SESSION DESCRIPTION

B2 Assessing urban risk and vulnerability and prioritizing action

Presentations

Date: Thursday, 26 April 2018
Time: 16:30-18:00
Rooms: S25-26

Language: English
ICLEI contact: Matteo Bizzotto
E-mail/web: resilient.cities@iclei.org
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OBJECTIVE

Urban areas are the hubs of economic activity and social development. However, rapid (and often unplanned) development, compounded by increasing impacts from climate change jeopardize the "promise of the city" and human well-being. Therefore, cities need a holistic approach to assessing their risk, vulnerability, and community capacity that will allow them to tackle the challenges of today and tomorrow and prioritize their efforts and limited resources accordingly.

The session will begin by introducing World Bank's *CityStrength Diagnostic* – a rapid, holistic, and integrated tool that aims to help cities enhance their resilience to a variety of shocks and stresses. The *CityStrength Diagnostic* encourages cross-sectoral collaboration and results in the identification of priority actions and investments. Lessons learned from the application of the tool at city and metropolitan level will be shared. The session will continue with an account of the *Dynamic Interactive Vulnerability Assessment (DIVA)* model's application in coastal cities threatened by sea level rise – specifically, Kaohsiung, Chinese Taipei. The Local Government of Tublay, Philippines will present a grassroots participatory 3D mapping tool that enables the participation and inclusion of local communities in decision making and climate-risk mitigation, preparedness and response initiatives. The development of physical models enabled the local communities in Tublay to relate climate hazards and risks to their everyday realities; reflect on their own capacity to adapt to climate change; and take collective community action as a result. The last presentation picks up on the thread on local community resilience and introduces a framework for collective risk assessment. As risks are always being dealt with by human agents, vulnerability and adaptive capacity assessment must be undertaken from the perspective of socio-cultural-political and socio-economic values and norms of human agents in their biophysical environments.

OUTCOMES

- Participants will be exposed to latest applications of risk modeling and holistic diagnostic tools that enable risk and vulnerability assessment and prioritization of investments;
- They will gain understanding of the benefits of including local communities in collective risk and vulnerability assessments;
- They will learn how socio-cultural-political and socio-economic values and norms of human agents contribute to resilience.

METHODOLOGY

- The facilitator will provide an overall introduction to the session topic and contributors **(5 minutes)**
- Each presentation will be allotted 10 minutes **(4 x 10 minutes)**
- The facilitator will manage questions and answers **(40 minutes)**
- Closing remarks by the facilitator **(5 minutes)**

CONTRIBUTORS

Facilitator *Janice Barnes, Global Resilience Director, Perkins+Will, New York City, USA*

Presenter *Stephan Zimmerman, Disaster Risk Management Specialist, The World Bank, Brussels, Belgium*

The CityStrength Diagnostic

CityStrength is a rapid diagnostic that aims to help cities enhance their resilience to a variety of shocks and stresses. A qualitative assessment, the diagnostic takes a holistic and integrated approach and encourages collaboration between sectors to more efficiently tackle issues and unlock opportunities within the city. CityStrength is flexible and can adapt to the different needs of clients in terms of depth and breadth and can be implemented in any city or combination of cities within a country regardless of size, institutional capacity, or phase of development.

Presenter *Po-Lin Chen, Postgraduate Student, National Cheng Kung University, Tainan, Chinese Taipei*

Vulnerability and adaptation of coastal cities to sea level rise

The impact of sea level rise on society and the environment is one of the major challenge in spatial planning in the 21st century. In particular, coastal urban zones are potential flood risk areas, so the disaster-oriented land use and management programs are one of the important issues in the future. However, in the past relevant study, take the flood risk as a static assessment of a single place, failing to reflect the dynamic relationship between disaster risk and land-use models from climate change over time. Consequently, this study conducts Cellular Automata (CA) based on Markov Chain Analysis to combine the land use change model with the flood risk caused by the sea level rise and to further explore the spatial distribution and change. It is hoped that by means of the dynamic simulation assessment in this study, we will provide the strategy and adjustment for spatial planning under climate change.

Presenter *Abner O. Lawangen, Disaster Management Officer, Local Government Unit Tublay, Tublay, Philippines*

Grassroots participatory 3D mapping: Community-lead climate risk assessment

This presentation will highlight an initiative that aims to engage local communities in developing a locally understandable and acceptable and scientifically sound climate risk assessment and planning tool. It addresses the ineffectiveness and disconnection of contemporary risk assessment tools to the local people by creating a locally understandable instrument that they will have a sense of ownership on. This program, which also amplifies knowledge and understanding of communities of their local climate hazards and risks and facilitates consensual development of practical interventions, will be shared with the audience.

Presenter *Grit Martinez, Senior Fellow, Ecologic Institute, Berlin, Germany*

Framework for collective risk assessment and local cultural resilience

This presentation will introduce a theoretical framework for understanding and assessing risk perception and management suitable under different regional conditions. The framework will focus on risk assessment as an objective analytical process, and as a subjective response shaped by collective and personal phenomena of cultural, socio-political, and cognitive forms. Emphasis will be put on interdisciplinary and trans-disciplinary collaborations when assessing resilience. Drawing on first empirical research from INNOVA local case studies, the presentation will focus on a risk frame to allow comparison of cognition, knowledge and affect in the production of risk perception, and in turn the vulnerability and management of climate risks of local decision makers.

Further recommended reading

CityStrength Diagnostic: http://www.worldbank.org/en/topic/urbandevelopment/brief/citystrength