



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 4: Green adaptation/ Building with Nature	
DP 4.1 How to find the balance between economic and natural sustainability – 5 WWF delta cases	
Chair	Esther Blom, WWF NL, the Netherlands
Organised by	Bas Roels, WWF NL, the Netherlands
Presentations	<ul style="list-style-type: none"> • Dr. Ruan Renliang, Deputy Chief Engineering of Shanghai Water Authority, China • Dr. Yong Yi, WWF China, China • Anurag Danda, WWF India, India • Viet Hoang, WWF Vietnam, Vietnam • Bas Roels, WWF NL, the Netherlands • Eva Hernández, WWF Spain, Spain
Session topic	<ul style="list-style-type: none"> • Upstream developments in the basin all have an impact on the water quality, quantity, timing and sediment distribution in deltas. This makes deltas the indicators of health of river basins. The economic and political powers in deltaic areas may have an influence to mitigate or even stop destructive activities upstream.
Objective of the session	<ul style="list-style-type: none"> • This workshop aims to summarise successful cases and lessons learnt in 5 world's representative deltas. It provides valuable and tangible reference for all relevant stakeholders to take a serious consideration on their delta's future development.
Main conclusions and lessons learnt from the presentations	
<ol style="list-style-type: none"> 1. Yangtze delta, 'from vision to action'. In the presentation several actions that have been successful in restoring the ecosystem are discussed: coastal wetland conservation, urban river ecosystem restoration, land subsidence control, etc. All these measures also resulted in better environments for people. 2. Sundarbans delta, 'vulnerability, vision and beyond'. In this presentation 3 developments were discussed: improvement of the quality of life of the human population, restoration of mangrove forests and systematic outmigration by 2050. With a growing population pressure of about 1000 persons / km² not all problems can be solved when all the inhabitants will stay in the area in the long term. Therefore, it is important to get support for changing residence to other, less vulnerable regions. Nature protection and development will go hand in hand. 3. Vietnam is one of the countries that is most vulnerable to climate change. This results in the recognition that adaptation measures are more important than before for the development of the Mekong area. However, there is still a lack of knowledge and information on how to adapt and the effects of adaptation. Climate-smart agriculture, mangrove production and restoration, and capacity-building, are examples of specific measures that are already taken. Also a cost-effectiveness equation was presented for 'grey' and 'green' measures. 4. The Dutch delta area was more or less closed after the 1953 flooding by a programme called 'de Deltawerken'. Nowadays re-opening the delta is a debated issue. Re-opening 	





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the delta would be better for nature, safety and tourism. To realise this it is necessary to find strategic partners like the Port of Rotterdam and the city of Dordrecht.

5. The Guadalquivir area in Spain has some problems that are accumulating: excess of nutrients, high CO2 emission, asymmetrical estuary, loss of tidal flats (less curves in the river), toxicity events and coast erosion. Land use has changed over the last 50 years: more forest, less water and more built up. Until some years ago there was no overall vision, this is now much better.

Main result of or conclusion from the session

1. View the river system as a whole: especially the upstream parts are crucial for the (water)quality and quantity of the downstream parts . The overall conclusion can be drawn that strategic partners are important in but also outside the delta.
2. inhabitants of the delta areas should support the developments. Their livelihood is important.
3. Strong partnerships between governmental organisations and companies are necessary to solve the challenges.
4. Of all the problems mentioned sea level rise is not the biggest one.

