



# DELTAS IN TIMES OF CLIMATE CHANGE II

## INTERNATIONAL CONFERENCE

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

Deltas in Practice, policy-practice sessions	
Deltas in Practice Theme 2. Adaptation strategies	
DP 2.5 Resilient cities talk: best practices and remaining challenges on creating resilient urban waterfronts	
Chair	Camiel van Drimmelen, City of Amsterdam, the Netherlands
Organised by	Peter van Veelen, City of Rotterdam and Delft University of Technology, the Netherlands Martijn Steenstra, Grontmij and STAR-FLOOD project, the Netherlands
Presentations	<ul style="list-style-type: none"> <li>● Martijn Steenstra, Grontmij and STAR-FLOOD project, the Netherlands</li> <li>● Alex Nickson, Greater London Authority, United Kingdom</li> <li>● Peter van Veelen, City of Rotterdam, the Netherlands</li> <li>● Jan-Moritz Müller, City of Hamburg, Germany</li> <li>● Ulf Moback, Gothenburg City Planning Authority, Sweden</li> </ul>
Panel	<ul style="list-style-type: none"> <li>● Dries Hegger, Utrecht University, the Netherlands</li> <li>● Prof. Zbigniew Kundzewicz, Polish Academy of Sciences, Poland</li> </ul>
Session topic	<ul style="list-style-type: none"> <li>● Best practices and remaining challenges on creating resilient urban waterfronts</li> </ul>
Objective of the session	<ul style="list-style-type: none"> <li>● To discuss challenges that coastal water front cities face when making their cities resilient. The question is how to respond to the urbanised floodplains that are becoming increasingly vulnerable.</li> </ul>
Main conclusions and lessons learnt from the presentations	
<p>The resilient cities talk focused on the challenges that the coastal cities face when making their cities more resilient. Martijn Steenstra showed that in the EU funded research programme <a href="#">Starflood</a>, five strategies are identified to deal with floods ranging from spatial planning to flood recovery. Starflood studies the related governance challenges.</p> <p>Alex Nickson shows that London is well protected against floods from the sea, but the city's drainage system is reaching its maximum capacity. Is a transition towards a new strategy, based on more infiltration possible? A main challenge is how to mainstream incremental improvements to the system into urban development. This is related to the question how to value increased storm water run-off. Can we put a price on 'producers' of storm water to incentivise smart local solutions to retain or store storm water. A barrier that needs to be overcome is that pricing storm water results into small extra costs.</p> <p>The Netherlands strive to broaden their flood risk management strategy. Based on three examples in which multiple layers of defence (prevention, mitigation and disaster management) are balanced in Amsterdam, Dordrecht and Rotterdam. Especially in unembanked areas close to the rivers, opportunities exist to base flood risk management on individual measures rather than dikes. Peter van Veelen explains that this entails involving new stakeholders and convincing them to take measures themselves. The main issue is that costs of extra protection are unevenly distributed among stakeholders, which is at odds with the Dutch centralised flood risk management system.</p>	





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The city of Hamburg is protected by dikes, except for the new Hafencity area. Here, a combination of elevated access pathways and water proof buildings provide a local solution for storm surges. Private parties have more responsibilities in flood protection. Changes in flood standards proved a problem for the oldest parts of the Hafencity. Jan-Moritz Müller explained that the designs lacks flexibility: due to new standards more protection is needed but adapting the buildings is difficult. Also this form of building level protection needs a high level of regular building maintenance.

Gothenburg has a large waterfront area that is flood prone and still lacks protection. Many options for protecting the city are still open. The city is evaluating the possibilities of protecting the city using large scale barriers, local protection walls or object protection. Ulf Moback describes that the current challenge is to provide an integrated analysis/framework to decide on local or regional solutions and to communicate about this decision.

### Main conclusions of the discussion

The discussion focussed on new possibilities to fund new strategies. Should London create a 'concrete tax' to pay for more green areas? How can Rotterdam involve the private sector to pay for measures? Should people pay taxes or insurance according to the risk they live at?

An insight from the session is that most cities undertake a cost-benefits analysis on the proposed measures. However, it is usually the impact on spatial quality that is most important when choosing a solution in city centres. Hamburg choose the solution in Hafencity not because it was the cheapest or easiest, but merely because it added most to the spatial quality.

An audience member mentioned that in some cities specific flood safety strategies have become impossible. For example, keeping the population out of flood prone areas has become impossible in many cities. This situation can be described as a technical lock-in, in which systems are locked in a pathway which makes it very expensive to change over to an other strategy.

In the Starflood programme the question arose whether diversifying the strategy regarding flood safety will lead to more resilient cities. Although not answered during the session, the discussion showed the insight that many solutions exist, but changing ones strategy is not easy. Lock-in situations, in which changing strategies becomes difficult and expensive, are hard to avoid, but flexibility should be the core of any new flood risk strategy such as currently is being developed for Bangladesh and many large cities in developing countries.

### Main result or conclusion of the session

Discussing the topic of resilience with European cities with comparable situations has proven to be beneficial. Conclusion of the session is that this discussion needs in depth follow-up.

