



# DELTA IN TIMES OF CLIMATE CHANGE II INTERNATIONAL CONFERENCE

OPPORTUNITIES FOR PEOPLE, SCIENCE, CITIES AND BUSINESS  
ROTTERDAM THE NETHERLANDS, 24 – 26 SEPTEMBER 2014

<b>Deltas in Depth scientific sessions</b>	
<b>Deltas in Depth Theme 5. Urban adaptation to climate change</b>	
<b>DD 5.3 Approaches to Urban Resilience</b>	
<b>Chair</b>	Prof. Edward Ng, Chinese University of Hong Kong, China
<b>Presentations</b>	<ul style="list-style-type: none"><li>● Hung-Chinh Hung, National Taipei University, Taiwan</li><li>● Prof. dr. Han Meyer, Delft University of Technology, the Netherlands</li><li>● Anne Loes Nillesen, Delft University of Technology, the Netherlands</li></ul>

The main focus of the session Urban Resilience is to draw out several methods to determine urban resilience. The scientists present three different methods:

- Making urbanized deltas adaptive
- Mainstreaming social participation into assessing resilience to climate hazards for land use management in Taiwan
- Improving the allocation of flood risk interventions from an urban and landscape design perspective

The chairman, Edward Ng, kicks off with an introduction. Han Meyer visualises in his presentation “Making urbanised deltas adaptive – a method” resilience as the rhythms of a delta, an ever changing and flowing system. Within this rhythm there might be a contradiction: how to be adaptive and resilient towards climate change and simultaneously thrive a vivid and prosperous socio economy. This scenario building method combines several processes (e.g. climate change, urbanisation, etc.) to transform a delta into a multiple adaptive system and thus creates a framework of robust zones in combination with adaptive solutions. This method creates a vision for projects, through understanding the history of the delta, the current physical state and the desired future.

The next speaker is Hung-Chih Hung, who talks about “Mainstreaming social participation into assessing resilience to climate hazards for land use management in Taiwan.” His method uses socio-economic data to determine whether an area is resilient. Combining data from different socio-economic aspects (e.g. number of fire departments, educational level, etc.) with physical data (e.g. elevation, climate hazards, etc.) delivers a bulk of information. Out of this new bundle of data conclusions can be drawn to determine the resilience of specific areas in a city.

Last but not least, Anne Loes Nillesen starts her presentation on “Improving the allocation of flood risk interventions from an urban and landscape design perspective”. Her method focuses on the regional scale of resilience, and in particular the Dutch delta. This method provides interventions for different scales. Whereas in specific place a dike enlargement suffices, in other places self reliance is the key to success. Worth mentioning is the cost benefit aspect, that optimises the design of the solutions.

In the end, the three methods provide an interesting view to create resilient cities. Unfortunately the methods cannot yet be used in daily practice. However, they are good approaches to start the discussion with the policymakers and to determine the necessity for resilience. The gap between the worlds of science and practice becomes smaller. Hopefully, in time both worlds will bridge this gap and will invest in resilient relationships.

