



SESSION DESCRIPTION

F2 Filling data gaps to address flooding in coastal cities

Panel discussion

Date: Friday, 30 May, 2014

Time: 16:45-18:15

Rooms: S30-32

Language: English

Contact: Heidi Braun

E-mail/web: hbraun@idrc.ca / www.idrc.ca/ccw

Organized by: International Development Research Centre (IDRC)

OBJECTIVE

As many coastal cities in the Global South undergo significant expansion, informal settlements are often constructed on marginal lands to house new urban residents. In addition to lacking adequate water and sanitation infrastructure, settlements built in low-lying areas or floodplains are highly vulnerable to flooding. Sea-level rise and the increased frequency and severity of storms associated with climate change further complicates municipal efforts to manage flood risk and respond to flooding events in dynamic coastal metropolitan areas.

The limited availability of data on climate risks compounds these challenges. This session will examine how researchers working closely with communities and municipal authorities can contribute valuable data to better understand specific vulnerabilities as well as current and anticipated impacts of climate-related risks on growing coastal cities. With a particular focus on urban flooding, panelists will discuss the results of research conducted in Cape Town (South Africa), Dakar (Sénégal), Alexandria (Egypt) and Bangkok (Thailand), highlighting the opportunities and challenges of gathering more precise data to inform urban adaptation actions. Panelists will also comment on strategies for bridging the researcher-practitioner divide and novel approaches for integrating data - spatial, socio-economic, etc. - into municipal efforts to respond to climate-risks.

OUTCOMES

Participants will gain a better appreciation and understanding of:

- Existing data gaps for addressing climate-risks in coastal urban environments, particularly with respect to flooding in vulnerable informal settlements in Africa and Asia;
- How research can employ novel approaches and tools for data collection to respond to urban climate risks; and
- Strategies for working with communities and municipal authorities to respond to flood risk in coastal cities.

METHODOLOGY

- Facilitator's opening remarks and introduction to the session and panelists. **(5 minutes)**
- The four panelists will each respond to the guiding questions with brief 5 minute presentations incorporating maps or other illustrations as needed to provide context. **(2 rounds x 20 minutes)**



- The city representative will react to the presentations, and will highlight the opportunities and challenges for research to help communities and municipal authorities respond to flood risk. **(15 minutes)**
- The facilitator will manage questions and comments from the audience. **(2 rounds x 10 minutes)**
- The facilitator will conclude with closing remarks. **(10 minutes)**

Guiding questions:

1. Describe the nature of flood risk in your city of focus. What are the critical data gaps that challenge effective management of flood risk in your city of focus?
2. What are the tools and strategies used for improving data collection methods and local government access to data that could inform adaptation strategies? What were the novel approaches used for incorporating spatial data into resilience programs and decision making procedures in the city under study? What strategies were employed to bridge the researcher-practitioner divide? How were they effective?

CONTRIBUTORS

Facilitator *Heidi Braun, Program Officer, Climate Change and Water Program, International Development Research Centre (IDRC), Ottawa, Canada*

Opening remarks to outline the theme of the session and to introduce the panelists.

Panelist *Joy Waddell, PhD Candidate, University of Cape Town, South Africa*

Will focus on the challenges of addressing inland flooding in Cape Town's informal settlements. Drawing on her on-going PhD research, Joy will comment on the novel data generated from the project that has succeeded in supporting the formal and informal governance systems' response to flooding in Cape Town. The challenges and benefits of participatory approaches to co-produce knowledge and barriers to collaboratively manage flooding in informal settlements will also be appraised.

Panelist *Conchita Kedowidé, Geomatics and Environment Specialist, Institut Africain pour la Gestion Urbaine, Dakar, Sénégal*

Will describe the perennial challenges associated with urban flooding for the burgeoning suburbs of Dakar, Sénégal. Drawing on research conducted in the suburban community of Yeumbeul Nord, she will reflect on the benefits of working with community members and municipal authorities to co-construct a detailed map of flood-related data including evolution of flood affected areas, households and neighbourhoods over time, distribution of key community assets and infrastructure, and projected future impacts. She will comment on the role of spatial data in informing efforts to safeguard communities from flood events.



Panelist *Mohamed Abdrabo, Professor, University of Alexandria, Egypt*

Will outline how research has assessed the resilience of urban centres in Egypt's Nile Delta to the impacts of sea level rise, focusing on inundation as one of the most significant physical impacts. A GIS database was built to assist with analysis and data visualization. Research demonstrates how multiple biophysical and socioeconomic factors relate to variations in resilience between urban centres. Results aim to inform key stakeholders, including municipal planners and identify key risks to consider when managing/planning for resilient urban centres in the coastal area of the Nile Delta.

Panelist *Wijitbusaba (Ann) Marome, Assistant Professor, Thammasat University, Pathum Thani, Thailand*

Will discuss the spatial and non-spatial circumstances that affect individual and community-level vulnerability to climate change in Bangkok and its surrounds. The use of mapping and field surveys as part of this research will be outlined. Social vulnerabilities will be discussed in terms of risk variables related to floods and socioeconomic change as a result of urbanization. The importance of social capital and its link with social vulnerability at the most local level will be addressed.

Further recommended reading

Waddell, Joy and Gina Ziervogel. "Multi-Actor Flood Governance in Cape Town's Informal Settlements." (2014)
http://resilient-cities.iclei.org/fileadmin/sites/resilient-cities/files/docs/Waddell_and_Ziervogel_Cape_Town.pdf

Rising Waters: Working together on Cape Town's flooding
<http://static.weadapt.org/knowledge-base/files/1280/52556f59809edacc-fliccr-risingwaters-2013.pdf>

Marome, W. (with A. Patandwarhan, A. Patankar and E. Porio) (2013) Impacts of Extreme Weather Events and Implications for Adaptation Planning for Coastal Cities, APN Science Bulletin (3): 16-75.
<http://www.apn-gcr.org/resources/archive/files/6af921c4ebfdcc24991a0c7f98e287cb.pdf>

Beyond city limits: Using a basin perspective to assess urban adaptation to climate change. The case of the city of Santiago in Chile:
http://resilient-cities.iclei.org/fileadmin/sites/resilientcities/files/Resilient_Cities_2014/Vicuna_et_al_Santiago_de_Chile.pdf
