Paris, and Cape Town. Obviously, Toronto and Canada are members of this organization.

To contextualize municipal city-based climate action, it is essential to understand what the science reveals. The science tells us that we need to be on a 1.5-degree pathway, which is to hold overall increases in global temperature to no more than 1.5 degrees Celcius. Six years ago in Paris, at COP21, the world agreed to hold global temperature increases to 2 degrees, with a higher ambition of 1.5 degrees. We now know that 1.5 was essential, but it was not deemed politically essential in Paris. However, the Paris pledges only took us to about

2.6 to 3.2 degrees, and many countries aren't even meeting those targets.

If by 2020 there were no climate policies based on historical emissions, we would be on a path to nearly five degrees of warming, which is catastrophic given that we are currently experiencing one degree of warming with extremely severe effects on nature and the environment. Five degrees of warming would be catastrophic, but the world is currently on a trajectory of three, which is exceptionally worrying.

In this graph, we observe which nations are on track—there are essentially two role models. This contrasts with the actions of the world's major cities. The C-40 cities themselves examined the science post-Paris and questioned: What should we do? According to the science, the world's major cities must peak their greenhouse gas emissions by 2020, with the goal of achieving net-zero emissions by 2050, at least in the global north. Therefore, we designed the global south so that peaking can occur a bit later because the proportion is so small, but emissions should peak by the end of 2020. This should continue on a path to half those emissions by 2030 and reach zero emissions by 2050. Therefore, C-40 cities agreed on a program called Deadline 2020 to accomplish this.

In order to remain a member of the C-40, every city must have a climate plan to achieve its fair share of net-zero emissions by 2050. The good news is that 54 of the C-40 cities already have these plans, although a few, especially in Africa, have been delayed due to Covid and the inability of city governments to solve and enact a climate plan at the same time. A significant number of C-40 cities, including Toronto, have already reached peak mission emissions well above 40. Not only are C-40 cities taking action, but so are the UNCCC-sponsored cities in their Race to Zero.

We are taking the knowledge of how to create an effective climate plan to at least a thousand global cities to spread this action. and ensure that cities beyond the world's major cities are taking action to combat climate change. In contrast, national governments that have made commitments are not fulfilling them and are not even close to being on track for a 1.5-degree trajectory. Why are they acting this way? How can they be so successful?

First and foremost, cities are taking action because they recognize climate risks and their residents demand change. As a result of the fact that cities produce the majority of greenhouse gas emissions in the world, the actions of city residents can have a significant effect. In the majority of cities, the areas that require attention are energy generation, heating, cooling, and transportation systems, as well as the manner in which we construct cities so that people can use active transportation. In terms of public transit, we ask, "Is the city dense or dispersed," such as Houston, Texas? We also ask how we dispose of waste.

Today, actions are occurring in each of these areas in a city somewhere in the world. I will emphasize Canadian, Chinese, and African cities today. There are actions occurring in a city somewhere

in the world that, if replicated on a large scale in the next very short period of time across multiple cities, can help put the world on the very important first part of the trajectory to maintain 1.5 degrees Celsius of warming by 2030. This is significant because these actions utilize existing urban design knowledge, technology, and thought processes that can be rapidly replicated on a large scale and do not depend on recent inventions.

The next few years are the most crucial if we are to limit the global temperature increase to less than 1.5 degrees Celsius. Action is the most significant thing, rather than pledging to do something in the future because it may end up being too late. Electricity generation is what brings forth fascinating examples of city-based activity, such as wind and solar power. This occurs in my hometown of Toronto: an exhibition center, a heavy user of electricity as an exhibition center, actually generates as much electricity on-site through wind and solar as it consumes using a highly advanced tri-generator.

There are also very interesting programs in American cities such as Los Angeles that control their own electricity generation and strive to be carbon-neutral by 2035. A few years ago, Austin, Texas, employed an intriguing strategy; the city is now thriving. It paid people to insulate their homes instead of building a new coal- or oil-fired power plant. It is now implementing a similar program to subsidies people who use solar panels to generate electricity on their homes and sell it to the grid. Both of these subsidy programs were

less expensive than building a plant, so there are many initiatives there.

I'm going to spend more time on waste transportation initiatives because they are highly relevant to Chinese, Canadian, and African cities. I believe that when we discuss climate change, the construction sector is undervalued. Those of us involved in urban issues understand the significance of building location, design, and architecture. In most cities, the single largest source of greenhouse gas emissions is the heating and cooling of buildings. This is significant from a climate change perspective. In a sprawling city, transportation may be the largest sector, but in many African cities, waste management is the largest sector due to informal landfills.

However, heating and cooling are the most important sectors in most cities around the world. Significant efforts are being made to create building codes requiring net-zero buildings. For example, in Vancouver, Canada, in order to address emissions from existing buildings, the city will require a drastic reduction similar to that in New York City. Both Vancouver and New York are employing their building energy efficiency laws to simultaneously generate employment. Vancouver works with private sector suppliers to increase the energy efficiency of supplies, such as making mass timber acceptable for use in large buildings or helping smaller businesses that supply windows change their production to be significantly more energy efficient. New York City is training youth from low-income neighborhoods to work

on building energy efficiency as a massive number of New York commercial buildings undergo energy retrofits.

China is also making significant strides to ensure that buildings are constructed to high energy efficiency standards. There is much work to be done, but there is also much work occurring in pilot cities. The Chinese government has a very interesting policy of allowing pilot green programs in select cities and checking out the outcomes. Afterwards, if the pilot is successful, it will be implemented on a national scale. China has made significant advances in energy efficiency in construction. Finally, under the leadership of Norway, there is a global movement toward zero-carbon construction. Due to the prevalence of concrete in construction, I feel compelled to mention a Canadian company that invented a method to reduce carbon in concrete some time ago, which aids in zero-carbon construction. These types of inventions and initiatives will contribute significantly to the advancement of construction in Canada and China.

Transportation is crucial not only because of the emissions from transportation but also because ensuring that our cities are designed so that people can walk, cycle, and use public transportation helps create energy-efficient cities. Consequently, this generates significantly fewer greenhouse gas emissions. We've observed a pandemic response, especially in European cities. In Montreal, there is a real push for the concept of a 15-minute city; this goes back to Jane Jacobs' belief that people

should work, live, and have recreation within a reasonable distance of their homes. Jane Jacobs argued that it is much more economically efficient for a restaurant to be located in a residential neighborhood rather than in a downtown area that can really only serve lunch customers. As such, there is significant work being done in Barcelona, Paris, and Montreal.

From the perspective of direct transportation, there are a few things that must be done to ensure that other cities that adopt this concept allow for safe walking, cycling, and an electrified rapid transit backbone of superior quality. Additionally, we must ensure that all of our public transportation is emission-free. Ethiopia's capital, Addis Ababa, has the first light rail network in a sub-Saharan country. From a Canadian perspective, the planning and financing of this network are intriguing. I believe we can learn a very important lesson from Addis Ababa about how to plan from the fact that it was constructed while cities in Canada were debating where to place their networks and implementing light rail.

As I understand it, one of the factors that was taken into account when determining the routing was the gender of the passengers, who were likely to be women. They considered where the women were going and asked, "How do we meet their requirements?" This is a very interesting and sophisticated approach to the construction of a rapid transit network. They also had to consider how this network will displace some of the informal sector's small buses, as well as how to ensure the

continued employment of those involved in that industry and how they will be able to find respectable work in the context of this new initiative. Adding to this are bus rapid transit or bus lanes, which are not only crucial in the African context but also in North America. Obviously, Ottawa has had bus rapid transit for a considerable amount of time, but we must ensure that the buses used in these initiatives are emission-free.

We can look to Shenzhen for this. China has performed extraordinarily well; all of its buses and taxis with over 16,000 seats are electric. It is used to fuel the development of the world's largest electric bus manufacturing industry, a company known as BYD, or Build Your Dreams. This company directly and indirectly creates tens of thousands of jobs as a result of a strong and intelligent public policy message. As a result of the work of a collective of C-40 cities, there are now approximately 66,000 electric buses on the streets of cities around the world. There is also significant progress to be made in Latin America if we can overcome some of the financing obstacles. We hope to accomplish this enroute to COP26 in Glasgow.

I would like to make two concluding points, followed by a brief explanation of how this applies to the Canadian context. The first point is the significance of waste management, particularly in Africa. There is a very significant program in Accra, including during COVID, to work with the informal waste sector to regularize waste disposal. This is important because it captures the green-house gas methane, which is extremely harmful. Accra's leadership reiterated the importance of formalizing jobs in the informal sector because, by closing informal landfills, the entire informal economy would collapse. People employed in that economy must continue to work.

Accra is currently working with residents of the informal settlements and their representative organizations to address these issues alongside the C-40 program. My final point is that mayors are not elected solely to address climate change; they are elected to create great cities where everyone is welcome. To achieve this, climate action must be equitable. In this presentation, I've attempted to highlight instances in which mayors and city governments are addressing climate change with a focus on equity. Other examples include work in Cape Town during COVID concerning food from an equitable standpoint.

Currently, there is work occurring in five south African cities and local trade unions with respect to the transition required to move from coal to clean energy. This is extremely complicated in South Africa due to the prevalence of coal. The fact is that there are well-paying jobs in the industry, but this conversation is a starting point. So how does everything work? Why does it work? I'll illustrate with the city of Toronto. "Change is in the Air" was the name of Toronto's first climate plan, which was adopted in 2007. It included a wide range of actions, including North America's largest transit expansion and multiple programs to address building energy efficiency in the private

sector, the public sector, and the not-for-profit sector (such as museums). As a result of this plan, the provincial government assisted by closing a coal-fired power plant. Toronto's greenhouse gas emissions as a metropolitan area are now 33 percent lower than they were in 1990, so massive reductions are feasible.

This is a time when Toronto has been economically successful, but equity was at the heart of the city's plan. At the time, there was a program to address investment needs in low-income neighborhoods; it was called the Priority Investment Program. This meant that low-income neighborhoods were a priority for public investment so that young people in those neighborhoods would have access to the same programs, opportunities, and jobs as those in other neighborhoods. When examining these charts, the transit plan on the right is visible. You can see that the transit lines connect the priority neighborhoods on the left to the rest of the city. Importantly, the first two lines were located at Etobicoke-Finch and Sheppard East when we consulted the public about transit city. I once took a bus from Malvern, which is on the right side of the slide, very early in the morning, around 5:30 a.m., forward onto Sheppard East. There was a woman who boarded my bus from Malvern, so I went over to say hello. I asked, "Where are you going?" to which she answered, "Work." "Where do you work?" I inquired. She stated that she worked at Pearson airport, which is approximately 40 kilometers from the transit city bus. I asked, "How long does that take you?" She

estimated two hours, assuming she made her connections. Then she asked, "Mayor, why are you here?" I stated, "Well, we're having conversations with people about an LRT." She asked, "What is it?" I stated that it was an in-the-middle-of-the-road, European-style tram that will not get stuck in rush hour, and therefore traffic will be on time. This service is superior to the bus, which gets stuck in heavy rush-hour traffic. She responded, saying it would be very beneficial to her. I said, "You've got a long day." She spent approximately four hours a day commuting between her two jobs. If she had access to rapid transit, she could save at least one hour per day, if not more. This may afford her the opportunity to return to school and upgrade her skills so she could have a single job. This would allow her to be home with her family for dinner or attend public meetings about the type of transit our city needs. Climate change encourages growth in the city, with a focus on equity. The City of Toronto actually developed plans that would significantly improve the lives of its citizens, not only considering their ability to prosper economically but also their participation in the city's decision-making process. I've underlined a few of them in my book. I find these plans inspiring because they are realistic and address multiple problems. They provide solutions to some of the most pressing public policy issues of our time, including climate change. This is exactly what I wanted to say today; I'm grateful for the opportunity to be here. I look forward to the comments of my colleagues.

What a Wonderful World it Could Be! by Leilani Farha:

Consequently, I have been fixated on two numbers for several years: 1.8 billion and 220 trillion. So, prior to the pandemic, I would travel to cities in every region of the globe. I would first notice two things when I looked up. I frequently observed cranes on the horizon erecting gleaming new buildings. I would then hear about and see neighborhoods with beautiful homes that were unoccupied and without lights on. Simultaneously, I would visit people residing on the pavement, sidewalks, toxic waste dumps, or in homeless or informal settlements. In all these cases, they were without access to water, sanitation, electricity, paved roads, etc. This was indeed the case in London, England, and also Lagos, Nigeria. I've seen it in Vancouver. I've seen it in Cairo. I've seen it in Lisbon. I've seen it in Mumbai.

What I've become interested in over the past few years is the gap between those living on sidewalks and those cranes in the sky. They are a visual representation of the gross inequality that plagues so many cities around the world, namely the disparity between the 1.8 billion people living in grossly inadequate housing, those who cannot afford a decent place to live, are homeless, and those with enormous wealth who utilize housing\ to hide it in order to leverage it. They expand it to the point where the global value of residential real estate exceeds 220 trillion dollars, making residential real estate the largest industry in the world, surpassing pharmaceuticals and tobacco.

To give you a sense of the magnitude of 220 trillion dollars, which, according to professor Saskia Sassen, exceeds the realm of money: if you add the GDPs of every country in the world, and proceeded to double them, you would still not reach 220 trillion US dollars. So, the question is, how we got to this point. I refer to this as a global housing crisis, in which housing is unaffordable for the majority of people in most cities and where the wealthy are granted housing security, and utilize housing security. How have we arrived at a point where governments criminalize those who are merely attempting to survive, for example, by creating informal settlements on vacant land so that they can provide services to city dwellers, and ensure that cities operate as expected.?

This morning, I awoke to the news that the municipality of the city of Cape Town is considering cutting off basic services to certain informal settlements, effectively evicting residents, as a result of an incredibly regressive unlawful occupation by-law. This is followed by concentrating them in only authorized areas. How did it become the case that the wealthier a nation, region, or city, the more likely it is that homelessness and housing instability will increase?

The United States, the world's wealthiest nation, has more than half a million homeless individuals. This does not account for all people residing in housing unaffordability or housing precarity. Twenty-five percent of the homeless population in the United States resides in California, which

has the fifth largest GDP in the world. In cities throughout the world, homelessness and grossly inadequate housing conditions have existed for a very long time. Despite the increasing wealth of the world, its persistence is remarkable, along with the manner in which this is rooted in housing. During the pandemic, a new billionaire was born approximately every 17 hours. Simultaneously, the world bank predicts that 150 million additional people will be living in poverty.

You can envision what their living conditions will be like, and you can imagine the source of these billionaires' wealth. I contend that, ironically, this reality of housing quality has emerged, and was buoyed by neoliberalism since the global financial crisis. It was at that time that the major financial actors - private equity firms, pension funds and other investors realized that new financial instruments could be created. For instance, Blackstone, one of the largest private equity firms, makes a substantial amount of money by using real estate as collateral. The residential real estate investor went on a shopping spree, purchasing approximately 45,000 homes in a single transaction. They were purchasing distressed assets, or homes whose owners had foreclosed their mortgages due to predatory lending practices. Blackstone became the largest single landlord in the United States before turning their attention to Europe. They commenced purchasing social housing, particularly in Spain. They have developed the predominant model currently used in residential real estate worldwide. This is the financialization of real estate; this is the accumulation of assets and using that to leverage more capital. They purchase any asset from which they believe they can extract greater profits or leverage more capital; housing becomes a mere financial instrument. This has directly undermined two fundamental principles of the right to housing: housing affordability and assurance of tenure.

The business model associated with the financing of housing necessitates a continual increase in rent and utilizes eviction as a method of doing so. This is a model that evicts low-income tenants and replaces them with higher-paying tenants. This is the reason why I avoid visiting California. When I go under a highway, I see people living in tents who, just a few months ago, could afford an apartment. We must remember that every homeless person once had a home. I want to be clear that this is not a Northern-only phenomenon; housing markets in developing economies have also been targeted by domestic and international investors. Their economies are undergoing reorganization and are primed to eventually facilitate the entry of these large financial actors into their markets. For instance, many states with a faltering economy establish mortgage-based housing systems as a remedy. They dress it up to make it appear as if they're addressing a housing problem, but in reality, the mortgage-based housing system is used to save or grow their economy.

I observed this in Egypt, specifically in Cairo, where mortgage-based systems very rarely benefit those in informal settlements with the greatest

need, such as individuals experiencing homelessness. Therefore, it is clear that this type of activity suggests housing is being used as a financial mechanism to establish financial market logics, rather than as a solution to the housing shortage.

I believe China is an interesting example of the push for property taxes and profits have led to the construction of skyscrapers in China's emerging megacities. Massive profits for developers' massive political power are produced at the expense of migrants displaced from their no longer viable agricultural lands. In emerging economies or peripheral economies, as some call them, financialization occurs when or wherever the conditions are ripe: economies that have reached a certain level of financial development with low interest rates, mortgage-based housing systems that permit securitization, stable financial lenders, cheap debt or assets on the market. This is combined with a reason to believe that the value of these assets will rise in a relatively short period of time. Weak tenant protection further contributes to ripening these conditions.

In places where the financialization of housing has not yet taken hold, I believe that low-income, informal, and Indigenous communities in developing economies have firsthand experience with the power of financial corporations to appropriate land and real estate, while generating vast wealth disparities through housing policy. Land is treated as a commodity, so in addition to the harm done to adequate and affordable housing, I want to emphasize that the actors, including private equity

firms, pension funds, international financial institutions, and real estate developers, are not only profiting at the expense of the poor, but also have a firm seat at the political table. They frequently serve as government advisors, and contribute financially to political campaigns. When interesting progressive legislation is proposed, these actors have a significant impact by utilizing their political influence and resources to eliminate it. What can we do about this rather bleak circumstance?

This is where human rights come into play. I believe that human rights possess the potential to be transformative. I believe they present the greatest answer to the global housing crisis and provide the best solution. First of all, human rights are fundamentally about accountability. If you know nothing about human rights, you should know this. I frequently refer to human rights as a framework for accountability. Since the advent of neoliberalism in the late 1970s, 1980s, and 1990s, governments have essentially ceded housing to the private sector. Rarely has the private sector been regulated. Certainly no one has been held accountable with regard to housing, which is why we have a global housing crisis.

National governments around the world have ratified international human rights law and made political commitments to the sustainable development goals without often consulting with local governments. Under international human rights law, it is crystal clear that governments are accountable to the people for ensuring that those in

need have access to adequate, affordable housing. Therefore, if we invoke a human rights framework, we can demand that governments meaningfully re-enter the housing market and uphold human rights standards. I believe this would completely change the game.

Human rights recognize that those who are homeless are rights holders; they are not criminals, encroachers, or unreasonable in their demands. Those living in informal settlements and homeless encampments are not only to be viewed as people experiencing rights deprivation, but also as rights holders. This allows us to view the tent on the sidewalk not as a criminal act, but rather as a human rights claim. This applies to the growth of informal settlements, as it has nothing to do with encroachment or criminality. These are human rights claims to housing, health, and life itself. This removes homelessness from the realm of charity and the generosity of governments to a new location. The second aspect of human rights is that I believe it is an appropriate response. The reason I say this is because of the worldwide housing crisis, and the conditions in which people are living.

Obviously, if you are living in homelessness, an informal settlement, or even in housing precarity where you may fear eviction because your rent is increasing, your dignity and your ability to live is challenged. When there is a human rights concern, the appropriate response is a human rights response, in my opinion. Deprivation of the ability to participate in democratic systems, for in-

stance, has resulted in constitutional rights to vote in other civil-political contexts. Therefore, the significance of democratic participation was understood. As a result, we as a society created constitutional norms that enable voting rights for everyone. I'm suggesting the same, that when we observe an assault on human dignity or life, we should respond with a human rights response.

Lastly, I will say that the human rights approach is valuable because human rights address the structural causes of rights deprivation. Human rights are utilized to comprehend the effects of laws, policies, and social structures. Those are reimagined using human rights. Given the role that housing plays in domestic economies, this is of the utmost importance in terms of housing. Housing is an integral part of the structures of our society, and consequently, the structure of our economy. Human rights enable us to evaluate the issues with these structures. To recap, the global housing crisis affects 1.8 billion people, which is a pretty bleak outlook. With deprived individuals living in housing insecurity, there is no city in the world that is affordable to the majority of the population; where do we draw our inspiration from?

Like David, I find a great deal of inspiration at the city level, but not exclusively. So, I thought I'd give you a few examples of rights-based approaches that are challenging the hyper-commodification of housing, that are embracing the concept of housing as a dignified home, and that are embracing the notion that housing must be affordable and adequate. Let's begin where I am

based, here in Canada, where a few years ago the country adopted legislation for the first time recognizing that the right to adequate housing is a fundamental human right. They have established a federal housing advocate and a council as a monitoring and accountability system, or are in the process of doing so. This is a complete 180 for Canada, as the country has long denied that housing is a human right in both international and domestic jurisprudence, so this is a real opening in this country at the municipal level. Montreal, not surprisingly a bit of a leader, has introduced, for instance, the 20-20-20 by-law requiring that when new buildings are constructed, twenty percent must be social housing, twenty percent must be extremely affordable, and twenty percent must be larger units in order to accommodate larger families. Where a developer fails to comply with 20-20-20, they must pay a fine that goes into a fund that is then reinvested in affordable housing. Recently, advocates in Cape Town, South Africa, were able to prevent the sale of centrally located public land to a private developer, and the land will now be used for social housing for black South Africans. This is particularly important as a victory in addressing racial segregation in a city where black South Africans continue to live on the city's outskirts. Referring back to David's remarks about the 15-minute city, many black South Africans do not have access to some of the best city center properties. Next, Barcelona is a real leader in terms of bringing the right to housing to the local level; they have mandated that vacant homes be made available for the city to lease as affordable housing for a certain period of time, such as during the recent pandemic. When the owners of these vacant homes refuse to sell, Barcelona has stated that they will confiscate those properties. I absolutely adore the Blackstone Law, which has been adopted at the national level by Denmark. It prevents rent increases on new acquisitions for five years.

This is a way to keep large financial actors out of apartments that are undergoing renovations, because when they purchase, they intend to make modest renovations. then increase the rents. Therefore, the Danish government has said, "You are welcome to enter our country, but you cannot raise rents for five years." This has had a significant chilling effect on investor activity in that city. In 2021, the city of Buenos Aires passed a one-time wealth tax, a portion of the revenues from which will be allocated to affordable housing and improvements to informal settlements. Additionally, they have imposed or will impose a solidarity tax on foreign property purchases. Again, a portion of the proceeds will be invested in low-income communities. Chile is moving toward incorporating the right to housing into its constitutional reforms, which is extremely vital.

I'll conclude with somewhere distant from me. Where in New Zealand, the human rights commission really pushing for a housing strategy based on human rights along with an accompanying legislation. As a result of the pandemic, it is more apparent than ever before that housing con-

ditions are a symptom of inequality, and housing itself is a driver of inequality. I believe Covid has demonstrated very clearly the connection between housing and life itself. However, there is this growing movement that I hope can be sustained. As I conclude my speech, I can't help but imagine how wonderful your city would be if the housing crisis were taken seriously and addressed within the context of human rights. I eagerly anticipate your questions. Thanks for listening, and thanks also to David for his insightful comments, which I greatly appreciated. I reiterate that we must continue to stay connected.

African Urbanization as Conducive Factor for Spread of COVID-19, by Oumar Sylla:

I believe Africa is significantly more intriguing than the other continents being discussed. I concur with Leilani that the problem of inequality in Africa is significantly worse than in the past. The question we are asking ourselves, is what path should be taken towards this corporate pandemic's recovery. Socially and environmentally speaking, Africa has not yet reached the level of casualties seen in other countries. Economically, socially, and environmentally speaking, I believe that Covid-19 has widened an already substantial chasm.

Since we have been doing things in a particular manner, the question of the day is what paradigm should we establish in order to gain new direction. I do not believe that those have been successful. Covid has demonstrated that we have a great deal of failure in how we view, plan, and manage our cities which demands novel thinking. I believe the purpose of this presentation is to provoke thought about the paradigm and the work done by UN-Habitat. In light of the work that UN-Habitat has done in many African countries, as well as on a global scale in terms of informing the discussion on post-recovery, what are the unique factors we must now consider in terms of constricting and reconstructing the concept of our African cities?

The mayor of Toronto has addressed the issue of climate change, which is a contiguous state element to that of the vulnerability of cities in Africa. Therefore, my presentation will revolve around three points: first, a simple vulnerability assessment regarding the crisis situation of African cities. I believe that COVID-19 is merely an additional layer of complexity, but from there we interrogate how those approaches have been implemented in so many African cities in terms of early age response of Covid. Before I move on to the business at hand, I'd like to pay homage to Mr. Alim. I believe he will be deceased a year tomorrow or the day after tomorrow. He was someone heavily invested in ICCCASU and believed urbanization to be an economic transformation factor. Globally speaking, I believe he devoted his time to more than just Africa. He considered the entire concept of urbanization globally.

Today, I am pleased that people are discussing him. He deserves this recognition once more. Thank you for your hard work in prioritizing the interests of urban residents and poor communities at the top of the agenda. So, here are some statistics. I believe you are aware of all of these effects of Covid in Africa. Obviously, cities have been at the forefront of this pandemic on a global scale, being the most impacted. We see that this is a predominantly urban crisis; however, Africa is entering its third wave of infection, which is extremely worrisome as the number of casualties increases in many nations. Today we're talking about 4.7 million infections in Africa, which is a huge number.

In terms of export, we've seen a drop. Even in the past two days, I've learned that the price of shipping containers from China to Africa has doubled or even tripled, which is a factor in the crisis that exports are currently experiencing. This is unfortunate for those nations whose economies depend on exports and those who rely on this transferential franchise. Millions are falling into extreme poverty, naturally resulting in a decline in revenue. Given the loss of millions of jobs in Africa, it is normal to observe an increase in poverty. We ask how many people are currently leaving their homes to demand access to food, energy, and basic needs? This suggests that this crisis may have a security and political impact, as we observed in Senegal not too long ago and in South Africa more recently.

As Leilani mentioned, 56 percent of sub-Saharan Africa's population lives in informal settlements without access to water and sanitation, and who have lost their jobs due to the recession. Still, the pandemic is wreaking havoc, resulting in a decline in gross domestic product in many African nations, thereby diminishing their capacity in terms of fiscal packages and social security blankets. What is the connection we want to make between the trend of urbanization in Africa and the propagation of Covid? People, including the secretary general of the United Nations, have said that Africa is vulnerable due to its high population density, high informality, and large numbers of displaced people. As a result, I believe there is a high risk of death on the streets in Africa. Others were fortunate that this did not occur, but this analysis is correct because the way we manage our cities and the congestion of population in many large cities in Africa give the impression that our urbanization is more conducive to disaster and transmission of the infection.

I believe we've heard some figures from the mayor of Toronto regarding the rapid urbanization globally, but let's delve a bit deeper into Africa to see the trend as Africa is less urbanized globally, but currently has the highest rate of urbanization. This indicates that the trend is too high and too fast. By 2040, it is possible that more than one billion Africans will reside in urban areas, a phenomenon referred to as the urban transition. As you can see, emerging secondary cities in Africa with a population of 2.3 million or less are another factor that must be considered in the process

of looking at long-term recovery, as these cities represent both a challenge and an opportunity in terms of territorial balance, as well as in terms of providing the chance to develop new economic hubs. This is an opportunity for Africa to capitalize on urbanization's value. To preserve our production system, which relies on well-managed cities.

We have all been exposed to this rapid urbanization trend, so this number is not particularly surprising. However, when it comes to Covid-19, it is essential to be prepared and address the readiness of these cities to face calamities, including climate change-related disasters and epidemics. I believe we have already discussed the level of informality in sub-Saharan Africa being 52 percent. In Kenya, 54.56 percent of the population resides in informal settlements, which is a substantial proportion. However, there are a number of factors that will contribute to a rise in this informality. I believe we discussed it, look at what happened in Madagascar with the people fleeing this drought area in search of food and shelter - this is very worrisome in the region.

In addition, we have a number of people being displaced by extra means by violence, so I believe we should also consider these factors in relation to climate change. I believe a reflection is occurring, but what is lacking is a clear distinction between territorial and urban development in relation to the phenomenon of environmental displacement. From a domestic conflict in Africa, the question of mobility emerged. I believe that density was initially perceived as a factor that could contribute to, or even facilitate, the spread of the Covid disease.

I am aware that there is a great deal of debate regarding the relationship between density and the spread of Covid-19. There is a camp that believes density contributes to the best use of resources, including infrastructure, which is true. However, I believe it is more important to examine congestion and how this function has contributed to the spread of these diseases in informal settlements. How can you see these megacities in Africa, the continent with the highest population? Still, the trend in Kinshasa continues, whereas Addis Ababa is expanding and Cairo is becoming a megacity. Soon, we will also have Dar es Salaam as well. This means that the territorial balance and planning, we must determine how to disperse this demographic brand in order to make optimal use of these infrastructures, while also taking into account health-related factors along with connection and mobility. These are remarkable numbers - I always catch my breath when I see these numbers on the screen: 85.87 percent of the world's population lacks access to running water in the 21st century; 69.69 million people in Africa do not have access to running water in the 21st century; filling this gap is quite a challenge. I am pleased with the reflection currently taking place to determine how it can help these communities gain access to basic services, including water, sanitation, and energy.

As mentioned by Leilani, access to tenant se-

curity is a struggle for communities residing in informal settlements, especially those struggling for energy access. Now that we have access to water analytics, we must reconsider our relationship with these cities. How many years have we been assisting these communities? The disparity in access to basic services is enormous, resulting in poverty. Obviously, this Covid pandemic has exacerbated inequality. We observed a great deal of evidence across the globe, in a variety of cities and countries, that people are truly seeking minimal revenue to support education and food access. Currently, UN-Habitat is aware of the impending deficit in the food system. UN-Habitat and WFP are conducting research in sub-Saharan Africa relating to the influence of Covid on food security - the gap is enormous.

In terms of access to food in the coming years, we foresee a somewhat bleak outlook, but 80% of African Americans of working age have lost their source of income. This number may rise if the economy is not stabilized. I do not believe that the current climate is conducive to repairing the economy because we are currently experiencing a return to a certain wave of infection. This means that we may once again invest the extra revenue we receive from banks into the vaccination system, which is not even accessible to many people in Africa. I believe this is another area we must examine in terms of equality, namely how to ensure that this vaccine is democratized. People are reaching out to many communities in Africa through us, but only drugs are arriving. I believe

this to be the case if you consider this issue in conjunction with the fact that there are global divisions and disparities.

Others are reaching eighty percent, forty percent, and sixty percent vaccination rates, but Africa is only one percent vaccinated; therefore, the world is only safe if everyone is safe. Leilani, you mentioned a housing element in your presentation, which is currently a factor of division in Africa. Sadly, real estate developers control the market, while a large number of people cannot even afford to pay their rent. This Covid-19 pandemic has caused a high rate of evictions, which is concerning. Violence against women that we observe in numerous nations is another dimension at the top of the priority list. Let's discuss informal settlements in terms of social protection, which I believe to be the most pressing issue on the agenda. Additionally, social security is a consequence of this shrinking local fiscal space.

I believe that, if local governments are extremely fortunate, the fiscal year will be reduced to 65 percent in the worst-case scenario and thirty percent in the best-case scenario. With a persisting crisis, I believe we could go further than that. This shrinking local fiscal space has implications for both service delivery and the financial economy of local government. Among the sectors significantly more impacted is manufacturing. This service area has been experiencing a great deal of use and employment, so I believe they are all currently experiencing a lack of import and export speed. Africa is in the process of negotiating

a new trade agreement, which is a positive development; however, it may be difficult to create an environment conducive to the success of the trade board as a whole in the country's context.

As I mentioned, municipal revenue will decrease as a result of the decline from three to four percent in terms of their financial impact. Consequently, fewer financial resources will be available to provide urban essential services. I believe that the cities with fewer than two hundred thousand inhabitants are most affected by the lack of capital investment, but we also know that the investment capacity of many African cities is extremely limited. More focus should be placed on secondary cities, but the enabling environment, including policies regarding access to land and transportation, must still be established. All of these resources are utilized for the operation of public services. As one of the leading agencies on cities, UN habitat has been very proactive in assisting African cities from an early stage.

By developing a strategy articulated around four areas, with the first focusing on water, sanitization, and hand-washing. However, with 54 percent of the world's population living in formal settlements without water sanitation, there is a significant risk of infection. Also, a major concern is diseases. calamities on those practical areas, which is why the element of wash was so crucial. The second point was about data, as I believe there is a cap on the number of casualties or infections in Africa. However, in terms of response to Covid, the data element was crucial for those only residing in informal settlements. We have always invested in cities and municipalities, but capacity has always been low. This is because we realized that many local government efficiencies were overlooked.

Now, if you truly desire genuine recovery, we must consider what kind of capacity we require, particularly in light of emerging technologies such as digital transformation, e-learning, and e-commerce, which will necessitate new skills from local governments and authorities, particularly in the context of standardization. I believe this is a crucial consideration stemming from Covid-19. I believe there is a unique dimension to how we now recognize our space if you consider the widespread suppositional concessions occurring in African cities. Spatial planning is essential to overcoming the risk that those populations face in terms of disease spread and gaining access to a healthy environment.

As we have worked in many countries, our engagement could be divided into two categories: first, we assisted people in understanding the risk of disease spread, and the second wave was primarily concerned with anticipating the recovery phase, despite the fact that we are still in the second wave for many cities right now. But we have a better understanding of the weaknesses of our cities' health systems and management systems. As you can see on the screen, our work has more than one million beneficiaries in sub-Saharan Africa, and we work with this community to improve water access and sanitization. We devel-

oped a system of cash transfers to allow the communities to start investing or to pay for food, as part of our sanitation efforts. Additionally, we developed a variety of mapping and data collection tools on informal settlements.

We began redesigning public space to incorporate this element of a nature-based solution after collecting data on informal settlements. In terms of waste management, I believe we discussed this circular economy system as a means of engaging communities, as well as a means of creating jobs for youth, and as a means of guiding public transport management. While it is not Toronto-level connectivity, it is still sufficient to ensure that this problem is not spreading throughout the transportation system while permitting connectivity. Importantly, we promoted a non-motorized transport system, which is the healthiest and allows people to exercise while enjoying fresh air and spending less money. This is another area that we are promoting in Ethiopia regarding public space using a nature-based solution. There is now a big project is currently undertaking a 52-kilometer beautification initiative.

It is also a means of diversifying access to public space, building community cohesion, reducing spatial inequality, and developing the local economy by integrating the economic, social, and environmental dimensions into this nature-based solution for which individuals are responsible. They are accountable for maintenance, as well as for improving health and increasing employment opportunities. This is just one example I'd like to share with you regarding this nature-based solution. The second element, on which we are currently working in the development of a Brazilian plan for long-term recovery. So, on this there's some prerequisite, of course: you need to have a government system that brings representatives at the national and local level together, because the crisis is not only local. The local central government must also support local government, particularly in regards to the fiscal package and all of the capacity building and policy development. We conducted extensive research on the impact of Covid-19 on education.

We place the greatest emphasis on housing because we view it as a vector. As Leilani mentioned, I believe this housing sector in Africa has not yet reached its full potential because this housing can help create more jobs and increase opportunities to reduce social inequality, but we are still relying on external material building and construction. I am aware that we are discussing China, but this is also the case: we must determine how to strike a balance between what must be manufactured abroad and what can be produced domestically. This is a potential area in which we must invest to create more jobs in Africa to generate more revenue including the taxation system, but most importantly the affordability system. That is the reason why UN-Habitat is working on establishing what we call the Centre of Housing Excellence in west Africa. Real-time data is also an important element in the development of our long-term recovery plan. I believe this is something that was

lacking at the housing level, but we also need to systematize our data collection and conduct some local economic analysis to determine economic development levels. I just mentioned the housing issue, but depending on the context of cities, there are others as well.

On the human settlement, different levels are possible. Those are different experiences depending on the country, but what's most important is that spatial analysis should also come with all these dimensions, or else we may not be able to achieve sustainable development. I believe we have also engaged in knowledge expansion in the past regarding policy evaluation. This report was developed in collaboration with UNEC Africa, UCLG Africa, UNCDF, and Shelter Afrique. It was intended to guide policy process, you know, in a way to address the impact of Covid, but also to better understand the fragility of our cities in Africa. So, I will just show you one recommendation of that report related to informal settlement because there are more than that, but I believe informal settlement should be the top priority for African countries if they want to transform their cities, reduce inequality, and ensure that everyone has access to water and sanitation. The design process must ensure that everything is participatory and integrated, and we must also employ a planning approach in designing a basic street layout to improve connectivity with neighborhoods because they are so densely populated that movement is impossible. There is still a risk of infection, but it is also crucial to develop informal settlement revitalization. The restructuring plan will become a national priority. As stated by previous table participants, strategies to comprehend the vulnerability's root cause are required. Inequality and probation knowledge are crucial factors in this region.

Another flagship program was recently developed by UN Habitat: the Cities and Pandemics Report. I believe that a commendable job was done in providing guidance on how this recovery should look, as they discussed what are the various parameters that must be considered when working with cities to develop recovery plans. In addition to preparing this report, the UN-Habitat has created a city response tracker for enhancing the analysis. As displayed on the screen, 1700 analyses are associated with impacts, responses, and capacities. Case studies from cities as well as countries were presented. We received feedback from 80 countries on this particular platform. The recommendation of this report was articulated around four points, as you can see on the screen, with the goal of establishing healthy, green cities through rethinking the form and function of the cities because, of course, we have some weak spots associated with inequality, inadequate mobilities, and specific urban occupations. All of this can result in the spread of disease; hence, unsustainable urbanization.

It is difficult to establish a connection between climate change and the current contest, which is why we must consider a more equitable distribution of resources. Access to public good is also

vitally important, as is listening to those who are vulnerable, but the planning form and design of our cities as a means of reducing air pollution are also crucial, along with the availability of services. The second point addresses systemic poverty and inequality in urban areas. I believe we must examine the concept of right-based development, as mentioned by Leilani, to ensure that everyone has access to urban space resident species resources relating to land, housing, water, and energy. Now, many African cities that are rebuilding their economies must contend with the digital divide.

In terms of rebuilding a 'new normal' urban economy, I believe that we are confronted with a new problem: the articulation between the local and the national. The federal government is working on this, but I believe it would be beneficial to examine the social contract in relation to this urban economic dimension. Regarding the social contract, consideration should be given to basic income, health insurance and universal housing systems, and most importantly employment. With respect to clarifying urban legislation and governance, we discuss the participation of citizens in governance to ensure that a sound governor system is in place, with particular emphasis on access to information and the decision-making process; if this is not the case, the recovery plan we are discussing may not be owned by the affected communities and will remain a mere piece of paper without any tangible results on the ground.

This is the last slide of the report's conclusion. I believe there are four major pillars deriving from this report. First, as I mentioned in my presentation, this increased urbanization should be viewed as an opportunity due to the transformative potential of cities, and necessarily in a negative light. The second reason is that we must elaborate on the funding that recognizes that the path to sustainable development is a well-planned, well-governed city. Certainly, we require an economic balancing system for the long-term health of urban vegetation. Fourthly, we must establish a new social contract for collective recovery that considers various aspects of political spheres. This is a crucial rights-based response that considers social protection and housing income. Finally, we must assess the vital role of cities. and the necessity of inclusive multilateralism. I believe this five-point list summarizes the previous discussion we've had within the context of IC-CCASU. I bring up the subject of vaccinations. and inequality and how multilateralism can help us overcome the challenges we face. I will recall the issue of climate change that was raised by the mayor of Toronto. We now see the entire world struggling with climate change, not only Africa, not only Europe, not only the United States, and not only China. Therefore, we must view multilateralism as a means of having an open dialogue. Putting our heads together to determine how we can build on the rights-based approaches we've been discussing, how we can drive this human rights dimension toward a more equal society, while also learning from our past mistakes. Thank you for listening to my presentation. I will be happy to answer any questions.

Second Keynote Session

Affordable Housing: What to do and what not to do. Lessons from Montreal and other places, by Mario Polese

The subject that I will deal with is affordable housing, which is by any measure a very complex issue, and I only have 25 minutes to speak, so I will necessarily gloss over many elements. In a nutshell, there are three dimensions to the issue of affordable housing: the affordable side first and foremost, households need to have sufficient income to afford houses. On the supply side, you need responsive, efficient housing markets, which hopefully will produce housing at the lowest possible cost. And third, if the first two aren't sufficient (for example, households that don't have sufficient income), you'll need publicly financed public housing, which is also called social housing, for many developing nations.

We know that haze is often the root problem in this presentation for poor nations. I'm in Montreal, so I'll focus primarily on b, which is the functioning of housing markets, and I'll look at it in a rich world city like Montreal, which has been reasonably successful in keeping housing prices below. I realized that this presentation will stay within the framework of liberal market economies, which is the dominant mode of housing in North America.

To illustrate the pricing range, we have the typi-cal price for a similar size department in a similar downtown location in a number of western cities, and as you can see, this has remained true for several decades.

Housing prices, whether owned or rented, are about half or close to half the price in the other two metropolitan areas of Canada, which are Toronto and Vancouver. So, the question, of course, is when people see the lower housing prices in Montreal, the question is, "Well, what's Montreal's secret? How did we get there?" Okay, a caveat is important here. This unquote success story I'm explaining to you is a story that I'm telling you.

Even in the developing world, the housing crisis has exploded; however, in relative terms, Montreal is still much more affordable than Toronto or Vancouver, so why did Montreal historically express it in this manner? First, Montreal has traditionally had a fairly liberal light regulatory framework in terms of building codes, bylaws, and so on. Second, and in many ways a caller to the first, is the absence of development charges except for very close services like parks. But what are development charges? When a developer or builder comes in, he is asked to contribute to the financing of a whole set of infrastructures, which can vary depending on the city.

These development charges can be quite important. Montreal, Montreal, that's number three in Montreal, as well as in much of Quebec, the provision and financing of urban services, whether schools, police, or fire departments, are all funded

through general revenue. I mean either through general real estate taxes if we're talking about cities or, in the case of Quebec, provincial taxes, income taxes, etc.

At the provincial level, so these services are not passed on to the homeowner or the renter except for accepting real estate taxes. The fourth which very much follows from those above, is a tradition in Montreal of mixed density housing, what people sometimes call the "missing middle," and corresponding zoning laws that favor mixed densities. the fifth, which is a significant difference with the United States, for all practical purposes, in Montreal.

We have very few nimbies, you know, not in my backyard; very few people are opposed to densification or building; almost no housing-related nimbies, which has created a fairly unique market in which smaller builders can move in and essentially make the building much more competitive. Toronto and Vancouver Montreal is browning and returning to blue. Vancouver is green, and the important thing is that here Toronto is 100, so Toronto is always the highest. You can see that no matter which indicator here we look at, whether it be the approval time to get a building permit, whether it be community opposition, the possible probability of community acquisition, which they called nimbies, or development charges, you can see that in all three cases it's much easier to build than in the two competing cities.

You can see the very big difference in development charges, where development charges in Montreal are about a seventh of those in Toronto. Let me repeat what this creates: this general framework in which building is much less onerous, particularly in terms of regulation charges, allows smaller and intermediate builders to enter the market, which also facilitates the type of middle-range housing that is typical of Montreal.

We have a nice picture of the iconic staircases of typical row houses in Montreal, where the owner and renter often live next to each other, making for generally better social relationships. If anyone knows Montreal, this type of missing middle is very dominant. Again, Toronto is a good example, but so are many new cities, where the majority of housing is either single-family detached housing or high-rise buildings. Let's move on to the other foundation of Montreal's overall success, which is public housing. I speak of a partial success. First, let me say that public housing is a relatively small component of the total housing stock, accounting for less than 10%, and part of the reason for this is that the market has historically done a fairly good job; I say partially successful because, in the last 10 to 15 years, public housing has been significantly underfinanced due to political squabbles.

I won't go into the details of why it's not happening. Another advantage, and this is something I want to emphasize, is that public housing, which is often built by cooperatives and then financed by the province or the federal government in general, has generally been of good quality and built in such a way that it fits into the neighborhood. I

live in a fairly upscale neighborhood, and I record a number of public housing projects in my neighborhood, but you couldn't tell them apart from the rest of the houses here, so you have many small projects.

It is a conscious city policy across the city and across the island that enables different people of different social classes, and I would say that there exists both the quality of in the small scale in the middle small scale of social housing and its general dispersion, which largely explains the absence of nimbies to social housing.

So, I've divided my conclusion into two parts: one is the market and the second is social housing. So, conclusion one is that the challenge here is keeping housing prices low, which means keeping the market responsive, efficient, and flexible. So, I basically put out five rules here, and that can make it easy and profitable because you want the bullets to make profits; otherwise, they're not going to come in. I know that sounds like a dirty word, but that's what it's all about: making it easy and profitable to build and facilitating market entry by developers of all sizes, not just the rich and big. The notebook should keep the bylaws and building quotes simple, predictable, and easy to begin to understand.

Unfortunately, Montreal has recently enacted some fairly complicated bylaws; we'll see what happens, but in many cities, you want to blame anyone if you look at the building codes and especially the bylaws, the regulations required to get a permit; you need an expensive lawyer, you need

architects and engineers, and small firms simply can't afford that, so keep it and make it possible for smaller builders to come in and build while still respecting the building codes.

Quebec is a North American outlier, typical of many other Quebec policies that Quebec has chosen, whether consciously or unconsciously, to finance urban infrastructures such as schools, roads, electricity, and water. is very important in schools because, out of general revenues, either local or provincial, the cost is not passed on to homeowners. which is a critical factor in maintaining low housing prices not only through competition but also in terms of costs. This is becoming more of a policy in the Montreal metropolitan area, as we now have an urban community with zoning that encourages mixed and mixed-use, mid- and high-density residential along transit corridors.

I haven't talked about transit, but encouraging housing along transit is clearly also a factor in affordability because the poor can't afford cars on the nimby's The fifth rule is that, while the local population should be consulted on new projects because we live in democracies, this is purely subjective. should not necessarily be local and should not necessarily be given absolute legal powers that should be reserved for elected officials.

Now the second part of the conclusion concerns public housing. Even in the richest nations, some public housing will be necessary because there will always be households that will need income transfers or to have access to them. Income trans-

fers aside, that's a whole other policy issue that I will not deal with.

The first is stable, predictable funding for public housing, with as little politicization as possible; the same is true for funding rules, which mean access to public funds for cooperatives and other building associations; keep that simple and predictable. Second, and very different from the big French projects, small and mid-sized projects dispersed across the city, and to avoid at all costs self-perpetuating concentrations of poverty, and for social housing, this is also a very sticky issue to ensure that the access criteria by poor people to social housing there again the different criteria for resale and occupancy that these rules are clear and limited and clear and easy to understand, and again as a result of the big French projects The final rule is that one should not confuse the two. I mean, one should not confuse the two, but what the state should not confuse is what the state's responsibility is and what markets can do. Markets are there to keep housing and housing prices as low as possible, and what the state must do is that even in the most efficient markets, some people will be left behind. I should not confuse the two and should not ask the market to do what the public sector should do.

Building a Thriving Caribbean Future: Resetting policy with international partners, by Mimi Sheller

Thank you for the invitation to be here. I was originally planning to speak specifically on mobilities for the topic of this conference, but given the events that are taking place in the Caribbean right now, I've decided to focus my talk on resetting policy with international partners and how we can all work together to build a thriving Caribbean future. Of course, Canada, China, and many African countries, as well as our important partners and populations in the Caribbean, have been heavily involved.

So, I'm going to draw on my book Island Futures, which Olivier Dehoorne mentioned and published last year, and the Caribbean region is at a critical crossroads right now, with really challenging environmental conditions, political conditions, and social transformations brought about partly by climate change and climate displacement, but also by economic pressures most recently caused by the pandemic, which, as you know, shut down do.

The Caribbean has also been buffeted by changing political alignments of both the traditional kind of what I call the "great powers," namely the US and EU in particular, and the newer power of China in the region. As we all come out of the pandemic crisis and face the ongoing climate crisis, we have an opportunity to try to reset foreign policy with our neighbors in the Caribbean.

So, in this talk, I want to argue that this is a really important time to build smarter, sustainable, equitable, and more cooperative international relationships that will help support better policies

for the people and ecosystems of the Caribbean region, both of which are in very fragile condition at the moment. So, I want to focus on our collective international obligations to the region at this crucial moment in its history, when many things are up in the air right now. As you know, the president of Haiti, a juvenile named Moise, was assassinated just this past month under very murky circumstances that are still under investigation, and the country had already been rocked by protests and violence for two years.

Of course, there was the ongoing recovery from the 2010 earthquake, which was still not complete in Cuba; meanwhile, protest demonstrations by ordinary people have occurred for the first time in decades, just again in July at this time, while the US embargo and thawing of relations with Cuba remain unresolved; and, of course, the looming climate emergency and ongoing efforts to recover from numerous recent hurricanes have been added to these political conditions.

I won't belabor this point, but climate scientist Michael Taylor has, you know, pointed out that we're under a new climate regime. It's an extremely unusual condition that is occurring with the number of category five hurricanes, the intensification of them, and so on. the slow movement of them and the number of devastating impacts that they're having, if the current climate situation can be described by scientists as unfamiliar and unprecedented. This does not imply that it does not have historical roots in terms of the vulnerabilities of this climate.

How we conceptualize climate vulnerability has important implications for how we think about the recovery and the future of the region. It's crucial to recognize the complex historical factors that contribute to current vulnerabilities across the Caribbean. Many analysts now refer to seemingly natural hazards such as hurricanes as unnatural disasters because of the ways in which risk and vulnerability are structured by all-too-human structures of inequality.

April Baptiste and Kevon Raney have argued that marginalized groups experience climate change effects differently from the wealthy and privileged. In this example, we see when Hurricane Dorian hit the Bahamas. Because of the marginalized communities in which they lived, as well as the immediate resurgence of things like this operation sovereign Bahamas, which sought to, as they put it, "eradicate illegal immigrants in the Bahamas" and "shut down shanty towns," Haitian migrants and Haitian Bahamians were the most vulnerable to the effects.

which play a role in explaining the intensity and the consequences of phenomena like hurricanes, no event is strictly or exclusively natural, and even the United Nations Development Program, which is quoted at the bottom here, makes that argument, while at the same time, there are other changes afoot in the Caribbean region. The US foreign affairs committees and so on are very concerned about these things, and as you know, they're concerned about China's belt and road initiative. but China has invested over eight bil-

lion dollars just between 2005 and 2020, particularly in six Caribbean countries, but it has done so elsewhere as well. Investments focus on tourism transportation, extractive metals, agriculture, and the energy sector.

So, there's a huge set of infrastructural developments and extractive industries that are moving into the region through Chinese investment. US corporations like Exon are also developing massive deep sea oil fields off of Guyana and Suriname, opening a new fossil fuel frontier at the very moment when the world is pressing to reduce carbon emissions while there's much emphasis on the need for the US administration to rebuild key US alliances with the EU, Canada, and other nations that were severely frayed under the Trump administration.

We have kind of been ignoring our role in the Caribbean region, and there are other crucial alliances in this hemisphere that also need to be repaired. The countries of the greater Caribbean are our closest neighbors, yet they are often forgotten, or worse, harmed, by US policies. I speak as a US citizen here, so I'm speaking for my country, but I also speak to Canadians and Chinese citizens to think about shifting our Caribbean policies in the future.

I'll shift here to Part 2 of my talk: What Future Is There in a World Without Rainfall? a world without or with uneven rainfall and flooding; a world without coral reefs; an ocean without fish not to mention an economy that we now see without tourists in the aftermath of these hurricanes like Dorian, Irma, Maria, and Matthew that have devastated the Caribbean. With the current situation of pandemic disruption, some people call for the tourism economy and cruise ship market to be restored; they want to see it bounce back. But others see this as a chance to rethink the forms of over tourism and unsustainable development that have severely impacted the ecology of the region. I want to argue that we cannot afford to miss this moment. We must get it right before the Caribbean's future slips further away in the face of the climate emergency. As I've said, anthropologists like Puerto Rican Larimar Bonilla wrote that the 2017 hurricanes' vulnerability is not simply a product of natural conditions; it's a political state and a colonial condition, so what responsibility do we bear as major emitters of greenhouse gases and major developers of fossil fuels, you know, in Canada and the US, as well as our roles in colonialism, slavery, and resource extraction? The question is not just one of climate adaptation.

I'd also like to bring up climate justice and climate debt: should major contributors to global warming pay for rebuilding reparations and restitution, and how can we do that through better policies in particular, how could sustainable tourism, for example, be part of a regional solution rather than part of the problem? Tourism, in particular, continues to benefit from uneven geographies of risk and vulnerability, and rather than viewing recent natural disasters as a threat to the Caribbean's tourist economy, we could instead consider how to reposition tourism so that it is less extractive,

less predatory, and contributes to a region's weaknesses rather than exploiting them.

So, I want to take the current interruption of global travel as an opportunity to rethink forms of reconstruction and post-tourism sustainable development, and crucial to this is the idea of regenerative tourism and also how that might link with food justice and food sovereignty in the region. So, in post-hurricane Maria and Irma Puerto Rico, for example, people formed what they called "people's assemblies" and they combined strategies around climate justice, food justice, and energy justice through organizations such as resilient power Puerto Rico. They thought to distribute solar power generators to create small scale, community-run micro grids.

They called for a complete reconstruction of economies, labor relations, and relationships to the natural world and to each other. These kinds of critical alternative development strategies occur throughout the Caribbean region. You'll find them in Haiti and Jamaica. People calling for this kind of work and this could really help, especially the small island developing states, become less reliant on extractive industries and to create more sustainable, more equitable, and less vulnerable communities in the face of climate change. So rather than rebuild under the policies of "build back better," which have often brought in large-scale developments, there's been a sort of explosion of extractive industries, such as mining and oil drilling, and building very large-scale tourist hotels and developments,

I hope that we can learn from these past ecological projects how to expand Caribbean food sovereignty and practices such as regenerative agriculture. Silvoagro-forestry: Silvopasture tree intercropping, use of tropical staple trees, etc. various types of gardening that draw on indigenous knowledge and horticultural practices, and at the same time to combine that with more resilience through integrating it with regenerative tourism economies, but also things like digital innovation and the call for new kinds of knowledge economies within the Caribbean, and I think there's a case to be made that these can be combined

You see these vast archipelagic spaces. I've recently been involved in the field of archipelago studies and archipelagic thinking in the Americas, and to get away from our idea of the continental thinking that we're kind of trapped in and to think of us as archipelagoes of connection, archipelagoes of cooperation, the transformation of US policy in the region, US government decisions, is crucial to implementing such a vision. Our early ties to the slavery plantation economies to the damaging forms of over-tourism to exploitative export processing zones and extractive industries such as bauxite mining, we have often failed the peoples of the Caribbean, and now our consumption of fossil fuel is driving climate emergencies. Even while the United States blocks climate-displaced refugees from places like Central America and the Caribbean, we've closed our borders.

We've deported people, many infected with COVID-19, sending them back to dangerous

conditions, so weak US policy leads to more violence, including state violence. More drug trafficking, more undocumented migration, and ongoing violations of human rights across the region mean that the Caribbean deserves better and the US deserves it. Canadian, Chinese, and African cooperation and good policies to help build thriving economies are needed in the region. The region needs all of us to build smarter, more cooperative relationships. We must help build food sovereignty, renewable energy, ecological repair, and coastal protection. gender equity and social justice safe housing, fair migration policies, disaster preparedness, and risk reduction

For example, the prime minister of Barbados, Mia Motley, in her recent address to the United Nations last year presented a vision for digital investment, knowledge building, and creative cultural economies, as well as the kind of regenerative ecological economies that I've been talking about. All of this requires cooperation around international climate justice. I believe that there is a demand already begun by the Caricom countries and by Haiti for immediate payment by the USA, the UK, and the EU of both slavery reparations and climate reparations, and that's a broader argument, which I won't give the details of here, but I think that's an important starting point. This is not aid; it is a debt that we already owe, and it can go into a reformed Caribbean green climate fund and new financing mechanisms, along with international recognition and protection for displaced people, also known as climate refugees.

We must reject the depiction of climate refugees as a growing danger who will flood our borders. In fact, it's our way of life that has put these people in harm's way and excluded them from social protection. I also argue that we need to reject the colonial or neocolonial logic that jumps to relegate certain islands to extinction and depopulation, you know, saying, "Well, we just can't live there anymore, forget that," even as they eye these very places for valuable luxury real estate development. That's what's happened in Antigua and Barbuda as Barbuda was evacuated during the hurricane and the Antiguan government has not allowed people to return there to what was a form of collective land holding and instead tried to open it for real estate development. So this demands ending the ecologically damaging development projects and extractive industries that are slowly but surely destroying the last endemic species and ecological remnants of these islands. fossil fuel and tourism dependence, labor exploitation, and unsustainability

We must also reject the Caribbean as a logistics hub where nature becomes global infrastructure, and I am concerned that some of the region's Belt and Road Initiatives turn nature into infrastructure to serve the mobility of capital investment but not necessarily to help the Caribbean's communities and people. We must imagine alternative futures for the entire region that are more resilient and flexible, allowing for movement in hurricanes.

We can also open borders and use communication technology to connect people more effectively

across the Caribbean and its diasporas and allow for easier movement between places by reducing the cost of travel for local people and the regulations of travel that make it difficult, as well as by opening borders. Finally, we can learn from agroecological projects how to expand Caribbean food sovereignty and resilience through regenerative low-till agriculture. As I've stated through these indigenous gardening systems known as cayuco, an Arawak term, and using traditional root crops such as cassava or yucca, I call on my own government administration, the bidden Harris administration, as well as the Canadian and Chinese governments and African partners, to learn from the mistakes of our so-called build back better policies, which failed in places like post-earthquake Haiti and led to corruption, ganja, and poverty.

High-Quality Infrastructure Development in China, by Zhi Liu

The first part is about China's infrastructure development over the last few decades, and the second part is a question about whether China is unique in infrastructure development. I know many people around the world feel China is like a big builder of infrastructure, but let's see how it looks when we present the data. Then I will talk briefly about the main factors influencing the future of infrastructure development in China. Finally, I will conclude with the challenges of high-quality infrastructure development.

As you well know, China has gone through several decades of rapid economic development, but the picture I show here is the rate of urbanization in China, which means the trend is driven by the rapid economic growth. As you can see, in the early 80s, China's rate of urbanization was around 20. Today, according to new census data, China's urbanization rate is 63 percent, but we still have half the work to do to reach the high level of urbanization seen in OECD countries rather than America.

Now let's look at the cities, and China is really nice, and now we have a number of major cities and we have mecca cities like Beijing, Tianjin, and Shanghai, but we also have a large number of cities with a population over 5 million or over 1 million, and we have a large number of county towns, so in the future we expect that we will have another 15 percent of the population that is becoming urban, and so that's the projection we have: 1.13 billion urban residents or 75 percent of the total population by the year 2050.

Our team conducted some analysis using China's infrastructure time series, and I'd like you to pay attention to the graph, which is called elasticity with respect to GDP and shows how much infrastructure stock increases with a percent increase in GDP. We see that all the elasticities are greater than zero, indicating that infrastructure increases a bit for GDP, but some infrastructure increases at a rate faster than the economic growth rate, and here we can see expressway high-speed rail.

Also, the mobile iPhone subscription, and these are the high flyers in the infrastructure sector, and these are the data that we have from the 80s until recent years. Now we also show some data here about the access to localized infrastructure by province, and the yellow dot shows them and the level of assets percentage around 2000, just a few years after 2000, and the proof of the level of assets in recent years.

So here we have a drinking water service, and we have clean fuel for cooking, and we also have a garbage treatment and sewage treatment, so we can see that for the last 15 years or so, access to this localized infrastructure service has risen to a level very close to 100 percent, and so that's the achievement that we can see for the last 15 or 20 years, and then here's the number that's a bit more striking, and that's the infrastructure investment compared to GDP, and I would suggest that you look at the curve on the top, and that's the percent of GDP that goes to the infrastructure investment, both for the private sector and the public sector, and of course, and of course this is very high.

So many people would ask where China gets the money to build the infrastructure. I will highlight a few observations. First of all, as you can see, we divide the infrastructure into two categories: the cross-regional infrastructure like highways and expressways, high-speed radio and telecommunications, and electric upgrades, and the localized infrastructure serving the settlements and the cities like the urban street of great power supply, water, and sanitation.

As evidenced by the data, I just showed you the pictures, and we can see the major achievement in infrastructure stock and also the assets, and we can also see that China has been able to maintain a high level of infrastructure investment, making China very unique in the development of the infrastructure stock. This is an original study or original data nets that we had recently, and we simply plot the in-structure stocks and by different physical types against the per capita GDP, and each dot represents a different physical type. have electricity capacity per capita, we have a pay flow, and we have a percent of the road paved; several indicators are not outliers using the international cross-country data from the World Bank.

This is how we see China as compared to a large number of countries. Here again, we have a fixed telephone subscription, we have a mobile cellular subscription, and we also safely manage the sanitation. Again, the red dot is buried in the thick, so you don't see China as the outlier, and we have a statistical analysis, but I think the approach that tells the story better has higher error coefficients.

I will show you a few more figures. This is what we call the chopstick plot. One line represents one country, and the lower end of the nine shows the point of the country. For example, the indicator of infrastructure is measured against the GDP of the early year, and the point is the ending year of the infrastructure level measured against the GDP of the new year. So one line shows how the particular infrastructure stock changes over time with GDP per capita, and again, I use the arrow

to show where China is because in the picture the red line is China.

I have to take off my glasses in order to tell you where China is, and this is China just around the turning point here, and then the red line is China if you follow the arrow to find the red line, and that's China again for the four indicators I show here. China is not the outlier, and the next four indicators show the growth path of infrastructure assets or stock, and China is once again buried in the fixed blood and outlier in this plot, indicating that China has led infrastructure development over the last 20 years.

If we see this as a behavior, and China is not really online, that is the major conclusion we have, and we are submitting our paper to a pro-academic journal to highlight this story. If we look into the future, we have a few main factors influencing the future of infrastructure development in China - income growth, of course, is a major factor - and continuing urbanization, and now we have a major policy indicator - China's decarbonization policy - and China is just an indicator

The megacity is particularly in the coastal and eastern coastal regions now, of course, they are facing COVID and other uncertainties, and our populations are rapidly aging, and we also need to develop climate resilience in the future, and of course, as all of you know, there is technological advancement in the infrastructure sector.

What we mean by high-quality infrastructure development I think there are a few components. One is the provision of universal access to basic services, even though our indicators show that the access to basic services is fairly decent, but we still have some localities where these indicators are not good enough, so we will continue to make efforts on this front, and then the second element is to meet the changing and diversified needs of the population, and we will also need to achieve climate resilience and protect the environment and ecology.

So one technical challenge we are considering is how we integrate infrastructure planning while also advancing technological and institutional innovation and improving sector governance, which is perhaps the most important, and in China now we are thinking infrastructure a little differently because we are facing such rapid change and also the underlying term for future infrastructure development.

Then we also talk about green infrastructure, which includes greenway parks, rain gardens, permeable pavement, storm water management ponds, and so on. Collectively, we call this a "sponge city." So these are the infrastructures for climate resilience, and we also have a new infrastructure, which is 5G artificial intelligence internet and data centers, so all together it constitutes what we call the infrastructure because today we see a possibility that the new infrastructure can actually help us build synergy among different types of infrastructure like energy and transport, economic and social, and green infrastructure. So that's the kind of concept we have when we move ahead with policy making and also sector man-

agement in the future.

So we will need to think about what we have to do with infrastructure, and we think for electricity generation it will be important to have a very clear supply of electricity. I mean an energy mix from renewable sources or nuclear power and then electrification of the provision and operation of all infrastructure services; without doing that, there is no hope of achieving the target. China will also face all the fossil fuels from infrastructure to the extent possible, and we will also try to develop the carbon through, say, land conservation forestry or something similar in order to absorb the residual carbon emissions that can't be avoided in the future, but a great deal still needs to be done. When we consider land use, how to optimize land use, how to use pricing to regulate personal behavior, and perhaps most importantly, how to organize the sector and achieve the goal of a lecture zero, this highlights the challenge we face when asked to achieve the letter zero policy; of course, there are other challenges as well, such as ageing and how to deal with artificial intelligence and other such things.

News on ICCCASU 4 held in Montreal

After more than a year of planning and organizing, ICCCASU4 was successfully held virtually in Montreal, Canada from July 28 to 31, 2021. The conference was staged in partnership with UN-Habitat, McGill University, University of Ottawa, and the International Council on Canadian, Chinese and African Sustainable Urbanization.

Under the theme of "Density, Diversity, and Mobility: The City in an Era of Cascading Risks," ICCCASU4 examined the opportunities and challenges of sustainable urbanization and its impact on urban economy, society, and environment, particularly in regard to our most vulnerable populations in a post-pandemic era. Over the four-day conference, more than 200 participants from 39 countries around the world engaged in discussions on the following themes: a) learning from and preparing for health crises in cities, b) preparedness and management of COVID-19 and climate change in cities, c) building more resilient cities worldwide, d) urban risk management, and e) privacy, surveillance, security, governance and collective wellbeing.

ICCCASU4 took place in the unprecedented and unique context of the global COVID-19 pandemic, a health crisis that transformed how we live, work, and relate to one another. ICCCASU too has had to adapt to the situation, and for the first time the conference took place primarily online. The opening ceremony began at 8:00 AM on July 28, 2021 over Zoom Webinar. The ceremony was co-hosted by Mr. Claude Ngomsi, Senior Programme Management Officer at UN-Habitat (Kenya), and ICCCASU's Chair of Latin America & Caribbean Relations, Ms. Luisa Gomez. Opening remarks were delivered by Ms. Maimunah Mohd Sharif, Executive Director of UN-Habitat, the Hon. Yuen Pau Woo, Canadian Senator representing British Columbia, the Hon. Claver Gatete, Minister of Infrastructure of Rwanda, Ms. Suzanne Fortier, Principal and Vice-Chancellor or McGill University, Mr. Jean Pierre Elong Mbassi, Secretary General of United Cities and Local Governments of Africa (Morocco), Mr. Peter Guo-hua Fu, President of KFS Architects & Professor at Peter Guo-hua Fu School of Architecture (McGill University), Professor Matti Siemiatycki, Director of School of Cities (University of Toronto), and Professor Huhua Cao, University of Ottawa & Co-President of ICCCASU.

The keynote session following the opening ceremony was co-hosted by Professor Benjamin Gianni, Carleton University, Mr. Allan Cain, Development Workshop (Angola), and Mr. Rong Yang, UN-Habitat. David Miller, Director of Director of International Diplomacy, C40 Cities Climate Leadership Group & Former Mayor of Toronto, Leilani Farha, Global Director of NGO the Shift & Former UN Special Rapporteur on the Right to Housing, and Oumar Sylla, Director of UN-Habitat Regional Office for Africa, each delivered insightful keynote speeches on climate change in cities, housing affordability, and building COVID-19 resilient cities in Africa, respectively. Programming began at 8:00 AM on the second day, with a dialogue co-hosted by Professor David Covo, McGill University, and Professor Denise Piché, Université Laval, based on the theme of "Rethinking the Post-Pandemic City." Mary Rowe, President & CEO of Canadian Urban Institute, Vikram Bhatt, Professor Emeritus, Peter Guo-hua Fu School of Architecture (McGill University), René Joly Assako Assako, Vice-Recteur, Université de Douala, and John Zacharias, Peking University, each delivered engaging presentations

and participated in the thought-provoking discussions with the participants.

The second dialogue session was on the theme of affordable housing, co-hosted by Mr. Allan Cain, Development Workshop (Angola), and Professor Benjamin Gianni, Carleton University. Kecia Rust, Executive Director of the Centre for Affordable Housing Finance in Africa, Patricia Roset-Zuppa, Vice-President Policy of Canada Mortgage and Housing Corporation, Anacláudia Rossbach, Regional Manager for the Latin America and Caribbean Cities Alliance, and Zhi Liu, Director of China program, Lincoln Institute of Land Policy, Peking University participated in thoughtful conversations on the topic of housing access.

Day three of the conference opened with the second keynote session on July 30, 2021. It was co-hosted by Professor Benjamin Gianni, Carleton University, and Professor Olivier Dehoorne, Université des Antilles. Mario Polèse, Professor emeritus at Institut national de la recherche scientifique, Mimi Sheller, Inaugural Dean of the

Global School (Worcester Polytechnic Institute), and Zhi Liu, Director of China program, Lincoln Institute of Land Policy, Peking University, presented keynote speeches on affordable housing, sustainable policy development in the Caribbean, and Chinese infrastructure development, respectively.

There was a total of six thematic areas for the panel discussions, which took place on days two to four.

Thematic area 1: Towards More Resilient Cities Worldwide was coordinated by John Zacharias, Peking University, and Inês Macamo Raimundo, Eduardo Mondlane University.

• (T1Pa): Metropolisation and Urban Renewal was hosted by Antoine Beaulieu, Université Laval, and Yombi Ouedraogo, UN-Habitat. Christophe Dongmo, Sonna Etienne Foundation, Kimberley Wint, Carleton University, and Aly
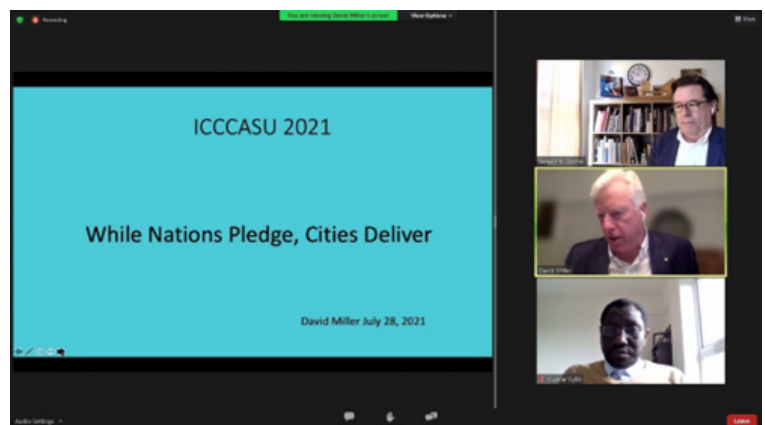
Sada Timera, Université Cheikh Anta Diop de Dakar presented their research.

• (T1Pb): Displacement and Rural-Urban Development was hosted by Liping Yue, Northwest University, and George Onatu, University of Johannesburg. Stephanie Loose, UN-Habitat Burkina Faso, Bing Xue, Technische Universität, Chen Yang, University of Waterloo, and Liping Yue, Northwest University delivered their academic speeches.

• (T1Pc): Urban Resilience: from Theory to Practice was hosted by Bing Xue, Technische Universität Berlin, and Aly Sada Timera, Université Cheikh Anta Diop de Dakar. Zixin Zhan, Peking University, Yangfan Lin, College of Environment & Ecology, and Anne-Catherin Chardon, Higher School of Real Estate Professions-ESPI participated in the discussion and presented their

research.

• (T1Pd): Resilience and Sustainable Infrastructure was hosted by John Zacharias, Peking University, and Stephanie Loose, UN-Habitat Burkina Faso. Riad El Jirari Arrach, Institut National d'Aménagement et d'Urbanisme, Thomas Tamo Tatietse, Institut Universitaire de Technologie FV, and Amy Huangqing Li, Associated research Centers for Urban Underground Space, delivered their academic research.

• (T1Pe): Urban Resilience and Coastal Development was hosted by Amy Huangqing Li, Associated research Centers for Urban Underground Space, and Andrea Brown, Wilfrid Laurier University. Xueting Zhang and Zhiyuan Xiang, Xiamen University, and Lei Liu, Sichuan University presented their research.

• (T1Pf): Education for Resilient Cities was hosted by Vincent Kitio, UN-Habitat Kenya, and Laïla Amraoui, Université IBN Zohr. Babatunde Fatai Aigbavboa Ogunbayo, University of Johannesburg, Ting Du, Beijing Foreign Studies Uni-

versity, and Jade Sullivan, University of Ottawa presented their academic research.

Thematic area 2: Preparedness and management of COVID 19 and climate change in cities was coordinated by Yangfan Li, Xiamen University, and Tonton Mundele, Global Affairs Canada.

• (T2Pa): Covid-19 Breakout and Cities Preparedness was hosted by Yangfan Li, Xiamen University, and Lolita Shaila Safaee Chalkasra, University of Ottawa. Douglas Mure-Ravaud Raga, UN-Habitat Kenya, Kgomotso Jackson Phillip Sebola-Samanyanga, University of Johannesburg, and Miriam Domingos Ngombe, Development Workshop Angola participated in discussions and delivered their academic speeches.

• (T2Pb): Covid-19 and Climate Change was hosted by Tonton Mundele, Global Affairs Canada, and Douglas Mure-Ravaud Raga, UN-Habitat. Ambilola Omolabi, Yaba College of Technology, Kamyar Razavi, Simon Fraser University, Laïla Amraoui, Université IBN Zohr, and Chalkasra Safaee, University of Ottawa presented their research.

• (T2Pc): Covid-19 Breakout and Risk Assessment was hosted by Abimbola Omolabi, Yaba College of Technology, and Dewei Yang, Southwest University. Tianyi Xiao, Tianjin University, Antara Tandon, UN-Habitat India, and Shaoyi Wu, Shanghai University delivered their academic speeches.

Thematic area 3: Forecasting and Forward-Looking Urban Risks Management: Managing Increasing Density, Diversity, and Mobility was co-ordinated by David Covo, McGill University, and Dingping Guo, Fudan University.

• (T3Pa): Building Inclusive and Sustainable Cities was hosted by Philippe Régnier, Université d'Ottawa, and Dingping Guo, Fudan University. Stephanie Loose, UN-Habitat Burkina Faso, Alice Nunes, University Eduardo, and Jerzy Bański, Polish Academy of Science presented their research.

• (T3Pb): Urban Complexity and Urban Development was hosted by David Covo, McGill University, and Jerzy Bański, Polish Academy of Science. Abdinassir Sagar, UN-Habitat Kenya, Bingyu Zhao, University of Chinese Academy of Sciences, Adiaratou Thiam, Ministère des Affaires foncières de l'Urbanisme et de l'Habitat Mali, and Abdelhamid Benhmade, University of Ottawa delivered their academic speeches.

• (T3Pc): Environment Comfort and Urban Space was hosted by Wang Hong, Shanghai University, and Adiaratou Thiam, Ministère des Affaires foncières de l'Urbanisme et de l'Habitat Mali. Tong Mu, Tianjin University, Asia Lachir, National School of Architecture Morocco, and Hanlin Zhao, University of Toronto presented their research.

• (T3Pd): Cities facing Diverse Challenges was hosted by Fachun Du, Yunnan Agricultural University, and Kamyar Razavi, Simon Fraser University. Emmanuel Takang, University of Yaounde I, Dewei Yang, Southwest University, Mohamed Zhar, Université Hassan II de Casablanca Maroc, and Zixiang Zhou, Yunnan Agri-

cultural University presented their academic research.

Thematic area 4: Privacy, Surveillance, Security, Governance and Collective Wellbeing was coordinated by Claude Ngomsi, UN-Habitat, and Yuenan Li, University of Ottawa, who also hosted

•	(T4Pa): Politics and Urban development. Andrea Brown, Wilfrid Laurier University, Xiaoxi Liu, Tsinghua University, Qianning Li, Nanjing University, and Atik Mohamed, Université Ibn Zohr presented their research.

•	(T4Pb): Theoretical and empirical analysis of Urban development was hosted by Abdelhamid Benhmade, University of Ottawa, and Asia Lachir, National School of Architecture. Valio Lubunga, ISP Bunia, RD. Congo, Claude Ngomsi, UN-Habitat Kenya, Yuenan Li, University of Ottawa, Gamaliel Mayoussi Kubwarugira, Université Sultan Moulay Slimane, and Anthony Bouyssou Tchekemian, Université de Polynésie Française Faa'a delivered their research.

Thematic area 5: Health Crises in Cities: Learning from the Past and Planning for the Future was coordinated by Ian Cooper, Employment and Social Development Canada, and Haotian Guan, University of Ottawa.

•	(T5Pa): Urban Health in the Era of Covid-19 was hosted by Ian Cooper, Employment and Social Development Canada, and Antara Tandon, UN-Habitat India. Raynous Abbew Cudjoe, Shanghai University, Thenushaa Ratnasapapathy, University of Ottawa, and Emmanuel Biririza, UN-Habitat Kenya presented their research.

•	(T5Pb): Urban Development in the Post-Covid Eras was hosted by Ruibo Han, University of Maryland, and Emmanuel Takang, University of Yaounde I. Jean Pierre Togolo, University of Dschang, Soniya Falahatdoost, Southeast University, and Ines Raimundo, Eduardo Mondlane University participated in discussions and delivered their research.

•	(T5Pc): Health Issue and Urban Pattern was hosted by Ines Raimundo, Eduardo Mondlane University, abd Abdinassir Sagar, UN-Habitat Kenya. Xiao Xiao, University of Chinese Academy of Sciences, and Vitor Pessoa Colombo, École Polytechnique Fédérale de Lausanne delivered their academic speeches.

Thematic area 6: Housing: Access, Affordability and Informality was coordinated by Benjamin Gianni, Carleton University, and Allan Cain, Development Workshop Angola.

•	(T6Pa): Affordability Housing and Informal Settlement was hosted by Benjamin Gianni, Carleton University, and Atik Mohamed, Université Ibn Zohr. George Onatu, University of Johannesburg, Kareem Mitchell, Carleton University, and Ziyu Liu, Southeast University delivered their academic research.

•	(T6Pb): Urban Governance and Housing Cost was hosted by Matti Siemiatycki, University of Toronto, and Claude Ngomsi, UN-Habitat Kenya. Allan Cain, Development Workshop Angola, Benoît Mougoue, Université de Yaoundé 1, and Haonan Zhang, Shandong Jianzhu University presented their research.

• (T6Pc): Public Policy and Homelessness was hosted by Allan Cain, Development Workshop Angola, and Benoît Mougoue, Université de Yaoundé 1. Nan Zhou and Ian Cooper, Employment and Social Development Canada, and Temidayo Aigbavboa Osunsanmi, University of Johannesburg, delivered their research.

Special Panel A: Human Mobility and Tourism in the Caribbean in the Context of the Socioeconomic Impact of Covid-19: How are Governments Coping? included four panel sessions.

• 1) Cruise Tourism: Interests and Limits of a Model,

• 2) Impacts of COVID-19 in Caribbean's Islands: Lessons and Perspective,

• 3) Haiti's Dilemma, from One Crisis to Another, and

• 4) The Impact of COVID-19 on Tourism and Mobilities: Comparative Regional Approaches.

Special Panel B: Built-environment in the Post Pandemic Era - Revisiting the Planning Doctrines consisted of two sessions:

• 1) Community-Based Initiative and Transformational Planning, and

• 2) Planning, Mobility, Built Environment and Real Estate Development. Special Panel C was entitled Results-Based Local Governance, and Regional Green Economic Growth and took place on day four of the conference.

Special Panel D: Industrial Parks, Agro-processing Zones and Urban Transformation had three total panels,

• 1) China-Africa industrialization, urbanization and planning experience and cooperative research,

• 2) Development and planning of China's overseas industrial parks along the Belt and Road initiative, and

• 3) China and Africa industrial park development experience.

Special Panel E: Are Latin American Cities Inclusive for Migrants? was the last special panel, and consisted of the sessions:

• 1) Inclusive Cities in Latin American, and

• 2) Urbanity and Governance in Brazil.

On the third day of the conference, a special event titled "Impact of the Urban Environment on Health and Wellbeing" was held at 12:00 PM. It was chaired by Pamela Carbajal, UN-Habitat Kenya, who along with Zhou Ying, Planner, Wuhan Land Use and Urban Spatial Planning Research Center, Kristie Daniel, Director of the Livable Cities program & Head of local office in Ottawa, Health bridge, presented their academic speeches.

Finally, the round table took place on the fourth day of the conference. Chaired by Patricia Zander, Université de Strasbourg, the round table focused on the theme of "Towards otherwise resilient cities?" and featured presentations and discussions from Geraldine Djament, Université de Strasbourg, Kamala Marius, Université de Bordeaux, and Patricia Zander, the round table chair.
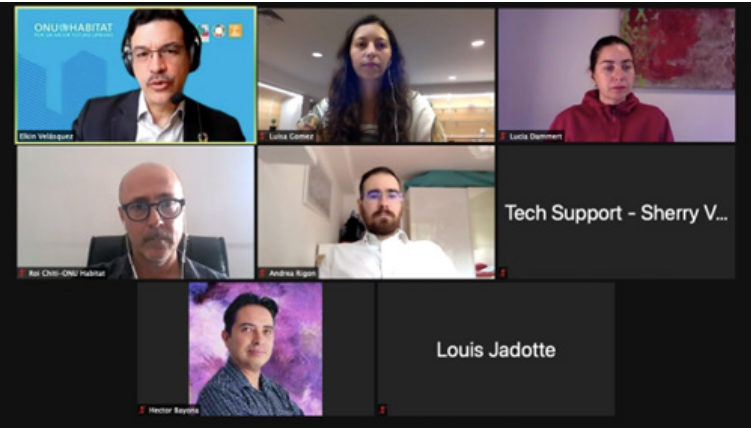
Following four days of engaging discussions and presentations, ICCCASU4 concluded on July 31, 2021. Despite the unprecedented challenges of COVID-19, the conference was a resounding success thanks to our participants. The ICCCASU4 organizing committee thank you for your support, and look forward to seeing you in 2023.
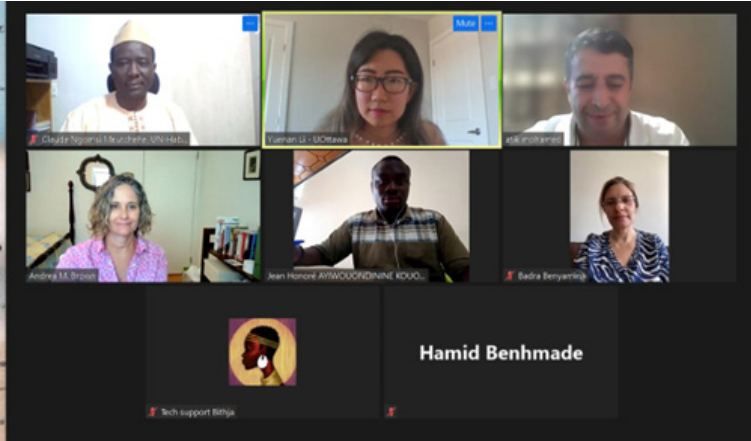
ABOUT ICCCASU

Created in 2014, The International Conference on Canadian, Chinese and African Sustainable Urbanization (ICCCASU) is an international think-tank for exchange and cooperation on issues relating to sustainable urban development, focusing on Canada, China and Africa. ICCCASU is an initiative between The United Nations Human Settlements Programme (UN-Habitat) and the University of Ottawa. It has expanded to include a consortium of Canadian universities (Carleton University, Université de Montréal and McGill University), as well as several important Chinese and African universities.

Moving beyond the conventional practice of North-South or South-South cooperation, ICCCASU fosters a triangular dialogue that altogether accounts for more than 30 percent of the world's urban population. Its biennial conferences and trainings, which rotate among the three regions, bring together scholars, practitioners, representatives of civil society, politicians and policymakers to share research and best practices on sustainable urbanization in the 21st Century.

To date, ICCCASU has mounted four conferences and trainings. ICCASU I was held in Ottawa in 2015 while ICCCASU II, in conjunction with the Ministry of Housing and Urban Development of Cameroon, was hosted in Yaoundé, Cameroon in 2017. In the summer of 2019, ICCCASU III took place in Chengdu, China in partnership with the National Development and Reform Commission of the Chinese government. ICCCASU IV took place in Montreal between July 27 to August 1, 2021.

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ICCCASU5

NAIROBI, KENYA (HYBRID)

DECEMBER 10 - 17, 2023

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