

# full program

Presented by







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# Word from the co-chairs

# Conference goals

## Time to innovate: Adapting Together

As the effects of climate change intensify across the world, we cannot simply replicate solutions from the past. The new climate reality compels us to intensify our risk reduction efforts, change our practices, update our inadequate public policies, and increase finance for climate change adaptation. Together, we must innovate to secure a resilient future.

This is precisely what Adaptation Futures aims to achieve: by mobilizing all actors in the global climate change adaptation community, we will facilitate knowledge exchange and co-creation among researchers, decision-makers, practitioners, industry representatives, and communicators.

It is an honor to welcome you to Montreal, Quebec, Canada, for the 7th edition of Adaptation Futures. During these five days, comprised of nearly 180 sessions, we will have the opportunity to share ideas, experiences, and innovative solutions for confronting the climate crisis and preparing for its impacts. Coming from more than 120 countries, together, we can help build a future where resilience and adaptation are at the core of our actions.

We wish you all a fruitful and inspiring conference and thank you for joining our efforts to help shape the future of adaptation.

Alain Bourque, Ouranos

Anne Hammill, IISD

#### AF2023 seeks to:

Learn from Indigenous, local knowledge and voices in climate change adaptation research, policies, practices and actions around the world

Bring marginalized voices, especially from the Global South, to the forefront in pursue of climate justice, equity, diversity and inclusion

Accelerate momentum towards the Global Goal on Adaptation and the Global Stocktake and build on action to implement effective adaptation Accelerate the adoption of transformative adaptation for long-term resilience

Recognizing these aims, and acknowledging our responsibility as a climate community to "walk the talk" on climate action, we will pursue these aims in an equitable, inclusive and low-carbon way

adaptationfutures.com

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#### **CONTACT US**

Conference Secretariat - JPdL International 514-287-1070 ext. 222 af2023@jpdl.com

#AdaptFutures23



# **Steering Comittee Members**

#### Co-chairs

**Alain Bourque** 

Executive Director, Ouranos

#### **Anne Hammill**

Senior Director, Resilience, International Institute for Sustainable Development (IISD)

#### **Laniel Bateman**

Environment and Climate Change Canada

#### **Bruce Currie-Alder**

International Development Research Centre and WASP

#### Jocelyn Joe-Strack

Yukon University

#### Maria José Moreno Ruiz

African Development Bank

#### **Anand Patwardhan**

University of Maryland

#### Jhannel C. Tomlinson

University of West Indies

#### María Del Pilar Bueno

National Council of Scientific and Technical Research, Universidad Nacional de Rosario, Argentina

#### Pasang Dolma Sherpa

Center for Indigenous Peoples' Research and Development

#### Maarten Kappelle

**UNEP** and WASP

#### Rose Mwebaza

UN Climate Technology Centre & Network

#### Arghya Sinha Roy

Asian Development Bank

#### **Maarten Van Aalst**

Red Cross Red Crescent Climate Centre

#### **Christina Chan**

Office of the Special Presidential Envoy for Climate Change (SPEC) John Kerry

#### Jean-François Gibeault

Ministère de l'Environnement et de la Lutte contre les Changements climatiques

#### Don Lemmen

Natural Resources Canada (retired)

#### **Youssef Nassef**

UNFCCC and WASP

#### **Roger B Street**

University of Oxford

#### Gina Ziervogel

University of Cape Town

# Scientific Comittee Members

#### Co-chairs

#### Georgina Cundill-Kemp

Senior Program Specialist at International Development Research Centre (IDRC)

#### **Edmond Totin**

Lecturer at Université Nationale d'Agriculture

#### Paulina Aldunce

University of Chile

#### Léa Berrang Ford

Leeds University

#### **Judy Lawrence**

Victoria University of Wellington

#### Shehnaaz Moosa

Climate and Development Knowledge Network

#### Nitya Rao

University of East Anglia

#### Chandni Singh

Indian Institute for Human Settlements

#### Aditya Bahadur

International Institute for Environment and Development

## Hetxw'ms Gyetxw (Brett D. Huson)

Prairie Climate Centre & Gitxsan Nation

#### Debora Ley

UN Economic Commission for Latin America and the Caribbean

#### Daniel Morchain

The Nature Conservancy

#### Lisa Schipper

University of Bonn

#### **Adelle Thomas**

University of The Bahamas and Climate Analytics

#### **Robbert Biesbroek**

Wageningen University

#### **Blane Harvey**

McGill University

#### **Robert McLeman**

Wilfrid Laurier University

#### Johanna Nalau

Griffith University

#### Nicholas Simpson

University of Cape Town



# **Organizers**



Based in Québec, Canada, Ouranos is an innovation cluster and consultation forum created in 2001. As a boundary organization, it aims to ensure the links and cohesion between the scientific community and the actors of adaptation – researchers, experts, practitioners and policymakers – working on potential solutions, enabling Québec society to better adapt to climate change. The consortium aims to acquire and develop knowledge on climate change and its impacts as well as on socio-economic and environmental vulnerabilities, so as to inform and advise decision-makers to identify, assess, promote and implement local and regional adaptation strategies.

## Canada Government of Canada

Canada is proud to host the next edition of Adaptation Futures, the world's largest conference dedicated to adaptation. Supporting adaptation to climate change is a priority for Canada, both at home and around the world. Join us in the global effort to build greater resilience to climate change. We look forward to seeing you in Montréal in October 2023!



The United Nations' World Adaptation Science Programme (WASP) is one of the four pillars of the World Climate Programme. WASP is led by seven UN agencies, i.e., the United Nations Environment Programme (UNEP), the World Meteorological Organization (WMO), the United Nations Framework Convention on Climate Change (UNFCCC), the Intergovernmental Panel on Climate Change (IPCC), the Green Climate Fund (GCF), the Global Environment Facility (GEF) and the United Nations University (UNU).

WASP's core vision is ensuring that climate adaptation knowledge gaps are filled to inform evidence-based policies, solutions and actions for successful adaptation to new climate conditions. Its priority is addressing the knowledge needs in vulnerable developing countries and providing policy-relevant science for decision-makers. WASP's overall mission is to make science work for climate change adaptation. WASP ensures that researchers, policymakers and practitioners have the knowledge, capacity, and solutions to underpin and implement effective adaptation to climate change. WASP works as a think tank and knowledge hub involving over 30 core specialists/members from around the globe. These include leading national, regional and international research institutions, implementation agencies, funding organizations, financial sectors and governance bodies. WASP has an international panel with a multi-stakeholder governance structure consisting of a supervisory Management Group, which oversees a Science Committee and a Policy and Finance Committee.

The biennial Adaptation Futures conferences have been co-organized and co-hosted by the World Adaptation Science Programme (WASP) and its predecessor PROVIA since 2010.

# **Major Partners**



Desjardins Group is the leading cooperative financial group in North America and one of the main employers in Canada.

The first Canadian institution to sign the United Nations' Principles for Responsible Banking (PRB) in 2019, Desjardins is also a signatory to the Principles for Responsible Investment (PRI) and the Principles for Sustainable Insurance (PSI). As a cooperative financial group contributing to the development of communities, sustainable development is part of Desjardins' DNA and is one of the foundations of its corporate strategy. Desjardins Group is therefore proud to be a partner of the next edition of Adaptation Futures.

Committed to the fight against climate change and adapting to its effects, Desjardins has set itself a net zero emissions target by 2040 for its operations and its supply chain, as well as its loans and own investments in three key carbon-intensive sectors: energy, transportation, and real estate.

Desjardins supports its members and clients, individuals and businesses, in their efforts to adapt to the effects of climate change. Indeed, they can benefit from discounts on financing for buildings with environmental certifications or for ecological renovations. They also have access to prevention tools – in particular thanks to programs like Ajusto (telematics), Alert (at-home prevention system) and Radar (bad weather notifications). In addition, Desjardins is adapting its products and services to the serious consequences of climate change, in particular by developing an extensive property and casualty insurance offer, with insurance guarantees for its business members in terms of water damage and sewer backflows. Finally, thanks to several partnerships, Desjardins is equipping businesses to be more resilient and adapt to the new reality brought about by climate change.



The Adaptation Fund (AF) finances projects and programs that help vulnerable communities in developing countries adapt and build resilience to climate change.

An innovative fund set up by the Conference of Parties to the UN Framework Convention on Climate Change, AF formally serves the Paris Agreement. It pioneered Direct Access which empowers country ownership in adaptation by enabling countries to access funds and develop projects directly through locally based National Implementing Entities.

AF has grown rapidly and has been receiving record demand since launching its operations 15-plus years ago, with more than US\$ 1 billion now committed to 150 concrete, localized projects in over 100 countries serving more than 38 million beneficiaries.

It offers growing funding opportunities across strategic pillars of Action, Innovation, and Learning and Sharing that support tangible, scalable adaptation actions on the ground for the most vulnerable groups. Independent reviews call AF's work effective, efficient and relevant.



# **Opening Plenary**

## Words from the frontlines

October 3, 8:30 am - 10:30 am - Hybrid

#### **Indigenous Opening**

#### Welcoming words from the organisers

By Alain Bourque, Executive Director Ouranos, and Anne Hamill, Associate Vice-President, Resilience, International Institute for Sustainable Development, Conference Co-Chairs

#### Opening words from dignitary

With: The Honourable Steven Guilbeault, Minister of Environment and Climate Change of Canada
Benoit Charette, Minister of the Environment, the Fight Against Climate Change, Wildlife and Parks of Québec
Valérie Plante, Mayor of Montreal
Guy Cormier, President and CEO of Desjardins Group
Mikko Ollikainen, Head of the Adaptation Fund

#### Testimony from the frontline

With Liteboho Makhele, Julia Santos Silva, Amina Maharjan and Mohab Sherif

#### Keynote by Sheila Watt Cloutier



#### **Guest Speaker Sheila Watt Cloutier**

Nobel Peace Prize nominee Sheila Watt-Cloutier is in the business of transforming public opinion into public policy. Experienced in working with global decision-makers for more than a decade, Watt-Cloutier offers a new model for 21st century leadership. She speaks with passion and urgency on the issues of today — the environment, the economy, foreign policy, global health, and sustainability — not as separate concerns, but as a deeply interconnected whole. At a time when people are seeking solutions, direction, and a sense of hope, this global leader provides a big picture of where we are and where we're headed.

In 2007, Watt-Cloutier was nominated for the Nobel Peace Prize for her advocacy work in showing the impact of global climate change on human rights — especially in the Arctic, where it is felt more immediately, and more dramatically, than anywhere else in the world. Watt-Cloutier is an Officer of the Order of Canada, and the recipient of the Aboriginal Achievement Award, the UN Champion of the Earth Award, the Norwegian Sophie Prize, the Jack P. Blaney award for Dialogue, and the Right Livelihood Award, which is widely considered the "Nobel Alternative".

From 1995-2002, Watt-Cloutier was elected the Canadian President of the Inuit Circumpolar Council (ICC). She was later elected in 2002 to become the International Chair of the ICC, representing the 155,000 Inuit from Canada, Greenland, Alaska, and Russia — she held this post until 2006.

Widely recognized for her influential work, Watt-Cloutier gave a TEDx Talk in 2016 titled "Human Trauma and Climate Trauma as One". She is also the author of the memoir, The Right to Be Cold: One Woman's Story of Protecting Her Culture, the Arctic and the Whole Planet, which was nominated for the 2016 BC National Award for Canadian Non-Fiction and the Shaughnessy Cohen Prize for Political Writing. In 2017, the book was shortlisted for CBC Canada Reads, defended by Chantal Kreviazuk. Watt-Cloutier was also shortlisted for the Kobo Emerging Writer Prize.

# Mid-week Plenary

# Rise-up: Partnering for social change in the era of adaptation

October 5, 10:30 am - 12:00 pm

Keynote by Laura Lynch

Panel discussion

Lead by Georgina Cundill Kemp with Ayesha Constable, Ethel Blondin-Andrew and Nabeel Petersen



#### **Guest Speaker Laura Lynch**

Laura Lynch is an award-winning journalist and is the host of What On Earth. What on Earth won the inaugural Climate Solutions Reporting award from the Canadian Journalism Foundation (2021). In the course of her career, she has reported from across Canada and around the world.

In the 1990's she covered the Supreme Court of Canada as it broke new ground with precedent setting Charter of Rights rulings. Laura also covered Parliament Hill, covering everything from gun control, to abortion to international trade.

Internationally, Laura was based in Washington D.C. during and after the attacks of September 11, 2001. She was posted to London for 9 tumultuous years that featured political turmoil and violent attacks blamed on terrorism. Laura also reported from Pakistan where Benazir Bhutto was attacked and then assassinated, from Israel during the war with Lebanon and its ongoing dispute with the Palestinians, from Saudi Arabia where she was detained, from Syria as the country descended into civil war and from Africa, where she reported undercover from Zimbabwe when western journalists were barred. She reported from many other nations and conflicts too numerous to list.

After many years abroad, Laura is back where she started in Vancouver using her years of experience to tell Canadians what they need to know about climate change, it's challenges and solutions.

Over the years, Laura has won the prestigious Nieman fellowship from Harvard University, awards from the British Bar Association, the Canadian Bar Association, RTNDA (Canada and U.S.), Overseas Press Club of America, Amnesty International, RNAO and the Gabriel awards. Laura has a law degree from the University of Victoria and a journalism degree from Carleton University.

# **Closing Plenary**

**Moving Adaptation Forward** 

October 6, 10:30 am - 12:50 pm

#### Awards ceremony

#### Moving Adaptation Forward, lead by Anne Hammill

With Adelle Thomas, Damian Morgan-Bulled, Fatou Jeng and the Honourable Harjit S. Sajjan, Minister of Emergency Preparedness and Minister responsible for the Pacific Economic Development Agency of Canada.

Announcement of the next edition of Adaptation Futures



# scientific program

# Monday, October 2, 2023





scientific program

Tuesday, October 3, 2023

Countdown

Indigenous Knowledge Multiple Risks

Adaptation Choices Limits to Adaptation Equity & Justice Nature-based Teac solutions Lea

FAO,

Governance & Finance

> owners/ managers

8:30	Opening plenary - Words from the frontlines Hybrid																	
Rooms	<b>520A</b> LAC Pavilion <b>Hybrid</b>	<b>520B</b> Africa Pavilion <b>Hybrid</b>	520C Hybrid	520D Hybrid	520E Hybrid	520F Hybrid	519A	518A	519B	518B	518C	523	522	525	524A Collaborative	524B Collaborative	524C Collaborative	Agora Hybrid
11:00-12:30	#53 Building participatory action research and alliances for climate justice with Indigenous Peoples in Latin America - IDRC	#666 Inclusive Adaptation in African Ecosystems: Empowering Communities for Effective Climate Resilience - FAO, UNEP, Climate Protection Zambia	#272 Towards new models of knowledge exchange for sustainability transformations: A multi-sited dialogue Organizers of AF2023, Transformations 2023, Gobeshona 2023 conferences	#840 Re-tooling and re-schooling: Advancing workforce competencies and literacies to meet society's climate risk, adaptation, resiliency, and leadership imperatives - Royal Roads Univ.	#278 Subnational governments innovation to integrate vulnerable community knowledge into adaptation planning and action - Region4, Gouvernement du Québec	#535 Establishing a globally-relevant just adaptation network - Future Earth Australia	#259 Key findings from UCCRN's third assessment report on climate change and cities - Urban Climate Change Research Network's		#661 Financing NDCs in African countries: Fel- lowship program developed nine in-country case studies to convene dialogue on challenges and opportunities for collective climate finance leadership - ARIN, Frankfurt School	#684 Advancing First Nations climate leadership: Case stories from the National, Territorial, and Provincial level - Assembly of First Nations	#337 Restoring degraded spaces for a resilient future: Approaches, opportunities and challenges - Desjardins, David Suzuki Foundation	#524 What do we know about effectiveness of adaptation in reducing climate risks? A review of methodologies and evidence on adaptations in the agri-food systems - CGIAR, Climate Analytics	#988 Calling those interested in closing the science-policy-practice gap in LDCs! How would you influence the priorities of a new action-oriented adaptation research programme? - Interfer, Adaptation Research Alliance	#736 Incentivizing equitable adaptation: Interdisciplinary perspectives - IIED	#875 Reimagining the adaptation continuum to include loss and damage - CJRF, IISD, ICCAD	#467 Knowledge Co- production for the Global Goal on Adaptation - WASP, UNU-EHS	#655 Who is enabling effective and socially just climate adaptation? Frontline organizations as critical intermediaries in adaptation - African Climate Development Initiative, Arizona State Univ.	Adaptation to climate change - the essentials of informed communication
13:30	Climate change adaptation challenges and solutions in Canada, provinces and territories leadership - Dialogue with Environment Ministers - AGORA																	
14:30-16:00	#138 Multilevel adaptation governance in dealing with multiple risks and enabling climate action at subnational levels - Univ. of Regina, IISD	#989 Food security in Africa: lessons learnt, opportunities, and priorities for adaptation - African Academy of Sciences	#277 "South", the new frontiers of adaptation in the "North"? An ideas' market place - AFD, I4CE, ICCCAD	#75 Integrating mitigation and adaptation into the feasibility assessment approach for improved support to climate-resilient development - Univ. nationale d'Agriculture,	#113 Ocean and climate crisis in the Pacific: An indigenous perspective - Univ. of Canterbury	Innovation Days  Innovation in adaptation: What is it? What does it look like?	#180 (in French) The necessary transformative adaptation: a combination of research and actions - Ouranos		#331 Financing Adaptation and Building Resilience: Developing a Gender Lens Climate Investment Framework - IDRC	#748 Engaging Indigenous and local people in the co-development of knowledge and resources to enhance climate action and mutual learning - KE4CAP project		#715 Resilience through envi- ronmentally sustainable agriculture production - MEDA	#392 What is effective adaptation, for whom, and how do we know? Findings from adaptation policies, NAPs and M&E on vulnerability assessments, measurments and effectiveness	#784 Achieving equity in climate change adaptation research and partnerships: Discussion pa- nel and Launch of the edited book "Climate Justice in the Majority World"	#812 The values of adaptation pathways for planning under adaptation limits - UNU-EHS	#205 Compound, cascading and complex climate risks and their impacts: getting from methodological advancements to practical outcomes - International Institute for	#693 Turning knowledge into Action: Workshop on linking adaptation assessment and adaptation implementation through Indigenous projects	Avoiding the unmanageable and managing the inevitable  The crucial role of SMEs in transforming the economy in the face of climate change
				ECLAC, Univ. of Toronto									Hunter College, City Univ. New York	Chalmers Univ., SUNY College and Univ. of Leeds		Applied Systems Analysis	ISC, CIRNAC	Launch of the 5th edition of Climatoscope
0-18:00	#221 Centering Indigenous perspectives in climate resilience planning - FSC Indigenous Foundation	#421 Youth Climate Adaptation Leadership: Insights from capacity building, knowledge brokering and entrepreneurship	#613 Scaling up cilmate risk informed decision making for a climate resilient development - Deltares.	#764 Squaring the debate: Does Locally Led Adaptation (LLA) help or hinder transformational adaptation?	#807 Scaling up ecosystem- based adaptation: Leveraging behavioral science for effective climate policy and	#83 Maximizing synergies across climate change adaptation, women's empowerment, and nutrition objectives through goat	#831 (in French) Promoting societal resilience by strengthening the links between engineering consulting and infrastructure	#834 Understanding the loss and damage finance facility: Opportunities and challenges ahead of COP28 - Northeastern	#963 Integrating adaptation into city budgeting - Lessons from C40 cities and Montreal - C40	#990 Responsible Artificial Intelligence for Resilience in a Changing World - Ouranos			#986 Facilitating an adaptation mindset using lessons from the transportation and buildings sectors - Canadian	#628 Just transitions to water resilience in African cities - Univ. of Cape Town	#38 Connecting the dots across regional resilience priorities: What have we learnt and done in 2023 so far and how are we	#455 Measuring the resilience of communities to climate impacts and using this knowledge to adapt IIASA		#946 Tracking health adaptations - design, mea- surement and improvement of health adapta- tion programs - Lancet



countries, World

CARE USA

# scientific program

Environmental

Studies (IGES)

of Human Sett-

lements

Montréal

IRD

India	Indigenous Multiple Adaptation Limits to Equity & Nature-based Teaching & Governance																	
Know	Knowledge Risks Choices Adaptation Justice solutions Learning & Finance																	
Rooms	<b>520A</b> LAC Pavilion <b>Hybrid</b>	<b>520B</b> Africa Pavilion <b>Hybrid</b>	520C Hybrid	520D Hybrid	520E Hybrid	520F Hybrid	519A	518A	519B	518B	518C	523	522	525	524A Collaborative	524B Collaborative	524C Collaborative	Agora Hybrid
8:30-10:00	#292 In Situ conservation of agro-biodiversity to ensure adaptive capacity - Building on Indigenous and local knowledge from Andean mountain ecosystems - Andes Resilientes Helvetas, Fundacion Avina, SDC	#634 Mobilising climate-smart finance for food security in sub- Saharan Africa - SNV Development Organisation	#304 Addressing the challenges of climate change, food insecurity, sustainable health and wellbeing - Time to innovate for progress on the Global Goal of Adaptation - Western Univ., Future Earth Mtl, CAPCC	#602 Mutual learning across Indigenous, Local and Scientific Knowledges to better adapt to interconnected risks: towards building a global Community of Practice - UNU-EHS	International Forum on Agro- ecosystem Living Labs  Opening Plenary	International Forum on Agro- ecosystem Living Labs Theme 2: Fostering	#107 Adaptation in practice: how local governments are mainstreaming climate resilience - Federation of Canadian Municipalities	#976 Migration and climate change: understanding decisions and evaluating outcomes - Univ. of Exeter	#617 How to incentivise financing for a resilient recovery - Mercy Corps	#329 Adaptation for a climate resilient North: Amplifying local voices in pursuit of northern- based solutions - Government of: Nunavut, the Northwest Territories, Yukon	#16 Making nature count for adaptation - Global, national and local action to value services provided by nature - INTACT Centre, Ouranos	#309 Flood mitigation and adaptation - Univ. of Prince Edward Island		#319 Driving equitable systems change in a world of urgent transitions: Effective knowledge brokering practices in the global South - IDRC, CDKN/ SouthSouthNorth	#723 Fostering equity and justice in adaptation and adaptation Interventions: Perspectives and questions from early- career African women scientists - START	#848 Improving assessment practices to incorporate equitable climate resilience amid increasing complex events - World Bank and National Institute of Standards and Technology	#642 Avoiding maladaptation in the Global Goal on Adaptation, what can we learn from community level adaptation to inform more effective practice to shape the Global Goal on Adaptation to be fit for purpose? - Practical Action	#985 Audit and Accountability for Adaptation - Office of the Auditor General of Canada  10:00-10:30 Practitioner Exchange for Effective Response to Sea Level Rise - PEERS
10:30-12:00	#332 Accelerating and scaling nature as a solution for equitable climate adaptation - The Nature Conservancy	#554 How gender- responsive climate adaptation solutions can accelerate resilient food systems in Africa - AWARD, CDKN	#147 Optimizing adaptation for Island Peoples: The role of traditional and local knowledges - Univ. of Malta	#211 Do we need a global goal on adaptation? - Basque Centre for Climate Change, Univ.of Bonn	Theme 1: Promoting innovation through living labs Thematic discussion	transitions toward sustainable food systems through living labs - Thematic discussion	#984 Adapting our infrastructures to climate change while transitioning to a circular economy model - AdapT Institute	#741 Indigenous anti- displacement manifestoes: Community strategies of resilience and resistance - Preparing Our Home	#799 Aligning perspectives to unlock the po- tential of climate adaptation finance and close critical funding gaps - Future Earth Canada, Sus- tainability in the Digital Age, Climate Policy Initiative		#746 EbA in practice: Lessons from implementers on planning and measuring EbA - UNEP-WCMC	#978 Basins' Resilience, Water Adaptation and Management: Challenges and Opportunities - International Secretariat for Water	#766 Effective support for transformative adaptation: What is it and how do we know we're making progress? - Tetra Tech		#389 The Climate Atlas of Canada: Weaving Indigenous and Western Knowledges to Advance Applied Adaptation - Prairie Climate Centre, Pacific Institute for Climate Impacts	#349 Pushing the envelope on climate change risk assessments: Aspirations, lessons learned, and new horizons - Canadian government	#974 Building understanding and capacity of climate change adaptation through education and learning - Victoria Univ. of Wellington	#561 Locally-led nature-based solutions for adaptation in practice: Building bridges between global concepts and local contexts - CARE, UNEP
13:00	2 <del>i</del>					Adapting Our	Communities : /	A Collective Resp	oonsibility - Conf	erence organize	ed by Union des I	Municipalités du	Québec - AGOR	A				
14:00-15:30	#525 Integrating adaptation into business strategies: Tools, lessons learned, and public-private articulation opportunities from a LAC perspective CLACDS	#630 From locally led metrics to international adaptation frameworks: capturing the diversity of adaptation needs and outcomes in communities across Africa and Asia - CDKN, IDRC	#835 Advancing women's leadership in climate action: Lessons from within and beyond adaptation - IDRC	#58 Urban climate resilient development: Reflections and insights from policy practice and research: opportunities, challenges and pathways for systemic change - Univ. of Canterbury	#509 Improving farmer resiliency and livelihoods: Science- and data-driven approaches to Inform climate adaptation in smallholder agriculture - Rainforest Alliance	Innovation Days  The Innovation Process: How is it done? Locally led innovation: What does it look like?	#572 NBS to address coastal flooding: New tools and case studies from North America's emerging community of practice - Commission for Environmental Cooperation	#979 Building resilience in fisheries management: Insights from around the globe - Ouranos	#975 Lessons from the GCF: transformatio- nal finance for climate justice - Northeastern Univ.	#966 Adaptation Across the Metis Motherland - Métis National Council	#291 Nature-based Solutions for just Urban Adaptation – Case Studies from the Global South – GIZ, C40	#972 Addressing water insecurity: A multi- dimensional perspective on causes, consequences and solutions - Ouranos	#980 Adaptation at the Nexus of Climate Change and Conflict - Univ. of Greenwitch	#565 Adapting to a changing climate: strategies for building climate-resilient health systems in Canada, US, and the UK - US CDC, Health Canada	#459 Advancing knowledge brokering for climate action: A collective reflection and learning journey - IDRC, CDKN	#316 (in French) Best practices for resilient flood management in urban areas: towards an inclusive and effective gover- nance model - Ville de Montréal Architecture sans frontières Québec	#79 Driving trans- formational change through action-oriented research - IDRC, FCDO	15:30-16:30 Sustainable wave-powered desalination in Pacific coastal regions (Chile & California) - Building an impact measurement and business cases for climate
16:00-17:30	#568 Hydro-social landscape approaches in Ecuador to link improved water management, health and other co-benefits in the face of climate change - CARE Ecuador,	#230 Towards Integrated climate change adaptation and scaling strategies - Africa Rice, Alliance Bioversity CIAT, ICRISAT, ILRI, IITA, Ministries of Agriculture of 6	#702 Co-producing adaptation strategies for agriculture supported by interdisciplinary system modeling and empirical studies - AgMiP	#238 Breaking the mould – Southern led micro-grants as a catalyst for scaling up Local Adaptation - Adaptation Research Alliance	#808 Climate action: Challenges, opportunities and good practices of formal and non-formal education - FAO	#496 Compound risks and vulnerability - What are implications for habitability and migration? Insights from research and practice - UNU-EHS, Risk-KAN,	#670 Strengthening the resilience of food systems to climate changes through agroecology - IDRC	#977 Challenges in coastal zones - CLIMAtlantics	#466 Research questions for enhancing actions to address loss and damage associated with adverse impacts of climate change - UNEP	#233 Developing the capacity of professionals to address climate change adaptation: the leverage effect of international cooperation - Global Alliance for buildings	#335 Climate action and innovation on nature Based solutions and equity in Canadian municipalities - FCM	#663 Advancing collaborative climate adaptation: Lessons learned from a Municipal and First Nations adaptation project - ICLEI Canada	#759 Enabling more effective adaptation decisions through Climate-Resilient Development Pathways: a critical reflection - University of East Anglia, Indian Institute of Human Sett-	#172 Incorporating health and well-being into climate adaptation actions - Univ. of Exeter	#454 Effective adaptation: What is it and how can we measure and manage it? - NASA Goddard Institute for Space Studies, Institute for Global	#295 From knowledge to action: Over-coming challenges, embracing opportunities and building community resilience through inclusive adaptation strategies ECCC, BC, AFN, Ville de	#393 Good practice community and citizen engagement for accelerating a climate resilient future in Europe and beyond - SEI	#716 Sharing experiences of knowledge and practices of small-holders farmers to face climate risks in the Pacific and in Africa



# scientific program

Thursday, October 5, 2023

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Rooms	<b>520A</b> LAC Pavilion Hybrid	<b>520B</b> Africa Pavilion Hybrid	520C Hybrid	520D Hybrid	520E Hybrid	520F Hybrid	519A	518A	519B	518B	518C	523	522	525	524A Collaborative	524B Collaborative	524C Collaborative	Agora Hybrid
8:30-10:00	#611 Indigenous perspective of climate adaptation in food systems - IDRC, Indigenous organisations	#101 A reality check on pastoralist livelihoods in East Africa - Exploring opportunities to support adaptation in the Horn of Africa - Cowater International	#660 Indoor Heat: Risks and Solutions for a Warmer World - Health Canada, The Global Heat Health Information Network, the Red Cross Red Crescent Climate Centre, WHO	#607 Equitable and inclusive community relocation practice: Preparing together for a measure of last resort - UNU-EHS, Munich Re Foundation, IOM	#406 Learning to work together: Principles and practices for collabo- rations with Indigenous and rural peoples to advance adap- tation - UNESCO	#649 Shaping the future of adaptation monitoring, evaluation, and learning: New insights, tools, and opportunities for overcoming challenges and constraints - UNFCCC, NAP Global Network, OECD			#860 Assessing climate risks: What is missing and what can be done to enhance knowledge and institutional capacities in the global south Impulsouth	#284 Culture and heritage-based education, training and capacity building for climate change adaptation - Carleton Univ., Norwegian Institute of Cultural Heritage Research	#981 Measuring performance of NBS - ECCC	#641 Building the business case for adaptation: The impacts of recent extreme weather events on Canada's agriculture and food sector and Learning from our experiences - AAFC, UPA	#691 The future of maladaptation research and implementation - Univ. of Bonn, Univ. of Twente, Practical Action	#730 Advancing equity, justice, and Indigenous rights in adaptation through Canada's National Adaptation Strategy - What is required for success? - IISD, McGil, Univ. of Regina	#685 Critical self- reflection, positionality and transformation: A focus on adaptation action - Kulima Integrated Development Solutions, Univ. of the Witwatersrand	#933 Advancing digital climate adaptation platforms to develop a climate-ready workforce - Climate Risk Institute, Resilience by Design Lab, Royal Roads Univ.	#928 Deliberating climate adaptation approaches to overcome challenges and build socio- ecological resilience: a practitioners' workshop - WWF	#380 Emerging adaptation practicioners and scholars: A dialogue on common and divergent challenges across African sociopolitical and environmental contexts - Ohio Univ.
10:30					Mid-v	veek Plen	ary - Rise	-up: Parti	nering for	social ch	nange in t	he era of	adaptatio	n Hybrid				
14:00-15:30	#674 Shared wisdoms: a joint dialogue on the contributions of Chiquitano women in Bolivia and Cree communities in Canada to the global goals on climate change (CC) and the conservation of biodiversity - CECI	#968 The role of local and indigenous knowledge systems in climate change adaptation: Case studies - African Academy of Sciences	#704 Catalysing adaptation through early career research: Needs, experiences, futures - START, McGill	Innovation Days Innovation in adaptation: What is the future?	International Forum on Agro- ecosystem Living Labs Theme 3: Empowering participation.	International Forum on Agro- ecosystem Living Labs	#829 Innovating targets to reduce wildfire, flood & extreme heat risk in Canada - Climate Proof	#560 Climate justice perspectives on planned relocation - Univ. of Exeter, Maynooth Univ.	#152 Valuation of climate impacts and extreme climate events in Canada: benefits, risks and how it incentivise and finance adaptation action - Canadian Climate Institute	#912 Indigenous adaptation leadership, action and research: Cultivating multi-level relationships and recognizing multidimensional sovereignty - Southwest Climate Adaptation Science Center, USGS	#971 Shaping the future of Nature-based Solutions for Adaptation - Parks Canada	#713 Adaptive creation and disruptive reorientation: Food systems innovation for adaptation - ClimEat	#498 Strengthening supply chain resilience and risk ownership in the face of transboundary climate impacts on trade - GIZ, SEI, Adaptation Without Borders, Global Shea Alliance, ICARUS, Maynooth Univ.	#830 Transformative adaptation: Navigating between rhetoric and reality - Temple Univ.	#506 Unlocking Adaptation Analytics and Tools: Stocktake and What's ahead - UNU-EHS	#39 Incorporating Indigenous knowledge in assessments of climate change impacts and adaptation - Natural Ressources Canada	#115 Scaling Up the Implementation of Community-Based Adaptation: Enablers and the way forward - CARE Germany, FANRPAN, IISD, IUCN	AC details contitol
16:00-17:30	#752 Climate risk and vulnerabilities assessments for adaptation planning: Practical approaches and lessons learned from Latin America and the Caribbean - UNEP	#969 Sectoral and placed-based adaptation challenges and solutions in South Africa, Ghana, Kenya, Senegal and Benin African Academy of Sciences	#778 Personal- political climate change vulnerability: A knowledge exchange about lived experiences of vulnerability - Norwegian Univ.of Life Sciences, Carleton Univ., UC Berkeley Univ.	#285 All eyes on 'My Climate Risk': Q-storming towards collective pathways to adaptation action, from local to global - Univ. of Reading	strenghtening participatory governance in living labs - Thematic discussion - Closing Plenary	on, ng ry vi in s Theme 4: Evaluating success in living labs Thematic discussion	#124 Adapting to Transboundary Climate Risks: Regional Perspectives and Actions - SPARC-Cascade		#362 Inclusive Approaches for Effective Mobilization of Adaptation Finance - Ceylon Chamber of Commerce, IDOS, Ludwig Maximilians Univ.Munich, DEval	#987 The Reconnection Vision – the Yukon First Nations youth- led approach to climate action - Yukon Univ.	#314 Learning from innovative partnerships and taking action with Nature: A reflection on Community Led Climate Adaptation and Resilience - The Nature Conservancy	#673 Climate change and the energy sector: Roadmaps toward adaptation - Hydro-Quebec	#464 Effective adaptation: What is it and how can we measure and manage it? - WASP	#699 Climate risk mapping to advance equitable climate action - WSP Canada, ICLEI Canada	#647 Normative visioning, authorship and imagination: experimenting with alternative futures for transformative adaptation - Leeds Beckett Univ., Univ. College London, Univ. of York, Univ. of Bristol	#880 Global Action on Sea Level Rise Adaptation: Knowledge Café on Co- Producing Actionable Information and Advancing Collaboration and Practice - Natural Ressources Canada	#648 Informality and urban adaptation - Univ. of Cape Town, Stockholm Univ., Arizona State Univ., Univ. of Exeter	#689 What science doesn't say: Implementing vulnerability assessments as part of the NAP process - IISD



# scientific program

Friday, October 6, 2023

Adaptation Limits to Nature-based Choices Adaptation solutions & Finance 520A 520B 520C 520D 520E 520F 524C Agora 519A 518A 518C 523 522 525 LAC Pavilion Africa Pavilion 519B 518B **Hybrid** Collaborative Collaborative Collaborative Hybrid Hybrid Hybrid Hybrid Hybrid Lessons learned Sharing good Crises and Empowering the Decision-Resilience The 2023 Applying Putting rural Critical The social Donor Advances Advancing cofrom local most vulnerable support tools for adaptation Indigenous women at the discussions impact of coordination and needs for production and practice on to indigenous compromise beyond adaptive Knowledge to fishbowl on actionable What will it take centre of climate on adaptation use of climate methodology for climate change climate resilient standards women. capacity finance gap adaptation vouth, elderly infrastructure update and climate change directions: and technical adaptation risk information empowerment. adaptation: for countries How can information. decoloniality to reach the indigenous and Strengthening emerging adaptation Insights from quidance in under deep for nature-based intersectiona-Global Goal on populations and communities Loss and lessons and best action across services, and IPCC Working climate change uncertainty solutions building in lity, indigenous Adaptation? incorporating Damage practice on how adaptation response to Infrastructure Discussion on Making the Deltares Columbia Univ. climate justice. local and response to bridge the planning climate change **Best Practices** Griffith Univ. and the pluritraditional Canada link between contribute to in Colombia, UCLG Africa, verse knowledge adaptation? and Lessons Abt Associates Univ. of Bonn. research and the Cuba, Chile, ALGA, ADEME UNEP. Learned Univ. Nationale people it seeks Ecuador, and Adaptation Fund Kulima ICCCAD, Integrated Univ. of Adelaide Development partners, SCC Government of Solutions Fundacion Avina Canada Closing plenary - Moving Adaptation Forward Hybrid

#### Field trips

(Keep an eye on our website for regular updates)

# SESSIONS DETAILS BELOW



## session 53

## Room 520A LAC Pavilion Hybrid

Equity & Justice

## Building participatory action research and alliances for climate justice with Indigenous Peoples in Latin America

The impacts of climate change are, and will be, disproportionately experienced by groups in situations of vulnerability. Responses to climate change offer potential to create or exacerbate inequalities and injustices but also hold the potential to transform society and build more resilient, just and equitable futures. Doing so, however, will require tackling structural injustices in society, such as the exclusion of marginalized groups from decision-making, and seizing climate action as an opportunity to reinforce democratic governance.

In Latin America, Indigenous Peoples are hailed as critical actors in protecting and sustaining natural resources that are vital to furthering a range of policy goals related to climate mitigation and adaption. However, recent years have seen a steady increase in threats to the rights, security and territories of Indigenous Peoples, who rank as the most targeted group of human rights defenders regionally and globally. Simultaneously, bright spots in the region include Indigenous Peoples' leadership, the convening power of universities and the protections contained in the Escazu environmental rights treaty (signed by 24 countries in the region).

In response to those challenges and opportunities, a group of researchers, rights advocates and Indigenous Peoples' groups are documenting efforts to support Indigenous Peoples to achieve climate justice.

## Authors and Partner organizations

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## session 666

## Room 520B Africa Pavilion Hybrid

Equity & Justice

# Inclusive adaptation in african ecosystems: Empowering communities for effective climate resilience

This session aims to showcase community driven climate adaptation solutions across various ecosystems in Africa, including agro-pastoral, farmland, and fisheries ecosystems, affected by climate change. It emphasizes the importance of inclusive, community-based adaptation, and locally led actions with a human rights-based approach. The session will highlight approaches for enhancing gender inclusivity, community ownership and participation in adaptation initiatives.

Actions and models showcased during the session are drawn from UNEPs and Climate Protection Zambia (CPZ) efforts to mainstream Human right-based approaches (HRBAs) for Ecosystem-based Adaptation (EbA), FAOs work in Africa focusing on participatory, community-based approaches to locally defined climate adaptation solutions.

The session will examine strategies and implementation modalities for ensuring the active involvement and meaningful participation of these groups in adaptation decision-making processes. Common factors for success and methods, approaches that enhance effectiveness or sustainability of locally led adaptation will be highlighted.

By bringing together farmers, practitioners, community representatives, researchers and stakeholders, the session aims to stimulate collective learning and foster actionable insights for promoting community engagement, inclusivity, and ownership in climate adaptation initiatives across diverse ecosystems in Africa, and through a human rights-based lens. Through knowledge sharing and interactive discussions, the session seeks to catalyze meaningful change and contribute to building resilient and sustainable communities in the face of climate change challenges in African countries. Participants will have the opportunity to share their insights and experiences and engage in collaborative dialogue to enhance the understanding and implementation of effective adaptation solutions in agroecosystems.

### Authors and Partner organizations

FAO

UNEP

Climate Protection Zambia

Session Chair: Deborah Duveskog, FAO





## session 272

# Room 520C Hybrid

Teaching & Learning

# Towards new models of knowledge exchange for sustainability transformation: A multi-sited dialogue

The community of researchers, practitioners and policymakers working on global climate and sustainability challenges are faced with two competing challenges: First, there is an ever-expanding body of knowledge, networks, and initiatives generating new insights that should be shared. Second, we see a growing recognition that fly-in-fly-out conferencing practices (long the main forum for this sharing) are an insufficient and unsustainable model for learning, boundary crossing and collaboration toward sustainability transformations. The interruption of international travel as a result of the COVID-19 pandemic spurred considerable learning and innovation in virtual, hybrid, and other alternative modes of convening and exchange, but also reminded us of the importance of in-person connections (Harvey et al. 2021). Against this backdrop, this session will bring together conference and network conveners and conference participants, to collectively discuss how we can re-think, re-design and sustain equitable and impactful knowledge exchange on sustainability transformations, building on lessons learned from recent years.

This session, co-convened by organizers of the Adaptation Futures 2023, Transformations 2023 and Gobeshona 2023 conferences, will be the third in a series of three dialogues unfolding at these three venues, with a view to capturing a wide range of experiences, lessons learned, and recommendations. The session's primary objectives at AF2023 are to:

- Co-construct a series of recommendations and principles of practice for the future of knowledge exchange and conferencing in the field of climate and sustainability, and
- Collectively map out a "pathway to impact" that articulates how the insights being co-produced can be brought into practice on a wide scale.

### Authors and Partner organizations

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session 840

Room 520D Hybrid

Teaching & Learning

Re-tooling and re-schooling: Advancing workforce competencies and literacies to meet society's climate risk, adaptation, resiliency, and leadership imperatives

The complex nature of climate change requires professionals across all sectors to address the complexity of the challenge in decision making and develop new competencies for planning and implementing climate adaptation initiatives (Atiq, 2022). Job postings for professionals appear daily (e.g., via Indeed and LinkedIn) for positions requiring climate adaptation competencies. Regulators and professional associations increasingly require the professionals they govern to possess competencies to identify, manage, and help redress climate-related risks. Whereas there is recognition of the skills gap for the net zero, green-economy transition (World Economic Forum, 2020), the same awareness and mobilization has yet to happen to address the skills gap for climate adaptation.

Education and training have a critical role to play in this agenda, however most education and training programs are grounded in the same dominant cultural norms, economies, and cultures that have created the climate crisis (Fazey et al, 2020). Disciplines are siloed, teaching is often unidirectional, transdisciplinary approaches are far from the norm, and many would-be learners are excluded because of cost, accessibility, and perceived fit or lack thereof to their values and goals. A Canadian study (Henderson, Beiler, & McKenzie, 2017) found that while many educational institutions have initiated climate policies to address their own emissions and financial investments, few institutions are addressing climate education in their policies, and instead are focused on "changing the energy consumption behaviors" of staff and students as part of their overarching carbon reduction plans.

Effectively building climate adaptation capacity and societal resilience therefore, requires not only new content but also new more accessible and inclusive mechanisms of delivery (Veletsianos  $\theta$  Holden, 2020). Education to support capacity building for transformative agendas requires changes that transcend the approaches that have created the climate and other crises, and that have reconciliation, equity, diversity, and inclusion agendas as cornerstones (Fazey et al., 2020).

### Authors and Partner organizations

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Sparling, Erik - Climate Risk Institute

Brooks, Janis - Indigenuity Consulting Group





## session 278

## Room 520E Hybrid

Equity & Justice

# Subnational governments innovation to integrate vulnerable community knowledge into adaptation planning and action

According to the RegionsAdapt Progress Report 2021-2022, vulnerable populations have severely constrained adaptive capacities and may be disproportionately affected by any additional stressors. In 2022, 74% of disclosing regions mentioned that climate hazards will affect vulnerable populations; however, only 67% of the reported climate risk and vulnerability assessments explicitly take such vulnerable populations into account. This highlights the gap between the harsh reality already faced by vulnerable populations and their lack of inclusion in assessments or planning.

At the international level, as parties try to define the metrics for the Global Goal on Adaptation, it is important to ensure that the most vulnerable populations, notably indigenous people, women and disabled communities' participation is secured. Decisions on climate mitigation and adaptation should employ a rights-based approach to ensure that vulnerable groups are not unduly harmed by adaptation and mitigation practices.

Within this framework, Regions4 in partnership with the Government of Quebec, other regional governments from around the world, and leading research institutes, aim to bring into an knowledge exchange interactive presentation the impacts of climate change on marginalized and vulnerable groups, and why efforts to support adaptation must therefore grapple with profound questions of ethics, equity, and justice to leave no one behind.

### **Participants**

Lead organisations: Regions4 and the Government of Quebec

**Moderators:** Jordan Harris - Regions4; Marta Olazabal - Basque Centre for Climate Change (BC3) and Marco Billi - Center for Climate and Resilience Research (CR2)

#### Participants:

Jean Lemire – Envoy for Climate change, Northern and Arctic Affairs of Québec (Canada)

Jônatas Trindade – Undersecretary of Environment for the Government of São Paulo (Brazil)

Philippe Leblanc-Rochette – Makivvik (Canada)

Julie Veillette - Government of Québec (Canada)

Aldo Treville – Joint Research Programme of the European Commission;

Dafne Mazo – Government of the Basque Country (Spain)

Leticia Salomão – Government of Paraná (Brazil)

Erika Margarita Uical Campos – Government of Yucatan (Mexico)

# session 535

## Room 520F Hybrid

Equity & Justice

# Establishing a globally-relevant just adaptation network

In the past decade, attention has largely focused on some of the systemic drivers of impacts from climate change that are not readily addressed by more information about the conventional factors - exposure, vulnerability and adaptive capacity, seen through a hazards lens. In particular, intersectional structural inequities and injustices have come to be understood as an intrinsic part of societal vulnerabilities, constraining the ability of many social actors to respond to climatic hazards and a multitude of other disturbances and shocks. We know that transformational change in levels of adaptation and societal resilience cannot be achieved without tackling these structural causes that continue to shape adaptation barriers and limits, such as colonialism and patriarchy. Hence, debates on just adaptation have become more prominent, whether expressed through empowering experiences and strategies of First Nations Peoples or through more inclusive and respectful involvement of disenfranchised minorities in adaptation decision making and disaster response planning. Other areas of inquiry now examine policy failures that further hamper rather than strengthen adaptive capacities, such as those in the housing sector that prevent low-income residents from protecting themselves against heat waves.

The recognition of needing to address layers of injustices in adaptation while fore-grounding just, inclusive, and dignified processes is starting to be reflected in adaptation strategies and policy. For instance, Australia's recent National Strategy for Just Adaptation proposes a framework for just adaptation in policy and practice. Yet, the translation from recognition to locally meaningful practice needs to be ramped up rapidly, in parallel with efforts for just transitions in mitigation. To this end, it is time to enable new globally-networked conversations not only about conceptual and theoretical approaches in this area but also about tested, negotiated, and recommended practice and advocacy across various scales of mattering. We also propose to articulate a conversation across continents about leading practice to just adaptation, and the many remaining pitfalls, in order to speed up the world's ability to respond in equitable ways to the rising impacts from climatic changes, including extreme events.

## Authors and Partner organizations

(some face-to-face and some online)

Petra Tschakert (Curtin University), Kate Nairn (Future Earth Australia), Roger Street (University of Oxford), Chandni Singh (Indian Institute for Human Settlements - IIHS), Sirkku Juhola (University of Helsinki; Climate Panel of Finland), Linda Shi (Cornell University), Paulina Aldunce (University of Chile), Jola Ajibade (Portland State University), Braiden Abala (Partnerships for Infrastructure – P4I, Thailand), Naomi Godden (Edith Cowen University), Karen Paiva Henrique (University of Amsterdam), Gina Ziervogel (University of Cape Town), Georgina Cundill Kemp (International Development Research Centre – IDRC), Satya Ramen (Government of Nova Scotia), Lisa Schipper (University of Bonn), and Mark Stafford-Smith (CSIRO). Others may be added following pre-conference scoping meetings.





# session 259

## Room 519A

Governance & Finance

#### Session panelists will include Coordinating Lead Authors from ARC3.3 Elements on:

Governance, Enabling Policy Environments, and Just Transitions Financing Climate Action Equity, Informality, and Development COVID-19, Cities, and Climate Change Urban Climate Change

# Key findings from UCCRN's third assessment report on climate change and cities

The Urban Climate Change Research Network's (UCCRN\*) panel session will share critical research takeaways and policy recommendations from the first five publications of UCCRN's Third Assessment Report on Cities and Climate Change (ARC3.3). ARC3.3 builds on the First and Second Assessment Reports on Cities and Climate Change published by Cambridge University Press in 2011 and 2018. These assessments are the first-ever global, interdisciplinary, cross-regional, science-based assessment to address climate risks, adaptation, mitigation, and policy mechanisms in cities.

ARC3.3 will provide actionable, up-to-date, benchmarked knowledge for urban climate change researchers, city practitioners, and policymakers at all levels of governance to motivate rapid action. Adaptation Futures 2023 will be the first time that ARC3.3's cutting-edge climate research will be released for discussion amongst a broad gathering of scholars and scientists.

#### Session Goals

Identify the necessary traits of urban climate change governance, including leadership, legal frameworks, public participation mechanisms, information sharing, and financial resources at all levels of government

Explain the current state of climate finance and provide examples of equitable finance at the localized urban level

Define equity as a critical area of focus in urban climate change and highlight environmental justice and inclusive actions in cities

Evaluate the lessons learned from the COVID-19 pandemic and demonstrate that climate adaptation must be integrated into the pandemic recovery

Share the latest urban climate projections for 200+ global cities which can be used in climate risk assessment and policy

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session 661

Room 519B

Governance & Finance

Financing NDCs in African countries: Fellowship program developed nine in-country case studies to convene dialogue on challenges and opportunities for collective climate finance leadership

The Paris Agreement (PA) has transformed notions of climate finance, alongside other types of support for means of implementation. Building on the PA, Nationally Determined Contributions (NDCs) have catalysed mixed efforts to mobilise a wide array of financing sources and mechanisms by public and private actors. Logical shift underpinned by the PA necessitates a re-conceptualisation of mobilising, allocating and scaling climate finance in the literature. Such a re-examination of the rapidly changing climate finance landscape is important, especially given that on climate finance in Africa is still dominated by notions of bi- and multilateral financial transfers. There is a need to understand countries' needs/nature/effectiveness of climate finance, and their implications for climate co-operation and policy in Africa. In this context, this proposal facilitates dialogues by using in-country case studies comparing local contexts/realities with challenges/opportunities of climate finance landscape in African countries.

### Authors and Partner organizations

**Chair/Moderation** Dr.Christine Grüning (FSFM), Dr.Joanes Atela (ARIN) **LightningTalk** Case study authors

session 684

Room 518B

Indigenous Knowledge

Advancing First Nations climate leadership: Case stories from the National, Territorial, and Provincial level

In the face of a rapidly changing climate, First Nations have been raising their voice to call for rapid decarbonization, raising the profile of what First Nations Climate Leadership means. This panel brings together presentations by First Nations at the national, provincial (British Columbia), and territorial (Yukon) level to highlight how First Nations are not only uniquely experiencing climate impacts, but also uniquely well-positioned to develop strategies that address the climate crisis. The concept of a First Nations Climate Lens will be used to challenge conventional conceptualizations of First Nations as 'vulnerable' populations and the 'passive recipients' of climate impacts, instead framing them as 'active leaders' based on unique connections to the land, water, air, and more-than-human beings.

### **Authos and Partner organizations**

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Jewel Davies - Yekhunashîn yu xhút duwáasakw - member of the Dakl'awedi (Eagle/Killer Whale) Clan.

Nika Silverfox-Young, identify as a Northern Tutchone woman, and a member of Little Salmon/Carmacks First Nation, and part of the Wolf (Egunde) Clan.

Carissa Waugh - Ékè Éwe - Kwanlin Dün First Nation

Graeme Reed, Strategic Advisor with the Assembly of First Nations (AFN), where he advocates for the inclusion of First Nations in international, national, and regional climate change and energy policy dialogues.

Nikita Kahpeaysewat is a Nehiyaw (Plains Cree) person born and raised in Moosomin First Nation, Treaty 6 Territory in Saskatchewan, Canada.

Patricia Rojas is the BCAFN's Regional Climate Change Coordinator.





## session 337

#### Room 518C

Nature-based solutions

# Restoring degraded spaces for a resilient future: Approaches, opportunities and challenges

The 2022 Kunming-Montreal Global Biodiversity Framework requires ambitious restoration action by 2030 and acknowledges the important roles and contributions of indigenous peoples and local communities as custodians of biodiversity and partners in its conservation, restoration and sustainable use. As such, municipalities and Indigenous governments have a crucial role to play in restoring natural spaces in the places where people live and in ensuring climate-resilient and healthy communities. For Indigenous peoples particularly, degraded lands and waters are a direct threat to their culture and economy.

"Nature-based solutions" (NbS) is an umbrella concept that can refer to a range of intervention approaches, such as ecosystem-based adaptation and natural or green infrastructure. It is a concept that encompasses diverse actions aimed at addressing societal challenges by working with nature. Underpinning this concept is also the understanding that functioning ecosystems supply services to people, including many that decrease impacts from climate hazards. So, in addition to addressing societal challenges, NbS must benefit biodiversity and support the delivery of ecosystem services. As a subset of NbS, restoration refers to the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed, and of regaining ecological functionality. As such, natural or green infrastructure (as opposed to conventional "grey" infrastructure) plays an essential role, especially in cities dominated by hard surfaces, as it uses natural vegetative systems (trees and other vegetation), engineered and built features, and green technologies that collectively provide society with a multitude of economic, environmental, and social outcomes.

Nature-based solutions hold promise in addressing multiple challenges cost-effectively, but they remain underutilized. Gaps in awareness of NbS, collaboration, finance, enabling policy, and inclusiveness, as well as uncertainties in NbS performance are among the challenges raised globally and in Canada. Although efforts are underway to reduce barriers to NbS uptake and implementation, there is much effort needed to deploy NbS at a pace required to meet the climate and biodiversity challenges.

This session will discuss current approaches, frameworks and tools that are available to local and Indigenous governments to deploy tailored nature-based solutions to restore natural spaces in ways that maximize climate adaptation, resilience and equitable access to- and benefits from nature. In urban settings, tailored tools and data for decision-making are essential to identify priority areas for greening that maximize climate resilience and equity, including on vacant, contaminated lands. On Indigenous lands, approaches to restoration must be reciprocal, meaning that the enhancement, creation, or re-creation of habitats that aims to restore the environment as well as Indigenous human relationships with the land.

#### Authors and Partner organizations

Desjardins
David Suzuki Foundation

## session **524**

Room 523

**Adaptation Choices** 

# What do we know about effectiveness of adaptation in reducing climate risks? A review of methodologies and evidence on adaptations in the agri-food systems

Anthropogenic climate change impacts every aspect of water and food security through changes in water availability and quality, increases in water-induced disasters, and changes in ecosystems and their services. In response to climate and non-climate induced water insecurity, people and governments around the world are undertaking various adaptation responses (Caretta & Mukherji et al. 2022; Kerr, Hasegawa and Lasco et al. 2022). While there are thousands of case studies of current implemented adaptation responses to water and food insecurity, there is a lack of synthesized understanding about the effectiveness of these responses in reducing risks.

In this session, speakers discuss methodologies and challenges for measuring effectiveness of adaptation and the various tools that can be deployed for the same by drawing upon examples from the agri-food sector. In doing so, the speakers will draw upon from the recently concluded IPCC WGII report, and from experiences of various scientific and implementing organisations including the CGIAR and look at a range of methodologies from impact evaluations, meta-reviews and satellite images (Reymondin, L.; Golden, A.; Spillan, C. (2022).

### Authors and Partner organizations

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session 988

Room 522

Governance & Finance

Calling those interested in closing the science-policy-practice gap in LDCs! How would you influence the priorities of a new action-oriented adaptation research programme?

This session provides an opportunity for Adaptation Futures conference delegates to influence the design of a new action-oriented adaptation research programme for Least Developed Countries (LDCs).

The Adaptation Research Alliance (ARA) is supporting the co-creation of a new programme to enable LDC researchers to contribute to and support their country's national adaptation priorities with new context appropriate transdisciplinary knowledge. This new programme could support locally-led adaptation, the development and implementation of National Adaptation Plans, or anything in between: it is up to the participants in the co-creation process to share their perspectives of what is needed. This co-creation process is being facilitated by a social enterprise called Interfer.

In this session, Interfer will feed back our findings. So far, the process has involved engagement with representative from LDC universities, governments, multilateral agencies and practitioners through interviews, conference sessions, in-country events and online workshops. We have surfaced the barriers to getting local research into policy and practice in LDCs and considered many innovative solutions to overcome these barriers.

Now, we would like to add your voice to this global conversation.

The proposed session has three main components:

- A presentation outlining the ARA Co-creation spaces, our process, and our findings to date
- A suite of exemplary examples of innovative solutions to the science-policy-practice gap in LDCs to learn from
- Your inputs in a round table discussion: What have we missed? What are your experiences and ideas around what has worked in LDCs? What would you like to see in the programme?

## Authors and Partner organizations

Authors: Sheona Shackleton, Lucy O'Keeffe, Leigh Stadler

**Lead organisation:** Interfer

Partner organisation: Adaptation Research Alliance

session **736** 

**Room 525** 

**Adaptation Choices** 

The session fits within the conference theme of "Making adaptation choices: managing trade-offs and seeking effective adaptation", but has clear contributions also to the theme "Who wins, who loses, who decides: Equity & justice in adaptation"

## Incentivizing equitable adaptation: Interdisciplinary perspectives

This knowledge-sharing open session will explore applied approaches to understand and support decision-making for equitable adaptation action. The starting points for the session are both the widespread creation of adaptation planning documents and business cases that suggest that anticipatory adaptation makes good economic sense. Despite this, evidence suggests that the move from planning and business cases to implementation and action is both insufficient and challenging, whilst at the same time often failing to serve the needs of the most vulnerable populations (Eriksen et al., 2021; Kodis et al, 2021; Nyiwul, 2021; Villamor et al, 2023). Further, differences in vulnerability and resources mean adaptation can serve to increase inequality across and within societies (Thomas 2018; Simpson et al. 2020).

This session will draw on papers that examine how to unlock incentives for equitable adaptation action. We aim to draw in interdisciplinary perspectives from submitted papers that focus on incentive structure. These may come from research on how climate services can incentivise more equitable adaptation, applied examples of how innovative governance approaches and public-private partnerships have unlocked action, and evidence of high-level leadership and business cases that have led to more equitable adaptation decisions from policy makers. We particularly welcome contributions on equitable adaptation from political science and perspectives from behavioural sciences.

Overall, the session will provide an opportunity for attendees to gain a deeper understanding of the challenges and opportunities associated with incentivizing equitable adaptation to climate change. The session will encourage attendees to think critically about the contribution of different disciplinary perspectives to understanding and promoting equity in adaptation decision making and action.

### Authors and Partner organizations

**Chair/Moderator:** Thomas Tanner (SOAS University of London, UK)

#### Presenters/papers

**Savio Rousseau Rozario and Afsara Mirza** (ICCAD, Bangladesh) - Locally-led Adaptation to ensure indigenous peoples' participation: Case studies from Bangladesh

**Regardt Ferreira and Tim Davidson** (Tulane University, USA) - Consortium for equitable disaster resilience: Creating an equitable and just society

**Rizqa Hidayani** (Kota Kita, Indonesia) - A human-centered perspective in food security and climate justice: The role of informal actors and small-scale community-based Initiatives Case study of Jakarta and Solo, Indonesia

**Donovan Burton** (Informed.City, Australia) - Adopting adaptation in civil organisations - tipping points or theatre in governance of boards and civil society?

**Ifeoma Anugwa** (University of Nigeria Nsukka) - Intra-household gender perception and adoption of climate adaptation practices in climate disaster risk zones of southern Nigeria

#### Discussants

Aditya Bahadur (International Institute for Environment and Development, UK/India)

Mairi Dupar (Overseas Development Institute, UK)

Nicholas Simpson (Global Centre for Climate Mobility, South Africa)





## session 875

# Room 524A Collaborative

Limits to Adaptation

# Reimagining the adaptation continuum to include loss and damage

The Adaptation Continuum (Weathering the storm, 2007) was a seminal conceptual tool for parsing out development and adaptation, and the range of adaptation activities that exist. Ten years after its publication, its authors reflected that the continuum highlighted how trying to sharply distinguish between development and adaptation was not helpful or reflective of ground realities, and that long term success meant abandoning the 'adaptation vs. development' rhetoric. They also noted that a focus on strict additionality could lead to potentially bad investments and unintended consequences.

Today, many of these similar issues are at the fore in the context of climate-induced loss and damage (L&D). Despite calls to include L&D within UNFCCC processes for decades, it was only at COP26 in Glasgow in 2021 that significant breakthroughs began to occur – led by the Scottish Government's historic allocation of funds to explicitly address L&D – and continued at COP27 in Sharm El-Sheikh in 2022 with the agreement to establish a L&D Fund. Given this fight for acceptance, there seems to be a strong inclination to clearly distinguish L&D from adaptation – but the history of the continuum highlights the risks of doing so.

This session proposes to learn from experience implementing adaptation measures, briefly showcase examples of overlap between adaptation and L&D, and spend the bulk of the time to reimagine a continuum – or other conceptual framework – in which adaptation, disaster risk reduction, humanitarian action, and L&D can co-exist in ways that honor the reality of frontline communities' lived experiences, while also being useful to the L&D Fund and other funders committed to L&D. The outcome of the session would be one, or multiple, diagrammatic frameworks that could be used to practically advance the current discourse around adaptation and L&D.

### Authors and Partner organizations

The Climate Justice Resilience Fund (CJRF), the International Institute for Sustainable Development (IISD), and the International Centre for Climate Change and Development (ICCCAD) will co-host this session. Heather McGray (CJRF) and Anne Hammill (IISD) are the authors of the adaptation continuum, and Saleemul Huq (ICCCAD) is a veteran expert on adaptation and loss and damage. They will lead the first three sections of the session, supported by relevant partners in this work.

## session 467

# Room 524B Collaborative

Governance & Finance

# Knowledge Co-production for the Global Goal on Adaptation

The session aims to contribute to the international discussion and process on the Global Goal on Adaptation (GGA). Article 7.1 of the Paris Agreement established the concept of a Global Goal for Adaptation (GGA) to 'enhance adaptive capacity, strengthen resilience, and reduce vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the temperature goal'. The GGA calls for adequacy in action and support for adaptation, requiring all parties to engage in and communicate their efforts to plan, implement, and monitor adaptation. Measuring the GGA needs transdisciplinary approaches considering interactions of adaptation actions across sectors, and interactions between adaptation and development goals. Establishing the GGA requires a collective effort from global to sub-national levels of governance to identify indicators of adaptive capacity, resilience, and vulnerability.

The session will touch on questions such as:

#### Knowledge creation/gaps

What types of adaptation science are needed to support the implementation of the GGA? What are the main knowledge gaps? What type of data is available and what is missing?

#### **Definitions, Concepts and Indicators**

How does assessment of global adaptation differ from other levels?

How can the GGA support transformations toward more equitable and climate-resilient societies?

#### Role of stakeholders/actors

What are the incentives for private sector to support GGA?

Can the GGA facilitate dialogues between ranges of knowledge-holders for effective and context-specific climate adaptation?

#### **Authors and Partner organizations**

The proposed session is organized by the UN-led World Adaptation Science Programme (WASP), and the United Nations University, Institute for Environment and Human Security (UNU-EHS). WASP is one of the four pillars of the World Climate Programme. Its core vision is ensuring that climate adaptation knowledge gaps are filled to inform evidence-based policies, solutions and actions for successful adaptation to new climate conditions.

#### Main organisers include:

Dr Johanna Nalau, Griffith University and Co-Chair of Science Committee and Co-Chair of the GGA Working Group, World Adaptation Science Program

Dr Elisabeth Gilmore, Charlston University and Co-Chair of the GGA Working Group, World Adaptation Science Program

Dr Zita Sebesvari, United Nations University - Institute for Environment and Human Security

Dr Saskia Werners, United Nations University - Institute for Environment and Human Security



14:30-16:00



## session 655

# Room 524C Collaborative

Governance & Finance

# Who is enabling effective and socially just climate adaptation? Frontline organizations as critical intermediaries in adaptation

International funding for adaptation is accelerating; vulnerable communities of the Global South are key beneficiaries (1). Nevertheless, evidence suggests funds may not be reaching those who need it most (1), and many projects implemented are failing to adequately address local needs, risk contexts, and intersectional concerns associated with power, equity and justice (2). Frontline organizations, or "meso-level organizations (MLOs)," work directly in and with populations that are typically targeted for adaptation support; these organizations play critical roles as intermediaries between ultimate beneficiaries (micro-level) and the policy and finance communities (macro-level). They not only facilitate the flow of finance, they also serve as conduits of local knowledge, experience, value and needs "upward" to higher-level organizations and sponsors (3). They also are key players in communicating "outward" the goals, visions and instrumental needs of organizations that sponsor adaptation to these beneficiaries. Nevertheless, there has been little attention to the distinct types of MLOs involved in adaptation program implementation and governance, and their differential capacities, strategies and structures. Better understanding of the roles played by MLOs in the practice and governance of adaptation resource flows, their capacities, strategies and barriers to effective operation, is important if adaptation finance is to not only address salient concerns of vulnerable communities, but do so in ways that are socially just and equitable.

We propose a knowledge co production session of 90 minutes (10 min introduction, 60 min for group interactions, 20 min plenary conclusion), in a World Café format, and designed for a diverse group of academic and practitioner co-collaborators. The key outcomes will be the identification of MLOs from attendee experience, crowd-sourced inventory of MLO capacities and challenges as adaptation intermediaries, and concrete ideas for enhancing the effectiveness of MLOs in equitable and sustainable adaptation project governance. This knowledge will inform the work of an international project focused on enhancing the effectiveness of MLOs in adaptation governance.

#### Authors and Partner organizations

Nadine Methner and Mark New, African Climate Development Initiative, University of Cape Town, South Africa - organiser

Hallie Eakin and Eric Welch, Arizona State University - organiser

Moushumi Chaudhury, CARE USA - session collaborator

Mark New, African Climate and Development Initiative, University of Cape Town

session 138

## Room 520A LAC Pavilion Hybrid

Multiple Risks

## Multilevel adaptation governance in dealing with multiple risks and enabling climate action at subnational levels

In recent years, there has been an increase in the establishment of multilevel governance mechanisms for climate adaptation action. However, there is still limited research on the role of multilevel mechanisms in adaptation governance.

The objectives of this session are two-fold. On the one hand, we will share experiences on the role that different multilevel governance frameworks and institutions can play in enhancing participation in the adaptation processes. On the other, we will explore inter- and transdisciplinary approaches to co-construct evidence that can help clarify and overcome governance gaps.

## Authors and Partner organizations

#### Panel participants:

Ms. Wendy Carolina Rodríguez Molina, Director, Dirección Nacional de Cambio Climático, Honduras (DNCC-SERNA)

Mr. Adrián Martínez, Director of the Costa Rican NGO, La Ruta del Clima

Ms. Jackeline Darlene Brincker Palomo and Ms. Gabriela Fuentes, Universidad de Valle, and member of the Sistema Guatemalteco de Ciencias del Cambio Climático (SGCCC)

Ms. Tania Guillén Bolaños, researcher from Nicaragua at the Climate Service Center Germany (GERICS)

#### Moderator:

Mr. Mauricio Luna Rodríguez, Policy Advisor, IISD / NAP Global Network





session 989

## Room 520B Africa Pavilion Hybrid

**Adaptation Choices** 

# Food security in Africa: lessons learnt, opportunities, and priorities for adaptation

Africa's population is expected to double to more than 2 billion people by 2050. Most of this population is expected to shift from rural to urban areas, potentially affecting food production, demand, and supply patterns. This introduces the need for an elaborate review and re-engineering of Africa's food systems in the context of availability, accessibility, utilization, and sustainability. This session shall highlight the progress made towards Africa's food system transformation in the context of climate change and just transition. Additionally, the session shall explore the role of research and innovation (R&I) in Africa's food system transformation in the context of climate change adaptation. Here, researchers from the African Research Initiative for Scientific Excellence (ARISE), working at the food security-climate change nexus across Africa, shall present insights from their work – highlighting advances made, lessons learnt as well as opportunities, needs, and priorities for adaptation.

ARISE is a flagship initiative aimed at advancing the African Union-European Union Innovation Agenda, one of whose actions is fostering the development and enhancement of sustainable and resilient agricultural and food systems value chains to improve food and nutrition security and sustainable agriculture. With an initial support of €25 million from the European Union, the current pilot phase supports 45 researchers in 38 African countries with 5-year research grants of up to €500,000. The 45 researchers are supported to create teams comprising postgraduate and post-doctoral researchers, resulting in a cohort potentially exceeding 600 researchers across many countries.

## Authors and Partner organizations

#### Moderator:

Dr. Peggy Oti-Boateng, Executive Director, AAS Dr. Obed Ogega, Programmes Manager, AAS

#### **Keynote Speakers:**

Prof. Lise Korsten, AAS President and Co-Director of the Department of Science and Innovation, Centre of Excellence in Food Security, South Africa

Dr Agnes Kalibata, AGRA President (TBC)

Spotlight presentations (ARISE Fellows)

Dr. Jessica Thorn, University of Namibia, Namibia

Dr. Thomas Kivevele, Nelson Mandela University of Science & Technology, Tanzania

Dr. Celimphilo Mavuso, University of Eswatini, Eswatini

Dr. Sonia Semedo, Universidade de Cabo Verde, Cape Verde

Dr Koffi Kibalou Palanga, Université de Kara, Togo

Dr. Alassan Assani Seidou, University of Parakou, Benin

Dr. Geoffrey Onaga, Africa Rice Center, Cote d'Ivoire

Dr. Sarobidy Rakotonarivo, University of Antananarivo, Madagascar

# session 277

# Room 520C Hybrid

Equity & Justice

# "South", the new frontiers of adaptation in the "North"? An ideas' market place

Adaptation is often framed as a North-South stream of capacities (finance, human resources, knowledge) flowing through Development Aid framework or through dedicated UNFCCC-related structures such as the Adaptation Fund or the Green Climate Fund.

Of course, efforts are still needed to meet financial commitments and adaptation costs (cf. UNEP adaptation gap report 2022), and to improve research funding that is unequally deployed, especially as regards Africa (Trisos, Adelekan, Totin et al., 2022; Overland et 2021).

However, Global South as actors in the frontline of adaptation have advanced their capacity to adapt beyond that of countries in the Global North. As an example, Bangladesh epitomizes such an incongruity, by being both one of the most vulnerable and one of the most advanced countries in adaptation. South-South experience sharing is also fast growing (e.g. through LUCCC, LEG, PAS-PNA, LDC Group, etc.), although challenges to overcome language barriers remain (e.g. for francophone Africa).

Conversely, this session aims at exploring a different stream of knowledge and experience, from "South" to "North". It is based on the assumptions that:

(1) the experience gained by developing countries can offer a wealth of adaptation knowledge in developed countries, whether it be in terms of framing or in terms of potential solutions;

(2) a South-North stream of knowledge can be mutually beneficial and needs to be strengthened;

(3) specific organisational arrangements should be explored to foster this dialogue. This session will tackle the following questions:

- what are the previous experiences in terms of the South-North knowledge stream related to adaptation?
- what topics or tools would be the most relevant to share in priority (e.g. hard limits of adaptation, participation and inclusiveness, a specific sector, etc.);
- what would be the most effective format to share this kind of experience between representatives of "South" and representatives of "North"?
- how to make this knowledge sharing actionable?

#### Authors and Partner organizations

Christophe Buffet (AFD), Vivian Dépouès (I4CE) and Imane Bourkane (AFD) Saleemul Huq (ICCCAD)

Lisa Schipper (GIUB)





## session 75

# Room 520D Hybrid

**Adaptation Choices** 

# Integrating mitigation and adaptation into the feasibility assessment approach for improved support to climateresilient development

First introduced in the IPCC Special Report on 1.5 °C global warming and further elaborated in the 6th Assessment Report, the "multidimensional feasibility assessment" (FA) framework has gained increasing attention from policymakers. The FA approach has several advantages over other approaches for assessing the potential of adaptation and mitigation, namely, cost-benefit analysis or other approaches that focus on single and often only economic dimensions. First, the FA provides a disaggregated synthesis of barriers and enablers along multiple dimensions that facilitates targeted interventions and risk management. Second, adopting a systems transitions perspective highlights how interactions, synergies and trade-offs between individual options emerge and for prioritization across portfolios. Further, the FA also allows for the assessment of linkages between adaptation, mitigation and the Sustainable Development Goals that underpin climate resilient development. In addition to providing valuable guidance - on where adaptation and mitigation responses have high feasibility to yield more impacts, why this is the case, and where efforts are needed to remove additional barriers - these assessments also reveal where more information is needed.

We call for a session on FA to bring scientists, practitioners and policymakers together to discuss and get their perspectives on the FA framework and how it can be improved to better support the synthesis of science for policy needs. Specifically, the session will:

- share best practices and lessons learned about the assessment of adaptation/ mitigation feasibility;
- explore actionable steps to use the framework for applications beyond the synthesis of peer review literature towards expert assessments in the 'realworld';
- refine the framework for integrated adaptation/mitigation assessment.

### Authors and Partner organizations

WG2 and WG3 authors to present the framework, methodology and scientific perspective;

Policymakers to discuss how the framework can be relevant to their work and areas where the methodology can be improved;

Practitioners to highlight some of the gaps in the FA framework and how it can be refined for its effective use with communities and serve as an appealing approach for participatory assessment;

Development world (UNEP) and partner organizations that have used the approach before to share their experience about the robustness and the value of the FA framework.

## session 113

## Room 520E Hybrid

Indigenous Knowledge

## Ocean and climate crisis in the Pacific: An indigenous perspective

This roundtable session provides a discussion on climate crisis from a Pacific Islands standpoint through the lenses of Indigenous and local peoples' knowledge, voices, and expertise in relation to adaptation, research, policies, practices and actions.

Indigenous knowledge and approaches to framing adaptation, mitigation and resilience strategies relating to climate crisis is gaining traction because of the deep symbiotic connection between the environment and indigenous cultures and peoples. Indigenous peoples have been stewards of lands, waters and oceans for generations anticipating and responding to climate variability and change. There is increasing recognition of the value of community expertise, plurality of knowledges, including Indigenous Knowledges (IK) and Local Knowledges (LK) for informed climate resilience pathways. IK & LK's are significant in framing climate change responses across genders, class and generations in addition to its place-based local practices. There is a growing consensus among climate scholars and practitioners that climate adaptation strategies and policies should use the best available knowledge, with exchange and interaction between IK / LK and "Western" knowledge.

The session will include researchers from the Pacific Ocean Climate Crisis project, a joint research project between the University of the South Pacific (Fiji) and University of Canterbury (NZ), funded by the NZ Ministry of Foreign Affairs to provide an Indigenous led, interdisciplinary, multi-methodological and integrated assessment of the climate crisis and oceans covering 16 countries in the Pacific region. It gives voice to Pacific voices in a research space dominated by Global North scientists and policy thinkers.

## Authors and Partner organizations

**Facilitator:** Distinguished Prof Steven Ratuva (University of Canterbury)

Dr Christina Tausa (University of Canterbury): "Voices from Samoa on the climate crisis"

Dr Dalila Gharbaoui (University of Canterbury): "Experiences of Climate (im) mobility in Fiji"

Dr Suli Vunibola (University of Canterbury): "Pacific methodologies and indigenous knowledge from local communities"

Prof Joeli Veitayaki (University of South Pacific) "Ocean, costal management and climate adaptation: Challenges and opportunities at grassroot level"

Prof Viliamu Iese (University of South Pacific) "Pacific stories on Climate crisis, loss and damage, disaster and risks"



room **520F** 

Side event



# session 180

#### Room 519A

**Adaptation Choices** 

#### Organisatrice de session :

Mme Nathalie Bleau – Ouranos -Montréal, Québec, Canada

#### Présidente de session :

Prof. Sophie L. Van Neste - Institut national de recherche scientifique (INRS), Chaire de recherche du Canada en action climatique urbaine -Montréal, Québec, Canada

## La nécessaire adaptation transformationnelle : une combinaison de recherches et d'actions

Depuis 2014, l'adaptation aux changements climatiques occupe une place plus importante dans les rapports du GIEC. Le sixième rapport propose quelques mots clés pour une nécessaire adaptation qui se doit d'être efficace et efficiente. Il y est question de collaboration et de complémentarité des savoirs scientifiques, techniques et traditionnels; de solutions basées sur la nature; de justice sociale; et de transformation. On doit ainsi passer d'une vision de l'adaptation qui recourt à des corrections, des ajustements, dite adaptation incrémentale, à une vision «évolutive» par la transformation des systèmes, des pratiques, des comportements, des processus, des décisions. Malgré ces signaux lancés par le GIEC, force est de constater qu'aujourd'hui encore, les actions en adaptation relèvent beaucoup plus de correction et d'ajustement que de remise en cause des valeurs, des mécanismes, des systèmes en place. Pourtant, cette remise en cause est essentielle pour répondre au wicked problem que sont les changements climatiques et aux adaptations justes qu'ils requièrent.

En Occident, l'adaptation dite incrémentale progresse, on voit de plus en plus d'actions de déminéralisation et de verdissement à petit et grand déploiement, la création de corridors écologiques qui permettent la migration des espèces, la sélection de cultures plus résistantes à la sècheresse, des initiatives de conservation (protection, restauration et aménagement durable) des territoires, on développe des systèmes d'alerte et des initiatives de soutien aux plus vulnérables, on adapte des bâtiments, des infrastructures et de la machinerie, on modifie des règlements et des lois. Toutefois, bien trop rarement on remet en question nos normes sociales, nos pratiques et nos comportements : façons de consommer, d'utiliser l'espace, de prendre des décisions ; bien trop peu on se préoccupe des dynamiques des systèmes sociétaux, environnementaux, économiques et institutionnels pour lutter contre les changements climatiques.

Alors que l'adaptation incrémentale vise à s'adapter aux conséquences des changements climatiques, l'adaptation transformationnelle cherche à créer des altérations, évolutives dans le temps, au sein des systèmes producteurs de vulnérabilités. Toutefois, bien que conceptuellement, l'adaptation transformationnelle tient la route, sa mise en œuvre manque d'exemples et on peut s'interroger sur sa pratique réelle.

#### Présentateur.trices ou invité.es (à définir)

Prof. Isabelle Anguelovski - Universitat Autònoma de Barcelona, Institute for Environmental Sciences and technology - Barcelone, Espagne (en virtuel)

Lisa Hiwasaki - University of Rhode Island - Kingston, Rhode Island, États-Unis

Mme Liza Leclerc - Stantec - Montréal, Québec, Canada

Mme Mélanie McDonald – Chemins de transition/Université de Montréal – Montréal, Québec, Canada

Dr. Guillaume Simonet - Réseau d'expertise sur les changements climatiques en Occitanie (RECO) – Toulouse, France







session 331

Room 519B

Governance & Finance

## Financing Adaptation and Building Resilience: Developing a Gender Lens Climate Investment Framework

Financial resources required to address global adaptation challenges are dauntingly large. To date, a significant portion of adaptation finance has come from international agencies and developed country governments. However, there is a growing concern that these existing funding commitments lack gender and social inclusion lens, particularly what opportunities should be ring-fenced for women-led adaptation actions at the local level. Quantifying gendered outcomes in relation to climate/development finance has generally been the purview of academia and one-off impact evaluations. Moreover, there is limited rigorous research on the efficacy of these approaches. More evidence is required to support workable investment strategies that pursue climate change solutions with explicit gender transformative objectives such as women as leaders, managers, entrepreneurs, consumers, and employees.

The main purpose of this session is to discuss how can adaptation investments can be made gender sensitive and can be channeled to key local actors such as women and marginalized groups that face high barriers to accessing finance. Some past studies have confirmed that small women-lead businesses are engines of innovation and can bring with them understanding of local markets, land, skills, and networks needed to overcome practical growth challenges. There are a host of challenges that all micro, small and medium-sized enterprises (MSMEs) face in low- and middle-income countries (LMICs), from missing market functions to technical capacity, but access to capital is a key barrier that constrains the growth of most green and women-owned businesses. The inability to access capital is a greater challenge for women led MSMEs, as most funds are disbursed in large amounts, while women are mostly involved in micro-scale enterprises that face barriers to accessing these funds.

## Authors and Partner organizations

Author: Dr Bhim Adhikari, International Development Research Centre (IDRC)

#### Partner organizations

Dr. Joanes Atela, Africa Research Impact Network (ARIN), Kenya

Dr. Shehnaaz Moosa, Climate and Development Knowledge Network (CDKN), South

Ms. Andrea Fonseca, Libélula, Peru

Mr. Raju Pandit, Prakriti Resources Center (PRC), Nepal

Dr. Vishal Singh, Centre for Ecology Development and Research (CEDAR), India

Dr. Victoria Plutshack, Nicholas Institute | Duke University, USA

Mani Ram, Banjade SIAS, Nepal

Srijana Baral, ForestAction, Nepal

## session 748

Room 518B

Indigenous Knowledge

## Engaging Indigenous and local people in the co-development of knowledge and resources to enhance climate action and mutual learning

An important shift is taking place globally, towards more inclusive and collaborative ways of working together, including with Indigenous Peoples and local communities (IPLC). In many parts of the world, IPLC are at the forefront of climate action showing leadership and advocating for the respectful consideration of their diverse knowledge systems. IPLC knowledge systems are "maintained through an inter-generational historical connection to place and nature through livelihoods, cultural identity, languages, worldviews, institutions, and ecological knowledge" (IPBES). These knowledge rich systems contain important climate-related information while often being holistic in nature, critical to identifying and understanding the systemic nature of the problems presented by climate change and identifying and implementing effective solutions. As such, this emerging shift in working with IPLC needs to be enhanced and the results of such better integrated into decision-support processes.

The members of this session's panel will explore the successes and challenges they have experienced when working to bring forth these diverse knowledge systems. They will engage in active two-way dialogue with the audience with the aim of enhancing the sharing of experiences and mutual learning. Deliberations will include considerations around policy, programming, governance and means of knowledge sharing (e.g., web-based climate adaptation platforms).

## Authors and Partner organizations

#### Chair:

Kim van Nieuwaal - Climate Adaptation Service, The Netherlands

#### Moderator:

Roger Street - University of Oxford and CMCC; and Jewel Davies, Yukon University

#### Speakers:

Myrle Ballard - Indigenous Science Division (ECCC), University of Manitoba

Siosinamele Lui - Secretariat of the Pacific Regional Environment Programme (SPREP)

#### Panel Members:

Damian Morgan-Bulled - Yorta Yorta Traditional Owner Land Management Board

Chaim Anderson - Nunatsiavut Government

Jocelyn Joe-Strack - Yukon University

Dane DeSouza - Metis National Council







# session 715

Room 523

**Adaptation Choices** 

# Resilience through environmentally sustainable agriculture production

Climate change is a major threat to our agricultural system requiring new ideas and innovations to support farmers to adapt to and mitigate this threat. MEDA supports the sector with an approach emphasizing the economic, social, and environmental impact on agri-food market system. Our experience has also shown that when businesses are supported in their growth in a gender inclusive and environmentally sustainable manner, the benefits are longer lasting and wider reaching. We refer to this as our triple impact approach.

This session proposes 4 presentations starting with an introduction to MEDA's Guide to Approaches to Environmentally Sustainable Agriculture Production, which promotes 14 production-oriented agricultural objectives to support small-scale food producers and farming families in strengthening their production systems and practices. This includes support for: farm management and planning, crop management, production financial management, market and product opportunities, soil carbon and nutrient management, climate change adaptation, efficient use of water and energy, protection of biodiversity and natural ecosystems, waste reduction, post-harvest management, and food safety and workplace safety.

The following three presentations will focus on the application of elements of the guide within three projects within Philippines, Ghana and Kenya. The presentations will be made by environmental specialists embedded with these projects and who have intimate knowledge of the challenges and opportunities they face in the application of sustainable agricultural practices within the unique project contexts.

#### Proposed Moderator and Presenters

**Moderator:** Dennis Tessier, Technical Director, Environment and Climate Change, MEDA

#### Presenters:

Dr. Zakaria Issahaku, Market Systems Specialist, MEDA

Roderick Volones, Market Systems Technical Lead, Resilience and Inclusion through Investment for Sustainable Agrikultura (RIISA) Philippines

Cynthia Kutir, Environnent and Climate Change Manager, GROW2

Jospeh Kuria, Environmental Specialist, Leveraging Equality for Gender-Inclusive Economic Development (LEGEND) Kenya



session 392

Room 522

Adaptation Choices

What is effective adaptation, for whom, and how do we know? Findings from adaptation policies, NAPs and M&E on vulnerability assessments, measurments and effectiveness

Adaptation is required to tackle the widespread, rapid, and intensifying impacts of climate change. It is equally important that the success or failure of such adaptation is monitored and evaluated. This ensures that the adaptation is effective and reaches especially those most vulnerable to the impacts of climate change. The current evidence of effective adaptation is vast but scattered, which increases the risk of maladaptation.

The Adaptation Gap Report (UNEP 2022) highlights that the adaptation finance gap in developing countries is likely five to ten times greater than current international adaptation finance flows and continues to widen. As such, it is imperative that already scarce adaptation finance supports adaptation measures that have well thought- through theories of change based on vulnerability assessments and provide a clear link to adaptation benefits for vulnerable people. This further underscores the importance of ensuring the effectiveness through rigorous monitoring, evaluation and learning (MEL) that can justify expenditures, meet the growing demands for accountability of financial resources while supporting learning on managing climate risks.

This session answers the following questions:

- How can progress reporting enhance the implementation and effectiveness of National Adaptation Plans, and what can be learned from existing practices?
- What is the state-of-the-art evidence on effective adaptation?
- How can adaptation planning and policy design improve to ensure robust adaptation?
- How can vulnerability assessments facilitate reaching those most vulnerable to the impacts of climate change?
- How can effective adaptation be measured using indicators?
- How can we ensure learning occurs from MEL processes and throughout the adaptation policy cycle?

## Authors and Partner organizations

William Solecki, University of New York - Hunter College

Dorothée Fehling, Kiel University City

Marta Olazabal, Basque Centre for Climate Change, BC3

Majorie Ménard, Perspectives Climate Research (PCR)

Kevin Moull, German Institute for Development Evaluation (DEval)

Émilie Beauchamp & Shafaq Masud, International Institute for Environment and Development (IISD)

session 784

Room 525

Equity & Justice

Achieving equity in climate change adaptation research and partnerships: Discussion panel and Launch of the edited book "Climate Justice in the Majority World"

This interactive session will focus on the issue of inequitable partnerships and epistemic (knowledge) injustice in the context of adaptation planning and implementation. In both academic and professional contexts, the relationships between Western (or Minority World) and developing country (or Majority World) partners are frequently skewed in favor of the former. This leads to adaptation that fails to understand the local context and is constrained by a narrow body of (usually Western) knowledge and values that it follows. This inequality is one of the main concerns of Climate Justice in the Majority World - a recently published edited collection featuring contributions from authors from across the Majority World. The book reflects a deliberate commitment on the part of the editors and the authors to foreground the diverse ways through which people make sense of their relationships with the climate and their environments. The book captures multiple epistemologies and ontologies of people who experience climate change and environmental challenges first-hand, often in conjunction with the aftermaths of colonisation, neo-liberal economic development models, increasing socio-economic inequalities, and general lack of recognition for their own lived realities.

In addition to serving as an occasion to formally launch the book, this session will build on its key arguments in an interactive and diverse setting. The main part of the event will consist of a panel featuring two book editors (M. Mikulewicz in person & K. Michael remotely), three Majority-World-based chapter co-authors and one Minority World chapter co-author (Patricia Perkins). Questions for panelists include:

- What are the main barriers to creating and maintaining equitable adaptation
  partnerships and knowledge exchange between Minority and Majority World
  actors? To what extent are these barriers purely financial vs. being rooted in
  other causes?
- How does one overcome the intra-country inequities in design and implementation (e.g. urban elites hijacking adaptation planning in rural areas) often found at the local level?
- Can you share an example of a successful adaptation project or initiative that increased overall adaptive capacity while promoting such equitable partnerships?
- What are some of the strategies or resources you would suggest to professionals, activists and academics who wish to decolonize their practice in working with Majority World partners?

### Authors and Partner organizations

Kavya Michael, Chalmers University, Sweden

Michael Mikulewicz, SUNY College of Environmental Science & Forestry, USA Neil Crawford, University of Leeds, UK





## session 812

# Room 524A Collaborative

Limits to Adaptation

# The values of adaptation pathways for planning under adaptation limits

To consider uncertainty and embed flexibility in adaptation planning, practitioners and scholars advanced "adaptation pathways". Adaptation pathways are forward looking approaches that comprise sequences of possible actions that can be implemented over time, depending on future dynamics. They allow for dealing with uncertainty in adaptation planning, whilst anticipating triggers and thresholds for action. The co-production of pathways has shown to build capacity for responding to change and anticipatory adaptation.

The concept was introduced into adaptation planning a decade ago, which means that Adaptation Futures 2023 provides an excellent opportunity to reflect on the lessons learned and look ahead to new challenges for adaptation planning. In particular, with the publication of the IPCC Sixth Assessment Report and recent climatic extreme events around the world, it has become evident that adaptation is constrained by soft and hard limits, which restrict the space in which pathways can be developed and raise questions about the feasibility and scope of transformative adaptation.

The aim of the session is to discuss how adaptation pathways can be designed and implemented in contexts experiencing severe climate impacts. More specifically, the session will explore the conditions and mechanisms for effective integration of transformational change, adaptation limits and systemic resilience into adaptation pathways in different contexts. Learning about the pre-conditions, challenges, and opportunities for developing anticipatory 'transformative adaptation pathways' in the context of large scale change and in the presence of both hard and soft adaptation limits is relevant for policy and practice as we prepare to reduce the risks of future climate change at different scales.

The session will bring together different stakeholders from research to practice to discuss conceptual and empirical experiences with pathways approaches and the utility of adaptation pathways in the context of development and adaptation limits. We expect to identify pre-requisites and mechanisms for effective adaptation planning under large-scale, transformative changes. We pay special attention to the role and engagement of different actors, ranging from communities, to government and private sector, in order to unpack the different knowledges and value sets these actors bring to the table.

#### **Participants**

Saskia Werners, UNU-EHS, Germany & Wageningen University, NL

Edward Sparkes, UNU-EHS, Germany

Edmond Totin, Université Nationale d'Agriculture, Benin

James Butler, Cawthron Institute, New Zealand Russell Wise, CSIRO Environment, Australia

Katharine Vincent, Kulima Integrated Development Solutions, South Africa

Sarah McKenzie / Alice Muller, WorldVision

Mieke Bourne, ICRAF

Veronica Doerr, ACIAR

Anna Taylor / Nadine Methner, ACDI, Univ Cape Town

Hallie Eakin, School of Sustainability ASU, US

Lisa Schipper, University of Bonn, Germany

session 205

Room 524B Collaborative

Multiple Risks

## Compound, cascading and complex climate risks and their impacts: getting from methodological advancements to practical outcomes

There is a growing understanding that climate adaptation and risk reduction strategies need to account for multiple hazards and their interrelationships (e.g., compound and cascading), as well as dynamics of exposure, vulnerability and responses across economic sectors, systems and borders. In addition, we are continuously reminded that impacts are not linear, as they propagate across spatial, sectoral, and governance boundaries, making it difficult to account for their complexity or manage their impacts. Compounding hazards and shocks reveal risks that expose the vulnerabilities of interdependent social-ecological systems, resulting in cascading impacts on the built and natural environment, disrupting economies and affecting human and ecosystem well-being. In addition, multiple types of human responses that aim to reduce risks in one system or for one group can exacerbate impacts in another system, region or for another group. Most often this happens in systems deemed less 'important' such as ecosystems, and among groups who are already vulnerable and marginalised. Complex risks do not operate within system boundaries, with interconnected vulnerabilities, risks and impacts underscoring the need to move from hazard-by-hazard and sectoral approaches to comprehensive all-hazard and multi-risk approaches of understanding, assessing and adapting to risks.

Given the prominence of the topic, there is a growing body of methodological advancements in assessing these types of risks and impacts. However, as the topic is gaining momentum, it is important to consider what needs to be done to transform cross-cutting scientific research into practical outcomes on the ground, ultimately informing adaptation action for a diverse set of stakeholders.

#### **Participants**

Robert Sakic Trogrlic, International Institute for Applied Systems Analysis, Austria (co-chair and presenter)

Julius Schlumberger, Deltares, The Netherlands (session organiser and presenter)

Edward Sparkes, UNU-EHS, Germany (session organiser and presenter)

Michael Hagenlocher, UNU-EHS, Germany (presenter)

Marleen de Ruiter, VU University Amsterdam, The Netherlands

Nicholas Simpson, University of Cape Town, South Africa

Demet Intepe, Practical Action, United Kingdom

Arielle Tozier de la Poterie, German Red Cross, Germany

Dorothy Heinrich, Red Cross Red Crescent Climate Centre, The Netherlands

Stefan Hochrainer-Stigler, International Institute for Applied Systems Analysis,

Stefan Schneiderbauer, UNU-EHS, Germany & Eurac Research, Italy & University of the Free State, S-Africa

Yvonne Walz, UNU-EHS, Germany

Sumana Banerjee, Jadavpur University, India

Mr Marlon Vieira Passos, Stockholm Environment Institute, Sweden (presenter)



16:30-18:00



session 693

Room 524C Collaborative

Governance & Finance

## Turning knowledge into Action: Workshop on linking adaptation assessment and adaptation implementation through Indigenous projects

This workshop will provide an opportunity for participants to discuss challenges and best practices for integrating adaptation assessment into adaptation implementation using key Indigenous projects as examples.

The workshop will include two parts:

#### **Breakout groups**

Two breakout groups will be planned, one on adaptation assessment and another one on adaptation implementation. These breakout groups, to be held concurrently, will be an opportunity for participants to exchange ideas, and discuss key topics in small groups, such as challenges with integrating assessment and implementation, best practices for bridging the gap, and lessons learned. Indigenous partners will be on hand in each group to showcase example projects from their communities and prompt discussion on how this issue can be addressed from an Indigenous context.

#### Knowledge exchange

After the breakout rooms, the two groups will join together to share what they have learned with each other and exchange further ideas on how to more effectively use knowledge and information gained during adaptation assessment to inform actions during implementation of adaptation projects.

This workshop will particularly tie in with Theme #8 of the conference themes, in that it will be an opportunity for participants to explore and discuss inclusive governance mechanisms and effective decision-making processes that help to turn knowledge into effective climate action. Highlighting Indigenous projects as examples will be particularly critical, as Indigenous peoples have a holistic view of climate adaptation, and Indigenous knowledge and expertise in this regard can be pointed to as best practices.

Expected outcomes of the session include knowledge exchange on challenges, best practices and lessons learned to better integrate climate adaptation assessment and implementation that participants can bring forward in their own initiatives.

#### **Participants**

Indigenous Services Canada (ISC) and Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) will facilitate and moderate the breakout rooms and knowledge exchange discussions.

Indigenous partners will be invited to participate as expert examples in the breakout groups, and help demonstrate Indigenous-Canadian programming in assessment and implementation, such as through the Indigenous Community-Based Climate Monitoring Program and the First Nation Adapt for assessment initiatives, and the First Nations Infrastructure Fund and the Climate Change and Health Adaptation Program for implementation initiatives (TBC).

## session 221

## Room 520A LAC Pavilion Hybrid

Indigenous Knowledge

#### **Outcomes**

Attendees will learn how respectfully engaging with Indigenous communities and centring their perspectives in program design and implementation is crucial for building climate resilience. Doing so not only improves donor-funded project outcomes, but more importantly redistributes power and control over rights and resources into the hands of Indigenous communities. With this session, we hope that attendees can learn effective ways for integrating gender, equity, and social inclusion (GESI) principles into climate adaptation and resilience programming.

# Centering Indigenous perspectives in climate resilience planning

Knowledge sharing session (one-way) where Indigenous leaders will share information about best practices for strengthening climate resilience by centring Indigenous Peoples' perspectives in climate programs. This panel will feature Indigenous and women leaders who will share insights on how centring Indigenous visions in the design, planning, and implementation of climate programs can deliver both adaptation and mitigation outcomes and distributive climate justice goals

#### **Participants**

Raymond Martinez, Director of the Department of Environmental and Cultural Preservation (DECP): Abt Associates has a long history working with the Pueblo de San Ildefonso in developing a climate action plan that is community driven and centered around their community vision. The Pueblo is now focused on implementing their priority climate adaptation actions. Raymond Martinez will describe their community-focused approach to develop climate resilience actions that preserve and sustain key aspects of their community's life for future generations and describe challenges and opportunities in pursuing various funding opportunities to implement actions

Rita Spadafora, Program Lead, FSC Indigenous Foundation: Ms. Spadafora will share how the FSC Indigenous Foundation (FSC-IF) is supporting the implementation of the Indigenous Women of Panama's Economic Empowerment Plan (PEMIP 2025). The plan is a comprehensive and pioneering initiative that seeks the full inclusion and effective exercise of the socioeconomic rights of Panamanian Indigenous women, based on their self-determination. It creates a space to convene multi-sectors including public and private actors to bring resources and commitment to support the Indigenous women of Panama. Ms. Spadafora will share how the FSC Indigenous Foundation (FSC-IF) is supporting the implementation of PEMIP through three of its components including ancestral cultural restoration, leadership, and governance.

Carla Cardenas, Forest Trends/People's Forest Partnership: Launched in COP26, the Peoples Forests Partnership aims to use the voluntary carbon markets to assure equitable, accessible, and culturally appropriate investment partnerships with Indigenous Peoples and Local Communities (IPLCs) to protect the environment, while setting the best-in-class standard for forest communities to engage with climate finance. Ms. Cardenas will share insights about how the partnership was developed and launched with Indigenous Peoples and Local Communities in the driving seat, and how this partnership can equitably build climate resilience.

**Daniel Peniston, Climate Adaptation and Resilience Specialist, Abt Associates** (Moderator): Daniel has experience in climate adaptation, climate policy, responsible forest management, and in supporting Indigenous-led forestry and climate programs. He will moderate the session.





session 421

Room 520B Africa Pavilion Hybrid

Teaching & Learning

## Youth Climate Adaptation Leadership: Insights from capacity building, knowledge brokering and entrepreneurship programs

The domination and over reliance on expertise from the global north in generating knowledge on climate change, in importing and controlling climate smart technologies, and in science more broadly are widely acknowledged. On research funding alone, the IPCC Sixth Assessment Report states that from 1990-2019, research on Africa received just 3.8% of climate-related research funding globally. And of this, only 14.5% went to African institutions, while 78% went to EU and North American institutions to do research on Africa.

We need to pay attention to these inequalities in generating and accessing knowledge, technologies, and capacity funding. There needs to be accelerated efforts by the development community in acknowledging the existing expertise of African researchers, enabling capabilities and in increasing their visibility and fostering effective south-north, and south-south research and entrepreneurial collaborations. We can accelerate progress in these areas by building synergy among people and ideas across the globe, providing opportunities for scientists to understand the realities of climate science in Africa, and strengthening the leadership capabilities of researchers and entrepreneurs in the global south.

This session aims to foster dialogue on the above themes giving to the floor to early career researchers and private sector leaders and innovators who have benefitted from a recent series of fellowship and capacity strengthening programs.

We will pose the following overarching question and delve into its various facets through discussions with diverse individuals and organizations:

How can scholars who benefit from these fellowships collaborate with young entrepreneurs in the private sector to drive transformative change in Africa's agriculture and food systems, fostering inclusivity and sustainability.

### Authors and Partner organizations

**Moderator:** Rita Effah, Coordinator, Africa Climate Change Fund, African Development Bank

**Keynote Address:** Edith Ofwona Adera, Coordinator, Africa Adaptation Acceleration Program, African Development Bank

#### Panelists:

Michelle Du Toit, Programme Manager for the Climate and Development Knowledge Network, South South North Organisation

Sophie De Connick, Local Climate Adaptive Living Capacity, UN Capital Development Fund (UNCDF)

Dr. Olufunso Somorin, Regional Principal Officer, African Development Bank

Rafael Morser, Program Specialist, UNCDF/LoCAL

Marie Veyrier, Development Director, Global Shea Alliance

Juveline Ngum Ngwa, YouthADAPT winner & CEO, Bleaglee Waste Management (Virtual)

# session 613

# Room 520C

**Adaptation Choices** 

# Scaling up climate risk informed decision making for a climate resilient development

#### Context

IPCC AR6 has widened the scope for climate change adaptation to climate resilient development, picturing pathways of resilient development that combine climate risk reduction, climate mitigation and development goals and action. This increases the relevance and transformative character of climate change adaptation and the need for action. At the same time, requirements are increasing for risk-informed decision making to come up with effective adaptation strategies that maximize benefits and minimize trade-offs towards other goals (e.g. how can an action both reduce risks, increase biodiversity and improve equity?).

#### Need

As demand for action is rapidly increasing, the community of practice in risk informed decision making (RIDM) is expanding and the need for upscaling successful methods is growing. We aim to foster knowledge sharing (bridging), catalyse networking (bonding) and identify the common lessons and recommendations for practitioners, researchers and decision makers about analytical and socioeconomic tools and methods that can support the decision-making process (empower).

#### **Anticipated outcomes**

During a hybrid (live/online) collaborative session, we will share and discuss current practices and emerging topics to meet these new requirements in adaptation planning. We will produce a collaborative summary of the session (tangible outcome) as an opportunity for the participants to remain connected, and help clarify means to pursue dialogue on scaling up RIDM (intangible outcome).

#### Organisers

Ad Jeuken, PhD (Deltares) Expert advisor Climate change adaptation

Sadie McEvoy, PhD (Deltares) Researcher Climate Resilient Development Pathways

Ursule Boyer-Villemaire, Ph.D. - Team Leader, Climate risk and adaptation expertise, Ouranos & Associate professor in Disaster risk resilience, Universite du Quebec a Montreal

Clara Champalle, M.a. - Project manager in climate risk and resilience at Ouranos

#### Partner organizations

US Army Corps of Engineers, Deltares, Ouranos, UQAM, Univ. of Cincinnati, Univ. of Stellenbosch, UNESCO, WSP Canada, CCG





session 764

Room 520D Hybrid

Equity & Justice

# Squaring the debate: Does Locally Led Adaptation (LLA) help or hinder transformational adaptation?

At the Climate Adaptation Summit (CAS) in the Netherlands in 2021, organizations from across the world came together to endorse the Principles for Locally Led Adaptation (LLA). LLA is about local people and their communities having individual and collective agency over defining, prioritising, designing, monitoring and evaluating adaptation actions, and working with higher levels to implement and deliver adaptation solutions (Soanes et al. 2021). Since the CAS, the movement to bring LLA into the mainstream of climate action has gone from strength to strength with almost a 100 entities (including the Governments of Costa Rica, Nepal, UK, Ireland, Netherlands, Denmark, Sweden and USA) formally committing to bring these Principles to life. It is safe to say that LLA is well on its way to becoming a dominant discourse on adaptation policy and practice.

Even though LLA is finding support from across the world, it is important to examine the degree to which this approach to managing risk can deliver 'transformational' change in the context of a changing climate. This is described by the IPCC as adaptation that changes the fundamental attributes of a system in response to climate and its effects, (IPCC 2012). Those arguing for LLA would underline the fact that this approach to tackling the impacts of climate change is essentially about shifting agency to those on the frontlines of climate risk and therefore catalysing fundamental shifts in adaptation decision making and financing regimes. Others might contest that a sharp focus on the local scale may not deliver the fundamental shifts as this would necessary entail robust engagement with national and international processes (Adger et. Al. 2005). This group might also argue LLA does not offer much over the existing concept of 'Community Based Adaptation' (Kirby et al 2015). Representatives from particularly vulnerable groups to climate change, that are prioritised in theory by the LLA Principles (women, girls, people with disabilities, indigenous peoples, other marginalised ethnic groups) may argue for or against LLA being an approach that better supports climate justice compared to mainstream adaptation.

Therefore, this session seeks to unpack these views, and explore whether LLA can be a credible pathway to transformational adaptation. It seeks to do so by providing a forum for frank and honest debate.

### Authors and Partner organizations

Marek Soanes, Climate Justice Lead, CARE Australia
Aditya Bahadur, Chair of the Research Strategy Team, IIED
Cristina Rumbaitis del Rio, UN Foundation
Suranjana Gupta, Huairou Commission
Anand Patwardhan, University of Maryland



Room 520E Hybrid

Nature-based solutions

## Scaling up ecosystem-based adaptation: Leveraging behavioral science for effective climate policy and action

Despite mounting evidence that Ecosystem-based Adaptation (EbA) can deliver important economic benefits on top of environmental and social gains, its application remains relatively limited globally. One of the challenges is that EbA requires significant behavioral changes, but our field has been slow to integrate insights from the behavioral sciences into our efforts to encourage such change. To effectively scale up EbA, we must leverage behavioral science and go beyond raising stakeholders' awareness in the interventions that we deploy.

Presenting work at the intersection of applied behavioral sciences and EbA, this interactive knowledge exchange session will begin with a review of the typical choice scenarios and biases that people face when it comes to adaptation, before looking at real-world case studies of organizations tackling such choices through behaviorally-informed interventions. Starting with a look at Canada, where the Natural Infrastructure Learning Ecosystem (NILE) approach is innovatively used to shape interventions at various learning stages, ensuring better incorporation of EbA and NbS in problem-solving and initiating a shift in both professional and societal norms. Transitioning to coastal cities, we will examine terrestrial behavior-change efforts aimed at enhancing ecosystem resilience and promoting the 'blue economy.' Then, an intervention in Kenya will demonstrate how nudges tailored to local values, norms, and knowledge can help Kenyan farmers adapt their planting decisions to climate change realities. In Colombia, a climate-smart agriculture program will demonstrate how we can shift social norms and make "silent" behaviors more observable to encourage long-lasting behavior change. And in Fiji, an initiative aimed at incentivizing the adoption of vetiver grass for riverbank rehabilitation explores how behavioral insights can inform the design of effective policies.

Throughout these examples, speakers will discuss how behavioral science enhanced adaptation efforts, and will elaborate on attendees' interests and concerns which will be collected in real-time throughout the session. Attendees will be asked to think through their own behavior-change challenges, identifying the case studies and behavioral science concepts most relevant to their work. Speakers will also highlight the challenges of relying on insights from one context when deploying interventions in another (for example, the global north vs the global south).

Overall, this session will serve as a showcase of the critical role behavioral science should play in scaling up climate adaptation efforts, and serve as an opportunity to better understand the various ways practitioners and policy-makers are approaching behavior change for EbA. Additionally, data gathered during the session will be collated and analyzed to identify implementers' needs in the translation from academic behavioral insights to real-world application, and to identify better ways of bridging EbA-relevant policy-making and behavior-change.

#### Authors & Partner organizations

Dr. Philipe Bujold, Rare, Center for Behavior & the Environment
Julie Dekens, International Institute for Sustainable Development (IISD)
Cortney Price, UN Food and Agriculture Organization (FAO)
Stewart Sarkozy-Banoczy, Resilient Cities Network
Liese Coulter, Royal Roads University





## session 83

## Room 520F Hybrid

Equity & Justice

# Maximizing synergies across climate change adaptation, women's empowerment, and nutrition objectives through goat value chains

This session proposes to examine the potential for goats and other small ruminants to enable small producers in low- and middle-income countries to adapt to climate change, facilitate women's empowerment, and improve nutrition. Goats and other small ruminants are considered to be particularly "hardy" animals, and as such are considered to be climate resilient, especially to droughts. Goats are also used as a store of wealth and are more easily traded following shocks, which can increase household resilience to climate shocks and stressors. At the same time, goats constitute an important animal source food (ASF), as goat milk is generally consumed by young children in the household and goat meat is consumed, in some contexts, as part of religious ceremonies. Goat products could be leveraged further in the context of under- and malnutrition, particularly for young children and mothers. Doing so will require identifying opportunities to improve goat production and strengthening value chains for goats and goat products to support women's empowerment, climate resilience and improved nutrition. This includes identifying and addressing production risks and tradeoffs, such as animal disease, declining availability of feed sources, as well as bottlenecks in the supply chain, such as market access and price fluctuations, many of which are associated with climate change.

### Authors and Partner organizations

Elizabeth Bryan, Senior Scientist, International Food Policy Research Institute (IFPRI)

Juliet Kariuki, Postdoctoral Researcher, University of Hohenheim

Dina Najjar, Senior Gender Scientist, International Center for Agricultural Research in the Dry Areas (ICARDA)

Immaculate A. Omondi, Gender Research Economist, International Livestock Research Center (ILRI)

## session 831

### Room 519A

**Adaptation Choices** 

## Favoriser la résilience de la société en renforçant les liens entre le génieconseil et les propriétaires/gestionnaires d'infrastructures

Les changements climatiques posent des risques pour la fiabilité des infrastructures et des services rendus, ainsi que pour la sécurité du public et pour l'économie. Bien que les infrastructures soient directement affectées par le climat, elles jouent également un rôle très important dans le renforcement de la résilience de la société face à ces impacts du climat. Tout d'abord, les nouvelles infrastructures doivent être planifiées, conçues, construites et exploitées pour tenir compte des changements climatiques qui peuvent survenir au cours de leur durée de vie utile. Ensuite, les infrastructures existantes doivent être adaptées ou gérées différemment dans un contexte de changements climatiques.

Afin que les infrastructures remplissent ce rôle, les professionnels en adaptation et les ingénieurs collaborent avec les différents acteurs afin que la conception et l'exploitation des infrastructures soient adaptées aux impacts des changements climatiques. Cette collaboration entre les divers acteurs facilite le dialogue, réduit les barrières de l'adaptation et éclaire les décisions d'adaptation.

Comme l'adaptation est relativement récente, il existe des barrières à surmonter et des innovations à mettre en œuvre. Parmi les obstacles à l'adaptation, notons :

- Le manque de ressources financières et techniques;
- Le manque de coordination entre les acteurs;
- Le manque de sensibilisation et de communication.

Il est également important de favoriser l'innovation à travers les solutions et leur mise en œuvre.

La session proposée se base sur deux thématiques principales définies dans l'appel de propositions :

- Gérer des risques multiples : plusieurs projets touchent de nombreux défis simultanés, et les changements climatiques représentent de nouveaux facteurs de stress.
- Faire des choix d'adaptation : plusieurs projets visent à promouvoir des choix d'adaptation qui valorisent la diversité et limitent la maladaptation.

#### Auteurs et organisations partenaires

**Organisatrice de session :** Liza Leclerc - Stantec - Montréal, Québec, Canada **Président de session :** Frédéric Gauthier - Stantec - Montréal, Québec, Canada

Présentateurs.trices ou invités.es (à définir) :

Jean-Philippe Martin - Hydro-Québec - Montréal, Québec, Canada Laurie Talluto - Aéroports de Montréal - Montréal, Québec, Canada

Brigitte Laliberté - Services publics et Approvisionnement Canada - Montréal, Québec, Canada

Doogie Black, Climate Sense





## session 834

### Room 518A

Limits to Adaptation

#### **Partner Organizations:**

Northeastern University, Boston, United States

International Centre for Climate Change and Development (ICCCAD), Dhaka, Bangladesh

# Understanding the loss and damage finance facility: Opportunities and challenges ahead of COP28

Loss and Damage due to climate change is inevitable and will impact developing countries, small islands, and other vulnerable countries disproportionately (IPCC AR6 2021, Geest et all 2019, Roberts & Pelling 2018). It is estimated that the average annual cost of addressing loss and damage in developing countries will be \$435 billion USD by 2030 and \$1 trillion by 2050. However, only \$300 million has been pledged by high-income countries, and current financial and institutional arrangements by government or other institutions in developing countries are not sufficient to comprehensively address loss and damage that can support local needs and respond quickly (Hug & Joshi 2023, IPCC AR6 2021).

"Loss and Damage" has been a highly contentious issue in the climate negotiations since it was proposed by the Small Island Developing States (SIDS) in 1991. While the SIDS proposed to establish a dedicated fund for vulnerable countries with mandatory funding by developed countries, developed countries have sought instead to treat losses and damage as a sub-component of adaptation within the UNFCCC negotiations (Byrnes & Surminski 2019). However, the adoption of loss and damage as a separate article in the Paris Agreement in 2015 indicated that financing for loss and damage should be considered separate and additional to adaptation finance. More than three decades after its initiation, all countries finally agreed to establish a financial facility to address loss and damage in Egypt at COP27.

While this agreement is a significant achievement and has created an opportunity to establish the institutional arrangement of a dedicated fund directly supporting climate-impacted communities, how this facility will function is now an important question. It is yet to be decided if it will be a fund under the UNFCCC like the GCF or an autonomous multilateral fund but regardless, the institutional design is critical to ensure that the fund is both effective and beneficial for vulnerable countries. Many suggest having a mosaic of funding arrangements as the issue of loss and damage is a complex spider net and requires a variety of mechanisms (Warner 2023). Hence this discussion on institutional development should be inclusive of different perspectives and lessons learned from existing climate finance mechanisms that can guide the design of the new proposed fund.

#### **Authors and Partner organizations**

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Laura Kuhl, Northeastern University
Saleemul Huq, International Centre for Climate Change and Development (ICCCAD)
Asfara Mirza, ICCCAD

session 963

#### **Room 519B**

Governance & Finance

# Integrating adaptation into city budgeting - Lessons from C40 cities and Montreal

Cities are starting to incorporate science-based emissions reduction targets and yearly caps on emissions into their main budgeting process, but mainstreaming adaptation in city budgets is relatively new.

How are cities integrating adaptation into municipal budgets? How can cities integrate their adaptation planning into the major municipal policies that determine investment prioritization? How do cities identify what is and isn't adaptation spending within their budget? How can cities monitor the implementation of adaptation measures and projects?

C40 will be hosting a panel with cities leading on climate adaptation budgeting and governance mainstreaming to explore the above questions and different mainstreaming climate adaptation methodologies in city budgets and governance.

The session will be led by city practitioners who will present their experiences, lessons learned and challenges so that these approaches can be scaled up to more cities in the future.

The session will delve into the experience of the City of Montreal, which has developed the 'climate test' to assess city investment decisions and committed to allocating 10% to 15% of the Ten-Year Capital Expenditures Program budget to adapting to climate change by 2030.

This session will contribute to the "Inclusive adaptation governance and finance: how do we get there?" theme of Adaptation Futures by sharing with attendees' potential methodologies for mainstreaming adaptation in city budgets and governance, providing practical knowledge and opportunities for collaboration and sharing experiences.

## Authors and Partner organizations

#### Speaker(s):

Barbara Barros, Senior Adaptation Finance Manager, C40 Cities

Aline Xavier, Planning Strategies Coordinator of the SUBPAR/ SMFP Planning Office, City of Rio de Janeiro

Lloyd Lee, Senior Sustainability Specialist (Climate Accountability), City of Vancouver

Nicolas Dedovic, Acting Head of Division, Office of Ecological Transition and Resilience, City of Montreal





session **990** 

Responsible Artificial Intelligence for Resilience in a Changing World

Room 518B

TBC

Adaptation Choices









session 986

Room 522

Multiple Risks

# Facilitating an adaptation mindset using lessons from the transportation and buildings sectors

Adaptation is a journey involving many steps and paths. An early step is understanding how the climate is changing. As awareness grows that the past is no longer a reliable predictor of the future, professionals from diverse groups, sectors and backgrounds are being called on to grapple with a changing climate. Using the lens of transportation and buildings, this session will explore how climate services providers and adaptation practitioners can couple climate data with facilitation skills to enable users to take adaptation actions.

This session will describe applied research processes used to increase relevance and user-friendliness of adaptation tools targeted at specific sectors. The sector-tailored content on ClimateData.ca, a national climate data portal, will be used as examples as they were developed through collaboration between regional, national and sector focused organizations.

The session will also include knowledge co-production elements to engage participants and draw upon expertise in the room. The session will be designed to walk through and replicate some common characteristics of the adaptation learning journey, draw out common roadblocks, and brainstorm creative solutions that can help to integrate climate data into adaptation practice.

### Authors and Partner organizations

#### **Session Chairs:**

Trevor Murdock, Canadian Center for Climate Services Kari Tyler, Pacific Climate Impacts Consortium



## session 628

Room 525

Equity & Justice

# Just transitions to water resilience in African cities

This session explores building urban water resilience in African cities, looking at adaptation priorities and actions from a justice and equity perspective. Many fast-growing African cities are facing persistent water stress, severely aggravated during drought periods. Infrastructure maintenance and expansion, diversification of water sources, ensuring equitable water access, rehabilitating and protecting rivers, catchments and aquifers all require transformations in how cities work, in a social, economic and material sense.

The session draws on experiences in a range of African cities. It takes the format of an interactive panel discussion, inviting participants into a conversation guided by three questions:

- What are the most urgent priorities for strengthening urban water resilience in African cities?
- What actions and coalitions are needed to accelerate the implementation of priorities?
- How can just adaptation be undertaken that ensures the needs of the most vulnerable are actively considered and acted upon, alongside economic and environmental needs?

#### Authors and Partner organizations

#### Session facilitators and panelists:

Gina Ziervogel - University of Cape Town, South Africa (Moderator)

Anna Taylor - University of Cape Town, South Africa (Panelist)

Liteboho Makhele - South African Cities Network, Johannesburg (Panelist)

Leila Harris, UBC, Canada (Panelist)

## session 38

Room 524A
Collaborative

Equity & Justice

# Connecting the dots across regional resilience priorities: What have we learnt and done in 2023 so far and how are we gearing up to COP28?

Since COP26, adaptation and resilience have become a visible and prominent theme in a way not seen before. COP27, in turn, demonstrated the unequivocal power of radical, long-term collaboration across civil society, state, and non-state actors that led to the breakthrough decision on Loss and Damage. Building on this momentum, the road to COP28 must continue to match the highest ambition with enabling frameworks to ensure implementation moves towards regulation that centres justice and equity.

This event is envisaged to be part of the Resilience Hub ecosystem in 2023, building on the workshops and dialogues with local constituents via Regional Resilience Hubs. Regional Resilience Hubs have, to date, played a crucial role of ensuring the voices and perspectives of the most vulnerable and climate affected are amplified and increasingly drive the global resilience agenda. In 2022, each of the regional hubs was led by a regional partner who facilitated a series of outreach and consultations that elicited great interest among stakeholders across sectors and geographies to share and, more importantly, to learn how to advocate locally-derived priorities and solutions at the global level (see Table 1 for snapshot of engagement).

Building on 2022 stakeholder engagement, 2023 efforts are under way to ensure that the Regional Resilience Hubs provide more meaningful spaces to engage and offer opportunities for capacity and capability building (of which this event is one). Noting also the importance of regional engagement that is highlighted by Adaptation Futures hosts via an open call, we are keen to explore a potential for deeper collaboration with AF regional hubs throughout 2023.

This session will present some of the emerging red threads from the Regional Hubs, but will also provide a space for cross-regional experiential learning. It will also retain space for High Level Champions and COP Presidency to respond to how they will carry these messages forward into COP28 and ensure that the drumbeat of implementation does not remain just that.

## Authors and Partner organizations

The event will be co-created with the regional resilience leads (CDKK/SSN; SDI; AVI-NA, ICCCAD, Global Evergreening Alliance) and GRP, and will draw from the regional engagements that will take place throughout 2023. This could also include Adaptation Futures Regional Hub leads.





# session 455

# Room 524B Collaborative

**Adaptation Choices** 

# Measuring the resilience of communities to climate impacts and using this knowledge to adapt

Communities around the world, in the developing world as well as in the global north are on the frontlines of the climate emergency. Communities, whether they are neighbourhoods in urban areas or villages in rural settings, are where the impacts are felt the most, with their livelihoods and their wellbeing threatened by rising sea levels, increased flood risk, heat stress, drought, etc. These same communities are facing existing and new and additional risks in addition to climate change, such a poor development choices, poor governance, social change, and population flux. How can communities be empowered to contribute to their development in a way that enables them to mitigate negative impacts and thrive in spite of increasing risk?

Climate smart risk informed development has been gaining traction as a practical approach to respond to change impacts and address adaptation deficits. But informed decision making is an essential ingredient for effective climate smart risk informed development. Climate smart risk informed development may comprise incremental (e.g., raising dikes), fundamental (floodplains instead of dikes) or transformative (voluntary migration from floodplains, shifts in livelihoods), but all these interventions need to be integrated into a coherent approach with community and individual actions coordinated with the actions (from their plans, capacities and budgets) of local governments, key sectors and national development.

The session brings together science and practice in order to inform policy as well as implementation. The session outlines the basic concept and rationale of climate smart risk informed development, it then presents our experiences of using a standardised community engagement tool to collect data to inform their development choices, then presents recent sectorial and place-based applications, such as on early warning, flood risk management, risk financing and how they have contributed or otherwise to their resilience, using the most widely applied a standardized disaster resilience measurement tool in the world. This session will include practical case study experiences from the UK, Nepal, Bangladesh, Cambodia, Philippines, Peru and US. It will explore the practical and conceptual opportunities and challenges of measuring community disaster resilience for both a single hazard (flood) and within a multi-hazard framework.

### Authors and Partner organizations

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Adeline Stuart-Watt, Sara Mehryar, Viktor Rözer, London School of economics (LSE)

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Manuel von der Muehlen, Daniela Donia – Plan International

Sarah Knight, Mercy Corps







#### session 292

#### Room 520A LAC Pavilion Hybrid

Indigenous Knowledge

#### In Situ conservation of agro-biodiversity to ensure adaptive capacity - Building on Indigenous and local knowledge from Andean mountain ecosystems

The Andes are one of the centers of origin of species that constitute the food base of humanity. However, climate change and extreme weather events are increasing the vulnerability of smallholder family farming. Adaptation strategies such as out-migration further erode ancestral practices and knowledge, which can be the basis for conservation of agro-biodiversity and future adaptive capacities.

Through showcasing three case studies from Andean countries of Bolivia, Ecuador, and Peru, the Andes Resilientes project will share innovative and participatory practices for in situ conservation of agrobiodiversity, which also help family farmers adapt to climate change. These practices combine indigenous and ancestral knowledge for conserving ecosystems and their services, including water, as well as the recovery and sustainable management of cultivated and wild native species and varieties, that significantly contribute to reducing vulnerability to climate change and adaptive capacities.

We will hear from women in the Cochabamba region of Bolivia who are recovering native potato seeds as agroecological practices for improved nutrition and crop productivity under changing growing conditions. From Ecuador, farmers associations will share the "tomate de arbol" experience that has allowed them to understand the benefits of its conservation and provide better access to markets. From 6 agrobio-diversity zones in Peru, CSOs, market actors, government functionaries and scientists will talk about their collaboration to conserve native species, combining their resources and competences.

#### Authors and Partner organizations

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Moderator: Mauricio Luna, Policy Advisor in Resilience Program at IISD

#### session 634

#### Room 520B Africa Pavilion Hybrid

Governance & Finance

## Mobilising climate-smart private finance for East African food security

#### Thematic focus: Food systems adaptation

Climate-smart finance, using the best available science-based climate assessments, combined with selected climate-smart practices and technologies can help improve food security and farmer resilience to climate change. The inclusion of women and youth is a particular focus.

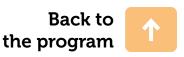
#### Context

Climate change is increasingly threatening agri-food systems with rising temperatures, unpredictable rainfall patterns, and increasing extremities such as floods and prolonged droughts. Such extremes in addition to external shocks such as the war in Ukraine, are affecting global markets and increasing prices for the most vulnerable members of society. Women and minorities are disproportionally affected.

The cost of inaction is as much as 20-fold the investment costs of adapting agricultural practices now. New approaches are needed to rapidly integrate climate adaptation, mitigation and embed a culture of long-term disaster risk reduction practices in food crop production and supply systems.

More innovative and climate-smart finance is needed to leverage investment in interventions that promote market-driven adoption and scaling of inclusive, climate-smart business to enhance risk reduction and climate resilience along agricultural value chains.





session 304

Room 520C Hybrid

Multiple Risks

Addressing the challenges of climate change, food insecurity, sustainable health and wellbeing - Time to innovate for progress on the Global Goal of Adaptation

As the UN Secretary-General has stated: ". global challenges are more and more integrated, and the responses are more and more fragmented ... this is a recipe for disaster." To effectively adapt to a changing climate, there is need to bring together issues and have integrated global responses. The Sustainable Development Goals - Food (SDG 2), Health (3), Life below Water (14), Life on Land (15) and Climate Action (13) - need to be addressed in an integrated way, noting that Poverty (1), Gender Equity (5), Water (6), Consumption (12), Innovation (9) and Sustainable Communities (11) are also critically connected.

The Session specifically addresses Theme 2: Dealing with multiple risks: Compound, cascading, cross-border climate change risks; with links to: 1: Learning from Indigenous and local peoples' knowledges and expertise in adaptation; 3: Making adaptation choices: managing trade-offs and seeking effective adaptation; and 6: The power of nature for climate action. It directly addresses the SDGs: Health (3), Food (2) and Climate Action (13), linking to sources of food and implications for health (SDGs 14, 15, 12, 9) – with the objective of Sustainable Cities and Communities (SDG 11).

#### Authors and Partner organizations

Speakers list in order of presentations providing academic or other position, being onsite or online and a title of the presentation.

Chair – Professor Gordon McBean, FRSC, Professor Emeritus, Department of Geography and Environment, Western University and Chair, Future Earth Montreal Hub (onsite)

Presenter 1 – Judith Meech, IUFoST Secretary-General, Fellow, International Academy of Food Science and Technology (onsite) The Global Roles of Food Science and Technology for Sustainable Food Systems.

Presenter 2 – Professor Isaac Luginaah, FRSC, Distinguished University Professor, Western University (online) Climate Change, Environment and Human Health in Africa.

Presenter 3 - Professor Fereidoon Shahidi, University Research Professor and Distinguished Scholar, Memorial University of Newfoundland (onsite) Food Science and Technology Addressing Issues of Food Safety and Human Health: Full Use of Food Resources and By-products.

Presenter 4 - Dr. Micheline Ayoub, Executive Director of Sustainability in the Digital Age and the Future Earth Canada Hub. (onsite) The Roles of Agriculture and Future Earth Projects in Addressing Adaptation Futures

Presenter 5 - Professor Sherilee Harper, Canada Research Chair in Climate Change and Health and Professor, School of Public Health, University of Alberta. (onsite) The Relationships Between Weather and Health in the Context of Climate Change.

Presenter 6 – Dr. Vish Prakash, Immediate Past President of IUFoST; former Distinguished Scientist of CSIR India. (onsite) Sustainable Science-based Solutions to mitigate Food Losses and Waste, Undernutrition, Safety of food, Poverty and Hunger Nationally and Globally – in Context of Climate Change.

Presenter 7 – Dr. Anna Gunz, paediatric intensive care doctor, Children's Hospital, London Health Sciences Center and Associate Professor, Schulich School of Medicine & Dentistry, Western University (online) Climate Change, Environment and Children's Health.

Presenter 8 – Dr. Charles Aworh, President, International Academy of Food Science and Technology, past Academy Chair, Nigerian Institute of Food Science and Technology (online) Climate Change: Building Sustainability and Resilience at the Water-Energy-Food Nexus in sub-Saharan Africa.

session 602

Room 520D Hybrid

Indigenous Knowledge

Mutual learning across Indigenous, Local and Scientific Knowledges to better adapt to interconnected risks: towards building a global Community of Practice

In our increasingly interconnected and globalised world, the compound, cascading, and systemic nature of risks takes on a whole new dimension and meaning. As regularly observed, different parts of the world are experiencing devastating climate-related interconnected risks resulting in systemic, transboundary impacts. Indigenous and Local Knowledges are increasingly seen as a crucial part of building climate resilience and accelerating climate adaptation. This is also reflected in global policy frameworks, such as the Sendai Framework for Disaster Risk Reduction, the Paris Agreement, as well as in the latest version of the IPCC WG2 report. Recent literature also explores the 'integration' of Indigenous, Local and Scientific Knowledges (Hadlos et al. 2022; Vasileiou et al. 2022; Hermans et al 2022). However, there is clear evidence that recognition of these Knowledges is often just lip service, while best practices for on-the-ground practice are still under-researched and not widely shared, preventing increased and mutual learning between Indigenous Knowledge and modern technologies. Power imbalances and epistemic inequities between the Global North and Global South and social injustices within a country can also impact the degree to which such Knowledges are integrated.

To better understand and address this issue, we intend to organise a global knowledge co-production session/contribution using an innovative approach consisting of three consecutive phases: 1.) a pre-conference phase, 2.) the actual conference session, and 3.) a post-conference phase leading to a global Community of Practice (CoP). This facilitated process and the CoP serve to create a common platform for sharing best practices for climate change adaptation and interconnected disaster risk reduction based on Indigenous Knowledges and the co-production of Indigenous and Scientific Knowledges.

#### **Participants**

Mr. Joerg Szarzynski (lead), United Nations University Institute for Environment and Human Security (UNU-EHS), Bonn, Germany.

Ms. Mayashree Chinsamy, DSI-NRF Centre in Indigenous Knowledge Systems (CIKS) University of KwaZulu-Natal, Durban, South Africa.; Ms. Paola Fontanella Pisa, United Nations University Institute for Environment and Human Security (UNU-EHS), Bolzano, Italy.; Ms. Thirze Hermans, Wageningen University & Research, Netherlands; University of Leeds, UK.; Mr. Marc van den Homberg, 510, an initiative of the Netherlands Red Cross, Den Haag, Netherlands.; Mr. Oscar Lino, International Center for Humanitarian Affairs, a knowledge hub of Kenya Red Cross Society, Nairobi, Kenya.; Mr. Robert Šakić Trogrlić, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria; Mr. Micha Werner, IHE Delft Institute for Water Education, Delft, Netherlands.; NN, ICIMOD, Kathmandu, Nepal; NN, Canadian Mountain Network/First Nation Representatives (CMN), Alberta, Canada, NN, Consortium for the Sustainable Development of the Andean Ecoregion (Condesan), Peru, South America; NN, Tohoku University, International Research Institute of Disaster Science (IRIDeS), Sendai, Japan; NN, Tsunami and Disaster Mitigation Research Center (TDMRC), Banda Aceh, Indonesia; NN, ASEAN Coordination Center for Humanitarian Assistance on Disaster Management, Jakarta, Indonesia; NN, WFP Zimbabwe.

room **520E F** 

Side event



session 107

Room 519A

Adaptation Choices

## Adaptation in practice: How local governments are mainstreaming climate resilience

This panel will provide an international look at municipal responses to the impacts of climate change.

In the 2022 National Adaptation Strategy, the Government of Canada identified the Federation of Canadian Municipalities (FCM) as a key delivery partner in its shared path to a more climate resilient Canada. Support provided by FCM's Green Municipal Fund will ensure that all municipalities, regardless of size, location and/or state of readiness, are able to access climate adaptation program support in a way that meets their needs in advancing their capacity and readiness to access complementary federal programs.

FCM will showcase its Theory of Change for National Adaptation Strategy implementation funding detailing how the organization proposes to support more than 1,400 community-based adaptation projects through a combination of grants, partnerships, capacity development opportunities and the infusion of private finance. Reinforcing this content will be examples from across Canada and internationally of how local governments are mainstreaming climate resilience considerations into municipal decision-making, including results from municipal knowledge exchange between local governments in Canada and the Global South will demonstrate the capacity development potential of direct peer-to-peer dialogue and process sharing, as well as highlighting climate adaptation mainstreaming opportunities undertaken by the cities of Montreal and Windsor.

#### Authors and Partner organizations

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Karina Richters, Supervisor, Environmental Sustainability and Climate Change, City of Windsor

Nicolas Dedovic, City of Montreal, Bureau of Ecological Transition and Resilience (subject to change)

Pascal Lavoie, Director, International and Governance and Social Inclusion Programs, Federation of Canadian Municipalities

Amy Pieterse, Senior Researcher, Council for Scientific and Industrial Research

Dr. Robin Leichenko, Professor of Geography and Dean of Social and Behavioral Sciences, Rutgers University

Dr. William Solecki, Professor, Department of Geography and Environmental Science, Hunter College-City University of New York.

session 976

Room 518A

Governance & Finance

## Migration and climate change: understanding decisions and evaluating outcomes

Globally, populations are moving in response to a broad range of drivers. Such movements occur over a continuum ranging from temporary moves to more permanent relocations. Though the impacts of climate change are now identified as one of the key drivers of migration and displacement, knowledge on the interaction between migration decisions and outcomes remain uneven. Through a combination of empirical and conceptual studies, this session explores how human migration at different spatial and social scales is deployed as adaptation strategy to environmental stressors.

#### **Participants**

Chair: Ricardo Safra do Campos (University of Exeter).





#### session 617

Room 519B

Adaptation Choices

## How to incentivise financing for a resilient recovery

While efforts to adapt to climate change should occur at all times, and its impact is much greater when undertake ex-ante, there is an opportunity post-disaster to consider future risk with increased political focus and some funding. There is a window of opportunity to invest in resilience, to build back better, to help avert and minimize the damage of future events.

Ensuring a Resilient Recovery requires reconstructing and restoring communities, homes, businesses, and infrastructure after a disaster in a way that reduces risk, such that they are better able to withstand future events. It is a holistic approach that goes beyond simply restoring the pre-disaster state, but also focuses on creating more resilient communities that can withstand future shocks and stresses and have a higher overall quality of life for residents.

This session will explore the evidence from a new report, which draws together the evidence from three case studies where a post-event analysis (PERC – Post Event Review Capability - conducted by the Zurich Flood Resilience Alliance) was undertaken after floods in Mexico, Senegal, and Nepal. The session will review whether and how authorities in those countries were able to build back better, what were the incentives and challenges to this, whether international finance was made available to support that, and how financial incentives can be created to encourage investment in resilient infrastructure.

#### Authors and Partner organizations

Simon Mercer, Mercy Corps, UK Karen MacClune, ISET International, USA Dharam Uprety, Practical Action, Nepal

#### session 329

Room 518B

Indigenous Knowledge

#### Adaptation for a climate resilient North: Amplifying local voices in pursuit of northern-based solutions

The session will bring together Northerners with lived experience of climate change impacts in Canada's Arctic and Sub-arctic regions. Drawing from their perspectives as leaders and residents of the North, presenters will share knowledge and experience of climate change adaptation and resilience in their communities. This panel will feature Indigenous Elders and youth voices from across the North.

The Canadian Arctic is exposed to some of the fastest rates of temperature increase on the globe. Entire landscapes are being transformed in response to impacts such as permafrost thaw and sea ice loss. These changes have cascading links throughout human and natural systems and are creating significant challenges for vulnerable populations in each.

Presenters in this session will explore Northern perspectives of the interconnectedness of human and natural systems, resilience, self-sufficiency, cultural revitalization and collaboration as topics driving adaptation action across the diverse landscapes of the North.

#### Authors and Partner organizations

#### Chair, intro and closings:

Alison Fung, intro (and registered chair) Sara Holzman, facilitator

#### Panelists:

Allison Perrin, Yukon University
Julia Gyapay, NWT Youth Council
Tim Heron, NWT Climate Council
Solomon Awa, NWT Association of Communities





#### session 16

#### Room 518C

Nature-based solutions

# Making nature count for adaptation - Global, national and local action to value services provided by nature

It is widely recognised that nature-based solutions have a key role to play in climate adaptation. Historically, climate adaptation approaches have heavily relied on "grey" infrastructure solutions to either control natural processes, or to harden development, to reduce risk of damage and danger to public safety. In some cases, these techniques have resulted in negative impacts on the function of ecosystems. In contrast, nature-based solutions can help manage climate risks in a way that provides benefits for both people and nature. Examples include protecting and restoring wetlands to manage downstream flooding or increasing urban forest cover to reduce extreme heat in cities. The role of nature in climate adaptation is underscored by Target 11 of the recently adopted Kunming-Montreal Global Biodiversity Framework, which calls for Parties to use nature-based solutions to restore, maintain and enhance nature's contributions to people, including protection from natural hazards

As parties work to implement the Global Biodiversity Framework, there is significant opportunity to accelerate the use of nature-based solutions to reduce the impact of climate change on people, while achieving multiple benefits. Identifying and valuing these multiple benefits will be important to support decision-making to make this opportunity a reality, at global, national and local scales.

A key challenge is that, while nature is considered by many to be priceless, nature's contributions to people are largely absent from the financial balance sheet of a world driven by produced capital and GDP. This panel session brings together leaders working at global, national and local scales to highlight initiatives and tools that are already been applied to make the value of nature for climate adaptation (and other services) transparent. Specific consideration will be given to how Indigenous ways of knowing and values can be used to accelerate this process. Canada will also be used as a case study to discussed the inter-relationship between organisation and ecosystem scales.

#### Authors and Partner organizations

#### Organisers (and panelists)

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#### **Panelists**

Shawn Blankinship, MBA, CPA, CA - First Nations Financial Management Board Bailey Church, CPA, CA, CIA – Lead, National Public Sector Accounting Advisory, KPMG Canada

Liesbeth Casier, LLB., NBI Global Resource Centre, International Institute for Sustainable Development (IISD)

#### session 309

Room 523

**Adaptation Choices** 

#### Flood mitigation and adaptation

Flooding, caused by heavy rainfall, storm surges, or rapid snowmelt, is one of the natural hazards which is directly influenced by climate change. As predicted by IPCC's assessment reports, climate change-induced extreme flooding events are becoming common phenomena around the world in recent years. Millions of people and their livelihoods, infrastructures, economy, as well as natural ecosystems are affected by severe flooding every year in both developing and developed countries. Particularly, settlements in coastal areas and in large river deltas are vulnerable to high flood risks. To prevent damage from flooding, traditional flood adaptation measures (e.g., levees, flood walls) are implemented in many places; however, some of them are not providing adequate protection because they are either very old or not built to withstand climate change-induced extreme flooding events. Even some flood mitigation measures implemented decades ago have now turned into examples of 'maladaptation' practices due to poor maintenance and lack of upgradation. Therefore, adaptation to flooding through building flood-resilient infrastructures and community remains a key priority in all flood-prone countries. Especially, urban infrastructures like transportation, houses, telecommunication, water and power supply, and wastewater drainage systems, which require huge investment and time for implementation, need to be built with innovative designs and materials considering flooding scenarios under climate change. Transformative and resilient adaptation measures combining grey infrastructures and nature-based solutions are necessary to achieve effective long-term sustainable flood risk management.

#### Authors and Partner organizations

#### Chair:

**Dr. Xiuquan (Xander) Wang**, Ph.D., P.Eng. - Member, Royal Society of Canada (RSC) College of New Scholars - Associate Professor, School of Climate Change and Adaptation - Director, Climate Smart Lab, Canadian Centre for Climate Change and Adaptation - University of Prince Edward Island, Canada C1A 4P3 Email: xxwang@upei.ca

#### Co-chairs:

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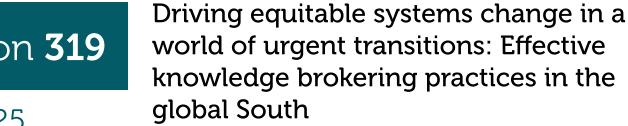






Room 525

Equity & Justice



Climate change is causing widespread negative impacts. Given that the window of opportunity to support appropriate adaptation at the scales needed is rapidly closing, the IPCC has called for systems-wide transitions, resilience building and an urgent all-of-society response. Practitioners and researchers working to support adaptation over the past two decades have learned that treating this imperative for action as a technical problem that can be solved through more accurate information alone is a fallacy. Addressing climate change is, at its core, a socio-economic, rightsbased and governance issue in which systemic barriers such as power asymmetries, conflicting knowledge systems and incentive structures, as well as institutional fragmentation are crucial impediments to action.

If society is to respond to the urgent adaptation imperative, researchers and practitioners need to become much more effective knowledge brokers. Knowledge brokers act as the link between producers and users of knowledge. The range of activities that knowledge brokers are involved in occurs along a spectrum from creating information flows to seeking to bring about systemic change. A new generation of climate knowledge brokers will operate in the context of multiple transitions and needs to be able to drive systemic change while navigating a complex environment encompassing a range of sectors and stakeholders with different values and priorities, at multiple levels.

This session will share cutting edge lessons about effective approaches to climate knowledge brokering in the global South. It will share lessons from practitioners and researchers alike who have taken on the challenge of driving systemic change. Methods for generating equitable climate action will be shared from such diverse contexts as Nepal, South Africa and Argentina, using case studies across urban and rural systems. The presentations hold a common thread in their focus on disrupting established power relations, and take on the challenge of elevating under-represented forms of knowledge, women's leadership and youth voices. In so doing, the speakers will traverse, and provide methodological insight into three core thematic priorities for the conference, namely: adaptation finance; ecosystem-based adaptation and the fight for gender equality and social inclusion in climate action.

#### Authors and Partner organizations

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#### session 723

### Room 524A Collaborative

Equity & Justice

# Fostering equity and justice in adaptation and adaptation interventions: Perspectives and questions from early-career African women scientists

Addressing equity and justice in adaptation efforts in Africa requires more holistic science leaders that are able to effectively navigate complexity and uncertainty and collaborate with diverse others. Actors from across scientific and professional sectors struggle to engage in science-society spheres without dedicated training on how to thrive in these spaces. With this session, a small group of early-career African women scientists who have been competitively selected as START's Sheila N. Onzere Memorial Leadership Fellows in 2023 will convene a virtual or hybrid knowledge café to co-interrogate questions of decision-making and inclusion in adaptation interventions alongside participants.

As part of their Fellows Program, the scientists will be journeying through a series of capacity-strengthening offerings on foundations for successful collaborations, systems thinking reflexivity and empathy, learning and growing in the face of discomfort, and power, gender, and intersectionality. The knowledge café will offer a space for them to share concrete examples from their own work on adaptation as African women scientists and to more deeply explore key questions of equity and justice in adaptation and adaptation interventions that emerge during their fellows program with session participants. These questions may include a spotlight on inclusivity and diversity in collaborative adaptation processes, the need for greater transdisciplinary training in technical sciences linked with adaptation issues, nurturing more equitable and meaningful collaboration for adaptation, and how to deal with injustice in adaptation processes. During the session, participants will be joined in small groups with one or more of the START fellows as table hosts for at least two rounds of questions and discussion, after which the table hosts will deliver key messages back to the group.

#### Authors and Partner organizations

Dr. Mariama Camara, START International (Senegal)- Session Chair
Dr. Mary Thompson- Hall, START International (USA)- Session Organizer
Ms. Karen Goldberg, Reos Partners (South Africa) – Session Organizer
Edward R. Carr, Humanitarian Response and Development Lab (HURDL): George Perkins Marsh Institute, Clark University, Worcester, Massachusetts, (USA)- Session Organizer

#### session 848

### Room 524B Collaborative

Equity & Justice

This will be a Knowledge Exchange session based on a two-way exchange among the session organizers and participants.

## Improving assessment practices to incorporate equitable climate resilience amid increasing complex events

Climate impacts are increasingly widespread, cascading through complex socio-economic systems, resulting in more severe impacts and risks that threaten efforts at poverty reduction and entrench long-standing injustices within communities. Despite recognition of the need to address distributive, structural, and procedural justice in climate responses that aim to moderate the impacts and risks (i.e., adaptation), as well as activities that build resilience, little replicable guidance exists that is grounded in empirical evidence of what has and has not worked and why. Both replicability and contextual considerations are critical in scaling up resilience while ensuring effective, equitable planning and implementation moving forward.

We strive to address the critical gap of existing analytics and their application to identifying and accounting for systemic vulnerabilities and risk perception and preferences of those affected by climate change and interventions, especially in monitoring and evaluation activities. At the nexus of research and practice, there is more evidence on what approaches have or have not worked than the published scholarly literature might suggest. Yet, this knowledge and data has not been systematically captured and integrated in iterative learning, guidance and implementation. Further, transparency around failures may cut against cultures, politics, perceived stakeholder interests, etc. Additionally, we hope to explore the fact that adaptation planning is multi-scalar in nature and requires funding/budget, which often drives the priority and 'who is at the table' towards solutions that may not be locally equitable or just. We believe there is enormous value in tapping into and capturing the practitioner and community knowledge around such areas for improvement, requiring the creation of inclusive, "safe" spaces where open conversations about outcomes and lessons learned can take place and be shared.

#### Authors and Partner organizations

#### Confirmed:

Elisabeth Gilmore, Carleton University

Debora Ley, Economic Commission for Latin America and the Caribbean Jia Li, World Bank

Jennifer Helgeson, National Institute of Standards and Technology, USA



10:30-12:00



#### session 642

### Room 524C Collaborative

**Adaptation Choices** 

Avoiding maladaptation in the Global Goal on Adaptation, what can we learn from community level adaptation to inform more effective practice to shape the Global Goal on Adaptation to be fit for purpose?

The 2015 Paris Agreement established, for the first time, a Global Goal on Adaptation (GGA), to enhance adaptative capacity, strengthen resilience and reduce vulnerability to climate change, "with a view to contributing to sustainable development and ensuring an adequate adaptation response".

Therefore, governments are starting to think about how to integrate climate adaptation into national strategies and development plans and how can they cascade these across sectors and from national to local government scales and how they will report on progress. However, at the community level adaptation is complex and complicated and too many projects risk charging ahead in the effort to be doing something, which may fail to provide adaptation and could inadvertently lock in maladaptation.

To inform the discussions on the GGA, this session will explore community experiences to developing and implementing adaptation projects, those run directly by communities as well as experiences from top down centrally led projects. It will explore the factors that drive adaptation planning and make recommendation for how to do this better, highlighting what tools are available, how to bring in the right partners, and what sort of decision-making process is best suited to promote adaptation and avoid maladaptation outcomes?

#### Authors and Partner organizations

Colin McQuistan, Practical Action, UK Johanna Nalau, Griffith University, Australia Rebecca McNaught, Griffith University, Australia Demet Inteppe, Practical Action, UK

#### session 332

#### Room 520A LAC Pavilion Hybrid

Nature-based solutions

# Accelerating and scaling nature as a solution fro equitable climate adaptation

Adapting to climate change can be very different depending on which region of the world you are in, which group you belong to, your economic reach and your gender. This puts the equity approach in a central position when we address climate adaptation.

However, these people focused issues need to be in balance with natural systems to ensure effective and long-lasting solutions. Nature-based Solutions (NbS) can do this by performing "at the interface of the socioeconomic system and the ecosystem to reduce the vulnerability of the social–ecological system as a whole" (Seddon et al, 2020).

This Roundtable Discussion will explore how equity and justice considerations are embedded in some NbS and why they are missing in others. We will investigate the benefits and challenges of ensuring equitable nature-based approaches to attain resilience and adaptation outcomes.

Our aim is to show the diversity of perspectives and of Nature-based Solutions applied in different contexts to highlight how principles of equity and justice are an important pilar to help scale and accelerate nature as a solution for climate adaptation and resilience. To do this, we will first frame the topic and then engage in discussions with a diverse panel of experts who will bring their learnings from the implementation of people centered NbS projects.

#### Authors & Partner organizations

#### **Authors**

The Nature Conservancy

Daniel Morchain - Global Climate Adaptation Director

Fernanda Kalena - Climate Adaptation Network Manager

Eric Roberts - Climate Risk and Resilience Senior Manager

Natainia Lummen - Snr NbS and Community Resilience Specialist

#### **Partner Organizations**

Rosario Carmona - PhD in Anthropology. Postdoctoral researcher, University of Bonn

Paulina Aldunce - University of Chile





#### session 554

#### Room 520B Africa Pavilion Hybrid

**Adaptation Choices** 

# How gender-responsive climate adaptation solutions can accelerate resilient food systems in Africa

Africa contributes less than 3% of global GHGs emissions[1], yet it stands on the frontline of climate change's economic and social consequences. With African small-holders predominantly bearing the brunt of climate change, Africa's agricultural and food systems are particularly vulnerable. Further, climate change has gendered impacts, significantly contributing to the yawning gender gap in food insecurity. The 2022 State of Food Security and Nutrition in the World (SOFI 2022)[2] report records that the gender gap in food insecurity widened substantially under the shadow of the COVID-19 pandemic and other shocks including climate change. In 2021, the global gender gap in food insecurity widened even further with 31.9% of women moderately or severely food insecure compared to 27.6% of men.

That is why climate change scientists must learn how to use a gender lens as they innovate solutions. Gender-responsive research allows us to understand how women and men smallholders are positioned differently across Africa's farming systems, and develop relevant adaptation options for resilient, inclusive, and equitable food systems. Empirical evidence[3] indicates that inclusivity can enhance equitable access to resources, knowledge, and benefits, thereby boosting climate resilience.

This session will spotlight the role gender-responsive climate research can play to close the gender gap in food systems, and the role female African researchers play in driving this research. Discussions will highlight how a gender lens can enable more inclusive food systems. Additionally, this session will showcase some of the gender-responsive adaptation solutions and the potential of transformative initiatives that focus on African researchers to develop gender-responsive, context-specific scalable solutions for African smallholders.

#### Authors and Partner organizations

Dr. Susan Kaaria, Director, African Women in Agricultural Research and Development (AWARD), Kenya

Dr. Meseret Tesema, Associate Professor, Plant Physiology, Hawassa University, Ethiopia

Ms Michelle du Toit, Director, Africa and Regional Engagement, Climate and Development Knowledge Network (CDKN), South Africa

Ms Marie-Therese Daba Sene, PhD Candidate, University of Gaston Berger, Senegal Ms Dorine Odongo, Senior Manager, Communications AWARD, Kenya

#### session 147

## Room 520C Hybrid

Indigenous Knowledge

#### Optimizing adaptation for Island Peoples: The role of traditional and local knowledges

The attainment of the sustainable development goals (SDGs) in small islands and coastal areas is threatened by environmental adversity, especially climate-change. In response, a growing body of literature has pondered the linkages between climate-change adaptation, disaster risk-reduction, and indigenous and local knowledge (Nunn and Kumar, 2019; Petzold et al., 2020; Walshe and Nunn, 2012). Climate-change adaptation and traditional and local knowledge (TLK) may converge to foster structural transformations (Makondo, C. C., & Thomas, 2018). Fostering adaptation by actively involving existing traditional and local knowledge may not only provide more suitable context specific solutions, but also potentially extend existing established theories and inform policy making in contexts often left out by mainstream studies. In this regard, there remains a question of how specific regions/communities in both high and low-income countries will be affected by climate-change. This is especially true for small islands. Research in this field is gaining momentum (Kelman, 2014, Moncada et al., 2021), but lack of data and research capacity remains a major challenge, particularly (and paradoxically) for the most impoverished/vulnerable communities in small island developing states (SIDS) (Lewis, 1999; Foley et al., 2022). What the proposed policy-solutions mean for specific island and coastal-communities is still largely unknown (Nunn et-al., 2007; Wolf et al., 2022); how these solutions might be optimally designed and implemented is often inadequately understood, especially in rural communities where traditional methods of coping are more highly valued than 'western' or global ones. Available data is frequently interpolated from large spatial or temporal scales. In turn, failure to identify specific local shocks may lead to adaptation activities that are poorly targeted, inadequate, or even maladaptive (Bambrick, Hales 2013). This too delays the comprehensive understanding of how specific development interventions might enhance adaptation, and how funds can be fairly and equitably distributed (Remling, Persson, 2015). The proposed session focuses on cutting-edge knowledge and experience on indigenous and local knowledge, especially stemming from small islands and coastal areas, with the intention of addressing knowledge gaps, foster transboundary perspectives for adaptation, and discuss realistic solutions to identify concrete connections with existing development goals.

#### Authors and Partner organizations

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#### session 211

## Room 520D Hybrid

**Adaptation Choices** 

## Do we need a Global Goal on Adaptation?

The Paris Agreement (Article 7) established a Global Goal on Adaptation (GGA) of "enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change" while contributing to sustainable development and meeting the temperature goal. Many challenges and questions emerge from the GGA framing and the Global Stocktake mechanism established to review progress towards it. These questions refer to the collective willingness to move towards a more precise definition of the GGA, assessment methods and means, sources of information and aggregation, temporal scales to consider, governance processes of monitoring and evaluation, and linkages with global and local justice and equity (1,2,3). The goal of this session is to facilitate the co-production of a nuanced narrative on the benefits and dangers, and - opportunities and trade-offs (and for whom), of the Global Goal on Adaptation framing.

Through a participatory debate, the session aims to generate a transparent collective discourse around the GGA that sets the scene for further constructive discussions to advance science, policy and practice on the effective, just and sustainable measurement/assessment of adaptation progress. The question "Do we need a GGA?" is used here to provoke constructive discussions about how, when, and for whom the GGA will be effective.

This hybrid session will be organised in four parts.

**Part 1.** Introduction (30 min). Co-conveners will welcome participants to the session and in a panel format will briefly explain the session and provide the context for the debate on the GGA.

**Part 2.** Preparation of the debate (40 min) - Participants are organised into two groups (each group led by one of the co-conveners) and work on arguments for the different sides of the main question set by this house, for which a set of guiding questions will be used. A virtual discussion will also happen in parallel with online participants.

**Part 3.** Debate (40 min) - In a facilitated debate, each group has the opportunity to argue on each one of the guiding questions but also an opportunity to respond to the other group.

Part 4. Wrap-up and future steps (10 min).

#### Authors and Partner organizations

Marta Olazabal, Basque Centre for Climate Change, BC3, Spain.

Lisa Schipper, University of Bonn, Germany.

Thomas Tanner, SOAS University of London, United Kingdom.

Alexandre Magnan, IDDRI, France.

Maria del Pilar Bueno, Consejo Nacional de Investigaciones Cientificas y Tecnicas, Argentina.

room **520E** F Side event

### session 984

#### Room 519A

**Adaptation Choices** 

# Adapting our infrastructures to climate change while transitioning to a circular economy model

In the past years, a lot has been done to decrease the carbon footprint of our built-environment, but we still have a lot to do to reach carbon neutrality in 2050, as required to keep the temperature increase below 1.5 or 2°C. In the meantime, the effects of climate change are already being felt and strongly affect our infrastructures. There is an urgent need to change the way we build to adapt our infrastructures to this new reality. And doing so, we must not increase the pressure by adding additional GHGs to the atmosphere. The circular economy model aims at optimizing the use of material and energy resources in order to decrease environmental impacts associated with extraction, manufacturing, use and disposal activities. The construction sector's circularity is still very low and the implementation of circular economy strategies is very challenging. While we develop innovative solutions to adapt our built-environment to climate change, we must be proactive and already integrate circular economy strategies. How can we do that?

#### **Authors and Partner organizations**

Organized by: AdapT Institute at École de technologie supérieure

**Chaired by:** Annie Levasseur, Professor at École de technologie supérieure and Scientific Director of AdapT Institute

Presenter 1: Hugo Lafrance, Associate and Director Sustainability, Lemay

**Presenter 2:** Gabriel Jobidon, Professor, École de technologie supérieure

**Presenter 3:** Hortense Montoux, Project manager of the construction sector circular economy living lab from CERIEC at École de technologie supérieure





session **741** 

Room 518A

Indigenous Knowledge

## Indigenous anti-displacement manifestoes: Community strategies of resilience and resistence

Climate displacement is a pressing global issue. Indigenous communities are simultaneously vulnerable to disasters—through shared histories of colonization and systemic exclusion from power—and resilient, through localized knowledge systems, community unity and cultural practices. By exacerbating existing hazards and triggering cascading disasters at increasing scales, climate change represents the most significant challenge to these communities since colonization.

In Canada, Indigenous communities are faced with impacts of disasters and climate change that are disproportionate compared to other communities. This reality flows from historical and ongoing racist policies, such as the Indian Act, that dispossessed land, suppressed culture, and placed reserves in hazardous locations. Climate change is exacerbating disaster risks. I the face of increasing climate risk, some communities will have to consider relocation. Drawing on Indigenous disaster risk reduction, decolonial climate adaptation, and intersectional scholarship and praxis, in this panel we examine an emerging praxis that explores the multiple objectives and identities that Indigenous Peoples occupy which produce unique vulnerabilities, capacities and encounters with adaptation policy and practice (Johnson, Parsons and Fisher, 2021). This session brings together Indigenous researchers and community voices to present current Indigenous DRR thinking and practices.

#### Authors and Partner organizations

Simon Lambert, University of Saskatchewan, Saskatoon, Canada Patrick Michell, Kanaka Bar Indian Band, Lytton, Canada Darlene Munro, Siksika Nation, Canada Astokomii Smith, Siksika Nation, Canada

Faisal Bin Islam, University of Delaware, Newark, United States Lilia Yumagulova, Preparing Our Home Program, Slocan, Canada

#### session 799

Room 519B

Governance & Finance

# Aligning perspectives to unlock the potential of climate adaptation finance and close critical funding gaps

Financing climate action has finally taken center stage in the decision-making of country leaders, public and private financial institutions, corporations, and other policymakers. Leveraging this collective focus to scale up investment in climate adaptation is critical to build global resilience to worsening climate impacts. While adaptation investment is growing, it is far from what is needed. In 2019-2020, of the more than USD 600 billion annually tracked to climate finance, USD 49 billion was committed to climate adaptation, a fraction of what is needed to address accelerating climate risk.

The financing gap is a central topic in recent scientific and policy dialogues. Bridging the financing gap will require better alignment between funding communities, including private sector, public sector, philanthropy, and other types of funders and across issue areas, recognizing interrelations between mitigation, adaptation, and biodiversity as well as the growing importance of the intersection with digitalization.

#### Authors and Partner organizations

#### Lead organizers:

Future Earth Canada and Sustainability in the Digital Age & Climate Policy Initiative Collaborators (preliminary):

Jennifer Garard, PhD (Future Earth Canada and Sustainability in the Digital Age) Morgan Richmond (Climate Policy Initiative)







session **746** 

Room 518C

**Adaptation Choices** 

# EbA in practice: Lessons from implementers on planning and measuring EbA

Through a series of short presentations, this knowledge exchange session aims to provide attendees with a comprehensive understanding of the Ecosystem-based Adaptation (EbA) approach, particularly its effective planning and monitoring. The session will feature experiences at different scales and from various implementers, including Indigenous Peoples and Local Communities (IP & LCs), academia, government, civil society, and international organizations. Participants will learn about the criteria and standards for EbA, understand the importance of stakeholder engagement throughout the process, become familiar with different strategies and practical tools for planning and monitoring EbA initiatives, and gain more awareness of how to demonstrate EbA outcomes.

#### Authors and Partner organizations

#### Session chair:

Carolina Chambi (Programme Officer, Nature-based Solutions, UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC))

#### Speakers:

David González (Policy Officer, Global Resilience Partnership)

Paul DeMerritt-Verrone (Water and Ecosystems Technical Specialist – CARE USA)

Rosa Morales (Program Manager for Climate Change, Water Resources, and the Amazon, CARE Peru)

Emily Campbell (Pou Whakamahere Kaupapa Here – Tikanga Māori Policy Planner, Hutt City Council)

Tui Warmenhoven (Community Researcher, Ngāti Porou)

John Reid (Senior Research Fellow, The Ngāi Tahu Research Centre)

Annie Huang (Kairangahau – Research Assistant, The Ngāi Tahu Research Centre)

Elena López-Gunn (CEO and Founder, ICATALIST)

Consultant representative from Commission for Environmental Cooperation – Awaiting final confirmation

Shuchi Vora (Resilience Evidence Coalition Lead, Global Resilience Partnership)

Alec Crawford (Director - Nature for Resilience, International Institute for Sustainable Development)



session 978

Room 523

Multiple Risks

# Basins' Resilience, Water Adaptation and Management: Challenges and Opportunities

This session seeks to discuss several water resilience and governance related experiences in different latitudes of the globe that assess and show how civil society, experts, decision-makers, and First Nations could face the future challenges and opportunities of water, and how information, mechanisms, and policies could contribute to strengthen more resilient communities.

#### Speakers and Partner organizations

Sonja Behmel, International Secretariat for Water (Québec, Canada)

Lisa Scharf, Martin Hämmerle, and Regina Patzwahl, Federal Waterways Engineering and Research Institute (Karlsruhe, Germany)

Neha Singh, Indian Institute of Technology Bombay (Bombay, India)

Sarah Redicker, University of Exeter (Exeter, United Kingdom)

Kayla Sunday, Mohawk Council of Akwesasne (Akwesasne, Canada)

Koto Dagnon, Benin Youth Parliament for Water, (Cotonou, Benin)

Vladimir Arana, International Secretariat for Water (Montréal, Canada).

session 766

Room 522

Limits to Adaptation

## Effective support for transformative adaptation: What is it and how do we know we're making progress?

Over the last 10 years, considerable literature has called for, and struggled to define, transformative adaptation. At the same time, a host of development practitioners, aware of the urgency of this work, have endeavored to bring this lofty concept into practice. These practitioners have worked with a wide range of organizations to synthesize knowledge, organize planning sessions, recommend investments, articulate policies, design programming, and manage trade-offs — all with the goal of fostering systems-level transformative change. This session provides an opportunity for practitioners to share their experience, adding to the growing number of case studies of transformative adaptation and further illuminating both the challenges and opportunities in advancing the practical work of transformation. The session will involve a mix of formal presentations and audience participation; it will both share and generate knowledge regarding the sorts of choices development practitioners can make to support transformative adaptation.

#### Authors and Partner organizations

USAID Center for Resilience; USAID Center for Adaptation Support Activity; Gates Foundation; Ethiopian Agricultural Transformation Agency; others

#### Presenters

What is transformative adaptation and how does the USAID Climate Strategy support it? - Laurie Ashley - USAID Center for Resilience

Agricultural transformation at Gates Foundation. - Steve Prager - Senior Program Officer for Agriculture Transformation Strategy - Bill & Melinda Gates Foundation

Transforming water systems in the Philippines through Safe Water - Maria "Ella" Lazarte - Sr. Water and Sanitation Advisor, USAID

Transforming Ethiopia's Agricultural Sector - Mandefro Nigussie - Chief Executive Officer of the Ethiopian Agricultural Transformation Agency (ATA)







session 389

Room 524A Collaborative

Indigenous Knowledge

# The Climate Atlas of Canada: Weaving Indigenous and Western Knowledges to Advance Applied Adaptation

The Climate Atlas of Canada (www.climateatlas.ca) connects science and storytelling with local and Indigenous knowledges to support applied adaptation locally, regionally, and nationally. This interactive digital platform, launched in 2018, was built upon years of climate mapping and filmmaking by the team that developed it, which now spans the Prairie Climate Centre (PCC) and the Pacific Institute for Climate Solutions (PICS). The platform initially visualized data for cities, towns, and regions – from coast to coast to coast – and created immediate opportunities for local, provincial and federal partners to access and use data for applied adaptation. Although the tool was ground-breaking at the time, the Climate Atlas team also recognized that maps have been used as colonial tools, and they set out to decolonize the platform by, with, and for Indigenous partners. A revised version of the Climate Atlas was launched in 2022.

The tool now takes a "two-eyed seeing" approach, which weaves together Western and Indigenous knowledges, and now includes climate projection data for all 634 First Nation reserve communities, all 53 Inuit communities, and projects across the Métis homelands. This major update to the Climate Atlas was co-developed with the Assembly of First Nations, Métis National Council, and Inuit communities and partners. By taking a distinctions-based approach, this new Indigenous Climate Atlas brings together diverse Indigenous perspectives, stories, and knowledges with climate data and other resources to advance climate action, resilience, and reconciliation

This interactive session will introduce the Climate Atlas – the philosophy, pedagogy, and partnerships – and share the ongoing processes and progress of the initiative. Through dialogue and sharing, this session will bring to light the complexities and critically important opportunities for research and tool co-production, which links climate science and cartography with local and Indigenous knowledges, videobased storytelling, and planning and design approaches. Diverse voices will guide the conversation and opportunity for knowledge exchange.

#### Authors and Partner organizations

**Chairs:** Christey Allen, Prairie Climate Centre; Ian Mauro, Pacific Institue for Climate Solutions

**Plenary Presenters:** Sheila Watt Cloutier; Brett Huson, Prairie Climate Centre; Annie Martel, Graduate Student, Prairie Climate Centre; Elmer Lickers, Ontario First Nations Technical Services Centre

**Breakout Group Presenters:** The Application of Two-Eyed Seeing; Ian Mauro, Pacific Institue for Climate Solutions; Sheila Watt Cloutier; Brett Huson, Prairie Climate Centre; Eromose Ebhuoma, Prairie Climate Centre

**Tools for Risk Assessment and Adaptation Planning:** Elmer Lickers, Ontario First Nations Technical Services Centre; Danny Blair, Prairie Climate Centre; Matthew Loxley, Prairie Climate Centre; Izabella Robak, Prairie Climate Centre

**Community-based Storytelling:** Marcel Kreutzer, Prairie Climate Centre; Erika MacPherson. Prairie Climate Centre: Annie Martel. Prairie Climate Centre



session 349

### Room 524B Collaborative

Multiple Risks

## Pushing the envelope on climate change risk assessments: Aspirations, lessons learned, and new horizons

As climate change impacts are becoming more frequent and severe, many governments are rethinking approaches on how to assess and prioritize climate change risks. New ideas and novel approaches to climate change risk assessments are increasingly being explored, including co-development, enhancing engagement, centring equity, increasing the scope and comprehensiveness of what's assessed (e.g., compounding, intersectional, and cascading risks across social and ecological systems), using the latest science and methodologies, and exploring new ways to overcome limitations.

These attempts are most often met with a mix of expected and unanticipated successes, challenges, and lessons learned. With much effort put into developing climate change risk assessments, their benefit in terms of adaptation planning rests on overcoming challenges in communicating, translating, and mobilizing findings in ways that are relevant, practical, compelling, and accessible for diverse audiences.

This session will begin by offering insights and lessons learned in challenging the status quo in both implementing and sharing climate change risk assessments and will create space for conference participants to connect and share their respective successes, challenges, and lessons learned with one another. The session will be guided by a central question: What are some key opportunities, insights, lessons learned, and considerations to improve how climate change risk assessments are developed and ultimately used by intended audiences?

#### Authors and Partner organizations

Kathleen Brennan, Senior Advisor on Strategic Initiatives, PEI Department of Environment, Energy and Climate Action

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Emma Squires, Senior Policy Analyst, Climate Risk Management at the B.C. Climate Action Secretariat

Fionna Warren, Natural Resources Canada

Satya Ramen, Manager, Research and Knowledge Mobilization, Nova Scotia, Department of Environment and Climate Change

session 974

### Room 524C Collaborative

Teaching & Learning

# Building understanding and capacity of climate change adaptation through education and learning

Education through teaching and communicating is fundamental for building capacity and taking action to adapt to climate change. In this session we discuss different teaching approaches across the Global South and in different sectors—storylines, experiential learning, leadership, and professional practice for sustainable practice. The session comprises five short presentations and a panel discussion over 90 minutes.

#### Authors and Partner organizations

#### Chair:

Dr Judy Lawrence, Adjunct Professor Climate Change Research Institute, Te Herenga Waka-Victoria University of Wellington, New Zealand judy.lawrence.nz@gmail.com

#### Presenters:

Paz Gonzalez, Fundacion Avina

Nina Pirttioja, Finnish Environmental Institute

Robert Manteaw, Centre for Climate Change and Sustainability Studies, University of Ghana

Sheetal Patil, Azim Premji University, Bangalore

Melanie Perroux, Faculty of Health Sciences, University of Montreal

All presenters are registered for in person presentations.

All presenters and Chair have met online and the session is organized with presentations and audience interaction.

The abstracts included are

Abstract #204: Paula. Ellinger@avina.net Educational approaches to build climate action leadership among young professionals using virtual environment in the Global South.

Abstract #296: nina.pirttioja@syke.fi Using climate impact storylines to enhance communication of local climate risks and inform regional adaptation planning

Abstract #775: rmanteaw@ug.edu.gh Transgressive Pedagogies in a Climate-constrained Africa: Grounding Sustainability Learning and Climate Change Education in Local Communities

Abstract #920: spatil@iihs.ac.in Developing a circular teaching-learning space for climate and sustainability: Experiments from Bengaluru, India

Abstract #89: melanie.perroux@inspq.qc.ca The teaching of climate change in university training in the health and social services sectors: methods, barriers and facilitators.





#### session 525

#### Room 520A LAC Pavilion Hybrid

**Adaptation Choices** 

# Integrating adaptation into business strategies: Tools, lessons learned, and public-private articulation opportunities from a LAC perspective

For companies across the world, integrating climate change adaptation into their corporate strategies is crucial, since climate change can present a threat to operations and supply chains, impacting the jobs, goods, and services they provide, and at the same time can bring about new business opportunities.

Building on the work of the Community of Practice on Public-Private Sector Articulation for Climate Action in Latin America (ArticuLAC) and the NAP Global Network (NAP GN), this online session will discuss tools available and practical examples of companies from diverse industries incorporating climate scenarios and multiple risk analyses into their decision-making processes for transformative adaptation and long-term resilience.

ArticuLAC is an initiative of the EUROCLIMA+ Program, through GIZ, the LEDS LAC Regional Platform and the Latin American Center for Competitiveness and Sustainable Development at INCAE Business School. Members representing more than 40 government and private sector organizations from 13 LAC countries participate in dialogue and capacity building activities, and collaborate in the development of knowledge products, with the purpose of promoting the alignment of public and private climate strategies and actions. One of the most recent knowledge products is a Toolkit that systematizes guides, web applications, case studies and other materials publicly available that can be useful for companies to integrate adaptation considerations into their corporate strategies.

#### Authors and Prtner organizations

#### Panelists:

Virginia Vilariño, Argentina s Business Council for Sustainable Development (CEADS) and LEDS LAC Platform (TBC)

José Alfredo Arce, Pozuelo Cookie Company, Costa Rica (TBC)

Evangelina Gómez, CERES, Ecuador (TBC)

#### Partner organizations:

Community of Practice on Public-Private Articulation for Climate Action (EUROCLIMA+, GIZ, LEDS LAC Regional Platform and INCAE Business School NAP Global Network Secretariat. IISD.

#### session 630

#### Room 520B Africa Pavilion Hybrid

Adaptation Choices

# From locally led metrics to international adaptation frameworks: capturing the diversity of adaptation needs and outcomes in communities across Africa and Asia

Local communities are the worst hit by the impact of climate change many vulnerable groups are dependent on livelihoods related to climatically sensitive sectors that are at serious risk. Coping strategies include developing local adaptation actions that are currently supported by Nationally Determined Contributions (NDCs) and National Adaptation Plans of countries and partners.

This session will exchange lessons and experiences on metrics for adaptation to build a shared understanding of how local measurement efforts can support an intersectional understanding of adaptation within national and international frameworks. The session will identify how funds and projects have captured adaptation needs and outcomes for different social groups within communities, and the challenges faced in building and integrating effective locally-led adaptation (LLA) into broader systems. Many adaptation interventions are not needs-driven and do not necessarily align with the differentiated adaptation needs of women, children, and other marginalized groups (Eriksen et al. 2021). Adaptation metrics have often struggled to capture differentiated outcomes within communities (UNEP, 2022). As such, it is unclear whether already disbursed funds will lead to the changes needed for all groups within diverse communities.

Adaptation finance structures are still relatively top-down across Africa and Asia due in part to a lack of consolidated insight and evidence on what works for local communities. This further impedes opportunities for supporting effective and inclusive locally-led adaptation. The IPCC Sixth Assessment report has revealed that while there is progress in efforts to address climate vulnerabilities in Africa, the outcomes of such efforts are mixed with certain groups getting better while others being pushed to the margins of vulnerabilities due to inequalities in interventions, policies, funding, and misalignment of adaptation priorities for different social groups. It is necessary to begin consolidating lessons and experiences to understand the metrics that capture diverse adaptation needs and to understand how these needs can be integrated into wider systems offering both depth and breadth of understanding around adaptation progress.

#### Authors and Partner organizations

Joanes Atela – Africa Research and Impact Network (Session Chair); Sheehnaz Moosa and Blaise Dobson- SouthSouthNorth; Christine Grüning - Frankfurt School; Susannah Fisher- University College London; Bhim Adhikari and Marie-Eve Landry - (IDRC); Mikkel Funder and Alphonce Mollo- Rights and Resilience Project; Dharam Uprety- Practical Action; Lucy Njuguna- International Livestock Research Institute, Wagenigen University & Research; Andreea Nowak - The Alliance of Bioversity and CIAT, Wageningen University & Research; Fredrick Dapillah- Simon Diedong University of Business and Integrated Development Studies; Jean-David Coulibaly - Climate Analytics; Robbert Biesbroek - Wagenigen University & Research; Todd Crane - International Livestock Research Institute; Karl Schutz – Adaptation Works & International Platform for Adaptation Metrics; Charles Tonui – Africa Research and Impact Network, and the Africa Platform for Adaptation Metrics Initiative.





session 835

Room 520C Hybrid

Equity & Justice

# Advancing women's leadership in climate action: Lessons from within and beyond adaptation

Efforts to advance women's leadership in climate change adaptation have sought to address gender-related barriers and to enable the significant contribution of women's diverse knowledge, expertise, experience and perspective toward adaptation research and action. These efforts show that sustained commitment is essential for more equitable participation in adaptation scholarship and practice, and more gender-equal outcomes from adaptation action.

This session will show and articulate lessons about advancing women's leadership. This will draw on multiple initiatives working in diverse contexts within the adaptation research and practice community It will also bring together the often-siloed research communities in adaptation and mitigation, to advance a shared goal of enhancing women's leadership in climate action. In particular, it will draw on innovative efforts to promote women's leadership in low-carbon economic activities.

The session will share lessons from across research and leadership programming, showcasing insights and innovation from the global South. It will highlight results from adaptation research projects that sought to advance knowledge and action on gender-transformative climate adaptation and disaster risk response. Case studies will highlight innovative approaches to strengthening women's leadership in disaster risk reduction and response in Nepal and India, promoting gender and climate justice for migrant women in Buenos Aires, Argentina and enhancing gender responsive climate adaptation in agriculture in South Asia. It will also set out an agenda for advancing women's empowerment and leadership in the low-carbon transition in the global South, highlighting new research in Central America and Nepal supported by IDRC's Gender Equality in a Low Carbon World (GLOW) programme.

#### Authors and Partner organizations

Heidi Braun and Arjan de Haan, International Development Research Centre (IDRC), Canada

#### Speakers:

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Dipak Gyawali, Nepal Water Conservation Foundation (NWCF), Nepal

Mairi Dupar, Overseas Development Institute (ODI) / Climate and Development Knowledge Network (CDKN), UK

Margarita Beneke de Sanfeliú, Fundación Salvadoreña para el Desarrollo Económico y Social (FUSADES), El Salvador

Kanchan Lama, ForestAction Nepal

Dr. Sneha Krishnan, OP Jindal Global University; ETCH Consultancy Services, India

Dr. Aditya Bastola, independent gender consultant working with Asian Disaster Preparedness Centre, Nepal

#### session 58

Room 520D Hybrid

Adaptation Choices

Urban climate resilient development: Reflections and insights from policy practice and research: opportunities, challenges and pathways for systemic change

This knowledge exchange session facilitates a dialogue been urban climate researchers, practitioners, and civil society, about climate resilient development in the context of five diverse cities in the global North and South

The 2022 IPCC Working Group II Report, Climate Change 2022: Impacts, Adaptation and Vulnerability defined climate resilient development as an approach which integrates adaptation and mitigation measures to advance sustainable development for all. The report emphasized the significance of key enabling conditions, such as: decision making which prioritises risk reduction, equity and justice, sufficient finance, and effective partnerships with business, and civil society including traditionally marginalised groups (Indigenous peoples. women, young or disabled communities). There are many diverse pathways to advance climate resilient development however options are constrained by 'every increment of warming', beyond 1.5°C (IPCC WGII SPM D1.1).

#### Authors and Partner organizations

Prof Siri Ellen Hallstrøm Eriksen (Norwegian University of Life Sciences) and a policy official partner from the Oslo Municipality, Norway.

Dr Nick Simpson (Africa Climate & Development Initiative (ACDI), University of Cape Town) with a policy practitioner partner from City of Cape Town's Strategic Planning and Policy Team and Resilient Unit

Prof William Solecki (Director of CUNY Institute for Sustainable Cities); with a policy practitioner partner from the US Urban Northeast

Associate Prof Minal Pathak (Faculty of Planning at CEPT University), Ahmedabad with a policy practitioner partner from Ahmedabad city/ Climate Change Department, Government of Gujarat,

Prof Bronwyn Hayward (University of Canterbury) with a Policy practitioner partner from Westport, Buller District Council New Zealand

Debbie Ley, United Nations Economic Commission for Latin America and the Caribbean, Energy and Natural Resources Unit

Lisa Schipper, University of Bonn





#### session 509

#### Room 520E Hybrid

**Adaptation Choices** 

# Improving farmer resiliency and livelihoods: Science- and data-driven approaches to Inform climate adaptation in smallholder agriculture

Communities and ecosystems around the world are already suffering from the devastating impacts of climate change. In the World Economic Forum's recent Global Risk Report for 2022, extreme weather, climate action failure, and livelihood crises were listed as some of the top ten biggest short-term threats already facing humanity, and environmental risks were ranked amongst the top ten biggest threats to humanity. In agriculture, unpredictable weather patterns and more frequent and severe weather events such as droughts, floods, and storms are already affecting farmer yields and threatening farmer livelihoods across the globe. These impacts are likely to continue to intensify in the near future, further disadvantaging some of the world's most vulnerable populations.

There is an urgent need to enhance the resilience of smallholder farmers and farming systems to climate change. Successful adaptation interventions in agriculture must be crop- and context-specific, informed by science and context-specific data, and navigate the multiple layers of uncertainty to ensure that they deliver the greatest impact to farming communities on the frontlines of the climate crisis. Farmers and agribusinesses must be equipped with the tools and resources to make informed decisions about adaptation planning and pathways. Empowering farmers with the data, knowledge, and expertise to understand how climate risks will impact their farms and farming businesses is fundamental in increasing their ability to adapt to a changing climate. Furthermore, innovative approaches to financing adaptation pathways will be critical in building smallholder farmer capacity to cope with the impacts of climate change.

This session will highlight the innovative ways in which different organizations are working with smallholder farmers to generate knowledge on the climate change risks in agricultural and rural communities and empower smallholder farmers with the data, knowledge, and resources to implement adaptation strategies. The session will highlight different approaches to providing data, tools and information to smallholder farmers in support of their adaptation strategies and will also provide examples of successful interventions where data initiatives have improved the resilience and adaptation of smallholder farmer groups.

#### Authors and Partner organizations

Celia A. Harvey, Ph.D., Rainforest Alliance, Co-Chair

Sabrina Kerin, Rainforest Alliance, Co-Chair

Christian Bunn, Ph.D., International Center for Tropical Agriculture (CIAT), Panelist

Pablo Imbach, Ph.D., Tropical Agricultural Research and Higher Education Center (CATIE), Panelist

Antoine Libert-Amico, Ph.D., Food and Agriculture Organization of the U.N. (FAO), Panelist

Maitreyi Koduganti, Indian Institute for Human Settlements (IIHS), Panelist

room **520F** 

Side event

#### session 572

#### Room 519A

**Adaptation Choices** 

# NBS to address coastal flooding: New tools and case studies from North America's emerging community of practice

The Commission for Environmental Cooperation (CEC) is a trilateral organization that brings together government officials, experts, practitioners, and stakeholders from across Canada, Mexico, and the United States to explore and promote solutions to protect the shared North American environment. The CEC is currently working on a project to support the broader implementation of nature-based solutions (NBS) to manage coastal flood risk in a changing climate, with the goal of maximizing co-benefits for coastal communities and the natural environment. The CEC offers a unique forum to leverage existing knowledge from across North America to foster the development of integrated flood risk management approaches and build capacity for the benefit of coastal communities.

Drawing on the diverse expertise from the three countries, a collection of guidance documents is currently in development and will be published ahead of the Adaptation Futures conference. These guides cover the topics of NBS co-benefits, retrofitting existing infrastructure using NBS, and monitoring NBS. The documents synthesize significant previous work, incorporate insights from an interdisciplinary community of practitioners, and propose new, practical decision frameworks and processes. In particular, the guides highlight the importance of adaptive management as applied in the context of climate change to address changing conditions, and the importance of engaging community members, Indigenous Peoples, historically marginalized groups, and other local stakeholders to anticipate and account for trade-offs between social, economic, and environmental outcomes.

In a series of scoping workshops in spring 2022, experts from across North America emphasized the need for knowledge and data sharing about other NBS projects to help identify best practices and build on lessons learned. As such, case studies are included in the guidance documents and the CEC is planning to bring together practitioners and decision makers from across the three countries to share their expertise; and the session at Adaptation Futures will be an opportunity to exchange as part of this ongoing process.

#### Authors and Partner organizations

John Sommerville, Mary-Ann Wilson and Kelsea Walker (Natural Resources Canada) Catherine Lafleur, Pierre Huns and Annette Morand (Infrastructure Canada) Enda Murphy (National Research Council of Canada)

Martha Niño Sulkowska and Gloria Cuevas Guillaumin (Secretaría de Medio Ambiente y Recursos Naturales),

Pedro Joaquín Gutiérrez and Maxime Le Bail (Procuraduría Federal de Protección al Ambiente - PROFEPA)

Isabel Selene Benítez Ávila, Leonel Álvarez Balderas and Juan Domingo Izabal Martínez (Instituto Nacional de Ecología y Cambio Climático - INECC)

Trisha Bergmann (National Oceanic and Atmospheric Administration)

Julien Katchinoff (U.S. State Department)

Lucie Robidoux (Commission for Environmental Cooperation)





session 979

Room 518A

Multiple Risks

# Building resilience in fisheries management: Insights from around the globe

Experts from research and practice share valuable insights from around the world on implementing climate adaptation in fisheries management and increasing resilience for coastal communities. Four diverse case studies will be presented, with the first looking to the Canadian north and the bridging fisheries science with Indigenous knowledge to increase resilience in fisheries management and food security. Second, we'll look at identifying adaptation solutions through a gender lens with the introduction of CARE USA's Gender Transformative Approach in coral reef and aquaculture adaptation. Next, we'll touch on the lessons that resilience pathways in American lobster fisheries can offer fisheries adaptation planning and management, and the last case study will showcase the role of information ecosystems in facilitating or inhibiting action on climate change adaptation of climate-vulnerable groups. The session will close with a dynamic discussion on operationalizing adaptation solutions, bridging the gap between research and practice, and communicating with diverse stakeholders.

#### Authors and Partner organizations

Chair: Hélène Osterman, Ouranos

Panelists:

Dylan Fraser, Concordia University
Katherine Maltby, Gulf of Maine Research Institute
Khalid Hossain, Monash University
Moushumi Chaudhury, Care

#### session 975

**Room 519B** 

Governance & Finance

## Lessons from the GCF: transformational finance for climate justice

The GCF is one of the largest and most influential climate funds. Its portfolio is important to analyze in its own right, but it also offers broader lessons for climate finance and is a demonstration site for piloting new and innovative climate finance mechanisms. In this session, presentations will analyze various aspects of the GCF portfolio, offering reflections on a) the process of decision-making, b) the ways that transformation is conceptualized in the GCF, and c) the tensions and synergies between mitigation and adaptation in the GCF portfolio. Presenters will also offer insights from the experience of the GCF for climate finance more broadly, including the design of the Loss and Damage Facility and innovative financial mechanisms such as debt-for-climate swaps. Collectively the presentations in this session will reflect on insights regarding the potential of climate finance to promote climate justice and provide recommendations to help achieve this.

#### Authors and Partner organizations

**Chair:** Laura Kuhl, PhD - Assistant Professor - School of Public Policy and Urban Affairs and International Affairs Program, Northeastern University





session 966

Room 518B

Indigenous Knowledge

#### Adaptation Across the Metis Motherland

As one of the three National Indigenous Organizations of Canada, the Métis National Council has been tireless in it's efforts to actualize climate adaptation solutions that are equitable, inclusive and effective. The Métis cultural identity is profoundly linked to stewardship of the land and our connection with the land. Climate change does not only impact our food security, health, safety and livelihoods but it directly impacts how we connect with our communities, culture and history. Despite the impacts of climate change, Métis identity, culture and communities hold climate solutions that can provide adaptation domestically and abroad.

This panel will include representation from across the Métis Motherland to discuss how climate impacts different communities and identities throughout the diverse Métis Nation. Panelists will discuss the historical and contemporary Métis stewardship of the lands, skies, waters and animals of the Métis Motherland. Our panel of experts will discuss programs that bring community, research and climate action together to monitor and adapt at home, in community and abroad.

Topics of discussion include:

- Braiding Métis Traditional Science
- Métis culture and environmental stewardship
- · Community climate monitoring
- Adaptation engagement
- Adaptation action
- Whole of society approaches to adaptation

#### Authors and Partner organizations

**Moderator:** Dane de Souza – Policy Advisor, Métis National Council

Panelists:

Jennifer Pylypiw - Engagement and Policy Manager - Métis Nation of Alberta

Ali Greenslade – Engagement Coordinator and Policy Analyst

- Métis Nation of Alberta

Cole Chretien – Policy Analyst – Métis Nation of Saskatchewan

#### session 291

Room 518C

Nature-based solutions

#### Nature-based Solutions for just Urban Adaptation – Case Studies from the Global South

With more than half of the global population residing in urban areas and still increasing urbanization rates, cities are particularly vulnerable to the effects of climate change. The impacts vary from indirect impacts such as economic losses, social inequalities, migration, and health-related issues to loss of life or destruction of infrastructure due to extreme weather events such as floods, droughts, and storms. Disadvantaged populations residing in urban areas are particularly exposed to these impacts due to lack of access to services and utilities. Nature-based solutions (NbS) have the potential to significantly improve the living conditions of these disadvantaged populations and increase their resilience to the adverse impacts of climate change. For example, NbS such as riverine management, green roofs and rain/community gardens can help to reduce the risk of flooding, reduce heat stress, and improve the air quality. Furthermore, NbS can also provide economic benefits for disadvantaged neighbourhoods by creating jobs in the green infrastructure sector and increasing property values.

This knowledge sharing session will explore the potential of NbS for infrastructure and just urban development with a focus on disadvantaged communities. It will examine the challenges and opportunities associated with planning and implementing NbS in urban areas in the global south, as well as the potential benefits of these approaches for reducing vulnerability to climate change impacts. Furthermore, the session will also discuss the key challenges and opportunities associated with scaling-up and mainstreaming projects related to NbS, including issues related to governance, infrastructure financing, and stakeholder engagement. Overall, this session will provide valuable insights for practitioners, policymakers, and researchers working on climate change adaptation, and will highlight the potential of NbS and green infrastructure to support just, sustainable and resilient urban development.

#### Authors and Partner organizations

Amina Schild (CitiesAdapt, GIZ) - moderation
Alejandra Bolio Rojas (Municipality of Mérida, Mexico)
James Nyagol (County Government of Kisumu, Kenya)
Alannah Hofemeier (PlanAdapt, Germany)
Sheetal Patil (Indian Institute of Human Settlements)
Liesbeth Casier - International Institute for Sustainable Development (IISD)





session 972

Room 523

Multiple Risks

#### Addressing water insecurity: A multidimensional perspective on causes, consequences and solutions

This session will feature five studies focusing on various aspects of water security and resilience in different regions of the World. The first study investigates the driving factors behind water security risks in Maharashtra, India, emphasizing the need for integrated analysis of biophysical, hydro-climatic, and socio-economic factors to inform policy measures. The second study explores water supply sustainability and adaptation in drought-affected areas of Mbhashe and Mnguma in South Africa, highlighting challenges faced and potential adaptation options through knowledge co-production. The third study presents the OWASA project, which utilizes open science to support water security and drought risk management in Southern Africa, offering data products, assessment frameworks, and decision support for adaptation measures. The fourth study examines the root causes of gender inequality in climate resilience and water security in Benin, Cameroon, Tunisia, Uganda, and Zambia, employing a gender transformative approach to identify barriers and opportunities for addressing inequalities. Finally, the fifth study focuses on understanding the drivers of emergency response to growing water insecurity in critical health infrastructures from humanitarian and low-resource contexts and discusses the possibility that the German and comparable Global North contexts could learn from the findings to increase their adaptation capacities. Together, these studies contribute to the understanding of water security challenges and provide insights into effective strategies for enhancing resilience and sustainability.

#### **Participants**

Chair: Anne Blondlot, Ouranos

#### session 980

#### Room 522

Equity & Justice

The session will cover presentations from (i) DanChurchAid's programmatic responses to conflict and climate related loss and damage in Mali, outlining perspectives and/or lessons on the collaboration with research institutions to quantify "Non-Economic Losses and Damages" and contribute to building an evidence base for the identification of community-appropriate responses, leveraging on local leadership and documenting gaps and opportunities to inform future adaptation interventions; (ii) Mercy Corp's Uganda-based USAID funded programme "Securing Peace and Promoting Prosperity Project" (EKISIL), offering new insights on recent approaches to addressing climate conflict risks, including insights on what works and challenges; (iii) a UKRI funded Prosperity and Peace Pathways Project output on differential vulnerabilities of populations on the frontline of interacting conflict, climate change and environmental crises in the Niger Delta region of Nigeria; and (iv) a political ecology analysis of the ways in which violent conflict interacts with agrobiodiversity and climate adaptation in agroforestry systems in the borderland region of East Africa (from an ongoing research at the Department of Global Development, College of Agriculture and Life Sciences, Cornell University).

## Adaptation at the Nexus of Climate Change and Conflicts

People dealing with climate crisis and violent conflict at the same time are among the most vulnerable to socioecological shocks and most neglected by adaptation actions. In situations characterised by state fragility, adapting to both climate and conflict can be somewhat complicated as it can require major social, cultural, political, ecological or economic changes. In addition to the challenges of dealing with multifaceted and multidimensional needs, which are driven by a variety of overlapping and concurring factors, clearly differentiating between specifically conflict- versus climate-induced vulnerabilities and related crises becomes particularly challenging. This potentially impacts on the effectiveness and sustainability of possible responses aiming to integrate nexus considerations. At the same time, the climate change-conflict nexus often overlays other nexus dynamics at play - namely the humanitarian-development-peace nexus, thus making it even harder for communities to identify effective adaptation strategies to address these stress factors all at once. For these reasons, especially considering the urgency of the climate crisis, promoting integrated and multidisciplinary approaches to addressing climate and conflict-related crises becomes crucial. In fact, these multidimensional approaches, combining both science-based and traditional response/resilience mechanisms, are necessary to promote effective locally-relevant and community-led resilience building activities - not only to operationalise locally-led adaptation principles, but also to identify effective responses specifically aiming at preventing and/or compensating climate-induced losses and damages.

This session, organised around four presentations, will explore various context-specific changes and practical approaches to addressing the compounding threats of climate change and conflict that show the most promise for long-term transformational adaptation, and identify how to move them forward.

Taken all together, the session will tackle the following questions:

- What can we learn from the humanitarian sector to advance long-term adaptation in situations characterised by conflict and climate related loss and damage? And how does the climate change and conflict nexus play out in contexts characterised by multidimensional challenges related to wider needs – and along other nexuses?
- In examining climate-conflict vulnerability and food insecurity relations, how/why do
  people's inability to cope with multiple interacting stressors undermine their capacity to
  improve their food security status?
- How do we decouple food security actions from risks emerging from the 'triple challenge' of conflict. climate and environmental crises?
- How can we minimize the risks associated with interventions along the humanitariandevelopment nexus, namely by ensuring that the 'do no harm' principle extends to the environment? In other words, how do environmentally- and climate-sensitive interventions reinforce the do no harm principle?
- How can donors support the implementation of holistic interventions and what type of funding is needed to address holistically these multidimensional challenges?
- What potentials exist in agroforest systems to buffer against the shocks and stresses posed by conflict and climate change?

#### Authors and Partner organizations

**Session chair:** Dr Uche Okpara, UK Research and Innovation Future Leaders Fellow, and Senior Lecturer in Climate Change, State Fragility and Conflict at the University of Greenwich, UK

**Speakers:** Elisa Benevelli [Head of Programmes DanChurchAid (Mali/Sahel)], Eliot Levine [Senior Director Climate & Water Security (Technical Support Unit) Mercy Corps], Uche Okpara [Natural Resources Institute, University of Greenwich] and Emily Baker [College of Agriculture and Life Sciences, Cornell University]





session **565** 

Room 525

**Adaptation Choices** 

Adapting to a changing climate: strategies for building climate-resilient health systems in Canada, US, and the UK

This session explores strategies and tailored solutions to address vulnerabilities and risks faced by health systems in the wake of climate change. Experts from the United States, United Kingdom, and Canada will present how they are working to build climate-resilient health systems through initiatives designed to increase the adaptive capacity of their local communities. They will discuss challenges and opportunities in adapting to a changing climate across various geographical contexts, including rural, urban, and remote settings. The session also focusses on the importance of monitoring and surveillance, intersectoral collaboration, and knowledge mobilization in promoting effective adaptation behaviours.

#### Authors and Partner organizations

Emin Nawaz, Health Canada (Chair/ Moderator)

Melanie Madore, New Brunswick Department of Health (Panellist)

David Demers-Bouffard OR Celine Campagna (TBC), Institut national de santé publique du Québec (INSPQ) (Panellist)

Paddy M. Enright, University of Waterloo (Panellist)

Lily Lessard, Centre intégré de Santé et de services sociaux (CISSS) de Chaudière-Appalaches (Panellist)

Magalie Canuel, Institut national de santé publique du Québec (INSPQ) (Panellist)

Sara Mehryar, London School of Economics Grantham Research Institute on Climate Change and the Environment (Panellist)

Neil Muscatiello, New York State Department of Health (Panellist)

#### session 459

### Room 524A Collaborative

Teaching & Learning

# Advancing knowledge brokering for climate action: A collective reflection and learning journey

Join the Climate and Development Knowledge Network (CDKN) for an interactive reflection journey in which we will all learn more about the world of knowledge brokering.

Climate knowledge brokers are understood as those individuals (hailing from practice, research or policy spheres) who aim to facilitate change, seeking to strengthen relationships, networks and understanding on the climate challenge, based on diverse types of knowledge and experience, to advance more evidence-based, inclusive and innovative decision-making and climate action.

CDKN's 12 years of working at the intersection of knowledge and adaptation action has revealed the urgent need to enhance capacities for more effective knowledge brokering, particularly at a time when climate action is critically needed. This requires practical and solutions-oriented tools, as well as soft skills, to navigate a complex environment encompassing a range of sectors and stakeholders with different values and priorities, at multiple scales. As different knowledge types and actors are brought together, different hierarchies - shaped by gender, sectoral affiliation, cultural or socio-economic factors - emerge, and these need careful, yet deliberate, surfacing to be acknowledged and possibly addressed. In the course of 2023, CDKN, in collaboration with diverse partners, has been developing and collating a series of modules, tools and approaches to strengthen the skills of climate knowledge brokers.

This interactive session will focus on one of the tools CDKN has developed - in the form of a card game - to create a peer learning space in which participants can reflect on different issues and elements critical to consider when working as knowledge brokers. By sharing their knowledge and experiences - wherever they are along the journey - participants will be invited to think about the kinds of questions we need to ask ourselves when working in the climate knowledge brokering space.

#### Authors and Partner organizations

Lucia Scodanibbio (session chair), Lisa McNamara and Nadia Sitas, Climate and Development Knowledge Network; Georgina Kemp, International Development Research Centre





#### session 316

### Room 524B Collaborative

Governance & Finance

#### **Auteurs**

Ville de Montréal - Bureau de la transition écologique et de la résilience

Le Bureau de la transition écologique et de la résilience s'assure que la Ville de Montréal transforme ses façons de faire et augmente sa résilience face aux enjeux environnementaux comme la crise climatique et la perte de la biodiversité.

#### Architecture sans frontières Québec

Architecture Sans Frontières Québec (ASFQ) est un organisme qui vient en aide aux populations victimes de crises, de catastrophes naturelles ou d'inégalités sociales. Il œuvre avec les communautés pour renforcer leurs capacités grâce à l'engagement de différents acteurs de l'architecture. ASFQ intervient outre-mer, avec d'autres organismes canadiens de coopération internationale, et au Québec, en milieu urbain, et auprès des peuples autochtones.

# Pratiques exemplaires d'aménagements résilients aux inondations en milieu urbain : vers un modèle de gouvernance inclusif et efficace

La conception d'aménagements résilients aux inondations est essentielle dans un contexte d'incertitude croissante. Que ce soit à l'échelle des villes, des quartiers ou des propriétés, elle repose sur la cartographie et la modélisation des aléas, permettant ainsi une meilleure compréhension du territoire, des dangers auxquels il est exposé et des vulnérabilités des personnes qui l'habitent. Il en résulte le développement de plus en plus de projets dits exemplaires. Ceux-ci sont fondés sur des données scientifiques qui abordent notamment l'intégration des infrastructures naturelles et la nécessité d'adapter les bâtiments tout en étant en accord avec les objectifs des politiques publiques et pensés pour le bien commun.

Cependant, la mise en œuvre de tels projets, surtout dans des zones déjà largement urbanisées, peut être entravée par de nombreux obstacles liés à la gouvernance, au financement, aux cadres réglementaires et législatifs, ainsi qu'à l'acceptabilité sociale.

Pour répondre à ce défi, le Bureau de la transition écologique et de la résilience (BTER) de la Ville de Montréal, en partenariat avec Architecture Sans Frontières Québec (ASFQ), propose un Café du savoir visant à identifier les capacités et les pratiques de gouvernance qui accélèrent la mise en place d'aménagements résilients aux inondations, allant des échelles des villes à celle du logement. La réflexion s'inscrit dans un contexte où la conception de projets résilients ne doit pas être seulement basée sur une logique de coûts-bénéfices, mais doit également permettre des débats sur des choix collectifs et une approche de la gestion des risques axée sur la résilience communautaire.

Afin d'orienter les discussions, Gilles Côté, directeur du développement du territoire de la Ville de Montréal, exposera la problématique des inondations et les actions mises en œuvre en contexte montréalais. Des courtes présentations suivront pour dresser le portrait de la session. Les connaissances de trois aménagistes spécialisés dans les stratégies visant à réduire les risques liés aux aléas hydrauliques seront ensuite mises à profit à travers une approche créative, conjointe et inclusive.

#### Participants confirmés

Gilles Côté, Directeur du développement du territoire de l'arrondissement d'Ahuntsic-Cartierville de la Ville de Montréal.

Joanna Eyquem, Directrice générale, Infrastructures résilientes au climat au Centre Intact d'adaptation au climat (Université de Waterloo).

Élène Levasseur, Directrice de recherche et d'éducation chez ASFQ.

Catherine P. Perras, Urbaniste - Conseillère en aménagement du territoire et urbanisme à Vivre en Ville.

Sybil Zettel, Conseillère en planification à la Ville de Montréal.

#### session 79

### Room 524C Collaborative

**Adaptation Choices** 

## Driving transformational change through action-orientated research

Climate Adaptation and REsilience (CLARE) is a seven-year initiative funded jointly by the United Kingdom and Canada, aiming to lead to transformational changes in adaptive capacity that will benefit vulnerable communities to tackle weather and climate change in the near and longer term. In 2022, the initiative convened a global call for research ideas that meet CLARE objectives whilst being transdisciplinary and system-focussed, needs-driven, action-orientated, and southern led. With a combined investment of over USD 130 million, of which roughly USD 50 million allocated to this call, CLARE is one of the world's largest initiatives in adaptation research.

The knowledge exchange will convene dialogue on enabling partnerships for research that enable transformational changes benefitting the most vulnerable communities. Researchers, practitioners and funders will examine the approaches that enable action-orientated projects that create and nurture diverse, southern-led partnerships and collaboration. The session will be opened and closed by independent advisors that provide a critical perspective on CLARE. Representatives from FCDO and IDRC will briefly share key insights from establishing the programme, then facilitate discussion involving leaders from the CLARE consortia, tapping their experience convening and planning research that involve diverse coalitions.

#### Participants and Partner organizations

#### This knowledge exchange is convened by:

Foreign, Commonwealth and Development Office (FCDO)

International Development Research Centre (IDRC)

#### Participants:

Arame Tall (World Bank) and Lisa Schipper (Bonn)

Elizabeth Kendon (Bristol) or Luis Artur (UEM)

Babatunde Abiodun (UCT)

Daniel Geiger (Hamburg)

Ayan Mahamoud (IGAD, Kenya)

Kate Gannon (LSE) or Julie Truelove (WaterAid)

Veena Srinivasan (KREA University) or Tom Omollo (IFRC)

Chandni Singh (IIHS) or Amina Maharjan (ICIMOD)

Blanche Butera (Rwanda)

Louie Posadas (TAMPEI, Philippines) or Vanesa Castan Broto (Sheffield)

Manuela Di Mauro Climate Science and Adaptation Advisor, FCDO

Heidi Braun, Senior Program Officer (capacity strengthening), IDRC





session 568

Room 520A LAC Pavilion Hybrid

Nature-based solutions

# Hydro-social landscape approaches in Ecuador to link improved water management, health and other cobenefits in the face of climate change

This event looks at the experiences of landscape approaches established by CARE Ecuador under the Climate Change Adaptation of Andean Populations (ACCRE) project. Specifically, the session focuses on sharing the "how we got here" of this experience, with the goal of facilitating exchanges between practitioners on what works and does not work, and recommendations moving forward. Landscape approaches can be complex and require coordination and goal setting among multiple sectors, actors and levels of government to balance demand and use of landscapes. However, the impact and social benefits can be extensive, including improvements to environmental conservation, climate adaptation, water security, gender equality and social justice, sustainable livelihoods, and health. CARE's model in the Pedro Moncayo canton promotes agroecological practices and the conservation of the paramos -- highland mountain grasslands that provide critical water and ecosystem services. The model has protected over 6,000 ha and restored 160ha of water recharge zones while also providing co-benefits in improved health, livelihoods based on agroecological principles, and capacity strengthening for community organizations and public sector actors working in climate change and water resources management. CARE's hydro-social territorial approach has five main components: i) ensure responsible production processes based on agroecology; ii) development of local regulation for the conservation of ecosystems that provide water services; iii) delineation of agricultural boundaries and conservation corridors to reduce the effects of agricultural production on the health of the water-supplying paramos; iv) conservation and restoration of paramos / water sources / water recharge areas; and v) valuing the inclusion of women in the community as central actors of change. This session will focus on what it took to negotiate goals, meaningfully engage government, private sector and communities, develop fit-for-purpose policy and legislation, set up agroecological production and markets, and how to use conservation and water funds based on local public policy to improve the management and conservation of water recharge zones impacted by climate change. The water funds developed in Pedro Moncayo have been particularly useful in forming a multi-sector coalition of water utilities, private sector actors, civil society organizations, community and women's groups, and small-scale farmers that are brought together through a shared financial mechanism that funds mutually beneficial solutions for the protection of the paramos, such as training for agroecological livelihoods and the creation of water recharge zones.

#### Authors and Partner organizations

CARE Ecuador, CARE USA

#### session 230

Room 520B Africa Pavilion Hybrid

**Adaptation Choices** 

## Towards Integrated climate change adaptation and scaling strategies

Climate change has a growing and diverse impact on the five regions of Africa (East, Central, Northern, Southern and West). It exposes fragile farm households to more intense production and consumption shocks contributing to food insecurity (ACPC 2020). For example, in West Africa, a region characterised by negative economic growth, conflict and migration, climate change is considered a threat multiplier for the long-term livelihood security of farm households (IPCC, 2014). East, Southern and West African regions are expected to experience a reduction in GDP per capita ranging from 4 to 15% by 2050 due to increased temperatures ranging from 1°C to 4°C (ACPC 2020). Therefore, climate change and variability continue to worsen the vulnerability and limit the adaptive capacity of these farm households that rely on rain-fed agriculture for their livelihood. Indicative findings show an increasing frequency of droughts and decreasing yields of legumes, maize, sorghum, and millet in all three regions due to climate change and variability (Traore et al., 2013; Sultan et al., 2019)

Accelerating Impact of CGIAR Climate Research for Africa (AICCRA), funded by the World Bank research for development program, has been promoting integrated CSA and CIS innovations using socially inclusive business models based on context-specific enabling conditions. This program is implemented in six countries (Ethiopia, Ghana, Kenya, Mali, Senegal, and Zambia). With growing emphasis on leveraging private sector investments in CSA-CIS innovation and agricultural development to achieve impact at scale, validated CSA practices complemented with reliable, relevant and actionable climate information services have been recommended as a cornerstone of climate adaptation and an oasis for sustainable livelihoods at farmscale in Africa (ACPC, 2020). Although private sector-driven inclusive business models have gained prominence globally as viable approaches to transform and build climate-resilient smallholder agri-food systems, there is still a gap in the scalability, suitability and sustainability of these models in the African context. Sustainable strategies for scaling CSA-CIS innovations require understanding the business models fundamental elements that drive the scaling process and radical change at the systems level. Therefore, there is a need to understand the incentive mechanisms that drive the behaviour change of the key value actors in the system and the scaling outcome. Additionally, more knowledge and understanding are required of the necessary conditions under which inclusive business models can create more equity and sustainable, resilient smallholder farming at scale within diverse farmers' livelihood needs and geographical contexts.

#### Authors and Partner organizations

#### **Authors**

Munyaradzi Mutenje, Sophia Huyer, Everisto Mapedza, Bhekiwe Fakudze, Tinashe Lindel Dirwai, Vimbayi Chimonyo, Tafadzwa Mabhaudhi and Portia Adade Williams

#### Partner organisation

CIMMYT, ILRI and University of KwaZulu-Natal





#### session 702

## Room 520C Hybrid

Adaptation Choices

# Co-producing adaptation strategies for agriculture supported by interdisciplinary system modeling and empirical studies

The proposed session will address the challenge that development of effective agricultural adaptation strategies requires close collaboration between decision and policy makers and scientists in the co-production of interdisciplinary science that is complex, evolving, and requires methodological innovations. The complexity of the research can raise barriers to stakeholder engagement. The research involves ex ante assessments of adaptations through integrated models of socio-environmental systems including climate, crops, livestock, economics, and human decisions. Ex post evaluation of outcomes from implemented adaptations can inform both adaptation design and integrated model improvement.

In order for the science to produce adaptation guidance that is relevant, useable, trusted, and tailored to the contexts in which it will be applied, decision and policy makers should participate in co-producing the science more fully than is common in practice. The collaboration should strive for end-to-end engagement of decision and policy makers in identifying research questions, co-designing and planning research, guiding the execution of research, and interpreting and applying results.

#### **Participants**

#### Chair and co-chairs:

Malgosia Madajewicz, The Climate School, Columbia University, USA

Sabine Homann-Kee Tui, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Zambia

Dilys MacCarthy, University of Ghana, Ghana

Laure Tall, Initiative Prospective Agricole et Rurale (IPAR), Senegal

Roberto Valdivia, Oregon State University, USA

Alex Ruane, NASA Goddard Institute for Space Studies, USA

#### session 238

## Room 520D Hybrid

Indigenous Knowledge

# Breaking the mould – Southern led micro-grants as a catalyst for scaling up Local Adaptation

Only 10% of climate finance committed from international funds was prioritised for local level in 2016 (Soanes,.M 2017). This speaks to the power dynamics and hierarchies which prevent adaptation being shaped by and taking place at the local level. Through listening to the voices and experiences of the ARA Grassroots Action Research Micro-grantees (small grants given to 60 local organisations based in the global south for undertaking action and research on adaptation). This session will showcase how the micro-grants act as a tool to enable ownership by, and as a result concentrate actions on local and indigenous people most vulnerable to climate change in the following ways;

- Converging multiple knowledge types and sectoral stakeholders.
- Eliciting innovations around local climate action.
- Identifying new opportunities for building the knowledge base from a grassroots perspective or influencing a solution.

In addition to listening to the experiences of grantees themselves, this session will include a technical expert on Locally Lead Adaptation (LLA) who will frame the discussion in the wider context of LLA, to convey the importance of this kind of funding model for enabling the necessary transformation needed for communities to adapt to Climate Change. This proposal will speak to Theme 1 – learning from Indigenous and local peoples, and is anticipated to be a knowledge exchange session.

#### Authors and Partner organizations

#### Suggested speakers;

ARA - Sydney Church (female, moderator)

ARA/IIED - Aditya Bahadur (male, speaker)

The ARA will partner with 3 grantees from round 1 and 2 – suggested speakers include:

- PRIA Participatory Research In Asia (Micro-grantee, Asia) (Karol Anshuman, male)
- Universidad Nacional De Rosario (Micro-grantee, Latin America) (Maria Del Pilar Bueno, female)
- KASA Ghana (Africa) (Jonathan Gokah, male)





session 808

Room 520E Hybrid

Teaching & Learning

## Climate-action: Challenges, opportunities and good practices of formal and non-formal education

Agriculture is one of the sectors most vulnerable to climate change and is already coping with the impacts of climate change. Without urgent and wide-scale efforts towards adaptation, our global food security faces serious threats. Although options for adaptation exist, a challenge is to disseminate them widely and efficiently to all actors of agrifood systems. In this aim, formal and informal education will be two key complementary allies to support the public's understanding of the challenges climate change will bring, and in preparing current and future generations to act to limit the magnitude of climate change and respond to those challenges.

Formal education systems cannot remain static in a rapidly changing world. If tailored to current challenges, they can prepare new generations to be changemakers in the climate crisis. To provide future generations with the knowledge and practical skills needed to protect the world around them, we must create curricula that empower people to take action and responsibility, and actively contribute to societal transformation.

In addition, informal education, which refers to teaching approaches happening outside of regular school curricula, gathers initiatives which complement and fill gaps of formal education. With enough reach to cater to those outside of formal education systems, it is also an incubator for innovative teaching approaches, based for instance on gamification. Informal education offers an accessible and flexible way of learning with emphasis on hands-on, practical learning experiences. Its potential has been harnessed in diverse contexts, teaching from children to government officials, with the aim of raising awareness or transferring complex skills.

#### Authors and Partner organizations

Food and Agriculture Organization of the United Nations
Université du Sine Saloum El-Hâdj Ibrahima NIASS
Marondera University of Agricultural Sciences and Technologies
Mer et Monde

session 496

Room 520F Hybrid

Multiple Risks

#### Compound risks and vulnerability -What are implications for habitability and migration? Insights from research and practice

With the current reports and findings on the increasing dynamics (e.g. UNEP 2022, Armstrong McKay et al. 2022) and impacts of the climate crisis (e.g. IPCC 2022, Romanello et al. 2022, Steel et al. 2022), it is becoming increasingly clear that adaptation to climate change has limitations. Humanity is facing permanent and crisis-like changes. Complex linkages between physical drivers and societal forces exacerbate pre-existing habitability challenges for the most vulnerable people and ecosystems worldwide. For example, in 2022, Pakistan was affected by extreme heat in the spring, followed by extreme monsoon rains compounded by glacier melting that led to the country's worst flooding in a decade. The flood event caused environmental devastation, suffering among humans and livestock, and reduced habitability 12 years after the 2010 flood disaster.

Against this background, "habitability" and its loss are increasingly recognized as important dimensions of climate change impacts, compound risk and vulnerability. Habitability extends the focus towards the necessary medium and also long-term perspective on development trajectories of regions and places. Building on recent contributions on habitability in the context of climatic and environmental change, as well as on the research of the HABITABLE project, this session approaches habitability from several angles: while it acknowledges that habitability is determined by interacting ecological and social systems, and processes, with compounding and cascading effects between various subsystems, it contends that the habitability of a given place is hardly objective and cannot be determined by analyses of macro-parameters alone. It is dependent also on individual and collective perceptions of changes and risks, adaptive strategies and capacities of populations in situ.

#### **Participants**

The session is jointly organized by the EC- funded HABITABLE project, the United Nations University's Institute for Environment and Human Security (UNU-EHS) and the Risk-KAN initiative.

#### The session will be led by:

Prof. Dr. François Gemenne – Hugo Observatory, University of Liège, Belgium

Dr. Lisa Thalheimer, Senior Researcher in the Environment and Migration: Interactions and Choices (EMIC) section at the United Nations University (UNU-EHS) and Steering Committee member at Risk-KAN.

with support from Dr. Yvonne Walz, Associate Academic Officer, Interim Head of the Environmental Vulnerability & Ecosystem Services Division (EVES) at UNU-EHS.





#### session 670

#### Room 519A

**Adaptation Choices** 

# Strenghtening the resilience of food systems to climate changes through agroecology

Multiple crisis during the last years have highlighted the structural vulnerability of food systems to local or global shocks such as climate extremes, pandemics, so-cio-political instability. Several reports from the international community (FAO, IFAD, CIRAD, HLPE) stressed the importance to transform food systems to address current inequalities and strengthen their resilience and sustainability. The urgent need to transform food systems as a condition to address current and future challenges and contribute to the Sustainable Development Goals was also recognized by the international community during the 2021 UN Food Systems Summit.

There is a growing interest for agroecology and for its potential to inform the transformation of food systems towards more resilient and equitable outcomes. The recent COP 27 (Climate) and COP 15 (Biodiversity) also witnessed an increased interest of countries and international organizations for the potential of agroecology to adapt and mitigate climate changes and revert the dramatic trend of biodiversity loss.

Evidence for the overall viability of agroecology and for its potential contributions to adaptation and mitigations to climate changes across scales is increasingly robust. However, benefits are not uniformly distributed and the complex nature of food systems points to the differential impacts and trade-offs associated to agroecology in different agroecological and cultural contexts. How is it influenced by ecological dynamics, historical legacies, political economic relations, governance structures, and social institutions that shape who has access to resources and the agency to realize their goals.

The session will explore evidence and perspectives on the potential and limits of agroecology to guide a food systems transition toward more equitable, healthy, and sustainable outcomes in the context of climate changes. Building on practical case studies and research projects, it will review and discuss different perspectives on the potential, limits, conditions and trade-offs associated to agroecology, to support food systems adaptation to climate changes.

#### **Participants**

**Facilitation:** Renaud De Plaen and Sandra Gagnon, International Development Research Centre (IDRC)

#### Roundtable participants:

Mamadou Goita, Institut de recherche et de promotion des alternatives de développement (IRPAD): Executive Director, socio-economist of development and engineer in management of education and training systems.

Lini Wollenberg, Alliance of Bioversity and Centro Internacional de Agricultura Tropical (CIAT): Anthropologist and natural resource management specialist concerned with rural livelihood and the environment.

Alvaro Acevedo, Universidad Nacional de Colombia (UNC): Specialist in agroecology and sustainable rural development.

Emily Baker, Cornell University: PhD Candidate in Rural/Environmental Sociology and Applied Ecology, in the Department of Development Sociology.

#### session 977

#### Room 518A

Multiple Risks

#### Challenges in coastal zones

This session will touch on a multitude of challenges in the coastal zone including a coastal resilience deadline, multi-meter sea-level rise in a populated low-lying country, adaptive capacity and local adaptation methods, as well as adaptation approaches.

#### Authors and Partner organizations

Chair: Dr Sabine Dietz, CLIMAtlantics

#### Presenters:

Ms Aishath Azfa, University of Melbourne

Dr Aysin Dedekorkut-Howes, Griffith University

Dr Elizabeth English, University of Waterloo

Prof Marjolijn Haasnoot, Deltares/Universiteit Utrecht

Aishath Azfa, University of Melbourne, will speak about «Artificial islands, better life? Adaptive capacity of socially differentiated households in Hulhumale' in the Republic of Maldives. The paper presented seeks to address critical gaps in the literature through analysing variations in adaptive capacities of socially differentiated households and examine how these variations may or may not have been influenced by the political economic processes driving development of artificial islands.

Aysin Dedekorkut-Howes will speak about «Coastal Adaptation at the Local Level: Queensland's QCoast2100 Program", a project aiming to examine local level coastal climate adaptation through the example of Queensland's QCoast2100 program. The project evaluates the content and the preparation process of the CHAS documents and seeks to answer the research questions of how prepared local governments are to sea level rise and coastal flooding, what innovative tools and methods were used in the planning process, and what local governments need to progress this work. The aim is to develop a set of recommendations to improve future phases of QCoast2100 and support the implementation of the strategies.

Elizabeth English with the University of Waterloo will speak about «Amphibious adaptations for flooding affecting Indigenous and rural populations". Their implementation of amphibious architecture takes a community-based, bottom-up approach to flood mitigation that adapts to and works in sympathy with water, not in opposition to it. Water can be viewed as nurturing a land and its people, rather than as a hazard to be subjugated. Our research challenges existing paradigms, to shift flood management practices from the imposition of control over nature to a paradigm of acceptance, accommodation and adaptation to natural events.

Marjolijn Haasnoot will present «Mapping the solution space for adaptation to multi-meter sea-level rise: a case of the Netherlands", research which aims to further map the solution space for adaptation to a multi-meter sea-level rise for the Netherlands, a densely populated low-lying country in the Rhine-Meuse delta with a comprehensive water management system in place. We explore alternative adaptation pathways and options ('building blocks') for the long-term to adapt to high SLR (>1 m) and assess the consequences thereof on adaptation and developments in the coming 2–3 decades.





session 466

Room 519B

Limits to Adaptation

Research questions for enhancing actions to address loss and damage associated with adverse impacts of climate change

The COP established the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (Loss and Damage Mechanism), to address loss and damage associated with impacts of climate change, including extreme events and slow onset events, in developing countries that are particularly vulnerable to the adverse effects of climate change. COP27 decided to establish a dedicated fund for Loss and Damage, which has been seen as a big breakthrough for negotiations on the topic. Herein, promoting the implementation of approaches to address loss and damage associated with the adverse effects of climate change is important.

The proposed session is organized by the UN-led World Adaptation Science Programme (WASP), which is one of the four pillars of the World Climate Programme. WASP's core vision is ensuring that climate adaptation knowledge gaps are filled to inform evidence-based policies, solutions and actions for successful adaptation to new climate conditions. Our priority is addressing the knowledge needs in vulnerable developing countries and providing policy-relevant science for decision-makers.

The programme of the session requires 90 minutes, including a brief opening remark, one or two technical presentations, followed by a panel discussion with some interactive activities with the audience. The chair of the session will close the discussion with summaries and closing remarks.

#### Authors and Partner organizations

#### Leading experts:

Cynthia Rosenzweig, Anand Patwardhan, Johanna Nalau, Minpeng Chen, Bruce Currie-Alder, Saleemul Huq (tbc)

session 233

Room 518B

Teaching & Learning

Developing the capacity of professionals to address climate change adaptation: the leverage effect of international cooperation

The general objective of this session is to share knowledge on how to accelerate the development of the adaptive capacity of professionals. Many of the decision-makers and professionals currently addressing the impacts of climate change have received no formal training on climate change, nor on how to design adaptation solutions and pathways. There is an urgent need to develop their knowledge and skills and provide ad hoc tools designed for their area of work.

This session will focus on the training of professionals in the private and public sectors (e.g., building sector, tourism sector, local governments, funding institutions...) and the potential leverage effect international cooperation can provide for the learners and the teachers. The session aims to share knowledge through a panel discussion on the way in which capacity building programmes and resources have been designed and implemented, and the lessons learned of the effectiveness of different approaches.

The session will be chaired by ADEME, the French Agency for the Environment and Energy Management. A panel discussion will be organised with representatives from international initiatives who have developed professional capacity-building programmes for their sectors. The panellists will address the specific cognitive challenges climate change adaptation poses in various sectors, highlighting any gender and social considerations. The members of the panel will then share their analyses of the effectiveness of their training programmes, resources and tools and the challenges they have faced. Finally, the leverage effect of multilateral cooperation for the development of the adaptive capacity of both the trainees and trainers will be discussed.

#### Authors and Partner organizations

#### Session chair

Dr. Céline Phillips, French Agency for the Environment and Energy Management (ADEME)

#### **Panellists**

Dr. Najat Zarrouk, Director of Development, Knowledge Management and African Local Governments Academy (ALGA), United Cities and Local Governments of Africa (UCLG-Africa)

Garfield Young, Associate Professor & Dean, Faculty of the Built Environment, University of Technology, Jamaica

Judy Zakreski, Senior Vice President, Global Operations & Solutions, International Code Council





session 335

Room 518C

Nature-based solutions

#### Climate action and innovation on nature Based solutions and equity in Canadian municipalities

The Municipalities for Climate Innovation Program (MCIP) was a five-year program, delivered by the Federation of Canadian Municipalities and funded by the Government of Canada. From 2017 to 2022, the program supported more than 600 municipalities under eight climate action programs, ranging from adaptation and mitigation planning to the integration of climate change data into asset management, feasibility and operational studies, and capital projects. The program provided funding, training and information sharing with the aim of encouraging municipalities to better adapt to the new realities of climate change, and reduce their emissions sources into the future.

#### Authors and Partner organizations

Alison Shaw, ACT - Action on Climate Team, Simon Fraser University Rebecca Sivel, Federation of Canadian Municipalities (FCM)

session 663

Room 523

Governance & Finance

# Advancing collaborative climate adaptation: Lessons learned from a Municipal and First Nations adaptation project

For Canadians to build and improve resilience to climate change impacts, it is essential to continually develop and update climate change information that can guide adaptation strategies and action. A thoughtful approach to mobilize information and knowledge consists of both adequate translation of scientific knowledge and accurate translation of Indigenous Knowledge Systems. This understanding of climate change must be coupled with effective climate change response; response that requires collaborative, community-based approaches where governments and non-government actors work together to identify impacts, assess risks, co-produce plans, and take action.

To address this challenge, the Advancing Adaptation project led by ICLEI Canada, aimed to increase climate change resilience in communities in the Great Lakes watershed, regardless of their stage in the adaptation process. ICLEI worked with 27 Ontario municipalities and First Nations to build capacity around collaborative adaptation response over an 18-month period. Each participant identified the local partners and community members which were involved throughout the duration of the project, then in collaboration with a training lead, participants developed the adaptation response that best suited their local priorities and needs. These responses ranged from vulnerability assessment posters shared at a local hunt to community asset mapping during neighbourhood fairs to hosting shoreline erosion planting events. The innovation in this approach was both the collaboration requirement (between government and civil actors) as well as the local ideation of adaptation solutions.

#### Authors and Partner organizations

Session Organizer: ICLEI Canada - Ewa Jakson, Managing Director

**Presenter/Panelist 1:** Shawnaga First Nation - Steven Kell, Species-at-Risk Biologist & Program Coordinator

**Presenter/Panelist 2:** District of Muskoka - Lauren Valliere, Climate Initiatives Coordinator

**Presenter/Panelist 3:** Dufferin County - Sara MacRae, Manager of Climate and Energy

**Presenter/Panelist 4**: Georgian Bay Biosphere - David Bywater, Conservation Program Manager





#### session 759

Room 522

Adaptation Choices

# Enabling more effective adaptation decisions through Climate-Resilient Development Pathways: a critical reflection

Rationale: Many climate hotspots are experiencing multiple pressures such as associated environmental changes, poorly planned and implemented development interventions, rapid population change, historically high rates of poverty, and isolation from national centers of power and government that stress livelihoods reliant on natural resources. Anthropogenic climate change exacerbates risks and further threatens livelihood security meaning that the coming decades are likely to become more challenging for human security. Chapter 5 of the 2018 Special Report on the impacts of global warming at 1.5°C and Chapter 18 of Assessment Report 6 published by Intergovernmental Panel on Climate Change (IPCC), emphasizes the extensive and deep links between the climate and sustainable development. The reports highlight that progress on climate mitigation and adaptation is highly related to action on addressing issues such as multi-dimensional poverty, inequality, justice, and wellbeing. Climate resilient development pathways (CRDPs) have emerged as a key framing through which actors are seeking to marry progress on the Sustainable Development Goals (SDGs), adaptation, and deep and rapid decarbonisation. However, there is only limited literature that has evaluated context-specific synergies and trade-offs between and across adaptation, mitigation response measures.

Objective: Responding to gap in the literature identified by the IPCC, this panel will bring together speakers engaged in work on climate resilient development pathways to explore the potential applicability of the CRDP concept to address the challenging set of issues present in climate hotspots.

#### Authors and Partner organizations

Dr. Mark Tebboth, University of East Anglia (Co-chair)

Dr. Chandni Singh, Indian Institute of Human Settlements (Co-chair)

Dr. Saskia Werners, Institute for Environment and Human Security, UN University

Prof. Lisa Schipper, University of Bonn

#### session 172

**Room 525** 

**Adaptation Choices** 

## Incorporating health and well-being into climate adaptation actions

Responses to climate change risks have diverse consequences for dimensions of well-being and dimensions of health. Well-being includes safety, place, self and belonging. Both multi-dimensional well-being and the physical and mental dimensions of health and ill-health are under-accounted for outcomes from adaptation interventions and actions. These are key issues for the Making Adaptation Choices theme of the conference.

This session therefore presents new knowledge from across multiple disciplines on new measures, new methods, and new findings on how to account for the health and well-being consequences of adaptation, over and above the simple observation that adaptations that draw down climate risk avoid some of the negative consequences of impacts. The various research present uses both observational and action and co-creation techniques across the social and health sciences to seek to make adaptation assessments comprehensive and inclusive of diverse knowledge.

#### Authors and Partner organizations

#### Convened by:

Neil Adger and Catherine Butler, University of Exeter, UK Stacey Heath, Open University, Milton Keynes, UK

Contributions of presented papers by: Hannah Hayes, Sergio Jarillo, Binaya Pasakhala, Betetebu Asule, Catherine Butler and Stacey Heath.

Introduction to the topic and theme by: Neil Adger

Principal partners: University of Exeter, University of Melbourne, International Centre for Mountain Research and Development (ICIMOD), and co-authors from various institutions.





#### session 454

### Room 524A Collaborative

Adaptation Choices

## Effective adaptation: What is it and how can we measure and manage it?

The new estimates of the costs of adaptation and the estimated financial needs for adaptation from developing countries indicate higher values than previously reported (Adaptation Gap Report 2022, UNEP). There have been positive trends in the emergence of new instruments, actors and approaches to scale up adaptation, including in the private sector. However, the financial gap remains larger and larger. It is also important to note that finance is a means rather than an end: the availability of funds does not guarantee that they will be used efficiently and effectively. It is worth noting that insufficient evidence on the effectiveness of adaptation in different contexts, exacerbated by various metrics applied across projects and result in weak incentives for investment in adaptation.

The proposed session is organized by the UN-led World Adaptation Science Programme (WASP), which is one of the four pillars of the World Climate Programme. WASP's core vision is ensuring that climate adaptation knowledge gaps are filled to inform evidence-based policies, solutions and actions for successful adaptation to new climate conditions. Our priority is addressing the knowledge needs in vulnerable developing countries and providing policy-relevant science for decision-makers.

The programme of the session requires 90 minutes, including a brief opening remark, one or two technical presentations, followed by a panel discussion with some interactive activities with the audience. The chair of the session will close the discussion with summaries and closing remarks. This session intends to conduct an open consultation with the wide adaptation community on the critical issue to address adaptation effectiveness, focusing on adaptation guidelines, metrics and toolkits currently in practice and in development at project, national, regional, and international levels, including vulnerability indexes.

The outcome of this session will contribute to the upcoming WASP science for adaptation policy brief on the topic, to be launched at the COP28. We also hope the discussion and outcome will help move forward the research agenda and policy process around this topic, informing IPCC, UNFCCC, GEF and GCF, the funding organizations of the WASP.

#### Authors and Partner organizations

Cynthia Rosenzweig, NASA Goddard Institute for Space Studies Sivapuram Ventaka Rama Krishna Prabhakar, Institute for Global Environmental Studies (IGES)

#### session 295

### Room 524B Collaborative

Governance & Finance

# From knowledge to action: Overcoming challenges, embracing opportunities and building community resilience through inclusive adaptation strategies

The science is clear. The benefits of effective adaptation action against extreme climate events—from wildfires to extreme heat waves to floods—are significant. Nevertheless, governments across the world continue to face a number of challenges in progressing from adaptation knowledge and planning to action. As climate impacts become more severe and the costs mount, the implementation of effective and inclusive adaptation strategies can help us work together more effectively and ensure that our collective actions do not leave anyone behind.

#### **Purpose**

The objective of this session is to explore and share transformative approaches to accelerate the implementation of local, regional and national adaptation strategies to increase the resilience of communities against the impacts of a changing climate. During this session, speakers from across government jurisdictions in Canada (federal, provincial, Indigenous and municipal governments) and participants from the international community will be discussing two areas of opportunity:

- Increased financial resources and innovation: What are the innovative long-term financial solutions and mechanisms at the public, private, or community levels that can be scaled up to better support communities affected by climate change? How can governments ensure with codes and guidance that all investments consider current and future climate change impacts, maximize benefits and avoid maladaptation?
- Enhanced participation, coordination, and empowerment: What are the most effective approaches for governments to co-develop inclusive climate adaptation decision-making processes and public information campaigns with multiple partners, Indigenous peoples and stakeholders? How can governments ensure that those processes advance equity and environmental justice, respect jurisdictions, and uphold Indigenous rights?

#### Speakers

Laniel Bateman, Director at Environment and Climate Change Canada, will present about considering gender, equity, accessibility, and social inclusion in the development of Canada's first National Adaptation Strategy (2022)

Tina Neale, Director at the Ministry of Environment and Climate Change Strategy of the Province of British Columbia (B.C), will present foundational actions included in the new B.C.'s Climate Preparedness and Adaptation Strategy (2022-2025), including practical actions to support Indigenous-led climate adaptation and improve understanding of climate change impacts on diverse populations.

Graeme Reed, Senior advisor at Assembly of First Nations, will discuss about approaches to advance First Nations Climate Leadership and learn from Indigenous peoples' expertise in adaptation

Marieke Cloutier, Acting director of the Bureau de la transition écologique et de la résilience de Montréal, will share lessons learned from Montréal's Climate Plan 2020-2030



## Wednesday 04 pm - 16:00-17:30 Thursday 05 am - 8:30-10:00

#### session 393

#### Room 524C Collaborative

Governance & Finance

#### Good practice community and citizen engagement for accelerating a climate resilient future in Europe and beyond

In 2022, the European Union (EU) launched the Mission on Adaptation to Climate Change, to foster the climate resilience of regions, cities, citizens, and companies in Europe. The EU funded project, AGORA, brings together 13 partners from eight EU countries and the UK to support communities and citizens to accelerate their transformation to a climate resilient future. More specifically, AGORA aims to cocreate a digital toolbox of innovative mechanisms and transdisciplinary approaches for inclusive climate governance that fosters citizen and community engagement using the Tandem framework for transdisciplinary co-design (Daniels et al., 2020). Different pilot communities and regions will advance adaptation action in the AGO-RA project by co-evaluating existing good practice with experts in different sectors using co-design methods to co-create visions, innovation pathways, and solutions.

Against this backdrop, we propose a transdisciplinary co-production session to facilitate dialogue across research and government, practitioners, civil society, private sector, and international organizations and foundations. The overarching objective of the session is to foster peer-to-peer learning on citizen and stakeholder engagement in adaptation planning and action. This will involve actors across the science-society interface sharing good practice, opportunities and barriers to engagement; co-creating innovative solutions for empowering vulnerable groups, integrating local knowledge, gender and equity considerations; and developing strategies for evaluating effectiveness of citizen and stakeholder methodologies.

All these insights will feed into the co-design of a 'Digital Agora', a toolbox of innovative mechanisms and approaches for inclusive climate governance and action. The co-created outputs of this session will also feed into the co-design of an evaluation framework for case study application and the implementation of the 'Digital Agora'.

#### Authors and Partner organizations

SEI HQ - Åsa Gerger Swartling, Mathilda Englund, and Karin André SEI Oxford - Rosie Witton and Sukaina Bharwani

#### session 611

#### Room 520A LAC Pavilion **Hybrid**

Indigenous Knowledge

#### Indigenous perspective of climate adaptation in food systems

The impacts of climate change on food systems and local communities are not homogenous. Given their socio-economic marginalisation and vulnerability, indigenous and smallholders farmers in climate hotspots are particularly affected. Dominant models of food production are increasingly being challenged for their role in climate changes and for their failure in responding to the needs of the most vulnerable populations, who experience hunger, miss key micronutrients or suffer from diet-related chronic diseases. New paradigms or models are required to inform the transformation of food systems to reduce inequalities and increase their resilience to climate changes. To be successful, these new approaches need to be anchored into deep understanding of local contexts and to consider the specific environmental conditions, and the knowledge and aspiration of local communities.

Increasingly, indigenous people are the focus of attention for their knowledge of nature, understanding of natural processes and deep bond to their environment. Their knowledge, practices and strategy, such as crop, land use and livelihood diversification; ancestral soil and water management systems; observation and interpretation of environmental, phenological and meteorological phenomena, can help communities monitor environmental change and adapt to increasingly unpredictable climate. Traditional governance systems and social networks also contribute to their ability to respond collectively to shocks and environmental changes.

This session will explore indigenous perspective on food systems and how it may be possible to leverage on the knowledge, expertise and vision of these communities to build food systems that are more equitable, more resilient to the changing climate and better contribute to their health and aspiration. Building on examples of climate resilient productive food systems, knowledge and practice that can improve climate adaptation, the session will focus on the constraints to implement and opportunities to scale these practices.

#### Authors and Partner organizations

Sandra Gagnon, IDRC

Pablo Pedro Pombosa, Universidad Intercultural de Nacionalidades y Pueblos Indígenas Amawtay Wasi

Maria Quispe, Promoción de la Sustentabilidad y Conocimientos Compartidos (PROSUCO)

Amada Vanneza, Chalparizan Universidad Nacional de Colombia

Renaud DePlaen, IDRC

Terrylynn Brant, Mohawk Seedkeeper Gardens





session 101

Room 520B Africa Pavilion Hybrid

Multiple Risks

#### A reality check on pastoralist livelihoods in East Africa - Exploring opportunities to support adaptation in the Horn of Africa

Around 20 million men and women pastoralists in the Horn of Africa depend on healthy rangelands for their livestock. From 2021 to early 2023, herders have been impacted by drought conditions, that was preceded by a locust plague that swept across most of the region. A regional crisis has now unfolded with dire consequences. The crisis was compounded by the outbreak of COVID-19 which affected access to cattle markets and rendered many more pastoralists vulnerable. A conservative estimate of animal loss suggests that 5-6 million animals valued at around US\$350 million have died in Somalia alone. Climate-related hazards combine with existing conflicts leading to deep insecurity for pastoralists, particularly women, as they are often displaced and lack any access to the most basic of health, education, and extension services.

This session will present the current state of pastoralists in the border regions of North-Western Kenya, Somalia and South Sudan. It will review research gaps and opportunities to support adaptation action. Relevant questions include: what are pastoralists doing to adapt to the current drought in East Africa? How are the combined challenges if high food/commodity prices and climate impacts being managed? What urgent action is required to support the humanitarian response and future adaptation in the region?

The format proposed is a facilitated roundtable (under Knowledge Exchange). This roundtable will include testimonials from pastoralists living and working in conflict zones in East Africa (visuals, quotes and short videos) and a discussion on failures, successes and opportunities related to adaptation support for pastoralists. We also welcome additional speakers proposed by the Adaptation Futures Secretariate that fit with the session theme.

#### Authors and Partner organizations

This session is proposed by Cowater International, in partnership with the FCDO and IDRC. SPARC is a partnership between Cowater International, ODI, Mercy Corps and the International Livestock Research Initiative.

Our proposed speakers include:

Joy Obando - Kenyatta University, Kenya

Muzzamil Abdi – SPARC, Somalia

Daniel Salau – Carleton University, Kenya

Heidi Braun - IDRC, Canada

Mark Redwood, Cowater International, Canada

Lucy Njuguna, International Livestock Research Institute

session 660

Room 520C Hybrid

**Adaptation Choices** 

## Indoor Heat: Risks and Solutions for a Warmer World

Extreme heat is one of the clearest and most deadly impacts of climate change. Most people who are impacted, are exposed to high temperatures indoors in their homes, workplaces, and other indoor places. Despite the substantial role indoor exposure has played in heat wave—related mortality, few epidemiological studies have examined the health effects of exposure to indoor heat. Knowledge gaps regarding indoor heat—health thresholds, vulnerability, and adaptive capacity persist and present important limitations for protective interventions and regulatory action. This session will bring together researchers and practitioners to discuss the state of research on topics related to indoor heat exposure with a focus on adaptation solutions in policy and practice.

This session will promote knowledge exchange and learning amongst a community of researchers and practitioners working on Indoor heat risks. The discussion will also be an input to an ongoing process to understand Indoor heat risks and solutions, policy and research gaps, and develop a toolkit to address one aspect of the issue initiated by Health Canada, The Global Heat Health Information Network, and the Red Cross Red Crescent Climate Centre.

#### Authors & Partner organizations

Julie Arrighi, Interim Director of the Red Cross Red Crescent Climate Centre Paddy Enright, Health Canada

Rosa Von Borries, Global Heat Health Information Network, WHO-WMO Joint Office

Joy Shumake-Guillemot, Global Heat Health Information Network, WHO-WMO Joint Office





#### session 607

## Room 520D Hybrid

Limits to Adaptation

This session is jointly organised by the United Nations University's Institute for Environment and Human Security (UNU-EHS) and Munich Re Foundation (MRF), in collaboration with the International Organisation for Migration (IOM).

Together, UNU-EHS and MRF are the lead organisers of the 2023 edition of the Climate Academy on the theme of community-led relocations – to be held in September 2023 – and on which this session will build.

## Equitable and inclusive community relocation practice: Preparing together for a measure of last resort

Relocations are often described as a last resort, a measure deployed only when adaptation in place is no longer feasible. Yet, when relocations are organized under extreme time pressure – in reaction to disasters – the relocation process risks being rushed, less inclusive and equitable. This can lead to highly negative outcomes for relocating communities. So, even if one's aim is to avoid relocation, it seems crucial to anticipate and evaluate relocation risks. This way, the relocation process can be pro-actively planned in an inclusive, context-appropriate manner, to maximise positive outcomes – should the need arise.

This tension leads to some fundamental questions. Under which conditions are relocations adaptive, or maladaptive? Can relocations be considered an adaptation measure, or do they more properly belong under loss & damages agendas, as a last resort when adaptation has failed?

This session will approach this overarching theme through the lens of relocation practice. Consequently, the session is looking for process-focused contributions on how relocations can be carried out in just, inclusive, and equitable ways. By "relocation processes", we mean all stages from anticipating relocation risk, decision-making (including the decision not to relocate), planning, implementation, and post-relocation assessments. At each stage, a key focus is on how communities are involved. Potential session contributions include but are not limited to the following issues:

- How can relocation processes centre local knowledges, including indigenous knowledges, at all stages of decision-making, planning, and implementation?
- How can responsibilities for relocation planning and implementation be defined, negotiated, and assigned to participating stakeholders?
- How can relocations processes account for and act on diverse viewpoints within communities – up to conflicting perspectives on whether to relocate or adapt in place?
- How can relocation processes avoid reproducing marginalisation of vulnerable communities/community members and reduce pre-existing inequalities?

#### Authors and Partner organizations

#### The session will be led by:

Dr. David Durand-Delacre, senior researcher in the Environment and Migration: Interactions and Choices (EMIC) section at UNU-EHS

Dr. Himanshu Shekhar, of the Vulnerability Assessment, Risk Management & Adaptive Planning Section (VARMAP) at UNU-EHS

With support from colleagues Lisa Thalheimer, Claudia Fry, and Kees van der Geest (UNU-EHS), Koko Warner (IOM) and Christian Barthelt (MRF).

session 406

Room 520E Hybrid

Teaching & Learning

# Learning to work together: Principles and practices for collaborations with Indigenous and rural peoples to advance adaptation

This session invites participants to explore emerging practices that could advance transdisciplinary approaches to teaching and learning about adaptation. It will be structured as a knowledge exchange in two parts conducted in succession. Outcomes of the session will contribute to a growing community of practice that aims to strengthen the Living Framework to Guide Transdisciplinary Sustainability Researchers.

#### Authors and Partner organizations

#### Panel #1

UNESCO Co-Chairs in Biocultural Diversity, Sustainability, Reconciliation, and Renewal, Drs Maureen Reed and James Robson

#### Panel #2

Indigenous and other adaptation specialists from Canada and the Global south.

Panelists will include all or some of the following pending in-person ability or virtual presence

- Laura S. Lynes, LLM, the Resilience Institute (confirmed)
- Noreen Plain Eagle, Piikani First Nation (confirmed)
- Ighsaan Samuels, PhD, South African Agriculture Research Council (confirmed)
- Mmoto Masubelele, PhD, South African National Parks (tentative)
- Gabriela Lichtenstein, PhD, Argentina National Research Council (tentative)





session 649

Room 520F Hybrid

**Adaptation Choices** 

Shaping the future of adaptation monitoring, evaluation, and learning: New insights, tools, and opportunities for overcoming challenges and constraints

December 2023 marks the end of the first global stocktake, the mechanism established to assess progress towards the long-term goals of the Paris Agreement. Monitoring evaluation, and learning (MEL) of adaptation action is fundamental to create the evidence needed to develop effective adaptation action and for informing national adaptation planning, as well as to hold all actors responsible for adaptation commitments. However, it remains methodologically and practically challenging. In many countries, MEL of adaptation action is still in its infancy. Against this background, assessing collective progress on adaptation at the global level is a huge challenge

#### Authors and Partner organizations

UNFCCC Adaptation Committee NAP Global Network OECD









session 860

Room 519B

Governance & Finance

# Assessing climate risks: What is missing and what can be done to enhance knowledge and institutional capacities in the global south

Advancing on adaptation policies and implementation demands adequate knowledge and capacities. As we look towards inclusive adaptation governance and finance it is paramount to understand what are the gaps in terms of capacities and knowledge that hinder participatory adaptation planning and implementation. Understanding knowledge needs and gaps is also key for meeting the objectives of the Paris Agreement and the NDCs implementation. For the Paris Committee on Capacity-Building (PCCB), developing countries need to enhance and count on the assessment of needs and gaps in order to increase ambition and meet the commitment under the UNFCCC. Although it has not been an easy task, assessing capacity building is necessary to understand the local context in order to put in place coherent objectives, create solid and strong proposals, to enhance access to finance, and avoid maladaptation.

This session aims to discuss the findings of a multi-country research about knowledge and capacity needs and gaps on the issue of «assessing impacts, vulnerabilities and risks of climate change, with an emphasis on gender» in the agricultural, coastal marine area, water and tourism sectors. The session also aims to deliver recommendations for research and action. The discussion will be guided by the research findings and driven by the question «What are opportunities to transform institutional capacities on adaptation planning, especially on assessing impacts, vulnerabilities and risks?». The topic contributes directly to theme 8 (Inclusive adaptation governance and finance: how do we get there?) proposed by the conference.

#### Authors and Partner organizations

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Partners: Fundación Avina, FLACSO Ecuador, United Nations University (UNU-ViE), International Development Research Centre (IDRC)



session 284

Room 518B

Teaching & Learning

# Culture and heritage-based education, training and capacity building for climate change adaptation

Culture and cultural heritage are recognised as helping shift mindsets and opening up new political horizons needed for driving sustainable climate adaptation. However, their integration into climate science and education has received limited attention. Given diverse local circumstances and priorities, existing education, training, and capacity building efforts that bridge culture and climate science have been fragmented, project-oriented and works-in-progress, to address varied emerging needs and challenges.

This session will share and discuss new and diverse educational programs and pedagogical approaches exploring integrative knowledge areas that include cultural heritage resources, such as material cultural heritage, practices and traditions, and indigenous and local knowledge that contribute to sustainable climate adaptation. It will allow the exchange of knowledge and experience on supportive multi-, inter-, and transdisciplinary learning through effective and inclusive partnerships to address cross-cutting issues and innovative pedagogical approaches.

Culture and heritage can act as catalysts for positive transformational change by connecting people to places, encouraging a sense of place and belonging, and fostering social inclusion, while accommodating integrative knowledge systems and ontological pluralism. Thus, culture and heritage can serve as powerful resources for deepening our collective knowledge, opening new creative solutions in tackling the impacts of climate change and contributing to transformational pathways.

The Paris Agreement highlighted the importance of capacity building, yet it is challenging to accommodate teaching and learning activities that are multi- and transdisciplinary, inclusive and holistic in approach in traditional high-education models. It is essential to strengthen synergies between culture and science, to advance their mutual roles in education and capacity building for climate change adaptation.

This session targets actors involved in education and capacity building for climate change adaptation across culture, heritage and the sciences, to facilitate dialogue and networking, foster knowledge exchange, experiences and practices, and innovative methods and tools that incorporate culture and heritage into teaching and learning. Professionals, administrators, policymakers, experts, academia, institutions, knowledge keepers and non-governmental organizations are invited to bring expertise from multiple scientific areas, together with the arts and humanities to share methodologies, and foster an iterative and dynamic process of mutual learning.

#### Authors and Partner organizations

#### **Session Organizers:**

Deniz Ikiz Kaya, Eindhoven University of Technology (NL) - Susan Ross, Carleton University (CA) - Paloma Guzman, Norwegian Institute for Cultural Heritage Research (NO) - Claudine Déom, Université de Montréal (CA)

#### Speakers:

Prathijna Poonacha Kodira, Indian Institute for Human Settlements, Bengaluru, India - Ernenek Duran, One Drop, Montreal, Canada - Johanna Nalau, Griffith University, Brisbane, Australia - Manel Djemel, Université de Montréal, Montreal, Canada

### session 981

Room 518C

Nature-based solutions

### Measuring performance of NBS

Nature-Based Solutions (NBS) are increasingly seen as critical tools in addressing climate change. This session will provide an overview of several initiatives that are aiming to evaluate and monitor the effectiveness of NBS for adaptation measures at multiple scales across different sectors and regions around the world, including:

Nature-Based Solutions for Adaptation: An assessment of USAID's Recent Investments – provides insight of a range of issues that inform both policy and practice of supporting NBS for adaptation in developing countries. This includes issues related to understanding the value of nature for climate adaptation; strengthening the adaptation impact from existing NBS initiatives; identifying appropriate metrics; and catalyzing investment in NBS for adaptation.

Nature-Based Equity: An Assessment of the Public Health Impacts of Green Infrastructure in Ontario, Canada – identifies essential considerations for implementing NBS in communities to address key public health issues including social isolation and food insecurity; recognizes gaps and challenges in green infrastructure implementation to current public health practice and policy; and describes the implementation and impact of publicly accessible green infrastructure to promote and protect the health of vulnerable populations.

Complementary Ideas for the Implementation of Nature-Based Solutions for Climate Change Adaptation – based on a scientific study published at the Journal of Environment & Policy, explores the implementation gap between theoretical frameworks of NBS and current NBS interventions. It targets climate change adaptation and how to prevent maldaptation practices, greenwashing, and confusion.

**How to Make Commitment to Nature a Reality** – covers the planning machinery and funding instruments in the Basque Country, together with three examples of NBS projects to tackle various climate hazards, implemented in municipalities of different types and at different scales of implementation.

Nature-based Solutions and evidence-based management in protected areas: A Parks Canada perspective – provides an overview of how Parks Canada is addressing climate change, focusing both on measuring the performance of protected areas for climate change mitigation and the effectiveness of adaptation measures within our park boundaries.

Are Urban Nature-Based Solutions to Climate Adaptation Addressing the Climate-Biodiversity-Society Nexus, and What Makes Good Information to Assess their Progress? An Analysis of 216 Nature-Based Solutions Across the World – aims to assess the degree to which NBS for adaptation have contributed to promoting transformative change across 130 cities world-wide and explore what makes good information to evaluate their progress.

### Authors and Partner organizations

**Chair and Moderator:** Laniel Bateman, Director, Climate Change Adaptation Policy, Environment and Climate Change Canada

**Speakers:** Laura M. Hammett, Adaptation Lead, USAID Climate Adaptation Support Activity (CASA)

Vidya Anderson, Adjunct Professor, Department of Physical & Environmental Sciences, University of Toronto Scarborough.

Diego Portugal Del Pino, Associate Programme Officer on Climate Change Adaptation and Green Works at the ITC ILO

Adolfo Uriarte, Director of Natural Heritage and Climate Change, Vice Ministry of Environmental Sustainability, Basque Government

Chelsea Chisholm, Ecosystem Scientist, Climate Change Science & Advisory Team, Parks Canada

Sean Goodwin, Researcher and PhD Candidate, Basque Centre for Climate Change (BC3) and the University of Almería (Spain)





session 641

Room 523

Adaptation Choices

Building the business case for adaptation: The impacts of recent extreme weather events on Canada's agriculture and food sector and Learning from our experiences

Canada's climate is rapidly changing and changes are projected to intensify. Canadian producers and our agriculture and food sector are already experiencing the impacts of a changing climate and is regarded as one of the sectors most impacted by climate change. Warmer temperatures, shifting precipitation patterns, and an increase in the frequency and severity of extreme weather events (e.g. droughts, floods, hurricanes) will increase current challenges on productivity and profitability, and create new ones, such as increased crop and livestock loss, incidence of pests and diseases, and increased risk of supply chain disruptions. Additionally, the sector's sensitivity and susceptibility to climate change can have wide-ranging effects on Canadian society, including the health and wellbeing, domestic and global food security, a thriving natural environment, and the long-term economic viability of rural communities.

Adapting to climate change is about preparing for the current and future impacts of climate change. It involves changing our activities and decisions so that we reduce the negative impacts of climate change, while taking advantage of opportunities and become more resilient. While adaptation efforts have occurred, recent climate disasters illustrate the need for more proactive and ambitious short-term and transformational adaptation action to address climate risks, improve the sector's adaptive capacity, and enhance its climate resilience.

Agriculture and Agri-Food Canada (AAFC) will invite diverse sector partners to engage in a panel discussion to share how recent climate impacts have impacted their operations and livelihoods, such as the impacts of extreme weather events (e.g. flood, drought, hurricanes), identify lessons learned, and explore avenues for putting lessons learned into practice in order to advance adaptation efforts of the sector. By understanding the impacts and lessons learned from recent extreme weather events on agriculture and food systems, as well as what is needed to improve the sector's adaptive capacity, the agriculture sector will be better equipped to prepare for, mitigate, respond to, and recover from hazards, risks, and consequences of disasters linked to climate change.

### Authors and Partner organizations

**Lead:** Agriculture and Agri-Food Canada (AAFC) **Partners:** Union Des Producteurs Agricoles (UPA)

session 691

**Room 522** 

**Adaptation Choices** 

**Knowledge Co-production session** 

### The future of maladaptation research and implementation

The IPCC's Working Group II recently concluded that at least 170 of 195 nations have included adaptation in their climate policies and planning processes, and that many planed actions are already implemented. Done right, adaptation efforts could soften the blow on billions of lives. Done wrong, they could lead to maladaptation, wasting time and money while leaving people as much or more vulnerable than before (Schipper, 2020). Maladaptation however is a tricky outcome to prevent as we don't usually know about it until it has already materialised.

This is made more difficult because the scientific community has a poor understanding of what successful adaptation looks like (Dilling et al., 2019. While the scientific community has some knowledge of what shapes and limits adaptation, understanding of maladaptation has potentially peaked at identifying the possible drivers of maladaptation. But how can we advance the science to prevent maladaptation and identify it in real time? How can practitioners use this concept?

This session asks how we can advance our understanding of maladaptation so that it can be useful for practitioners.

Questions of relevance include:

- How can we best advance the topic of maladaptation in science?
- How has the knowledge of maladaptation been integrated into adaptation planning?
- Will the risk of maladaptation potentially prevent funders to reduce adaptation action?
- What are the effects of maladaptation in adaptation outcomes?
- How has knowledge of maladaptation influenced the role of vulnerable actors?
- Has maladaptation knowledge made an impact on how we deal with adaptation?

### Authors and Partner organizations

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### session 730

### **Room 525**

Equity & Justice

Panelists and participants will then engage in discussion on what this means for implementing Canada's NAS, focusing on the following questions:

What additional evidence is needed to inform inclusive, equitable and Indigenous rights-based NAS implementation?

What processes and/or mechanisms must be put in place to ensure that NAS implementation meets the needs of all Canadians, particularly the most vulnerable to climate change?

What tools and approaches are needed to track progress on the equity, justice, and Indigenous rights elements of NAS implementation?

# Advancing equity, justice, and Indigenous rights in adaptation through Canada's National Adaptation Strategy - What is required for success?

Canada has committed to advancing equity and environmental justice, as well as upholding Indigenous rights, through implementation of its National Adaptation Strategy (NAS). This commitment is in line with the latest assessment report from the Intergovernmental Panel on Climate Change (IPCC) (2022), which found with high confidence that vulnerability to climate change is exacerbated by inequities arising from discrimination of the basis of gender and ethnicity, among other factors, and that this is particularly the case for Indigenous Peoples and local communities. The IPCC also asserts that "inclusive governance that prioritizes equity and justice in adaptation planning and implementation leads to more effective and sustainable adaptation outcomes" (IPCC, 2022, p. 28). Canada has an opportunity to be a leader in this area, but this relies on the processes and governance structures created to implement the NAS, as well as the outcomes that result.

This knowledge exchange session will explore different perspectives on the social dimensions of adaptation in Canada, addressing intersectional factors including gender, disability, and Indigeneity. It is organized by the International Institute for Sustainable Development (IISD), in partnership with the Disability-Inclusive Climate Action Research Programme (DICARP) at McGill University and the Community Engagement and Research Centre at the University of Regina.

The session will be organized as a roundtable discussion. Following a brief framing presentation by IISD, three speakers will set the stage for the discussion through five-minute interventions that illustrate the differentiated impacts of climate change on different groups in Canada and discuss the key principles that inform an inclusive, equitable, and Indigenous rights-based approach to adaptation.

### Authors and Partner organizations

Anne Hammill, Senior Director, Resilience, International Institute for Sustainable Development (IISD) (Moderator)

Angie Dazé, Gender Equality and Social Inclusion Lead, Resilience, International Institute for Sustainable Development (IISD) (Framing Presentation)

Dr. Amber Fletcher - Associate Professor; Academic Director, Community Engagement and Research Centre, University of Regina

Dr. Sébastien Jodoin - Associate Professor, Canada Research Chair in Human Rights, Health, and the Environment  $\boldsymbol{\vartheta}$ 

Director of the Disability-Inclusive Climate Action Research Programme (DICARP), McGill University, Faculty of Law

Dr. Graeme Reed - Senior Policy Advisor, Assembly of First Nations

### session 685

### Room 524A Collaborative

**Adaptation Choices** 

## Critical self-reflection, positionality and transformation: A focus on adaptation action

The IPCC 6<sup>th</sup> Assessment Report sounded the warning that we have a brief and rapidly closing window to secure a liveable future in the context of climate change (IPCC, 2022). In the political arena discussions on loss and damage are ramping up, together with discussion on the limits to adaptation (Berkhout and Dow, 2022). The need for transformation is thus ever more pressing. But much of the focus on transformation has focused on objective and technical understandings of definitions of problems, and framing through particular, usually positivist knowledge systems. Another route to transformation can come subjectively from how we perceive issues.

In this session, we aim to give people within the adaptation community the opportunity to step back and critically examine and analyse (a) their own positionality in the adaptation climate space and (b) critically interrogate how this is influenced by (often implicit) assumptions about how change happens. Building on work from others (e.g. O'Brien, 2021) the aim is that greater self-reflection and humility can lead to transformations in perspectives that can then translate into innovations in the way that we collectively define, frame challenges and promote adaptation action.

To do this, we will facilitate a workshop-style session in which participants have the time and space to critically observe and reflect on their past work, identify the lenses through which they (perhaps unknowingly) approached this work, and actively consider how this knowledge might inform and shape current and future work. This is likely to raise issues around how individuals and organisations shape and respond to the configurations of the adaptation space, and the role of ethics, politics, justice and morality, among others. To stimulate the process, the organisers will give a brief overview of some of the recent work highlighting human agency in transformation, and work through some examples, illustrated by guests from the global North and South (TBC depending on confirmed attendance). Sequenced questions will then be used in a facilitated session for participants to work through individually, with the opportunity to share with the group at the end of each stage if they feel comfortable

### Authors and Partner organizations

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### session 933

### Room 524B Collaborative

Teaching & Learning

# Advancing digital climate adaptation platforms to develop a climate-ready workforce

In Canada, the launch of the National Adaptation Strategy, as well as other sub-national policies, are likely to catalyze climate adaptation actions, each of which may include a complex web of actors from Indigenous, federal, provincial, territorial and local governments and the private sector. While the understanding of climate impacts is improving, the achievement of ambitious targets and goals outlined in recent strategies requires a scaling up of adaptation capacity and collaboration across a range of sectors. To meet this need, practitioners in the workforce who are well-positioned to support adaptation implementation must be able to efficiently find relevant training and educational opportunities, identify partners and peers, and quickly navigate the many websites offering information.

The focus of this Knowledge Co-production session is on the evolution of digital Climate Adaptation Platforms (CAP) and how to better fund, sustain, and position these platforms to drive access to education and training, facilitate effective peer-to-peer networks, support knowledge-brokering, and provide other key services and support.

The session will open with a series of lightning talks by the session authors Resilience by Design Lab and Climate Risk Institute, as well as each of the identified session partners. These presentations will provide an overview of the characteristics of a set of international CAPs, including key features, functionality and reflect on strengths and lessons. The session will then move to a knowledge café format to engage participants in a series of structured knowledge-generating discussions across 5-7 main themes.

### Authors and Partner organizations

#### **Authoring Organizations**

Climate Risk Institute.

- Cobb, P., Manager, Training Services.
- Sanders, C., Manager, Engagement and Communications
- Sparling, E. Vice President

Resilience by Design Lab, Royal Roads University.

- Cox, R., Professor and Director.
- Forssman, V., Program Manager.

#### **Partner Organizations**

Bharwani, S., Senior Research Fellow and weADAPT Coordinator, Stockholm Environment Institute.

Jacobson, R., American Society Adaptation Professionals.

Camara, Ana-Carolina., GIZ-Brazil / ProAdapta.

### session 928

### Room 524C Collaborative

Adaptation Choices

### Deliberating climate adaptation approaches to overcome challenges and build socio-ecological resilience: a practitioners' workshop

The interwoven socio-ecological nature of adapting to the compounding risks associated with climate change necessitates practitioners to develop diverse solutions that span national and local levels. Rising temperatures, sea level rise, droughts, floods, and biodiversity collapse associated with climate change and rising resource extraction and development pressures, among many other issues, are affecting populations and ecosystems globally. However, adaptation and conservation solutions that work for one region may prove to be maladaptive for another if they are not contextualized to the local context.

### Authors and Partner organizations

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Shail Joshi, Senior Program Officer—Nature-based Adaptation Solutions





### session 674

### Room 520A LAC Pavilion Hybrid

Indigenous Knowledge

The participants should understand the life experience of indigenous peoples regarding CC adaptation and how they become resilient. Alliances will be forged and joint tasks will be agreed to incentive interaction and joint advocacy so that the contributions and leadership of indigenous women aimed at the fulfillment of global CC goals and the conservation of biodiversity, are evident. Participants will be sensitized and committed to the conservation efforts of indigenous women, whose rights and ways of life are threatened by lack of information on CC and the devalorization of their traditional life systems.

### Shared wisdoms: a joint dialogue on the contributions of Chiquitano women in Bolivia and Cree communities in Canada to the global goals on climate change (CC) and the conservation of biodiversity

Though indigenous peoples' significantly contribute to the preservation of forests, the brunt of the negative impact of CC is heavier on them. As a result, indigenous women and youth see their workload and exposure to gender based violence (GBV) increased, and their livelihoods affected . Floods, droughts, wildfires, plagues and new diseases, are some of the issues to which they have to adapt.

In Chiquitania, in Bolivia, indigenous women and youth currently lead innovative initiatives for the processing of non-timber resources that preserve their ecosystem and generate income. The processing of honey from native bees rescued from wildfires is restoring the integrality and functionality of their forest. This and other initiatives help reduce deforestation, and improve the quality of life and the position of women within their communities. As their sustainable activities grow, women acquire new skills, they gain recognition as leaders, demand the fulfillment of their rights, and question the patriarchal system that makes them invisible and ignores their needs.

In Canada, Indigenous partners aim to achieve self-identified food sovereignty goals, addressing the underlying issues impacting their ability to respond to their own needs for healthy, culturally adapted Indigenous foods. Addressing CC, Food Forests in Saskatchewan  $\theta$  Alberta aspire to transform food systems in a holistic way. Through small-scale agroecology, the Cree communities are working to create systems that will sustain not only for the present, but for future generations.

Within the framework of UNDRIP, the event will foster the sharing of wisdom and dialogue on how indigenous peoples; particularly, indigenous women in Bolivia and Canada, adapt and become more resilient to CC. The dialogue proposed is based on a joint reflection of their contributions, and the challenges they face in the fulfillment of global CC goals and the preservation of biodiversity.

The event starts with the testimonies of two indigenous women: one from Canada and one from Bolivia. In their own words, they will share their experience and make evident the issues that either limit or foster their capacity to adapt. Their testimonies will be followed by two technical presentations, by Patricia Patiño from APCOB, and Sydney Richards from CFTC. A World Café Session involving the audience and a technical panel will afterwards reflect on the questions and dilemmas raised. IT tools will be used to foster the active engagement of the public during the panel discussion. Finally, the audience will participate in a short but meaningful ceremony aimed at consolidating a shared vision for the future.

### Authors and Partner organizations

Authors: Patricia Patiño and Marcela Vallejos (CECI); Sydney Richards(CFTC)

**Partners:** Apoyo al Campesino Indígena Boliviano (APCOB); Representatives of the Chiquitano people in the Lomerio, Monte Verde and Zapocó; Beardy's & Samp; Okemasis Cree Nation; Ahtahkakoop Cree Nation.

### session 968

Room 520B Africa Pavilion Hybrid

Adaptation Choices

# The role of local and indigenous knowledge systems in climate change adaptation: Case studies

Despite increasing recognition of the importance of indigenous knowledge in achieving climate change resilience when designing and implementing interventions, indigenous knowledge and approaches are sometimes underemphasized and yet their integration presents fertile ground for community-based and driven climate adaptation and mitigation. The session will explore case studies from Southern Africa, Nigeria, Kenya and Algeria.

### **Authors and Partner organizations**

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session 704

Room 520C Hybrid

Equity & Justice

## Catalysing adaptation through early career research: Needs, experiences, futures

The depth and breadth of adaptation-related research is at unprecedented levels, demonstrated by the weight of evidence synthesised by the recent IPCC sixth assessment report. The opportunities for early career researchers (ECRs) have expanded accordingly and significant numbers of ECRs are expected to be attending the AF2023 conference.

ECRs face a range of barriers and challenges across all subjects, but these are exacerbated in the context of adaptation in at least three key areas. Firstly, adaptation science requires researchers to look outside as well as within adaptation scholarship and recognise the interdisciplinary nature of research contexts (Hein et al., 2018). Second, research institutions in the most vulnerable areas and populations are often the most resource constrained and southern ECR's are typically more isolated compared with their contemporaries in the north (Vincent & Cundill, 2022) leading to research gaps and research capacity deficits being filled by researchers external to those places and contexts (Mustelin et al., 2013). And third, the negative equity and justice aspects of adaptation science scholarship that disadvantage ECRs in resource-constrained contexts (Schipper et al. 2020). Yet, ECRs are commonly at the cutting-edge of adaptation science and often have often key insights that could progress the field forward. Hence, closer collaboration and dialogue with and within ECRs is needed to explore both the constraints and barriers they face, and the opportunities and insights that they have in developing the future field of adaptation science.

### Authors and Partner organizations

#### Moderators

Thomas Tanner (SOAS University of London, UK) Blane Harvey (McGill University, Canada)

#### **Presenters**

Mzime Ndebele-Murisa (START Secretariat, Zimbabwe)

George Lakey (Association of Commonwealth Universities, UK) (online)

Estefania Arteaga (Griffith University, Australia)

Daniel Ugwu (David Umahi Federal University of Health Sciences, Nigeria (online))

Jon Padgham (START Secretariat, USA)

Other ECR participants TBC following Monday's academic writing masterclass

### session 829

Room 519A

**Adaptation Choices** 

### Innovating targets to erduce wildfire, flood & extreme heat risk in Canada

Canadians are already seeing and feeling the effects of our changing climate – including more frequent and intense floods, wildfires, hurricanes and hailstorms. 2022 was the third most costly year on record for climate-related disasters costing over \$3.1B in insured losses alone. Canada, like many countries, is becoming a riskier place to live, work and insure. In response to this threat, the Government of Canada introduced a National Adaptation Strategy (NAS) – the first of its kind in the country – that ingrains clear targets into a federal action plan that is to measure progress every five years.

Climate Proof Canada hailed the NAS as "a bold step forward by delivering a strategy with world-leading targets and clear goals that will drive necessary progress on adapting to the worst impacts of climate change."

The NAS draws on significant policy expertise from the advisory tables convened by the federal government, where Climate Proof Canada played a significant role. To drive progress the NAS proposes a national action plan, renewable every five years, with clear targets across the five strategy areas. The NAS establishes long-term transformational goals to address the widespread effects of climate change AND sets near-term targets to reduce disaster risk, specifically Canada's vulnerability and exposure to acute and rapidly intensifying severe weather.

National targets can help focus adaptation effort on disaster risk reduction. Awareness of the effects of climate change has been amplified in Canada by the recent floods, wildfires and heat waves that damaged critical infrastructure, destroyed personal property, claimed lives, and affected health and wellbeing.

### **Participants**

Climate Proof Canada is a coalition of Canadian business representatives, disaster relief organizations, municipalities, indigenous organizations, environmental NGOs, and think tanks that believes Canada must prepare for the present and growing effects of climate change through building a more disaster-resilient country.

Climate Proof Canada will be represented by Craig Stewart of Insurance Bureau of Canada as well as representatives from these member organizations:

- Canadian Red Cross
- Federation of Canadian Municipalities
- Canadian Association of Physicians for the Environment
- International Institute for Sustainable Development





### session 560

### Room 518A

Limits to Adaptation

Climate justice is central to formulating a clear assessment of the potential for planned relocation within a portfolio of sustainable and potentially progressive and transformative adaptations to climate change. We reflect on what this means for actions by different stakeholders, and what are the strengths and weaknesses of current policy frameworks in the context of justice for climate-induced planned relocation.

### Climate justice perspectives on planned relocation

Planned relocations are often deployed as a measure of last resort after in-place adaptation and resilience-building measures have been exhausted. But as climate change impacts become more frequent and intense, authorities and communities have increasingly been seeking to minimize harm to people living in unsafe places by moving them to areas with lower exposure. These recent relocations build on decades of development-related displacement, moving settlements and people to make way for urban development, dams and roads. These initiatives have, however, been widely shown to exacerbate inequalities, leading to unjust and uncertain outcomes among relocated communities without legitimate processes.

Processes of planned relocation raise questions about the scope of local and national governments' responsibility for helping people to move out of harm's way and settle in a safer location. Institutional responses at national level have been facilitating the movement of vulnerable populations out of at-risk areas, but there is an ongoing uncertainty as to whether these relocation practices do in fact promote equality, fairness and resilience in the affected communities.

In this session, we consider the process of planned relocation and issues of climate justice across stakeholder groups and consider government, media and resident framings and experience of relocation processes. Drawing on empirical studies, we explore the types of institutional and governance innovations required to move from relocation as ad hoc reactive solutions to anticipatory and managed adaptation strategies, we examine the role of the media in shaping discourses on planned relocation and we provide insights into policy design and implementation of planned relocation in response to environmental stressors. We present and put in dialogue case studies from both the Global North (Italy) and the Global South (Bangladesh and India) and focus on different drivers of relocation, including coastal and riverine flooding, coastal erosion and cyclones.

### Authors and Partner organizations

**Panel co-chairs:** Ricardo Safra de Campos (University of Exeter); Tara Quinn (Maynooth University)

**Discussant:** AR Siders (University of Delaware)

#### Presenters and talks

Tara Quinn (Maynooth University): Fair outcomes in planned relocation: insights from senses of place research

Elisa Calliari (International Institute for Applied Systems Analysis): Governing planned relocation in the context of flood risk: policy formation and implementation in Northern Italy

Nihal Ranjit (Indian Institute for Human Settlements): Media portrayals of cyclones and planned relocation in coastal India

Oana Stefancu (University of Exeter) & Ricardo Safra de Campos (University of Exeter): Just Planned Relocation in Bangladesh: disentangling policy, practice and multistakeholder perspectives

Tasneem Siddiqui (University of Dhaka and Refugee and Migratory Movements Research Unit): Planned Relocation in the National Action Plan of Bangladesh (2022-2042)

### session 152

Room 519B

Governance & Finance

# Valuation of climate impacts and extreme climate events in Canada: benefits, risks and how it incentivise and finance adaptation action

The goal of this knowledge exchange session is twofold: (1) to characterize the direct and indirect costs from climate change impacts and (2) to discuss possible solutions to incentivise and finance adaptation action. As climate induced extreme weather events rapidly increase in frequency and intensity and as slow onset climate changes progress and accelerate, impacts and costs will continue to grow. Policy makers need to better understand the costs of inaction and the benefits of adaptation to inform adaptation decision making. However, costing climate change impacts and adaptation benefits has limitations and risks—modelling is complex, data is scarce, uncertainty is high, and many costs and benefits cannot be quantified. Nonetheless, delaying adaptation decisions and investments while awaiting perfect information is not an option. The session will highlight important developments in the analysis of the costs and benefits of adaptation and their use in decision making and in funding models.

The speakers will present climate impacts and adaptation costing and economic analysis applications to infrastructure, real estate, human health, financial systems and national economies. They will also discuss mechanisms for incentivizing and financing adaptation that can be informed by better understanding of the costs of impacts and the benefits of adaptation.

### Authors and Partner organizations

Session master: Julien Bourque Canadian Climate Institute First speaker: Charles-Antoine Gosselin, WSP Canada Second speaker: Ryan Ness, Canadian Climate Institute

Third speaker: Dr. Jesse Gourevitch, Environmental Defence Fund (United States)

Fourth speaker: Jean-Philippe Meloche, Université de Montréal





### session 912

### Room 518B

Indigenous Knowledge

We will bring together leading researchers and practitioners from throughout the southwestern US and beyond to provide thought-provoking insight into each of the timely and highly relevant topics we will examine in this session.

### Indigenous adaptation leadership, action and research: Cultivating multilevel relationships and recognizing multidimensional sovereignty

Indigenous knowledge systems, such as traditional ecological knowledge, contain climate observations and adaptation strategies reaching back millennia. These include methods for caring for our natural ecosystems, resources and traditional cultures. Although Indigenous Peoples and Native Nations are on the front lines of climate change impacts, they are also leading the way in many innovative cultural-based adaptation actions, such as in drought resilient agriculture, integrated soil-water management practices, and burning practices. Cultural burning, a form of low-intensity understory-burning that is used to increase ecosystem and cultural resilience, is especially important for food and material availability that support traditional lifeways.

Fire has always been an important component of life for many North American Indigenous Peoples and across the globe. Traditional wisdom instructs that rather than suppressing fire, we should seek to have a good, respectful relationship with fire. Yet, during the century-long policy of fire suppression that contributed to the cascade of detrimental impacts on both ecosystems and people, Indigenous-led burning practices also were severely hindered. Reconciliation of these policies with traditional fire management requires building trust to foster knowledge development and exchange with Indigenous partners at various structural levels. Indigenous-led leadership is critical to facilitating a process across governance levels in support of policy changes.

At the same time, there is growing global recognition among researchers and resource managers of the value of Indigenous and local knowledges in leading and enhancing the human capacity to adapt to climate change. However, we face historical inequities that hinder cross-cultural knowledge exchange and innovation. This includes a tendency towards extractive research that accesses Indigenous knowledges without regarding Indigenous decision-making needs, sovereignty, or rights for self-determination.

### Authors and Partner organizations

Session Moderator and Facilitators: Carolyn A.F. Enquist (Session POC), Southwest Climate Adaptation Science Center (SW CASC), U.S. Geological Survey (USGS); Anissa McKenna, American Indian Higher Education Consortium, SW CASC Authors include SW CASC Principal Investigators and Associates: M. Adams, S. Carroll, S. Natonabah, N. Fontana, R. Goode, M. Johnson, D. Martinez, R. Martinez, B. Middleton-Manning, C. Oraftik, and others TBD (confirmations will be made should proposal be accepted)

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### session 971

### Room 518C

Nature-based solutions

### Shaping the future of Nature-based Solutions for Adaptation

Nature-based Solutions (NbS) encompass a broad range of policies and practices aimed at leveraging nature to address global and societal challenges through the protection, management, and restoration of ecosystems (Cohen-Shacham et al., 2019). However, there are many obstacles to the implementation and scalability of NbS to tackle issues such as climate change, food security, natural disasters, and biodiversity loss. These include addressing current knowledge and policy gaps, advancing effective governance and coordination, and ensuring equitable engagement and fair distribution of costs and benefits. NbS are fundamentally place-based, necessitating the engagement of all relevant stakeholders, including Indigenous Peoples and local communities (Seddon et al., 2021). Additionally, climate change threatens the health and functioning of ecosystems and could impair their ability to act as NbS in the future (Seddon et al., 2020). Integrating NbS into planning and decision-making processes is critical to ensure their long-term effectiveness in harnessing co-benefits for both people and nature.

To advance this important dialogue with this conservation community, Parks Canada's Climate Change Science & Advisory Team, within the Office of the Chief Ecosystem Scientist, proposes a knowledge-sharing session centered around 'Shaping the Future of Nature-based Solutions for Adaptation.' This session will bring together presenters from various organizations and institutions to share their experiences and insights from both theory and practice. The session will comprise a series of short presentations and end with a 30-minute panel discussion, focusing on identifying pathways forward to fully realizing the potential of NbS for the climate crisis and other global concerns. We aim to highlight the importance of inclusivity, equity, and engagement in the application of NbS to build a more sustainable and resilient future for our planet.

#### **Participants**

Parks Canada





### session 713

### Room 523

**Adaptation Choices** 

# Adaptive creation and disruptive reorientation: Food systems innovation for adaptation

Global campaigns, including AIM4Climate, ClimateShot, and Glasgow Agriculture Breakthrough, have brought together hundreds of stakeholders behind the need to innovate fast and differently to transform food systems under a changing climate. The innovation lever of the UN Food Systems Summit was a clear signal of the role of innovation.

But as the weighing of results of COP27 comes to an end, and the world turns to COP28 in the UAE, we must admit that our current innovation system is not delivering innovation at the scale and pace that we need to combat both climate change, nor its threats to our food system. Especially on adaptation, we need to make more happen, and urgently so. As highlighted in the IPCC 6th Assessment Report (WG II), current adaptation options will not deal with 2°C+ global temperatures.[1] Institutional, financial, and social bottlenecks limit the adaptation innovation we need. [2]

In this session, we will draw out key lessons around research and innovation for a food systems transformation, focussing on accelerating adaptive creation and disruptive reorientation in adaptation, linking it directly to the conference theme of "Time to innovate: Adapting Together." Building on those key lessons, the session will facilitate knowledge exchange by bringing together research and government, practitioners, civil society, private sector, international organizations, and foundations. As such, the session aims to identify examples and practical ideas for adaptive creation and disruptive reorientation in food systems innovation.

Essential to this exchange is a diverse and balanced group of experts, as well as plenty of time for open discussion. Hence, the format of the proposed session includes a brief context-setting presentation, highlighting the key opportunities for accelerating adaptation in food systems through innovation. This will be followed by a round of 'firestarter' pitches from experts on 'the most urgent actions/reorientation in innovation for accelerating adaptation', which will bring a mix in terms of gender, age and perspective. These will form the starting point for a roundtable to share experiences and ideas. We hope to emerge from this session with a recognition of the need for disruptive reorientation in food systems innovation, as well as some consensus around the three pitches.

### Authors and Partner organizations

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Jessica Fanzo, Columbia Climate School

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### session 498

### Room 522

Governance & Finance

### Strengthening supply chain resilience and risk ownership in the face of transboundary climate impacts on trade

Strengthening the climate resilience of supply chains has become subject of strong interest among governments and businesses across the world – particularly in the wake of the rising frequency and severity of extreme weather in recent years. However, addressing the complex and systemic risks from climate change is a difficult task as it requires close cooperation between value chain actors in local communities, businesses, public authorities, and scientific enterprise. While there is a growing body of evidence canvassing how countries around the world are exposed to the cross-border effects of climatic drivers, there remains significant knowledge gaps about the risk exposure, vulnerabilities and capabilities of governments and businesses to manage these risks. Moreover, comprehensive risk management strategies are largely absent and misguided maladaptation could exacerbate the consequences of climate change for vulnerable countries and people.

This session will draw on emerging and important insights from several areas of work on this subject, including GIZ and GEPA's work on the implications of climate change on fair-trade value chains and potential solutions of how to address them, the UN Global Compact Think Lab's work on just transition and supply chain resilience, and more in-depth assessments by the Irish Environmental Protection Agency, ICARUS and Maynooth University on transboundary climate risks and potential impact for Ireland. Together, the insights emerging from these findings provide a compelling overview of transboundary climate risks and their consequences on both global and local economies, as well as highlight the barriers and opportunities in time of pressing policy demands.

The session organisers invite participants to explore and discuss the interlinkages and shared risks for value chain actors, main barriers and potential opportunities and concrete approaches for solutions to climate-proof a supply chain.

### Authors and Partner organizations

Stockholm Environment Institute (SEI) / Adaptation Without Borders
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Global Shea Alliance

Irish Climate Change Advisory Council Secretariat and Irish Climate Analysis and Research UnitS (ICARUS) at Maynooth University





session 830

**Room 525** 

Equity & Justice

### Transformative adaptation: Navigating between rhetoric and reality

The IPCC defines transformational adaptation as, "adaptation that changes the fundamental attributes of a social-ecological system in anticipation of climate change and its impacts" (IPCC, 2022). The idea permeates the IPCC's approach toward the solution space for climate change, and pathways toward higher climate resilient development are based on a transformational approach to adaptation. But it is also clear that transformation is not an easy or even explicit choice (Schipper et al, 2020). This leaves policymakers to confront the question of how such a complex idea can actually be implemented.

Part of the difficulty is that there is no agreement on what transformative adaptation means or entails (Blythe et al., 2018), thus driving efforts to better define and implement it (Lonsdale, 2021). The relationship between incremental and transformative approaches has been paramount. Some scholars view transformative and incremental adaptation as two ends of a spectrum (Moser and Ekstrom, 2010; Thornton and Manasfi, 2010). Incremental and transformative adaptation may also alternate over a longer adaptation cycle (Park et al., 2012). Meanwhile, some scholars assert that transformative and incremental change are decoupled altogether, requiring a paradigm shift that dismantles systems of marginalization, exploitation, and oppression (Warner and Kuzdas, 2017). However, such conceptual advances remain theoretical without an examination of how transformative adaptation happens in practice.

A recent review of adaptation interventions concludes that "the overall transformative potential of adaptations documented in the academic literature across most global regions and sectors is low" (Berrang-Ford et al. 2021: 993). It also finds that most adaptations are incremental and thus unable to effectively address the root causes of vulnerability to climate change (Vermeulen et al. 2021, Singh et al. 2022). Transformation faces a number of practical barriers, including tokenism, uncertainty of climate impacts and adaptation benefits, path dependencies in governance systems, elites' resistance to change, high costs of transformational measures, a dominant focus on the short rather than medium term, and risk-aversion among marginalized groups and individuals who could potentially gain the most from transformation (Kates et al. 2023, de Rosa et al. 2022, Deubelli & Mechler 2021, Singh et al. 2022).

This knowledge-sharing session aims to synthesize scholarly, practitioner, and policy perspectives on transformative adaptation and aligns with the Conference Theme "Who wins, who loses, who decides: Equity & justice in adaptation." The four speakers seek to build on their research experiences in Latin America, Asia, and West Africa by inviting audience insights about the prospects and pitfalls of transformative adaptation. The session therefore divides time equally between oral presentations (45 minutes for three papers) and open dialogue between speakers and attendees (45 minutes). The papers provide empirical data, conceptual challenges, and pressing questions that will form the scaffolding for interaction among participants. Dr. Arame Tall, World Bank Senior Adaptation and Resilience Specialist, will facilitate discussion. We are enthusiastic to generate ideas among participants about examples of and opportunities for just transformative adaptation. The key outcome of the session will be documenting these cases and identifying important next steps for research and action on transformative adaptation.

### **Authors and Partner organizations**

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### session 506

### Room 524A Collaborative

**Adaptation Choices** 

### Unlocking Adaptation Analytics and Tools: Stocktake and What's ahead

In this session, AF2023 participants will discuss the tools that we have, the ones we need, and the channels available to make what we know about adaptation more easily available for global, national, and local decision-making. The event will be divided into two blocs. The first bloc will present a set of tools that successfully bridge scientific developments with end users. The second one will compile other examples provided by participants, as well as questions that need to be prioritized in adaptation research and ways in which both can inform ongoing global processes. The workshop will be held in a hybrid format, with options for speakers and participants to join the room via Zoom or similar platforms and engage on discussion tables through Miro.

The context for this session is that while scientific and economic understanding of adaptation has significantly increased in the last decade, the accessibility and usability of this knowledge are still limited and unequal worldwide. Over 50% of all adaptation-related academic publications were made after 2016, with growing literature referencing resilience, vulnerability, and disaster risk reduction (Nalau & Verrall, 2021). Much of this work is reflected in the WGII-AR6, which showcases a series of innovations in assessing, addressing, and monitoring adaptation needs and solutions (IPCC, 2022). However, such innovations are often not incorporated into decision-making support tools that are accessible and scalable to national and subnational authorities. Translating knowledge into practical tools is important for the capacity building and technology transfer requests from developing countries (UNFCCC - Standing Committee on Finance , 2021), including supporting the formulation of NAPs (UNFCCC LDC EXPERT GROUP, 2022) and the adaptation sections of NDCs.

### Authors and Partner organizations

This session is organized by UNU-EHS (United Nations University – Institute for Environment and Human Safety), SOAS University of London , WRI (World Resources Institute), the African Climate & Development Institute at the University of Cape Town, and MCII (the Munich Climate Insurance Initiative). The specific authors will be confirmed upon acceptance.





### session 39

### Room 524B Collaborative

Indigenous Knowledge

Moderator: Fiona Warren, Knowledge Assessment Manager at Natural Resources Canada

# Incorporating Indigenous knowledge in assessments of climate change impacts and adaptation

International and national assessments on climate change impacts and adaptation have conventionally drawn primarily from scientific and peer-reviewed literature. In recent years, significant efforts have been made to expand the knowledge base that assessments draw from to include broader forms of knowledge, including Indigenous Knowledge.

Approaches have included delivering training to author teams early in the process; engaging Indigenous scholars as authors and reviewers; highlighting examples and case studies of Indigenous-led adaptation initiatives; and developing entire sections, chapters, and/or reports focused exclusively on Indigenous Knowledge and perspectives with respect to climate change impacts and adaptation.

While these approaches have improved the inclusion of Indigenous Knowledge in assessments, it is important to take stock of lessons learned in terms of what worked well and what could be improved.

- Different approaches that have been used to incorporate Indigenous Knowledge into recent national and international assessments, including Canada's latest National Assessment, the Fifth U.S. National Assessment, and the IPCC's Sixth Assessment Reports;
- Experiences, perspectives, and lessons learned from authors and others involved in recent national and international assessments; and
- Co-generating new ideas and approaches that could be considered for future assessments.

#### Authors, Discussants, PO and Contributors

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### session 115

### Room 524C Collaborative

Adaptation Choices

# Scaling Up the Implementation of Community-Based Adaptation: Enablers and the way forward

Join us for a dynamic and impactful knowledge co-production session on scaling up Community-Based Adaptation (CBA), a critical strategy for building resilience to climate change. This session, organized by CARE, FANRPAN, IISD and IUCN, is a unique opportunity for you to actively contribute to the future of CBA initiatives and to help shape the "CBA SCALE Southern Africa+" project, a major initiative for Southern Africa, funded by the International Climate Initiative of the German government.

#### Background:

Community-based adaptation (CBA) is gaining prominence as a critical strategy for building resilience to climate change. The Intergovernmental Panel on Climate Change's (IPCC) 2022 report recognizes the potential of CBA when it's thoughtfully designed, contextually sensitive, and inclusive of marginalized groups. In addition, more than 100 diverse organizations, including governments and think tanks, have endorsed the Principles for Locally Led Adaptation, further encouraging the adoption of CBA.

#### Challenges:

Despite the momentum, widespread implementation of CBA remains a challenge. Many initiatives operate on a small scale, providing local benefits but lacking the structure for sustained implementation. Bridging the gap between national policies and community realities remains a major hurdle. Subnational governments, as critical intermediaries, often lack the resources to facilitate climate-resilient community development.

#### Our session:

Our ninety-minute session on collaborative knowledge co-production will explore catalysts for scaling up CBA using an inclusive, gender responsive, and nature-based approach. We invite you to actively engage in discussions around key issues such as governance mechanisms, gender equality and social inclusion, and documentation of CBA at the local level to inform national level actions. The session will use a knowledge café format to facilitate discussions and share insights.

Expected outcomes include a deeper understanding of enabling factors for CBA implementation at scale and practical strategies to achieve them.

The session will be facilitated by Stefan Mielke (CARE Germany) and Angie Dazé (IISD).

### Authors and Partner organizations

#### Lead organisation:

**CARE Germany** 

#### Partner organisations:

Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN)

International Institute for Sustainable Development (IISD)

International Union for Conservation of Nature (IUCN)





### session 752

### Room 520A LAC Pavilion Hybrid

Governance & Finance

# Climate risk and vulnerabilities assessments for adaptation planning: Practical approaches and lessons learned from Latin America and the Caribbean

The National Adaptation Plan (NAP) initiatives seek to identify medium and long-term adaptation needs, informed by the latest climate data and research. Climate risk and vulnerabilities assessments are key factors to reduce vulnerability by building adaptive capacity and resilience. Countries utilize the NAP to develop, update or improve the adaptation elements of their planning instruments (at national and subnational levels). In Latin America and the Caribbean, the UN Environment supports the implementation of the NAP projects in Costa Rica, the Dominican Republic and Honduras. In these countries, climate risk assessments are performed and once vulnerabilities to climate change have been identified, the NAP process develops strategies to address them. However, integrating the results of these assessments into new and existing policies, especially development strategies, is a difficult challenge to address. This is particularly noticeable when translating risk information to vulnerable communities and populations and stakeholders.

To overcome this challenge, different perspectives and spatial and temporal scales will be discussed from the experience of the NAPs in Costa Rica, Dominican Republic and Honduras. These NAPs have worked at the subnational level (Costa Rica), promoted the updating of public policies at the national level (Dominican Republic) and supported the development of the conceptual framework of the adaptation architecture (Honduras). These experiences allow discussion of the effective applicability of risk and vulnerability assessments. This includes determining what factors enable or hinder the inclusion of risk assessment in planning instruments. In particular, the integral consideration of disaster risk reduction strategies and national adaptation objectives is discussed.

The outcome for this session is a knowledge exchange originating from various experiences, driven by different factors and contexts, to collectively formulate innovative ideas which guide policy makers, practitioners and researchers on how to make climate change adaptation efforts effective, inclusive and adaptive themselves, taking into account the multiple aspects that inform climate risk management. Technical resources, capacity building and research needs will be proposed to ensure a transformative approach to adaptation.

### **Authors and Partner organizations**

NAP Costa Rica
NAP Dominican Republic
NAP Honduras
United Nations Environment Programme and Green Climate Fund

### session 969

### Room 520B Africa Pavilion Hybrid

Indigenous Knowledge

# Sectoral and placed-based adaptation challenges and solutions in South Africa, Ghana, Kenya, Senegal and Benin.

This session looks at adaptation challenges from a variety of entry points, including the development of an adaptation plan for the fisheries sector in St-Louis, Senegal, the design of approaches to deal with critical drought periods in the Sahel, and choice of adaptation strategies for rice producers in Benin. Ensuring that the voices and needs of marginalized people are acknowledged is a theme that runs throughout the session, as well the need to identify lessons that could lead toward more equitable and transformative future adaptation projects.

### Authors and Partner organizations

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### session 778

### Room 520C Hybrid

Equity & Justice

# Personal-political climate change vulnerability: A knowledge exchange about lived experiences of vulnerability

Vulnerability – defined as the susceptibility to or capacity to cope with the adverse effects of climate change - is one of the core components that determines the severity of risks. It is also a critical concept for understanding the uneven impacts of climate change and identifying effective responses to these impacts such as adaptation initiatives (Adger 2006). Thus, how vulnerability is conceptualized and measured determines which adaptation interventions are viable, where they are implemented, and for whom (Huq and Burton 2003; O'Brien et al. 2007) with major implications for communities on the frontlines of global change.

Currently, understandings of vulnerability are often limited to discrete, quantifiable, and externally defined biophysical and socio-economic variables, which privilege externally-determined theories of vulnerabilities and more technocratic assessments (Eriksen et al. 2021; Mills-Novoa et al. 2020; Goldman, Turner, and Daly 2018). By contrast, the emerging concept of personal-political vulnerability recentres the experiences of affected communities and individuals, focusing on peoples' everyday lived personal, emotional, existential and spiritual experiences of climate change vulnerability (Eriksen 2022).

In this knowledge exchange session, we will bring together scientists, practitioners, and policymakers to explore more embodied, relational, and compassionate understandings of climate change vulnerability and the potential for these understandings to generate more transformative adaptation.

### Authors and Partner organizations

#### Chairs:

Siri Eriksen, Norwegian University of Life Sciences, Norway Elisabeth Gilmore, Carleton University, Canada Megan Mills-Novoa, University of California, Berkeley, US

#### Panelists:

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Michael Mikulewicz, SUNY College of Environmental Science & Forestry, New York Luis Fernandez-Carril, Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico

### session 285

Room 520D Hybrid

Governance & Finance

### All eyers on 'My Climate Risk': Q-storming towards collective pathways to adaptation action, from local to global

A new approach that synthesises cross-disciplinary insight and information is needed to address the adaptation challenges of the climate emergency. This requires forward-looking analysis based on integrated data and evidence, and a transformation in how natural and social scientists work alongside counterparts in the government, non-government and community sectors.

This hybrid 'Q-storming' session is designed to bring together representatives from all these communities, to explore how we can bridge science and socio-political action, addressing multiple risks while responding to local adaptation needs. It will draw on the break-through approach of a new World Climate Research Programme (WCRP) Lighthouse Activity, entitled 'My Climate Risk' (MCR). The title reflects the need to embed climate risk within its unique local and social context. Eight WCRP MCR hubs have been established globally and are going 'broader and deeper' in their work with local counterparts to assess risk and implement credible and effective climate actions. Examples will be presented as part of the Q-storming session.

Q-storming is designed to come up with well-stated questions and problem formulations, not easy answers. To reach actionable solutions, we need first to identify obstacles, then map out local pathways to overcome them. Our virtual and in-person colleagues will contribute to this process, following short case-study presentations. The session builds on our AF2018 Q-Storm experience and introduces the use of Facilitated Q-Storming Tables using Mural Boards.

### **Participants**

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### session **124**

Room 519A

Governance & Finance

### Adapting to Transboundary Climate Risks: Regional Perspectives and Actions

In our interconnected world, the impacts of climate change, adaptation or mitigation actions within one country can create risks to food security, trade and economic sectors in another - and can influence the adaptation options of other countries. We call these, collectively, 'transboundary climate risks' (TCRs).

Scientific evidence, as summarised in IPCC assessments, has long recognised that climate change impacts could cross national boundaries. However, while multi-country mitigation efforts were established through the United Nations Framework Convention on Climate Change, coordinated international action on adaptation has been slower: it has historically been treated as a local to national concern. Momentum is growing to explicitly investigate not only the transboundary risks associated with climate change, but also risks resulting from adaptation at different scales.

This knowledge exchange session explores the implications of TCRs for adaptation planning, and the role that regional organisations can play in strengthening cooperation on adaptation and managing cross-border and cascading climate risks through regional adaptation plans. It exchanges knowledge about policy and actions to manage TCRs unfolding in the Sahel and in Europe, as well as other regions around the world. The session will do this by drawing on the experiences of three initiatives - the programme Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC), the project Cascading Climate Risks: Towards Adaptive and Resilient European Societies (CASCADES) and the global partnership Adaptation Without Borders (AWB) – as well as knowledge exchange with the audience.

### Authors and Partner organizations

Sarah Opitz-Stapleton (session organiser and chair: ODI and SPARC)

Emmanuel Seck (presenting author: ENDA and SPARC)

Katy Harris (presenting author: SEI and AWB)

Christopher Reyer (presenting author: Potsdam Institute and CASCADES)







session 362

Room 519B

Adaptation Choices

### Inclusive Approaches for Effective Mobilization of Adaptation Finance

Current global environmental and development challenges require increasingly transformational changes to tackle them, particularly to reach the Sustainable Development Goals (SDGs) and climate resilient development (IPCC, 2022). Finance is crucial in enabling and catalysing conditions for transformational adaptation (ibid).

This session will feature two sub-sessions seeking to provide further nuance to adaptation finance through macro – comparative analyses and through micro – case study approaches.

The first sub-session delves into the questions of access and allocation of adaptation finance with a special focus on multilateral climate funds like the GCF and on bilateral development cooperation with a view to informing the upcoming planning of the operationalization of the loss and damage fund. (35 minutes of presentations with further 10 min interactive Q&A component)

The second sub-session will delve into approaches of multi-stakeholder engagement in the effective design of adaptation finance instruments such as Debt for Nature Swaps offering insights from previous sovereign debt swap arrangements. With about 60 percent of low-income developing countries being already at high risk of or in debt distress, according to the IMF, sovereign debt swaps hold a significant potential as an instrument to define the adaptation futures of developing economies. (25 minutes with further 10 min interactive discussion).

### Authors and Partner organizations

Session concept jointly developed by Adheesha Perera, Member of the Climate Action Steering Committee of Ceylon Chamber of Commerce; Dr. Mariya Aleksandrova, Senior Researcher, German Institute of Development and Sustainability (IDOS); Deepal Doshi, PhD researcher at the University of Munich, Germany; and Kevin Moull, German Institute for Development Evaluation (DEval).

Session Chair: Adheesha Perera

### session 987

Room 518B

Indigenous Knowledge

# The Reconnection Vision – the Yukon First Nations youth-led approach to climate action

The Reconnection Vision (RV) is a youth-developed societal shift guide and tool kit and the Yukon First Nations unified approach to climate action. Here, climate change is a symptom of our state of disconnection and imbalance, that is reflected in the imbalance of the land. The RV was developed through the Yukon First Nations Climate Action Fellowship, where 13 young people strived to be whole people and be in good relationship with themselves, eachother and the Land. Through their two-year journey, they confronted the norms of our society that actively bar Reconnection and perpetuate disconnection.

In this session, members of the Reconnection Collective will share their journey in Reconnection and how they are actively transforming they way we live, learn and work. They will present their 10 Reconnection Seeds, vision and digital storytelling website, www.reconnection.vision.

### Authors and Partner organizations

Yukon University, Reconnection Collective.





session 314

Room 518C

Nature-based solutions

### Learning from innovative partnerships and taking action with Nature: A reflection on Community Led Climate Adaptation and Resilience

Drawn by access to marine resources and trade routes, people have settled along the world's coastlines throughout history. According to the United Nations Ocean Conference fact sheet 2017, 37% of humans live along the coast. The combined values from shipping, tourism, and commercial and subsistence fishing mean that living by the sea offers a great opportunity. Coastlines are therefore our frontlines: it is here where many hazards cause the greatest havoc.

Human-induced climate change, including more frequent and intense extreme events, has caused detrimental impacts and increasingly irreversible losses and damages to nature and people with adverse socioeconomic consequences, especially along the frontlines. This situation is evident with the ever-increasing risks of floods, droughts, storms (hurricanes) and heat waves. In 2004, the Indian Ocean tsunami killed at least 228,000 people and caused estimated losses of USD 15 billion. On a much more regular basis, cyclones and hurricanes kill and destroy as they reach land with maximum speed. Recent cases include Hurricane Dorian (2019) that caused loss of lives and about \$ 3 billion in damages in the Bahamas. Cascading and compounding impacts attributed to climate change will also result in losses of coastal ecosystems and ecosystems services that cascade into risks to livelihoods and well-being.

The Nature Conservancy (TNC) and the International federation of Red Cross and Red Crescent Societies (IFRC) work with communities and governments to put into action the transformation needed to keep pace with the rising impacts of climate change and carry out nature-based solutions (nbS) for adaptation to benefit people in the Caribbean Islands and Asia Pacific Regions. Having a sound understanding of why people are more likely to be impacted by hazards in a changing climate is essential to address the root causes of these challenges and strengthen people and nature's adaptive capacities. NbS can be powerful and cost-effective means to help communities adapt while lowering hazard-related damages and losses. The challenge is to bring such solutions to scale, and to do so fast. Healthy ecosystems can boost livelihoods, strengthen resilience to extreme events, foster economic opportunity, and improve gender equity.

### Authors and Partner organizations

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### session 673

Room 523

**Adaptation Choices** 

### Climate change and the energy sector: Roadmaps toward adaptation

Energy utilities face unique challenges in the ongoing context of climate change. As owners and operators of large infrastructure portfolios, they are directly exposed to physical climate risks that are expected to be exacerbated in future decades. Moreover, energy utilities provide critical services to their customers. Resilience of the energy grid directly affects the climate vulnerability of communities. Finally, their climate adaptation strategies need to be aligned with the evolution of the energy system.

Given that energy utilities operate in a wide range of geographic, cultural, climatic, and economic contexts, they are expected to take different trajectories towards climate change adaptation. For example, some companies will favor a top-down, corporate-focused approach aligned with frameworks such as the Taskforce on Climate Financial Disclosure. Others will prefer to implement processes driven by climate data to trigger changes at the infrastructure or project level. In the absence of metrics to measure or define the success of adaptation, strategies that are most beneficial to achieve a high level of climate resilience can be challenged.

This session aims to discuss the challenges that the energy sector is facing and the strategies they adopt to adapt to climate change. The session will consist in a panel presentation of representatives from different energy organizations, moderated by Hydro-Québec. Each panelist will be invited to briefly present their approach and challenges toward climate adaptation. The objective of the panel will be to engage in thought-provoking discussions on the following questions:

- What are the best trajectories to increase climate resilience for the energy sector?
- How do the specificities of different organizations of the energy sector affect their adaptation strategies?
- How do your strategies benefit to climate change adaptation of the communities depending on your organization?

The expected outcomes of the session are to better understand the diversity of responses in the energy sector regarding climate adaptation and to gain insight on how different contexts trigger different adaptation trajectories.

### Authors and Partner organizations

Jean-Philippe Martin, Hydro-Québec
Isabelle Chartier, Hydro-Québec
Yann Chavaillaz, Hydro-Québec
Jacinthe Clavet-Gaumont, Hydro-Québec





session 464

**Room 522** 

**Adaptation Choices** 

### Adaptation effectiveness: framework, metric and indicators

The new estimates of the costs of adaptation and the estimated financial needs for adaptation from developing countries indicate higher values than previously reported (Adaptation Gap Report 2022, UNEP). There have been positive trends in the emergence of new instruments, actors and approaches to scale up adaptation, including in the private sector. However, the financial gap remains larger and larger. It is also important to note that finance is a means rather than an end: the availability of funds does not guarantee that they will be used efficiently and effectively. It is worth noting that insufficient evidence on the effectiveness of adaptation in different contexts, exacerbated by various metrics applied across projects and result in weak incentives for investment in adaptation. In addition, the COP27 decision asks IPCC to update its Technical Guidelines for Assessing Climate Change Impacts and Adaptations published in 1992. Meanwhile, the Global Stocktake starts from 2023 requires further work on the adaptation metrics to track progress and monitor the effectiveness of adaptation. This session aims to contribute to these important works.

The proposed session is organized by the UN-led World Adaptation Science Programme (WASP), which is one of the four pillars of the World Climate Programme. WASP's core vision is ensuring that climate adaptation knowledge gaps are filled to inform evidence-based policies, solutions and actions for successful adaptation to new climate conditions. Our priority is addressing the knowledge needs in vulnerable developing countries and providing policy-relevant science for decision-makers

The programme of the session requires 90 minutes, including a brief opening remark, one or two technical presentations, followed by a panel discussion with some interactive activities with the audience. The chair of the session will close the discussion with summaries and closing remarks.

This session intends to conduct an open consultation with the wide adaptation community on the critical issue to address adaptation effectiveness, focusing on adaptation guidelines, metrics and toolkits currently in practice and in development at project, national, regional, and international levels, including vulnerability indexes.

The outcome of this session will contribute to the upcoming WASP science for adaptation policy brief on the topic, to be launched at the COP28. We also hope the discussion and outcome will help move forward the research agenda and policy process around this topic, informing IPCC, UNFCCC, GEF and GCF, the funding organizations of the WASP.

#### Authors and Partner organizations

#### Leading experts:

Cynthia Rosenzweig, Anand Patwardhan, Johanna Nalau, Minpeng Chen, Bruce Currie-Alder, Alexandre K. Magnan (tbc)

### session 699

Room 525

Equity & Justice

### Climate risk mapping to advance equitable climate action

Climate change vulnerability and risk mapping is a useful tool to help communities visualize the spatial interactions between hazards, exposure, and vulnerabilities to understand where the community is most at-risk, who is most vulnerable, and why. Mapping is being used more frequently to inform climate change adaptation planning. However, approaches to climate vulnerability and risk mapping have been ad hoc, and do not always result in decision-useful data, sometimes hindered by complexity, silos, and knowledge gaps on key terms and variables. How can we make sure risk mapping projects are accessible and achievable for as many communities and decision-makers as possible? Further, when projects are completed, how can they be used to support vulnerable communities and equity-deserving groups?

This knowledge-exchange session will focus on how community climate risk maps can be used as one tool to inform equity-focused climate adaptation. The session will include an introductory presentation on equity-driven climate adaptation planning, and case studies from 2-3 communities that have completed different climate risk mapping projects and are at various stages of implementation. Each case study will summarize a mapping project and discuss the different drivers of exposure, vulnerability, and risk across an area, and how this knowledge has been used to design community-level equity-driven actions. The case studies will also include lessons learned from each project and how challenges were overcome. Q&A and panel discussion will then help participants understand how the mapping approach can be integrated into decision-making, how the projects could be adapted or scaled.

Finally, a facilitated dialogue between panellists and audience will identify the common barriers to completing and/or using the results of mapping projects. The session panellists and attendees will co-develop solutions and next steps to increase the accessibility and useability of climate risk mapping data.

### **Participants**

**Session organizer:** Christina Schwantes, Advisor, Risk and Resilience, WSP Canada Inc.

Presenter/Panelist 1: Ewa Jackson, Managing Director, ICLEI Canada

Presenter/Panelist 2: Dawn Smith, Adaptation Leader, The City of Calgary

Presenter/Panelist 3: Francis Labelle-Giroux, Aménagement, urbaniste-stagiaire,

MRC D'Antoine Labelle, Région des Laurentides





### session 647

### Room 524A Collaborative

Indigenous Knowledge

# Normative visioning, authorship and imagniation: experimenting with alternative futures for transformative adaptation

Adapting to climate change requires challenging who gets to imagine and make decisions about the future and how to decolonise persistent development narratives. Normative Future Visioning (NFV) (Nalau and Cobb, 2022) is about the collective imagination of desired future end-states and the trajectories they entail. It has the potential to foster critical pedagogical processes, where knowledge is built up to emancipate marginalised ways of being and knowing (Escobar, 2018). Through processes of radical imagination, stakeholders can challenge (or plan to disrupt) dominant development assumptions and trajectories. In turn, this foregrounds the significance of the relative authorship of participants and facilitators as they direct discussions and surface or conceal a diversity of possible futures. Despite the potential of - and issues of concern with - NFV, to date it has remained at the margins of adaptation studies.

This session builds on the creative ethos of NFV approaches to enable diverse participants to explore and challenge the transformative potential of experiences of NFV. After introductory remarks (5mins), participants will split into four tables, each dedicated to discussing one of four questions, as follows:

- How can working with local and Indigenous voices enable a navigation of normative adaptation futures in more imaginative ways e.g., across different temporal and geographical boundaries?
- How is a theory of change embedded in NFV strategies? To what extent do
  issues of authorship arise from these strategies, opening up or closing down
  different ambitions for future change through adaptation?
- What are the particularities of NFV when it comes to trust building, conflict and difference? To what extent are these issues leveraged to decolonise ideas about how the future should be?
- What is the role of science in NFV supporting, disrupting or overshadowing non-hegemonic (potentially decolonising) ways of knowing and experiencing adaptation?

### Organisers/authors

Dr Jessica Thorn, University of St Andrews, University of Namibia; Professor Jonathan Ensor, University of York; Dr Maria Evangelina Filippi, University of Bristol; Eunomia; Professor Mark Pelling, University College London; Dr Max Hope, Leeds Beckett University Professor Robert Marchant, University of York; Dr Thaisa Comelli, University College London

#### Partner organizations

Dr Tobias Nyumba, University of York, University of Nairobi; Lucy Wariungi, African Conservation Centre, Kenya; Dr Guillermo Delgado, Namibia's Informal Settlement Upgrading Programme; Sion Shifa, Namibia Ministry of Environment and Tourism; Anna Sobczak, UN Habitat Participatory Slum Upgrading Programme

### session 880

### Room 524B Collaborative

**Adaptation Choices** 

### Global Action on Sea Level Rise Adaptation: Knowledge Café on Co-Producing Actionable Information and Advancing Collaboration and Practice

Rising seas caused by global warming are estimated to threaten over 400 million coastal and island residents on every inhabited continent by the end of the century. Due to continued emissions of greenhouse gases, there is strong scientific agreement that we will see an acceleration of global sea level rise with an additional 0.5-1.4 m added by the end of the century. Even greater amounts of rise cannot be ruled out due to deep uncertainty related to ice sheet processes. Projected sea level change is a foundational input to support policy, planning, risk assessment, and adaptation to future flooding, inundation, and erosion hazards.

This interactive session, hosted by the Practitioner Exchange for Effective Response to Sea Level Rise (PEERS), Natural Resources Canada, and City University New York aims to gather researchers, practitioners and decision-makers working on the issue of sea level rise. The session will provide networking and knowledge co-production opportunities to advance the resilience of coastal communities to sea level rise. The session will focus on how to better co-produce and communicate actionable information and advance coordinated adaptation actions and emerging practices by sparking conversations around what adaptation measures and approaches are working and not working in different contexts globally, and by creating opportunities for interaction among peers and subject matter experts.

The session will be organized as a knowledge café with a strong focus on taking stock of leading practices evolving in practitioner communities, across government, as well as the latest scientific research supporting adaptation.

### Authors and Partner organizations

#### Main facilitator:

David Behar (USA) – Climate Program Director, San Francisco Public Utilities Commission

#### Co-facilitators:

Mary-Ann Wilson, John Sommerville, Thomas James – Natural Resources Canada Gordon Smith (Canada) – Strategic Lead, Community Climate Action for the Province of Nova Scotia

Laurice Jamero (Philippines) – Resilience Coordinator, Manila Observatory William Solecki - City University New York



### Friday 06 am - 8:30-10:00

### session 648

### Room 524C Collaborative

Equity & Justice

### Informality and urban adaptation

Understanding the role of informality in urban adaptation is critical. Informality is everywhere, yet often insufficiently recognised, considered, and integrated in urban adaptation planning and practice. This "knowledge co-production" session will follow a world café style conversation. The overarching question to guide the session will be: "What role does informality, as a label attached to activities, peoples and places, play in efforts towards more equitable adaptation governance?"

The session will start with input on informality and adaptation (drawing on 3 cases from South Africa, Malawi and Mexico) and underlining the idea that informality is first and foremost a social construct, legitimized by those in power. Then a world cafe style process will follow, to explore "informality and inequitable vulnerabilities", "informality as a source of adaptation innovation" and "informality and opportunities in adaptation governance". After feedback, a plenary discussion will focus on emerging areas of work, areas of priority for adaptation policy and practice, and an opportunity to discuss future collaboration.

### Authors and Partner organizations

#### Session hosts:

Gina Ziervogel - University of Cape Town
Hallie Eakin - Arizona State University
Maike Hamann - University of Exeter
Nadine Methner - University of Cape Town

In absentia: Johan Enqvist – Stockholm University

### session 967

Room 520A LAC Pavilion Hybrid

Indigenous Knowledge

Lessons learned from local adaptation practices in agriculture, forestry, and livestock as a response to climate change in Colombia, Cuba, Chile, Ecuador, and Peru

Climate change impacts are expected on agriculture, forestry, and livestock practices in the Latin American region, impacting already vulnerable communities. Additionally, there is still a lot of adaptation research on adaptation measures at local level required. Based on a series of traditional papers presented to the Adaptation Futures, a session has been put together to showcase the research done on agriculture, forestry, and livestock measures in the region. As well as to have a greater discussion on how this research can give us an insight on the replication of good adaptation practices in other areas in the region, based on similar ecosystem and/ or community dynamics.

### Authors and Partner organizations

#### Facilitator:

Gabriel Quijandria, Regional Director for South America at IUCN

#### Panelists:

Catalina Castillo,

Pedro Pablo,

Gonzalo Perez,

Eduardo Fuentes Navarro,

Gonzalo Lizarralde





### session 659

### Room 520B Africa Pavilion Hybrid

Indigenous Knowledge

### Partage d'une bonne pratique sur la méthodologie d'autonomisation de formation et de renforcement des capacités en matière d'action climatique

Les changements climatiques, problème mondial par excellence, constituent aujourd'hui la question déterminante de notre époque et affectent désormais tous les pays du monde, principalement les pays africains.

Depuis 2015, la Communauté Internationale a adopté une série d'Agendas mondiaux pour le Monde que Nous Voulons, dont les Objectifs du Développement Durable (ODD), l'Agenda du Climat, le Nouvel Agenda Urbain, le Cadre de Sendaï pour la Réduction des Risques de Catastrophes ainsi que l'Agenda de l'Action d'Addis Abeba (AAAA).

Pour permettre la territorialisation et la localisation de ces Agendas, et en vue d'autonomiser, de développer et de renforcer les capacités des Collectivités Territoriales africaines (CTA), premières pour ne pas dire principales Institutions qui sont affectées par les Changements Climatiques, l'Organisation Internationale Panafricaine (CGLU Afrique) a retenu l'Action Climatique, la Biodiversité et les systèmes alimentaires parmi ses Priorités.

Dans ce cadre, un cadre de Partenariat et de Collaboration a été mis en place entre l'Académie Africaine des Collectivités Territoriales (ALGA) de CGLU Afrique et l'Agence de la Transition Ecologique ADEME de France a été mis en place depuis 2018 à ce jour pour développer une Méthodologie d'autonomisation, de formation et de renforcement des capacités ciblant les CTA.

### Auteurs et organisations partenaires

Dr Najat Zarrouk, Directrice du Développement, de la Gestion des Connaissances et de ALGA de CGLU Afrique, Maroc

Mlle Fariath Chabi, Task Manager ALGA de CGLU Afrique, Bénin

Dr Joseph Magloire OLINGA OLINGA, Géographe – Aménagement du territoire, gestion de projets et enjeux climatiques chargé d'études urbaines et environnementales, Cameroun

Honorable Mr Abdoulkader IMAN ADEN, Président de la Commune de Boulaos, Dji-

Mme Najat MOUSSAOUI, Cadre Responsable de la Formation à la Région de l'Oriental, Maroc

Mr Fakassi Fofana, Représentant Régional, ONG Grat, Mali

### session 416

### Room 520C Hybrid

Indigenous Knowledge

### New approaches to indigenous climate change adaptation: decoloniolity, intersectionality, indigenous climate justice, and the pluriverse

Climate change is exacerbating many of the challenges faced by indigenous peoples, including food, water, and energy security, access to sustainable livelihoods, poor health and wellbeing, and the enactment of responsibilities to and connections with human and more-than-human beings in indigenous territories (Bardsley and Wiseman, 2012; Beaumier et al., 2015; Johnson et al., 2022; Nursey-Bray et al., 2019; Nursey-Bray and Parsons, 2020; Weatherdon et al., 2016). These coupled challenges are contributing to mounting calls from scholars, activists, and indigenous leaders for indigenous peoples' experiences, values, knowledges, capacities and priorities to be highlighted and located at the heart of building alternative decolonising visions for their futures under changing climate conditions. In this proposed session, we will present the latest research exploring different indigenous peoples (Australia, Aotearoa New Zealand, Vanuatu, Canada) experiences and responses to climate change. Presenters draw on intersectionality, indigenous environmental justice, indigenous feminist, anti-colonial and decolonial approaches to demonstrate the ways in which indigenous climate adaptations can and should be adopted to create more equitable climate futures.

Research on indigenous peoples and climate change that developed over the last two decades developed in response to shortcomings in academic and policy narratives that depicted climate change impacts and responses through the lens of science and economics (Adger et al., 2011), and conceptualised indigenous peoples as both powerless climate victims and resilient heroes (Cameron, 2012; Comberti et al., 2019; Lin et al., 2020). Scholars demonstrate how the existing climate change narratives distort and obscure indigenous peoples realities, often ignoring the past and present-day realities of colonialism and capitalism, contributing to the creation of inappropriate knowledge claims about indigenous experiences of climate risks and adaptation responses that intensify inequities, magnify injustices, and lead to maladaptation (Bordner et al., 2020; Parsons et al., 2019; Smith and Rhiney, 2016; Whyte, 2020). In this session we are presenting a different narrative about indigenous climate adaptation based on the unique histories, worldviews, epistemologies, lived experiences, and aspirations of indigenous peoples. The presenters in this session will examine carefully how the intersections of gender, class, race, culture and other social categories coalesce to produce varied and variable outlooks on climate change between and within indigenous peoples (Bee et al., 2015; Johnson et al., 2021; Osborne, 2015; Prior and Heinämäki, 2017).

### Authors and Partner organizations

Assoc Prof Karen Fisher, School of Environment, The University of Auckland.

Assoc Prof Meg Parsons, School of Environment, The University of Auckland.

Prof Melissa Nursey-Bray, School of Social Sciences, The University of Adelaide.

Mr Allan Rarai, Climate Services Manager at the Vanuatu Meteorology and Geo-Hazards Department, Vanuatu Government.

Ms Roa Crease, PhD Candidate, The University of Waikato.

Dr Lilia Yumagulova, Program Director, Preparing Our Home (that empowers Indigenous youth in emergency preparedness) and Editor of HazNet, Canada's disaster resilience magazine.





### session 639

### Room 520D Hybrid

**Adaptation Choices** 

# Crises and compromise: What will it take for countries to reach the Global Goal on Adaptation?

The Paris Agreement established the Global Goal on Adaptation (GGA) articulating a collective effort to enhance adaptive capacity, strengthen resilience, and reduce vulnerability. Climate adaptative and resilient agrifood systems responses are seen as fundamental to achieving both the GGA and collective temperature goal. Over 90% of countries include agriculture as a priority sector in the latest round of nationally determined contributions (NDCs) and National Adaptation Plans (NAPs) (FAO, 2021a). Furthermore, the current crises, from climate to the Covid pandemic and the ongoing war in Ukraine, have revealed the fragility of our agrifood systems but also their potential to bring about change and build resilient communities that are food, livelihood and economically secure.

Evidence suggest that globally agreed goals, on adaptation included, do not easily trickle down from the global to the national level. Firstly, emerging evidence from global goal setting agendas indicate the need to consider national capacities and priorities when designing standards, to ensure successful operationalization (Hickmann et al., 2022; Leiter, 2022). A country-driven approach may only be feasible if countries have sufficient resource availability, administrative capacity and economic development, as well as adequate support from external donors.

Second, recent assessments show that the share of global climate finance in the agriculture and land use sector remains largely insufficient (CPI-IFAD, 2020; FAO, 2021b,c; IFPRI, 2022). Current financial flows for climate change in the agriculture, forestry, and land use (AFOLU) sector, one of the central components of food systems, amount to less than 4 percent of total climate finance (IFPRI, 2022). Third, unlike for mitigation, no global framework for measuring progress on adaptation has been agreed upon. Thus, countries have only limited guidance as to what or how to track and report on adaptation progress.

With insights from the South and the North, this session will focus on how to operationalize global goals on adaptation at country and sub-national levels with agriculture and food systems.

### Authors and Partner organizations

Food and Agriculture Organization of the United Nations (FAO), Provincial government of Quebec (tbc), Government of Senegal (tbc), Government of Haiti (tbc), Government of Côte d'Ivoire (tbc)

session 804

### Room 520E Hybrid

Teaching & Learning

# Maximizing knowledge transfer: new paradigms and online platforms for climate resilience education

There is plenty of tools, methods, solutions for climate resilience, but cities are far beyond the potential of implementation of these solutions. Also, universities' curricula are far from mainstream climate change within their programs. In this session we wish to address this gap offering an overview about the potential for climate resilience education through virtual platforms and guidelines, widening the public and maximizing knowledge transfer.

We will address the questions about which should be the core skills of the next generation of urban climate leaders? How to sustain local authorities, stakeholders and communities in integrating innovative concepts and methods in the current urban planning, design and governance practices? How to balance the need for a strong theoretical background with the acquisition of technical and practical skills? And also, is the academic system equipped to support the education of hybrid and multidisciplinary new professionals?

This knowledge exchange panel will provide in a first part some critical thoughts on education and knowledge transfer challenges. In a second part it will show some available online educational platform (i.e. the UCCRN Edu) and some guidelines to integrate climate design into planning and city management, and finally allow a workshop-like discussion from the online and in person public.

The panel brings together a set of core members from the "Urban Climate Change Research Network for Higher Education" (UCCRN\_edu, www.uccrn.education), of the European leading project on Carbon neutral, resilient and inclusive cities "Urban Planning ready 2030" (HEU UP2030) and other sister projects in EU and US, such as HEU KNOWING and NSF City as Lab.

### Authors and Partner organizations

#### **Session Moderation**

Lorenzo Chelleri, Ph.D. – Urban Resilience research Net (URNet) at International University of Catalunya (UIC Barcelona)

#### **Panelists**

Marie-Christine Therrien, École nationale d'administration publique Montréal, Québec, Canada

Cristina Visconti, Università di Napoli Federico II, Urban Climate Change Research Network (UCCRN)

Chantal Pacteau, French National Centre for Scientific Research/ Sorbonne université, Paris, France

Mattia F. Leone, Università di Napoli Federico II, Urban Climate Change Research Network (UCCRN)

Jeffrey Raven, New York institute of Technology, Urban Climate Change Research Network (UCCRN)

William Veerbeek, UNESCO-IHE, Delft, The Netherland



session 973

Room 520F Hybrid

Indigenous Knowledge

Empowering the most vulnerable, women, youth, elderly, indigenous populations and incorporating local and traditional knowledge

During the session AF National Implementing Entities (NIE)s discuss findings from projects that benefit and empower the most vulnerable communities such as women, youth, the elderly, and indigenous populations, and incorporate local and traditional knowledge.

Authors and Partner organizations

Adaptation Fund

session 982

Room 519A

**Adaptation Choices** 

### Decision-support tools for climate resilient infrastructure and communities

The use of decision-making tools and methodologies are key for building effective resilience to the impacts of climate change. The session, entitled "Decision-support tools and assessments for climate resilient infrastructure and communities", aims to bring together national and international experts to share best practices and discuss ways of increasing the resilience of community infrastructure in the face of climate change. The various presentations will provide an overview of relevant tools in the vulnerability assessment process, evaluation of resilience projects and effective measures for building low-carbon and resilient infrastructure. The session will offer the opportunity to gain valuable insights from leading national and international experts, and to connect with a community of professionals, researchers and policy-makers working on infrastructure resilience to climate change.

### **Participants**

Chair: Abderrahmane. Yagouti, Infrastructure Canada





session 369

Room 518A

Limits to Adaptation

### Resilience beyond adaptive capacity: How can Strengthening Loss and Damage response contribute to adaptation?

As climate action delays, we are approaching the limit of adaptive capacity, with climate induced losses and damages becoming inevitable. Our current mitigation and adaptation efforts have been deemed insufficient to resist loss and damage, particularly in vulnerable communities and countries of the Global South. Local communities, mainly women, people with disability and other marginalised peoples and ecosystems in many climate-vulnerable countries in the Global South with less adaptive capacity are suffering from unavoidable losses and damages caused by climate change (Boyd et al., 2021; Ojha & Dahal, 2022). These countries have gone beyond their ability to adapt both due to frequent and intensified extreme weather events such as floods and slow-onset events such as sea level rise, and also because of the poor institutional and financing capacity to manage the risk. In some countries and localities, it is already too late to fix the problem with conventional adaptation interventions (Kumari, 2022). We are seeing significant loss of lives, livelihoods, assets, infrastructures, culture, well-being, and biodiversity (Bhandari et al., 2022; van der Geest, K. et al., (2019).

With increasing climate risks exceeding communities' adaptive capacity, there is a need to bring Loss and Damage (L&D) architecture to better address loss and damage (Huq 2022, 2023). While L&D has appeared in previous UNFCCC negotiations for the past three decades, only recently last year in COP27, it was agreed to pursue a L&D finance mechanism, recognising the limits of adaptation in the context of delayed mitigation. This policy move is considered a positive action; however, it comes with new questions as to how it will be operationalised at global, national and sub-national levels (Hossain et al., 2021). How do we understand when adaptation is exhausted and L&D is needed? Should L&D have a separate institutional architecture or can it still build on the existing adaptation and disaster risk reduction systems? Shouldn't L&D be seen as a means to increase resilience?

### Authors and Partner organizations

Saleemul Huq, International Centre for Climate Change and Development (ICC-CAD), Bangladesh

Hemant Ojha and Basundhara Bhattarai, Institute for Study and Development Worldwide (IFSD), Australia

Bhim Adhikari, International Development Research Centre (IDRC), Canada

### session 493

Room 519B

Governance & Finance

# The 2023 adaptation finance gap update and emerging lessons and best practice on how to bridge the gap

This proposed knowledge sharing session will present the new findings of the Adaptation Finance Gap analysis 2023. The format will be based on a series of short presentations, followed by an interactive discussion session on how to bridge the gap.

The adaptation finance gap is defined as the difference between the estimated costs of meeting a given adaptation target and the amount of finance available (UNEP, 2014).

Based on a combination of global and national studies, the UNEP adaptation gap report (AGR) estimated the annual costs / financial needs for adaptation in developing countries at between US\$ 160 billion and US\$ 340 billion by 2030 (UNEP, 2016). With increasing levels of climate change, this annual cost was projected to increase to between US\$ 315 billion and US\$ 565 billion by 2050. The most recent gap report (UNEP, 2022) suggests that for developing countries, the estimated adaptation costs – and likely adaptation financing needs – could be five to 10 times greater than current international adaptation finance flows (as reported by OECD, 2022).

These adaptation cost estimates were produced in 2015. Much has changed since then, with improved academic studies and country submissions. A major update of the costs of adaptation is being undertaken in 2023. This research will update the estimates of the costs of adaptation, the estimated financing needs from developing countries, and the levels of finance flows. This will be used to estimate the size of the adaptation finance gap. This new gap estimate has extremely high relevance for the new collective, quantified goal on climate finance.

This session will present the headline research findings from the updated AGR 2023 study. It will present and discuss the updated estimates, providing details of various evidence lines (costs of adaptation, country financial needs from NDCs and NAPs, adaptation finance flows), and present and discuss the implications of these new estimates for the adaptation finance gap.

### **Participants**

The session is proposed by a series of organisations working on the AGR update as well as other participants. It includes:

UNEP

Paul Watkiss Associates, UK

Kulima Integrated Development Solutions, South Africa

Independent researchers from Nepal and Rwanda.

Institute for Climate Economics, France

Chalmers School of Management, Sweden





session 694

Room 518B

Indigenous Knowledge

Applying Indigenous Knowledge to climate change adaptation action across sectors — Panel Discussion on Best Practices and Lessons Learned

Indigenous Peoples have been relying on Indigenous knowledge to monitor and adapt to the changing environment for millennia. Indigenous knowledge systems play an important role in detecting and adapting to the impacts of climate change . Indigenous Knowledge was highlighted as a crucial resource for adaptation by the Intergovernmental Panel on Climate Change's Working Groups .

This panel discussion will showcase approximately 5 (TBC) innovative climate change adaptation initiatives by Indigenous communities and organizations in South of 60 Canada, who are working in partnership with the Government of Canada. Panellists will highlight key Indigenous-led projects that demonstrate how Indigenous knowledge has informed climate adaptation to build long-term resilience (conference theme #1), and showcase how the Government of Canada has helped to support Indigenous-led climate adaptation efforts across a range of sectors.

The panellists will each provide brief overviews of their respective initiatives related to the adaptation to the impacts of climate change on health, infrastructure, and environmental stewardship. This will be an opportunity to discuss challenges, best practices, solutions and lessons learned. Following this, there will be a facilitated discussion that will highlight how Indigenous knowledge played a role in their initiatives, and what approaches, tools and practices could be used as models and best practices for the integration of Indigenous knowledge in climate adaptation. The session will also include opportunities for the audience to ask their own questions and interact with the panellists.

### Authors and Partner organizations

Representatives from Indigenous Services Canada (ISC) and Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) (TBD) will facilitate and moderate the session and support the identification of a range of suitable projects to present, drawing from the wide range of Indigenous-led projects supported to date.







### session 178

### Room 523

Indigenous Knowledge

# Putting rural women at the centre of climate information, advisory services, and adaptation planning

#### **Knowledge Sharing Session: Open Session**

The aim of this session on is translate and communicate good practices for tailoring climate advisory services for women farmers and enabling them to access resources to build adaptive capacity. We will discuss participatory methods for climate-informed agricultural extension, climate and digital literacy, innovative finance schemes, and other services that can help women access, use, and benefit from climate services and build resilience to climate change.

#### Rationale

Women play a major role in agricultural production and are disproportionately affected by climate variability and change. Enabling women to account for climate risks in livelihood-related decision-making can help strengthen the resilience of rural communities. However, there is much to learn about how women farmers make decisions in the face of climate risks. Prior to choosing a course of actions, individuals usually appraise the probability and magnitude of hazards, consider a list of alternative actions, and evaluate the consequences of these actions on their livelihoods.

This session will discuss:

- How climate advisory services can help determine climate risks in agriculture at the local, sub-national, and national levels;
- How extension support, integrated farming systems and technologies, and policy measures can help farmers build adaptive capacity;
- How innovative business models can help mobilize financial and technological resources for to support climate change adaptation on the farm.

### Authors and Partner organizations

Moderator and session organizer: Dr. Caroline Staub

Session co-organizers: Rajat Shubhro Mukherjee, Ritika Kherotia

**Contributor:** Promoting gender equity in smallholders' adaptation decision-making through digital climate information services and participatory extension: Field experiences from E-PICSA in Southern Africa. Authors: Shibata, R., Clarkson, G., Dorward, P., Caine, A. and Clarke, C.

### session 375

### **Room 522**

**Adaptation Choices** 

# Critical discussions on adaptation directions: Insights from IPCC Working Group II

Adaptation science, policy and practice have progressed in recent years. The Paris Agreement heralded a new era for greater focus on climate adaptation. Adaptation investments are increasing, even if slowly, and implementation is growing. The potential for a substantial increase in adaptation in the coming years with a wide range of benefits.

Yet, the IPCC 6th Assessment Report of Working Group 2 notes that there are severe challenges, gaps and limits in what adaptation can achieve. Questions have also been raised in terms of whose knowledge, experiences and insights are driving the current adaptation agenda including its design and implementation, what is missing and how we can diversify the current discussions on where adaptation should be heading.

This session opens up with an overview of key insights from IPCC WGII to set the scene where the assessment is presented by several IPCC WGII authors (30 min). We then open up the space for critical discussion with the audience, and seek to identify, in particular, the 'next generation' questions that we should be asking in driving the adaptation agenda forward in an inclusive manner that also utilizes multiple forms and sources of knowledge, and connects across scales and across geographies. The discussion will be facilitated by two panel members (Lisa Schipper and Edmond Totin; 50 minutes). Our aim is to co-design a learning space through this session that can be used to accelerate critical debates between and within the scientific and policy communities about how we think about adaptation, which of those frames are useful, and how the key questions for the future could be formulated. We will then close with a brief wrap-up (Johanna Nalau; 10 minutes).

### Authors and Partner organizations

Johanna Nalau, Griffith University, Australia

Siri Eriksen, Norwegian University of Life Sciences (NMBU)

Elisabeth Gilmore, Carleton University, Canada and Peace Research Institute Oslo (PRIO)

Debora Ley, Economic Commission for Latin America and the Caribbean

Mike Morecroft, Natural England, UK

Aditi Mukherji, IWMI, India

Lisa Schipper, University of Bonn, Germany.

William Solecki, Hunter College - City University of New York, USA

Edmond Totin, Université nationale d'agriculture, Benin





session 330

Room 525

**Adaptation Choices** 

The social impact of standarrds and technical guidance in climate change adaptation: Making the link between research and the people it seeks to serve and benefit

The proposed international-focused knowledge sharing (closed session) panel will discuss how adaptation information, such as new ideas and research, can be codified into guidance, codes and standards in order to set new benchmarks and design minimums for the built environment and ultimately better protect and benefit the lives of individuals. The panel will focus on case studies relating to guidance and standards addressing a variety of catastrophic events. These case studies will highlight best practices and lessons learned about effective adaptation methods for these hazards and demonstrate how research can be applied through guidance and standards to achieve changes in policy and practice, to ultimately realize adaptation goals.

The panel will begin with several short, pre-recorded video testimonies from people of various backgrounds who have been negatively affected by climate change and catastrophic events. Grounded by these individual experiences, the panel will provide presentations on their areas of expertise, followed by a panel discussion.

Each presentation will elaborate on different aspects of the adaptation system and how the underlying elements interact, while tying it back to standards and how they serve individuals. The first presentation will outline how organisations around the world are benefiting from a standardised, best-practice approach to addressing climate impacts, with a focus on ISO 14090. Shifting to a Canadian lens, a general overview of infrastructure resiliency and the National Adaptation Strategy will provide the context in which the system operates. The research process into adaptation strategies broadly, and high winds and WUI fire specifically, will be discussed along with how they lead to standardization strategies. The general Canadian standards development process will be outlined before discussing the standards created for high winds and WUI fire. Examples will be provided of where the research and resulting standards were implemented. Finally, real world challenges and opportunities in implementing guidance and standards will be presented, with examples from India.

### Authors and Partner organizations

#### The panel will feature:

Dr Mona Chhabra Anand, Disaster and Climate Resilience Specialist (panelist) Marianne Armstrong, Initiative Leader - Climate Resilient Built Environment Initiative, National Research Council (panelist)

Prof. John Dora, Director, Climate Sense (panelist)

Gary Graham, Sector Specialist, Standards Council of Canada (panelist)

Chad Nelson, Principal Advisor, Adaptation and Resilience, Infrastructure Canada (panelist)

Stephanie Poirier, Sector Specialist, Standards Council of Canada (moderator)

Dan Sandink, Director of Research, Institute for Catastrophic Loss Reduction
(panelist)

### session 553

Room 524A Collaborative

Equity & Justice

### How to embed justice in climate change practices. Dialogue on global urgencies and local practices

The IPCC (Intergovernmental Panel on Climate Change) Sixth Assessment Report (2022) highlights for the first time justice as a core element of climate change adaptation, alongside effectiveness and feasibility. Recent development in policy also reflects the growing awareness and need of justice considerations in adaptation planning and action, Just resilience is for instance one of the key principles in the recent European Union Climate Adaptation Strategy (2021). We are grappling with the clear need to transition our societies away from our current unsustainable trajectories. This demands significant social change. Striving for transitions that are more just requires us to re- organise the way we adapt and mitigate. Because justice has emerged as a key concept on the back of much growing evidence regarding how the most vulnerable people and systems are disproportionally at risk from climate change. These people and systems often have less capacity and capabilities to adapt and are the least likely to be heard, recognised and prioritised in adaptation processes, resulting in fewer benefits from adaptation actions. The lack of justice considerations and due processes can also result in 'maladaptation' resulting in redistribution of burdens or even enhancing risk for regions or groups. This is daunting, especially considering that those disproportionately affected have often contributed the least to causing climate change in the first place.

The aim of this session is to bring together experiences and approaches on how to embed justice in global and local climate change practices. We could learn a lot from the overarching concepts of climate justice.

### Authors and Partner organizations

Marian Stuiver, Wageningen University & Research, the Netherlands Frida Lager, Stockholm Environment Institute, Sweden

Stephen Flood, Irish Climate Change Advisory Council Secretariat; Irish Climate Analysis and Research Units (ICARUS), Maynooth University

Lisa Schipper, University of Bonn, Germany





### session 747

### Room 524B Collaborative

**Adaptation Choices** 

### Donor coordination fishbowl on adaptation metrics

Given the highly contextual nature of adaptation, and the varied definitions of "adaptation success," there is no single set of metrics that can help measure progress toward the Global Goal on Adaptation. Many different approaches and frameworks are currently used to organize adaptation M&E. Much of this work is aimed at the local, project level rather than at the national or cross-sectoral levels and much of it is focused on process and outputs, rather than outcomes.

While a number of initiatives (e.g., GAMI, IPAM, RegionsAdapt) have sprung up to improve the development and coordination of adaptation metrics, donor agencies have an important role to play both in advancing the quality and application of adaptation metrics and, particularly, in coordinating amongst themselves in the creation of common tools, methods, and frameworks. In this highly interactive session, representatives from key development agencies and climate funds will use a "fishbowl" structure to discuss their own approach to adaptation M&E (e.g., success stories, lessons learned) and to find avenues for future collaboration around the use and programming of adaptation metrics that can have far reaching consequences for national and international adaptation planning and implementation. The discussion is also expected to explore how donors track adaptation results vis-a-vis resilience and other sectoral priorities.

### Authors and Partner organizations

#### **Proposed Session Chairs:**

Catherine Pomposi, Climate Adaptation Metrics Advisor, USAID Bureau for Resilience and Food Security

Laurie Ashley, Climate Adaptation and Resilience Advisor, USAID Center for Resilience

Cathy Vaughan, Director of Learning, Innovation, and Research, USAID Climate Adaptation Support Activity

#### **Proposed Authors:**

Fernanda Zermoglio, Senior Climate Adaptation and Resilience Advisor, USAID Center for Resilience

Georgina Cundill-Kemp, Senior Programme Specialists, International Development Research Center

Jenny Frankel-Reid, Senior Program Officer, Climate Adaptation, Bill & Melinda Gates Foundation

Susannah Fisher, Senior Research Fellow, Kings College London

#### Partner organizations:

USAID Center for Resilience; USAID Center for Adaptation Support Activity; Gates Foundation; International Development Research Center; Kings College London; Kulima Development Solutions

### session 345

### Room 524C Collaborative

Adaptation Choices

### Advances and needs for acionable adaptation under deep uncertainty

Prioritizing and realizing adaptation actions in the context of climate change is subject to a wide array of human and natural uncertainties. While research to reduce these uncertainties are significantly advancing, plausible futures for climate and society, complex and dynamic cause-and-effect relations, limits of knowledge or contested values are expected to result in deeply uncertain climate impacts, adaptation responses and effectiveness. Thus, tools to support decision-making in the context of these deep uncertainties can help make most out of limited or conflicting information.

Within the community of researchers and practitioners in the field of Decision-Making Under Deep Uncertainty (DMDU), a growing set of methods, tools and approaches is developed and assessed for policy-analysis to support decision-making for climate change adaptation challenges. As such, DMDU approaches like Robust Decision-Making or Adaptation Pathways offer guidance to identify (a) robust decisions in the context of various objectives and large uncertainties, and (b) trade-offs, flexible decisions, and opportunities by developing sequences of measures (adaptation pathways). Ongoing research is advancing these approaches to support making better adaptation choices.

In this session we aim to (a) collaboratively identify and discuss promising advancements for improving climate change adaptation decision-making in complex systems; and (b) inspire further research and discussion by showcasing novel approaches for decision-support at the forefront of science and society.

### **Participants**

#### Session organizers

Julius Schlumberger, Deltares, Netherlands

Chandni Singh, Indian Institute for Human Settlements, India

Patrick Reed, Cornell University, USA

Bramka Arga Jafino, World Bank, USA

Tirusew Asefa, Tampa Bay Water, USA

Marjolijn Haasnoot, Deltares, Netherlands

#### Invited speakers for lightning pitches:

Julius Schlumberger, Deltares, Netherlands

Chandni Singh, Indian Institute for Human Settlements, India

Tirusew Asefa, Tampa Bay Water, USA

Arjuna Srinidhi, Watershed Organization Trust

Antonia Hadjimichael, Penn State University, USA

Nathan Bonham, University of Colorado Boulder, USA



session 946

**Adaptation Choices** 

### Tuesday 03 ······ Tracking health adaptations - design, 16:30-18:00 ..... measurement and improvement of health adaptation programs

Nature-based Solutions for adaptation - or ecosystem-based adaptation - have in recent years surfaced as a blanket term applied for approaches that "protect, sustainably manage and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously benefiting people and nature (IUCN 2020). Nature-based solutions (NbS) thus have the potential to deliver sustainable solutions to address climate impacts, while tackling the degradation of ecosystems and the resulting loss of biodiversity and ecosystem services. Until recent years, NbS were mainly emphasized in the context of their ability to mitigate climate change. However, the role of NbS in adaptation is now recognized as timely and of central importance to climate adaptation (GCA, 2019).

This session aims to unpack the concept of NbS and explore how NbS solutions for adaptation and related processes are translated at the local level. While the potential of NbS to link climate change-, biodiversity- and livelihood concerns is widely and increasingly recognized, and lessons are starting to emerge, little is yet known on how NbS approaches may in practise bring environmental, economic, and social benefits, to the most climate vulnerable populations in the Global South. There is still uncertainty as to what the potential risks, adverse effects, challenges, and opportunities associated with NbS are for local communities, who depend on ecosystem services for their livelihoods. At the same time, numerous lessons exist from decades of closely related efforts in local natural resource management that must not be forgotten in the development of NbS. As the impacts of climate change disproportionately affect the most vulnerable populations, combining NbS for adaptation with a strong community engagement, and pro-poor and rights-based approaches is critical to enhance the long-term sustainability of social-ecological systems. This session will unpack how engaging local communities, including indigenous and marginalized populations groups, and considering their views, rights, and interests as well as the realities of the context in which they live, should be reflected in all stages of the decision-making- and implementation processes of NbS initiatives, as emphasized in criteria 5 of the IUCN Global NbS Standards (IUCN 2020).

#### Authors and Partner organizations

Professor Kristie L Ebi (Lead of Lancet Countdown Working Group 2 and Professor of Global Health and Environmental Health at the University of Washington) – session

Professor. Karyn Morrissey (Author in Lancet Countdown Working Group 2 and Professor in Applied Economics in the Sustainability Division at the Technical University of Denmark) - session presenter

Dr. Nick Ogden (Director, Public Health Risk Sciences Division, National Microbiology Laboratory, Public Health Agency of Canada) – session presenter

Lesley-Anne Dams (Program Lead Infectious Disease and Climate Change program, Centre for Food-borne, Environmental and Zoonotic Infectious Diseases, Public Health Agency of Canada) – session presenter

8:30-10:00 ····· for Adaptation

session 985

Governance & Finance

### Wednesday 04 .... Audit and Accountability

Governments of all levels around the world have made important commitments to adapt to climate change. These commitments to citizens and international partners take the forms of laws, directives, plans, programs, initiatives and other significant funding allocations. Government spending on adaptation, disaster risk reduction and responses to every more frequent floods, fires, storms and heat has increased exponentially in recent years and will only grow more significant in the years to come.

Auditors around the globe seek to examine whether governments of all levels are keeping their promises and making progress in assessing risks, developing plans and adapting to climate change. Climate change is fast becoming a key subject of performance audits around the globe.

This session will show how audits are a source of independent information on progress toward adaptation goals and a key driver of continual improvement. It will introduce key initiatives that the international audit community is implementing including the Global Cooperative Climate Change Adaptation Actions audit and the Climate Scanner.

### Authors and Partner organizations

Jerry DeMarco - Commissioner of Environment and Sustainable Development, OAG Canada

Kimberley Leach - Principal, OAG Canada - Moderator and facilitator

Dr. Vivi Niemenmaa - Secretary General, INTOSAI Working Group on Environmental Auditing, National Audit Office of Finland

Archana Shirsat - Deputy Director General, IDI

Dashiell Velasque Da Costa, Climate Scanner Project Coordinator, Federal Court of Accounts, Brazil

Mohamed Ibrahim Jaleel, Manager, Performance Audit Department, Auditor General's Office Maldives



session 561

Nature-based solutions

Wednesday 04 ... Locally-led nature-based solutions for 10:30-12:00 ..... adaptation in practice: Building bridges between global concepts and local contexts.

> Nature-based Solutions for adaptation - or ecosystem-based adaptation - have in recent years surfaced as a blanket term applied for approaches that "protect, sustainably manage and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously benefiting people and nature (IUCN 2020). Nature-based solutions (NbS) thus have the potential to deliver sustainable solutions to address climate impacts, while tackling the degradation of ecosystems and the resulting loss of biodiversity and ecosystem services. Until recent years, NbS were mainly emphasized in the context of their ability to mitigate climate change. However, the role of NbS in adaptation is now recognized as timely and of central importance to climate adaptation (GCA, 2019).

> This session aims to unpack the concept of NbS and explore how NbS solutions for adaptation and related processes are translated at the local level. While the potential of NbS to link climate change-, biodiversity- and livelihood concerns is widely and increasingly recognized, and lessons are starting to emerge, little is yet known on how NbS approaches may in practise bring environmental, economic, and social benefits, to the most climate vulnerable populations in the Global South. There is still uncertainty as to what the potential risks, adverse effects, challenges, and opportunities associated with NbS are for local communities, who depend on ecosystem services for their livelihoods. At the same time, numerous lessons exist from decades of closely related efforts in local natural resource management that must not be forgotten in the development of NbS. As the impacts of climate change disproportionately affect the most vulnerable populations, combining NbS for adaptation with a strong community engagement, and pro-poor and rights-based approaches is critical to enhance the long-term sustainability of social-ecological systems. This session will unpack how engaging local communities, including indigenous and marginalized populations groups, and considering their views, rights, and interests as well as the realities of the context in which they live, should be reflected in all stages of the decision-making- and implementation processes of NbS initiatives, as emphasized in criteria 5 of the IUCN Global NbS Standards (IUCN 2020).

### Authors and Partner organizations

Chair:

Dr Caroline Schaer; CARE Denmark (in-person)

Presenters:

Dr Henri Neufeldt; UNEP Copenhagen Climate Centre (in-person)

Dr Dafa Gudina Gumo, CARE Ethiopia (in-person)

Dr Mikkel Funder; Danish Institute for International Studies (DIIS). (virtual)

Dr Jessica Thorn; University of Namibia & University of St Andrews (in-person)

session 716

Indigenous Knowledge

Wednesday 04 ··· Sharing experiences of knowledge and 16:00-17:30 ..... practices of small-holders farmers to face climate risks in the Pacific and in **Africa** 

> Small-scale agriculture is an important pillar of the economy and food security in many countries, especially in villages that rely heavily on their own production for their livelihoods. Today, despite improvements in crop productivity over the past decades, annual production remains highly dependent on climate variability. Among the consequences of climate change expected in the coming decades, the increase of periods of heavy rainfall as well as drought are expected.

> Nevertheless over time in various countries which are different in terms of geomorphology, history and economic development, "risk cultures" have developed. People has learned to cope with climate and socio-environmental events according to its own knowledge, norms and values. Today many countries and territories are already being affected by the increase in the number of extreme climate and hydrological events. Faced with these growing climate risks, they need to organise coherent and structured responses to adapt to climate change, which means modifying ways of living and doing things though National Adaptation Plans.

> The objective of this round table is to bring together the experiences of research-action carried out in the Pacific, in Africa and elsewhere on (1) the collection of knowledge, know-how, know-how of farmers facing extreme situations such as droughts, heavy rains, or even cyclones and (2) the initiatives of dialogue or hybridization between scientists, farmers, technical agents of institutions that may have taken place in the territories concerned, without attaching other summaries. All disciplinary fields are welcome. The objective will be to discuss survey methods, difficulties encountered and progress made in terms of appropriation and sharing of knowledge between the actors mentioned.

### Authors and Partner organizations

Catherine Sabinot, French National Research Institute for Sustainable Development (IRD), ESPACE-DEV - New Caledonia

Benjamin Sultan, French National Research Institute for Sustainable Development (IRD), ESPACE-DEV - WASP, France

Christophe Menkes, French National Research Institute for Sustainable Development (IRD) – New Caledonia

Fleur Vallet, French National Research Institute for Sustainable Development (IRD) - New Caledonia

Samson Jean-Marie, PhD Student, UNC-IRD, New Caledonia

Alexandre Peltier, MeteoFrance - New Caledonia

Pierre Metsan, Ministry of Education and Training, Vanuatu

Sunny Seuseu, Climate Information Services Officer, SPREP, Vanuatu

Moirah Mato, Ministry of Geohazard, Vanuatu

Youssoupha Tall, G-EAU, Senegal

Jeanne Riaux G-EAU. France

Aleksandra Dolinska, ART-DEV, France

Diabel Ndiaye, ANACIM, Senegal

Ousmane Ndiaye, ANACIM, Senegal



session 380

Limits to Adaptation

Thursday 05 ..... Emerging adaptation practitioners and 8:30-10:00 ..... scholars: A dialogue on common and divergent challenges across African sociopolitical and environmental contexts

> This session will entail an exchange among young African adaptation researchers and adaptation practitioners on the evolving relationship between adaptation research and practice. These scholars and practitioners working in a diversity of environmental and socio-political contexts will explore the limitations of contemporary collaborations across the academic-practitioner divide and evaluate how such collaborations can be improved. Participants will explore the specific kinds of analytical frameworks and tools that researchers can bring to the table that will be helpful in identifying adaptation priorities, ensuring inclusion in adaptation interventions, and avoiding maladaptation. Likewise, the session will explore the challenge of producing research that enables practitioners to address complex forms of social vulnerability to climate change. How might researchers and practitioners deep their understanding of the interconnections, synergies and trade-offs of adaptation across environmental, livelihood, technological, and institutional dimensions.

### Authors and Partner organizations

Chair and moderator: Thomas A. Smucker, Ohio University (USA)

Alan Ouku, Konkuey Design Initiative (Kenya) Maria Mugeni, MS candidate (Geography) Ohio University (USA) Erick Valentine, Tanzania Private Forestry Organization Filemon Eliamini, MA candidate (Geography), Ohio University Fatou Jeng, Clean Earth Gambia (the Gambia) Muhammed Ceesay, MA candidate (Geography), Ohio University (USA) Mohammed Basit Jibreel, Urbanet (Ghana) Abdul-Salam Jahanfo Abdulai, MA candidate (Geography), Ohio University (USA)

session 689

**Adaptation Choices** 

#### Objective and outcome

Building on IISD's extensive experience in supporting country programs through its National Adaptation Plan Global Network (NAP GN) forum in developing NAPs and its link to VRAs, the session aims to build on past experiences to highlight and bridge the gaps between academic and on the ground practices in implementing VRAs of National Adaptation Plan.

Thursday 05 ....... What science doesn't say: Implementing 16:00-17:30 .... vulnerability assessments as part of the NAP process

#### Introduction

Vulnerability Risk Assessments (VRAs) are an essential tool to help assess the potential stresses and impacts on a social-ecological system resulting from climate change and can, therefore, help implement effective strategies to adapt to change (Fakhruddin et al., 2020). VRAs offer a broad scope and can encompass community level assessments to national adaptation planning processes. If done properly they can help prioritise adaptation action and when repeated can be a valuable contribution to the planning process and MEL systems (Fritzsche, 2014). Countries are now focusing more and more on using VRAs for National Adaptation Plan (NAP) prioritization. Currently the conceptual framing of VRAs and their approaches present a gap in how they are implemented in theory and in practice.

#### Problem statement

National systems vary from country to country and are influenced by multiple factors when it comes to implementing VRAs. These can include but are not limited to lack of capacities to conduct VRAs, complexity of government systems, poor governance and disconnected regional boundaries, lack of data or challenges in the acquisition of data across scales, and challenges in upscaling or down scaling VRAs, are some on-the-ground realities that countries face.

In particular, climate change planning decisions consider spatial context that require engagement of actors across different scales of governance. This constitutes the engagement of decision makers as risk managers and climate adaptation specialists (Connelly et al., 2018). The component of scale adds complexity to decision-making as it involves different stakeholders with varying degrees of capacities to grasp a common understanding and where resource use and access are navigated by jurisdictional control. Definitions of VRAs can differ across different sectors and scales (Wolf 2011).

Under the above premise, the framing of VRAs from science to practices varies in its conceptual understanding. Academic approaches for implementing VRAs often require adjustments to conform to local realities. Successful application of VRA approaches require understanding of the context. In theory, VRAs can provide a compartmentalized process of conducting and assessing vulnerabilities. However, when delivered appropriately within political realities, VRA are a pillar of adaptation planning and can serve as a basis for MEL systems.

### **Participants**

Emilie Beauchamp, Lead Monitoring, Evaluation & Learning for Adaptation to Climate Change, IISD (Lead author and presenter).

Kouassigan Tovivo, Director - Lomé Office / Senior Implementation Specialist -Climate Finance & Adaptation, Climate Analytics (co-author)



the program

session 814

**Adaptation Choices** 

### Friday 06 ..... Advancing co-production and use of 8:30-10:00 ..... climate risk information for naturebased solutions

With implementation adaptation activities ramping up, practitioners and decision-makers need significantly improved climate risk information that can reliably address emerging challenges. It is vital that co-production is deeply embedded in cutting-edge science with stakeholder engagement being at the center of climate risk information development. Effective communication and improving the usability of climate risk information also remain essential. This session will focus on understanding climate risk information needs, re-search gaps and needs, and ways in which climate risk can be integrated into the planning, design, and development of nature-based solutions for adaptation, as well as policy integration. The session will bring together lessons learned from on-the-ground implementation about the ways in which nature-based solutions can be harnessed to build resilience and strengthen climate adaptation. The session will identify outcomes of activities implemented by practitioners and cutting-edge climate science information for stakeholder use. The session will serve as a platform to demonstrate nature-based solutions from the field, showcase the latest science, identify challenges and propose research needs. It will highlight experiences from the high mountain regions of Afghanistan, the Aral sea region in Uzbekistan, and coastal and marine regions in Mesoamerica from projects being implemented by Columbia University, NASA, UNDP, WWF, WCS, and Environment Management Group.

### Authors and Partner organizations

#### Partner organizations

Columbia University, NASA Goddard institute for Space Studies (NASA GISS), World Wildlife Fund (WWF), Wildlife Conservation Society (WCS), United Nations Development Programme (UNDP)

#### **Authors/presenters**

Introduction to the session - Cynthia Rosenzweig (NASA GISS and Columbia Uni-

Developing Climate Risk Information for the Implementation of Adaptation Activities – Manishka De Mel (Columbia University and NASA GISS)

Integrating Climate Risk Assessment and Natural Capital Modelling to Support Planning for Ecosystem-based Adaptation in Mesoamerican Reef [2-part presentation] - Ryan Bartlett (World Wildlife Fund) and Alejandra Calzada (WWF Mesoamerica)

Resilient Coastal Development Belize – Johanna Lovecchio (Columbia University)

Catchment investment programs: designing nature-based solutions for agropastoral resilience in Southern Africa - Radhika Dave (United Nations Development Pro-

Mapping and addressing climate, ecosystem, biodiversity, and socioeconomic vulnerability in high mountain regions of Afghanistan [2-part presentation] - Gautam Surya and Sorosh Poya Faryabi (Wildlife Conservation Society)

Structured Discussion – Johanna Lovecchio (Columbia University)





### Masterclasses - Monday, 02



Masterclass 1: What Remains After Project Closure? Conducting Ex Post Evaluations for Adaptation Interventions - room 524A

**—** 14:00-16:00 **—** 

Led by Susan Legro, Technical Evaluation Reference Group of the Adaptation Fund (AF-TERG)

This Masterclass will provide an overview of the Adaptation Fund's approach to ex post evaluations; i.e., evaluations 3 to 5 years after project closure. The class will review how to assess the sustainability of project outcomes and how to characterize the resilience of outcomes that are sustained through discussion and targeted problem-solving. In addition, it will also share lessons learned from the first four ex post evaluations managed by the AF-TERG. Finally, it will provide information and resources to support the design of adaptation interventions that can generate learning long after donor support ends.

This class is targeted towards development and environmental practitioners, including those involved in the design and evaluation of adaptation interventions, evaluation management, and adaptation program management.

**Group size flexible** (no minimum or maximum size)



Masterclass 2: Operationalising Co-creation for Transformation: A Masterclass by the Adaptation Research Alliance and Climate and Development Knowledge Network - room 524B

13:00-17:00

Organized by the Adaptation Research Alliance and Climate and Development Knowledge Network

The IPCC has called for systems-wide transformations, 1 resilience building and an urgent all-of-society response to climate change. Adaptation practitioners have learned that addressing climate change through purely technical measures has been ineffective as this requires considering socio-economic and governance issues as well as navigating barriers such as power asymmetries, conflicting knowledge systems and different worldviews. To respond to the urgent adaptation challenge, it is therefore critical to collaborate with and work across a range of sectors and stakeholders with different values and priorities, at multiple levels, including through processes of 'co-creation'. Often used interchangeably, the terms co-production and co-creation are employed to cover a spectrum of activities that can go from more consultative meetings where stakeholders' opinions are sought for validating certain concepts, to full co-creation where diverse actors can take part in co-designing, co-delivering and co-evaluating interventions. When different knowledge types and sectors are brought together, what emerges is a collective wisdom and knowledge that cuts across disciplinary siloes. This is crucial for addressing the challenges we face. This masterclass is being run by the Adaptation Research Alliance and the Climate and Development Knowledge Network and builds on their extensive knowledge and experience of working with diverse stakeholders and knowledge types globally, with a particular emphasis on the global South. The session seeks to be as practical, interactive and experiential as possible, equipping participants with a range of tools and skills that they can apply in their own co-creation (and more generally, multi-stakeholder) processes.

#### **Objectives**

- Sensitise participants about the value and benefits of engaging in co-creation, including as a means of making research more impactful, as well as the challenges that arise in such processes. Through this, understand the rationale and 'business case' for co-creation.
- Explore and experience a number of tools and approaches that can be used to make the different phases of co-production (e.g., from convening participants to co-evaluating impacts) more inclusive and effective, as well as to address the different challenges that may arise.
- Share concrete stories and examples of co-creation to enable the concept to become as alive and tangible as possible.
- Inform the operational strategies of the Adaptation Research Alliance and the Climate and Development Knowledge Network to expand and improve co-creation processes being run by these networks.

Registration required - Places limited

Masterclass 3: How to Write Peer-Review Publications: Tips and Tricks from the Editors of Climate and Development - room 524C

**—** 13:00-16:30 **-**

#### Organised by Editors of Climate and Development

Peer-review writing remains the currency of academia, whether we like it or not. Even though it is clear that publication success is highly inequitable and multiple systemic barriers generate gatekeeping, there are some key tricks that early career researchers should be aware of to improve their chance of getting a paper accepted. Even an interesting story describing ground-breaking empirical research findings requires the argument to be framed in a solid, logical style that enables the reader to clearly understand the objectives, methodologies, findings and relate these to other similar work.

The purpose of this MasterClass is to discuss some of the biggest barriers to overcome to help a manuscript to make it past the editors and reviewers. Among other things, we will examine the building blocks of an academic paper – from how to write a good title to how to best present references – explain the review process, and discuss the role of the editor. We will have extensive discussion time in small groups divided by research focus (social science, natural science, etc), where participants can share their experiences and get tips from editors and other participants. The MasterClass is run by Editors of Climate and Development and will focus on interdisciplinary but mainly social science, qualitative writing. Nevertheless, the class is open to anyone looking to learn more about the writing process and should be generic enough to apply to any journal. While we draw on examples from Climate and Development, we will also refer to our own experience as academics publishing in a wide range of journals.

While all of the content will be prepared in advance, participants will be asked to vote on the priority topics at the beginning of the class so that appropriate time can be allocated to the different elements.

#### **Objectives**

After this MasterClass, participants should:

- Have a clear understanding of how to plan an academic paper, and the mistakes to avoid
- Understand how the submission and review process works (generically, not just for a specific submission system)
- Have identified one or more writing buddies who could help encourage them and read drafts

**Registration required - Places limited** 

### Field trips Friday 06 - 13:00-17:00



### Glocal Learning Journeys

Glocal Learning Journeys are dynamic and intimate fieldtrips for attendees to interact and connect with local actors and organizations working in the Montréal area on local climate-related challenges. If you want to learn more about why you should join one of our learning journeys, please visit the blog posting (link on the website of Adaptation Futures).

### Mobilizing school communities in creating personalized roadmaps for climate change education (\*new)

Led by: Lab22 in collaboration with Leadership & Learning for Sustainability Lab

Site: Lab22 offices, 5248 St-Laurent blvd.

Conference Theme: Teaching and learning adaptation in a changing climate

Overview: This glocal learning journey will discuss the role of schools in preparing youth for a changing climate. By inviting some of our staff and recent youth council members engaged in local schools, we want to bring field and youth perspectives to the forefront of the discussion. We will present specific Lab22 approaches to foster cocreation and collaborations in school communities, as well as the role of eco-emotions in shaping these processes. Participants will be invited to share hopes and visions for the educational system and exchange inspirational practices and policies in a more global context.

Maximum number of participants: 30

### Urban agriculture cooperatives for a food secure future (\*new)

Led by: CultivAction

Site: Loyola Campus Concordia

Conference Theme: Equity & Justice in adaptation

Overview: CultivAction is an urban agriculture cooperative working on building food sovereign communities and sustainable food production in Montréal. This learning journey will focus on how urban agriculture cooperatives can build solidarity and activate networks of reciprocity to create resilient and just futures for urban food security.

Maximum number of participants: 25

### Glocal Learning Journeys

#### Lachine-Est écoquartier (Lachine Canal)

Led by: Institut national de la recherche scientifique (INRS) in collaboration

with Concordia Climate Change Adaptation Lab

Site: Le quartier Lachine-Est (Lachine Canal)

Conference Theme: Making adaptation choices

Overview: The Lachine-est learning journey focuses on how the City of Montreal is integrating urban greening initiatives into neighborhood development planning in order to reduce urban heat island effect and local flood risks. Lachine-est is a designated special planning project for the City of Montreal with the aim of creating an éco-quartier. In our discussion we will explore how existing urban planning tools can be used to support or constrain transformative adaptation efforts. We will also discuss how inclusive planning processes can be designed to realize the benefits of urban greening for those most vulnerable to climate change risks.

Maximum number of participants: 30

### Intergenerational climate action: urban nature walking tour

Led by: Sustainable Youth Canada in collaboration with Leadership & Learning for Sustainability Lab

Site: Falaise St. Jacques - entrance at the parking lot of Quilles G Plus Bowling NDG (6510 Rue Saint-Jacques)

Conference Theme: Who wins, who loses, who decides: Equity & justice in adaptation

Overview: The Intergenerational Climate Action learning journey will explore how youth drive the environmental movement in their communities, and how this impacts policy decisions across the world. Sustainable Youth Canada (SYC) is a 100% youth-led environmental organization in Montreal with local projects and experience working with government. We hope to discuss the importance of our work as well as challenges we have faced in a system that was not designed for us. In this intergenerational setting, we hope to bridge conversations on the importance of supporting youth climate action and how non-youth can assist in creating meaningful participation for younger people.

Maximum number of participants: 20

### Field trips Friday 06 - 13:00-17:00



### Glocal Learning Journeys (suite)

### Placemaking: an urban greenhouse approach

Led by: The Concordia Greenhouse in collaboration with Concordia Climate Change Adaptation Lab

Site: 1455 de Maisonneuve Blvd. W., 13th floor, Montreal, QC H3G 1M8

Conference Theme: The power of nature for climate action

Overview: The Concordia Greenhouse Project is a collectively run, consensus-based, non-profit organization. It uses the Henry H. Hall Building rooftop greenhouse as an all-organic space geared towards community, education and sustainable horticulture. The Greenhouse is a year-round green space that hosts workshops, projects and events raising awareness around food issues and alternatives to mainstream consumerism. In this learning journey, we will learn about how the Greenhouse Project strengthens the urban sustainability movement in Montreal by growing local products using ecological practices, providing experiential learning opportunities through volunteering, internships and jobs, and networking with other like-minded individuals and organizations.

Maximum number of participants: 25

#### Tree mapping as a transformative approach to climate change education

Led by: Concordia University Loyola College for Diversity and Sustainability in collaboration with the Concordia Climate Change Adaptation Lab

Site: Loyola Campus, Concordia University

Conference Theme: Teaching and learning adaptation in a changing climate

Overview: The Concordia Tree Project launched in 2019 as part of the Concordia University Climate Action Plan. The initiative aims to build public understanding of native tree species and the ecosystem services they provide. Throughout the summer, students document each tree on Concordia's two campuses. Information in Kanien'kéha, English, and French is then made available via a QR code affixed to each tree. During this learning journey we will discuss how the mapping project contributes to formal teaching and public understanding about nature-based solutions for climate action, the relationship between climate action and decolonization, and the importance of protecting urban biodiversity.

Maximum number of participants: 30

### Glocal Learning Journeys

### Funding sustainability: a reflective tour of McGill's sustainability projects fund (SPF)

Led by: McGill Office of Sustainability in collaboration with Leadership & Learning for Sustainability Lab

Site: Starting and ending at 550 Sherbrooke Street West (MOOS' office), with two to three additional sites on McGill's downtown campus.

Conference Theme: Inclusive and Adaptation Governance and Finance

Overview: This learning journey uses the case of McGill's Sustainability Projects Fund (SPF) initiative as a conversation starting point to explore how innovative financial solutions at community level that can be scaled out. SPF is a McGill initiative that aims to build a culture of sustainability at McGill University through cross-disciplinary approach. It is the largest fund of its kind in Canada, and one of the largest in North America. Over 340 projects have been funded since 2009. In this learning journey, we will start with a general overview of the SPF, including its history, some flagship projects, the governance structure, challenges and opportunities. The second part will focus on the selected SPF projects on McGill's downtown campus, with a view to exchanging learning and knowledge with AF2023's participants.

Maximum number of participants: 30

### Field trips Friday 06 - 13:00-17:00



### **General Site Visits**

Innovation by and adaptation of quebec farms relative to climate change (Living Lab – Quebec and agrisolutions climat projects)

Led by: Union des producteurs agricoles (UPA)

Site: Ferme Cristallina Time: 1:00 – 8:00 p.m.

Overview: The Union des producteurs agricoles (UPA) invites you to Ferme Cristallina, a family farm specializing in dairy production, operated by Mr. Michael Jeker, located one hour from Montreal.

Transitioning towards a sustainable agri-food sector requires innovations at different levels: technical, social, economic, etc. This multi-level approach to innovation and adaptation will be presented through the lens of lessons learned through two major agri-environmental projects run by the UPA in Quebec (Living Lab – Quebec and Agri-solutions climat). Joined by researchers from Agriculture and Agri-Food Canada and other specialists, farmers will share with you the innovative farming practices they have codeveloped and experimented.

Maximum number of participants: 50

\*Note: This tour is not suited to people with reduced mobility.

#### Tour of Tekakwitha Island & bay restoration project (\*new)

Led by: Kahnawà:ke Welcome Center

Site: Ile Tekakwitha

Overview: Tekakwitha Island located in Kahnawà:ke Mohawk Territory was formed by the construction of the St. Lawrence Seaway in the 1950s. The artificial island was created by filling in a series of natural islands with rock and clay excavated to create the shipping canal. In the intervening years since its creation, the immediate significant impacts of the modifications have been compounded by additional changes to the landscape as the river seeks a new balance. The Kahnawà:ke Environment Protection Office (KEPO) completed a naturalization project on this island and accompanying bay between 2020 and 2022 to enhance opportunities for wildlife and the community. This tour will take 1-1½ and introduce participants to the history of the island, environmental issues, and restoration project.

Maximum number of participants: 48

### General Site Visits -

### Palais des congrès de Montréal rooftop urban farm : experimentation and research platform (\*new)

Led by: Laboratoire sur l'agriculture urbaine

Site: Palais des congrès de Montréal

Overview: Montreal has 57 urban farms, including some rooftop urban farms. The Palais des congrès experimental urban farm is one of these. Opening in 2011, the green roof of the Palais des congrès de Montréal has become in 2016 one of the most important experimentation and research site to promote of urban agriculture. Its current surface area of 3,250 meters square (35 000 sq feet), allows it to accommodate a vineyard, a saffron plantation, a section of vegetable production in geotextile bags area and a section with an intensive green roof. Spaces are also provided to accommodate prototypes on roof, particularly vertical modules (installation in 2024). As part of this visit, it will be possible to see the different installations, to present the automated irrigation system and optimal nutrient management systems planned. The AULAB team will also be able to present and exchange some results of research projects that took place on site 2016

Maximum number of participants: 25 per visit, 2 visits (a minimum of 10 for a visit)

### **Innovation Days**



### Tuesday 03 - room 520F

**————** 13:30-14:30 **———** 

### Innovation in adaptation: What is it?

A dynamic session curated by the Adaptation Fund to discuss a global vision for innovation in service of adaptation to climate change. The session will offer a variety of perspectives explored by a panel of thought leaders on the questions of:

- What is innovation in context of adaptation?
- Why must we innovate?
- In the context of adaptation, where does innovation come from?
- At what scale does innovation in adaptation happen?
- Where should more focus and support go?
- Whose responsibility is it?

The session consists of a speaker introduction round, followed by facilitated discussion amongst the panel in response to the key questions. Alternative viewpoints will be explored and the essence of innovation in adaptation unpicked.

Speakers include voices from international organisations, policy, locally-led innovation, and the scientific community.

**-----** 14:30-15:30 **-----**

### Innovation in adaptation: What does it look like?

An inspiring session on real world applications of innovation in adaptation. Organizations on the cutting edge of adaptation projects describe what innovation on the ground looks like. In this interactive session audience participation is encouraged as speakers are placed around the room to facilitate group conversations. Questions to be explore are:

- What are some of the best examples to-date?
- What are the main challenges and/or opportunities?
- What could innovation actors (financiers, policy-makers, private sector, etc.) do better to support adaptation?
- Learning from experience: how can we better leverage failure?

Highlights from the in-room discussions will be brought to the stage by the speakers to highlight key ideas and thought-provoking comments. The session will culminate with a lightening round of speaker's best examples of innovation in adaptation to

Speakers include voices from the Adaptation Fund's National Implementing Entities, global innovation programmes, foundations, humanitarian organisations, and world leading Universities.



### Wednesday 04 - room 520F

**————** 13:30-14:30 **———** 

### The Innovation Process: How is it done?

Innovation is a process that drives advancements in all spheres of society and economy involving a range of stakeholders that must collaborate to serve today's and tomorrow's needs. There is a greater demand than ever for integrated solutions that can respond to complex societal challenges. As such, there are certain well-understood elements in the innovation process.

In this high level and diverse panel-led session innovation actors speak about their experiences making change, and shifting to new paradigms. The key questions to be explored are:

- What is innovation?
- What is the process like?
- How can it work for adaptation?
- Is innovation really the answer or should we look to existing solutions?
- Innovation entails risk and failure. Can we afford to fail?

Speakers include voices from public private partnerships, government, Silicon Valley, third level innovation hubs, acceleration programmes, and Global South and European networks.

**14:30-15:30** 

### Locally led innovation: What does it look like?

Adaptation in hyper local contexts through real-life stories of innovators

Bringing voices from the Global South, to the forefront in pursue of climate justice, equity, diversity and inclusion. This session will bring forth the lessons directly from grantees of Adaptation Fund Climate Innovation Accelerator (AFCIA, a partnership of Adaptation Fund, EU, UNDP, UNEP and CTCN) who have the potential to demonstrate a breadth of Locally Led Adaptation (LLA) initiatives at different scales.

Two of the key LLA principles are the amplification of agency of the most vulnerable, and the role of patient funding in LLA Initiatives. This session will explore these two principles through the experience of the Adaptation Innovation Marketplace (AIM), specially through AFCIA grant makers and funders using knowledge exchange through a moderated dialogue between funders, grantees and audience members.

#### Key questions:

- What is LLA and why is it such an important adaptation action?
- What are the lessons, challenges and opportunities as experienced by the AFCIA grantees?
- What are the models of finance for innovation in adaptation?
- How can we continue to adapt and grow this success?

The session will be a facilitated two-way knowledge exchange session between funders of adaptation initiatives and their grantees in the panel, as well as the audience members.

### **Innovation Days**



### Thursday 05 - room 520D

13:30-15:30

### Innovation in adaptation: What is the future?

Given the trajectory of climate change, the need for adaptation will only grow. In this session, curated by the Adaptation Fund, key opinion holders discuss how to accelerate successful adaptation through innovation and what are the latest trends and likely future directions in adaptation.

The session will begin with thought provoking inputs and a moderated panel discussion with researchers, communities, authors, and innovators. The topic will revolve around questions on the future of innovation in adaptation:

- What are the new frontiers?
- Is the answer technology, society or nature?
- What is the role of the government / private sector / International finance (grant and lending) institutions? Who are the other key actors?
- Society and the power of citizens and communities: what will be the role of individuals and communities?

Keeping our focus on action, the power of partnerships will then be explored through a series of talks led by the Adaptation Fund's partners.

The session will culminate in a facilitated networking event to allow speakers, audience members and contributors from across the Adaptation Fund's sessions to interact and connect.

Join this session not only to be inspired but also to contribute, meet others, and connect with innovation for adaptation.







This first International Forum on Agroecosystem Living Labs (IF-ALL) marks five years since the agroecosystem living lab concept was first presented by Canada to the Ministers of Agriculture of the G20 in 2018. Agriculture and Agri-Food Canada (AAFC) and France's National Research Institute for Agriculture, Food and Environment (INRAE) are co-hosting this International Forum. The Forum features discussion panels and parallel sessions of scientific papers to establish state-of-the-art practices, share lessons learned from case studies and address challenges facing the international agroecosystem living lab community.

### Wednesday **04**

8:30-12:00

### Opening Plenary - room 520E

IF-ALL participants are invited to attend the Opening Plenary session that will feature opening remarks and keynote presentations on the concept and value of Agroecosystem Living Labs.

Chairs: François Chrétien (Director, Research Development and Technology, AAFC) and Christian Huyghe (Scientific Director of Agriculture, INRAE)

Minister remarks. The Honourable Lawrence MacAulay, Minister of Agriculture and Agri-Food Canada

Opening remarks. Philippe Mauguin (CEO, INRAE) and Gilles Saindon (Assistant Deputy Minister, AAFC)

Why Agroecosystem Living Labs? / Forum Overview. Javier Gracia-Garza (AAFC, retired and Chris McPhee (AAFC)

#### Theme 1 - room 520E

### "Promoting innovation through living labs"

#### 9:05 Presentations

This session will focus on the use of the agroecosystem living labs approach to promote agricultural innovation as a way to establish productive and sustainable agroecosystems. Presenters will capture the experience of farmers, scientists, and others using an open innovation approach, capitalizing on the potential of local knowledge, and promoting the dialogue between scientific and empirical knowledge. It will also explore new ways to enable open innovation systems with policy makers.

Chair: François Chrétien (AAFC)

- **9:10** Invited Speaker: Lessons from building Agriculture and Agri-Food Canada's network of agroecosystem living labs. Chris McPhee, AAFC, Canada
- **9:25** Invited Speaker (virtual): Living Labs as a key instrument for the transition to sustainable farming: A European Union perspective. Kerstin Rosenow, European Commission, Belgium
- **9:40** Ecological intensification of livestock production in native grasslands: operationalizing «win-win» opportunities in South America's Pampas and Campos grasslands. Santiago Dogliotti , Univesidad de la República, Uruguay
- **9:55** Developing the Organic Field Crop Sector Using the Living Lab Approach: A Story from Abitibi-Témiscamingue (Québec, Canada). Stéphanie Lavergne, Université du Québec en Abitibi-Témiscamingue, Canada

10:10 Break

### ———— Wednesday 04 8:30-12:00 (suite) —

**10:30** Agroecology Virtual Research Environment as an example of collaboration between Living Labs and Research. Jose-Manuel Avila-Castuera, LifeWatch Eric, Spain

**10:45** FOod REsilience Living Lab (FORELL): a proposed Soil-Food Living Lab linking soil health to food sustainability and climate adaptation. Achilleas Zalidis, University of the Aegean, Greece

**11:00** Breathing life into rangeland living laboratories in the Western US. Hailey Wilmer, U.S. Department of Agriculture, Agricultural Research Service (USDA-ARS), USA

#### 11:15 Thematic Discussion

Facilitator: Chris McPhee, AAFC, Canada

All speakers, presenters and attendees are invited to engage in a guided interactive discussion on the theme of promoting innovation for transition through living labs.

Questions for discussion:

- What kind of outcome would you expect if you were to be engaged in an agroecosystem living labs?
- What are the best practices, tools or research needed to support the co-creation process in an agroecosystem living labs?
- What is the biggest challenge participants face when using a living lab approach?

#### **Virtual Posters**

Living in an Agroecosystem Living Lab: Participant Reflections and Experiences from Canada's Living Laboratories Initiative. Margaret Bancerz, AAFC, Canada

Scientific interest groups in France: an innovative multi-stakeholder initiative for collaborative research in agricultural sectors. Frédérique Angevin, INRAE, France

FInAL: - Facilitating insects in agricultural landscapes: A project to demonstrate the impact of landscape transformation on biodiversity and socio-economic aspects with ALLs in Germany. Stephanie Holzhauer, Thuenen Institute, Germany

From waste land to retention ecosystem, a successful living lab adventure. Jonathan Lafond, AAFC, Canada

ADOPT model predictions in a Canadian context: Estimating future beneficial management practice adoption rates. Margot McComb, AAFC, Canada

'Social Network Webbing' on-farm experimentation and the co-production of cropping system innovation research in the Pacific Northwest. Carol MacFarland, Washington State University/USDA-ARS, USA





### Wednesday **04**

8:30-12:00 —

### Theme 2 - room 520F

### "Fostering transitions toward sustainable food systems through living labs"

#### 9:05 Presentations

his session will focus on the use of the agroecosystem living labs approach to foster transitions toward sustainable food systems, including for food production, transformation, and consumption.

Chair: Christian Huyghe, INRAE, France

9:10 Invited Speaker: ALL-Ready: Living labs for agroecology transition. Heather McKhann, INRAE, France

**9:25** Invited Speaker: Network for Integrated Resilience Agricultural Research (NIARR): Collaborations on the resilience of agricultural systems. Shana Sundstrom, University of Nebraska-Lincoln, Center for Resilience in Agricultural Working Landscapes (CRAWL), USA

**9:40** Rethinking the support of rural actors in Africa: The Living Lab approach as a lever for territorial agroecological transitions? Amandine Hertzog, French Agricultural Research Centre for International Development (CIRAD), France

**9:55** A Conceptual Framework of Living Labs for People: Fostering Innovations for Low-Emissions Food Systems and Social Equity. Ryan Nehring, International Food Policy Research Institute, USA

#### 10:10 Break

**10:30** Lessons from the agroecological transition through the implementation of the RVG as living laboratories: case analysis in Boyacá-Colombia. July Carolina Rojas Gómez, Universidad Nacional de Colombia, Columbia

**10:45** Sustainability by chance – consumer co-creation yielding unintended environmental benefits for the food system. Experiences of EIT Food RIS Consumer Engagement Labs project. Krzysztof Klincewicz, Faculty of Management, University of Warsaw, Poland

**11:00** Farmer-led learning: Understanding sustainable transitions in Ontario's potato sector. Charlotte Potter, University of Guelph, Canada

#### 11:15 Thematic Discussion

Facilitator: Muriel Mambrini-Doudet, Institut de recherche et développement, France

All speakers, presenters and attendees are invited to engage in a guided interactive discussion on the theme of fostering transitions toward sustainable food systems through living labs.

Questions for discussion:

- What is the most important change that you would like to see to support transitions to sustainable food systems?
- What contribution do you think living labs can make to accelerating the transitions toward sustainable food systems?
- What are the most urgent research questions that you think should be addressed in a living lab to foster transitions?

——— Wednesday 04 8:30-12:00 (suite) —

#### **Virtual Posters**

How can living labs contribute to co-create transition pathway towards chemical pesticide-free agriculture by 2050: the example of "la fabrique des transitions en Bergeracois" and wine production. Claire Meunier, INRAE, France

Participatory modeling of soil carbon dynamics following the adoption of agroecological systems in Quebec, Canada. Sylvestre Delmotte, Consultant, Canada

Holos Version 4: A Whole-Farm Model for Estimating Greenhouse Gases and Soil Carbon. Sarah Pogue, AAFC, Canada

Unique Opportunities for Sustainable Agriculture in Alberta through the Alberta AgriSystems Living Lab. Brian Karisa, Alberta Beef Producers, Canada

Resilience Landscapes as a Vehicle Of Change In Local Food Systems. Vimbayi Grace Petrova Chimonyo, International Maize and Wheat Improvement Center (CIMMYT), Zimbabwe

**————** 17:00-20:00 **———** 

# Networking Activity - Collège Ahunstic Omics To Close the Loop X Adaptation Futures/International Forum on Agroecosystem Living Labs

We invite the agroecosystems living labs community to a networking event featuring the Genome Canada and Génome Québec-supported project «Omics to Close the Loop/Les Sciences omiques pour boucler la boucle». This is a unique opportunity to create links between researchers, collaborators and partners in this project, which includes a living lab component, but also to further network between IF-ALL participants.

Part 1, Meet and Greet: Collège Ahuntsic (17:00 – 20:00)

Part 2, After (optional): Beer at Centrale agricole (20:00 – 22:00)

For the first part, you'll be welcomed at Collège Ahunstic in a cocktail buffet format, with welcoming remarks from the hosts and partners. For those who wish to continue the evening, participants will be invited to La Centrale agricole, a relaxed venue where you can enjoy beers from local microbreweries. A bus will take you from the Palais des congrès to the Collège, with two return trips planned, one after each part of the evening.

Register to reserve your place.





### Thursday 05

14:00-17:30

### Theme 3 - room 520E

### "Empowering participation, strenghtening participatory governance in living labs"

#### 14:00 Presentations

This session will focus on empowering participation and strengthening participatory governance in agroecosystem living labs, including encouraging the inclusion of all relevant partners and identifying best practices to work on shared goals with a prospective vision.

Chairs: François Chrétien, AAFC, Canada

**14:05** Invited Speaker: Living Lab approaches enrich INRAE strategy for research, partnership for innovation and support to public policies. Christian Huyghe, INRAE, France

**14:20** Democratizing interactions with and among food system actors in a newly set-up Agroecology Living Lab in a Mediterranean area. Luca Colombo, Italian Foundation for Research in Organic and Biodynamic Agriculture (FIRAB), Italy

**14:35** Empowering communities to build regional resilience: A case study of the Goulburn Murray Irrigation District in Australia's Murray-Darling Basin. Ruby Olsson, Australian National University (ANU), Institute for Water Futures, Australia

**14:50** Co-design of insect-friendly agricultural landscapes – Results and experiences from a transdisciplinary process in three German landscape labs. Maria Busse, Leibniz Centre for Agricultural Landscape Research (ZALF), Germany

**15:05** Open Innovation and transdisciplinary for territorial transitions: the case of the TETRAE Program in France. Romain Melot, INRAE, France

**15:20** Occitanum, an archipelago Living-Lab to evaluate and co-design digital technologies as enablers of the agroecological transition. Véronique Bellon-Maurel, French National Institute for Agriculture, Food and Environment - Convergences in Digital Agriculture Institute (INRAE-DigitAG), France

#### 15:35 Break

**16:00** Invited Speaker: Bridging Land and People to Secure our Future. Roger Daniels, Mistawasis Nêhiyawak, Living Lab – Bridge to Land Water Sky, Canada

Thursday 05 14:00-17:30 (suite)

#### **16:15 Thematic Discussion**

Facilitator: Muriel Mambrini-Doudet, Institut de recherche et développement, France

All speakers, presenters and attendees are invited to engage in a guided interactive discussion on the theme of empowering participation of every single actor in an agroecosystem living lab (such as farmers, scientists, policy makers, partners and citizens) to strengthening participatory governance in living labs.

Questions for discussion:

- Is empowerment in a living lab comparable or different from what you have already experienced? Do you have any tips to support such empowerment?
- Do you have advice on how to ensure the engagement of the diversity of partners needed in the co-creation process? Who is to be engaged?
- If you had to choose the three most important factors to empower participation in a living lab, which ones would you choose? These could be skills, knowledge, values, etc.

#### **Virtual Posters**

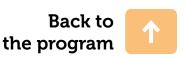
Affordances and improvements of design thinking to support farmers in the process of adaptation to climate change. Diane Pruneau, Université de Moncton, Canada

Effects of Organic Amendments on Soil Health indicators in an Indigenous Farm in the Northern Peace River Region of Canada. Bharat Shrestha, AAFC, Canada

A Conceptual Framework for Enhancing Resilience to Climate Change in Ghana's Agriculture and Food Sector through Improved Climate Information Accessibility. Mark Atta Mensah, Department of Computer Science, University of Ghana, Legon, Ghana

Fostering Collaboration and Innovation for Island Agriculture: The Living Lab – Atlantic Story. Emily K. Murphy, East Prince Agri-Environment Association, Canada





### Thursday 05

14:00-17:30

### Theme 4 - room 520F "Evaluating success in living labs"

#### 14:00 Presentations

This session will focus on evaluating success in living labs using natural and social indicators. Topics will include the evaluation of processes, innovation outcomes, and impacts beyond the living labs.

Chairs: Javier Gracia-Garza (AAFC, retired)

**14:05** Invited Speaker: Agriculture Living Labs across LTAR and other USDA ARS Research Networks. Marlen Eve, United States Department of Agriculture (USDA), Agricultural Research Service (ARS), USA

**14:20** Knowledge gaps in evaluating the effectiveness and impacts of Living Labs focused on environmental and agricultural sustainability. Vivian Nguyen, Carleton University, Canada

**14:35** A Multilevel Evaluation Approach of Agroecological Living Labs: The Occitanum Case. Alexia Gobrecht, French National Institute for Agriculture, Food and Environment (INRAE), France

**14:50** A customisable tool for monitoring and evaluating transformational change in European Agri-Food Living Labs: ATP-in-ALL «Analysing Transformation Processes within Agroecosystem Living Labs". Erika Angarita, Thuenen Institute, Germany

**15:05** Place-based evaluation in Living Labs: designing tools for collective learning. Erwan Sachet, French Agricultural Research Centre for International Development (CIRAD), France

**15:20** Innovation through collaboration: Co-developing ecohydrological indicators in a US rangeland to balance livestock production and conservation in a changing climate. David Hoover, U.S. Department of Agriculture, Agricultural Research Service (USDA-ARS), USA

#### 15:35 Break

**16:00** Invited Speaker (virtual): Agroecosystem Living Labs approach: INTA's strategy to promote territorial innovation processes in Argentina. Eduardo Cittadini, Instituto Nacional de Tecnología Agropecuaria (INTA), Argentina

#### 16:15 Thematic Discussion

Facilitator: Chris McPhee, AAFC, Canada

All speakers, presenters and attendees are invited to engage in a guided interactive discussion on the theme of evaluating success in living labs including processes, innovation outcomes, and impacts beyond the living labs.

Questions for discussion:

- What would be your advice for setting up a monitoring or evaluation framework to follow the outcomes of a living lab, considering the unpredictability of the co-creation process and the long-term impact of changes in the agroecosystem?
- How would you measure the environmental, social, economic and cultural impacts of the living lab?
- If you had to choose only three specific indicators to measure the impact of the agroecosystem living lab, which ones would you choose?

Thursday 05 14:00-17:30 (suite)

#### **Virtual Posters**

Agroecosystem Living Lab, Methodological Proposal for Impact Evaluation. Pablo Andrés Curarello, INTA, Argentina Using agro living labs as a transition tool: how to measure outcomes? The example of prudent antimicrobial use in European countries and livestock sectors. Florence Beaugrand, Oniris-INRAE, France

### 17:10 Closing Plenary - room 520E

All attendees are invited to join us in Room 520E for the Closing Plenary of the International Forum on Agroecosystem Living Labs Highlights from oral presentations, posters and group discussions will be summarized as well as reflection on the future of agroecosystem living labs at Global scale. Information and logistical details on the field tour organized by the Union des producteurs agricoles du Québec (UPA) will also be provided.

Chair: François Chrétien, AAFC, Canada

An introduction to Living Lab Québec and field visit instructions. Chantal Foulds (Union des producteurs Agricole, Canada)

Forum Summary. Muriel Mambrini-Doudet (Institut de recherche et développement, France) and Javier Gracia-Garza (AAFC, retired)

Reflection on the future/next steps. François Chrétien (AAFC) and Christian Huyghe (INRAE)





### Friday 06

12:30-20:30

### Field Tour

# Innovation by and adaptation of Quebec farms relative to climate change (Living Lab – Quebec and Agrisolutions climat projects)

The Union des producteurs agricoles (UPA), in collaboration with the IF-ALL 2023 Organizing Committee, invites you to Ferme Cristallina, a family farm specializing in dairy production, operated by Mr. Michael Jeker, located one hour from Montreal.

Transitioning towards a sustainable agri-food sector requires innovations at different levels: technical, social, economic, etc. This multi-level approach to innovation and adaptation will be presented through the lens of lessons learned through two major agri-environmental projects run by the UPA in Quebec (Living Lab – Quebec and Agrisolutions climat). Joined by researchers from Agriculture and Agri-Food Canada and other specialists, farmers will share with you the innovative farming practices they have codeveloped and experimented with.

#### Registration is required to participate.

Boarding starts at 12:30 from the Adaptation Futures event at the Palais des Congrès de Montréal.

Boarding location: 1015 rue de Chenneville via l'avenue Viger Ouest

Departure time: 13:00

**Return to Montreal:** estimated arrival **20:30** at the Palais des Congrès de Montréal (exact hour may differ slightly).

### About the Organizers

#### Agriculture and Agri-Food Canada

Agriculture and Agri-Food Canada (AAFC) is proud to present the first edition of the International Forum on Agroecosystem Living Labs as part of the 7th Adaptation Future conference. While guiding the growth and development of a competitive, innovative and sustainable Canadian agriculture and agri-food sector, we believe it is important to share knowledge and innovations at an international level in a common effort to strengthen our resilience to climate change.

#### Institut national de recherche pour l'agriculture, l'alimentation et l'environnement

INRAE, the French National Institute for Agricultural, Food and Environmental Research, is the leading public research organization in France specializing in its three scientific fields. It contributes to meeting the challenges facing humanity, including climate change mitigation and adaptation, food and nutritional security, agricultural transition, natural resource preservation, biodiversity restoration, and risk anticipation and management. Through research, innovation and support to public policies, INRAE proposes new orientations to accompany the emergence of sustainable agricultural and food systems. INRAE's ambition is to provide solutions for life, humans and the earth.

### **Organizing Committee**

#### **Conference Co-chairs**

Christian Huyghe, National Research Institute for Agriculture, Food and Environment, France François Chrétien, Agriculture and Agrifood Canada

#### **Steering Committee Members**

Bradley Noonan, Agriculture and Agrifood Canada
Caroline Rochon, Agriculture and Agrifood Canada
Claire Mullen, Agriculture and Agrifood Canada
Greta Chiu, Agriculture and Agrifood Canada
Hervé Guyomard, National Research Institute for Agriculture, Food and Environment, France
Ines Akué, Agriculture and Agrifood Canada
Jamie Hewitt, Agriculture and Agrifood Canada
Joshua Girard, Agriculture and Agrifood Canada
Kevin Anderson, Agriculture and Agrifood Canada
Luka Kovacec, Agriculture and Agrifood Canada
Natalie Boulay, Agriculture and Agrifood Canada
Oussama Turki, Agriculture and Agrifood Canada
René Morissette, Agriculture and Agrifood Canada
Sarah Breton, Agriculture and Agrifood Canada

#### **Scientific Committee**

Chair: Javier Gracia-Garza, Agriculture and Agrifood Canada (retired)
Ann Lévesque, Agriculture and Agrifood Canada
Aude Ridier, Institut Agro Rennes-Angers, France
Chris McPhee, Agriculture and Agrifood Canada
Eduardo Cittadini, Instituto Nacional de Tecnología Agropecuaria, Argentina
Ionel-Mugurel Jitea, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania
Marlen Eve, Agricultural Research Service, USDA, United-States
Muriel Mambrini, Institut de recherche et développement, France

#### **Contact Information**

Agriculture and Agrifood Canada, Living Labs Division aafc.livinglaboratories-laboratoiresvivants.aac@agr.gc.ca



### AGORA - Tuesday 03 side events

Adaptation to climate change - the essentials of informed communication

**- 10:30-12:00 -**

### Workshop presented by the Fédération québécoise des municipalités

This activity of the Community of Practice in Climate Communication in Quebec, sponsored by the Fédération québécoise des municipalities, aims to put forward the most effective strategies and messages to communicate the needs and possible solutions relating to climate change. adaptation to climate change in Quebec, particularly at the municipal level.

With experts who know the multiple adaptation issues in Quebec, and the best ways to popularize them, we will answer the following questions: How to ensure that we have a unifying discourse, which allows both to highlight the need to mitigate climate change, while adapting to it? What are the narratives and communication angles that will communicate the urgency of adapting in Quebec? How to communicate without generating skepticism? And above all, which target audiences should be targeted when talking about adaptation?

#### **Participants**

Caroline Larrivée, Scientific director, Ouranos Michaël Pilote, mayor of Baie-Saint-Paul Élizabeth Ménard, head of the Climate Emergency section, 24heures

#### Moderator

Leïla Copti, president and founder of COPTICOM, Strategies and public relations, implementation partner of the Community of Practice

Climate change adaptation challenges and solutions in Canada, provinces and territories leadership - Dialogue with Environment Ministers

- 13:30-14:30 -

### Lunchtime conference presented by the government of Quebec.

Adapting to climate change is now more important than ever. Recent extreme weather events in Canada, notably forest fires, floods, and Hurricane Fiona in 2022, have tested the resilience of Canadian provinces and territories to the effects of climate change.

This conference-lunch gathers ministers from Canadian provincial governments responsible for climate change adaptation and offers a unique opportunity to discover Canadian expertise in this field. It aims to highlight the key role played by provincial and territorial governments in climate change adaptation in Canada, emphasize the measures taken and innovative actions in this area, and foster discussion among ministers, the scientific community and practitioners in order to align public policy with research, knowledge, and innovation.

#### **Participants**

Benoit Charette, ministre de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs, gouvernement du Québec

Bernard Davis, minister of Environment and Climate Change, government of Newfoundland and Labrador Steven Myers, minister of Environment, Energy and Climate Action, government of Prince Edward Island George Heyman, minister of Environment and Climate Change Strategy, Government of British Columbia

#### Moderator

Alain Webster, professor, Department of Economics, Université de Sherbrooke and Chair of the Advisory Committee on Climate Change



### AGORA - Tuesday 03 side events



Avoiding the unmanageable and managing the inevitable - The crucial role of SMEs in transforming the economy in the face of climate change

15:00-15:30 -

### Conference presented by Finance Montreal

Open discussion between Finance Montréal, a learning network contributor and a participating company on:

- The challenges faced by SMEs in adapting to the physical and transitional risks of climate change
- The obstacles encountered in their approach
- What solutions the network can provide to meet the current needs of SMEs
- Encouraging SMEs to join the initiative!

#### **Participants**

Mickael Brard, Independent Consultant and Director and Co-founder of Coop Sens Climat and contributor to the Learning Network, creator of the masterclass CM0 – Climate

change will affect your business!

Camille Wilhelmy, Corporate Social Responsibility Advisor at Norda Stelo and participant in the first cohort of CP1 Communities of Practice Champions.

#### **Facilitator**

Florian Roulle, Vice-president, Sustainable Finance, Finance Montréal

### Launch of the 5<sup>th</sup> edition of Climatoscope under the theme of adaptation to climate change

16:00-16:30 —

Le Climatoscope is a catalyst environment at the University of Sherbrooke (Canada), around which arise series of activities, including Le Climatoscope journal, to popularize science and transfer knowledge in all disciplines investigating climate change.

Le Climatoscope journal publishes its 5th issue, on the theme of adaptation to climate change. With popular scientific articles as diverse and topical as: the carbon border adjustment adopted by the European Union; the adaptation of seals in the St. Lawrence River to the new conditions of pack ice; or the recognition of traditional knowledge in Senegal, the journal has opened its pages to contributions from international research.

In collaboration with the ministère des Relations internationales et de la Francophonie, the journal is published in two versions: French and English.

#### **Participants**

Annie Chaloux, Professor, School of Applied Politics, University training center for the environment and sustainable development, University of Sherbrooke and Head of Le Climatoscope

Jean Lemire, Emissary for Climate change, Northern and Arctic Affairs by the Government of Québec

Alain Webster, President of the Advisory Committee on Climate Change of Government of Québec, Professor, Business School, University of Sherbrooke



### AGORA - Wednesday 04 side events

Practitioner Exchange for Effective Response to Sea Level Rise - PEERS

**\_\_\_\_\_** 10:00-10:30 **\_\_\_\_** 

#### **Launch Event**

PEERS is new practitioner-led global community of practice that emerged from global workshops and convenings and is focused on rising seas and related coastal resilience threats. Membership is free and open to all and over 250 have joined already. An international committee drafted the PEERS mission and goals, and PEERS leaders and partners will be present at this event to discuss planned global and regional activities.

#### **Participants**

David Behar, Chair PEERS, Climate Program Director, San Francisco Public Utilities Commission Glynis Lough, Global Director PEERS, Director, Science for Climate Action Network Aspen Global Change Institute

### Adapting our communities, a collective responsibility

**\_\_\_\_\_** 13:00-14:00 **\_\_\_\_** 

### Lunchtime conference presented by the **Union of Municipalities of Quebec**

Torrential rains, heat waves, floods, ice storms, forest fires, hurricanes, shoreline erosion... Year after year, municipalities are on the front lines to protect communities, land, and infrastructures as the effects of climate changes continue to multiply and intensify. Municipalities are doing their part but cannot stand alone without strong support from other levels of government.

The Union des municipalités du Québec (UMQ) invites you to its lunchtime conference to discuss adaptation to climate changes with a focus on solutions. Innovating collectively in order to better manage climate risks and mobilizing the required resources will allow local governments to continue to take advantage of their key role in ensuring the resilience of Quebec and Canada.

#### **Participants**

France Bélisle, Mayor of Gatineau

Mathieu Maisonneuve, Mayor of Saint-Lin-Laurentides

Antonin Valiguette, Mayor of the Magdalen Islands

Marie-Andrée Mauger, Borough Mayor of Verdun and member responsible for ecological transition on the Montreal Executive Committee.

#### Host

Martin Damphousse, President of the Union of Municipalities of Quebec and Mayor of Varennes

Sustainable wave-powered desalination in Pacific coastal regions (Chile & California) -Building an impact measurement and business cases for climate mitigation and adaptation

\_\_\_\_\_ 15:30-16:30 **\_\_\_\_** 

### A workshop presented by Oneka

Fresh water is our most precious resource. It needs to be accessible, affordable, and sustainable for humanity to prosper. According to the Sustainable Development Goals Report 2023 of the United Nation, in 2022, 2.2 billion people lacked safely managed drinking water, and at the current rate of progress, by 2030, 1.6 billion people will still live without access to safely managed drinking water supplies.

Oneka Technologies' mission is to revolutionize freshwater production by making the oceans a sustainable and affordable source of freshwater to empower coastal communities' regional growth, economic development and social equity, so that water can remain at the service of future generations.

Oneka is an award winning impact-driven innovation company which developed an all-in-one sustainable wave-powered desalination system. The technology consists of buoys installed near shore that use the motion of the waves to mechanically pump seawater. The seawater is pumped through reverse osmosis membranes that separate the salt from the water. The resulting fresh water - that can be used as potable water, for irrigation, for mining applications or other purposes - is sent to shore through a submarine pipe. Benefits include zero energy cost, zero CO2 emissions, zero land use, responsible brine discharge, regenerative marine life and biodiversity, low level of maintenance, and a modular & scalable technology.

As an Impact driven company, Oneka is committed to partner with the scientific community and experts to develop methodologies and indicators to measure the impact and co-benefits of its intended system transformation. Thus, accelerating the process of shifting the desalination industry to become a scalable climate adaptation solution.

During this collaborative session, we intend to present two project business cases currently being developed in California, USA and in Chile with local communities and stakeholders. We intend to share our impact road map and discuss some of our biggest challenges when it comes to regulations and intended environmental and societal impacts. This collaborative session will also aim to leverage the expertise of the scientific community to share knowledge and identify potential collaborations to advance science-based and concrete solutions to achieve our goals to provide an equitable access to safe and affordable drinking water.

#### **Participants**

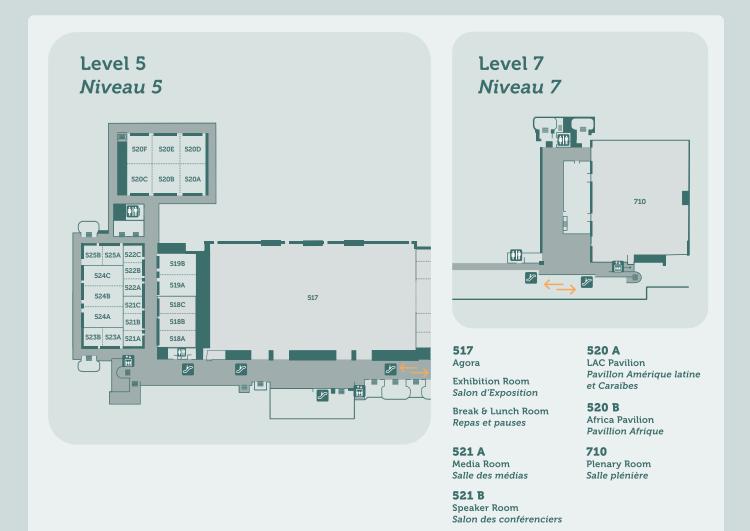
Susan Hunt, Chief Innovation Officer at Oneka Technologies Mary Anne Petrillo, CEO at the West Business Development Center

Eric Miller, Principal and Owner at Miller Marine Science & Consulting

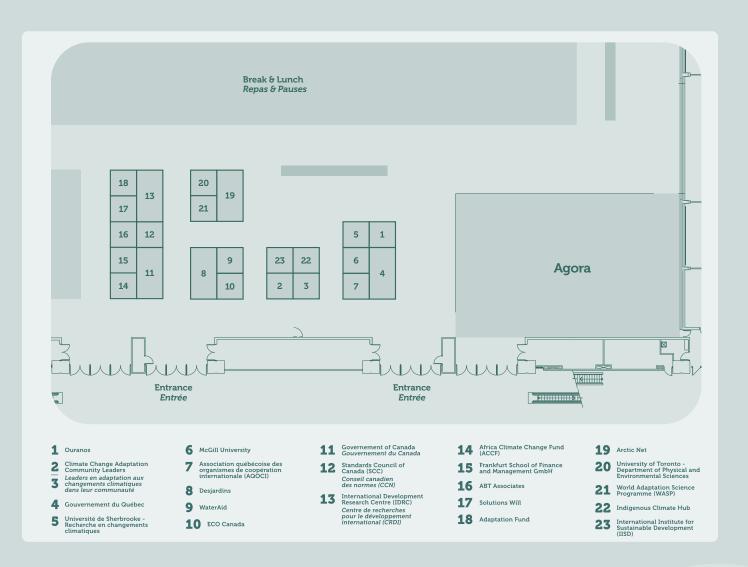
Alain-Olivier Desbois, Chief Finance & Impact Officer at Oneka Technologies



### Conference plan



### **Exhibitors plan**







### Thanks to our partners





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