



DELTA IN TIMES OF CLIMATE CHANGE II INTERNATIONAL CONFERENCE

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

Deltas in Depth scientific sessions	
Deltas in Depth 9. Governance of adaptation	
DD 9.3 Knowledge and policy for governing adaptation in coastal regions	
Chair	Prof.dr. Joyeeta Gupta, University of Amsterdam, the Netherlands
Presentations	<ul style="list-style-type: none">• Camille Manning-Broome, Center for Planning Excellence, USA• MSc Chris Seijger, University of Twente, the Netherlands• Prof. Christo Fabricius, Nelson Mandela Metropolitan University, South Africa• Liang Xiong, Department of Urbanism, Delft University of technology, the Netherlands• PhD Matthias Garschagen, United Nations University Institute for Environment and Human Security, Germany

Camille Manning-Broome presents a “Local perspective and policy recommendations on ‘non-structural’ flood-risk reduction in south Louisiana”. After hurricane Katrina a recovery project plan is made for 21.000 participants, whose homes were flooded. The plan is a 50 year guide for growth and development; 81% of the people wanted to change the land use. To manage the system Manning-Broome designed the 2012 coastal master plan. The master plan included structural protection, bank stabilization, oyster barrier reefs, ridge restoration, shoreline protection, marsh creation, sediment diversion and hydrological restoration. The research is based on the Dutch DNA (Dutch National Approach). This is different than is used in the USA. The planners looked at how people were living and how and where they buildings were constructed. Industries were located nearby the waterfront. In designing a new plan for the coast, educational workshops with experts were held and stakeholders were motivated to participate. Also a coastal toolkit was created. By using this toolkit it could be concluded that by 2050 about 3,5 million people would be at risk from flooding. This project is about the people and economics.

Chris Seijger’s presentation is on “Organising interactive knowledge development in multifunctional coastal projects”. We are applying a lot of monofunctional engineering solutions at the coast. We should not only use engineering knowledge, but also include practical experience of stakeholders, since all stakeholders have their own knowledge and make their own decisions (different norms). For his research, he analysed three case areas, Waddenzee, Francisco bay and Delfzijl. To analyse practices of interactive knowledge development he separated actors in a project- and a knowledge arrangement. Within the two arrangements, there are four important issues: actors, resources, discourses and rules. For data collection for the three cases he used different methods: interviewing, project meetings and field trips. The key results of the study into interactive knowledge development is that sharing responsibilities at the project level supports interaction rules for interactive knowledge development. The feasibility of solutions improves through interactive knowledge development.

Christo Fabricius focuses on “Understanding and learning from (mal) adaptations in coastal areas”. Adaptation is seen as a good thing, but the question is: ‘What constitutes effective adaptation?’. There are a lot of wicked problems in relation to coastal adaptation. The effects of climate change, but also the vulnerability of other systems. So often we designed mal-adaptation: ‘actions taken to avoid or reduce





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vulnerability to climate change, but in reality they impact adversely on, or increases the vulnerability of other systems, sectors or social groups'. For his research, he used three cases, South-Africa, France and United Kingdom. The methods used are interviews, dialogues, participatory action research, mapping development of models, feedback learning and participation planning. The framework used is the connecting and disconnecting of social elements. Other frameworks are focused on human adaptation strategies and the resilience framework. To test maladaptation, the framework is divided in four categories: robust undesirable, robust desirable, fragile undesirable and fragile desirable. Testing the three cases lead to 'ensnaring' maladaptations, 'stagnating' maladaptations, 'disruptive' maladaptations and 'blinkered' maladaptations. The conclusion is that adaptation can be dangerous, but the pathways can better be understood by using a multi-scale SES lens and participatory methods, coupled with models. Thus combination has the potential to simulate smart adaptations.

Xiong Liang talked about "River & urban system governance in Pearl River Delta: 1920-2013". The China Pearl River Delta is the area with the fastest population growth. For this research, Liang designed a triangle with three corners: river dominated, tide dominated and wave dominated. For the analysis, he first looked at the history of the delta area in different layers, water, buildings and infrastructure. He analysed this for the years 1279, 1644, 1911 and 2010. The next step was to look at the big events that happened in the area in 1920-1970 (large scale dike integration & land ownership change) and in 1980-2013 (sand dredging and fast urbanization). The central government started to integrate the large dikes projects, but only three of them were successful, because the central and provincial governments were not working together very well. The first change of land ownership was towards collective farmland. The positive thing of this change is that people better cooperate together and it is positive for the urban expenses. A problem is that the riverbed has decreased in the last 25 years. In the last 80 years ownership and land management are changed, meaning that also water management has changed. So there is a need to change the governance system.

Finally, Matthias Garschagen gives his presentation about "Bridging state and non-state divides in Vietnam's transforming adaptation governance: Lessons from the Mekong", a study into how to facilitate effective adaptation governance in one of the most hazard-exposed deltas globally. The research is about how responsibilities and capacities for risk reduction and adaptation are negotiated and shared in selected urban risk hot-spots of the Mekong Delta, focusing in particular on the shifting roles of state vs. non-state actors within Vietnam's changing political economy. The case study has about 450.000 residents, a rapidly growing economy and flood risk is increasing. The risk of flooding on a daily base is one of the dynamic factors. So Garschagen looked at elements such as global change influences, vulnerability, adaptive capacity, governmental risk, national legislation and influences of discourses. Methods used are interviews, participation observation, discussions experts, workshops, statistical data and literature analysis. State measures in the case study are flood protection, climate change adaptation and climate change institutional changes. Then he looked at household level, where different measures are possible. For testing the method he used the best five measures, 1. house elevation, 2. alley elevation, 3. participating in vocational training class, 4. building small flood barrier and 5. moving to another area. He tested the measures by risk ranking: before and after resettlement.

