Resilient Cities 2018

Session Descriptions

Resilient Cities 2018

The 9th Global Forum on Urban Resilience and Adaptation

Tracking local progress on the resilience targets of SDG 11

26 - 28 April 2018 | Bonn, Germany



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Local Governments for Sustainability

TABLE OF CONTENTS

OPENING PLENARY p. 1

CO- EVENT: Resilience Innovators Hour p. 3

POSTER SESSION p. 5

THEME SESSIONS A

A1. Multi-level governance to enhance integrated climate action: Good practices inspiring Talanoa Dialogues p. 9
A2. Brokering new partnerships & stimulating private sector engagement for resilience p. 11
A3. Cities in transition: From waste management to circular city economies p. 14
A4. Towards realizing just cities p. 17
A5. The resilience of digital cities - Cybersecurity, data protection and risk management in the digitalization era p. 19

THEME SESSIONS B

B1. Getting the most out of climate services for cities p. 21
B2. Assessing urban risk and vulnerability and prioritizing action p. 23
B3. Fostering global multi-stakeholder partnerships for strengthened urban resilience p. 26
B4. Achieving social cohesion through inclusive resilience-building p. 28
B5. Earth observations for climate-resilient cities: Resilience Brokers, GEO p. 31

SPECIAL SUB-PLENARY: Driving transformative climate change adaptation in cities through nature-based solutions p. 33

THEME SESSIONS C

C1. Building resilience in the face of limited resources: The case of Mozambican coastal cities p. 35
C2. Inclusive and participatory disaster risk management in cities p. 37

THEME SESSIONS D

D1. Front-line islands and cites: Building resilient island communities p. 39
D2. Unleashing and enhancing local capacity through university and local government partnerships p. 41
D3. Standardized support tools for urban resilience, integrating resilience planning into local decision-making p. 43
D4. The need for a holistic approach to achieve sustainable food systems p. 45
D5. Bringing the insurance industry and cities together: Innovations and partnerships to drive urban resilience and sustainability p. 47

THEME SESSIONS E

E1. ICLEI Oceania and sub-national governments collaborating to accelerate climate action p. 49
E2. CitiesIPCC: Science for effective city climate action and resilience building p. 51
E3. Preserving cultural and natural heritage for enhanced urban resilience p. 53
E4. The weight of cities: Towards inclusive, resource efficient and resilient cities p. 56
E5. Shaping the long-term global sustainability agenda for the insurance industry and cities p. 58

THEME SESSIONS F

F1. Louisiana adaptation: Mitigation to managed retreat p. 60
F2. How resilient is your city? City resilience profiling tool p. 62
F3. The new ISO standard for resilient cities indicators: Opportunities for city and expert input p. 64
F4. Building inclusive urban food governance: Local food council in Lusaka, Zambia p. 66
F5. Toward resilient and robust urban infrastructure p. 68

THEME SESSIONS G
G1. Planning for urban resilience: Co-development of solutions for transformative impacts p. 71
G2. How to finance climate change adaptation projects in cities: Past experiences, present challenges, and future opportunities p. 73
G3. Lima, Peru: Local adaptation measures to climate change p. 75
G4. Measuring urban resilience and evaluating impacts p. 77
G5. Preparing for internal climate migration: Introducing Groundswell findings p. 79

THEME SESSIONS H
H1. Active citizen engagement and participatory urban resilience planning p. 81
H2. Reality Check: Adaptation on the ground in Istanbul Metropolitan Municipality p. 83
H3. Managing water resources in cities p. 85
H4. Slum dwellers count: Knowledge, data and action shaping inclusive urban resilience investments p. 87
H5. Global Covenant of Mayors for Climate & Energy (GCoM): We want to hear your voice p. 90

SUMMARY AND OUTLOOK PLENARY p. 91

SESSION DESCRIPTION

P1 Resilient urban futures: Where we are and where we need to go

OPENING PLENARY

Date: Thursday, 26 April, 2018
Time: 10:00-12:00
Room: S29-32

Language: English
Contact: Evgenia Mitroliou, Monika Zimmermann
E-mail/web: resilient.cities@iclei.org

OBJECTIVE

The concept of resilience has been mainstreamed into urban planning theory, practice, and policy over the past several years. What remains is to convert theory into reality by embedding resilience principles into the design and implementation of urban development plans across all sectors.

Often, the true value of resilience is found at the nexus of two or more sectors, for example, waste, energy, and buildings or health, environment, and transport. There is beauty in the complexity of urban systems and societies. However, navigating interdependencies to buoy adaptive capacity and reduce risky behaviors – without introducing new hazards or undermining existing capacities – is a persistent challenge. As we have evidenced in past years, it requires meaningful multi-collaboration, community buy-in, and systems thinking. It also requires foresight to anticipate necessary or projected changes to the urban form, technologies, and social contracts.

The opening plenary considered where we are in the international processes and the local realities.

And, it set the tone for congress discussions: What lies ahead for cities and human settlements seeking to pursue more resilient development pathways? How can advances in science and technology help local practitioners visualize risks and impacts to guide better planning? How can data be used to tell a story and influence positive behavior change? How can governments manage physical loss and damage without compromising social and cultural assets which underpin the true worth and identity of a community? How can solutions that reduce risk in the short term but introduce new or additional risk in the long-term be avoided? Which resilience challenges result from digitalization entering the local and regional governments practice?

METHODOLOGY

- Welcome and congress opening. **(35 minutes)**
- Thematic messages with Q&A. **(80 minutes)**
- Introduction to the congress program. **(5 minutes)**

CONTRIBUTORS

Facilitator:

- *Monika Zimmermann, Deputy Secretary General, ICLEI – Local Governments for Sustainability, Bonn, Germany*

Welcome and opening remarks

- *Ashok Sridharan, Mayor, City of Bonn, Germany; First Vice President, ICLEI Global Executive Committee (2015 – 2018) / Co-Chair and ICLEI special messenger to UNFCCC and carbon Climate Registry; Co-Patron of Resilient Cities 2018*
- *Franz Marré, Head of Division „Water, Urban Development, Mobility" Federal Ministry for Economic Cooperation and Development, Bonn, Germany,* on behalf of Norbert Barthle, Parliamentary State Secretary to BMZ
- *Gino Van Begin, Secretary General, ICLEI – Local Governments for Sustainability*

International agenda on resilient cities

- **Implementing the Paris Agreement together with local & subnational governments**

  Patricia Espinosa, Executive Secretary, UN Climate Change, Bonn, Germany; Co-Patron of Resilient Cities 2018
- **CitiesIPCC: How data can best inform political decision**

  Don Iveson, Mayor, City of Edmonton, Alberta, Canada (video intervention)

Resilient Cities in 2018: Opportunities and challenges

- **Louisiana, Isle de Jean Charles: The first community-scale, climate induced resettlement project in American history**

  Dakota Fisher, Resilience Program Analyst, State of Louisiana's Office of Community Development, New Orleans, USA
- **Prepared for the future: Quito's resilience strategy and how it relates to SDGs implementation**

  David Jácome Polit, Chief Resilience Officer, Municipality of Quito, Ecuador
- **Realizing a global transition to resilient development paths by 2030**

  Peter Head, Founder and CEO, The Ecological Sequestration Trust, London, UK
- **Can digital cities be resilient?**

  Ina Schieferdecker, Director, Fraunhofer-Institut für Offene Kommunikationssysteme (FOKUS), Berlin, Germany; Member of the German Advisory Council on Global Change (WBGU)

SESSION DESCRIPTION

Resilience Innovators Hour

Co-event

Date: Thursday, April 26, 2018
Time: 13:00-14:00
Rooms: S01-02

Language: English
ICLEI contact: Matteo Bizzotto
E-mail/web: resilient.cities@iclei.org
Organized by: ICLEI World Secretariat

OBJECTIVE

In the effort of building urban resilience while overcoming increasing shocks and stressors from climate change, disasters, human mobility, and socio-economic challenges, local governments are supported by innovative solutions pioneered by visionary institutions and the private sector. Resilient Cities 2018 brought these solution providers together with urban resilience practitioners and created a platform for innovations to be presented, discussed, and weighted up against the needs of the cities.

OUTCOMES

Participants gained a better understanding of new, innovative approaches to solving their challenges and enhancing their resilience. For example, they were exposed to:

- using impactful investments for financing cities' adaptation and mitigation projects;
- technological advances that help cities prevent power failures and protect assets in critical situations;
- ways to "self-finance" district energy.

METHODOLOGY

- Introduction by facilitator **(5 minutes)**
- Innovators held a **10 minutes** presentation each to present their innovations **(30 minutes)**
- Innovators engaged with the audience through Q&A. Questions left unanswered during this session were encouraged to be followed-up at the exhibition space **(20 minutes)**
- The facilitator concluded with closing remarks. **(5 minutes)**

CONTRIBUTORS

Facilitator — *Miriam Badino, Senior Officer, Low Carbon, ICLEI World Secretariat, Bonn, Germany*

Innovator(s) — *Thomas Arnoldt, Senior Manager Structuring, Munich Re, Munich, Germany;*
Julian Wiegelmann, Manager Origination Capital Partners, Munich Re, Germany;
Karim Tarraf, CEO, Hawa Dawa GmbH, Munich, Germany

Mitigating financial risks of air quality improvement measures

Munich Re presented an impact bond concept to finance air pollution mitigating measurements, which depict usually a financial burden for the public sector – comprising e.g.public transportation systems improvements, electric mobility solutions or introduction of other tools to reduce air pollution. Testing, evaluating and visualizing the financing parameters needed to determine the success of air quality improvement measures requires environmental input data on a city-scale. The Munich-based company Hawa Dawa specialized in providing environmental data (air quality, noise and microclimate), if desired, in real-time, by combining machine-learning-enhanced sensor data from a sensor network with external information, such as weather and traffic. The resulting high resolution heat maps can be accessed via an easy-to-use Application Programming Interface (API). Munich Re's impact bond concepts may also be applicable for financing any kind of environmental risk mitigation measurement.

Innovator — *Heiko Milk, Senior Manager, Business Development, Siemens AG, Nuremberg, Germany*

Keeping power grids resilient with a comprehensive transformer concept

What can be done to make urban power grids more resilient, protect them from extreme weather events and minimize economic losses following natural disasters / human attacks? This was the focus of Siemens AG's presentation, which highlighted power transformers as the most critical assets located at the most critical nodes of modern power grids. Ultimately they save time, money and give cities peace of mind by keep the lights on at all times.

Innovator — *George Berbari, CEO, DC PRO Engineering, Dubai, United Arab Emirates*

A structured and self-financed plan to reduce City Energy

Every country, city, town and factory should have a specific energy budget. That budget would not be set by politicians but by independent elected or appointed energy governors similar to a Central Bank Governor - which will be transcended to every home, commercial building, factory and transportation body. The 'Energy Budget' proposes to reward efficiency by providing lower rates and penalize inefficiency with higher rates, the author insists. He stresses that under his plan, this wouldn't be a revenue generator, but the whole population would benefit as the penalties would be used as a self-financing mechanism by each country or city to finance district energy in existing buildings and factories and fund research into the use of renewables, hydrogen and bio fuels.

SESSION DESCRIPTION

POSTER PRESENTATIONS

Date: Thursday, 26th April, 2018 Friday, 27th April, 2018
Time: 13:30-14:30
Rooms: S05-06

Language: English
Contact: Matteo Bizzotto
E-mail/web: resilient.cities@iclei.org
Organized by: ICLEI World Secretariat

CONTRIBUTORS

Presenter *Menna Dessouky, Sustainability Master Planning, Arcadis, Abu Dhabi, United Arab Emirates*

Circular urban metabolism as a design approach for master plans

Circular Metabolism (CM) considers an urban area to be a system with a set of circular or recycled flows, where "the output of one [agent] is the input for another" (Robinson et al., 2003). Flows include natural resources, human knowledge, labour, skills, income, technology and data. The main objectives of a CM approach to development are: resource efficiency and self-sufficiency (Rapoport, 2011), reduction of CO2 emissions and creation of socio-economic opportunities. This research proposes a design framework (coined as Circu-Set) for master planners to achieve the objectives of CM on private sector design projects using an integrated systems approach.

Presenter *Troy McMillan, PhD student, University of British Columbia, Vancouver, Canada*

Using participatory mobile technology to engage citizens in urban climate resilience-building within developed countries

Disaster losses in developed countries continue to grow in large part due to the exposure of citizens and infrastructure to existing and future disaster risks, influenced by both rapid urbanization and climate change. Concurrently, we are witnessing unprecedented consumerization of mobile technology. Recent research has examined how mobile technology influences disaster response and recovery efforts; however, little research has been conducted to determine how this technology can be used to increase engagement between local governments and their citizenry in order to build urban climate resilience. This research aimed at reducing the existing gap in knowledge using a mixed methods approach, with the intent to develop a "quick start" mobile technology framework for local governments to strengthen digital engagement with residents in advance of climate-induced disaster.

Presenter *Kathia Vanessa Román Reina, Student, HafenCity Universitat, Hamburg, Germany*
Gerson Amaral Lima, Landscape Architect, Architectus S/S, Frontaleza, Brazil

Fiocruz Ceara: First public certified building in the Brazilian northeast region

Fiocruz is a Brazilian institution part of the Minister of Health, reference in Latin America in the areas of public health, research and education. This project is the result of a working process, where the stakeholders were willing to innovate, becoming a role model regarding how to conciliate a public bidding with an environmental certification system and how to integrate sustainable construction solutions in order to turn possible integrated goals. Successful strategies, like stormwater and runoff control, energy demand and water consumption reduction and the capacity of being a sustainable knowledge multiplier among students and professionals, must be highlighted.

Presenter *Lee Shing Him, PhD Candidate, University of Hong Kong, Hong Kong*

Thermal benefits of wire-rope climber-green walls in subtropical summer

Urban greening can contribute to urban resilience in the face of global climate change. The growing number of cities in subtropical region necessitates the need to combat the urban heat island phenomenon which jeopardizes the thermal condition in urban space. The vertical wall surface of buildings offers great potential in green wall implementation. The present research investigates the outdoor and indoor thermal effects of a green wall in various weather scenarios. Influencing factors of the cooling benefits have been examined. Recommendations have been proposed for the use of green wall.

Presenter *Sébastien Dujardin, Researcher, University of Namur, Namur, Belgium*

Catherine Linard, Professor, University of Namur, Namur, Belgium

A spatial predictive model of urban malaria infection risk in sub-Saharan Africa

Throughout the 21st century, climate change is expected to lead to increases in ill-health in many regions and especially in cities from developing countries with low income. Within this poster presentation, we show the potential of remote sensing and spatial modelling at different spatial and temporal scales to improve the understanding of intra- and inter-urban malaria risk variations in sub-Saharan Africa. We introduce a spatial predictive epidemiological risk model that will provide stakeholders with a faster and less labour-intensive alternative for effective disease control, and an applied tool to address urban developments that impede their transformation to resilient cities.

Presenter *David Williams, Researcher, Climate Service Center (GERICS), Hamburg, Germany*

Vulnerability of informal settlements in the context of rapid urbanization and climate change in Durban, South Africa

Rapid urbanization and climate change collectively increase the vulnerability of poor urban communities to natural hazards, thereby undermining urban resilience. It is therefore critical to identify and deepen our understanding of the main variables, and the complex interactions between them, which produce and shape the vulnerability of poor urban communities to natural hazards. To develop this understanding it is necessary to conduct detailed research at the local scale. This poster represents the work carried out in Quarry Road West informal settlement, Durban, South Africa. It shows how participatory systems mapping can contribute the understanding of vulnerability at the local scale. Furthermore, results from the application of the Capital Approach Framework, identifying strengths and weaknesses in current local governance, are also presented.

Presenter *Nora Schneevoigt, Research Associate, University of Bonn, Bonn, Germany*

Half a century of land use and cover change in North Rhine-Westphalia

The project KlimNet aims at improving the climate adaptation competence of cities. To collect maximum knowledge for creative solutions towards resilient towns, scientists, municipalities and citizens are closely cooperating. Satellite data of North Rhine-Westphalia (NRW) from the 1970s to date are analysed regarding different kinds of land cover and use as well as varying degrees of imperviousness or soil sealing. The changes over time and certain hotspots of climate change become visible. Decision tools and capacity-building measures are provided to support the application of the findings by the interested public and communal decision-makers.

Presenter *Linda Beyer, Visiting Scholar, Urbanization and Well-Being Unit, African Population and Health Research Center (APHRC), Nairobi, Kenya*

Urban food deserts: Exploring dimensions of food security and resilience. The tale of two slums in Nairobi, Kenya

This research shows geo-spatial and differentiated socio-economic dimensions of food insecurity and resilience of vulnerable urban populations in two informal settlements of Nairobi (Korogocho and Mukuru). Using a mixed methods design, two years of monthly data sets and bi-monthly market data explore dimensions of food insecurity at a household level as well the interface with various socio-environmental factors. Further, household interviews have been undertaken to explore dimensions of resilience (what makes a difference) in relation to food insecurity. The results of this analysis explore the critical and complex understanding of how vulnerable urban populations cope or adapt to food insecurity.

Presenter *Lisette Klok, Researcher, University of Applied Sciences, Amsterdam, The Netherlands*

The cooling effect of small blue urban spaces is negligible

Blue spaces in cities are often regarded as adaptation measures that effectively reduce urban heat. Therefore, urban professionals like to integrate blue infrastructures in climate resilient designs. However, several studies indicated that the cooling effect of small water bodies is often small or absent. This poster informs about the actual cooling potential of small blue spaces such as rivers, ponds, canals and fountains. Simulation results from the REALCOOL project will be complemented with measurements and questionnaire surveys from other studies and relevant scientific literature to illustrate the negligible cooling impact of small blue spaces for climate resilient urban design.

Presenter *Johannes Lückenkötter, Research Assistant, Technische Universität Dortmund, Dortmund, Germany*

Research and PhD Programme on Resilient Cities in East Africa

This poster summarizes the work of a research-cum-training programme that focuses on governance and planning for resilient cities in East Africa. The programme is conducted jointly by the urban planning schools of Ardhi University (Tanzania) and TU Dortmund University (Germany) and includes several PhD research projects in East African countries. The research focuses on challenges of climate change and continued rapid urbanisation for informal settlements and the functioning of urban systems as a whole. Proposed strategies integrate both innovative technical solutions and more adaptive local governance.

Presenter *Eddie Wasswa Jjemba, Urban Resilience Advisor, Red Cross Red Crescent Climate Centre, The Hague, The Netherlands*

Closing gaps for warming cities in Africa

Unlike Europe and the United State of America, risks of extreme heat events are less understood in developing countries. In India, extreme temperatures appear among the top most disasters and are reported to cause enormous suffering including mortality and illness yet their impact remain under reported. In Africa, a recent study indicates increased intensity and frequency of heat waves in many parts of the continent between 2006 and 2015. Poor housing conditions, constrained health systems and limited access to income further increase the vulnerability of the urban poor to extreme heat. Drawing from different case studies, we brainstorm practical actions and suggest feasible research priorities and policy options towards adapting cities to extreme heat risks.

Presenter *Cristian Terreno, Researcher, Universidad Nacional de Córdoba, Córdoba, Argentina*
Cecilia Becerra, Researcher, Universidad Nacional de Córdoba, Córdoba, Argentina

A partnership for the sustainable development of an urban protection area "Los Manantiales" Rio Ceballos, Argentina

The poster presents the regulation and environmental management proposal for the protection of the water basin "Los Manantiales" located in the municipality of Rio Ceballos (22.000 inhab.) part of the metropolitan region of Córdoba (1.350.000 inhab.). The protection area was legally created by local authorities in 2008 starting from the initiative of neighbors organized in a Non-Governmental Organization. Facing the current urban development pressures, NGO members stimulated the integration of knowledge and political actors with social engagement in a partnership that in an intensive participatory eight months process developed an integral plan for the management of the protection area.

Presenter *Leila Irajifar, Lecturer, RMIT University, Melbourne, Australia*

Crowdsourcing Urban Resilience

Crowdsourcing as an emerging tool to foster participatory approaches has the potential to engage individuals in solving urban challenges in many different ways from self-organization activities and shared learning to mutual support, and innovative ideas. This study explores the link between crowdsourcing and urban resilience and investigates the interconnectivity between urban subsystems, individuals, and government to understand how active citizenship can stimulate building urban resilience. We argue the necessity of allocating more resources to prefigure all the potentials of crowdsourcing platforms in solving urban challenges and ensure the openness, transparency, interoperability and adaptability of these crowdsourcing platforms for all the stakeholders' involved in building urban resilience from designers, planners and policymakers.

Presenter *Theresa Zimmermann, Research Associate, Freie Universität Berlin, Berlin, Germany*

Understanding urban disasters – the 2005 floods in Mumbai

This poster presents insights from research on the constitution of meanings of the 2005 floods in Mumbai. It is argued that the way how disasters are discussed, how they are contextualized, which impacts are considered and which conclusions are drawn from the experiences, are socially constructed and henceforth differ between actors. The results contribute to understanding urban disasters and developing disaster risk reduction and resilience strategies that include perspectives of vulnerable populations.

SESSION DESCRIPTION

A1 Multi-level governance to enhance integrated climate action: Good practices inspiring Talanoa Dialogues

Panel

Date: 26 April, 2018
Time: 14:30-16:00
Rooms: S30-32

Language: English
Contact: Felix Akrofi-Atitianti
E-mail/web: felix.akrofi@iclei.org
Organized by: ICLEI World Secretariat

OBJECTIVE

The session aimed at offering insight into the importance of multi-level governance and its potential for bridging the often disconnected climate change mitigation and adaptation interventions to take advantage of co-benefits, while leveraging linkages and synergies with global development frameworks including the Paris Agreement (PA), Sustainable Development Goals (SDGs) and the New Urban Agenda (NUA). Responding to the call for Talanoa Dialogues in all countries, regions and cities to address this, is in focus. The PA recognizes the important role of local and regional governments in global climate action to help their national governments implement their Nationally Determined Contributions (NDCs). Yet, the challenge remains how to align strategies and approaches between all levels of governments to support coordinated planning and accelerated implementation. Cities, towns and regions are exploring the use of appropriate policies, technologies and actions, they are mobilizing stakeholders and trying to access finance for implementation of climate action. To optimize this, and achieve more ambitious NDCs to reach the PA goal, they will require (i) enhanced coordination between all levels of government, (ii) empowerment by enabling frameworks and policies, (iii) more effective communication and, last but not least, (iv) coherent monitoring and evaluation systems to track progress made. These elements of multi-level governance require collaboration among all levels of government, vertically and horizontally, to foster ownership of national climate planning and action.

This session focused on sharing and discussing diverse good practice cases that highlighted how local and national governments could take a more integrated approach to achieve synergistic outcomes in terms of resilience to climate change, integrated climate action and wider sustainable development. The focus was on processes, structures and people - key stakeholders who can make this work. Insights into integrated frameworks and relevant research were presented to underscore implications for climate financing, and priority-setting for scaling up with focus a on cities in Africa, Asia and Latin America.

Through information sharing and networking on a unique international platform, the session provided added-value to the Cities and Regions Talanoa Dialogues initiative launched by ICLEI and partners as part of the official UNFCCC mandated 2018 Facilitative Dialogue (Talanoa Dialogue) to deliver and advance NDCs through effective multilevel governance.

OUTCOMES

Participants left the session with:

- Improved understanding the importance of vertical and horizontally integrated governance. Thus understanding what joint planning, implementation, monitoring and tracking of an integrated climate change action mean in practice at the local level.
- Enhanced appreciation of how city level climate change priorities could be linked to sustainable development and imbibed principles such as inclusiveness, transparency and equity could be mainstreamed effectively.

- Catalyzed initial thinking towards establishing inter-city learning platforms and collaboration hubs to foster collaboration across NDC sectors and SDG themes and mobilize improved financing.
- Enhanced knowledge of mechanisms to access finance, technology transfer and capacity building.
- Good practice cases illustrating how local, national and international climate and development goals can be implemented with a multilevel governance approach in preparation of second NDCs due by 2020 and SDGs by 2030 – The outcomes were directly feed into discussions at the Bonn Climate Talks in May 2018.

METHODOLOGY

- Welcome, opening remarks and introduction by the facilitator. **(10 minutes)**
- ICLEI's approach to the Talanoa Dialogues and multi-level governance. **(5 minutes)**
- Presentations. **(20 minutes)**
- Panel Discussion. **(30 minutes)**
- Q&A. **(20 minutes)**
- Closing remarks. **(5 minutes)**

CONTRIBUTORS

Facilitator	*Maryke van Staden, Director, Carbonn Center; Program Manager, Low Carbon Cities, ICLEI World Secretariat, Bonn, Germany*
Panelist	*Jisun Hwang, Senior Climate Advocacy and Policy Officer, ICLEI World Secretariat, Bonn, Germany*
Panelist	*Bima Fitrindana, Project Assistant, ICLEI Southeast Asia, Indonesia Office, Jakarta, Indonesia*
Panelist	*Nidhi Mittal, Urban Resilience and Climate Change Specialist, Hitchin, UK*
Panelist	*Jong Geon Kim, Director General, Air Quality Planning Bureau, Seoul Metropolitan Government, Seoul, Republic of Korea*
Panelist	*Oswar M. Mungkasa, Deputy Governor for Spatial Plan and Environment, DKI Jakarta (Special Capital City District of Jakarta), Indonesia*
Panelist	*Rebecca Cameron, Professional Officer for Climate Change, Energy and Resilience, ICLEI Africa, Cape Town, South Africa*

Thanks to: *the Urban-LEDS II project*, jointly implemented by ICLEI and UN-Habitat, funded by the European Union.

Further recommended reading

23rd session Conference of Parties (COP 23) to the UN Convention on Climate Change: https://cop23.unfccc.int/

Boosting Subnational Climate Action through New Climate Governance - carbonn® Climate Registry 2016-2017 report: http://carbonn.org/20171101_cCR%20report_final-web.pdf

The Enabling Subnational Climate Action through Multi-Level Governance: http://e-lib.iclei.org/wp-content/uploads/2017/11/GIZ-ICLEI-UNHabitat_2017_EN_Enabling-subnational-climate-action.pdf

ICLEI's GreenClimateCities Handbook for Local Governments: http://urbanleds.iclei.org/fileadmin/user_upload/publications/Final_publications_2016/GCC_Handbook_Final.pdf

Cities and Regions Talanoa Dialogues: http://www.cities-and-regions.org/talanoa/

The New Urban Agenda: http://habitat3.org/the-new-urban-agenda

SESSION DESCRIPTION

A2 Brokering new partnerships & stimulating private sector engagement for resilience

Presentations

Date: Thursday, 26 April, 2018
Time: 14:30-16:00
Rooms: S29-31

Language: English
ICLEI contact: Ute Göldner
E-mail/web: resilient.cities@iclei.org
Organized by: ICLEI World Secretariat

OBJECTIVE

Engaging the private sector in urban resilience and adaptation is not yet intuitive for local governments. Barriers in understanding each other persist, though both stakeholders recognize the need and urgency to work together. Micro, Small and Medium Sized Enterprises (MSMEs), for example, have a vast potential for supporting and implementing disaster & societal resilience while conducting business as usual. At the same time, MSMEs are very vulnerable to disaster risks in the cities they operate. By involving the private sector in urban resilience-building both sides could reap benefits. How do we make this happen?

Until recently, the term “private sector” in the context of urban resilience and adaptation has been synonymous to corporations. With examples from the Global North and Global South, the session explored how to include the insurance, the tourism, and the real-estate sector, as well as local SMEs and MSMEs in the cities’ efforts to increase resilience and achieve sustainable urban futures. Starting by acknowledging the potential of MSMEs for urban resilience building and social cohesion in the Global South, the discussion highlighted key findings from the forthcoming UNEP DTU Partnership “*Perspective Series*”, which explores the issue of private sector engagement in climate change adaptation with a special focus on MSMEs. The discussion then shifted focus to the global north geographically and to the insurance sector thematically. In the context of the EU Horizon 2020 project “*NAID: Nature Insurance Value Assessment & Demonstration*”, examples from Copenhagen, Denmark, Rotterdam, Netherlands, and Lodz, Poland were shared. These cities have developed tools for capturing co-benefits of NBS and operationalizing the implementation of such projects by tailoring them to the local environment, social and legislative local conditions.

The next presentation introduced six key planning documents that guide the resilience strategy of Jersey City, New Jersey, USA. In particular, participants learned how the City’s character was incorporated in the planning; how land-use regulations could support climate change mitigation efforts and at the same time encourage continued real estate investment; and how Jersey City’s Capital Improvement roadmap guides the City's resilience investments. Last, a presentation from the City of Cape Coast, Ghana will ground-truth the discussion on the involvement of the private sector in urban resilience and adaptation efforts.

OUTCOMES

- Participants were presented with some of the challenges and opportunities of involving the private sector (incl. SMEs, MSMEs, the insurance, real estate and tourism sector) in the process of urban resilience-building;
- They were inspired by on-the-ground examples of private sector's engagement in the Global North and Global South;
- They learned how cities quantify capital (and social) returns on resilience by implementing nature-based solutions;
- Discussed transferability of experience and how to improve involvement of the private sector in resilience building and climate change adaptation efforts

METHODOLOGY

- The facilitator provided an overall introduction to the session and contributors. **(5 minutes)**
- Each presentation was allotted 10 minutes. **(5 x 10 minutes)**
- The facilitator managed questions and answers. **(30 minutes)**
- Closing remarks by the facilitator. **(5 minutes)**

CONTRIBUTORS

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

Presenter — *Caroline Schaer, Researcher, UNEP DTU Partnership, Technical University of Denmark, Copenhagen, Denmark*

Unlocking the climate adaptation potential of MSMEs in the Global South

Acknowledging the importance of micro, small & medium sized enterprises (MSMEs) to contribute to societal resilience in developing countries is essential and receiving increasing attention in the international arena. While representing 80% of businesses in developing countries and being crucial to employment generation and supporting livelihoods, they also have limited capacity to respond to climate and disaster risks, and are therefore more vulnerable to the negative impacts of climate change. This presentation highlights key findings from the latest UNEP DTU Partnership (UDP) '*Perspectives*' publication, which explores the role of MSMEs in building climate resilience.

Presenter — *Peter van der Keur, Senior Scientist, Geological Survey of Denmark and Greenland, Copenhagen, Denmark*

Operationalization of insurance value of nature based solutions. An Urban living lab approach

The insurance value of ecosystems for mitigation of water related risks is assessed and tested through the co-design and implementation of nature-based solutions (NBS) with involvement of key stakeholders. Focus is particularly on hybrid blue-green and grey infrastructures aiming to build resilience to climate extreme events. Copenhagen, Rotterdam and Lodz develop tools for coupling biophysical, system dynamic and economic modelling and tailor NBS to the local environmental, social and legislative conditions. Economic valuation methods, including co-benefits and business models are to be developed to empower broader investments in NBS.

Presenters *Risa P. Goldstein, Partner, Goldstein Partnership Architects & Planners, Maplewood, NJ, USA;*

Alexander D'Hooghe, Senior Partner, Org. for Permanent Modernity, Boston, USA

Jersey City: 6 Key Resiliency Planning Documents

A presentation of highlights from the recently completed Jersey City Resiliency Master Plan initiated by the city of Jersey City, New Jersey, USA, post-hurricane Sandy of 2012. The presentation will cover the broad range of planning issues this Master Plan addresses, including large-scale urban systems risk assessment, key investment prioritization and long term phasing planning; and at a smaller scale, specific zoning and building code amendments, that support overall resiliency planning goals as new development proceeds.

Presenter *Ernest Arthur, Metropolitan Chief Executive, Cape Coast, Ghana*

Together for a clean Cape Coast

The Cape Coast Metropolitan Assembly recognizes the importance of a clean city to its sustainability agenda, especially in the area of investments and promotion of Cape Coast as the desired tourism destination in Ghana. In view of this, the Cape Coast Metropolitan Assembly appointed Sanitation and Tourism Ambassadors in 2017 to assist in the campaign for a clean Cape Coast. The Waste Management Department, the Environmental Health Unit and the Metro Sanitation and Tourism Ambassadors will visit schools, communities and the vendors in market places and small businesses to educate and collaborate. The Mayor will share the vision of this campaign and plans for enhanced private sector involvement in the future.

Further recommended reading

UNEP DTU Partnership "Perspective Series": http://www.unepdtu.org/PUBLICATIONS/Carbon-Market-Perspectives-Series

EU Horizon 2020 project "NAID: Nature Insurance Value Assessment & Demonstration": https://cordis.europa.eu/project/rcn/206403_en.html

Naidad, Nature Based Solutions, Nature Insurance value http://www.naiad2020.eu/

Commission for Conciliation, Mediation and Arbitration (CCMA), South Africa, www.ccma.gov.gh

SESSION DESCRIPTION

A3 Cities in transition: From waste management to circular city economies

Panel

Date: April 26, 2018
Time: 14.30 – 16.00
Rooms: S34-25

Language: English
Contact: Keith Weitz
E-mail/web: kaw@rti.org
Organized by: RTI International

OBJECTIVE

Waste represents inefficiency, which translates to economic loss and negative impacts to the environment, public health and social well-being. Moreover, waste management represents one of the largest cost to city budgets. Policies and programs to reduce the amount of waste generated are a priority, and turning waste that is generated into resource streams can generate revenues and create jobs. Transitioning from traditional waste management to a circular city economy is a complex endeavor that cuts across the domains of technology, economics, environment, governance, behavior change, education and social well-being. Cities must balance economic, environmental, social and other objectives to be sustainable.

The objective of session was to exchange knowledge, best practices, technologies and innovative solutions to challenges facing cities as they transition to a circular city economy. In this session, panelists discussed emerging and innovative solutions, issues and challenges, and fostered debate and interaction with the audience. The panel included participants from a variety of stakeholder groups including cities, NGOs, development Banks, and industry. The session was designed to focus not only the technical solutions but also on the underlying governance and capacity-building cities need to enhance service delivery, building Public-Private Partnerships, and ensuring that innovative solutions needed to implement a circular economy can be implemented.

OUTCOMES

Participants gained a better understanding of:

- Approaches for planning and managing waste as part of the whole urban system that considers the dynamic and evolving nature of cities.
- Business models and financing approaches to support circular economy programs and infrastructure.
- Strategies cities can employ to spur innovation, technology adoption, and market creation through policy reform or voluntary programs that create incentives.
- Barriers and challenges facing cities with respect to improving waste management and adopting circular economy measures.
- Strategies, successes, lessons learned, and recommendations for future measures and activities that can help cities transition from waste management to a circular economy.

METHODOLOGY

- The facilitator introduced himself and each speaker, the circular economy concept and its implementation issues. **(15 minutes)**
- The remainder of the session was organized around the guiding questions, with each panelist given time to respond to individual questions, and to respond to comments made by other panelists. **(45 minutes)**
- The facilitator managed questions and answers from the audience. **(25 minutes)**
- The facilitator concluded with closing remarks. **(5 minutes)**

Guiding questions:

1. What barriers exist for cities interested in moving towards a circular materials economy?
   - How can industries, infrastructure and programs that are heavily linked in a circular economy be made resilient to external conditions such as fluctuations in market prices for material and energy products?
   - Has the transition towards a circular economy created friction between the old and new approaches and how have they been overcome?
2. How can barriers be overcome?
   - What transformative or disruptive technologies currently helping to advance the circular economy or are needed to advance the circular economy.
   - What are innovative business models and financing strategies can be employed by cities to pay for new infrastructure and programs?
   - What type of enabling policies and other measures from National and local governments are needed to support the transition to the circular economy?
   - What information is needed to inform local decisionmakers about circular economy interventions and to better integrate environmental, economic and social impacts?
   - What changes are needed in business models, consumption behaviours, finance and fiscal mechanisms, as well as triggers and pathways for technological and social innovations to facilitate the circular economy?
3. Are there definable economic development opportunities that come with transition towards a circular economy?
4. What top 3 interventions could cities do in the short term to start their transition to the circular economy?

CONTRIBUTORS

Facilitator — *Keith Weitz, Deputy Director, Sustainability and Resource Management, RTI International, Durham, USA*

Director at RTI International working to implement sustainable waste and materials management and circular economy in global communities.

Panelist — *Catherine Allinson, Director, Future Earth Ltd, London, UK*

Director of Future Earth Ltd specializing in the facilitation of urban sustainability and resource management, climate change mitigation and adaptation and human well-being for resilience. Also, leads the UK Foreign & Commonwealth Office Smart Sustainable Cities initiative.

Panelist — *Sunandan Tiwari, Senior Program Manager, Global Projects, ICLEI World Secretariat, Bonn, Germany*

Head of the Global Projects team at the ICLEI World Secretariat with experience in urban climate change adaptation and resilience building, climate financing, biodiversity management, and sustainable urban development issues.

Panelist	*Gwendolen White, Chair, Sustainability Commission, City of Bloomington, USA* Chair of the City of Bloomington, Indiana, Commission on Sustainability and Founder of Sustainability Within Reach LLC specializing in sustainability reporting, sustainability strategy development, and assurance preparedness.
Panelist	*Johannes Paul, Advisor, Concepts for Sustainable Waste Management, GIZ, Eschborn, Germany* GIZ adviser who works in global communities to implement research and development projects that relate to environmental policy and circular economy with focus on waste management, marine litter and sectoral climate mitigation.
Panelist	*Lisa Junghans, Director, Climate Finance & Urban Resilience Expert, GIZ, Berlin, Germany* Lisa has academic and professional experience in the fields of urban planning, climate change adaptation and finance.

Further recommended reading

RTI International: https://www.rti.org/

C40 Waste to Resources Network: http://www.c40.org/networks/waste-to-resources

SESSION DESCRIPTION

A4 Towards realizing just cities

Panel

Date: Thursday, 26th April, 2018
Time: 14:30-16:00
Rooms: S01-02

Language: English
Contact: Jan Riise
E-mail/web: jan.riise@chalmers.se
www.mistraurbanfutures.org
Organized by: Mistra Urban Futures

OBJECTIVE

The 'Towards Realizing Just Cities' session presents the latest research and knowledge concerning the implementation of the Urban SDG, contributing to a transition towards inclusive, safe, resilient and sustainable cities – with the New Urban Agenda's 'Leave no one behind' as a motto for fairness and justice.

Based on experiences in a number of primarily intermediate cities in several continents, the session opens up for comments and discussion regarding cities' and local governments' participation in and commitment to the ongoing development. Particular attention will be paid to urban public finance for implementation of SDGs and the New Urban Agenda.

OUTCOMES

The proposed session intended to achieve a few related but still different outcomes:

- For participants wishing to take a less active part in the session – listeners – it provided an overview of the state-of-play regarding the development and the implementation of the Sustainable Development Goal 11 and the New Urban Agenda, with a particular focus on 'Just Cities'
- For participants wishing to take a more active part in the discussion, an opportunity to raise issues within the field of particular relevance for the own local government or city situation, as comments or questions.
- For the panel, an opportunity to receive feedback and comments at an intermediate point in time for the 'Realizing Just Cities' project, as well as other related projects concerning the Urban SDG, the New Urban Agenda and urban public finance.

METHODOLOGY

- The facilitator opened the session with a short introduction of himself and each speaker and the context of the subject, including how the session is organized. **(10-15 minutes)**
- Each of the four speaker was given time to describe their work, showing maps or other illustrations as needed. **(4 x 10 minutes)**
- The facilitator managed questions and answers from the audience, with the objective of creating a discussion, rather than a Q&A session – i.e. asking also the audience for comments and experiences, not only questions. **(25 minutes)**
- The facilitator concluded with closing remarks. **(5 minutes)**

Guiding questions:

1. List of questions the panel explored and sought to answer; however the two first are more rhetorical questions, from which the panelists discussed how various interventions and projects can contribute. The third question was immediately relevant, for the audience and for the panel.
2. What do just cities look like in different urban contexts?
3. And how might just cities be realized?
4. Who are the key role-players in the realization of just cities?

CONTRIBUTORS

Facilitator	*Jan Riise, Project Manager, Mistra Urban Futures, Chalmers University of Technology, Gothenburg, Sweden*
Panelist	*David Simon, Director, Mistra Urban Futures, Chalmers University of Technology, Gothenburg, Sweden*
Panelist	*Warren Smit, Lead Researcher, Realizing Just Cities Project, African Centre for Cities, University of Cape Town, Cape Town, South Africa*
Panelist	*Liza Cirolia, Urban Planner, Mistra Urban Futures, University of Cape Town, Cape Town, South Africa*
Panelist	*Sara Pettersson, Project Manager, Climate and Environment, City of Gothenburg, Gothenburg, Sweden*

Towards Realizing Just Cities, that are Fair, Green and Accessible – what does it take? The panel and the audience discussed and commented on several initiatives across the world that may contribute to the social sustainability and the 'Just City' that is necessary for a sustainable urban development.

Further recommended reading

Rethinking Sustainable Cities: https://oapen.org/search?identifier=613676

Summaries of the book available in Engllish, Spanish, Swedish and Hindi: https://www.mistraurbanfutures.org/en/news/summaries-swedish-spanish-english-and-hindi

Towards Realising Just Cities – Co-production in action: https://www.mistraurbanfutures.org/en/annual-conference/conference-book

SESSION DESCRIPTION

A5 The resilience of digital cities – Cybersecurity, data protection and risk management in the digitalization era

Panel

Date: Thursday, 26 April, 2018
Time: 14:30-16:00
Rooms: S25-26

Language: English
Contact: Olga Horn
E-mail/web: olga.horn@iclei.org / www.iclei.org
Organized by: ICLEI World Secretariat

OBJECTIVE

Advances in digital technologies are increasingly transforming the way cities are operated and managed. They have altered physical (e.g. energy, water, waste, transportation) and social (e.g. governance, citizen participation, service provision) infrastructure systems. This brings new opportunities but also challenges and risks. From a resilience perspective, protecting critical infrastructure from cybersecurity threats and power outages will gain in importance as urban systems are becoming increasingly interconnected. In addition, sensitive data needs to be protected to prevent theft, unauthorized access or inappropriate use thereof.

This session started with a live-hacking demonstration and expert presentation to showcase how easily seemingly secure systems and data can be compromised. The ensuing panel discussion provided a critical reflection of urban digitalization and its resilience-related risks and challenges. City representatives and experts discussed what policies, strategies and concrete measures are needed to address them.

OUTCOMES

Participants gained a better understanding of:

- The potential risks associated with the digitalization of municipal infrastructure systems and data;
- The policies, strategies and concrete measures cities can implement to safeguard their digitalized systems and data.

METHODOLOGY

Time break down of the session (90 minutes total):

- Opening and speaker introduction by facilitator. **(10 minutes)**
- Live-hacking demonstration and presentation by IT-expert. **(20 minutes)**
- Panel discussion around the guiding questions. **(30 minutes)**
- Moderated Q&A with questions and comments from the audience. **(25 minutes)**
- Closing remarks by facilitator. **(5 minutes)**

Guiding questions:

1. What are the resilience-related risks and challenges of digital cities?
2. How can cities ensure the security and privacy of their sensitive data in an era of data breaches and cyber-attacks?
3. How can cities guarantee the continuity of ICT-enabled critical infrastructure systems in the face of shocks and stresses?
4. When are hi-tech ICT solutions preferable to low-tech solutions? And vice-versa?
5. Which municipal policies and strategies are needed when it comes to digitalization and resilience?

CONTRIBUTORS

Facilitator	*Holger Robrecht, Deputy Regional Director, ICLEI Europe, Freiburg, Germany*
IT-Expert	*Thomas Stasch, Head of IT-Security and Civitec-CERT, Civitec, Siegburg, Germany*
Panelist	*Ina Schieferdecker, Director, Fraunhofer Institute for Open Communication Systems, Berlin, Germany; Member of the German Advisory Council on Global Change*
Panelist	*Roman Mendle, Smart Cities Program Manager, ICLEI World Secretariat, Bonn, Germany*
Panelist	*Paul Argyle, Multi-Agency Strategic Advisor to the Mayor and Deputy Mayor, Greater Manchester Combined Authority, Manchester, UK*

Further recommended reading

ICLEI's approach to Smart Cities: http://www.iclei.org/activities/agendas/smart-city.html

SESSION DESCRIPTION

B1 Getting the most out of climate services for cities

World Café

Date: Thursday, 26th April 2018
Time: 16:30-18:00
Rooms: S34-35

Language: English
Contact: Adriaan Perrels & Raffaele Giordano
Organized by: EU-MACS project

OBJECTIVE

For most cities it is not straightforward what their information needs are when embarking in adaptation planning, and even for cities with experience in adaptation planning the sourcing of new climate information can be demanding in next phases of adaptation planning and implementation. Also questions such as from what source(s) to acquire climate services, and how to assess the quality and appropriateness for a particular city may be hard to crack without guidance. Similarly, cities could consider joint acquisition and reflect whether they mainly acquire data or more comprehensive - consultancy embedded - climate services.

The EU funded Horizon 2020 study EU-MACS (http://eu-macs.eu/#) is analyzing how the market for climate services can be enhanced so as to better fulfil information needs of prospective climate service users, such as cities. Among others the project explores in close cooperation with 2 focus cities, Helsinki and Bologna, what are effective interaction formats for offering, tailoring and using climate services.

This session aims to present and discuss these interaction formats in conjunction with the adaptation planning processes of these cities. The discussion is in particular meant to reflect on the applicability of the presented interaction formats for other cities, i.e. what is their transferability and what seem to be important prerequisites for the use of the different formats.

After introducing the EU-MACS approach and experiences in the focus cities, group discussions are conducted among the session participants, facilitated by group facilitators. Each group had its own premeditated discussion theme, while participants can switch once to another theme group. The theme discussions can make use of comments displayed during the case presentations mediated via an app, introduced at the start of the session. This session should be attractive for officials, private experts, researchers and citizens involved in climate change adaptation planning for and in cities.

OUTCOMES

Participants left the session with:

- Better understanding of the information processes feeding into urban climate adaptation planning
- Better understanding of how to prepare themselves before their organization acquires climate information services
- Insights in actually applied concepts and experiences of other cities regarding implementation of adaptation planning

METHODOLOGY

- Introduction and welcome remarks by the facilitators. **(10 minutes)**
- Speakers discussing the use of climate information services in urban adaptation planning – theory and cases. **(30 minutes)**
- Group discussions supported by group facilitator; 1 predefined question per table. **(35 minutes)**
- Feedbacks from the tables. **(10 minutes)**
- Wrap up and follow up work in EU-MACS. **(5 minutes)**

CONTRIBUTORS

Facilitators	*Adriaan Perrels, Professor, Finnish Meteorological Institute, Helsinki, Finland*
	Raffaele Giordano, Researcher, CNR Institute for Water Research, Bari, Italy
Speaker	*Sonja-Maria Ignatius, Climate Adaptation Expert, Helsinki City, Helsinki, Finland*
Speaker	*Viliina Evokari, Water Project Manager, Helsinki City, Helsinki, Finland*
Speaker	*Giovanni Fini, Coordinator, Environmental Quality Unit, City of Bologna, Bologna, Italy*

Further recommended reading

Output of EU-MACS Project: http://eu-macs.eu/outputs/#

Outlining the Urban CS Field: https://drive.google.com/open?id=0B9Zfkc1cQTRmNklGTlUtSWFnTWM

Analysys of Excisting Data Infrastructure for Climate Services: http://eu-macs.eu/wp-content/uploads/2017/08/EU-MACS_D13_submitted_14072017.pdf

Review and Analysys of Climate Market Conditions: http://eu-macs.eu/wp-content/uploads/2017/07/EU-MACS-D11_CLIMATE-SERVICE-MARKET-CONDITIONS.pdf

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
Organized by: ICLEI World Secretariat

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 began 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 continued 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 city of Turku, Finland, switched the focus of the session on the Global North. Turku aims to become the first carbon-neutral city by 2029 and for that it needs a comprehensive Climate Action Plan; hence, city representatives showcased their Adaptation Plan. The attention of the session remained in Europe with a presentation on how to assess risk in the Greater Manchester and which adaptation options the area needs to prioritize. 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 were exposed to latest applications of risk modeling and holistic diagnostic tools that enable risk and vulnerability assessment and prioritization of investments;
- They gained understanding of the benefits of including local communities in collective risk and vulnerability assessments;
- They learned how socio-cultural-political and socio-economic values and norms of human agents contribute to resilience.

METHODOLOGY

- The facilitator provided an introduction to the session topic and contributors. **(5 minutes)**
- Each presentation was allotted 10 minutes. **(5 x 10 minutes)**
- The facilitator managed questions and answers. **(30 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 provided the strategy and adjustment for spatial planning under climate change.

Presenter *Risto Veivo, Manager, Climate and Environment Policy, City of Turku, Finland*

Adaptation as Part of Climate Action Plan

Turku is a city on the southwest coast of Finland, the 6th largest in the country, also designated the European Capital of Culture for 2011, alongside Tallinn, Estonia. Turku aims to become the first carbon-neutral city by 2029, which also marks the city's 800 anniversary. This presentation focused on Turku Adaptation Plan as well as the steps for its implementation.

Presenters *Angela Connelly, Greater Manchester Combined Authority, University of Manchester*

Matt Ellis, Climate Resilience Officer, Greater Manchester Combined Authority, Environment Agency, Bristol, UK

Assessing climate risk in Greater Manchester and prioritizing adaptation options: a step by step approach

Why risk assessment is needed and what are the priorities for Greater Manchester?

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

Framework for collective risk assessment and local cultural resilience

This presentation introduced a theoretical framework for understanding and assessing risk perception and management suitable under different regional conditions. The framework focused 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 was put on interdisciplinary and trans-disciplinary collaborations when assessing resilience. Drawing on first empirical research from INNOVA local case studies, the presentation focused 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

SESSION DESCRIPTION

B3 Fostering global multi-stakeholder partnerships for strengthened urban resilience

Facilitated Discussion

Date: Thursday, 26 April, 2018
Time: 16:30-18:00
Rooms: S01-02

Language: English
Contact: Julie Greenwalt
E-mail/web: jgreenwalt@citiesalliance.org
www.citiesalliance.org
Organized by: Cities Alliance

OBJECTIVE

This session explored how strong global partnerships and local initiatives are essential to implement approaches to implementation sustainable and inclusive urban development. There is an urgent need to foster clarity and common purpose around what are the global agendas relevant for cities. The global development framework consists of different global agreements, the most important of which are the: 2030 Agenda; the Sendai Framework for Disaster Risk Reduction; the Addis Ababa Action Agenda on Financing for Development; the Paris Climate Change Agreement; the World Humanitarian Summit; and the New Urban Agenda.

To varying degrees, these agendas provide frameworks for action relevant to sub-national governments, to cities and regions and, critically, both as areas of concern and as important development actors. In the field of sustainable urban development, the number of global agreements with high importance is partly perceived as an extra burden overwhelming national and sub-national decision-makers.

The session focused on two of the Cities Alliance Joint Work Programmes (JWP), which address these global agreements through projects, knowledge products and engagement.

(1) The JWP on Resilient Cities which aims to build resilience in long-term urban planning and guide investment in strategies that place informality and the working urban poor at the center of city-wide solutions and affiliate projects on climate action planning and the CURB tool (C40), finance and the Transformative Actions Program (ICLEI), Urban Community Resilience Assessments (WRI), and the business case for adaptation (C40).
(2) The JWP on Cities in the Global Agendas, including the knowledge products and partnerships intended to increase coherence of effort towards the implementation and follow up and review of the Global Sustainability Agendas, specifically the 2030 Agenda and New Urban Agenda, in and with cities.

OUTCOMES

Participants gained a better understanding and explored topics of:

- The results of the Cities Alliance JWPs on Resilient Cities and Global Agendas
- Joint global and local work in urban resilience, advancing global agendas at the local level through an integrated implementation and follow up and review
- Resilience work in informal settlements and among vulnerable groups

METHODOLOGY

- Welcome and Introduction. **(5 minutes)**
- Interactive activity on urban resilience and adaptation in Global Agendas. **(5 minutes)**
- Global Agendas Presentations by David Dodman and Alexa Kurth. **(20 minutes)**
- Quick exchange between participants on Global Agendas. **(10 minutes)**
- Video presentation of the JWP on Resilient Cities projects. **(15 minutes)**
- Facilitated discussion and audience inputs/Q&A. **(30minutes)**
- Closing Remarks. **(5 minutes)**

Guiding questions:

1. What are the key areas for knowledge exchange and learning necessary for improved urban resilience?
2. How does building partnerships facilitate more effective implementation of urban resilience efforts?
3. How does your approach/tool/project also address issues of equity and inclusion?
4. How is your project structured to be inclusive and engage multiple stakeholders on urban resilience?

CONTRIBUTORS

Facilitator	*Julie Greenwalt, Urban Environment Specialist, Cities Alliance, Brussels, Belgium*
Panelist	*Marie-Alexandra Kurth, Good Governance and Urban Development Specialist, Cities Alliance, Brussels, Belgium*
Panelist	*Rose Molokoane, Coordinator FEDUP & Vice President SDI, Cape Town, South Africa*
Panelist	*Robert Kehew, Leader, Climate Change Planning Unit, Urban Planning and Design Branch, UN Habitat, Nairobi, Kenya*
Panelist	*Suzanne Nolden, Department of International Affairs and Global Sustainability, City of Bonn, Bonn, Germany*
Video	*Representatives of the Joint Work Programme on Resilient Cities* (video intervention)

Further recommended reading

Local and Regional Governments in the Follow-up and Review of Global Sustainability Agendas: http://www.citiesalliance.org/sites/citiesalliance.org/files/adelphi_Cities-Alliance_Report_Local%20and%20Regional%20Governments_Follow-up_and_Review_FINAL.pdf

SESSION DESCRIPTION

B4 Achieving social cohesion through inclusive resilience-building

Presentations

Date: Thursday, 26 April, 2018
Time: 16:30-18:00
Rooms: S29-31

Language: English
ICLEI contact: Ute Göldner
E-mail/web: resilient.cities@iclei.org
Organized by: ICLEI World Secretariat

OBJECTIVE

Managing large, dense, and diverse populations is inherently difficult, and more so in the face of rising seas, increasingly frequent disasters, resource shortages and mass population movements. The ability to rise to these challenges depends a great deal on each city's level of resilience. This session explored how cities, facing rapid social change, are managing social tensions resulting from political and civil unrest. Local governments' efforts to build socially cohesive communities, promoting inclusion and a sense of trust and belonging for forced migrants and displaced populations were also in focus.

The conversation started by assessing the link between social cohesion and urban resilience. The first presentation argued that higher levels of positive peace – the attitudes, institutions, and structures that reduce violence in a society – strengthen overall the social fabric of urban environments and equips them to better mitigate shocks and stresses. The next presentation identifies four key factors for local governments and their partners to consider in order to build resilient, cohesive societies less prone to conflict and social and political unrest. The application of these factors was showcased by four USAID-supported projects in urban areas in Peru, Colombia, Albania, and Georgia. Next, Quelimane Municipality, Mozambique presented the challenges and opportunities of reinforcing social cohesion in an urban environment confounded by multiple development and environmental issues, including poverty, land degradation, and sea level rise. Quelimane Municipality in partnership with USAID's Coastal City Adaptation Project (CCAP) has developed tools that are bringing the urban poor and disadvantaged to discuss and plan climate change adaptation and development strategies. Building upon this example, the following presentation reinforced the argument that social cohesion is directly correlated with urban resilience and, in fact, it enhances the capacity of cities to reconstruct in the aftermath of natural hazards. Flood disaster recovery in the Western Balkans was in focus. Next, the City of Zamboanga, Philippines shared their unique, first-hand experience in post-conflict and post-disaster reconstruction within an ethnically diverse urban environment. The City highlighted the challenges of assisting multi-ethnic refugees and supporting a relocation of a traditional community to a suitable, culturally appropriate new site. The last presentation focused on the recent large-scale displacement in Somali cities due to the worst drought in decades and suggests the implementation of an analytical framework of urban resilience that could help donors, municipal authorities, and implementing partners to bridge the nexus between humanitarian support and longer-term socially cohesive urban development.

OUTCOMES

This session allowed participants to:

- Re-think the relationship between social cohesion and urban resilience and discuss how this link could be operationalized and measured;
- Learn from cities and city practitioners how to include and integrate large numbers of displaced populations and build resilience within a diverse, tribal environment;

METHODOLOGY

- The facilitator provided an introduction to the session topic and contributors. **(5 minutes)**
- Each presentation was allotted 10 minutes. **(6 x 10 minutes)**
- The facilitator managed questions and answers. **(20 minutes)**
- Closing remarks by the facilitator. **(5 minutes)**

CONTRIBUTORS

Facilitator — *David Simon, Director, Mistra Urban Futures, Chalmers University of Technology, Gothenburg, Sweden*

Presenter — *Marcel Smits, Program Director, Institute for Economics & Peace, The Hague, The Netherlands*

Measuring social cohesion for urban resilience management

The presentation showcased a framework for monitoring and measuring social cohesion at the city level. It was part of an innovative pilot research project that will help to further built up the evidence base on social cohesion in connection to city resilience and develop a work plan for a city-level social cohesion and resilience management tool. IEP's empirical analysis demonstrates that resilience is built by building high levels of Positive Peace. One way in which Positive Peace helps to build resilience is by creating an environment conducive to nonviolent alternatives for conflict resolution, shifting shocks from violent to non-violent, hence help reduce the erosion of social cohesion. By tracking both improvements and deteriorations in resilience over time and by creating links with sustainability or equity goals for instance, the proposed case study provides cities with new guidance on how to build cohesive communities through better management of its city resilience. The presentation elaborated on how ICLEI Canada is currently building resilience through social cohesion in Canadian communities and why the proposed project would help to advance Canadian cities.

Presenter — *Gerardo Berthin, Senior Associate, Tetra Tech, Burlington, USA*

Four ways to support local service delivery in expanding urban environments

Tetra Tech has identified four key factors for improving local service delivery in urban areas and build resilient societies less prone to unrest. These include (1) the role of policy dialogue in the vertical and horizontal governance system. (2) the importance of local capacity (3) the role of citizen engagement and (4) the challenges of accountability and transparency. The presenters shared lessons learned from four decades of supporting improved service delivery, and discussed capacity investments to reduce risk of conflict.

Presenter — *Manuel De Araujo, Mayor, Quelimane Municipality, Quelimane, Mozambique; Co-Chair ICLEI Resilient Cities Portfolio*

Experience of Quelimane Municipality, Mozambique

Building resilient urban societies means building the capacity of Municipal residents to anticipate and respond to the negative impacts posed by climate change. A combination of factors has created an urban environment, which by any urban standards is rated as of very low quality. To bring back the community members to the center of development Quelimane Municipality in partnership with USAID-CCAP has developed tools, such as Local Adaptation Plan, that is progressively helping build the social cohesion towards a more resilient city.

Presenters *Linda Nielsen, Phd Fellow, Aalborg University, Aalborg, Denmark*

Mille Pedersen, Master student, Aalborg University, Aalborg, Denmark

Flood risk mitigation and indicators of social cohesion in the Western Balkans

This presentation provided empirical validation to the postulate that social cohesion enhances reconstruction in the aftermath of natural hazard events. Historical data on flood events in the Western Balkans together with social cohesion, economic and development indicators were analysed to assess community resilience to flood risk in the region as well as in individual countries and local districts. The data was compared before and after the disintegration of the Yugoslavian state to determine changes in correlations following changes in political institutions. The study contributes to capacity building through knowledge exchange on disaster risk and resilience in the region.

Presenter *Marie Angelique C. Go, City Administrator, Zamboanga City, Zamboanga, Philippines*

Build back better Zamboanga: Evaluating community resilience through a diverse & innovative economy

Community Resilience is the existence, development and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability and surprise. The sustained ability to withstand and recover from adversity (the 2013 man-made disaster), continues to be a key policy issue of the local government. The City of Zamboanga, Philippines shares the unique, first-hand experience in post-conflict and post-disaster reconstruction within an ethnically diverse urban environment. This presentation reported the components of community and individual resilience identified through a participatory action study within a diverse community with focus on an innovative economy. Discussion was on the interactions between individuals, the community, infrastructure, the environment and the economy in the process of building resilience. The findings extended from previous studies by recognizing environmental and economic factors, infrastructure and support services, as enhancing resilience, and expand the limited evidence base for those wishing to promote social cohesion through inclusive resilience-building. In terms of comprehensiveness, the economic dimension received relatively less attention in spite of its significance for building community resilience. Attention needs to be paid to stakeholder participation in developing assessment tools.

Presenter *Simon Griffiths, Evaluation and Practice Leader, Coffey International, London, UK*

Linda Beyer, Visiting Scholar, Africa Population and Health Research Center, Nairobi, Kenya

Urban resilience bridging humanitarian support & urban development in Somalia

The presentation argued for an appraisal, monitoring and evaluation framework structured around an integrated conceptual model of urban resilience to help donors, municipal authorities and implementing partners operationalize their program objectives of transitioning large numbers of displaced people in Somali's cities and towns from humanitarian support towards development that meets their longer term needs. At the heart of this framework are key social inclusion questions about the type of change that diverse urban populations want and need in the context of Somalia's worst drought in decades and ever-changing social power dynamics and political situation.

Further recommended reading

Coastal Community Adaptation Project (CCAP), USAID: https://www.usaid.gov/pacific-islands/environment-and-global-climate-change/coastal-community-adaptation-project

Buggoc Challenge, Zamboanga: https://mindanaoexaminer.com/buggoc-challenge/

SESSION DESCRIPTION

B5 Earth observations for climate-resilient cities: Resilience Brokers, GEO

Panel

Date: Thursday, April 26, 2018
Time: 16:30-18:00
Rooms: S30-32

Language: English
Contact: Andrew Simmons
E-mail: andrew.simmons@resiliencebrokers.org
Organized by: Resilience Brokers (Eco Sequestration Trust), Group on Earth Observations (GEO)

OBJECTIVE

The use of earth observations ("EO") and geospatial data and their effective integration with other development- and civic-related information sources can produce a quantum leap in tracking progress towards and achieving the Global Goals [1] and Sendai Framework outcomes while allowing policy and planning decision makers and communities to more effectively implement climate-informed resilience measures through data modeling and communications tools, collaboration and knowledge sharing. [2]

From a range of practitioners' perspectives, this session introduced current and emerging case studies, joint EO-support programmes and initiatives, and open source platforms across thematic topics and contexts. The examples demonstrated the profound value of EO/remote sensing data – when combined with federated-database approaches operating with free-at-use data access policies, integrated-decision and communications-support tools, and facilitated information sharing and collective-knowledge building – in advancing more resilient development pathways in city-regions.

OUTCOMES

Participants left the workshop session with:

- Knowledge of specific case studies and current and emerging roles of EO (e.g., integrated climate risk assessments, dynamic M&E in real time, SDG reporting [3], public-realm asset management, stakeholder communication strategies, examples of public-private sector collaboration) and sensitivity to issues of scale and jurisdictional boundaries in project design, implementation and data integrity/relevancy;
- Knowledge of accessible resources and an understanding of the roles of specific leading actors and EO-support programes and partnerships – intergovernmental agencies and initiatives including the Group on Earth Observations (GEO), UN agencies, the European Space Agency's Earth Observation for Sustainable Urban Development (EO4SD-Urban) project, Global Partnership for Sustainable Development Data (GPSDD), the UN-SPIDER Knowledge Portal to support disaster risk reduction; open-access satellite and remote sensing datasets, including the GEOSS Common Infrastructure (GCI), the GEO Human Planet Initiative, and the Global Human Settlement Layer (GHSL); emerging open-source data platforms to support policy and community decision-making, such as "PREPdata" for climate-related hazard analysis and "resilience.io" for informed scenario planning through integrated-systems modeling, as well as research initiatives including the Urban Climate Change Research Network (UCCRN);
- Appreciations of the value of EO data together with the need for open access and open source data products, models and platforms that promote data interoperability, knowledge sharing, partnership building and civic engagement, so as to: facilitate scaling, optimize data integrity, inform practitioners, and enable global support for community/grassroots initiatives.

METHODOLOGY

- Welcome and GEO introduction: the facilitators lead an icebreaker, and the session begins with a brief presentation from Steven Ramage on the role and activities of the intergovernmental Group on Earth Observations (GEO). **(10 minutes)**
- Panel 1: Presentations from European Commission, European Space Agency (ESA), and UNISDR on EO-support programmes from planetary, national and regional (SDGs, NDCs, Sendai Framework) to local levels (urban resilience, adaptation planning); lightning-round Q&A**. (20 minutes)**
- Panel 2: Presentations on case studies: resilience.io and Rezatec's "URGED" initiative for climate-derisked public realm/infrastructure asset management (with ESA and Scottish Canals); how EO data were communicated to multisectoral decision makers and applied to adaptation planning in Mozambique (CCAP); lightning-round Q&A. **(20 minutes)**
- Combined panelists' discussion with audience Q&A. **(35 minutes)**
- Wrap-up: concluding remarks from the facilitators and next steps. **(5 minutes)**

CONTRIBUTORS

Facilitators: *Steven Ramage, Head of external relations, Group on Earth Observations (GEO), Geneva, Switzerland*

Andrew Simmons, Director of Research, Resilience Brokers Programme, Ecological Sequestration Trust, London, UK

Panelist *Thomas Kemper, Scientific Officer, Joint Research Center, European Commission, Ispra, Italy*

Panelist *Marc Paganini, Technical Officer, Directorate of Earth Observation Programmes, European Space Agency (ESA), Paris, France*

Panelist *David Stevens, Head of Bonn Office, United Nations Office for Disaster Riske Reduction (UNISDR), Bonn, Germany*

Panelist *Philip Briscoe, Chief Operating Officer, Rezatec, Harwell, UK*

Panelist *Stephen Passmore, Technology Director and Resilience.io Platform Lead, Resilience Brokers Programme, Ecological Sequestration Trust, London, UK*

Panelist *Maria Olanda Bata, Chief of party, Mozambique Coastal Cities Adaptation Project, Maputo, Mozambique*

With thanks to: *Stelios Grafakos (IHS, Erasmus University), André Obregón (GEO), Laura Kavanaugh (UNFCCC), Monika Zimmermann (ICLEI), Christoph Aubrecht (ESA/World Bank).*

Further recommended reading:

"Earth observations in support of the 2030 Agenda for Sustainable Development" (GEO 2017): www.earthobservations.org/documents/publications/201703_geo_eo_for_2030_agenda.pdf
"Roadmap 2030: Financing and implementing the Global Goals in human settlements and city-regions" (Ecological Sequestration Trust): http://ecosequestrust.org/roadmap2030.pdf
"Satellite earth observations in support of the Sustainable Development Goals" (CEOS and ESA 2018) : http://eohandbook.com/sdg/
"d_city manifesto: Connecting global futures for environmental planning" (GEO): http://dcitynetwork.net/manifesto

SESSION DESCRIPTION

P2 Driving transformative climate change adaptation in cities through nature-based solutions

SPECIAL SUB-PLENARY

Date: Friday, April 27, 2018
Time: 09:00-10:30
Room: S30-32

Language: English
Contact: Holger Robrecht, ICLEI Europe
E-mail/web: resilient.cities@iclei.org

OBJECTIVE

By investing in nature-based solutions (NBS) and preserving urban and peri-urban biodiversity, cities can address the complexity of resilience (and its financing), through sustainable and integrated approaches that make sense. This special thematic sub-plenary discussion highlighted the multiple benefits of NBS for urban resilience and adaptation to climate change, whilst also illustrating its potential to transform urban spaces and planning processes in the interests of more livable and resilient cities. Panelists put focus on supportive framework conditions for cities on their work in implementing nature-based solutions to drive transformative adaptation.

METHODOLOGY

- Welcome and opening remarks by the facilitator. **(5 minutes)**
- Representatives from local governments share their experiences on policies shaped along nature-based solutions. **(3 x 5 minutes)**
- Keynotes: why nature-based solutions are crucial to resilience. **(2 x 10 minutes)**
- Panel discussion. **(4 x 10 minutes)**
- Wrap up and closing remarks. **(10 minutes)**

CONTRIBUTORS

Facilitator:

- *Holger Robrecht, Deputy Regional Director, ICLEI Europe, Freiburg, Germany*

Interviews: What cities need to implement nature-based solutions - Representatives from local governments introducing their adaptation policies which are based on nature-based solutions

- *Joshua Wycliffe, Permanent Secretary, Ministry of Local Government, Housing and Environment, Suva, Fiji*
- *Marie Angelique C. Go, Administrator, City Government of Zamboanga, Philippines*
- *Giovanni Fini, Coordinator, Environmental Quality Unit, City of Bologna, Italy; Co-Chair of EU Urban Agenda Partnership on Land-use and Nature-based solutions*

Special Messages: Why nature-based solutions are key to resilience?

- *Kobie Brand, Director, ICLEI Cities Biodiversity Center; Regional Director, ICLEI Africa, Cape Town, South Africa*

  Nature based solutions are more and more accepted as equally relevant to technical solutions, often being cheaper and offering more co-benefits. What cities can do and how ICLEI supports local action.

- *Jonathan Hughes, Global Councillor 2016-2020 of International Union for Conservation of Nature (IUCN) Edinburgh, UK; Chair, IUCN Urban Alliance* on behalf of Zhang Xinsheng, President of IUCN

  Discussed the varying opportunities and (co-)benefits of nature-based solutions for building climate resilience in cities and provide the audience with a unique opportunity to learn from IUCN's leading efforts to ensure nature-based solutions worldwide.

Panel discussion: Multiple opportunities for nature-based solutions to transform cities into resilient communities

- *Matthias Braubach, Technical Officer, World Health Organization (WHO) European Centre for Environment and Health, Bonn, Germany*

  Serving the nature, serving the people: How NBS are supporting urban health and livable communities. What international organizations like WHO can contribute.

- *Christos Fragakis, Deputy Head of Unit, Sustainable Management of Natural Resources, DG Research and Innovation, Brussels, Belgium*

  Discussing how nature-based solutions could become innovative means for inspiring urban transformation and healthy and sustainable living

- *Gerry Muscat, Head of Urban Development Division, European Investment Bank, Luxembourg*

  Money makes the world go around … or can help transforming cities. How the Investment Banks like the EIB can support nature based solutions.

- *Giovanni Fini, Coordinator, Environmental Quality Unit, City of Bologna, Italy; Co-Chair of EU Urban Agenda Partnership on Land-use and Nature-based solutions*

  How can cities be included in a multilevel governance structure for nature-based solutions? The example of the EU Urban Agenda partnership on Nature-based solutions.

SESSION DESCRIPTION

C1 Building resilience in the face of limited resources: The case of Mozambican coastal cities

Cities in Focus

Date: Friday, 27 April, 2018
Time: 09:00-10:30
Rooms: S29-31

Language: English
Contact: Maria Olanda Bata
Email/web: mobata@ccap-mz.org
Organized by: USAID Coastal City Adaptation

OBJECTIVE

This session explored the tools and approaches of coastal cities in Mozambique to enhance resilience in a context of limited resources and funding. The Mayors of Pemba and Quelimane and senior municipal managers examined the context and realities of their cities and how they address the underlying risk factors and stresses posed by informal settlements, changes in urban land use, ecosystem degradation to build urban resilience, which is relevant to other low-income coastal cities. The session highlighted the tools that have provided the most benefit at the least cost and can be applied for use in similar contexts globally. The session also explored how the tools developed at local level are being taken up and scaled for use at the national level. The session continued with the relationships with donor-funded programming – specifically with USAID Costal Cities Adaptation Program (CCAP) – and how partnerships can be made to support municipal-driven resilience agendas. This session was complemented by an EXPO event to further explore the resilience building tools and have an interactive dialogue with interested stakeholders.

OUTCOMES

Participants did:

- Understand how resource constrained coastal cities perceive the impacts of climate change and which tools, approaches, and methodologies they use to address risks and build resilience;
- Understand how these tools, approaches, and methodologies are tested, refined, and implemented at the city level and how they are being taken up at scale to national level implementation via cities;
- Identify existing opportunities to leverage adaptation and resilience building resources for cities in similar contexts to Pemba and Quelimane.

METHODOLOGY

- Intro: The facilitator opened the session, present the panellists and introduce the project, as well as the climate change risks and challenges faced in Mozambique **(10 min**).
- Panel of cities mayors and senior managers responded to guiding questions and present on the impacts and challenges which climate change poses for their cities and how they are turning them into opportunities and results for building resilience. The session also explored and highlighted the tools and approaches the cities are using to foster adaptation, focusing on:

- Resilient housing construction – city officials will discuss how resilient housing techniques and procedures are helping enhance vulnerable groups perception of climate risk and highlight the need to invest and promoting resilience thinking in changing environment;
- Land use management – will present and discuss how risk and vulnerability maps, one of the tools developed and then embedded in municipal cadastres, is improving the management of urban areas; informing decisions regarding settlements, and guiding overall urban development;
- Ecosystem recovery – the panel will explore how active and passive restoration of mangrove is helping improve resilience by mitigating floods caused by tide and rainfall and protecting the natural ecosystem; **(3 x 10 min)**

- Externalities and response. Panelists highlighted the adaptive management, stepwise approach, and developing bottom-up and responsive adaptation and resilience building tools to help municipalities improve land management, strengthen cities' capacity to build resilience, and inform the national policy development **(15 min)**.
- Q&A and conclusion **(35 min).**

Guiding questions:

1. What are the underlying risk factors threating your resilience building efforts? What is the response of your city to address them?
2. What lessons would you share for resilience building in resource limited cities?
3. What are the challenges and opportunities that emerged when your city embarked on adaptation and resilience building? What will you continue to do to build resilience in your city?

CONTRIBUTORS

Facilitator	*Brian App, Director, East and Southern Africa, Chemonics International, Washington D.C., USA*
Panelist	*Manuel de Araujo, Mayor, Quelimane Municipality, Quelimane, Mozambique; Co-Chair ICLEI Resilient Cities Portfolio*
Panelist	*Tagir Carimo, Mayor, Pemba Municipality, Pemba, Mozambique*
Panelist	*Eduardo Nguenha, Secretary General, Mozambique Nacional Association of Municipalities, Maputo, Mozambique*
Panelist	*Maria Olanda Bata, Chief of Party, Mozambique Coastal City Adaption Project, Maputo, Mozambique*

Further recommended reading:

USAID: https://www.usaid.gov/

SESSION DESCRIPTION

C2 Inclusive and participatory disaster risk management in cities

- Increasing resilience by unlocking the resources of the non-organized/self-organized responders

Round Table Discussion

Date: Friday, 27 April, 2018
Time: 09:00-10:30
Rooms: S34-35

Language: English
Contact: Magnus Qvant
E-mail/web: info@resilientregions.org
www.resilientregions.org
Organized by: Resilient Regions Association

OBJECTIVE

Traditionally disasters and shocks of different kinds are handled by the emergency services. When the most severe threat is taken care of, it is up to the community to deal with the aftermath. The resilience to threats of tomorrow is increasingly going to depend on the resilience of the local communities.

When different crises and shocks occur, citizens and self-organized groups gather. Via social media and other tools, allowing for fast sharing of information, the first respondents are often “the general public” first at the scene. The self-organized citizens usually take on the tasks related to the consequences of the impacts e.g. organizing accommodation for displaced people, helping out with logistics etc.

Self-organized and volunteers generate great possibilities but also challenges for the crisis management team.

How can we better, in a more structured way use the willingness and preparedness among citizens?

How can we better identify, and use these volunteers and organized and non-organized responders to build a better and more resilient community?

The session firstly presented cases where self-organized citizens contribute to manage the crises and the aftermath. Thereafter, a round table discussion took place, allowing everyone to actively take part and share their knowledge and their ideas.

OUTCOMES

Participants left the session with:

- Increased awareness of the dilemmas and possibilities of self-organized citizens
- Insights on how to better plan for citizen involvement
- Insights and knowledge exchange on capacity building for more resilient communities

METHODOLOGY

- The facilitator introduced the aims and format of the session. (**5 minutes**)
- Four presentations introduced and outlined the topic for the round table discussion. (**30 minutes**)
- Facilitated round table discussion. (**40 minutes**)
- Round up and conclusions. (**15 minutes**)

CONTRIBUTORS

Facilitator	*Magnus Qvant, Secretary General, Resilient Regions Association, Malmö, Sweden*
Speaker	*Per Björkman, Senior Strategist, Fire and Rescue Service, Lund, Sweden*
Speaker	*Björn Klüver, Programme Specialist Asia, Disaster Risk Management, Plan International, Hamburg, Germany.*
Speaker	*Bernard Faustino Dy, Mayor, Cauayan City, Cauayan, Philippines*
Speaker	*Eddie Wasswa Jjemba, Urban Resilience Advisor, Red Cross Red Crescent Climate Centre, The Hague, The Netherlands*

SESSION DESCRIPTION

D1 Front-line islands and cities: Building resilient island communities

Panel

Date: Friday, 27th April, 2018
Time: 11.00-12.30
Rooms: S01-02

Language: English
Contact: Steve Gawler
E-mail/web: steve.gawler@iclei.org
Organized by: ICLEI Oceania

OBJECTIVE

Islands are at the front-line of climate change. Their towns and cities are growing rapidly, experiencing many of the development pressures of other larger cities. This is compounded by their extreme vulnerability to climate change. Island cities are also particularly significant as they are at the interface of human settlements and healthy oceans. At COP23 in Bonn last November the Front-Line Cities and Islands initiative was launched, attracting great interest. Front-Line aims to connect island cities and communities, within their own regions and with cities from other parts of the world, to form strategic and learning partnerships and to assist islands to fast-track sustainable urban development.

This session aimed to give the early adopters of the Front-Line initiative an opportunity to present some of their initial experience and thinking about how to optimize city – island exchange, the most crucial issues confronting them, and to encourage others to join the movement. It also explored two "entry points" to island resilience – Disaster Risk Reduction (DRR) and Ecosystem-based Adaptation (EbA) as these are being applied in the South-West Pacific.

OUTCOMES

Participants gained a better understanding of:

- The most pressing urban challenges facing islands and the extent to which these are mirrored in other geographic contexts for mutual learning
- The efficacy of DRR and EbA as entry points for engaging island cities in resilient and sustainable development
- How other cities, agencies and funders can provide most effective support

METHODOLOGY

- Introduction. **(5 minutes)**
- Representatives from the Fiji Government and three cities will give short bursts on their most pressing urban development challenges, opportunity for questions after each burst. **(4 x 10 minutes)**
- Two case studies were presented:
  - Ecosystem-based Adaptation in Port Vila (University of Wellington). **(20 minutes)**
  - Disaster Risk Reduction in Honiara, Solomon Islands (ICLEI). **(10 minutes)**
- UNISDR invited to present on the Making Cities Resilient Campaign, its application for small islands
- Plenary discussion on opportunities for twinning of cities and support from the international community

CONTRIBUTORS

Facilitator	*Steve Gawler, Regional Director, ICLEI Oceania, Melbourne, Australia*
Panelist	*Joshua Wycliffe, Permanent Secretary Ministry of Local Government, Housing and Environment, Suva, Fiji*
Panelist	*Sandeep Kuar Singh, Director, Ministry of Local Government, Housing and Environment, Suva, Fiji*
Panelist	*Jone Nakauvadra, CEO, Lautoka City Council, Lautoka, Fiji*
Panelist	*Premila Chandra, Senior Health Officer, Nadi City Council, Nadi, Fiji*
Panelist	*Asaeli Tokalau, Director, Administration and Operations, Suva City Council, Suva, Fiji*
Panelist	*Paul Blaschke, Research Fellow, Victoria University of Wellington, Wellington, New Zealand*
Panelist	*Herman Timmermans, Project Manager, Pacific Regional Environment Programme, Suva, Fiji*
Panelist	*David Stevens, Head of Office, United Nations Office for Disaster Risk Reduction (UNISDR), Bonn, Germany (invited)*

Further recommended reading:

Pacific DDR Workshop: http://oceania.iclei.org/newsdetails/article/port-vila-committed-to-compact-of-mayor.html

ICLEI Oceania program highlights: http://oceania.iclei.org/local-action/programs.html

SESSION DESCRIPTION

D2 Unleashing and enhancing local capacity through university and local government partnerships: International applicability of the EPIC, GCSO and Mistra Urban Futures Models

Workshop

Date: Friday, 27 April 2018
Time: 11:00-12:30
Rooms: S34-35

Language: English
Contact: Anthony Socci
E-mail/web: socci.anthony@epa.gov
Organized by: EPIC-N Partners and GCSO

OBJECTIVE

The Educational Partnerships for Innovation in Communities Network (EPIC-N) systematically matches city and local government needs with the innovation of students and academics to address a broad spectrum of sustainability related issues, with lasting and sustainable impacts for all involved. Colleges and universities paired with local governments can be a powerful force in making cities more sustainable and more resilient, connecting students and faculty to real-world projects that address the pressing needs of local municipalities who often have little or no additional capacity to adequately address the complex challenges before them.

Based on nearly a decade of effective and productive university/local government collaborations in various parts of the U.S., in 2017 the EPIC partners embarked on an effort to introduce the EPIC model to local governments and universities internationally. Although EPIC-N is a widely-recognized leader in helping cities become more resilient, there are other models for college/university-city partnerships that assist local governments in tackling their sustainability problems, including the Global Consortium for Sustainability Outcomes (GCSO) and Mistra Urban Futures.

The objectives of this workshop were to:

1. Describe the origin, make-up, attributes and differences among EPIC-N and similar partnerships;
2. Explain how these models enhance and/or unleash untapped local capacity to tackle local issues;
3. Present examples of how EPIC-style and related partnerships are presently being used to enhance local government capacity to address real issues. The examples will be mainly drawn from new and on-going partnerships in Lusaka, Zambia, Durban, South Africa and Nairobi, Kenya; Apache Junction, Arizona (USA); Karlsruhe, Germany; Tempe, Arizona; Mexico City, Mexico and Gothenburg, Sweden.
4. Foster a conversation among the presenters and the audience.

OUTCOMES

Participants left the workshop session with:

- A better understanding of how EPIC-style partnerships work to enhance local government capacity to tackle issues of resilience, sustainability, adaptation and development.
- How EPIC and similar college/university-city partnerships provide students with a) real life experiences working with local governments and communities and b) skills they can apply upon graduation to help improve community well-being.
- Concrete examples of the types of collaborations possible, along with outcomes, drawn from various parts of the world.
- A sense of the various models' applicability outside of the U.S.
- Knowledge on how to participate in an upcoming EPIC training.

METHODOLOGY

- The Facilitators presented a brief overview of the workshop and its objectives, and introduced the workshop participants. **(10 minutes)**
- Examples of implementations of the EPIC, GCSO and Mistra Urban Futures models and other models, along with outcomes, in various parts of the U.S. will include Durban South Africa, Nairobi, Kenya, Lusaka, Zambia, Kisumu City, Kenya, Cape Town, South Africa and Tempe, USA. **(60 minutes)**
- Open discussion among the audience and panelists, followed by concluding remarks. **(50 minutes)**

CONTRIBUTORS

Facilitators	*Anthony Socci, Senior Lead on International Resilience Climate Policy, US Environmental Protection Agency, Washington, D.C., USA*
	Rob Melnick, Executive Director, Global Institute of Sustainability, Arizona State University, Tempe, USA
Speaker	*Jessica Barlow, Vice President, EPIC Network; Director of the SAGE Project, San Diego State University, San Diego, USA*
Speaker	*David Simon, Director, Mistra Urban Futures, Chalmers University of Technology, Gothenburg, Sweden*
Speaker	*Gilbert Siame, Coordinator, EPIC Africa; Researcher, University of Zambia, Lusaka, Zambia* (video intervention)
Speaker	*Sean O'Donoghue, Co-Coordinator, EPIC Africa; Senior Manager, Climate Protection Branch, Durban, South Africa* (video Intervention)
Speaker	*Edna Odhiambo, Tutorial Fellow, School of Law, University of Nairobi, Nairobi, Kenya* (video intervention)

Further recommended reading:

EPIC-N model: http://www.epicn.org/

Global Consortium for Sustainability Outcomes: https://sustainabilityoutcomes.org/

SESSION DESCRIPTION

D3 Standardized support tools for urban resilience, integrating resilience planning into local decision-making

Roundtable Discussion

Date: Friday, 27 April, 2018
Time: 11:00-12:30
Rooms: S29-31

Language: English
Contact: Peter Bosch
E-mail/web: peter.bosch@tno.nl, www.resin-cities.eu
Organized by: RESIN

OBJECTIVE

In this roundtable discussion we investigated the usefulness of standardized approaches in a climate resilience planning process. We discussed the advantages and challenges of producing support tools in a co-creational environment with the aim of producing widely applicable results (EU and globally). The discussion draw on experiences in European cities, such as Bratislava and Manchester, and include demonstrations of tools co-developed with these cities.

OUTCOMES

The audience gained a better understanding of recent developments in standardizing (parts of) the process of creating an adaptation strategy, tools that have been developed to support standardization and relevant developments in international standardization organizations.

METHODOLOGY

The facilitator introduced to the RESIN project, of which the experiences on the need for and potential of standardized approaches in a climate resilience planning process formed the basis of the session **(5 min)**. After a presentation by the city of Bratislava on the challenges of integrating climate adaptation into the work of other departments and of the different independent boroughs of Bratislava **(10 min)**, we dealt with the issue of systematically taking stakeholders along the path of creating a risk assessment, while at the same time using a new methodology. To do so, the Fraunhofer Institute presented its standardized approach to making a vulnerability and risk assessment and illustrated how this was effectively used to create impact chain diagrams with stakeholders and to arrive at systematically mapped risk indicators and indices in Bratislava and Manchester **(10 Min)**.

These inputs informed a discussion of the advantages of standardized step-wise approaches for resilience building at the local level. Cities from the audience were invited to share their experiences of using such approaches with a particular focus on challenges and needs on the one hand, and on positive results on the other. The focus then moved to the notion of developing a standardized approach to the whole process of creating an adaptation strategy. Greater Manchester presented its experience working with various administrative bodies within its territory and with infrastructure managers to apply tools supporting a standardized process of adaptation planning, specifically focusing on RESIN's co-creation process **(10 min)**. TNO gave insights into the web-based tool (the e-Guide) they have developed to support this process **(5 min)**. Tecnalia shared insights on working closely with cities in co-creation activities for resilience in collaboration with ICLEI - Local Governments for Sustainability and hinting on relevant work from other projects like RAMSES and/or Smart Mature Resilience. The main purpose of this contribution was to emphasize on the importance of co-creation;

when cities are involved in the process of co-producing climate adaptation and resilience support tools, they are also better prepared to adopt and use them to inform their policy making.

The discussion then touched upon those aspects of resilience and climate adaptation building processes can be standardized into general process guidance. Participants were invited to put forward examples of adaptation processes where standardization seems impossible, e.g. because they are so deeply embedded in other specific policies/developments, or because they are highly iterative. In addition, the benefits of adopting a co-creational approach and the "golden rules" for successful co-creation were discussed with the audience. In this way the audience gained an understanding on how to successfully co-develop decision-making support tools for climate adaptation with cities and practitioners, combining findings developed by researchers with integrated management methodologies for climate adaptation. **(30 min)**

In the conclusion we aimed to highlight the issues that have to be taken into account in standardizing urban climate adaptation processes. This was carried forward as part of national and international discussions in standardization in urban climate adaptation **(5 min).**

Guiding questions:

1. What is the importance of standardized tools for supporting local decision making on resilience?
2. What is the current experience of cities with standardized tools for resilience planning?
3. Can the support provided by the RESIN tools in these cities be easily replicated in other cities around the globe?
4. What are the limitations of standardized approaches to local resilience? How should these be taken into account in the further standardization of support tools for cities?
5. How can cities set up a co-creation process for acquiring resilience knowledge and who should they involve in this process?

CONTRIBUTORS

Facilitator	*Peter Bosch, RESIN Coordinator, TNO, Utrecht, The Netherlands*
Panelist	*Eva Streberová, Climate Adaptation Expert, City of Bratislava, Bratislava, Slovakia*
Panelist	*Matt Ellis, Climate Resilience Officer, Greater Manchester Combined Authority, Bristol, UK*
Panelist	*Albert Nieuwenhuijs, Researcher, TNO, Utrecht, The Netherlands*
Panelist	*Daniel Lückerath, Researcher, Fraunhofer Institute for Intelligent Analysis and Information Systems, Sankt Augustin, Germany*
Panelist	*Efrén Feliu, Climate Change Manager, Tecnalia, Derio, Spain*

Further recommended reading

RESIN website: http://www.resin-cities.eu

SESSION DESCRIPTION

D4 The need for a holistic approach to achieve sustainable food systems

Panel

Date: Thursday, 27 April 2018
Time: 11:00 – 12:30
Rooms: S25-26

Language: English
Contact: Marina Bortoletti, UN Environment
E-mail/web: marina.bortoletti@unep.org
Organized by: UN Environment, Hivos and Biovision

OBJECTIVE

Food systems need to function within the context of a finite and shrinking resource base. Currently collaboration across the food system is rare with silo-thinking predominant and insufficient interconnectivity among a variety of food system's issues and impacts such as food production, environmental degradation, diets, nutrition, poverty, education, trade, etc. As a result of incoherent or inadequate policy planning, many food systems are exploiting more resources, externalizing costs to the environment or vulnerable communities, producing inefficiencies and mainly focusing on end-of-pipe solutions.

Based on that UN Environment, in partnership with Hivos and Biovision, developed a proposal for a Transformative Framework for Sustainable Food Systems (or SFS Transformative Framework), which proposes key policy-levers, methodologies, tools and collaborative activities across the food system, exploring how a transition to sustainable food systems could be stimulated by local and national governments. The objective of this initiative is to engage governments and other actors (industry, civil society, academy, etc.) towards building consensus concerning the urgent need for the adoption of a more holistic approach and integrated policy making in order to achieve sustainable food systems. This activity happens in the context of the "10 Years Framework of Programmes for Sustainable Consumption and Production (SCP)", a global framework for action to accelerate the shift towards SCP in both developed and developing countries.

In this session, facilitated by Hivos, UN Environment gave a presentation of the SFS Transformative Framework. After that, key experts and partners that work at city level and from different sectors provided comments on the proposed Framework. The plenary discussion focused on receiving feedback from the audience in relation to the SFS Transformative Framework and on how a more holistic approach to food systems can be scaled up and replicated.

OUTCOMES

Participants left the session with:

- A good understanding on how a food system's approach can help local governments to improve their food systems' policies planning and implementation
- Examples of key elements and actions towards a food system's approach
- How local government and other partners can engage in the initiative

METHODOLOGY

- The facilitator provided welcome remarks and also introduced the audience about the context of the sessions' discussion: the need for the uptake of a more food system's approach. **(5 minutes)**
- Presentation and comments on the proposal for a Transformative Framework of Actions for Sustainable Food Systems, and how this Framework can support local governments to more effectively assess their food system's and deliver sustainable food system's polices. **(30 minutes)**
- Video intervention and comments. **(10 minutes)**
- General discussion with the audience to address questions like:
    - is this Framework practical?
    - what is missing?
    - what are the gaps for the adoption of a more holistic approach? **(40 minutes)**
- Wrap up and closing remarks **(5 minutes)**

CONTRIBUTORS

Facilitator	*Nout van der Vaart, Advocacy Officer Sustainable Food, Hivos, The Hague, The Netherlands*
Panelist	*James Lomax, Programme Officer, Food System and Agriculture, UN Environment, Paris, France*
Panelist	*Guido Santini, Program Coordinator, Food for the Cities, Food and Agriculture Organization of the United Nations, Rome, Italy*
Panelist	*Tori Okner, Head of Strategies and Partnerships, ICLEI World Secretariat, Bonn, Germany*
Panelist	*Marielle Dubbeling, Director, RUAF Foundation, Leusden, The Netherlands (video intervention)*
Panelist	*Saul S. Morris, Director, Programme Services, Global Alliance for Improved Nutrition, London, UK*

Further recommended reading

Sustainable Food System (SFS) Programme: http://web.unep.org/10yfp/programmes/sustainable-food-systems-programme

SESSION DESCRIPTION

D5 Bringing the insurance industry and cities together: Innovations and partnerships to drive urban resilience and sustainability

Panel

Date: Friday, April 27, 2018
Time: 11:00-12:30
Rooms: S30-32

Language: English
Contact: Olivia Fabry / Evgenia Mitroliou
E-mail/web: olivia.fabry@un.org / resilient.cities@iclei.org
Organized by: UN Environment's PSI & ICLEI

OBJECTIVE

The session discussed innovations in the insurance industry across its risk management, insurance and investment activities, such as the use of insurance loss data for urban development planning, risk analytics, parametric or index-based insurance, catastrophe and resilience bonds, social impact bonds, and green bonds.

It also featured key resilience and sustainability challenges and opportunities across cities in different geographies, and partnerships between insurers and local governments.

Panelists shared their expertise and views on how such innovations and partnerships evolved (update since the 1st Insurance & Cities Summit at Resilient Cities 2017); key challenges and lessons learned; and opportunities to bring these solutions to scale.

OUTCOMES

This session:

- Raised awareness of insurance industry innovations across risk management, insurance and investment that help build city resilience and sustainability;
- Provided examples of key resilience and sustainability issues that local governments and insurers can address collaboratively;
- Presented examples of partnerships for resilience and sustainability between the insurance industry and local governments and how these can be promoted in other geographies.

METHODOLOGY

- The facilitator introduced himself and the panelists, and the session aims. **(5 minutes)**
- Each speaker was given time to describe their work and the facilitator will ask questions along the way in order to have an interactive discussion. **(50 minutes)**
- The facilitator managed questions from the audience. **(20 minutes)**
- The facilitator gave each panelist an opportunity for final thoughts. **(10 minutes)**
- The facilitator gave closing remarks. **(5 minutes)**

Guiding questions:

1. What innovations in the insurance industry, across its risk management, insurance and investment activities, have contributed, or have the potential to contribute, to building resilient and sustainable cities?
2. Are local governments aware of these contributions and innovations by the insurance industry? Is the industry actively reaching out to local governments? Is there enough communication between insurers and local governments?
3. What are examples of key resilience and sustainability issues across cities in different geographies?
4. What are the motivations for insurers and local governments to work together?
5. What are elements of successful partnerships between insurers and local governments? How can such partnerships be deepened and brought to scale?

CONTRIBUTORS

Facilitator	*Butch Bacani, Programme Leader, UN Environment's Principles for Sustainable Insurance Initiative, Geneva, Switzerland*
Panelist	*Kobie Brand, Regional Director, ICLEI Africa, Cape Town, South Africa*
Panelist	*Thomas Arnoldt, Senior Manager, Structuring, Munich Re, Munich, Germany*
Panelist	*Mia Ebeltoft, Deputy Director, Non-Life, Finance Norway, Oslo, Norway*
Panelist	*Ole Jørgen Grann, Climate Change Special Advisor, Transport, Planning and Environment Division, The Norwegian Association of Local & Regional Authorities, Oslo, Norway*
Panelist	*Ermin Lucino, City Planner, City of Santa Rosa, Philippines*

Further recommended reading

Press release of UN Environment's Principles for Sustainable Insurance Initiative and ICLEI (May 2017):
"United Nations-backed insurance industry initiative and network of local governments to create "Insurance Development Goals for Cities": www.unepfi.org/psi/wp-content/uploads/2017/05/Bonn-Ambition-Press-release-final.pdf

SESSION DESCRIPTION

E1 ICLEI Oceania and sub-national governments collaborating to accelerate climate action

Panel

Date: Friday, 27 April, 2018
Time: 14.30–16.00
Rooms: S01-02

Language: English
Contact: Bernie Cotter
E-mail/web: Bernie.cotter@iclei.org
Organized by: ICLEI Oceania

OBJECTIVE

Since the Paris Agreement, cities around the world are mobilizing to take accelerated action to tackle climate change. And so are subnational states and regions. The sweet spot occurs when these two levels of government are able to join forces to align their efforts and give clear and powerful leadership to their communities. This session shows how several sub-national governments in Australia and the Global Covenant of Mayors for Climate and Energy are strongly aligning to provide a framework for measureable action to meet community and legislative targets.

The session presented a brief case study of the State of Victoria's climate change commitments, including the Take 2 Pledge Program and recently adopted Climate Change Act. The Take 2 Pledge program isn't just for local government. It is also a program for government operations, businesses and the community and has already attracted over 8,500 pledge participants. A brief case study from the Australian Capital Territory (Canberra) will also be presented to show how a "City-State" can drive zero net emissions.

The panel also considered:

- how the Victorian sub-regional "Climate Change Alliance" clusters are providing the engine room for climate innovation with members councils.
- encouraging adoption of science-based target setting at the local level to complement state or national targets

OUTCOMES

Participants gained a greater understanding of:

- how the framework of the Global Covenant can increase the effectiveness alignment subnational programs
- how comprehensive climate change programs when underpinned by robust legislation can drive whole of community change and achievement of ambitious targets
- how state and local governments can align their climate targets and action to contribute to achievement of the Paris Climate Agreement:
- how encouraging the adoption of science-based target setting can complement state or national targets

METHODOLOGY

- Introduction and welcome remarks by the facilitator. **(10 minutes)**
- Panel discussions. **(3 x 10 minutes)**
- Questions by and discussion with the audience. **(30 minutes)**
- Wrap up and closing remarks. **(10 minutes)**

CONTRIBUTORS

Facilitator	*Steve Gawler, Regional Director, ICLEI Oceania, Melbourne, Australia*
Panelist	*Stephanie Ziersch, Director, Communities and Climate Change, Sustainability Victoria, Melbourne, Australia*
Panelist	*Geoffrey Rutledge, Deputy Director-General, Sustainability and the Built Environment, Australian Capital Territory Government, Canberra, Australia*
Panelist	*Cesar Carreño, Senior Project Officer, Low Carbon Team, ICLEI World Secretariat, Bonn, Germany*
Panelist	*Alexi Lynch, Business Manager, Ironbark Sustainability, Melbourne, Australia*

Further recommended reading

IPCC Fifth Assessment Report (AR5): https://www.ipcc.ch/report/ar5/

Johannesburg GDS 2040: http://www.joburg.org.za/gds2040/gds2040_strategy.php

SESSION DESCRIPTION

E2 CitiesIPCC: Science for effective city climate action and resilience building

Facilitated Discussion

Date: Friday, 27 April, 2018
Time: 14:30-16:00
Rooms: S34-35

Language: English
Contact: Julie Greenwalt
E-mail/web: jgreenwalt@citiesalliance.org
www.citiesalliance.org
Organized by: Cities Alliance

OBJECTIVE

This facilitated discussion focused on presenting the outcomes of the first of its kind CitiesIPCC Conference held in Edmonton, Canada in March 2018 that focused on science for cities and climate change. The conference's key contributors introduced science, policy and practice gaps, as well as co-produced knowledge emerging from the conference and discuss scientific work on mitigation-adaptation and resilience. The discussion also touched upon the science-policy interface for urban policymakers and practitioners working on resilience. Speakers included Scientific Steering Committee members and CitiesIPCC Conference partner organizations.

OUTCOMES

- Participants familiarized themselves with the outcomes of CitiesIPCC Conference and its co-produced new knowledge, understood its linkages for urban practice and policy, engaged in the discussion on science and policy with regard to climate change and resilience.
- Audience and speakers learned and got inspired from mutual critical discussion.

METHODOLOGY

- Introduction and CitiesIPCC video. **(5 minutes)**
- Overview of the CitiesIPCC conference and outcomes. **(15 minutes)**
- Facilitated panel discussion by moderator. **(20 minutes)**
- Questions and answers from the audience. **(15 minutes)**
- Concluding remarks. **(5 minutes)**

Guiding questions:

1. How will the outcomes of the CitiesIPCC conference be utilized by researchers, practitioners and policy-makers?
2. What needs to happen now to further research agenda on cities and climate change?
3. How will the outcomes of the conference be utilized in the resilient cities agenda?

CONTRIBUTORS

Facilitators	*Julie Greenwalt, Urban Environment Specialist, Cities Alliance, Brussels, Belgium*
	Anthony Socci, Senior Lead on International Resilience & Adaptation Policy, US Environmental Protection Agency, Washington D.C., USA
Panelist	*Maryke van Staden, Director, Carbonn Center; Program Manager, Low Carbon Cities, ICLEI World Secretariat, Bonn, Germany*
Panelist	*David Dodman, Director, Human Settlements, International Institute for Environment and Development (IIED), London, UK*
Panelist	*Lykke Leonardsen, Head of Program, Resilient and Sustainable City Solutions, City of Copenhagen, Copenhagen, Denmark*

Further recommended reading

TOWARDS A NOVEL ASSESSMENT FRAMEWORK FOR CITIES AND CLIMATE CHANGE *William Solecki, Cynthia Rosenzweig, Debra Roberts, Seth Schultz*

URBAN DATA SCIENCE FOR GLOBAL CLIMATE SOLUTIONS *Felix Creutzig, Steffen Lohrey, Xuemei Bai, Richard Dawson, Shobhakar Dhakal, William Lamb, Timon McPhearson, Jan Minx, Esteban Munoz, Brenna Walsh*

RESPONDING TO CLIMATE CHANGE IN CITIES AND IN THEIR INFORMAL SETTLEMENTS AND ECONOMIES *David Satterthwaite, Diane Archer, Sarah Colenbrander, David Dodman, Jorgelina Hardoy and Sheela Patel*

FINANCING LOW-CARBON, CLIMATE-RESILIENT CITIES *Sarah Colenbrander, Michael Lindfield, Joseph Lufkin and Nastassja Quijano.*

URBAN CLIMATE CHANGE SCIENCE, IMPACTS AND VULNERABILITIES: STATE-OF-THE-ART FINDINGS AND KEY RESEARCH GAPS *Cynthia Rosenzweig, William Solecki, Patricia Romero-Lankao, Shagun Mehrotra, Shobhakar Dhakal, Somayya Ali Ibrahim*

SESSION DESCRIPTION

E3 Preserving cultural and natural heritage for enhanced urban resilience

Presentations

Date: Friday, 27 April, 2018
Time: 14:30-16:00
Rooms: S29-31

Language: English
ICLEI contact: Matteo Bizzotto
E-mail/web: resilient.cities@iclei.org
Organized by: ICLEI World Secretariat

OBJECTIVE

"The city, however, does not tell its past, but contains it like the lines of a hand"- Italo Calvino

Preserving cultural and natural heritage is a challenge for most growing cities of the world, but a necessary effort which could allow them to maintain their uniqueness and quality of life, while simultaneously enhance their climate resilience. The momentum of cities, often generated by citizens, to preserve historic heritage sites could also be a powerful force that drives nature-based, climate-resilient and sustainable solutions for urban environments of tomorrow that incorporate the wisdom of past urban planning.

This session started with a presentation by the City of Bologna, Italy, which is planning to transform its historic center by greening public spaces, improving sustainable mobility and prioritizing the establishment of creative and sustainable socio-economic districts. Next, the City of Guimarães, Portugal, presented its vision "*Guimarães Mais Verde*" ("*more than green*"), which incorporates activities and policies that construct a biocultural mosaic, singular and unique to the City. Then the attention shifted to Asian cities, many of which are under an unprecedented urbanization pressure that often leads to uncontrolled development. From Zamboanga City, Philippines, we heard how the local government is approaching protecting key biodiversity areas which, with their essential role in ecosystem services, are the basis of the philippino natural heritage and life. Lastly, the "heritage journey" ended in Mexico, where, due to large-scale nation-wide privatization, local governments have limited influence over surrounding ecosystems and are unable to effectively protect and manage natural heritage. The presentation argued for the creation of Mexico's Public Lands Initiative (MPLI), which has the potential to advance urban and regional sustainability and socioecological resilience by drawing novel institutional, financial, and socio-cultural linkages that engage citizens and local governments with their regional landscapes and ecosystems.

OUTCOMES

- Participants were exposed to the benefits of preserving cultural and natural heritage in urban environments and ways of mainstreaming such activities in urban planning;
- They gained insights into the complex relationship between land ownership, conservation and urban planning and how this connects to urban resilience and sustainability efforts; and
- They were inspired by successful examples of natural and cultural heritage protection and citizens' engagement.

METHODOLOGY

- The facilitator provided an overall introduction to the session and contributors. **(5 minutes)**
- Each presentation was allotted 10 minutes. **(4 x 10 minutes)**
- The facilitator managed questions and answers. **(40 minutes)**
- Closing remarks by the facilitator. **(5 minutes)**

CONTRIBUTORS

Facilitator — *Nealla Frederick, Climate Adaptation Specialist, The Nature Conservancy, St. George's, Grenada*

Presenter — *Giovanni Fini, Coordinator, Environmental Quality Unit, Bologna City, Bologna, Italy*

Resilience of historic city centers to cope with climate change

By adopting Local Adaptation Plan on Climate Change, the City of Bologna has translated into action its political commitment to address urban sustainability and resilience. Thanks to its participation as leading partner in ROCK H2020 project, the city is now testing actions in a pilot area and also supporting a systemic transformation, for new "shared responsibility" towards heritage. Adopting a multi-level collaborative and systemic approach that boost the exploitation of cultural heritage as a powerful environmental catalyst for regeneration, sustainable development, and economic growth, ROCK will produce outputs related to three main domain of innovation: organizational, technological, social.

Presenter — *Jorge Cristino, Deputy Mayor's Aide, Guimarães City, Guimarães, Portugal; and*

Isabel Loureiro, Executive Coordinator for Guimarães Structure Mission EGC 2020, Guimarães City, Guimarães, Portugal

Guimarães 2030 sustainable plan: How can a city become greener?

Guimarães, with 900 years of history, is known as the "Birthplace of the Portuguese Nationality" and World UNESCO Heritage. The city strives to honor its proud heritage by becoming Portugal's most sustainable and resilient city in the future, after been European Capital of Culture 2012, European City of Sport 2013. Its vision is to be 'more than green'. To this end, over the past 30 years, our environmental governance has aimed at becoming a model of urban development characterized by difference, boldness and innovation.

Presenter — *Eduardo M. Bisquera Jr., Assistant City Environment and Natural Resources Officer, City Government of Zamboanga, Zamboanga, Philippines*

Building the resilience of key biodiversity areas at the local level: Experiences from Zamboanga City, Philippines

Biodiversity and ecosystem services are co-dependent, and have a direct impact on all our lives. Simply put, reduced biodiversity means local food supplies and fresh water are at risk and our natural heritage becomes more vulnerable to disasters and the stresses of climate change. Local governments play a key role in protecting and preserving biodiversity. Zamboanga's mission is to sustain the protection, conservation and development of biodiversity through participative and pro-active governance focused on community-based approaches such as increasing knowledge and competencies of stakeholders, building partnerships with adjacent local governments and the private sector and working with citizens to shift the culture towards a positive view on biodiversity.

Presenter *Paulo Quadri Barba, Phd Candidate, University of California, Santa Cruz, USA*

Conservation for cities and cities for conservation: Restoring Mexico's public lands

As economic and political powerhouses, cities have the capacity to influence and transform land use and socioecological landscapes well beyond their political boundaries. In Mexico, however, city governments remain institutionally disarticulated from their surrounding ecosystems and landscapes. Throughout the XX Century, Mexico almost entirely lost its public lands to private property, severely limiting the ability to protect and manage its natural heritage. Our project is spearheading efforts to regain some of those public lands through land purchases funded by local and federal carbon taxes and regional markets. In this scenario, cities may hold the key to find optimal governance schemes.

Further recommended reading

UNESCO, The Porticoes of Bologna, https://whc.unesco.org/en/tentativelists/5010

UNESCO, Historic Centre of Guimaraes, https://whc.unesco.org/en/list/1031

Guimarães mais verde, http://www.guimaraesmaisverde.pt/

SESSION DESCRIPTION

E4 The weight of cities: Towards inclusive, resource efficient and resilient cities

Panel

Date: Friday, 27 April, 2018
Time: 14:30-16:00
Rooms: S25-26

Language: English
Contact: Ainhoa Carpintero Rogero
E-mail/web: Ainhoa.carpintero@un.org
Organized by: UN Environment/International Resource Panel

OBJECTIVE

This session centered on the resource perspective of urbanization, by highlighting the serious shortage of resources, both for building new cities as well as for running them, and addressing the inequitable resource distribution. It also outlined a strategy to develop sustainable cities, including a call for "entrepreneurial urban governance," and shared the experience of working with fast-changing cities around the world to highlight potential ways to accelerate the transition to more resource efficient urbanization. Within the needed integrated approach based on parallel interventions on urban spatial restructuring, resource-efficient components and value change, new governance city networks fulfil a crucial role; therefore a discussion on the required bridge between city networks and practitioners with the science community was held. The discussion included the views of two city networks and an exchange with the audience to further discuss what is required to make transformative change happen and take root.

OUTCOMES

Participants gained a better understanding of:

- How the current use of natural resources should now become a central policy concern
- The transition needed to achieve low-carbon, resource-efficient and socially just cities and the parallel interventions to support such transition
- What is entrepreneurial urban governance and how city networks can enhance their role as agents of change

METHODOLOGY

- Welcome and brief introduction of the International Resource Panel. **(5 minutes)**
- Presentations of findings of The Weight of Cities. **(15 minutes)**
- Presentation of the findings of the series release by WRI and how the findings of both organizations complement each other (tbc). **(15 min)**
- The facilitator facilitated a discussion and managed questions and answers from the audience. The discussion included a pitch by two city networks: The League of Cities of the Philippines and ICLEI. **(50 min)**
- The facilitator concluded with closing remarks. **(5 minutes)**

CONTRIBUTORS

Facilitator	*James Lomax, Sustainable Food System and Agriculture Programme Officer, UN Environment, Paris, France*
Panelist	*Maarten Hajer, Professor, Urban Futures, Utrecht University, Utrecht, Netherlands*
Panelist	*Jessica Seddon, Director, Integrated Urban Strategy, World Resources Institute, Washington D.C., USA*
Panelist	*Veronica Hitosis, Deputy Executive Director for Policy, Programs, and Projects; League of Cities of the Philippines, Quezon, Philippines*
Panelist	*Yunus Arikan, Head of Global Policy & Advocacy, ICLEI World Secretariat, Bonn, Germany*

Further recommended reading

International Resource Panel's summary and factsheet of the publication: IRP (2018). The Weight of Cities: Resource Requirements of Future Urbanization. Swilling, M., Hajer, M., Baynes, T., Bergesen, J., Labbé, F., Musango, J.K., Ramaswami, A., Robinson, B., Salat, S., Suh, S., Currie, P., Fang, A., Hanson, A. Kruit, K., Reiner, M., Smit, S., Tabory, S. A Report by the International Resource Panel. United Nations Environment Programme, Nairobi, Kenya. http://www.resourcepanel.org/reports/weight-cities

International Resource Panel's report: UNEP (2013) City-Level Decoupling: Urban resource flows and the governance of infrastructure transitions. A Report of the Working Group on Cities of the International Resource Panel. Swilling M., Robinson B., Marvin S. and Hodson M. http://www.resourcepanel.org/reports/city-level-decoupling

UN Environment report and summary for policy makers: UNEP (2018). Sustainable Urban Infrastructure Transitions in the ASEAN Region. United Nations Environment Programme, Nairobi, Kenya.

https://resourceefficientcities.org/2018/02/sustainable-urban-infrastructure-transitions-in-the-asean-region/

WRI World Resources Institute Report research: http://www.wrirosscities.org/

SESSION DESCRIPTION

E5 Shaping the long-term global sustainability agenda for the insurance industry and cities

Consultation on the main themes of the "*Insurance Development Goals for Cities*"

Date: Friday, April 27, 2018
Time: 14:30-16:00
Rooms: S30-32

Language: English
Contact: Olivia Fabry / Evgenia Mitroliou
E-mail: olivia.fabry@un.org
resilient.cities@iclei.org
Organized by: UN Environment's PSI & ICLEI

OBJECTIVE

The session provided an update on the "*Bonn Ambition*" initiative – the outcome of the Insurance Industry & Cities Summit that was organized by UN Environment's Principles for Sustainable Insurance (PSI) and ICLEI at the 2017 Resilient Cities Congress in Bonn. The Bonn Ambition initiative is strategically linked to the UN Sustainable Development Goals (SDGs), particularly SDG 11 to "*make cities inclusive, safe, resilient and sustainable*". Panelists contributed their expertise and views on the creation of the "*Insurance Development Goals for Cities*" – converting the various underlying targets for SDG 11 into risk management, insurance and investment goals for the insurance industry. The main themes of these Goals, as well as learnings from a year-long consultation process, were presented.

The session was the last in-person consultation before the Goals are finalized. The Insurance Development Goals for Cities will be launched at the 2018 ICLEI World Congress in Montreal this June to set the long-term global sustainability agenda for the insurance industry and cities.

OUTCOMES

This session did:

- Present the main themes of the "*Insurance Development Goals for Cities*", as well as learnings from a year-long consultation process, for feedback;
- Get input from local government officials, insurers and other key stakeholders on what they believe are the most impactful risk management, insurance and investment goals for the insurance industry that would help achieve SDG 11 in cities;
- Raise awareness on how the insurance industry can support cities as risk managers, insurers, and investors and the value of industry-city collaboration to help realize the SDGs, Paris Agreement on Climate Change, Sendai Framework for Disaster Risk Reduction, and New Urban Agenda.

METHODOLOGY

- The facilitator introduced himself and the panelists, and the session aims. **(5 minutes)**
- The facilitator presented the main themes of the "Insurance Development Goals for Cities" and learnings from a year-long consultation process. **(20 minutes)**
- The facilitator asked the panelists for their feedback on the presentation and will manage an interactive discussion. **(40 minutes)**
- The facilitator managed questions from the audience. **(20 minutes)**
- The facilitator gave closing remarks. **(5 minutes)**

Guiding questions:

1. Do the main themes of the "*Insurance Development Goals for Cities*" capture the key elements of SDG 11 that are most relevant to the insurance industry across its risk management, insurance and investment activities?
2. Are these main themes in line with local government officials' expectations form the insurance industry?
3. Are there major gaps or omissions in the main themes?
4. How should the Goals be structured and look like?
5. How can such Goals support your work?
6. How can you and your organization contribute to achieving these Goals, and to promoting them?

CONTRIBUTORS

Facilitator	*Butch Bacani, Programme Leader, UN Environment's Principles for Sustainable Insurance Initiative, Geneva, Switzerland*
Panelist	*Gino Van Begin, Secretary General, ICLEI – Local Governments for Sustainability*
Panelist	*Lucia Rückner, Senior Corporate Responsibility Consultant, Munich Re, Munich, Germany*
Panelist	*Katharina Nett, Advisor, Secretariat of the InsuResilience Global Partnership, Bonn, Germany*
Panelist	*David Jácome Polit, Chief Resilience Officer, Municipality of Quito, Quito, Ecuador*
Panelist	*Daniel Stander, Global Managing Director, Risk management Solutions, London, UK*

Further recommended reading

Press release of UN Environment's Principles for Sustainable Insurance Initiative and ICLEI (May 2017):

"United Nations-backed insurance industry initiative and network of local governments to create "Insurance Development Goals for Cities": www.unepfi.org/psi/wp-content/uploads/2017/05/Bonn-Ambition-Press-release-final.pdf

ICLEI World Congress 2018: https://worldcongress2018.iclei.org/

SESSION DESCRIPTION

F1 Louisiana adaptation: Mitigation to managed retreat

Panel

Date: Friday, 27 April, 2018
Time: 16:30-18:00
Rooms: S30-32

Language: English
Contact: Jeannette Dubinin & Mathew Sanders
E-mail/web: jdubinin@cpex.org, www.cpex.org & mathew.sanders@la.gov
Organized by: Center for Planning Excellence & Office of Community Development of Louisiana

OBJECTIVE

Following 2005's Hurricane Katrina, the State of Louisiana recognized the long-term connection between coastal land loss, subsidence, sea level rise and their collective effects on flood risk. In an effort to combat these conditions, the state created the Coastal Protection and Restoration Authority (CPRA), and in doing so, has made significant investments in modeling out future land loss and flood risk on a 50-year time horizon. Although crucial to the future viability of the Louisiana coast, the restoration of land and creation of structural flood protection will not alone save the coast of Louisiana or the inhabitants that call this land home. In recognition of the fact that no one solution can prevent loss from catastrophic events in the future, the State of Louisiana was awarded $92.3 million for the execution of two projects, Louisiana's Strategic Adaptations for Future Environments (LA SAFE) and the Resettlement of Isle de Jean Charles by the U.S. Department of Housing and Urban Development. LA SAFE is an initiative launched in 2017 and funded by $40 million of the $92.3 million grant. In 2017, LA SAFE used the state's land loss and future flood risk data to complete regional and local plans across a six-parish (county) target area in an attempt to orient current and future growth management and land use and development strategies in alignment with the state's Master Plan.

In addition, the state is working with the Isle de Jean Charles Island, a coastal community in remote Terrebonne Parish (county) that has lost more than 90 percent of its land mass over nearly three generations, to relocate the residents into a safe and lower risk area. Looking forward, the Island itself is expected to disappear completely over the next 50 years – or upon the next significant tropical impact. Using $48.3 million of the $92.3 million grant, the State of Louisiana is working with the Island community to conduct the first publicly funded, climate change-induced resettlement in American history.

The objective of this panel discussion was to discuss the lessons learned and best practices from both of these adaptation efforts.

OUTCOMES

Participants did:

- Learn about how the State of Louisiana is trying to adapt to our current coastal challenges, including land loss and future flood risk;
- Have a deeper understanding of the importance of authentic engagement in public planning processes that have a direct impact on their lives;
- Learn about new, innovative solutions that were co-designed by the LA SAFE team and community residents;

- Gain a deeper understanding of and appreciation for the inherent challenges of the community resettlement process;
- Better understand the coastal conditions that will likely engender future migrations along the Louisiana coast, as well as other coastal environments around the country and the world;
- Analyze the economic and cultural sustainability strategies proposed by the master planning team for the new Isle de Jean Charles community.

METHODOLOGY

- The facilitator opened the session with a short introduction. **(5 minutes)**
- Each speaker were given time to describe their work. **(3 x 10 minutes)**
- The remainder of the session was organized around the guiding questions, with each panelist given time to respond to individual questions, and to respond to comments made by other panelists. **(25 minutes)**
- The facilitator managed questions and answers from the audience. **(25 minutes)**
- The facilitator concluded with closing remarks. **(5 minutes)**

Guiding questions:

1. List of questions the panel will explore and seek to answer
2. What are the adaptation strategies from the LA SAFE process that panelists think will be the most successful and why? Do the panelists think those same strategies would be the most successful everywhere across the Louisiana coast or will they be the most successful because they respond to a particular need in a particular place?
3. What was the outreach and engagement strategy in the LA SAFE process versus the IDJC process? What differences did the team consider when crafting each strategy?
4. Do the panelists envision a way to bring lessons learned from both processes to other places in Louisiana or around the country and world, without a major source of new funds? Could existing planning processes be changed to accomplish the same goals?

CONTRIBUTORS

Facilitator	*Dakota Fisher, Resilience Program Analyst, State of Louisiana's Office of Community Development, New Orleans, USA*
Panelist	*Rachelle Thomason, Coastal Community Resilience Programs Associate, Foundation for Louisiana, New Orleans, USA*
Panelist	*Jeannette Dubinin, Director of Coastal Program, Center for Planning Excellence, Baton Rouge, USA*
Panelist	*Maria Papacharalambous, Architect and Project Manager, Waggonner & Ball Architects, New Orleans, USA*

Further recommended reading

IPCC Fifth Assessment Report (AR5): https://www.ipcc.ch/report/ar5/
Johannesburg GDS 2040: http://www.joburg.org.za/gds2040/gds2040_strategy.php
Disaster Recovery Unit, State of Louisiana: http://www.doa.la.gov/Pages/ocd-dru/Index.aspx

SESSION DESCRIPTION

F2 How resilient is your city? City resilience profiling tool

Workshop

Date: Friday, 27 April, 2018
Time: 16:30-18:00
Rooms: S34-35

Language: English
Contact: Amaia Celaya
E-mail/web: amaia.celaya@un.org
Organized by: UN-Habitat

OBJECTIVE

We are in a moment of change. Change regarding ethics, social models, as well as new political, spatial and territorial patterns. One of the most challenging changes we face is related to growing urban areas and the future of their inhabitants. Cities can bring positive change and we believe resilience should be one of the key vectors to achieve it.

The main goal of UN-Habitat's resilience work is to support local governments and relevant stakeholders to transform urban areas into safer and better places to live, and improve their capacity to absorb and rebound quickly from all potential shocks or stresses, leading them towards sustainability.

UN-Habitat's understanding of a resilient city is one that is able to absorb, adapt, and recover from the shocks and stresses that are likely to happen, transforming itself in a positive way toward sustainability.

This session at the Resilient Cities Congress aimed at building knowledge on global development frameworks and alignment with resilience pathways in urban setting. The training increased understanding of local challenges, the City Resilience Profiling Tool and the opportunities such tools open for cites in the future.

OUTCOMES

Through this training, participants gained a broad understanding of urban resilience concepts, examples of challenges and good practice, with a specific focus in resilience and climate action, and of holistic approaches to resilience building. The session was hands-on and participants were invited to contextualize the learning and initiate the path and roadmap towards building resilience in their city.

Participants left the workshop session with:

- A basic City Resilience Snapshot Profile
- Increased knowledge of holistic resilience tools and practices and challenges for local governments in different regions
- A clear vision of the link between urban resilience and transformation and sustainable change, as set out in the Sustainable Development Goals and New Urban Agenda.

METHODOLOGY

- Introduction and welcome remarks by the facilitator. **(5 minutes)**
- Global Agendas and Local Challenges to Building Resilience. (**20 minutes)**
- Technical introduction to the City Resilience Profiling Tool. **(10 minutes)**
- Climate Action and resilience lens. **(25 minutes)**
- City Resilience Profiling Programme - Barcelona / Maputo / Asuncion / Port Vila. **(25 minutes)**
- Wrap up and closing remarks. **(5 minutes)**

CONTRIBUTORS

Facilitator	*Amaia Celaya, Normative and Operations Coordinator, City Resilience Profiling Programme, UN Habitat, Barcelona, Spain*
Speaker	*Craig Laird, Communications and Content Editor Specialist, City Resilience Profiling Programme, UN Habitat, Barcelona, Spain*
Speaker	*Anna Karaan, Urban Resilience Officer, UN Habitat, Barcelona, Spain*
Speaker	*Carimo Tagir Assimo, Mayor, Pemba Municipality, Pemba, Mozambique*

With thanks to: *The European Commission (EC DEVCO)* whose valuable support has enabled the City Resilience Profiling Tool to be developed, tested and calibrated.

Further recommended reading

City Resilience Profiling Tool www.unhabitat.org/urbanresilience

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SESSION DESCRIPTION

F3 The new ISO standard for resilient cities indicators: Opportunities for city and expert input

Roundtable Discussion

Date: Friday, 27th April, 2018
Time: 16:30-18:30
Rooms: S01-02

Language: English
Contact: Matthew Lynch
E-mail/web: matthew.lynch@globalcities.ca
Organized by: World Council on City Data (WCCD)/UNISDR

OBJECTIVE

ISO 37120 *Sustainable Development of Communities: Indicators for City Services and Quality of Life*, is the first ISO standard for cities. ISO 37120 defines a comprehensive set of 100 indicators that enables any city, of any size, to measure and compare its social, economic, and environmental performance in relation to other cities from around the world. This standard is now being applied by rapidly-growing number of cities, with more than 60 cities having achieved WCCD ISO 37120 Certification, driving benchmarking, innovation, city-to-city learning and data-driven decision making globally.

In response to demand from cities and other stakeholders, the development has begun within ISO of a complementary standard on Indicators for Resilient Cities (ISO 37123). The availability of ISO standardized metrics for resilience will assist local governments to determine their exposure to and capacity to cope with potential hazards, extreme events or stresses while maintaining their essential functions and safeguarding their population. Local governments need reliable, comparable data to set targets and measure their performance, particularly when developing a comprehensive and effective response to the challenges of managing complex risks and enhancing resilience. Standardized metrics allow municipal leaders to measure and benchmark their performance and learn from comparable cities.

The ISO city indicators will also play an important role in driving and measuring local level action to ensure progress towards the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals.

The United Nations Office for Disaster Risk Reduction (UNISDR) and the WCCD are working together to drive awareness of cities of the development of ISO 37123 and encouraging their input in the development process. This ‘roundtable’ session was convened to build awareness of ISO 37123 and to encourage city and expert input to maximize the practicality and effectiveness of the new standard.

OUTCOMES

This highly interactive session enabled participants to:

- Understand the development process for the new ISO 37123 Indicators for Resilient Cities Standard and the likely key elements of the Standard.
- Provide their comments and perspectives on the development of ISO 37123 to help maximize the practicality and effectiveness of the new standard in enhancing resilience at the city level.

METHODOLOGY (2 hours session)

- Session introduction and overview by the facilitator.
- Introduction to the ISO City Indicator Standards - ISO 37120 and the new draft ISO 37123 Standard by the facilitator.
- The importance of ISO standardized indicators to support local implementation of the Sendai Framework for Disaster Risk Reduction.
- ICLEI perspectives on the development of the ISO 37123 Standard.
- Facilitated discussion with Roundtable Session participants.
- Session wrap up and next steps by the facilitator.

Guiding questions:

1. What are the most important indicators and metrics used by your city to guide resilience planning and to measure progress towards resilience objectives?
2. Which resilience indicators can guide city-to-city learning and collaboration on resilience?
3. Which indicators should be prioritized for inclusion in the new ISO 37123 Standard? Which measures would benefit from global standardization (i.e. definitions and measurement methodology) to enhance comparability of data?
4. Do you see key indicator gaps?

CONTRIBUTORS

Facilitator	*Matthew Lynch, Vice President, Global Partnerships & Initiatives, World Council on City Data, Toronto, Canada*
Panelist	*David Stevens, Head of Office, UNISDR Bonn, Germany*
Panelist	*Holger Robrecht, Deputy Regional Director, ICLEI Europe, Freiburg, Germany*
Panelist	*Lykke Leonardsen, Head of Program, Resilient and Sustainable City Solutions, City of Copenhagen, Denmark*
Panelist	*Daniel Stander, Global Managing Director, Risk Management Solutions, London, UK*

Further recommended reading

The ISO 37120 Standard https://www.iso.org/standard/62436.html

Sendai Framework for Disaster Risk Reduction https://www.unisdr.org/we/coordinate/sendai-framework

UNISDR Making Cities Resilient website https://www.unisdr.org/we/campaign/cities

World Council on City Data http://www.dataforcities.org/

SESSION DESCRIPTION

F4 Building inclusive urban food governance: Local food council in Lusaka, Zambia

Facilitated Discussion

Date: Friday, April 27, 2018
Time: 16:30-18:00
Rooms: S25-26

Language: English
Contact: Nout van der Vaart
E-mail/web: nvaart@hivos.org / www.hivos.org
Organized by: Hivos

OBJECTIVE

In 2017, Zambia was ranked as one of the 10 hungriest countries in the world. This is despite Zambia registering "bumper harvests" for the previous 3 year farming seasons. These two divergent pictures of the Zambian food security situation indicate that more needs to be done within the food system to translate into healthy livelihoods for the population. The local authority in Lusaka has signed up to the Milan Urban Food Policy Pact (MUFPP) pledging to take an active part in food security issues for the city. The City Region Food Systems study by FAO/RUAF states that "the current fragmented governing bodies for food systems do not normally work in collaboration; a multi-stakeholder and inter-institutional mechanism or body responsible to define food strategies and policies would be key to reinforce the food system, in order to ensure food and nutrition security, including food safety" .

Furthermore, the recently launched decentralization policy offers a good platform for setting up a food council because certain national government functions such as agriculture and health have been devolved to local government. This means the local authority, Ministry of Agriculture and Ministry of Health are already working hand in hand but only need other stakeholders in the food system to join in to create well-adjusted strategies and policies to reinforce the Lusaka food system.

This Facilitated discussion brought together civil society and municipal representatives around the topic of building inclusive urban food governance. Practitioners presented the case of Lusaka, Zambia and the entry point of building these local food councils from different perspectives, while key experts provided a broader input and perspective on the topic.

The aim of the session was to learn from different approaches to build inclusive urban food governance, which was done by addressing the following questions:

1. Why and how can an urban food council be a solution for food and nutrition security?
2. When is a local food council inclusive?
3. What is the difference between councils that are initiated by local government versus councils that are initiated through civil society organisations?

OUTCOMES

Participants left the session with:

- A good understanding of the concept of urban food councils and how they may contribute to better food and nutrition security
- The pros and cons of urban food councils being initiated by civil society or local authorities
- Some first insights into how to initiate a process to build inclusive urban food governance

METHODOLOGY

- The facilitator introduced the aim and the format of the session, as well as the speakers. **(10 minutes)**
- The session presented two entry points to activate change towards inclusive urban food governance in Lusaka, Zambia: citizen driven change and local government driven change. **(20 minutes)**
- Key experts provided their input to the Zambia case: they shared what went well and what could be done to improve the process. **(20 minutes)**
- Audience and representatives from other municipalities provided their input in the Zambia case and responded to the three questions. **(35 minutes)**
- Summary of key outcomes and recommendations for follow up. **(5 minutes)**

CONTRIBUTORS

Facilitator	*Nout van der Vaart, Advocacy Officer, Sustainable Food, Hivos, The Hague, The Netherlands*
Discussant	*Guido Santini, Program Coordinator, Food for the Cities, Food and Agriculture Organization of the United Nations, Rome, Italy*
Discussant	*Mangiza Chirwa Chongo, Advocacy Officer, Hivos, Lusaka, Zambia*
Discussant	*Manuel De Araujo, Mayor, Municipality of Quelimane, Quelimane, Mozambique; Co-Chair ICLEI Resilient Cities Portfolio*
Discussant	*Glory Manambowoh Lueong, FIAN International, Heidelberg, Germany*
Discussant	*Marina Bortoletti, Associate Programme Officer, UN Environment, Paris, France*

With thanks to: *Dutch Ministry of Foreign Affairs*

Further recommended reading

City Region Food system Situational Analysis, Lusaka, Zambia www.fao.org/3/a-bl822e.pdf
Hivos: www.hivos.org

SESSION DESCRIPTION

F5 Toward resilient and robust urban infrastructure

Presentations

Date: Friday, 27 April, 2018
Time: 16:30-18:00
Rooms: S29-31

Language: English
ICLEI contact: Matteo Bizzotto
E-mail/web: resilient.cities@iclei.org
Organized by: ICLEI World secretariat

OBJECTIVE

Urban economies and societies depend on robust infrastructure (buildings, transportation and communications systems, power lines, water and wastewater) for the delivery of goods and services. Urban growth combined with increased shocks and stressors such as climate change impacts, interferes with delivery and management systems and can put a severe strain on built assets. More importantly, it leads to disruption, damage and cascading failure of critical infrastructure (CI), which is vital for the functioning of cities. This session will explore how built infrastructure could be future-proofed and how cities could anticipate system dependencies and prevent disruptions in essential assets and systems.

The session began by exploring resilient and adaptive building and construction. The first presentation argued the urgent need for integrating mitigation and adaptation considerations in Nairobi, Kenya's infrastructure in order to deal with increased climate change impacts and population growth while achieving low-carbon and resilience goals. Stormwater has disrupted the construction and integrity of several buildings in Nairobi, with cascading functional failures for other infrastructure systems, as well as knock on effects on the economy. A representative from the National Construction Authority then highlighted the changes needed to be in place for the construction and building sector, including research into the resilience of building materials and techniques; indeed, green stormwater infrastructure is often viewed as a climate-resilient, low-cost alternative to traditional (gray) infrastructure. The next presentation put this view to the test by introducing a set of indicators to determine the resilience of green stormwater infrastructure. Could that be a solution to lessen damages in built infrastructure in cities?

Changing gears, the City of Rome shared lessons from the Smart Mature Resilience (SMR) project, especially the ones addressing the interdependencies of risk and the cascading effects of disasters on public infrastructure. Last, the Grassroots Infrastructure Dependency Model (GRID-M) was introduced – an innovative model which was developed to enable a near-real-time analysis of physical infrastructure dependencies of specific supply and demand nodes.

OUTCOMES

- Participants were exposed to the benefits of integrated adaptation and mitigation measures in urban infrastructure – especially *vis-à-vis* flood protection;
- They gained insight into selecting appropriate and effective flood resilience measures – either in gray/traditional or green stormwater infrastructure;
- They gained an understanding of physical infrastructure dependencies and how this knowledge could be applied to anticipate pre-disaster disruption, to minimize post-disaster impacts, and prioritize action during the event.

METHODOLOGY

- The facilitator provided an overall introduction to the session and contributors **(5 minutes)**
- Each presentation was allotted 10 minutes **(4 x 10 minutes)**
- The facilitator managed questions and answers **(40 minutes)**
- Closing remarks by the facilitator **(5 minutes)**

CONTRIBUTORS

Facilitator — *Sunandan Tiwari, Senior Program Manager, Global Projects, ICLEI World Secretariat, Bonn, Germany*

Presenter — *Ruth Onkangi, Research Officer, National Construction Authority, Nairobi, Kenya*

Phillip Dinga, Low Emission Development Officer, UNDP, Nairobi, Nairobi, Kenya

Linking adaptation and mitigation towards a resilient and robust infrastructure

This presentation addresses concerns by stakeholders and policymakers with regard to city infrastructure and climate change in Kenya. It evaluates mitigation and adaptation efforts of infrastructure in Nairobi, and identifies key gaps by practitioners and policy-makers. The presentation recommends a change from business as usual by increasing the level of awareness on disaster and infrastructure disruptions, researching into resilience of materials and technologies used locally, advocating use of resilient materials and techniques, adapting green building designs, mainstreaming climate change into the infrastructure sector through policy and introduction of incentives to increase adaptation and mitigation measures in the sector at local government level.

Presenter — *Tara Kulkarni, Associate Professor, Norwich University, Northfield, USA*

Elizabeth Ells, Research Apprentice, Norwich University, Northfield, USA

Resilience metrics for Green Stormwater Infrastructure

Engineers, challenged to design affordable and resilient stormwater infrastructure, have been installing Green Stormwater Infrastructure (GSI) around the world, as a way to effectively manage stormwater flows, especially in areas with combined sewer systems. GSI is a climate resilient, low-cost alternative to traditional stormwater infrastructure. However, there is no uniform policy framework for engineering these systems to be climate resilient or metrics to assess their performance or resiliency. This presentation covers an overview of different frameworks that provide some design criteria and performance metrics for GSI. Trends and recommendations are offered on the basis of that overview.

Presenter — *Pierluigi Potenza, Urban Resilience and Natural Hazards Expert, Risorse per Roma S.p.A., Rome, Italy*

Smart Mature Resilience: Lessons on disaster-proofing critical infrastructure

The H2020 SMR Project is an outstanding opportunity for cities aiming at improving their resilience against a number of resilience challenges, namely those arising from climate change, critical infrastructures and social dynamics. Thanks to SMR tools, Rome was able to understand interdependencies of risks and the cascading effects of disasters, as well as its current resilience level. The next step will be the set-up of a dedicated Resilience Office, as a new governance functionality. Synergy between SMR and the 100 Resilient Cities initiative has proven to be effective in developing such a plan.

Presenter *Kyle B. Pfeiffer, Manager, National Preparedness Analytics, Argonne National Laboratory, Washington D.C., USA*

Near-real time infrastructure dependency analysis

Situational awareness of the operational status of critical supply and demand nodes following a major disaster may inform response and recovery activities based on the ability of an infrastructure asset or system to support core facility operations. Near-real-time analysis of infrastructure dependency information is a computationally intensive process that is observed informally. To address this problem, a Grassroots Infrastructure Dependency Model was developed to enable near-real-time analysis of physical infrastructure dependencies of specific supply and demand nodes.

Further recommended reading

Smart Mature Resilience – For more Resilient Cities in Europe http://smr-project.eu/home/

Green Stormwater Infrastructure: https://www.epa.gov/water-research/stormwater-management-and-green-infrastructure-research

SESSION DESCRIPTION

G1 Planning for urban resilience: Co-development of solutions for transformative impacts

Panel

Date: Saturday, 28 April, 2018
Time: 09:00-10:30
Rooms: S01-02

Language: English
Contact: Evgenia Mitroliou
E-mail/web: resilient.cities@iclei.org
Organized by: ICLEI World Secretariat/IDRC

OBJECTIVE

Rapid global urbanization presents important social, environmental and economic challenges. One of the most important challenges faced by urban societies is to design viable and sustainable solutions that effectively address these challenges. With the threat of climate change, urban policy makers and planners have to take in consideration risks, prepare for crisis and include uncertainty: they have to plan for urban resilience. In other words, they need to improve their predictive capacity, develop integrated and climate smart management frameworks and tools, and propose real solutions to respond to climate hazards, such as floods.

This session explored urban planning informed by policy-relevant research and local experience, which is only possible with collaboration and partnerships amongst various stakeholders from the public, community to private sectors. Engaging research-into-use approaches, through relevant multi-stakeholder participation in the planning process, have been proven to generate stronger climate resilient solutions and a more systemic impact. Panelists highlighted research results from diverse cities with the goal of understanding how their research is contributing, to improve urban governance and resilience. The session also explored the key enablers and barriers to co-developing solutions in the Global South. Input from the International Development Research Centre was also crucial.

OUTCOMES

Participants gained a better understanding of:

- Methods for adapting urban management in different urban environments involving various stakeholders;
- How research can be used to inform policies and management to allow collaborative management, co-learning and multi-stakeholders participation; and
- Strategies for working with city governments to respond to the changing dynamics of resilient urban development in the context of climate change

METHODOLOGY

- The facilitator opened the session with a short introduction. **(5 minutes)**
- Each speaker were given time to describe their work, showing maps or other illustrations as needed. **(3 x 10 minutes)**.
- David Jácome Polit, Chief Resilience Officer, Municipality of Quito, Ecuador reflected on the result and outcomes presented. **(10 minutes)**
- The remainder of the session was organized around the guiding questions, with each panelist given time to respond to individual questions, and to respond to comments made by other panelists. **(20 minutes)**

- The facilitator managed questions and answers from the audience. **(15 minutes)**
- The facilitator concluded with closing remarks. **(5 minutes)**

Guiding questions:

1. How have these research projects sought to enable collaborative processes and multi-stakeholder engagement?
2. How have the stakeholders who have been part of these processes responded to these collaborative processes? Do they see greater value in collaboration than before?
3. What are the key enablers and barriers to collaborate and develop partnerships in your work?
4. How has the research being done informed policy?

CONTRIBUTORS

Facilitator	*Kobie Brand, Director, ICLEI Cities Biodiversity Center; Regional Director, ICLEI Africa, Cape Town, South Africa*
Panelist	*Emani Kumar, ICLEI Deputy Secretary General and Executive Director, ICLEI – Local Governments for Sustainability*
Panelist	*Amy Pieterse, Researcher, Council for Scientific and Industrial Research, Pretoria, South Africa*
Panelist	*Astrud Lea Beringer, Researcher, Faculty of Environment and Resource Studies, Mahasarakham University, Maha Sarakham, Thailand*
Panelist	*David Jácome Polit, Chief Resilience Officer, Municipality of Quito, Ecuador*
Panelist	*Rebecca Cameron, Professional Officer for Climate Change, Energy and Resilience, ICLEI Africa, Cape Town, South Africa*

Further recommended reading

IPCC Fifth Assessment Report (AR5): https://www.ipcc.ch/report/ar5/

Johannesburg GDS 2040: http://www.joburg.org.za/gds2040/gds2040_strategy.php

SESSION DESCRIPTION

G2 How to finance climate change adaptation projects in cities: Past experiences, present challenges, and future opportunities

Panel

Date: Saturday, April 28th, 2018
Time: 09:00-10:30
Rooms: S25-26

Language: English
Contact: Aris Moro
E-mail/web: amoro@c40.org www.c40cff.org
Organized by: C40 CFF & ICLEI World Secretariat

OBJECTIVE

This session illustrated the range of different sources of financing available to cities implementing climate change adaptation projects. It will draw upon the experiences of a few cities, uncovering differences in past experiences, present challenges and future opportunities between various sized cities. The session was complemented by representatives of city networks working with local governments to support project preparation and access to financing.

OUTCOMES

Participants gained a better understanding of:

- Different sources of financing for climate change adaptation projects in cities;
- Differences in challenges and opportunities between megacities and medium-sized cities;
- How city networks and donors are addressing challenges by working with local governments and cities.

METHODOLOGY

- The facilitator opens introduced the topic, herself and each speaker. **(5 minutes)**
- Representatives of ICLEI and CFF briefly outlined their work on supporting climate change adaptation projects with financing, offering a snapshot of the sector. **(2 x 5 minutes)**
- City officials gave a short overview of the financing options and experiences with adaptation projects in their respective city. **(4 x 5 minutes)**
- The facilitator followed up with each speaker, highlighting commonalities and differences and encouraging a one-to-one conversation. **(10 minutes)**
- The facilitator moderated a Q&A with the audience. **(45 minutes)**

Guiding questions:

1. What sources of financing has your local government and city employed to implement your adaptation projects?
2. What challenges has your local government faced in sourcing financing for adaptation projects?
3. How can national governments, international organisations, and other cities help in sourcing additional, sustainable financial resources for adaptation projects?
4. What do you predict will be the biggest innovation in how cities finance climate change adaptation projects in the next 10 years?

CONTRIBUTORS

Facilitator	*Lisa Junghans, Director, Climate Finance & Urban Resilience Expert, GIZ, Berlin, Germany*
Keynotes	*Maryke van Staden, Director, Carbonn Center; Program Manager, Low Carbon Cities,, ICLEI World Secretariat, Bonn, Germany*
Panelist	*Oswar M. Mungkasa, Deputy Governor for Spatial Planning and Environment, DKI Jakarta (Special Capital City District of Jakarta), Indonesia*
Panelist	*Bernard Faustino Dy, Mayor of Cauayan City, Cauayan, Philippines*
Panelist	*Nontsundu Ndonga, Deputy Municipal Manager, City Development, City of uMhlathuze, uMhlathuze, South Africa*

Further recommended reading

'Explainer: How to finance urban infrastructure?' C40 Cities Finance Facility (2017): https://www.c40cff.org/knowledge-library/explainer-how-to-finance-urban-infrastructure.

Summary of Good Practice of Successful Project Preparation Facilities, CCFLA (2018): https://gallery.mailchimp.com/579aabd5d8021a54b18da0551/files/619be1dd-a0da-4b65-92d0-1ca06dc4819d/20180201_PPF_Report_final.pdf

New calls to cities and investors announced to deliver sustainable finance growth in cities worldwide. Press release of the Global Covenant of Mayors for Climate & Energy (2018): https://www.globalcovenantofmayors.org/wp-content/uploads/2018/03/GCoM-Finance-Call-to-Action-Press-Release_22.3.18_final2.pdf

Boosting subnational climate action through new climate governance, carbon*n*® Climate Registry 2016-2017 report. ICLEI (2017): http://e-lib.iclei.org/wp-content/uploads/2017/11/20171101_cCR-report_final-web.pdf

Transformative Actions Program (TAP): www.tap-potential.org

Financing the Resilient City: A demand driven approach to development, disaster risk reduction and climate adaptation – An ICLEI White Paper, ICLEI Global Report, ICLEI (2011): http://www.iclei.org/fileadmin/PUBLICATIONS/Papers/Financing_the_Resilient_City_2011_Global_Report_ICLEI_WS.pdf

SESSION DESCRIPTION

G3 Lima, Peru: Local adaptation measures to climate change

Cities in Focus

Date: Saturday, 28 April 2018
Time: 09:00-10:30
Rooms: S30-32

Language: Spanish (with translation in English)
Contact: Ute Göldner
E-mail/web: resilient.cities@iclei.org
Organized by: ICLEI World Secretariat

OBJECTIVE

The Lima Metropolitan Area is comprised of 51 districts with a total population of more than 10 million inhabitants and it is located at the arid Pacific coast of Peru. The melting of the Andean glaciers and the increased variability of the river flow for water supply is probably the biggest climate hazard the city is currently facing. However, other climate hazards are also likely to become increasingly relevant for urban development in the near future. This session explored how local municipalities in Lima identify and select local adaptation measures that were most suited to address their specific conditions and vulnerabilities. Panelists (representatives of three districts) highlighted how they completed and presented their proposal titled "Municipal Adaptation Measures to Climate Change": this document reveals selected and prioritized adaptation measures that were elaborated to suit the specific conditions of each district.

OUTCOMES

Participants gained a better understanding of:

- Municipal adaptation measures to climate change in dry urban environments;
- How climate change policies can be used to develop a local strategy; and
- Strategies for working with city governments to respond to climate change vulnerabilities.

METHODOLOGY

- The facilitator opened the session with a short introduction. **(5 minutes)**
- Each speaker was given time to describe their work, showing maps or other illustrations as needed. **(4 x 10 minutes)**
- The remainder of the session was organized around the guiding questions, with each panelist given time to respond to individual questions, and to respond to comments made by other panelists. **(15 minutes)**
- The facilitator gave time to describe the local situation in Peru. **(10 minutes)**
- The facilitator managed questions and answers from the audience. **(15 minutes)**
- The facilitator concluded with closing remarks. **(5 minutes)**

Guiding questions:

1. What are the steps/methodology to prioritize adaptation measure?
2. What are the challenges to put in practice adaptation measures?
3. Lima is most vulnerable to drought and heat weaves, how are you working to adapt to them?

CONTRIBUTORS

Facilitator	*Liliana Miranda, Foro Ciudades Para la Vida, Lima, Peru*
Panelist	*Catherine Cardich, Technical Adviser, GIZ, Lima, Peru*
Panelist	*Pamela Olenka Peña Vivanco, Manager of Sustainability, Municipality of San Isidro, Lima, Peru* **Efficient use of water and wastewater treatment for the irrigation for green areas in San Isidro Municipality.**
Panelist	*Juana Rosa Cavero Velaochaga, Municipal Manager, Municipality of La Punta, Lima, Peru* **Solarímetro: communication on climate hazard and primary health in La Punta Municipality**
Panelist	*César Cáceres Barraza, Municipal Manager, Municipality of Santa Anita, Lima, Peru* **How works the risk management and climate change team in Santa Anita.**

Further recommended reading

Peru Municipal Adaptation Measures to Climate Change: http://www.paccperu.org.pe/publicaciones/pdf/170.pdf

SESSION DESCRIPTION

G4 Measuring urban resilience and evaluating impacts

Presentations

Date: Saturday, 28 April 2018
Time: 09:00-10:30
Rooms: S29-31

Language: English
ICLEI contact: Evgenia Mitroliou
E-mail/web: resilient.cities@iclei.org
Organized by: ICLEI World Secretariat

OBJECTIVE

In recent years, there has been increased international attention on urban resilience building. Several strategies have been implemented at the city and metropolitan level. How do we measure success? How do we enable local governments to measure their disaster and climate resilience? And how do we monitor the impact of efforts made?

This session attempted to address these complicated questions. The discussion began by introducing a research study that provides a sound guide for local and sub-national governments to choose the most suitable resilience assessment framework among the existing, widely applied measurement frameworks. The main characteristics and necessary indicators to be considered by local government decision makers at the early steps of resilience building was presented. Moreover, an illustration of real-world application of one of the most popular urban resilience assessment frameworks provided participants with a deeper understanding of how to measure disaster resilience in their specific local context. Next, German municipalities' climate resilience efforts were in focus. In the past ten years, many local authorities in Germany have started a wide range of activities aimed at dealing with the impacts of climate change and increasing resilience. However, few cities have undertaken actions to evaluate the impacts of their efforts made. As a basis for monitoring and evaluation in this realm, it is important to have a clear-cut conception of what components actually constitute urban climate resilience. A draft framework which aims to describe the dimensions and sub-dimensions most relevant for urban climate resilience in German urban areas was presented. This framework and a set of indicators to operationalize it – i.e. to effectively measure climate resilience at the local level – are developed as part of the research project "*Monitoring adaptation measures and climate resilience in cities*" (MONARES) and will be applied by German local authorities in 2018.

The next two presentations provided a brief reality check to the measurement, monitoring and evaluation of resilience and climate change adaptation efforts from the perspective of local governments. Last, measuring and evaluating the impact from the multi-year Coastal Cities Adaptation Program on the vulnerable Mozambican communities' resilience will unveil valuable lessons on measuring progress and evaluating impact of intervention.

OUTCOMES

- Participants got an overview of existing disaster and climate resilience frameworks and their applications worldwide;
- They were exposed to the challenges of monitoring and evaluating resilience efforts;
- Take this knowledge with them to apply in their own communities, cities and regions.

METHODOLOGY

- The facilitator introduced the session topic and contributors **(10 minutes)**
- Each presentation was allotted 10 minutes **(4 x 10 minutes)**
- The facilitator will manage questions and answers **(30 minutes)**
- Closing remarks by the facilitator **(10 minutes)**

CONTRIBUTORS

Facilitator — *Joseph Wladkowski, Head of ICLEI Global Capacity Center, ICLEI World Secretariat Bonn, Germany*

Presenter — *Pourya Salehi, Urban Research Team, ICLEI World Secretariat, Bonn, Germany*

Utilizing a convenient resilience measurement framework: A guide for local and sub-national governments

This presentation introduced a research study that provides a sound guide for local and sub-national governments to choose the most suitable and fit for purpose resilience assessment framework from the existing and widely applied measurement frameworks. While a large number of studies have been conducted on the importance of disaster resilience measurement, a few of them suggest how and by which mechanism the concept can be measured. Moreover, there is little orthodoxy in measurement of resilience in the real world.

Presenter — *Christian Kind, Senior Project Manager, Adelphi research GmbH, Berlin, Germany*

Developing a framework for urban climate resilience in German municipalities

Since around 2008, many local authorities in Germany have started taking actions to deal with the impacts of climate change and increase their city's resilience. However, few cities have undertaken actions to evaluate the impacts of their efforts made. As a basis for monitoring and evaluation in this realm, it is important to have a clear-cut conception of what components constitute urban climate resilience. This contribution presented a draft framework that aims to describe the dimensions and sub dimensions most relevant for urban climate resilience in German municipalities.

Presenter — *Gwendolen B. White, Chair, Commission on Sustainability, City of Bloomington, USA*

Tracking progress on community resilience and sustainability efforts in Bloomington, Indiana

The City of Bloomington Commission on Sustainability (BCOS) promotes economic development, environmental health, and social equity in our community for present and future generations. The commission gathers and disseminates information; promotes practical initiatives; and measures, monitors, and reports on our community's progress toward sustainability. This presentation shared valuable lessons from the BCOS on key challenges and future steps in tracking the local resilience and sustainability efforts that in line with ISO 37120, CDP, and GRI.

Presenter — *Brian App, Director, Chemonics International Inc., Washington D.C., USA*

Measuring resilience progress of coastal cities in Mozambique

This presentation introduced the Mozambique Coastal Cities Adaptation Program (CCAP) (2014 – 2018) and speak to the progress made for the target communities involved as a result of the program. An ambitious initiative supported by USAID, CCAP's objective is to improve the resilience of vulnerable coastal communities in Mozambique and to facilitate the adoption of adaptive measures at the local level. Nearing the end of the program, objective and perceived results will be shared.

SESSION DESCRIPTION

G5 Preparing for internal climate migration: Introducing Groundswell findings

Facilitated discussion

Date: Saturday, April 28, 2018
Time: 09:00-10:30
Rooms: S01-02

Language: English
Contact: Viviane Clement
E-mail/web: vclement@worldbank.org
Organized by: The World Bank

OBJECTIVE

This session discussed the findings of the World Bank's newest flagship report *Groundswell: Preparing for Internal Climate Migration* and its implications for inclusive and climate-resilient city development. The report is the first of its kind to lay out the scale and trajectory of climate migration between now and 2050 using a pioneering scenario based approach that combines climate impacts, demographic/development, and emissions pathway datasets. For the three regions of focus—Sub-Saharan Africa, South Asia, and Latin America that together represent 55 percent of the developing world's population—the report finds that a startling 143 million people – or around 2.8 percent of the population – could be pushed to migrate within their countries by 2050.

The first part of the session provided an overview presentation of the report's key findings. The scale of internal climate migration is set to ramp up by 2050 and then accelerate unless concerted climate and development action is taken. These trends, alongside the emergence of "hotspots" of climate in- and out-migration, will have implications for urban planning. Many cities, urban and peri-urban areas will need to prepare for an influx of people, including through improved housing and transportation infrastructure, social services, and employment opportunities. Some large urban and coastal cities will need to balance climate out-migration against broader trends of population growth through longer-term planning and investments in adaptive capacity to secure climate resilience.

The second part of the session was a panel discussion on the implications of the report's findings for urban planning particularly in terms of simultaneously integrating climate migration, growing populations, and climate-smart development. The last part of the session consisted of a guided discussion among panel members and participants on key challenges and opportunities for cities to plan for climate migration over the next 30-50 years. Participants were encouraged to contribute their own experiences on how urban areas can leverage migration and broader urbanization trends, capitalize on agglomeration and economies of scale, and explore the role of secondary cities as growth poles.

OUTCOMES

Participants left the session with:

- A good understanding of the key findings of the *Groundswell* report and its implications for inclusive and climate resilient urban planning
- An appreciation of shared perspectives and experiences on climate migration from select cities
- Policy, planning and investment directions for integrating climate migration in future urban development

METHODOLOGY

- The facilitator gave welcome remarks and provided a brief overview of the agenda for the session. **(10 minutes)**
- Presentation of the Groundswell Report. The session began with a presentation on the key finds of the report and explored its implications for urban development. **(20 minutes)**
- Panel Discussion – Panel members shared their perspectives on integrating climate migration in urban planning. **(30 minutes)**
- Q&A and Guided Discussion. Panel members and participants discussed challenges and opportunities for cities to plan for and integrate climate migration in future urban planning. **(30 minutes)**

CONTRIBUTORS

Facilitator *Viviane Clement, Climate Change Specialist, The World Bank, Washington D.C., USA*

Speaker *Veronica Hitosis, Deputy Executive Director, Policy, Programs, and Projects, League of Cities of the Philippines, Calabarzon, Philippines*

Further recommended reading

Groundswell: Preparing for Internal Climate Migration

- Groundswell: Preparing for Internal Climate Migration (Report)
- Climate Change Could Force Over 140 Million to Migrate Within Countries by 2050: World Bank Report (Press Release)
- Meet the Human Faces of Climate Migration (Feature Story)
- Groundswell: Preparing for Internal Climate Migration (Infographic)
- New Report Says Climate Change Could Force Millions to Move Within Their Countries (Video)
- Bangladesh: Supporting Climate Migrants through Education and Jobs (Video)
- Ethiopia: Creating Good Policies that Support Climate Migrants (Video)
- Mexico: Finding Ways to Help Communities Cope with Climate Change (Video)

SESSION DESCRIPTION

H1 Active citizen engagement and participatory urban resilience planning

Cities in Focus

Date: Saturday, April 28, 2018
Time: 11:00 – 12:30
Rooms: S25-26

Language: English
ICLEI contact: Ute Göldner
E-mail/web: resilient.cities@iclei.org
Organized by: ICLEI World Secretariat

OBJECTIVE

It is a truth universally acknowledged that urban resilience and climate change adaptation efforts are most beneficial when there is local ownership of efforts. Though undeniably an integral part of urban resilience efforts, citizens' active and *meaningful* participation is not necessarily straightforward or obvious in all local and cultural contexts.

Here to present different approaches to citizen engagement were four local government representatives. From Copenhagen, Denmark we learnt how "storytelling" could be used as a powerful tool for participatory planning and implementation, generating citizen's engagement, and enhancing the impact of the City's adaptation work. From Guimarães, Portugal we learnt how citizen participation has been integrated into the local governance structures to create a culture of positive change for sustainability and resilience. Next, Quito, Ecuador shared their strategy for including citizen voices in resilience planning and how to ensure that these voices are successfully integrated and translated to action. Santa Rosa, Philippines rounded up the session by introducing an innovative and collaborative project that aims to provide both socio-economic, as well as urban resilience benefits to its people, including significant improvements for residents of informal settlements. The City shared its collaborative process and actions taken by the city to increase downward accountability vis-à-vis resilience measures.

OUTCOMES

Participants had the chance to:

- Reflect on the benefits and opportunities of citizen engagement and participatory planning;
- Learn directly from cities on ways to achieve active community engagement in resilience planning and implantation;
- Take this knowledge with them to apply in their own communities, cities and regions.

METHODOLOGY

- The facilitator provided an introduction to the topic and contributors. **(5 minutes)**
- Each presentation was allotted 10 minutes. **(4 x 10 minutes)**
- The facilitator managed questions and answers. **(40 minutes)**
- Closing remarks by the facilitator. **(5 minutes)**

CONTRIBUTORS

Facilitator — *Anthony Socci, Senior Lead on International Resilience & Adaptation Policy, US Environmental Protection Agency, Washington, D.C., USA*

Presenter — *René Sommer Lindsay, Special Advisor, Climate Resilience, City of Copenhagen, Denmark*

Storytelling as strategy for creating climate resilient communities

One instrument to create a belief in a positive change and ensure the support of politicians and city dwellers is to understand planning as a form of "*persuasive storytelling*". It adds a layer of emotion to the, essentially technical, field of urban planning. Rather than being a purely technical field of work, planning should be about finding the best technical solutions, but also making these solutions relevant, valuable and relatable to both politicians deciding to fund them, and, especially, to the inhabitants who will be living in them.

Presenter — *Isabel Loureiro, Executive Coordinator for Guimarães Structure Mission European Green Capital 2020, Guimarães City, Portugal*

Jorge Cristino, Deputy Mayor's Aide, Guimarães City, Guimarães, Portugal

Weaving citizen participation into governance structures

As a World UNESCO Heritage site, the European Capital of Culture 2012 and European City of Sport 2013 Guimarães strives to become Portugal's most sustainable and resilient city in the future. To this end, over the past 30 years, the City's environmental governance has aimed at becoming a model of urban development. This is a city commitment that goes beyond politics and rather encompasses a strategic city governance decision to include citizens and have a citizen-driven approach to innovation and robust resilience and sustainability planning. The City of Guimarães shared concrete examples of how this is achieved on the ground.

Presenter — *Andrés Isch, General Planning Secretary, Municipality of Quito, Quito, Ecuador*

Citizen participation mechanisms in Quito, Ecuador

Citizen participation is the basis of the Resilience Strategy in the Metropolitan District of Quito. The Municipality of Quito is updating these participatory tools by building a digital participatory platform and by strengthening other participatory mechanisms, such as participatory budgets. The presentation showed how the effective participatory management of the city in different areas benefits from these mechanisms, such as the zonal administration of Eloy Alfaro in the south of the city, or of Calderón in the north.

Presenter — *Ermin Lucino, City Planner, City of Santa Rosa, Philippines*

Eco-Tourism People's Park - Stronger collaboration and resilience for all

The City of Santa Rosa, Laguna, Philippines is a fast urbanizing city located beside Laguna Lake. Though undeniably public parks provide social, economic, environmental, and disaster risk reduction benefits, such important public green spaces were not considered and prioritized in the fast development of the city. To address this, the idea of the "Eco-tourism People's Park" was born – a 14-hectare development. It will (1) decrease vulnerability by limiting exposure to risk through additional illegal housing developments, (2) increase adaptive capacity of the people living near the project area by maximizing the economic tourism opportunities that the project will bring (3) improve the socio-economic status of the people in the city and (4) throughout the project development increase local ownership and citizen participation.

H2 Reality Check: Adaptation on the ground in Istanbul Metropolitan Municipality

Reality Check Workshop

Date: Saturday, 28 April 2018
Time: 11.00-12.30
Rooms: S29-31

Language: English
ICLEI contact: Evgenia Mitroliou
E-mail/web: resilient.cities@iclei.org

OBJECTIVE

Many scientific studies have proven that our cities have become increasingly vulnerable because of chronical stresses like overpopulation and acute shocks. This affects not only Istanbul but other World cities as well, which must solve these problems and threats as soon as possible in order to take our cities well prepared into the future. The transformation of our neighbourhood into a *Resilient* neighborhood should be evaluated through a holistic approach, addressing social, physical, economic and environmental concerns such as disaster risk management, improving living and health safety standards, expanding and improving infrastructure, creating more open space, air pollution abatement and energy efficiency etc. There are several ways by which urban development can be increase resilience. Urban Transformation is one the most important tools for it. The İstanbul Urban Transformation Master Plan (İKDMP) is being developed to provide a holistic approach to the transformation ensuring that İstanbul in the future is successful, accessıble and safe.

The work is being conducted in three stages:

Phase 1: Preparation of Analysis + Synthesis: Economics, demographics, culture and society, urban form and planning context, legislation and governance, natural environment, urban resilience, transport infrastructure, utility infrastructure are research themes.

Phase 2: Determining Economic Potentials and Development Strategies: Assessment of economic sectors and current projections, development of Economic / Population Scenarios and visions, scenario testing and land use analysis, economic, demographic and land use budget forecasts and parameters are research themes.

Phase 3: Preparation of Transformation Schemes That Shall Form the Basis for the Plans to be Prepared with Urban Transformation Perspective for the Whole City of İstanbul: Development of options for city-wide transformation - drawing upon the analysis and synthesis, identification of priority areas for intervention and conceptual master planning, refining the City Wide Transformation Plan at 1:25,000 scale, refining urban transformation plans and guidelines for individual priority areas

The case study presented in this Reality Check Workshop was about the application of the Transformation plan in Bayrampaşa district, an area about 25 Hectares in central Istanbul. This transformation project started in 2016 will run until 2019. The main problems in this area were unsafe buildings and a lack of green spaces and social facilities. In an approach called “Build & Transfer & Evacuate”, safe buildings will be erected on state-owned land and bartered against unsafe buildings in the vicinity. Thus, after the transformation process has been concluded, there will be 2500 safe residential units available. Built & Transfer & Evacuate is a model that can be used on empty, state-owned urban development areas. Any essential public areas such as green areas, regional parks, public health facilities, educational facilities etc. can be planned in these urban spaces within the master plans for these areas.

OUTCOMES

This Session informed and discussed with participants Istanbul's approaches to realizing urban resilience. In particular:

- How Istanbul has approached analysing and understanding its risks – especially around the significant earthquake hazards – and what it has done to address these.
- Istanbul's implementation of the Urban Transformation Model with Bayrampaşa district serving as a case study.
- Discuss the process, achievements and challenges of this process with the Local Government Representatives.

METHODOLOGY

- Welcome and introduction. **(10 Minutes)**
- Istanbul and earthquake: introducing the Istanbul Earthquake Master Plan and Disaster Risk Management. **(10 minutes)**
- Earthquake based urban transformation studies with case studies from Fatih, Küçükçekmece and Zeytinburnu. **(10 minutes)**
- Istanbul Urban Transformation Master Plan Study (IKDMP)*:* Problem areas (multi-criteria analysis), opportunity areas for urban transformation (1/5000 scaled) and priority areas for urban transformation (1/1000). **(15 minutes)**
- Implementation studies by using the Built&Transfer&Evacuate model on state-owned areas.
- Case study: Bayrampasa Urban Transformation Project. **(15 minutes)**
- Breakout discussion groups and Q&A. (**30 minutes)**

SPEAKERS from Istanbul Metropolitan Municipality, Turkey

Speaker	*Süleyman KARALI, Deputy Secretary-General, Istanbul Metropolitan Municipaliy*
Speaker	*Betül ERGÜN KONUKCU, Team Leader of Resilience & Sustainability, Urban Transformation Directory*
Speaker	*Gökhan YILMAZ, Head of Earthquake Risk Management and Urban Improvement*
Speaker	*Didem CALISKAN, Coordinator, Urban Transformation Directory*
Speaker	*Seniye Selcen ONUR, Director, Urban Transformation*
Speaker	*Semih ADİL, Coordinator, Urban Transformation Directory*
Speaker	*Ayşe GÖKBAYRAK, Vice Director, Urban Transformation*
Speaker	*Mehmet Akif LEVENT, Administrative Assistant, Deputy Secretary-General Office*

SESSION DESCRIPTION

H3 Managing water resources in cities

Presentations

Date: Saturday, 28 April, 2018
Time: 11:00-12:30
Rooms: S30-32

Language: English
ICLEI contact: Ute Göldner
E-mail/web: resilient.cities@iclei.org
Organized by: ICLEI World Secretariat

OBJECTIVE

Many cities are facing growing difficulties in securing safe and reliable water supplies, managing wastewater and dealing with floodwaters that threaten human health and safety and put critical infrastructure at risk. While cities' vulnerability to water-related challenges are often associated with inadequate infrastructure, ineffective urban planning approaches and unplanned urban development, increasingly added pressure is generated by the impacts of climate change, increased population growth and related water-use needs, as well as water mis-management in the broader catchment which significantly reduces water availability in cities.

The first presentation set the scene with the argument, that a transition is needed to redesign cities into 'water smart cities' – i.e. green, resilient, and circular urban environments – by integrating urban planning with innovative water management measures so that every drop of water in a city is considered a benefit, instead of a problem. Investing in the right kinds of solutions could help drive this vision. Showcasing how leveraging partnerships with the private sector can increase effectiveness of water use and distribution, the next presentation focused on two cities in Uganda. The last presentation introduced how African cities are managing (scarce) water resources in the region, with the example of Cape Town's recent water shortage crisis in focus.

OUTCOMES

The session provided examples of:

- Effective urban planning approaches that address the challenges of urban water security and water safety;
- The benefits and challenges of establishing integrated, circular economy approaches;
- How knowledge-sharing can benefit implementation and replication of good practices.

METHODOLOGY

- The facilitator provided an introduction to the session topic and contributors. **(10 minutes)**
- Each presentation was allotted 10 minutes. **(3 x 10 minutes)**
- The facilitator will manage questions and answers. **(40 minutes)**
- Closing remarks by the facilitator. **(10 minutes)**

CONTRIBUTORS

Facilitator *Vasileios Latinos, Program Officer, Sustainable Resources, Climate and Resilience, ICLEI Europe, Freiburg, Germany*

Presenter *Tim van Hattum*, *Program Leader Climate, University of Wageningen, The Netherlands*

Towards water smart cities

Water is a vital resource and plays an important role for the livability of cities. Cities around the world face great challenges with water including risks for water shortage and floods. These challenges ask for a systemic approach and a transition in urban planning. We have to rethink the way we deal with water in our cities to create green, resilient and circular cities, so called “Water Smart Cities”, where collaboration between businesses, public authorities, researchers and citizens plays a unique part to ensure rapid transition.

Presenter *Scott McCormick, Senior Associate, Land and Water Resources, Tetra Tech, Burlington, USA.*

Leveraging partnerships for water security: Reducing non-revenue water in Uganda

Urban areas in East Africa face the challenges of competition for water resources, inadequate infrastructure, droughts and water shortages, and non-revenue water loss. Under the USAID-funded PREPARED project, Tetra Tech harnessed private sector engagement to reduce water loss in two urban areas (Jinja and Iganga) in Uganda. In order to achieve the project goals three key components had to be addressed: (1) Improving service delivery, (2) enhancing customer engagement, and (3) improving water monitoring and management through engineering and ICT solutions. Working in a Public-Private Partnership Uganda’s National Water and Sewerage Corporation (NWSC) the project also partnered with an international engineering firm and a local NGO, showing how critical partnership with the private sector and civil society is in creating a successful holistic water resilience strategy.

Presenter *Jessica Kavonic, Climate Change Officer, ICLEI Africa, Cape Town, South Africa*

Building African city-region resilience: Translating priority principles into action for improved management of water resources

A coordinated sharing of knowledge, particularly in the context of south-south and south-north learning, for the implementation of climate resilience interventions is imperative. ICLEI Africa’s cutting-edge projects provide good practice case studies for learning, providing solutions and guidance for better resilience planning in an African context. Based on these learnings, ICLEI Africa and partners have been exploring the development of core principles for implementing resilience initiatives in African cities. Case studies will be showcased, with Cape Town’s current water shortage in focus.

SESSION DESCRIPTION

H4 Slum dwellers count: Knowledge, data and action shaping inclusive urban resilience investments

Panel

Date: Saturday, 28 April, 2018
Time: 11:00-12:30
Rooms: S34-35

Language: English
Contact: Dorcas Robinson
E-mail/web: dorcasrobinson@measuringresilience.org
www.measuringresilience.org
Organized by: The Resilience Measurement, Evidence and Learning Community of Practice (CoP) with Global Infrastructure Basel Foundation (GIB) and Slum Dwellers International (SDI)

OBJECTIVE

This session explored how innovative partnerships are shaping urban resilience planning and partnerships, and presented data, tools and standards that can be applied by city development stakeholders.

The panelists presented how communities in the Slum Dweller International (SDI) network are collaborating with cities and international climate and resilience experts to bring *Know Your City* slum-dweller generated data into urban resilience planning processes. Participants learnt how SDI and Global Infrastructure Basel (GIB) are working to influence public and private sector investments in sustainable infrastructure in Durban, by applying KYC data to existing infrastructure investment certification tools through the *Standard for Sustainable and Resilient Infrastructure (SuRe®) Smartscan*.

This innovative collaboration project is supported through an award made by the Resilience Measurement, Evidence and Learning Community of Practice (CoP), which seeks to strengthen the evidence base for resilience investments. The CoP has an active network of members focused on the challenges of designing, measuring the outcomes of, and valuing, investments in resilience for urban contexts.

The specific objectives were to:

- Highlight how SDI's *Know Your City* initiative mobilizes slum dwellers to collect their own data, profile their settlements, and create partnerships with cities around this data
- Identify the ways in which SDI and GIB's analysis of this data has the potential to influence decisions and investments related to large infrastructure investments
- Discuss the ways in which linking urban planning and investment with real-time, local data can benefit development and investment at local, national, and global levels, with particular emphasis on rapidly growing cities with large informal settlement communities.

OUTCOMES

Participants were introduced to and gained a better understanding of:

- Methods for integrating data from poor communities into urban planning for resilience
- How this data can be applied to inform more inclusive infrastructure investment frameworks and decision-making; and
- Strategies to support urban poor communities to be at the table with urban planners and investors, thus promoting multi-stakeholder collaboration to increase city resilience for all.

METHODOLOGY

- The facilitator opened the session with a short introduction of themselves, and of the challenges of integrating data and robust measurement approaches into planning, monitoring and evaluating city resilience strategies that promote resilience for all. The facilitator introduced the panelists. **(10 minutes)**
- Three speakers, representing IIED, SDI and GIB introduced their organization's tools and approach to informing urban resilience planning and investment and describing the innovative collaboration project that they are implementing together. **(3 x 10 minutes)**
- The remainder of the session was organized around the guiding questions, intended to enable the panel to talk about what they are learning through their collaboration, with each panelist given time to respond to individual questions, and to respond to comments made by other panelists. **(20 minutes)**
- The facilitator managed Q&A from the audience and give closing remarks. **(25 minutes)**

Guiding questions:

1. What are the current challenges that urban poor communities face in being included in planning processes for developing and financing resilience strategies for cities?
2. What can and do urban poor communities bring to the urban resilience planning process? What approaches are being used in practice?
3. How can data analysis and resilience assessment reveal unknown or new kinds of investment potential? In what ways can KYC data being applied to inform infrastructure investment certification tools?
4. What insights does this work offer into how municipalities be supported to go beyond 'the data' towards increased engagement and more inclusive participation in city-level planning processes?

CONTRIBUTORS

Facilitator — *Robert Kehew, Leader, Climate Change Planning Unit, Urban Planning and Design Branch, UN Habitat, Nairobi, Kenya*

Panelist — *David Dodman, Director, Human Settlements, International Institute for Environment and Development, London, UK*

David Dodman is an expert on climate change vulnerability and resilience in urban centres. His current work focuses on understanding the nature of urban risks, and the way in which daily hazards, major disasters and climate change can affect low-income urban residents. He is working with local organisations, international agencies and universities to build the resilience in urban communities and cities.

Panelist — *Rose Molokoane, Co-ordinator FEDUP & Vice President SDI, Cape Town, South Africa*

A veteran of South Africa's anti-apartheid struggle, Rose Molokoane is a founder and Coordinator of the Federation of the Urban and Rural Poor (FEDUP) in South Africa. She is part of the SDI Management Committee and serves as SDI's Vice President. She grew up in an informal settlement called Oukasie, Brits, where she is still an active member of her savings group. In 2017 she was appointed Chair of the World Urban

Campaign and serves on a number of national and international urban advisory committees.

Panelist — *Louis Downing, Director, Standard Development, Global Infrastructure Basel (GIB), Basel, Switzerland*

Chief Operating Officer and Programme Manager of Capacity Development at Global Infrastructure Basel (GIB) Foundation, Louis presents the GIB Grading for Sustainable Infrastructure. This tool has helped to highlight the environmental, social and economic risks and potential impacts of projects and provided investors and project owners a framework for decision-making.

Further recommended reading

The Resilience Measurement, Evidence and Learning Community of Practice and the Innovation Awards: www.measuringresilience.org

Slum Dwellers International and *Know Your City*: http://knowyourcity.info

Global Infrastructure Basel Foundation and the *Standard for Sustainable and Resilient Infrastructure (SuRe®) Smartscan*: http://www.gib-foundation.org

SESSION DESCRIPTION

H5 Global Covenant of Mayors for Climate & Energy (GCoM): We want to hear your voice!

Local Government Consultation

Date: Saturday, April 28, 2018
Time: 11:00-12:30
Rooms: S01-02

Language: English
Contact: Miriam Badino
E-mail/web: miriam.badino@iclei.org / www.iclei.org
Organized by: ICLEI World Secretariat

OBJECTIVE

This facilitated discussion aimed at answering questions and concerns on the Global Covenant of Mayors for Climate & Energy (GCoM) that local governments wish to share and discuss.

These could be on the practical developments and framework of the merger of Compact of Mayors and EU Covenant of Mayors, or access to finance, the use of reporting platforms and available tools and support.

Taking the opportunity to have many city representatives participating in the Resilience Cities congress, ICLEI as a Founding partner of the GCoM shared updates on GCoM developments, followed by constructive discussions and suggestions from the local perspective.

METHODOLOGY

Facilitator *Maryke van Staden, Director, Carbonn Center; Program Manager, Low Carbon Cities, ICLEI World Secretariat, Bonn, Germany*

Further recommended reading

Global Covenant of Mayors for Climate and Energy: https://www.globalcovenantofmayors.org/

SESSION DESCRIPTION

P3 Measuring progress, enhancing action and anticipating future urban resilience challenges

OUTLOOK PLENARY

Date: Saturday, April 28, 2018
Time: 14:00-15:30
Room: S29-32

Language: English
Contact: Evgenia Mitroliou, Monika Zimmermann
E-mail/web: resilient.cities@iclei.org

OBJECTIVE

Following three days of discussion, the outlook plenary summarized and reflected on the key messages and moments from Resilient Cities 2018.

Part I: Congress summary

Part II: Measuring progress

- Impacts & efficacy: How are we measuring and applying evidence base? How can we track the efficacy and impacts of different approaches and innovations in urban resilience?
- Accountability: How can measuring and reporting make local action accountable?
- Follow up: Ongoing initiatives and upcoming events and milestones including the ICLEI World Congress and the High-Level Political Forum (HLPF) on sustainable development in 2018.

Part III:

As with each Resilient Cities Congress, we look ahead to emerging issues in urban resilience. Digitalization and resilience was part of the opening discussion, challenges around autonomous driving form a call for action at the congress outlook plenary.

METHODOLOGY

- Opening and summary remarks. **(20 minutes)**
- Discussion on key messages and accountability and 2018 milestones. **(45 minutes)**
- Special address: What does autonomous driving mean for resilient cities? (**20 minutes**)
- Closing remarks. **(5 minutes)**

CONTRIBUTORS

Facilitator:

- *Monika Zimmermann, Deputy Secretary General, ICLEI – Local Governments for Sustainability*

I: Congress summary and reflections

- *Ashok Sridharan, Mayor, City of Bonn, Germany; First Vice President, ICLEI Global Executive Committee (2015 – 2018); Co-Chair and ICLEI special messenger to UNFCCC and Carbonn Climate Registry; Co-Patron of Resilient Cities 2018*
- *Robert Kehew, Leader, Climate Change Planning Unit, Urban Planning and Design Branch, UN Habitat, Nairobi, Kenya*

II: Review of SDG11: Measuring progress toward resilience goals and applying evidence base

- **Progress from the perspective of UNISDR**

  David Stevens, Head of Bonn Office, United Nations Office for Disaster Risk Reduction (UNISDR), on behalf of Mami Mizutori, Special Representative of the Secretary-General for Disaster Risk Reduction; Co-Parton of Resilient Cities 2018 (invited)

- **Progress from the perspective of local practitioners**

  Lykke Leonardsen, Head of Climate Unit, Resilient and Sustainable City Solutions, City of Copenhagen, Denmark

- **ICLEI's political message to the review of SDG11 and the High-level Political Forum (HLPF)**

  Manuel de Araújo, Mayor, Quelimane Municipality, Mozambique; Co-Chair ICLEI Resilient Cities Portfolio

  Yunus Arikan, Head of Global Policy and Advocacy, ICLEI World Secretariat, Bonn, Germany

II: Looking ahead: Autonomous driving as a challenges to cities' resilience

- *Michael Glotz-Richter, Senior Project Manager 'Sustainable Mobility', Senate Department for Environment, Construction and Transport of Bremen, Bremen, Germany*

  Self-driving-vehicle technologies are on the rise. Heralded as a controversial innovation that will revolutionize our cities, autonomous driving promises to make our urban mobility systems safer and more efficient. However, these emerging technologies are not risk-free. Relying on computer-powered technologies, advanced algorithms and machine learning makes autonomous vehicles prone to cyberattacks and malware. Further impacts on our cities, including an increase in car use, might endanger mitigation and adaptation achievements of the past.

Closing remarks

- *Monika Zimmermann, Deputy Secretary General, ICLEI*