|  |
| --- |
| *Panel*  **Learning from practice: Climate Resilient Development Pathways planning in cities and settlements** |
| **Background**  Cities are widely recognized for their vulnerability to climate hazards and their role in achieving climate mitigation and adaptation ambitions and sustainable development goals. Constraints on space and resources in the urban environment cause conflicts between a city’s many objectives, forcing decision makers to make trade-offs between adapting to climate change, achieving development goals and reducing emissions, among other priorities[1]. Legacies of colonialism and persistent inequality can deepen the complexity of managing competing demands [2]. More integrated, inclusive and just planning is needed, but silos created by city departments, financing structures and planning cycles endure [3].  Climate Resilient Development Pathways (CRDP) are trajectories that integrate climate change adaptation and mitigation to achieve sustainable development for all. CRDP aim to consolidate synergies and co-benefits across interventions, while identifying and limiting potential conflicts and trade-offs, over time as risk profiles change. In this way, CRDP offer cities and human settlements a potentially transformative framework for aligning their climate action and development goals in ways that reduce vulnerability, increase wellbeing and secure ecological health. The outline for the IPCC Special Report on Climate Change and Cities highlights the need for integrated climate action and sustainable and just development, and seeks lessons from practice. However, despite urgent calls for action, the concept of CRDP requires translation and nuanced application to become operational for planning. There are limited examples from practice, or approaches or frameworks to practically guide and structure contextual applications of CRDP, especially at the city scale across multiple sectors and hazards [4], [5]. To accelerate the deep and broad changes required for CRDP, scalable methods and tools are needed to support a rich diversity of urban environments and planning contexts. Additionally, a robust exchange of experiences and lessons from practice are critical to the learning required for transformational change. Communities of learning and practice focussing on urban CRDP are beginning to emerge in some national contexts and this session provides an opportunity to share and critically reflect between them.  This session brings together approaches, experiences, opportunities and challenges from efforts to operationalize CRDP in cities and settlements of various types and scales, with diverse planning contexts in the Global South and North. To benefit from this exchange and to engage the broader adaptation community in CRDP planning and practice, this session will have two parts: first, the approaches and experiences from several cities in Europe, Africa, Australasia and North America will be presented, with each case sharing their core contribution for CRDP planning and central challenges and opportunities they experience. In the second part of the session, interactive discussions will reflect on each of the contributions and the core challenges and opportunities, for example, how to evaluate synergies and trade-offs, how to bridge between technical and political dimensions to prioritise options (within growth pressures and capacity constraints), and how to effectively nest and inter-relate urban pathways within regional, national, and international development trajectories.  **Purpose**  Accelerating adaptation while achieving broader societal goals and avoiding maladaptation, requires strong science-policy-practice interfaces and ongoing learning, especially at sub-national scales. The purpose of this session is to strengthen the science-policy-practice interfaces for CRDP, to facilitate exchange and shared learning, and to contribute to the emergent understanding and practice of CRDP in cities and settlements. This session also aims to strengthen the nascent community of practice for urban CRDP planning.  **Contribution**  In this session, we share approaches to CRDP planning and experiences in European, African, Australasian and North American cities and settlements. A range of examples are shared, from small settlements along the length of the Whanganui River in New Zealand, to metropolitan Durban, South Africa, and mid-sized Cork, Ireland. We reflect on the opportunities, challenges and needs for CRDP in different planning contexts and for urban communities of different sizes and with different adaptation and development priorities. Further, the approaches reflect a range of entry points, from indigenous and local knowledge, to process-based frameworks and analytical methods. This interactive exchange aims to make a contribution to accelerating the shift to transformative CRDP planning in cities and settlements.  [1] X. Bai, “Make the upcoming IPCC Cities Special Report count,” *Science (1979)*, vol. 382, no. 6670, 2023, doi: 10.1126/science.adl15.  [2] N. P. Simpson *et al.*, “Climate-resilient development planning for cities: progress from Cape Town,” Dec. 01, 2023, *Springer Nature*. doi: 10.1038/s42949-023-00089-x.  [3] S. H. Eriksen *et al.*, “Pathways for urgent action towards climate resilient development,” 2024, *Nature Research*. doi: 10.1038/s41558-024-02190-0.  [4] A. Taylor *et al.*, “Operationalising climate-resilient development pathways in the Global South,” Oct. 01, 2023, *Elsevier B.V.* doi: 10.1016/j.cosust.2023.101328.  [5] S. E. Werners *et al.*, “Advancing climate resilient development pathways since the IPCC’s fifth assessment report,” *Environ Sci Policy*, vol. 126, pp. 168–176, Dec. 2021, doi: 10.1016/j.envsci.2021.09.017. |
| **INDIVIDUAL PANELLIST CONTRIBUTION**  **Moderator Details**  **Full Name:** Bill Solecki  **Organisation:** City University of New York  **Bio:**  William Solecki is a Professor in the Department of Geography, Hunter College, City University of New York. His research focuses on urban environmental change, resilience, and urbanization. He is a Coordinating Lead Author for the IPCC Special Report on Climate Change and Cities.  **Panellist 1**  **Full Name:** Dr Anna Taylor  **Organisation:** University of Cape Town, African Cities and Development Initiative  **Bio:** Anna works on adapting to climate risks in African cities. She engages transdisciplinary approaches to produce knowledge, develop plans and mainstream interventions to equitably build climate resilience. She has been working with South Africa’s Presidential Climate Commission to support cities and municipalities design and navigate climate-resilient development pathways.  **Presentation 1**  Operationalizing CRDPs in South Africa: experiences from Nelson Mandela Bay and eThekwini (the cities of Gqeberha and Durban)  **Panellist 1 Contribution:**  **Introduction**  CRDPs planning is being promoted in South Africa as a means of working with and across multiple stakeholders to weigh up and prioritise climate adaptation, mitigation and development measures over time in a context-sensitive way. Attempts at operationalizing a CRDPs approach began with developing guidance and has moved into efforts at place-based applications and learning exchanges, between municipalities and provinces.  **Objectives**  The session input will focus on methods used to assess and prioritise between options, when confronted with many developmental challenges, already high levels of climate risks, a diversity of opinions regarding what is more critical, and severe resource and capacity constraints.  **Methodology**  Multi-stakeholder teams worked together in the metropolitan municipalities of Nelson Mandela Bay (Gqeberha) and eThekwini (Durban) to identify suitable CRD options, develop relevant criteria relating to resilience, co-benefits, scale of impact and equity, and then assess each option according to a multi-criteria scoring system.  **Findings**  The findings highlight the value of a structured analytic and participatory method for appraising CRD options to sequence pathways, working to balance between feasibility and justice considerations. One of the emerging challenges is how to inter-relate CRD pathways developed in neighbouring municipalities with each other and with provincial and national scale CRD pathways also under development, to weigh up synergies and trade-offs.  **Panellist 2**  **Full Name:** Siri Eriksen  **Organisation:** Norwegian University of Life Sciences  **Bio:** Siri Eriksen is a professor at the Norwegian University of Life Sciences who does work on the politics of adaptation in different geographic contexts. Her recent work has focused on climate resilient development, in particular the diverse knowledges and inclusive decision making processes required to advance CRD in practice locally.  **Presentation 2**  Co-creating local climate resilient development practice in the Oslofjord region  **Panellist 2 Contribution:**  **Introduction**  The urgency to shift the development towards sustainability is increasingly emphasised, i.e. in recent IPCC and IPBES assessments. Climate resilient development emerges from decision-making characterized by diverse knowledges, inclusion, equity and justice, and ecosystem stewardship.  **Objectives**  This paper addresses the key challenge of identifying how CRD can be contextualized into local action. In this paper, we investigate the process of co-creating local climate resilient development practice at municipal level in the Oslofjord area of Norway, an area undergoing economic growth and urbanization, putting ecological qualities under pressure.  **Methodology**  The paper documents how local, place-based knowledge encounters practitioner and scientific knowledge in knowledge-action arenas for co-creating CRD measures. In particular, we investigate how local planners, political leaders, citizens and private sector actors interact to navigate divergent interests and knowledges when making decisions regarding urban land use.  **Findings**  Analysis of participant observation and key informant interview data suggests that there are several barriers to CRD practice. These include underlying growth development logics, siloed institutional systems, political differences, and a lack of accounting for the costs of ecosystem degradation. Yet, local knowledge and place-based perspectives represent levers for locally contextualised CRD action since such knowledge is inherently holistic, integrating across sectors and issues. By grounding climate action in people’s local surroundings, cultural identify, social belonging and connection to nature, local, co-created, place based CRD knowledge can potentially become a common community development ‘project’ around which political differences and conflicting interests align.  **Panellist 3**  **Full Name:** Sadie McEvoy  **Organisation:** Deltares  **Bio:** Sadie is a senior researcher on adaptation planning and decision making under deep uncertainty for water resources, coasts, and urban areas. She is particularly interested in how adaptation is planned, the effectiveness of adaptation, and in methods and tools to support decision making for effective adaptation.  **Presentation 3**  A framework for Climate Resilient Development Pathways planning and experiences from Cork, Ireland and Logroño, Spain  **Panellist 3 Contribution:**  **Introduction**  As a first step to making CRDP operational for planners and decision makers, a planning framework was developed, based on three key needs for CRDP: (1) identifying and evaluating interactions between adaptation, mitigation, and sustainable development, (2) addressing time and uncertainty in plans, and (3) providing specialized information for CRDP. The framework has since been tested and applied to support CRDP planning in Cork, Ireland and Logroño, Spain.  **Objectives**  This presentation will share the CRDP planning framework and its application, reflecting on lessons learned from a structured analytical approach, and the opportunities and ongoing challenges we experience in CRDP planning.  **Methodology**  Key needs for a CRDP planning framework were informed by reviewing joint adaptation and mitigation initiatives in European cities and experience from a decade of adaptive policy pathways planning. An operational planning framework was developed for CRDP planning, and applied in Cork, Ireland and Logroño, Spain.    **Findings**  The CRDP planning framework provides a systematic analytical approach to align planning objectives and actions in cities. Climate services and stakeholder participation can inform evidence-based and equitable CRDP plans. Highlighting critical decision moments, opportunities for synergies, and potential long-term trade-offs provide new insights for planners. There are many entry points to CRDP, from ‘stress testing’ existing plans for CRDP opportunities, to adopting CRDP as a guiding approach to master planning. Momentum behind existing and siloed plans, and political appetite for change can hinder or accelerate adoption of CRDP, while information gaps remain a core challenge.  **Panellist 4**  **Full Name:** Bruce Glavovic  **Organisation:** Massey University, Aotearoa New Zealand  **Bio:** Bruce has worked as a policy advisor, consultant planner, and academic in South Africa, the USA, and New Zealand. His applied research centres on how to make societal choices in turbulent times, with a focus on climate change adaptation; natural hazards planning; coastal governance; and collaborative planning and conflict transformation.  **Presentation 4**  Charting climate resilient development pathways from the mountains to the sea: Reflections from the Whanganui River, Aotearoa New Zealand  **Panellist 4 Contribution:**  **Introduction**  This presentation disrupts anthropocentric framings of climate resilient development (CRD). It challenges notions of urban CRD pathways (CRDPs) because cities and settlements are embedded in a milieu that is not only biophysical and built but also cultural, socio-economic, political and spiritual, with profound implications for CRD thinking and practice.  I share reflections from the Whanganui River in New Zealand – the world’s first river granted legal personhood – a living and indivisible whole who is the spiritual ancestor of the Whanganui iwi (tribe). Reaching from its source to its union with the sea, the river carries CRDPs through its mauri (life-force) into and with human settlements along the river – past, present and future.  **Objectives**  This presentation sets out to re-imagine human relationships with non-human beings and entities as integral to CRD. Esteeming the intrinsic value and rights of the non-human realm is ancient and epitomizes the worldviews and values of many Indigenous Peoples. How can the ethical standpoint of Māori be entrenched in contemporary efforts to enable CRDPs that are holistic, just, and sustainable across generations and the more-than-human?  **Methodology**  This presentation draws from, deepens and extends research carried out with communities on the banks of the Whanganui River.  **Findings**  For Whanganui hapū (sub-tribe or clan) and iwi, the 2017 Te Awa Tupua Act was the culmination of over a century of struggle to gain formal recognition of their worldview, values, and rights. River reflections shed light on the struggles inherent in institutionalizing new but ancient imaginaries foundational for charting CRDPs.  **Panellist 5**  **Full Name:** Marta Olazabal  **Organisation:** Basque Centre for Climate Change, BC3  **Bio:** Dr Marta Olazabal is an interdisciplinary scientist exploring progress on climate action in cities worldwide. She is an Ikerbasque Research Associate Professor and Ramon y Cajal Fellow at BC3 where she leads the Adaptation Research Group. She is the Principal Investigator of the European Research Council project [IMAGINE Adaptation](https://imagineadapt.bc3research.org/%C3%A7).  **Presentation 5**  Imagining Beyond Adaptation: How Local Actors Struggle and Dream of Urban Climate-Resilient Futures  **Panellist 5 Contribution:**  **Introduction and Objective**  This presentation explores the role of imaginaries in moving beyond adaptation and expanding the possibilities for climate-resilient development futures in cities and settlements worldwide. I will present recent work from the IMAGINE Adaptation project, which showcases global examples of climate-resilient actions and progress in urban areas.  **Methodology** I begin by presenting the findings of a global survey of urban climate change adaptation actors to explore collective imaginaries of desirable urban futures. Through visual art, we examine how 100 urban climate adaptation practitioners from 37 countries conceptualize adaptation. I then use case studies from cities in Europe, Latin America, and Oceania to illustrate the challenges faced by local actors in envisioning climate-resilient urban development pathways.  **Findings** While our work with urban actors worldwide demonstrates that adaptation is moving beyond risk reduction, we find that current urban imaginaries are still constrained by a belief in universal problems and solutions, a lack of pluralistic values and forms of knowledge, and the oversimplification and idealization of climate action processes. These imaginaries fail to recognize experimentation and error as integral parts of the journey. Through our transdisciplinary work with local climate actors, we observe how actors and researchers confront their preconceptions and, amid power dynamics, resource shortages, and electoral cycles, strive to create spaces to collectively reconsider and redefine what a desirable urban future might be. |