DELTAS IN TIMES OF CLIMATE CHANGE II

OPPORTUNITIES FOR PEOPLE, SCIENCE, CITIES AND BUSINESS

INTERNATIONAL CONFERENCE

ROTTERDAM, THE NETHERLANDS 24 – 26 SEPTEMBER 2014

PROGRAMME

Floods in Bangkok and the Thames delta, salt intrusion in Egypt and Bangladesh: just a few examples of the challenges deltas and delta cities face. They are tangible effects of climate change.

Adaptation strategies are being developed, flood protection plans carried out and measures taken to manage fresh water more effectively. But climate change not only affects the water systems we depend on. Extreme weather, including heat waves, affects the quality of life and infrastructures, crucial economic assets in metropolitan areas. Considerable progress has been made since the first Deltas in Times of Climate Change conference in 2010. We then focused on assessing impacts and planning. Now, in 2014, the focus will fall on implementation. This reveals important issues such as governance and finance, and the mainstreaming of adaptation into current practices. The quest to adapt to climate change brings innovation, both technical and socio-economical. This requires new thinking and new arrangements for cooperation. All these issues will be discussed during the Deltas in Times of Climate Change II conference in Rotterdam.

The conference brings together scientists and practitioners, business people and public officials, civil servants and people from non-governmental organisations. Leading authorities will reflect on the latest insights from science and how people in deltas are coping with climate change. Participants can choose from a wide variety of scientific and practitioners sessions. Panels of leading figures from the public and corporate sectors and the non-profit world will discuss options for financing adaptation, community based adaptation and many other timely issues.

Exchanging scientific knowledge, lessons learned and best practices is at the heart of the conference. Networks will be strengthened, new networks will be formed. Connecting Delta Cities (a cities platform for sharing best practices) and the Delta Alliance (an international coalition to promote scientific cooperation) will be present. Networks act to create communities engaging scientists, policy makers and practitioners in developing and promoting new delta techniques and innovative governance and finance concepts.

We very much look forward to your contributions to the conference. We are convinced that they will inspire new insights for resilient deltas and for a better world.

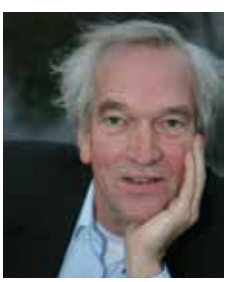
Melanie Schultz van Haegen
Minister of Infrastructure and the Environment

Ahmed Aboutaleb
Mayor of Rotterdam

Prof.dr. Pier Vellinga
Conference Chair

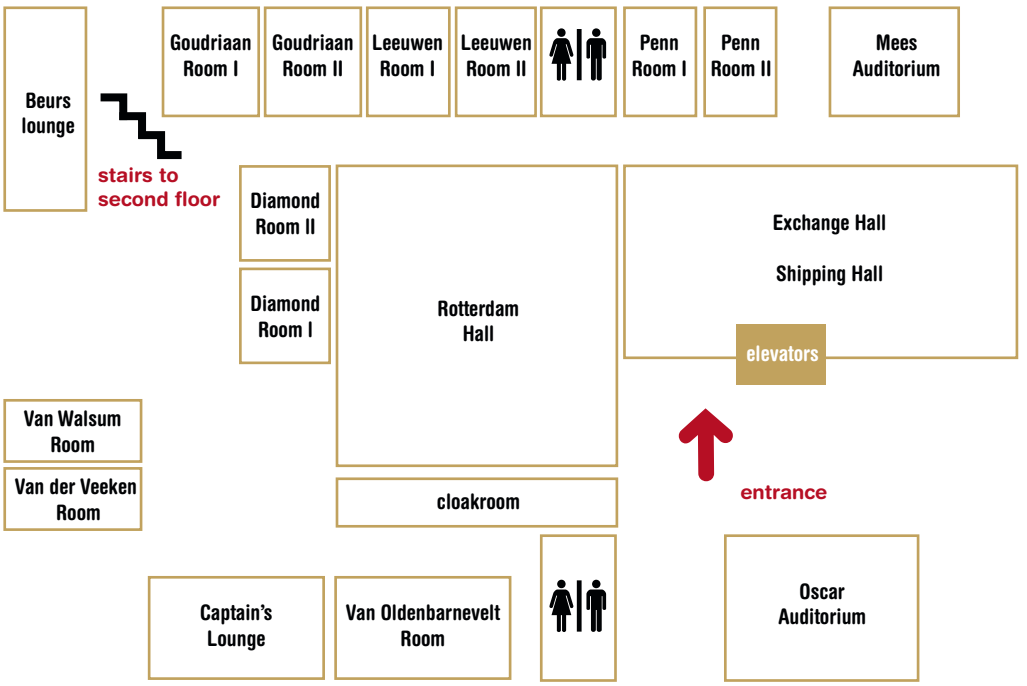
Melanie Schultz van Haegen

Ahmed Aboutaleb

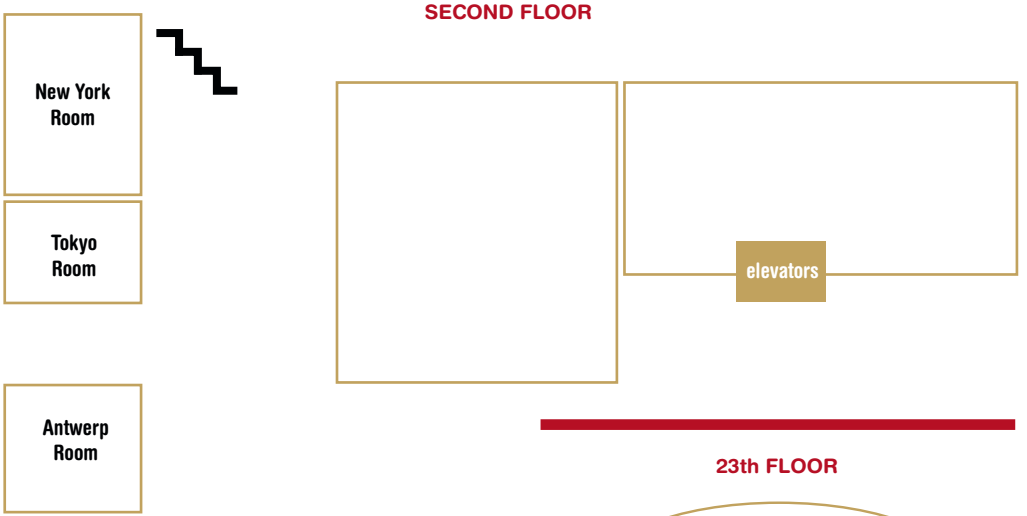


Pier Vellinga

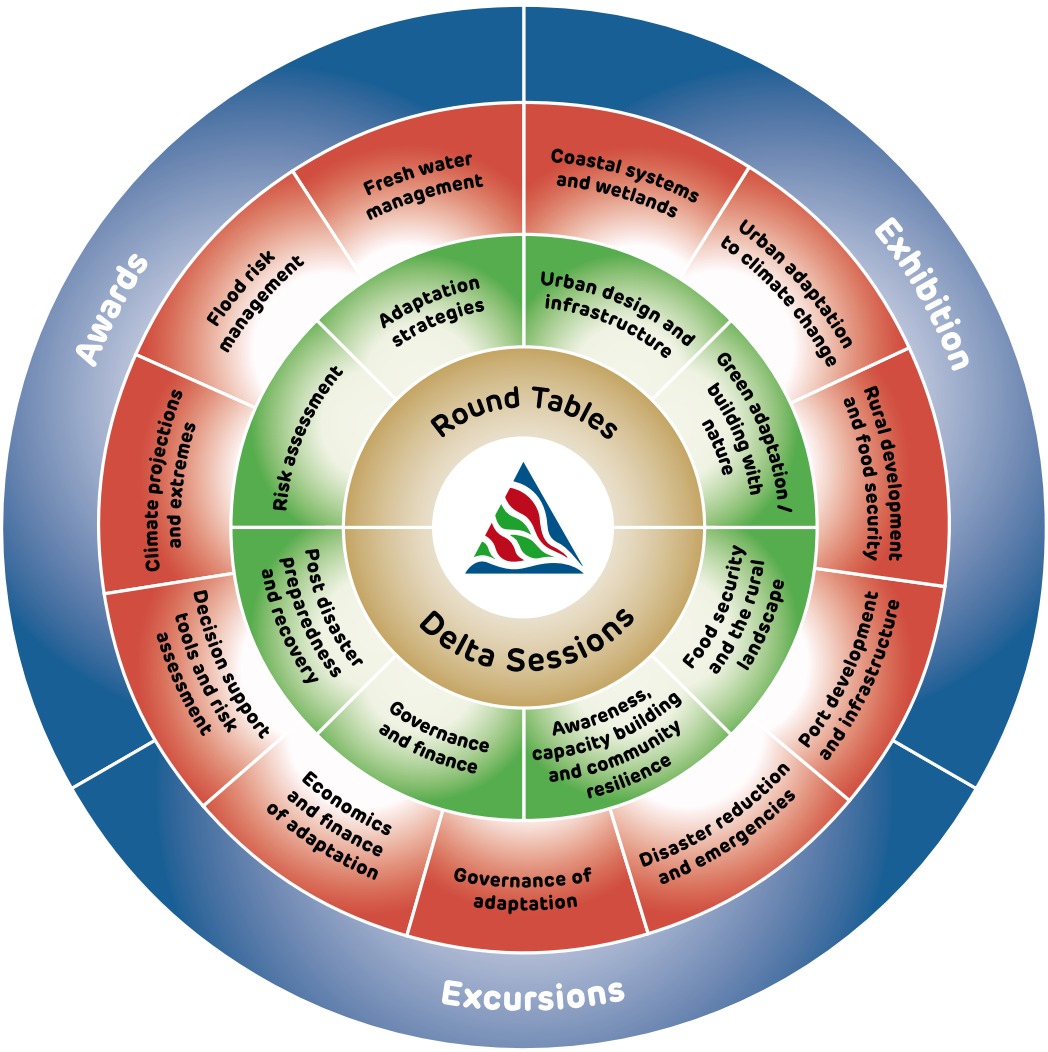
GROUND FLOOR



SECOND FLOOR



23th FLOOR


Awards
Exhibition
Excursions
Fresh water management
Coastal systems and wetlands
Urban adaptation to climate change
Rural development and food security
Port development and infrastructure
Disaster reduction and emergencies
Governance of adaptation
Economics and finance of adaptation
Decision support tools and risk assessment
Climate projections and extremes
Flood risk management
Adaptation strategies
Urban design and infrastructure
Green adaptation / building with nature
Food security and the rural landscape
Awareness, capacity building and community resilience
Governance and finance
Post disaster preparedness and recovery
Risk assessment
Round Tables
Delta Sessions

Plenary sessions

Participants of the conference will be welcomed by the Mayor of Rotterdam, Ahmed Aboutaleb. He will show how much delta cities have proceeded with the implementation of adaptation strategies since 2010. Then various prominent speakers will follow: Melanie Schultz van Haegen, Dutch Minister of Infrastructure and the Environment, prof. Myles Allen of the University of Oxford, Yolanda Kakabadse, international president of the WWF and prof. Chris Rapley, climate scientist and former director of the Science Museum in London. The speakers will address topics, such as the latest scientific findings on climate change, the effects of climate change on people and ecosystems in deltas, and the communication of climate science. After the break short pitches will be given and a panel discussion will be moderated by Roger Harrabin, BBC correspondent.

On Thursday 25 September a short plenary session can be enjoyed focussing on finance and economics of adaptation with Stéphane Hallegatte of The World Bank and Stephan Ritter, CEO in Europe of ARCADIS, as key note speakers. The session concludes with a show of the International Business Challenge; the winners of the Challenge will be announced.

The conference will be closed with a plenary session on Friday 26 September with a speech by Henk Ovink, Senior Advisor Hurricane Sandy Rebuilding Taskforce and by the award ceremony for best presentation and poster.

Plenary opening, Wednesday	09.30 – 12.20	Rotterdam Hall
Plenary, Thursday	11.15 – 12.15	Rotterdam Hall
Plenary closure, Friday	12.00 – 13.00	Rotterdam Hall

Parallel sessions

The conference offers more than 100 parallel sessions on Wednesday afternoon 24 September, Thursday 25 September and on Friday morning 26 September. The diagram shows the different kinds of sessions and the themes of the conference.

You can participate in **Round Table** discussions. On Wednesday afternoon mayors and alderman of delta cities will discuss the question 'If Mayors ruled the world', followed by a Round Table Financing adaptation. The Round Table Community Based Adaptation takes place on Thursday. Besides these Round Tables nine **Deltas Sessions** will be held, focussing on a specific delta country and two sessions about the research programme 'Urbanising Deltas of the World'.

The second ring represents the policy programme **Deltas in Practice**, with sessions structured around eight themes. In solution oriented sessions people from NGOs, private sector and governments at (inter)national, regional and local level will share lessons learnt, and exchange their approaches and best practices. The Deltas in Practice sessions are organised by a variety of international stakeholders and include presentations, group discussions, trainings, serious games and design charrettes. The sessions are tailored to practitioners' needs. Scientists are most welcome!

The third ring represents the scientific programme **Deltas in Depth**. Presentations of scientific results, methodologies and innovations are organised around eleven themes. Scientists and other experts discuss the latest scientific insights on a range of topics under these themes. Practitioners are most welcome to participate.

The fourth ring shows a variety of side events such as **excursions**, **exhibition** and **award ceremonies**.

Deltas in Depth

In scientific sessions, scientists from all over the world present their findings. Sessions will take place in the afternoon of Wednesday 24, on Thursday 25, and on Friday morning 26 September.
The programme is structured around the themes:

1. CLIMATE PROJECTIONS AND EXTREMES

Convenors: John Church, Wilco Hazeleger, Daniela Jacob, Eelco Rohling

Models and observations of the climate system play an important role in projecting our future climate. Especially extreme events can disrupt society. The impacts concern increased risks of coastal, river and pluvial flooding. This theme covers the following issues: future sea level scenarios globally and regionally, future changes in storm surges, changes in precipitation regimes and associated river discharge, analyses of multiple threats to coastal areas and deltas due to climate change, measuring/recording climate change induced change and extremes and compound climatic events.

DD 1.1	Scenarios	Wednesday, 14.00-15.45	Diamond Room II
DD 1.2	Sea Level Rise	Thursday, 09.00-10.45	Diamond Room II
DD 1.3	Weather/impacts (I)	Thursday, 15.45-17.30	Diamond Room II
DD 1.4	Weather/impacts (II)	Friday, 09.00-10.15	Diamond Room II
DD 1.5	Supporting adaptation	Friday, 10.45-12.00	Diamond Room II

2. FLOOD RISK MANAGEMENT

Convenors: Jeroen Aerts, Luciana Esteves, Frans Klijn, Heidi Kreibich, Zbigniew Kundzewicz, Corinne Larrue

Flood risks in urbanized coastal areas are largely determined by socio-economic trends (population growth and land use change) and the frequency and magnitude of extreme weather events. How can extreme event exposure be analysed and reduced? What type of adaptation strategies can be developed for managing low probability events? What are successful examples of community based flood protection measures and how does this relate to spatial planning? Which financial instruments are available to cover residual risks? How can insurance schemes provide incentives to reduce risk? How can we innovate in damage estimation and reduction, in evacuation and risk communication? Which tools from climate and vulnerability science are needed for the management of extreme events? These questions and others will be discussed under this theme.

DD 2.1	Social disruption	Wednesday, 14.00-15.45	Van Oldenbarnevelt Room
DD 2.2	Room for water	Wednesday, 16.15-18.00	Van Oldenbarnevelt Room
DD 2.3	Flood risk management	Thursday, 09.00-10.45	Diamond Room I
DD 2.4	Flood damage	Thursday, 13.30-15.15	Van Oldenbarnevelt Room
DD 2.5	Flood risk analyses	Thursday, 15.45-17.30	Van Oldenbarnevelt Room
DD 2.6	National policies	Friday, 09.00-12.00	Mees Auditorium, incl. break

3. FRESH WATER MANAGEMENT

Convenors: Emilio Custodio, Ad Jeuken, Shah Alam Khan, Holly Michael, Gualbert Oude Essink

Climate change, socio-economic development, ineffective water policy and governance, and basin-wide developmental interventions are causing increasing threats to the availability and access of fresh water in deltas for drinking, agriculture, ecosystem sustenance and industrial activities. Sea level rise, salinisation and long periods of drought are posing challenges to optimisation of freshwater supply and demand. The sessions under this theme cover research on how deltas can be adapted to threats of salinisation and increasing uncertainties in fresh water supply. This includes technical, economic, policy and spatial planning measures that can be applied for improved fresh water management.

DD 3.1	Surface water	Wednesday, 14.00-15.45	Tokyo Room
DD 3.2	Drinking water	Wednesday, 16.15-18.00	Tokyo Room
DD 3.3	Groundwater	Thursday, 09.00-10.45	Tokyo Room
DD 3.4	Agriculture-water	Thursday, 13.30-15.15	Tokyo Room
DD 3.5	Policy and practices	Thursday, 15.45-17.30	Tokyo Room

4. COASTAL SYSTEMS AND WETLANDS

Convenors: John Day, Peter Herman, Hans Paerl

Coastal systems, such as estuaries, sandy beaches, coastal wetlands and mangrove forests, are threatened by the accelerating human population growth and resultant impacts on the world's coastal regions. Effects of this activity are amplified by growing demands on the planet's limited supplies of (eco) dynamic coastal systems and freshwater, deterioration of water and habitat quality, changes in climatic patterns and rising sea level. Within this theme we will discuss problems coastal systems are facing in times of global change, opportunities estuarine ecosystems can offer in terms of climate proofing delta areas and feasible adaptation strategies.

DD 4.1	Sustainable deltas	Wednesday 14.00-15.45	Mees Auditorium
DD 4.2	Delta ecosystem	Wednesday, 16.15-18.00	Mees Auditorium
DD 4.3	Deltas 2015	Thursday, 09.00-10.45	Penn Room II
DD 4.4	Sediment	Thursday, 09.00-10.45	Goudriaan Room II
DD 4.5	Building with nature	Thursday, 13.30-15.15	Mees Auditorium
DD 4.6	Ecosystem	Thursday, 15.45-17.30	Mees Auditorium
DD 4.7	Wetlands	Friday, 09.00-10.15	Van Oldenbarnevelt Room
DD 4.8	Conservation	Friday, 10.45-12.00	Van Oldenbarnevelt Room

5. URBAN ADAPTATION TO CLIMATE CHANGE

Convenors: Bruce Glavovic, Edward Ng, Cynthia Rosenzweig, Chris Zevenbergen

Many urban deltas are under stress of population growth, austerity measures and associated environmental pressure. Changes in extreme events, rainfall patterns and higher temperatures increase this stress on cities and surrounding areas. Adaptation of the existing and newly developed urban fabric, public space, the water system, and buildings is essential to protect inhabitants from social dislocation and discomfort and calls for an approach which integrates and reconciles various objectives across institutional, spatial and temporal scales. This theme focuses on adaptation measures, policies and strategies to anticipate and cope with climate change impacts on urban deltas. It also covers research on governance aspects of urban adaptation.

DD 5.1	Urban adaptation	Wednesday, 14.00-15.45	Goudriaan Room I
DD 5.2	Adaptation tools	Wednesday, 16.15-18.00	Diamond Room II
DD 5.3	Urban resilience	Wednesday, 16.15-18.00	Penn Room I
DD 5.4	Economics	Thursday, 15.45-17.30	Goudriaan Room I
DD 5.5	Urban water	Friday, 09.00-12.00	Antwerp Room, incl. break
DD 5.6	Cities developing countries	Friday, 09.00-10.15	Penn Room II

6. RURAL DEVELOPMENT AND FOOD SECURITY

Convenors: Frank Berendse, Adri van den Brink, Saleemul Huq

A most prominent characteristic of delta regions is a high pressure on land and high competition for available space by urban and industrial development, food production and nature conservation. Flood protection and fresh water management call for innovative solutions if we want delta's to remain international centres for food production. The sessions under this theme will explore the various ideas, concepts and strategies to deal with the increasing demands. Both physical and institutional measures will be explored.

DD 6.1	Landscape development	Wednesday, 14.00-15.45	Leeuwen Room I
DD 6.2	Food security	Thursday, 15.45-17.30	Leeuwen Room I
DD 6.3	Food security (6.2 continued)	Friday, 09.00-10.15	Leeuwen Room I

7. PORT DEVELOPMENT AND INFRASTRUCTURE

Convenors: Jim Hall, Lori Tavasszy, Tiedo Vellinga

Ports and transport infrastructure are crucial elements for deltas to remain prosperous. But they and their related infrastructural networks are vulnerable to climate change, in particular to flooding, as extreme events over the last few years have demonstrated. Under this theme questions will be discussed such as: What can be done to make such systems less vulnerable? What is more effective: large scale area protection or small scale adaptation measures? How are preventive and how are post-disaster responsibilities organised? What can we learn from flooding experiences that is relevant for delta infrastructure?

DD 7.1	Systems approach	Wednesday, 16.15-18.00	Van Walsum Room
DD 7.2	Extreme weather	Thursday, 13.30-15.15	Goudriaan Room II

8. DISASTER REDUCTION AND EMERGENCIES

Convenors: Maarten van Aalst, Thea Hilhorst, Ed Thomas, Koko Warner

The hazard mitigation community often operates separately from the climate adaptation community, although they can enrich their knowledge by working more together. Climate adaptation experts can tap from the long standing experience and knowledge from the hazard mitigation experts and can deepen their understanding of future climate risks. They might start working together on rebuilding delta areas that have been confronted with a flooding event. In sessions under this theme the role of adaptation in hazard mitigation will be discussed and the possibilities to strengthen post hazard reconstruction with a long term adaptation perspective.

DD 8.1	Disaster, regional	Thursday, 15.45-17.30	Van Walsum Room
DD 8.2	Regional / global resilience	Friday, 09.00-10.15	Goudriaan Room II

9. GOVERNANCE OF ADAPTATION

Convenors: Harriet Bulkeley, Simin Davoudi, Joyeeta Gupta, Dave Huitema, Katrien Termeer

Adaptation to climate change is not merely a technical or environmental challenge, but also a social, political and normative challenge. Its policy domain and institutional landscape are subject to political contestation. Under this theme, questions will be discussed such as: how do societal adaptations in response to climate change take place? How can they be influenced? What do people mean by climate change and what is its significance for governing adaptation and transformations? What type of governance arrangements are emerging in relation to adaptation? How effective are they? What are the social justice implications of adaptation policies and practices? What forms of science-policy interactions and knowledge-power relations are emerging?

DD 9.1	Adaptation governance	Wednesday, 14.00-15.45	Oscar Auditorium
DD 9.2	Adaptation city	Wednesday, 16.15-18.00	Oscar Auditorium
DD 9.3	Adaptation coast	Thursday, 09.00-10.45	Oscar Auditorium
DD 9.4	Governing adaptation	Thursday, 09.00-10.45	Goudriaan Room I
DD 9.5	Actors and agendas	Thursday, 13.30-15.15	Oscar Auditorium
DD 9.6	Adaptation and public	Thursday, 15.45-17.30	Oscar Auditorium
DD 9.7	Adaptation the Netherlands	Friday, 09.00-12.00	Oscar Auditorium, incl. break

10. ECONOMICS AND FINANCE OF ADAPTATION

Convenors: Anthony Bigio, Stéphane Hallegatte, Swenja Surminski, Paul Watkiss

For policy makers and politicians the most challenging question is: what are the costs and benefits of adaptation and what are effective and legitimate strategies to finance adaptation measures? Financing arrangements for adaptation is an urgent matter. This theme covers the following issues: What trends in economic losses of climate extremes are detected and projected? Which methods can be used to calculate economic losses? How do we define the most cost effective and legitimate measures to gain the most socially desired benefits? Which innovative financing models for adaptation can be applied and what are possible partners for financing alliances?

DD 10.1	Financing	Thursday, 09.00-10.45	Beurs Lounge
DD 10.2	Climate risks	Thursday, 13.30-15.15	Penn Room II
DD 10.3	Tools	Thursday, 13.30-15.15	Diamond Room II

11. DECISION SUPPORT TOOLS AND RISK ASSESSMENT

Convenors: Carlo Giupponi, Richard Klein, Rob Swart

Uncertainty about climate change increases the complexity of decision-making. Limits to the predictability of natural and societal processes prevent scientists from making firm statements about the possible consequences of adaptation decisions. This contrasts with the public's expectation that decisions will be based on sound science. Better methods and tools for assessing, simulating and communicating climate risk and the environmental, social and economic costs and benefits of adaptation might help in bridging the gap between science and decision-making. In these sessions such methods and tools are presented along with recent case studies of the use of these methods and tools, offering lessons that could inform efforts to address similar challenges in other places.

DD 11.1	Risks	Wednesday, 14.00-15.45	New York Room
DD 11.2	Pathways	Wednesday, 14.00-15.45	Penn Room II
DD 11.3	Asian deltas	Wednesday, 16.15-18.00	Leeuwen Room I
DD 11.4	Netherlands	Wednesday, 16.15-18.00	Penn Room II
DD 11.5	Analysis / support	Thursday, 13.30-15.15	Leeuwen Room I
DD 11.6	Mapping	Thursday, 15.45-17.30	Beurs Lounge


Ngô Quyền
MUA BÁN PHỤ LIỆU UỐN TÓC & ĐỒ CƯỚI
SỐ 88 NGÔ QUYỀN - CẦN THƠ
ĐIỆN THOẠI : 825560

1


CENTRAAL STATION

2 3

4 5


LIVORNO EXPRESS

Deltas in Practice

The Deltas in Practice workshops are hosted and organised by a variety of international stakeholders. In solution oriented sessions people from NGOs, private sector and governments at (inter)national level as well as regional and local level will share lessons learnt, and exchange their approaches and best practices. All with the same goal: to take the next step in adaptation. Session formats include presentations, trainings, panels, break-out discussions, serious games and design charettes.

1. RISK ASSESSMENT

Global temperatures are projected to continue rising, which is likely to cause continued changes in weather patterns, rising sea levels, and an increased frequency and intensity of extreme weather events. The earlier we plan for adaptation, the less it will cost and the better equipped we will be to cope with potential changes. To better understand the specific risks that climate change poses, it is essential to carry out a risk assessment as a first step towards developing an adaptation strategy. Ideally, the assessment gives a detailed analysis of the potential impacts of climate change and therefore a better understanding of the vulnerability of our deltas and delta cities. The sessions under this theme will discuss practical risk assessment methodologies, decision making tools that deal with risk assessment and practical tools to assess economic impacts.

DP 1.1	Future weather	Wednesday, 16.15-18.00	Goudriaan Room I
DP 1.2	Critical infrastructures	Wednesday, 14.00-15.45	Diamond Room I
DP 1.3	DA Toolbox	Thursday, 15.45-17.30	Goudriaan Room II

2. ADAPTATION STRATEGIES

Climate change impacts rural and urban areas. Adaptation of land use patterns, public space, water systems and buildings is essential to protect inhabitants from flooding, social dislocation and discomfort. Access to fresh water in deltas is essential for agriculture. Ecological corridors improve species' chances to survive climate change. But how do we do this and at what costs? Many countries and roughly 20 percent of all cities around the globe have developed adaptation strategies. Wealthy nations have provided developing countries with $11 billion to help them make those strategies. Adaptation strategies are evolving and maturing as cities, deltas and countries build on initial efforts. Examples will be presented to provide useful frameworks for other cities and countries that are in the process of creating and refining their own strategies. Questions to be discussed include: How can we incorporate social and economic scenarios in adaptation strategies? In which ways can human usage and ecological functioning be integrated? How can we manage future risks in rapidly urbanising areas? Can we use cost-benefit analysis to optimise adaptation strategies? How can barriers in governance and decision making be overcome?

DP 2.1	Migration	Wednesday, 16.15-18.00	Antwerp Room
DP 2.2	Regional strategies	Thursday, 09.00-10.45	New York Room
DP 2.3	K2K	Wednesday, 16.15-18.00	New York Room
DP 2.4	Subsurface water buffers	Thursday, 13.30-15.15	Antwerp Room
DP 2.5	Resilient cities talk	Thursday, 13.30-15.15	New York Room
DP 2.6	Estuarine management	Thursday, 15.45-17.30	Townhall Room
DP 2.7	Weathering storms	Friday, 09.00-12.00	New York Room, incl. break
DP 2.8	2013 Storm	Wednesday, 14.00-15.45	Goudriaan Room II
DP 2.9	Uncertain world	Friday, 10.45-12.00	Diamond Room I

3. URBAN DESIGN AND INFRASTRUCTURE

Global warming alters hydrological cycles causing changes in water supplies and an increase in the frequency and severity of droughts, floods and extreme weather events. Urban planning and design are crucial for adaptation strategies, not only in the areas that still have to be developed, but also in existing parts of our cities and surroundings. Sessions under this theme will illustrate innovative forms of urban design that increase social and economic benefits to the city and improve ecosystem services, making the city and its infrastructure more resilient and adaptable to climate change. The sessions will include the relationship between resilience and other urban planning challenges, turning adaptation measures into solutions that tackle multiple problems at the same time.

DP 3.1	Multipurpose infrastructure	Friday, 09.00-12.00	Goudriaan Room I, incl. break
DP 3.2	Floating cities	Thursday, 13.30-15.15	Penn Room I
DP 3.3	Room for river	Thursday, 15.45-17.30	Diamond Room I
DP 3.4	Design Brisbane	Wednesday, 14.00-18.00	Beurs Lounge, incl. break
DP 3.5	Eendragtspolder	Thursday, 15.45-17.30	Penn Room I

4. GREEN ADAPTATION/BUILDING WITH NATURE

Urban and economic development as well as changes in fisheries, agriculture, transportation and recreation has induced profound changes in land use and hydrological conditions of deltas. Constructions such as dams, dikes and weirs often led to a reduced functioning of ecosystems. In the past, technical solutions in deltas to protect land were dominant. Meanwhile coastal and delta development and rapid urbanisation have diminished natural defences against flooding. Awareness is growing that ecosystems are central in supporting livelihoods, economic activities and provide resilience against freshwater shortages, heat stress and natural disasters. Sessions under this theme will focus on questions like: Which examples of ecosystem services and building with nature projects that protect against climate change have been successfully applied and are transferable to other areas? How are we to minimize the climate and human induced damage to wetlands, agriculture, fisheries, forests, etc.?

DP 4.1	Resilient deltas	Thursday, 13.30-15.15	Beurs Lounge
DP 4.2	Building nature	Thursday, 15.45-17.30	Antwerp Room
DP 4.3	Green resilience	Thursday, 09.00-10.45	Penn Room I

5. FOOD SECURITY AND THE RURAL LANDSCAPE

Deltas provide huge potential for food production with their fertile soils and flat lands, but unusual weather patterns can create challenges for agricultural production systems. For example, food security might become more at risk when fresh water supplies are threatened by salt intrusion caused by rising sea levels and more prolonged droughts. Livestock mortality might increase due to other climatic conditions. Rural areas also provide services to the community, such as natural flood defences, water buffering and carbon storage, that can relieve the pressure of climate change. However, human interventions and climate change threaten these so called ecosystem services. This theme illustrates strategies and practical adaptation measures that keep deltas at the forefront of food production. The ultimate question is how adaptation fosters food production and ecosystem service may change the rural landscape and economic relations.

DP 5.1	Food chain	Friday, 10.45-12.00	Goudriaan Room II

6. AWARENESS, CAPACITY BUILDING AND COMMUNITY RESILIENCE

To protect ourselves from the impacts of climate change and to build our own sustainable futures, it is vital to increase public awareness. Support and participation of politicians, governments, private companies, NGOs and the community are essential to collectively address the challenge of climate change. Climate change adaptation should be more embedded in sustainable development processes. Communication and education will help raise public involvement, but also prepare people for emergencies. Since adaptation strategies deal with long term programmes and measures, capacity building will help keep the focus on climate change challenges and increasing community engagement. In the sessions various implemented approaches for raising awareness, community based adaptation projects and models of community resilience will be discussed. Among questions to be addressed are: How to remove barriers to participation? What tools are required to help communities and individuals articulate the benefits of emergency preparedness to the wider community? How can cultural and natural heritage help to make adaptation strategies successful?

DP 6.1	Resilient adaptation	Thursday, 09.00-10.45	Antwerp Room
DP 6.2	Heritage	Wednesday, 14.00-15.45	Van Walsum Room
DP 6.3	Science-to-action	Friday, 09.00-12.00	Van Walsum Room, incl. break
DP 6.4	Ecosystems & estuaries	Thursday, 13.30-15.15	Diamond Room I
DP 6.5	Landscape level	Wednesday, 16.15-18.00	Goudriaan Room II

7. GOVERNANCE AND FINANCE

Climate adaptation requires co-operation between national, regional and local governments, between the public and private sector, and between science and practice. It also requires a different perspective on community involvement. Hence, adapting deltas and cities to climate change requires new governance arrangements. Good governance is one condition for successful implementation of adaptation. Funding is another. Today, government austerity measures affect implementation of adaptation measures. Austerity might also offer opportunities, since new financial arrangements may broaden the possibilities to have adaptation measures funded in an efficient way. The sessions under this theme aim to discuss long term outlooks on planning for adaptation. Questions that raise from practical implementation of adaptation are discussed: How better to govern climate adaptation? Is there synergy between adaptation and mitigation projects? What (new) institutional arrangements are needed? What role can private parties play in funding and financing? How might the benefits of adaptation be monetised in order to link the beneficiaries with those who pay?

DP 7.1	PPP	Thursday, 13.30-15.15	Goudriaan Room I
DP 7.2	Mainstreaming greening	Thursday, 13.30-15.15	Townhall Room
DP 7.3	Economic assessment	Thursday, 15.45-17.30	Penn Room II
DP 7.4	City blue print	Thursday, 09.00-10.45	Van der Veeken Room
DP 7.5	Cross-sector collaborations	Thursday, 15.45-17.30	New York Room
DP 7.6	LT strategies	Thursday, 09.00-10.45	Leeuwen Room I
DP 7.7	Water authorities	Friday, 09.00-10.15	Diamond Room I

8. POST DISASTER PREPAREDNESS AND RECOVERY

Many deltas focus on prevention (dikes, levees, etc.) to reduce risk. Another strategy to manage climate change risks is to focus on reducing loss of life, economic losses and social disruption. It uses spatial planning instruments such as adjusting building codes and smart architecture to cope with storm and flood risk. Vulnerability to climate extremes is also determined by the coping capacity of an administration that can follow the event through evacuation, relief and rehabilitation options. This theme covers the issues that relate both to managing risks before disaster hits and fast recovery thereafter. In sessions under this theme participants can experience decision making under pressure in an uncertain disaster situation and are introduced to the possibilities of early warnings systems for humanitarian funding.

DP 8.1	Flood simulators	Wednesday, 14.00-15.45	Antwerp Room
DP 8.2	Early warning, early action	Friday, 09.00-10.15	Tokyo Room

Round Tables

On Wednesday and Thursday 24 and 25 September three high level Round Table discussions will be held. In a round table a discussion is facilitated between 'high level' practitioners, politicians and scientists about issues of crucial importance to adaptation to climate change. The first round table will put the spotlight on the power of delta cities in climate adaptation in relation to national governments. The second will focus on the role of private actors in financing climate adaptation. During the last round table the role of Community Based Adaptation will be discussed in the context of challenges of dealing with increasing climate risks in deltas. The audience will be actively involved in the debate. With these round tables, we aim to bring the international debate further and to table new urgent matters.

RT 1	If mayors ruled the world	Wednesday, 14.00-15.45	Townhall Room
RT 2	Financing climate adaptation	Wednesday, 16.15-18.00	Townhall Room
RT 3	Community based adaptation	Thursday, 09.00-10.45	Townhall Room

Delta Sessions / Urbanising Deltas of the World

One of the four main conference session streams is reserved for the Delta Sessions: nine sessions focusing on the current status and future development of innovative approaches and projects in Indonesia, Vietnam, Bangladesh, Mozambique, Myanmar, USA, Colombia, Egypt and the Netherlands. These Delta Sessions will address a number of the Building Blocks for the Delta Approach: a dozen specific approaches for delta areas, such as integrated approach, finance and implementation, supported analysis, governance and cooperation with stakeholders. Each of the Delta Sessions will address a few of these building blocks.

As part of the Delta Sessions two sessions will be held about the research programme 'Urbanising Deltas of the World (UDW)'. This programme aims to increase knowledge about river deltas worldwide and to contribute to water safety, food security, and to sustainable economic development in these areas. The first session will present the programme and discuss how research feeds the delta planning processes of amongst others Vietnam, the Netherlands, and Bangladesh, through the lenses of key stakeholders from Business, Policy and Research. The second session will present the new UDW Call for proposals, which opens funding opportunities for delta research.

DS 1	Mozambique	Wednesday, 14.00-15.45	Leeuwen Room II
DS 2	USA	Wednesday, 16.15-18.00	Leeuwen Room II
DS 3	Indonesia	Thursday, 09.00-10.45	Leeuwen Room II
DS 4	The Netherlands	Thursday, 09.00-10.45	Van Oldenbarnevelt Room
DS 5	Bangladesh	Thursday, 13.30-15.15	Leeuwen Room II
DS 6	Vietnam	Thursday, 15.45-17.30	Leeuwen Room II
DS 7	Colombia	Friday, 09.00-10.15	Leeuwen Room II
DS 8	Egypt	Friday, 10.45-12.00	Leeuwen Room I
DS 9	Myanmar	Friday, 10.45-12.00	Leeuwen Room II
UDW 1	Science / practice	Wednesday, 14.00-15.45	Penn Room I
UDW 2	Deltas call	Friday, 09.00-10.15	Penn Room I

6

7

9

8

AWARDS

International Business Challenge

During the plenary session on Thursday 25 September the winners of the first International Climate Adaptation Business Challenge will be announced. The seven finalists will pitch their business plan for an international audience in the session which takes place on: IBC25 Thursday, 09.00-11.00, Mees Auditorium

Young scientist best presentation and best poster award

During the plenary closure on Friday 26 September the 'Young scientist best presentation and best poster award' will be announced. The Scientific Committee will act as the jury of these awards. This only applies for those who have indicated this possibility in the abstract registration system (maximum age for Young scientist is 30 years).

SOCIALS

Receptions and conference dinner

TUESDAY 23 SEPTEMBER

17.00 – 19.00 Welcome reception and start registration

WEDNESDAY 24 SEPTEMBER

18.00 – 19.00 Poster session and reception

19.00 – 22.30 Conference diner (optional)
To the zoo!
The conference dinner will be held in Blijdorp Zoo. The evening includes:

- transportation to/from the conference venue - zoo
- dinner, buffetstyle and drinks
- guided tour Oceanium: a walk through the fully covered Oceanium, the world of sharks, king penguins, sea lions and yellyfish

19.00 departure busses from WTC to the Zoo
22.30 departure busses from the Zoo to WTC
Admittance on showing your conference dinner voucher.
Costs € 50 per person

THURSDAY 25 SEPTEMBER

18.00 – 19.00 Poster session and reception
19.00 – 21.30 Drinks - Bites - Music

We work on a climate proof Delta City Rotterdam

Three regional water authorities work together with the municipality to create an attractive and climate proof Delta City Rotterdam. Together they work out actual water projects which fit well in the urban development. Like extra water storage, more efficient waste water treatment, cleaner surface water and initiatives to make the city more healthy and green.

The cooperation between the regional water authorities and the municipality of Rotterdam is an example for a successful collaboration for a sustainable future. The mutual experiences are also important for the next decades. Maintaining the cooperation is crucial for creating an attractive, climate proof and sustainable city. Especially for a Delta City like Rotterdam it is essential to act before the expected change.

Hoogheemraadschap van Delfland

Hoogheemraadschap van Schieland en de Krimpenerwaard

Waterschap Hollandse Delta

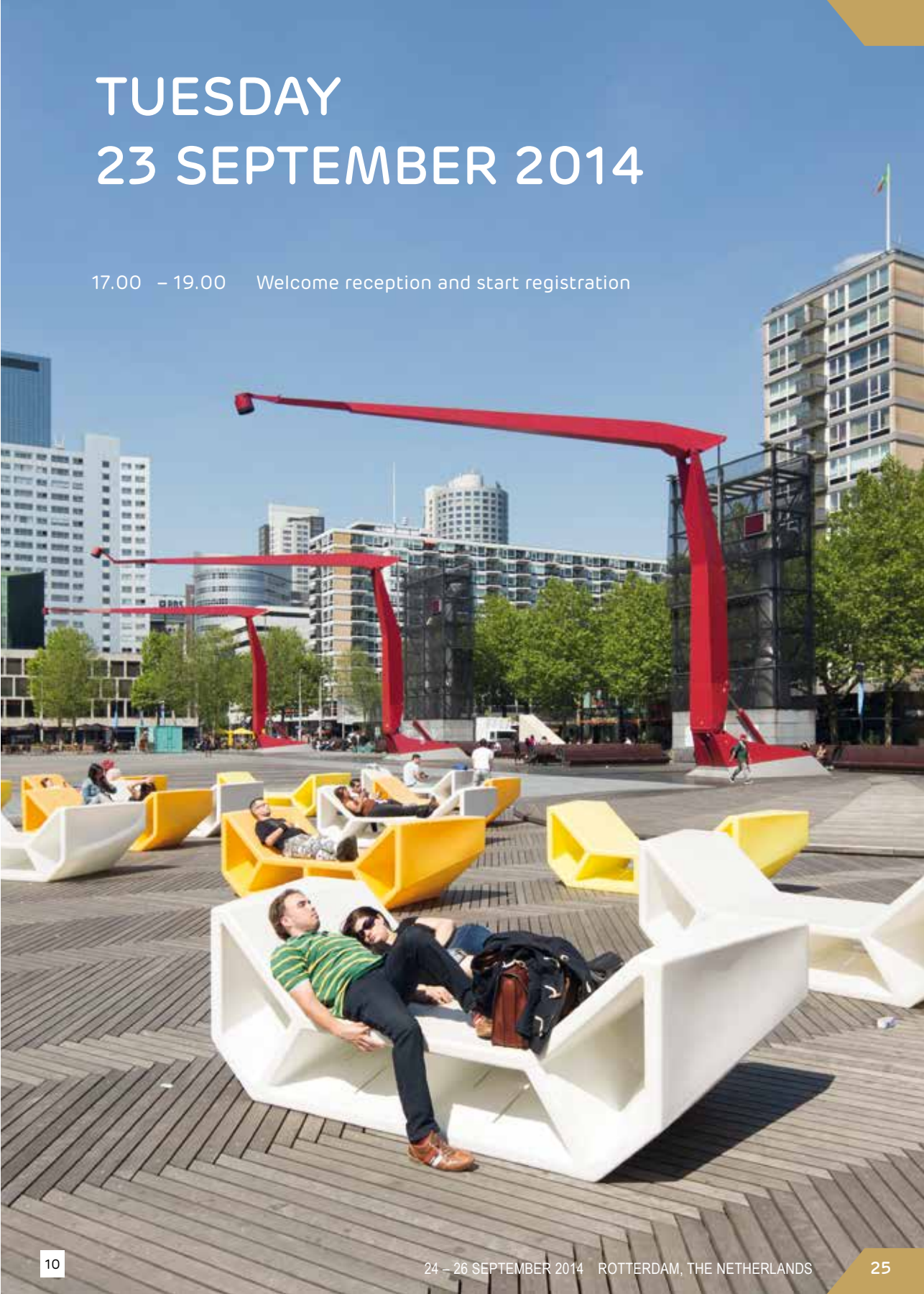
Please also visit our stand about Water Governance in the Netherlands.

W WEDNESDAY
T THURSDAY
F FRIDAY
P POSTERS

DD Deltas in Depth sessions
DP Deltas in Practice sessions
DS Delta Sessions / Urbanising Deltas of the World
RT Round Tables
PL Plenaries
IBC International Business Challenge

TUESDAY
23 SEPTEMBER 2014

17.00 – 19.00 Welcome reception and start registration



WEDNESDAY 24 SEPTEMBER 2014

08.00 – 19.00	Registration
09.00 – 19.00	Exhibition
09.30 – 10.30	Plenary opening
10.30 – 11.00	Break
11.00 – 12.20	Plenary opening
12.20 – 14.00	Lunch
14.00 – 15.45	Parallel sessions
15.45 – 16.15	Break
16.15 – 18.00	Parallel sessions
18.00 – 19.00	Reception and poster session
19.00 – 22.30	Conference dinner (optional)

SPEAKERS PLENARY OPENING


Pier Vellinga


Roger Harrabin


Ahmed Aboutaleb


Melanie Schultz van Haegen


Myles Allen


Yolanda Kakabadse


Bart Parmet


Tineke Huizinga


Humberto Delgado Rosa


Cynthia Villar


Chris Rapley

PL

ROTTERDAM HALL

Chair Prof.dr. Pier Vellinga, Knowledge for Climate, the Netherlands
Moderator Roger Harrabin, BBC correspondent, United Kingdom

09.30 – 10.30	Welcome by Ahmed Aboutaleb, Mayor of Rotterdam, the Netherlands
	Opening by Melanie Schultz van Haegen, Minister of Infrastructure and the Environment, the Netherlands
	Quantifying hazard in a changing climate: Long-term trends and changing weather Prof. Myles Allen, University of Oxford, United Kingdom
	No excuse for inaction Yolanda Kakabadse (Ecuador), WWF International President
10.30 – 11.00	**Break**
11.00 – 12.20	Panel with short presentations: Bart Parmet, Staff Delta Programme Commissioner, the Netherlands Tineke Huizinga, Delta Alliance, the Netherlands Humberto Delgado Rosa, DG Climate Action, European Commission, Belgium Cynthia Villar, Senator of the Republic of the Philippines
	Bridging the gap: Organising and communicating climate resilience Prof. Chris Rapley, University College London, United Kingdom
12.20 – 14.00	**Lunch**

DD 9.1 Adaptation governance in comparative context

Deltas in Depth Theme 9
14.00 – 15.45
OSCAR AUDITORIUM

Chair Prof.dr. Katrien Termeer, Wageningen UR, the Netherlands

Presentations

Climate change and securitisation of nature
Prof. Simin Davoudi, Newcastle University, United Kingdom

Handling adaptation governance choices in Sweden, Germany, the UK and the Netherlands
MSc Eric Massey, VU University Amsterdam, the Netherlands

Governing adaptation to climate change: an analysis of England's National Adaptation Programme
Suraje Dessai, Sustainability Research Institute, School of Earth&Environment, Leeds University, United Kingdom

Tackling climate change uncertainty with planning approaches for water management
Mark Zandvoort, Wageningen UR, the Netherlands

DD 1.1 Climate change scenarios

Deltas in Depth Theme 1
14.00 – 15.45
DIAMOND ROOM II

Chair Prof.dr. Wilco Hazeleger, Royal Netherlands Meteorological Institute, the Netherlands

Presentations

KNMI'14: New climate change scenarios for the Netherlands
Prof. Bart van den Hurk, KNMI, the Netherlands

Future changes in extreme temperature events using statistical downscaling model in the Jhelum Basin, Pakistan
PhD Rashid Mahmood, University of Agriculture, Pakistan

The KNMI'14 climate change scenarios: The wind chapter
Dr. Andreas Sterl, KNMI, the Netherlands

DD 5.1 Urban adaptation to climate change: introduction and keynotes

Deltas in Depth Theme 5
14.00 – 15.45
GOUDRIAAN I

Chair: Dr. Cynthia Rosenzweig, Columbia University, USA

Keynote: Towards reflexive adaptation and resilient coastal communities
Prof. Bruce Glavovic, Massey University, New Zealand

Presentations

Climate Proof Cities: How Dutch cities can prepare themselves for climate change impacts
Peter Bosch, TNO, the Netherlands

The UCCRN assessment report on climate change and cities: guidelines for developing climate change strategies
Stelios Grafakos, Institute for Housing and Urban Development Studies, Erasmus University Rotterdam, the Netherlands

DD 6.1 Opportunities for socio-ecological landscape development

Deltas in Depth Theme 6
14.00 – 15.45
LEEUWEN ROOM I

Chair: Prof.dr. Frank Berendse, Wageningen UR, the Netherlands

Presentations

Predicting vegetation patterns under future climatic conditions with a process-based eco-hydrological model
Dr. Ruud Bartholomeus, KWR Watercycle Research Institute, the Netherlands

Implementing an ecological network in a densely populated area under conditions of global change
PhD Martha Bakker, Wageningen UR, the Netherlands

Drivers, constraints and dynamics of wellbeing from ecosystem services in the deltaic environments of Bangladesh
PhD Helen Adams, University of Exeter, United Kingdom

Collective implementation of agri-environment climate measures with a spatially explicit agent-based model
Dr. Nico Polman, Wageningen UR, the Netherlands

Economic and social drivers of land use change in coastal Bangladesh
Prof.dr. Boris Braun, University of Cologne, Institute of Geography, Germany

DD 11.2 Pathways for adaptation to an uncertain future

Deltas in Depth Theme 11
14.00 – 15.45
PENN ROOM II

Focussed session

Exploring adaptation pathways is an emerging concept for supporting climate adaptation and mitigation decisions. The pathways concept is further elaborated and applied by four EU FP7 research programs: BASE, RISES, IMPRESSIONS and URBES. The following questions are addressed:

- How can pathways be defined across different sectors and scales?
- How can pathways be used as a means to highlight perspectives of different stake holders?
- What are the available quantitative or qualitative methods to generate adaptation pathways?
- How can pathways be evaluated (a.o. costs/benefits flexibility and robustness)?
- What are the knowledge gaps for generating, assessing and implementing adaptation pathways?

Organisers: Marjolijn Haasnoot, Deltares, the Netherlands
Hans Sanderson, Aarhus University, Denmark
Niki Frantzeskaki, DRIFT, the Netherlands
Paula Harrison, Oxford University, United Kingdom
Agustín Sánchez-Arcilla, UPC, Spain
Tom Bucx, Deltares, the Netherlands

Chair: Jaap Kwadijk, Deltares, the Netherlands

Presentations

Exploring, evaluating and upscaling adaptation pathways for Europe
PhD Marjolijn Haasnoot, Deltares, the Netherlands

Responses to coastal climate change: innovative strategies under an uncertain future
Prof. Agustín Sánchez-Arcilla, Lab. d'Enginyeria Marítima (LIM/UPC), Universitat Politècnica de Catalunya (UPC), Spain

Two sides of the same coin? Integrating resilience and transitions thinking for climate change governance
Katharina Hölscher, Dutch Research Institute for Transitions (DRIFT), the Netherlands

DD 2.1 Analyses and mitigation of social disruption

Deltas in Depth Theme 2
14.00 – 15.45
VAN OLDENBARNEVELT ROOM

Chair: Prof. Corrine Larrue, University of Rabelais de Tours, France

Presentations

Social disruption by flooding, a European perspective
PhD Wilfried ten Brinke, Blueland Consultancy, the Netherlands

How to avoid social disruption. Options for the Dutch flood risk management policy to reduce the societal risk
Joost Knoop, PBL Netherlands Environmental Assessment Institute, the Netherlands

Is calculation of casualties from flooding in Germany desirable: methods and case studies
Andreas Burzel, Deltares, the Netherlands

Societal flood fatality risk assessments: An advanced method and its application to the Rhine-Meuse delta
Dr. Karin de Bruijn, Deltares, the Netherlands

Flood hazard mapping: On the purposeful combination of individual flood characteristics in behalf of hazard zoning
Frans Klijn, Deltares, the Netherlands

DD 4.1 Sustainable management of deltas - a tour around a changing world

Deltas in Depth Theme 4
14.00 – 15.45
MEES AUDITORIUM

Chair: Dr. Hans Paerl, University of North Carolina at Chapel Hill, USA

Keynote: Sustainable management of deltas in a climate challenged, energy scarce world
Prof. John Day, Louisiana State University, Baton Rouge, Louisiana, USA

Presentations

Impacts of changing climate projections on restoration of the Mississippi river delta
PhD Paul Kemp, Louisiana State University, USA

Environment and water resources vulnerability in the lower estuary of the Senegal River from 2003 to 2013
Dr. Awa Niang, Cheikh Anta Diop University, Senegal

The importance of scale in defining vulnerability of the Ganges-Brahmaputra river delta to environmental change
Carol Wilson, Vanderbilt University, USA

DD 11.1 Risk assessment and management

Deltas in Depth Theme 11
14.00 – 15.45
NEW YORK ROOM

Chair Prof.dr. Richard Klein, Stockholm Environment Institute, Sweden

Presentations

Exploring changes and challenges: global trends in flood risks towards 2050 in an urbanizing world
Arno Bouwman, PBL Netherlands Environmental Assessment Agency, the Netherlands

Hydrological variability, transboundary floods and institutions: Are we prepared for tomorrow's problems?
PhD Marloes Bakker, Utrecht University, the Netherlands

Assessing health, livelihoods, ecosystem services and poverty alleviation in populous deltas
Prof. Robert Nicholls, University of Southampton, United Kingdom

Increase resiliency with a new approach to communicate flood risk to flood-prone communities
MSc Marten Hillen, Royal HaskoningDHV, Singapore

Coupled ethical-epistemic issues in assessing and managing risks from sea level rise
PhD Per Wikman-Svahn, Rock Ethics Institute, Pennsylvania State University, USA

DD 3.1 Surface water quantity and quality

Deltas in Depth Theme 3
14.00 – 15.45
TOKYO ROOM

Chair Dr. Gualbert Oude Essink, Deltares, the Netherlands

Presentations

Modelling impacts of climate change and societal change on flows and nutrients in the GBM delta of Bangladesh
Prof. Paul Whitehead, University of Oxford, United Kingdom

Salinity intrusion and water availability under changing climate in the coastal Ganges delta in Bangladesh
Zahirul Haque Khan, Institute of Water Modelling, Bangladesh

Centralized and de-centralized wastewater reuse in Maputo, Mozambique
André Marques Arsénio, Delft University of Technology, the Netherlands

Assessment of evaporative water loss from Dutch cities
Dr. Cor Jacobs, Wageningen UR, the Netherlands

Population vulnerability to seasonal freshwater fluxes and diarrheal diseases in Bengal delta
PhD Ali Shafqat Akanda, University of Rhode Island, USA

DP 1.2

Extreme weather impacts on critical infrastructures: International lessons to improve analysis

Deltas in Practice Theme 1
14.00 – 15.45
DIAMOND ROOM I

Extreme weather events can cause damage to connected and interdependent infrastructure networks like ICT, energy, transport, etc. The combination of infrastructure and network interconnectedness with climate change and extreme weather events asks for better ways of assessing risks and determining policy and adaptation options in practice. Three cases (the Netherlands, United Kingdom and Ireland) will show international experiences on how to get each other informed on interconnected risks between different networks due to extreme weather events. The final step in the workshop is a group discussion with the participants on both the lessons learnt for adaptation strategies in practice and steps forward for research and analysis of interconnected risks on critical infrastructures.

Chair: Msc Nienke Maas, TNO, the Netherlands
Organised by: Msc Nienke Maas, Rene Willems, Ruben Vogel, TNO, the Netherlands

Presentations

The UK 2013/14 winter floods: Examples of effects of adverse weather
Andrew Tagg, HR Wallingford, United Kingdom

Flooding The Hague Rotterdam Airport: Risks for transport and electricity network
Jos Streng, City of Rotterdam, the Netherlands

Ireland flash floods
Dr. William Hynes, Future Analytics Consulting, Ireland

DP 2.8

The December 2013 storm: Learning lessons across the North-Sea

Deltas in Practice Theme 2
14.00 – 15.45
GOUDRIAAN ROOM II

The December 2013 tidal event had a similar intensity across the North Sea. This makes it an excellent case study to compare and contrast how different countries manage coastal flood risk and to identify opportunities to learn from each other and support adaptation to climate change.
Coastal managers from each five countries that suffered from the storm (Denmark, Germany, the Netherlands, Belgium and England) will give a structured presentation, covering topics such as: coastal flooding history; short introduction into governance and policy of flood risk management; technical and policy experiences with the December 2013 event (understanding the risk – mitigation – preparedness – response); lessons learnt and impacts for the future.
This will be followed by a facilitated discussion (with audience involvement), aiming to identify explicitly where countries face similar issues (and therefore there is scope for knowledge exchange) and where one country can learn from another.

Chair	MSc Jaap Flikweert, Royal HaskoningDHV, United Kingdom
Organised by	MSc Jaap Flikweert, Royal HaskoningDHV, United Kingdom Lisette Heuer MSc, Royal HaskoningDHV, the Netherlands

Presentations

The December 2013 storm flood in the Netherlands: The benefits of national coordinated early warnings
Bart Vonk, Rijkswaterstaat, the Netherlands

The December 2013 storm flood in England: The value of learning from the past
Craig Woolhouse, Environment Agency, United Kingdom

The December 2013 storm flood in Belgium: Soft and adaptive measures do their work!
Patrik Peeters, Ministry for Mobility and Public Works, Flanders, Belgium

The December 2013 flood in Germany: The second highest storm surges in Hamburg, but well defended and no damages
Jan-Moritz Müller, City of Hamburg, Germany

DP 8.1 Exercising decision-making during flood disasters by the use of 'Flood Simulators'

Deltas in Practice Theme 8
14.00 – 15.45
ANTWERP ROOM

In this workshop participants will experience a 'flood simulator', comparable with a flight simulator. It aims to train the ability of decision-makers to deal with uncertain and fragmented information they receive during a flood disaster. With this 3Di model, decision-makers can directly visualise the messages they receive about, for example, failed dams or levees into a digital flood map. Based on new messages from people in the field, this digital flood map can constantly be updated and measures to decrease the flood risks can be selected. The participants in this workshop will join a short flood disaster exercise in which this flood simulator will be applied. After the exercise the experiences will be jointly evaluated. An observer will assess and present several indicators for good decision-making during the exercises, based on Sense making theory.
For more information about the 3Di model, please visit www.3di.nu.

Chair	Dr. Elgard van Leeuwen, Deltares, the Netherlands
Organised by	MSc Johannes Leskens, Nelen&Schuurmans, the Netherlands

DP 6.2 Water & Heritage: Protecting deltas, heritage helps

Deltas in Practice Theme 6
14.00 – 15.45
VAN WALSUM ROOM

Exposure to water related hazards, together with an increasing population density and richness in cultural and natural heritage puts civilisations particularly in world's deltas at high risk. Rapid urbanisation of delta areas without respecting the historic water structures that have evolved over the ages make these areas even more vulnerable.
For a world struggling to find solutions to pressing challenges, heritage helps by providing valuable examples of successful strategies. A better understanding of place and historical continuity and ingenious use and reuse of tangible and intangible heritage can offer solutions for the future.
ICOMOS Netherlands works on bringing the water and heritage fields together through promoting a multidisciplinary dialogue and case studies, working towards best practice guidelines. The outcomes of this workshop will be recommendations on this process. Examples of follow-up activities are the ICOMOS General Assembly and Scientific Symposium in Florence 2014 and a Sidestone Press publication.

Chair	Prof. Rohit Jigyasu, ICOMOS International Committee on Risk Preparedness (ICORP), Japan
Organised by	MSc Erik Luijendijk, International Council on Monuments and Sites (ICOMOS-NL) and ICOMOS International Committee on Risk Preparedness (ICORP), the Netherlands

Presentations

Introducing the water & heritage theme from the ICOMOS perspective
Prof. Rohit Jigyasu, ICOMOS International Committee on Risk Preparedness (ICORP), Japan

ICOMOS Netherlands Water & Heritage short movie release: The international importance of water & heritage cooperation; risks and opportunities

Ayutthaya; the relationship between heritage and water management in the history of a world heritage city: Current challenges and resilience strategy
MA Hatthaya Siriphattanakun, Ministry of Culture, Thailand

UNESCO world heritage in use: The role of the ir. D.F. Wouda Pumping Station in contemporary water management
MSc Rombout Jongejans, Friesland Water Authority, the Netherlands

DP 3.4 Brisbane watershed design charrette

Deltas in Practice Theme 3
14.00 – 18.00
including break
BEURS LOUNGE

Being a region half the size of the Netherlands in area, the Brisbane watershed in southeast Queensland, Australia, is subjected to flooding and drought events of increasing regularity. A new holistic and integrated approach is needed! We believe design is a powerful tool for this.
One proven successful method to share knowledge and think creatively about a collective future is using design in a dialogue or charrette. In this session our team takes you into this interactive rollercoaster of 4 hours where we aim for results in an unconventional setup.
We are looking for an energetic public to actively participate and share an experience. Besides sharing knowledge of content and process, we will create and design! Concluding the charrette, we will deliver a preliminary presentation, a booklet of the charrette with presentations, sketches and conclusions arising from the workshop that will serve as input for the Australian context where the dialogue will continue!
Please note: 45 participants max, so be quick!

Chair	MSc Stijn Koole, Bosch Slabbers Landscape + Urban Design, the Netherlands
Organised by	MSc Stijn Koole, Bosch Slabbers Landscape + Urban Design, the Netherlands

Presentations

Kick-off charrette
MSc Stijn Koole, Bosch Slabbers Landscape + Urban Design, the Netherlands

MISI-ZIIBI | the process
PhD John Hoal, RA(SA), AICP, Urban Design, Washington University and H3 Studio, St. Louis, USA

MISI-ZIIBI | the results
Derek Hoeferlin RA, Washington University and James Hoeferlin Architect, St. Louis, USA

Brisbane watershed
James Davidson, James Davidson Architect, Australia

RT 1 If mayors ruled the world

Round Tables
14.00 – 15.45
TOWNHALL ROOM

Benjamin Barber

The Round Table 'If mayors ruled the world' will put the spotlight on the power of cities in climate adaptation in deltas in relation to national governments. This round table is meant to inform the audience about the opinion of the city leaders when it comes to the importance and urgency of climate adaptation and how cities may have to take the lead. Not only because they feel the consequences of climate change directly, but also because most measures have to be taken on a local scale.
What are strategies followed by local governments when it comes to making their cities climate proof? What can be their role in international climate meetings on a high level considering the earlier mixed results? What are similarities between different delta cities? And how can they apply each other's solution in their own deltas?

Moderator Dr. Benjamin Barber, USA

Panel
Ahmed Aboutaleb, Mayor of Rotterdam, the Netherlands
Maria Belen Andaya-Eusebio, Mayor of Pasig City, the Philippines
Cedric S. Grant, Deputy Mayor of Facilities, Infrastructure and Community Development, New Orleans, USA
Dao Anh Kiet, Director of Ho Chi Minh City's Department of Natural Resources and Environment, Vietnam
Sutanto Soehodho, Deputy Governor of Jakarta Capital City Government, Indonesia
Cynthia Villar, Senator of the Republic of the Philippines

DS 1 Mozambique: Integrated approach, the city of Beira

Delta Sessions
14.00 – 15.45
LEEUWEN ROOM II

The session on Mozambique will primarily focus on the port city of Beira. The session illustrates urban resilience challenges that Mozambique faces, such as flooding, coastal erosion, rapid population growth, inadequate infrastructure, stressors in the economy and financial stressors that compromise the delivery of public services. The session will highlight how Beira's local government promotes flood resilient urban development in partnership with key economic and social actors in the city. Beira's approach highlights stakeholder participation, increased transparency and partnership to realise the 2035 vision for the city.
The session will address:

- What is at stake in Beira? What are the opportunities? What are the risks? From the perspective of the city, as well as that of the port.
- What is the vision 2035? And how does the integrated 'delta approach' support the realisation of this vision?

The Mozambique session will focus on the following Building Blocks for a Delta Approach:

- Integrated approach
- Financing
- Government cooperation / stakeholder cooperation
- Decision support systems

Chair — David Schaub-Jones, SeeSaw Group, South Africa, Paul van Koppen, NWP, the Netherlands

Presentations

Beira masterplan 2035, roadmap for a resilient, prosperous, safe and beautiful city
Mario Guina, Beira Master plan, Mozambique

Beira port city: Driver of regional development
Maria Alice Mangore and João Mabote, Mozambique Port and Railway Company CFM, Mozambique

Dutch support to Beira: Delta approach in a coastal city in Mozambique
Maarten Gischler, Ministry of Foreign Affairs, the Netherlands

Discussion with panel of presenters, other coastal cities and the audience

- What lessons can other coastal cities share with Beira?
- How does the delta approach help other coastal cities?

UDW 1

Urbanising Deltas of the World
14.00 – 15.15
PENN ROOM I

How research and practice meet and feed each other to develop new delta management approaches

Focussed session

The NWO research programme Urbanising Deltas of the World aims to promote innovative developments in science, technology, and new governance arrangements for pro-poor sustainable economic development in deltas across the world. Results will strengthen long-term Delta Planning processes.

This session will present the UDW programme and will investigate the delta planning cases of Vietnam, the Netherlands, and Bangladesh through the lenses of key stakeholders from B(usiness), P(olicy) and R(esearch).
In short pitches experts from UDW and related projects will present the main future challenges for the three deltas by rethinking alignments and configurations across sectors and actors, perspectives for collaboration (B<=>R<=>P), and implications for research. The delta contributions will be followed by a panel discussion, to make comparisons, draw general conclusions, and identify priority issues and research needs that contribute to future delta management and planning processes.

Organiser	MSc Han van Dijk, Netherlands Organisation for Scientific Research (NWO), the Netherlands
Other organisations	Delft University of Technology, University Utrecht, VU University Amsterdam, UNESCO-IHE, Twijnstra-Gudde, Witteveen+Bos, Deltares, Royal HaskoningDHV, Wageningen UR, NWP, Acacia Water, Ministry of Foreign Affairs, Vitens/ Evides International
Chair	Dr. Huub Savenije, Delft University of Technology, the Netherlands

Presentations

Mekong Delta: Issues, collaboration and research needs

- Case & Research Perspective:
  Dr. Hieu Trung Nguyen, Can Tho University, Vietnam
- Policy Perspective:
  Dr. Dang Kim Son, Ministry of Agriculture and Rural Development, Vietnam
- Business Perspective:
  MSc Christiaan Elings, Royal HaskoningDHV, the Netherlands

The Netherlands Delta: Issues, collaboration and research needs

- Case & Business Perspective:
  Dr. Ralph Schielen, Ministry of Infrastructure and Environment-Rijkswaterstaat, RiverCare research programme, the Netherlands
- Research perspective:
  Dr. Ho Long Phi, Vietnam National University Ho Chi Minh City, Center for Water Management and Climate Change, Vietnam
- Policy perspective:
  MSc Willem Ligtvoet, PBL Netherlands Environmental Assessment Agency, the Netherlands

The Bangladesh Delta: Issues, collaboration and research needs

- Case & Business perspective:
  Dr. Jaap de Heer, Twynstra Gudde, The Netherlands
- Research perspective:
  Dr. M. Shah Alam Khan, Bangladesh University of Engineering, Technology, Institute of Water and Flood Management, Bangladesh
- Policy perspective:
  Mayor Moniruzzaman Moni, Khulna City Corporation, Bangladesh

Panel discussion	Delta comparisons, conclusions, and visions on sustainable development	
	Mediator	BSc Corné Nijburg, Netherlands Waterpartnership/Water Governance Centre, the Netherlands
	Panel	Dr. Bui Tran Vuong, Division of Water Resources Planning and Investigation for the South of Vietnam (DWRPIS), Vietnam Dr. Nelson Matsinhe, Universidade Eduaordo Mondlane, Mozambique MSc Arjen Zegwaard, Wageningen University, the Netherlands MA Renske Peters, Delta Alliance international, the Netherlands Dr. Poulomi Banerjee, South Asia Consortium for Interdisciplinary water Resources Studies (SaciWATERs), India

15.45 – 16.15 **Break**

DD 9.2 Governing adaptation in the city

Deltas in Depth Theme 9
16.15 – 18.00
OSCAR AUDITORIUM

Chair Prof. Simin Davoudi, Newcastle University, United Kingdom

Presentations

Who governs urban climate adaptation? A comparative analysis of governance arrangements in urban areas
MSc Heleen Mees, Utrecht University, the Netherlands

Test driving a policy instrument for climate adaptation: Analyzing institutional dynamics using simulation gaming
PhD Liz Root, Radboud University: Climate Proof Cities, the Netherlands

What strategies trigger local responses to climate adaptation: With insights from Philadelphia, A best adapter
Dr. Hens Runhaar, Utrecht University, the Netherlands

Using climate impact models as a tool for finding a climate adaptation strategy: A case study in the Baakse Beek
MSc Merel van der Wal, Open University Nederland, the Netherlands

DD 5.2 Urban adaptation tools and strategies

Deltas in Depth Theme 5
16.15 – 18.15
DIAMOND ROOM II

Chair Prof. Bruce Glavovic, Massey University, New Zealand

Presentations

New challenges for adaptive urban governance in highly dynamic environments: Revisiting tools and strategies
PhD Joern Birkmann, United Nations University, Institute for Environment and Human Security, Germany

Preliminary study for an environmental impact assessment of floating cities
Barbara Dal Bo Zanon, University of Potsdam, Germany

Reevaluation of high standard levees along the Arakawa River as upland evacuation areas in the lowlands of Tokyo
Dr. Hitoshi Nakamura, Shibaura Institute of Technology, Japan

The Adaptation Support Tool for climate resilient urban design & planning
Dr. Frans van de Ven, Deltares, the Netherlands

The climate adaptation app - providing feasible climate adaptation measures
MSc Leon Valkenburg, Witteveen+Bos, the Netherlands

Planning tools and design strategies for integrated stormwater management
Elke Kruse, HafenCity University Hamburg, Germany

DD 11.3 Decision support and risk assessment in Asian deltas

Deltas in Depth Theme 11
16.15 – 18.00
LEEUWEN ROOM I

Chair Prof.dr. Richard Klein, Stockholm Environment Institute, Sweden

Presentations

Coastal vulnerability assessment: A case study in Kien Giang, western part of the Mekong river delta in Vietnam
PhD Thang T.X Nguyen, School of Earth and Environmental Sciences, GeoQuest, University of Wollongong, Australia

Assessment of adaptation scenarios of coastal protections under global warming, in case of Mekong Delta
PhD Hisamichi Nobuoka, Ibaraki University, Japan

Evaluation of adaptation to water related risk in the Mekong Delta:
A multi-criteria analysis of response decisions
Matthias Garschagen, United Nations University Institute for Environment and Human Security, Germany

Constructing scenario analyses for assessing flooding risk in the Bangladesh delta
PhD J. Craig, Jenkins, Ohio State University, USA

Integration of bio-physical and livelihood dynamics for analysis of poverty in coastal Bangladesh
PhD Attila Lazar, University of Southampton, United Kingdom

DD 5.3 Approaches to urban resilience

Deltas in Depth Theme 5
16.15 – 18.00
PENN ROOM I

Chair Prof. Edward Ng, Chinese University of Hong Kong, China

Presentations

Mainstreaming social participation into assessing resilience to climatic hazards for land use management in Taiwan
PhD Hung-Chih Hung, National Taipei University, Taiwan

Making urbanized deltas adaptive – a method
Prof.dr. Han Meyer, Delft University of Technology, the Netherlands

Improving the allocation of flood risk interventions from an urban and landscape design perspective
MSc Anne Loes Nillesen, Delft University of Technology, the Netherlands

DD 11.4 Decision support and risk assessment in the Netherlands

Deltas in Depth Theme 11
16.15 – 18.00
PENN ROOM II

Chair Dr. Rob Swart, Wageningen UR, the Netherlands

Presentations

Dutch delta scenarios
PhD Ed Dammers, PBL Netherlands Environmental Assessment Agency, the Netherlands

Safe dike heights at minimal costs - an integer programming approach
Gerard Verweij, CPB, the Netherlands

Anticipating change by exploring adaptation pathways for the Rhine delta
PhD Marjolijn Haasnoot, Deltares, the Netherlands

A monitoring and evaluation framework to support the new National Climate Adaptation Strategy in the Netherlands
PhD Jelle van Minnen, PBL Netherlands Environmental Assessment Agency, the Netherlands

Simulating land use change to explore sustainable urban renewal strategies in the context of flood risk
MSc Bart Rijken, PBL Netherlands Environmental Assessment Agency, the Netherlands

DD 2.2 Making room for water

Deltas in Depth Theme 2
16.15 – 18.00
VAN OLDENBARNEVELT ROOM

Chair Dr. Luciana S. Esteves, Bournemouth University, United Kingdom

Presentations

7 ALFA lessons in rural Europe: Combining flood management, farming and forestry
Dr. Jean-Marie Stam, Rijkswaterstaat Room for the River, the Netherlands

Creating space for change: Managed realignment and flood risk reduction in low-lying coastal areas
Luciana S. Esteves, Bournemouth University, United Kingdom

A compensation mechanism for flood protection services on farmland
Hans-Peter Weikard, Wageningen University, the Netherlands

Soft flood risk management: Impact in delta's around the world
Dr. Anna Wesselink, University of Twente, the Netherlands

DD 4.2 Climate change and delta ecosystem functioning

Deltas in Depth Theme 4
16.15 – 18.00
MEES AUDITORIUM

Chair: Prof.dr. Peter Herman, Netherlands Institute of Ecology / Royal Academy of Sciences, the Netherlands

Keynote: Coastal eutrophication dynamics and controls in a culturally and climatically stressed world
Dr. Hans Paerl, University of North Carolina at Chapel Hill, USA

Presentations

Cyclone induced salinity intrusion causes loss and damage in rice fields in the coast of Bangladesh
Md Golam Rabbani, Bangladesh Centre for Advanced Studies, Bangladesh

Projecting fish production in Bangladesh under climate change
Dr. Jose A. Fernandes, Plymouth Marine Laboratory, United Kingdom

Peatland management in a changing world
MSc Karlijn Brouns, Utrecht University, the Netherlands

Enhanced olivine dissolution: Creating a coastal CO_2 sink?
PhD Francesc Montserrat, Netherlands Institute for Sea Research (NIOZ), the Netherlands

DD 3.2 Salinity, drinking water, adaptation practices

Deltas in Depth Theme 3
16.15 – 18.00
TOKYO ROOM

Chair: Dr. Holly Michael, University of Delaware, USA

Presentations

Water quality of Fayoum surface water, Fayoum Province, Egypt
Abdel Wahed, M.S.M., Lappeenranta University of Technology, Laboratory of Green Chemistry, Finland

Water – air bubble screens reduce salt intrusion through ship locks
Dr. Rob Uittenbogaard, Deltares, the Netherlands

Air bubbles against salt intrusion, promises and misconceptions
Dr. Yann Friocourt, Deltares, the Netherlands

Upscaling detailed process study to regional effectiveness on water supply: Bubble plumes in the Rotterdam Waterway
Drs. Joachim Hunink, Deltares, the Netherlands

Assessment of water quality changes in Ras Jbel and Guenniche aquifers of Tunisia due to artificial recharge
Jamila Hammami Abidi, Faculty of Sciences of Tunis, University of Tunis El Manar, Tunisia

DD 7.1 Systems of systems approach for climate resilient multi-infrastructure

Deltas in Depth Theme 7
16.15 – 18.00
VAN WALSUM ROOM

Focussed session

Infrastructure networks like ICT, energy and transport are more connected and interdependent and are critical to societal and economic growth. Climate change and extreme weather events can cause damage to these infrastructures. One of the biggest challenges in this field is to have generic adaptation frameworks for transport and utilities infrastructures, and there is an increase of work on this topic worldwide. This focussed session brings together researchers that are building risk assessment frameworks to get more insights in vulnerability of the infrastructure systems, all using a system-of-systems perspective. Important aspects in these frameworks are: both qualitative and quantitative, involvement of stakeholders, geographical information.
Four frameworks will be presented and we will have a structured dialogue between presenters and the audience about the common ground, lessons learned, applicability for policy makers and next steps for further research.

Organiser	MSc Nienke Maas, TNO, the Netherlands (Ruben Vogel, TNO)
Other organisations	University of Oxford
Chair	Prof.dr. Lori Tavasszy, TNO and Delft University of Technology, the Netherlands

Presentations

Discussion of a framework for interdependent critical infrastructure vulnerability analysis from a climate change perspective
PhD Jonas Johansson, Lund University, Sweden

A decision support toolkit for 'climate smart' seaports
PhD Jane Mullett, Global Cities Research Institute, RMIT University, Australia

The hybrid critical infrastructure analysis framework
Ruben Vogel, TNO, the Netherlands

Flood risk assessment of interdependent national infrastructures
PhD Raghav Pant, University of Oxford, United Kingdom

DP 1.1 Future Weather: A new instrument for policymakers and risk analysts

Deltas in Practice Theme 1
16.15 – 18.00
GOUDRIAAN ROOM I

Future Weather is a new instrument for policymakers and risk analysts for climate adaptation. Realistic time series of high-impact weather events (often caused by a combination of circumstances!) are generated, which can be used to explore the impacts on e.g. infrastructure and water management.
In the first presentation Future Weather is placed in the international context of climate services, like climate scenarios and probability distributions (mainly in the United Kingdom).
Then two additional Future Weather applications (in the Netherlands and Sweden) are presented. The implications of building policy on high impact events are discussed with the public. A practitioner of the Dutch Delta programme reflects on the use of Future Weather to determine tipping points in the future.
With this session we intend to further elaborate on the applicability of Future Weather.

Chair Prof. dr. Wilco Hazeleger, KNMI, the Netherlands
Organised by MSc Bernadet Overbeek, KNMI, the Netherlands

Presentations

Future weather in the international context of climate services and climate modelling
Dr. David Stainforth, London School of Economics, United Kingdom

Stress test for water authorities to test the water safety of their management area
Prof.dr. Bart van de Hurk, KNMI, the Netherlands
MSc Hans Waals, Regional Water Authority Hollandse Delta, the Netherlands

Challenges for Stockholm in a changing climate, considering a combination of variables
Prof. Sten Bergström, SMHI, Sweden

DP 6.5 Landscape level planning to reduce disaster risk and enhance community resilience in delta areas

Deltas in Practice Theme 6
16.15 – 18.00
GOUDRIAAN ROOM II

Ecosystem degradation is among the root causes of increased disaster risk. Deforestation, overexploitation of water resources, draining of wetlands and other practices that degrade ecosystems often stem from flawed spatial planning or inappropriate water management policies. Addressing the complex underlying causes of disaster risk requires integration of best practices from Disaster Risk Reduction, climate adaptation and ecosystem-based approaches at various levels from the community to the landscape level and across the risk reduction cycle.

This workshop will present the case for more integrated approaches through examples of community level interventions and landscape scale planning in two large deltas: Mahanadi Delta, northeast India and the Inner Niger Delta in Mali.

We will exchange experiences between different sectors (policy makers, scientists, engineers, civil society organisations) working on disaster management. The aim of this workshop is to explore and identify opportunities and challenges for integrated disaster risk reduction and enhanced community resilience in delta environments more broadly.
Read more on the website for more information about Partners for Resilience.

Chair Prof. Thea Hilhorst, Wageningen UR, the Netherlands
Organised by Marie-José Vervest, Wetlands International, the Netherlands

Presentations

Introduction: Challenges and need for an inter-disciplinary approach towards Disaster Risk Reduction
Jane Madgwick, Wetlands International, the Netherlands

Landscape level planning & restoration of river systems to reduce vulnerability in Mahanadi Delta, India
Dr. Ritesh Kumar, Wetlands International South Asia, India

Holding back drought by influencing large scale irrigation programme investments and community interventions in Inner Niger Delta Mali
Eddy Wymenga, Altenburg & Wymenga Ecological Consultants, the Netherlands

Key lessons from an integrated approach to Disaster Risk Reduction: Partners for Resilience programme
Bruno Haghebaert, Netherlands Red Cross, the Netherlands

DP 2.1 Migration as an adaptation to climate change: The best option for deltas?

Deltas in Practice Theme 2
16.15 – 18.00
ANTWERP ROOM

Deltas have some of the highest population densities in the world with 500 million, often poor, residents. The adaptive strategies available to delta residents may exacerbate existing vulnerabilities and inequalities, and may not be adequate to cope with pervasive, systemic, or surprise changes associated with climate change. Hence, large movements of people are often projected from deltas under climate change. Migration is already an established household adaptation to cope with environmental and economic change within deltas, such as rural to urban movement. This can be both a successful form of adaptation, increasing the resilience of the migrant household, and unsuccessful, perpetuating vulnerability in a new location.

The panel discussion will contextualise the impacts of climate change and associated vulnerabilities across four contrasting deltas in Africa and South Asia – drawing on 'Deltas, vulnerability & Climate Change: Migration and adaptation' (DECCMA) research plans – in particular focussing on when migration might be an appropriate adaptation, especially for the most vulnerable.

Chair Dr. Emma Tompkins, University of Southampton, United Kingdom
Organised by Jon Lawn, University of Southampton, United Kingdom

Presentations

Introduction to the IDRC/DFID funded programme: Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA)
Dr. Michele Leone, International Development Research Council, Kenya

Introduction to DECCMA: The role of migration as an adaptation in deltas
Prof. Robert Nicholls, University of Southampton, United Kingdom

Four video vignettes of climate change adaptation challenges in four deltas: Volta, Mahanadi, Nile, Ganges-Brahmaputra-Meghna

Panel

Prof. Munsur Rahman, Bangladesh University of Engineering and Technology, Bangladesh
Dr. Tuhin Ghosh, Jadavpur University, India
Dr. Belal El Leithy, National Authority for Remote Sensing and Space Sciences, Egypt
Prof. Samuel Codjoe, University of Ghana, Ghana

DP 2.3 Learning from the practical experiences in the science policy interface in Delta Cities

Deltas in Practice Theme 2
16.15 – 18.00
NEW YORK ROOM

Delta cities are vulnerable areas, with further increasing levels of risks under future climate and socio-economic conditions. The Connecting Delta Cities network (CDC) operating under the C-40 network, aims to extend the collaboration from government-to-government (G2G) to knowledge-to-knowledge (K2K) in the C-40 cities.

In this session we explore how research can support policy making in CDC cities, in for example developing climate adaptation strategies. Presenters will give short pitch presentations on a statement, based on their experience of using scientific knowledge and expertise in developing and implementing adaptation, novel (green) adaptation measures, and how these have been (un)successful.

The objective is to explore if, and how a knowledge to knowledge (K2K) network might be organised between delta cities. A desired outcome is (1) commitment of researchers and knowledge centres in coastal cities to share knowledge and potentially join the K2K network of the CDC, and (2) building blocks for CDC K2K research agenda.

Chair Piet Dircke, ARCADIS, the Netherlands
Organised by Ralph Lasage, VU University Amsterdam, the Netherlands

Presentations

Science policy interface and K2K exchange within the C40 network
Jeroen Aerts, VU University Amsterdam, the Netherlands

Requirements for effective cooperation
Paul Owen, New York District of the U.S. Army Corps of Engineers, USA

Development of an integral climate change adaptation strategy for HCMC
Prof. Ho Long Phi, Centre of Water Management and Climate Change HCMC, Vietnam

RISES-AM: Experiences from the Barcelona and the Mediterranean coast
Augustin Sánchez-Arcilla, UPC, Spain

Rotterdam: Experience in science-policy interface: towards better informed adaptation
Peter van Veelen, City of Rotterdam and Delft University of Technology, the Netherlands

DP 3.4 Brisbane watershed design charrette (continued)

Deltas in Practice Theme 3
14.00 – 18.00
including break
BEURS LOUNGE

Being a region half the size of the Netherlands in area, the Brisbane watershed in southeast Queensland, Australia, is subjected to flooding and drought events of increasing regularity. A new holistic and integrated approach is needed! We believe design is a powerful tool for this.
One proven successful method to share knowledge and think creatively about a collective future is using design in a dialogue or charrette. In this session our team takes you into this interactive rollercoaster of 4 hours where we aim for results in an unconventional setup.
We are looking for an energetic public to actively participate and share an experience. Besides sharing knowledge of content and process, we will create and design! Concluding the charrette, we will deliver a preliminary presentation, a booklet of the charrette with presentations, sketches and conclusions arising from the workshop that will serve as input for the Australian context where the dialogue will continue!
Please note: 45 participants max, so be quick!

Chair MSc Stijn Koole, Bosch Slabbers Landscape + Urban Design, the Netherlands
Organised by MSc Stijn Koole, Bosch Slabbers Landscape + Urban Design, the Netherlands

Presentations

Kick-off charrette
MSc Stijn Koole, Bosch Slabbers Landscape + Urban Design, the Netherlands

MISI-ZIIBI | the process
PhD John Hoal, RA(SA), AICP, Urban Design, Washington University and H3 Studio, St. Louis, USA

MISI-ZIIBI | the results
Derek Hoeferlin RA, Washington University and James Hoeferlin Architect, St. Louis, USA

Brisbane watershed
James Davidson, James Davidson Architect, Australia

RT 2 Financing climate adaptation

Round Tables
16.15 – 18.00
TOWNHALL ROOM

Nanno Kleiterp

The Round Table 'Financing climate adaptation' will focus on the role of private actors in financing of adaptation measures in deltas. The main question to be discussed is: How to activate private finance for adaptation? What are the opportunities for private investors? What are the barriers that private actors currently experience that restricts them to invest in adaptation? And what can be done to overcome these barriers? Issues such as risk reduction strategies, innovation of financing instruments, the role of the government in stimulating private investment and success factors of existing privately funded adaptation projects will be discussed. A presentation will be given to introduce the subject, followed by an interactive discussion with the panelists and public. The outcome of the round table will be a contribution to the international debate on how to finance adaptation measures and the innovations that can help activate (new) sources of finance.

Chair Nanno Kleiterp, FMO Dutch Development Bank, the Netherlands

Presentations
Panel

Pieter Pauw, Deutsches Institut für Entwicklungspolitik, Germany
Patrick van Dijk, Royal HaskoningDHV, the Netherlands
Arthur Gleijm, Rebel Group, the Netherlands
Stéphane Hallegatte, The World Bank, USA
Marieke Lely, Boskalis, the Netherlands
Andreas Prystav, Swiss RE, Switzerland
Willem Stitselaar, Macquarie Capital, the Netherlands
Willemijn Verdegaal, Ministry of Foreign Affairs, UNFCC standing Committee on Climate Finance, the Netherlands

DS 2 USA: Developing resilient communities

Delta Sessions
16.15 – 18.00
LEEUWEN ROOM II

The USA session will focus on current developments around water management and climate resilience in the USA. Federal and local authorities across the nation are taking action to make communities and their economic assets more resilient to future climate events. In addition to the government, community based organisations, NGO's and private companies also play an important role in developing a sense of the consequences of climate change and discussing ways to handle those effects. This leads to tailor made solutions and innovative tools to make data on the consequences of climate change accessible for everyone.

This session will address:
- How an integrated approach on water management is applied in the USA
- How the federal government is monitoring if the current developments will be adequate to counter the estimated effects of climate change in such a large and diverse country
- The need for innovative tools to make the effects of climate change accessible and understandable for governments, companies and individuals

The USA session will focus on the following Building Blocks for a Delta Approach:
- Integrated approach
- Long term vs short term
- Decision support systems
- Innovation

Chair David Schaub-Jones, SeeSaw Group, South Africa, Paul van Koppen, NWP, the Netherlands

Presentations	Working together on resilience in the USA Jan Peelen, Royal Netherlands Embassy, Washington D.C., the Netherlands
	An integrated approach to water management in the USA David Waggonner, Waggonner & Ball Architects, USA
	Towards a resilient east coast: The USACE North Atlantic Coast Comprehensive Study and H. Sandy Recovery Program Roselle E. Henn, US Army Corps of Engineers, USA
	Measuring, mapping and understanding water risks around the globe Charles Iceland, World Resources Institute, USA
Panel	Discussion with panel of presenters, additional experts and the audience about the presented topics.

THURSDAY
25 SEPTEMBER 2014

08.00	– 19.00	Registration
09.00	– 19.00	Exhibition
09.00	– 10.45	Parallel sessions
10.45	– 11.15	Break
11.15	– 12.15	Plenary
12.15	– 13.30	Lunch
13.30	– 15.15	Parallel sessions
15.15	– 15.45	Break
15.45	– 17.30	Parallel sessions
17.30	– 19.00	Reception and poster session
19.00	– 21.30	Drinks - Bites - Music

DD 9.3 Knowledge and policy for governing adaptation in coastal regions

Deltas in Depth Theme 9
09.00 – 10.45
OSCAR AUDITORIUM

Chair Prof.dr. Joyeeta Gupta, University of Amsterdam, the Netherlands

Presentations

Caught in the middle: Developing components of a state program to assist Louisiana's communities reduce flood risk
Camille Manning-Broome, Center for Planning Excellence, USA

Organising interactive knowledge development in multifunctional coastal projects
MSc Chris Seijger, University of Twente, the Netherlands

Unintended consequences of adaptations to climate change in coastal areas
Prof. Christo Fabricius, Nelson Mandela Metropolitan University, South Africa

River and urban system governance in Pearl River Delta: 1920 – 2013
Liang Xiong, Department of Urbanism, Delft University of Technology, the Netherlands

Bridging state and non-state divides in Vietnam's transforming adaptation governance: Lessons from the Mekong
PhD Matthias Garschagen, United Nations University, Institute for Environment and Human Security, Germany

DD 2.3 Improved decision support in flood risk management

Deltas in Depth Theme 2
09.00 – 10.45
DIAMOND ROOM I

Chair Prof. Zbigniew Kundzewicz, Polish Academy of Sciences, Poland

Presentations

Costing natural hazards
Dr. Heidi Kreibich, German Research Centre for Geosciences, Germany

Robust flood risk management against acceptable cost: How the choice of criteria affects the ranking of strategies
MSc Marjolein Mens, Deltares, the Netherlands

Economical optimal water safety in a multi-level system: A new method applied to the IJsselmeer region
Peter Zwaneveld, CPB, the Netherlands

Robust management of flood risk under deep uncertainty: An application to Dhaka City
Prof. Carlo Giupponi, Ca' Foscari University of Venice, Italy

DD 1.2 Sea level rise and impacts

Deltas in Depth Theme 1
09.00 – 10.45
DIAMOND ROOM II

Chair: Prof. Eelco Rohling, Australian National University, Australia

Keynote: News from the IPCC chapter on Observations, Understanding and Projections of Sea Level Change
John Church FAA, FTSE, CSIRO Fellow, Centre for Australian Weather and Climate Research, Australia

Presentations

A geological perspective on potential future sea-level rise
Prof. Eelco J.Rohling, Research School of Earth Sciences, The Australian National University, Australia

The KNMI'14 scenarios for sea level rise along the North Sea
Dr. Hylke de Vries, KNMI, the Netherlands

Preparing for sea level rise in New York City
Cynthia Rosenzweig, NASA GISS/Columbia University, USA

Natural hazards and migration in the coastal region of Bangladesh
PhD Rezaur Rahman, Bangladesh University of Engineering and Technology, Bangladesh

DD 9.4 Innovation and experimentation in governing adaptation

Deltas in Depth Theme 9
09.00 – 10.45
GOUDRIAAN ROOM I

Chair: MSc Heleen Mees, Utrecht University, the Netherlands

Presentations

Experimenting for policy: An in-depth look at how the design of experiments can enable learning in climate adaptation
Belinda McFadgen, Institute for Environment Studies, the Netherlands

Possibilities and restrictions for transboundary climate adaptation governance for the Netherlands
MSc Marjolein van Eerd, Radboud University Nijmegen / Knowledge for Climate, the Netherlands

Sustainable transition characteristics of the integral area development on water in Rijnhaven Rotterdam
BSc Leander Ernst, Rotterdam, the Netherlands

Waters with(out) borders - The horizontal collaboration on climate change adaptation in North Denmark
Anja Wejs, Aalborg University, Denmark

Research training on the boundary between science and society:
Do transdisciplinary PhDs obtain different skills?
Tjerk Wardenaar, Rathenau Instituut, the Netherlands

DD 4.4 Sediment supply, loss and accumulation

Deltas in Depth Theme 4
09.00 – 10.45
GOUDRIAAN ROOM II

Chair Prof.dr. Johan Winterwerp, Deltares, the Netherlands

Presentations

Development of deltaic and estuarine wetlands under decadal and long-term climate variations
Dr. Mark Schuerch, University of Kiel, Germany

The role of natural accretion mechanisms in deltaic sustainability: The case of the Ebre Delta
Professor Agustín Sánchez-Arcilla, Lab. d'Enginyeria Marítima (LIM/UPC), Universitat Politècnica de Catalunya (UPC), Spain

Sedimentation in the Ganges-Brahmaputra Delta: Natural mangrove forest and embanked polders
PhD Irina Overeem, University of Colorado, USA

Water and sediment transport processes in the estuarine systems of the Ganges-Brahmaputra-Meghna delta
PhD Anisul Haque, IWFM, BUET, Bangladesh

DD 4.3 Sustainable Deltas 2015 (SD2015) initiative

Deltas in Depth Theme 4
09.00 – 10.45
PENN ROOM II

Focussed session

Recently the International Council for Science (ICSU) endorsed an initiative called 'Sustainable Deltas 2015' (SD2015). The purpose of this initiative is to serve as a call-to-arms towards increasing awareness, accelerating scientific progress, and promoting knowledge and data sharing for delta prosperity and sustainability through international partnerships and networking at local to regional and global levels. This session will give an overview of the state of the art in delta research and research-to-operations, data collection, integrated delta modelling and related international networks (Belmont Forum Deltas, Delta Alliance, LOICZ-IGBP), and their role in the SD2015 initiative. The presentations will be followed by an opportunity for the audience to comment upon the objectives of SD2015, and this will be facilitated through a panel discussion.

Organiser Tom Bucx, Deltares, the Netherlands
Organisers Prof. Efi Foufoula-Georgiou, University of Minnesota, USA
Irina Overeem, Steven Goodbred, John Dearing, Tom Bucx, and Cees van de Guchte, Deltares, the Netherlands
Partners Belmont Forum-DELTAS Project, Delta Alliance, LOICZ, CSDMS
Chair Hartwig Kremer, The UNEP GEMS/Water Programme (UNEP Headquarters), Division of Early Warning and Assessment, DEWA, Nairobi, Kenia

Presentations

The State of deltas in times of climate change: Challenges and opportunities in data collection and integrated delta modeling
Irina Overeem, Community Surface Dynamics Modeling System, University of Colorado at Boulder, USA

Belmont Forum Deltas Project (BF-DELTAS) – to sustain the resilience of deltas
Prof. Efi Foufoula-Georgiou, University of Minnesota, USA

Delta Alliance - for the resilience of deltas worldwide
Renske Peters, Director of Delta Alliance, the Netherlands

Land-Ocean Interactions in the Coastal Zone (LOICZ) – A Focus on the resilience of deltas worldwide
R. Ramachandran, Chair LOICZ, Germany

DD 3.3 Groundwater, salinity intrusion

Deltas in Depth Theme 3
09.00 – 10.45
TOKYO ROOM

Chair: Prof.dr. Shah Alam Khan, Bangladesh University of Engineering and Technology, Bangladesh

Presentations

Saline seepage in deltaic areas: From problem to solution
PhD Perry De Louw, Deltares, the Netherlands

Vulnerability of groundwater to salinization and the case of the Bengal Delta
PhD Holly Michael, University of Delaware, USA

Guiding principles for fresh water lens development: Exploitation and maintenance in artificial islands
MSc Marloes van Ginkel, Delft University of Technology & Royal HaskoningDHV, the Netherlands

Sophisticated well configurations to enable aquifer storage and recovery (ASR) in coastal aquifers
MSc Koen Zuurbier, KWR Watercycle Research Institute, the Netherlands

DD 10.1 Financing adaptation

Deltas in Depth Theme 10
09.00 – 10.45
BEURS LOUNGE

Chair: Dr. Swenja Surminski, London School of Economics, United Kingdom

Presentations

99 case studies of the UNFCCC Private Sector Initiative: Can the private sector finance adaptation?
MSc Pieter Pauw, Deutsches Institut für Entwicklungspolitik (DIE), Germany

Financing green adaptation strategies to Climate Change: The potential of Public-Private Partnerships (PPP)
Dr. Monica Alejandra Altamirano, Deltares, the Netherlands

A comparison of financial arrangements for realising adaptation projects
PhD Jeroen Rijke, UNESCO-IHE, the Netherlands

DP 7.6 Feasibility of long-term adaptation measures: How to develop a strategy that is cost-effective and reflective of stakeholder values

Deltas in Practice Theme 7
09.00 – 10.45
LEEUWEN ROOM I

The focus of this workshop is to provide a detailed account about how alternative approaches to water management policy are feasible in developed and developing countries. More specifically, it will focus on the financial tradeoffs that are necessary for the implementation of adaptive measures; thus providing long-term strategies that are cost-effective and reflective of stakeholder values about modes of adaptation to the consequences of climate change.

What economically viable adaptation possibilities exist for deltas and low-lying coastal zones both in developed and developing countries? What do local stakeholders prioritise and how do existing policies reflect those priorities? What short-term financial tradeoffs are these local stakeholders willing to acquiesce in exchange for longer-term financial security?

In this workshop, we will compare lessons learnt from Bangladesh, Florida (USA) and The Netherlands. Each case study will be discussed by two researchers and / or practitioners. The plenary discussion and lessons learnt will be visually summarized.

Chair MSc Bert Satijn, Water Governance Centre, the Netherlands
Organised by Dr. Aline te Linde, Twynstra Gudde Consultants and Managers, the Netherlands

Presentations

Integrated policy making and institutional strengthening in Bangladesh: experiences from the development of the Bangladesh Delta Plan 2100
Prof. Jaap de Heer, Twynstra Gudde Consultants and Managers, the Netherlands
MSc Md. Zahirul Haque Khan, Institute of Water Modelling, Bangladesh

From restoration to adaptation in Palm Beach County and Broward County, Florida, USA
MSc Karen Langbehn, University of South Florida and Patel School of Global Sustainability, USA
MSc Julie A. Dennis, Florida Department of Economic Opportunity, USA

Administrative, legal and financial bearings of the Dutch Delta Programme: lessons learnt about leadership and a multi-governance approach
MSc Jos van Alphen, Dutch Delta Programme, the Netherlands
PhD Ytsen Deelstra, Erasmus University Rotterdam and Wing, the Netherlands

DP 4.3 Green solutions for resilient delta cities

Deltas in Practice Theme 4
09.00 – 10.45
PENN ROOM I

The climate is changing; at the same time as we see urban delta areas enlarging and getting more densely populated. We need to find new and innovative ways to keep people in urban areas safe from chronic and acute stresses such as flooding and poor water quality whilst maintaining a desirable environment. Traditional responses generally focus on hard infrastructure solutions which are often costly to build and maintain and do not always represent the most effective, sustainable or desirable option. Green approaches and solutions are increasingly proving themselves. Whether alone or combined with traditional approaches, they are often more adaptable, cost-effective and bring co-benefits such as nature development and recreation. We will provide inspiring examples from cities around the world of how this can be achieved. In consultation with participants we will explore the opportunities and challenges to mainstreaming these approaches and identify how we can move this agenda forward.

Chair MA Arnoud Molenaar, City of Rotterdam, the Netherlands
Organised by Dr. Chris Baker, Wetlands International, the Netherlands

Presentations

Introduction
Jane Madgwick, Wetlands International, the Netherlands

How cities adapt through use of green infrastructure
Bregje Wesenbreeck, Deltares, the Netherlands

Case Study: Rotterdam City, the Netherlands: Urban greening for a resilient Rotterdam and improved quality of life
Pieter de Greef, City of Rotterdam, the Netherlands

Case Study: Saint-Louis, Senegal: Planning for a sustainable city (greening urban areas, planning and development) (tbc)

New Orleans, United States: Lessons learnt from coastal defence
David Waggonner, Waggonner and Ball Architects, USA

DP 6.1 Resilient adaptation: How to practice what is preached

Deltas in Practice Theme 6
09.00 – 10.45
ANTWERP ROOM

The problem with all measures addressing the consequences of climate change is uncertainty. A considerable chance exists that they will only be used decennia after implementation (or never). This requires much of their implementation; the support and understanding for these measures needs to be time-resistant and embedded in the long-term memory of the communities that they protect. This workshop will be organised from the perspective of those communities. Three international, community level and field experienced, panel-guests will engage in a conversation with a hardened researcher. They will be asked about their experiences and ideas, they will discuss the, if at all, importance of government policies and of scientific scenario-modelling, before trying to answer the essential question: How to reach those solutions that generate high impact then, with minimal investments now. Participants of the workshop will be able to join the discussion via our 'communicating walls'.

Chair	MSc Kim Anema, Unesco-IHE and Netherlands Red Cross, the Netherlands
Organised by	MSc Kim Anema, Unesco-IHE and Netherlands Red Cross, the Netherlands
Panel	Representing the field of scientific research: Prof. Efi Foufoula-Georgiou, University of Minnesota, USA Representing the local policymakers view: Beth Mclachlan, City of Melbourne, Australia Representing the practitioners view: Martijn Näring, Regional Water Authority Delfland, the Netherlands Representing the communities view: Enda O'Donovan, National Forum of Community Flood Committees, Ireland

DP 2.2 Regional adaptation strategies: Tips and tricks from three inspiring delta regions

Deltas in Practice Theme 2
09.00 – 10.45
NEW YORK ROOM

Climate change is a global issue. In practice however, adaptation to climate change is generally accomplished at the regional level, linking various local needs and opportunities. Deltas are typically subjected to regional adaptation to climate change. One of the major drivers for dealing with climate adaptation at the regional level is the integral system's approach. Adaptation to climate change at the regional level faces both barriers and opportunities. In this workshop we aim to exchange the latest and most valuable lessons learnt in that respect. Presentations from the delta regions of Rotterdam, London and Mekong will be a kick-off for interactive discussion among the audience and the presenters on tips and tricks for developing regional adaptation strategies and putting them into practice. Based on various experiences from around the world, we aim to indentify: (a) best ways to organise stakeholder involvement and partnerships, (b) major pitfalls, (c) ways to turn climate challenges into benefits and (d) benchmarks.

Chair Dr. Kim van Nieuwaal, Knowledge for Climate, Utrecht University, the Netherlands

Organised by Dr. Kim van Nieuwaal, Knowledge for Climate, Utrecht University, the Netherlands

Presentations

Introduction to regional adaptation strategies
Dr. Kim van Nieuwaal, Knowledge for Climate, Utrecht University, the Netherlands

Building blocks for adaptation strategies in the Rotterdam Region
MSc Lissy Nijhuis, Rotterdam City Region, the Netherlands

Preparing London for extreme weather and climate change
Juliette Daniels, Climate UK, United Kingdom
Tim Reeder BSc CSci FCIWEM, Environment Agency, United Kingdom
Alex Nickson, Greater London Authority, United Kingdom

The Mekong Delta Plan: Regional strategy for the sustainable long-term development of the Vietnamese Mekong delta
Dr. Tran Hong Thai, Ministry of Natural Resources and Environment, Vietnam

DP 7.4 How sustainable is your city water management?

Deltas in Practice Theme 7
09.00 – 10.45
VAN DER VEEKEN ROOM

Large cities in deltas are vulnerable to climate change. Urban areas can combat the impacts of climate change by creating a robust and sustainable city water management. In this workshop we pose the question "how sustainable is your city water management?" and present a new method for comparing cities: the City Blue Print.
The City Blue Print is the successor of the widely known Siemens Green City Index, especially aimed at water management. It measures the level of sustainability of a city's present water management on the basis of socio-economic costs and benefits. It also traces the possible future measures that cities can take to improve their water management (website).
The City Blue Print has been applied to more than 25 cities across the world. The results of these exercises will be presented. We will discuss how to make City Blue Prints for various climate change scenarios and how to select the most desirable measures based on cost benefit analysis.

Chair — Prof. G.M. Whiteman , World Business Council for Sustainable Development and Rotterdam School of Management, the Netherlands
Organised by — MSc K.A. Haans, Witteveen+Bos, the Netherlands

Presentations

Introduction to the City Blue Print
Richard Elelman, NETWERC H20 and Fundació CTM Centre Technologic, Spain

How sustainable is Jakarta's water management?
Herman Mondeel, Witteveen+Bos, the Netherlands

How sustainable is Manresa's water management?
Richard Elelman, NETWERC H20 and Fundació CTM Centre Technologic, Spain

Comparing two cities that seem similar: Amsterdam & Eindhoven
PhD Elisabeth Ruijgrok, Witteveen+Bos, the Netherlands

RT 3 Community based adaptation

Round Tables
09.00 – 10.45
TOWNHALL ROOM

Maarten van Aalst

The Round Table on Community Based Adaptation (CBA) will focus on the role of CBA within the broader challenges of dealing with increasing climate risks in deltas. The three main questions to be discussed are: What are the challenges currently faced by communities in deltas, and how will these be affected by climate change? What are the likely challenges and opportunities in promoting CBA in deltas? What is needed to promote CBA in delta areas? Issues such as funding mechanisms, control by the communities over planning and finance, scaling up of CBA initiatives and how scientists can help supporting CBA, will be tabled. Two presentations will be given followed by short comments from the panellist and a discussion. The outcome of the round table will be a contribution to the international debate on how CBA in deltas can be strengthened through national and international policy and finance mechanisms.

Organisers	International Red Cross Red Crescent Climate Centre Both Ends International Institute for Environment and Development (IIED)
Facilitator	Maarten van Aalst, International Red Cross Red Crescent Climate Centre, the Netherlands

Presentations	Munish Kaushik, Cordaid India Anju Sharma, Oxford Climate Policy/IIED, United Kingdom
Panel	Speakers Yolanda Kakabadse (Ecuador), WWF International President Atiq Rahman, Bangladesh Centre for Advanced Studies (BCAS), Bangladesh Michel Rentenaar, Netherlands climate envoy, the Netherlands

IBC International Climate Adaptation Business Challenge 2014

09.00 – 11.00
MEES AUDITORIUM

Adapting to climate change offers great opportunities for business and entrepreneurs. Therefore Knowledge for Climate and Climate-KIC organised the International Climate Adaptation Business Challenge. Nearly 80 ideas for adaptation products and services were submitted in this second edition of the Business Challenge, from 28 countries all over the world. 7 finalists were selected who received financial support and business coaching in order to develop their idea into a strong business plan over summer. Now they get the opportunity to pitch their plan at the international stage of Delta's II. Guided by energetic presenter and journalist Rens de Jong (BNR newsradio) the finalists will battle with each other in order to win awards up to 25.000 euro for implementation of their business plan. The winners will be announced in the plenary session between 11.15 and 12.15. How will they convince the jury? How will they convince you of their practical solutions and innovative concepts for climate adaptation?

Chair Rens de Jong, BNR newsradio, the Netherlands

DS 3 Indonesia: NCICD, from planning to implementation

Delta Sessions
09.00 – 10.45
LEEUWEN ROOM II

The Indonesia session will focus on the project 'National Capital Integrated Coastal Development' (NCICD). Based on the recently presented master plan for this project the focus will be on the shift from planning towards implementation of this project. Key aspects will be: integrated approach, cooperation of various governments and private and knowledge sectors and finance.

The session will address:
- Experiences of the NCICD project so far
- Key issues of the project
- Future progress of the project

The Indonesia session will focus on the following Building Blocks for a Delta Approach:
- Integrated approach
- Legislation and depolitization
- Finance and implementation
- Governance and cooperation with stakeholders

Chair Welcome and introduction to the session
Welcome to the session, Interest of Indonesia

Presentations
NCICD Jakarta, The ultimate urban flood management case
Sutanto Soedodho, deputy Governor Jakarta, Indonesia

Masterplan NCICD and the Dutch delta Programme: Similarities and differences
Victor Coenen, Master Plan NCICD, Witteveen + Bos, the Netherlands

Integrated implementation after Planning
Luky Eko Wuryanto, MENKO (Coordinating Ministry for Economic Affairs), Indonesia

The legal framework and funding arrangements
Ad Sannen, Jakarta Integrated Coastal Development Project Management Unit Support, Royal HaskoningDHV, the Netherlands

Discussion with panel of presenters and the audience

- How to achieve a paradigm shift in project planning and implementation arrangements to make such a complex project possible and to maximizes the revenue potential from the project implementation
- How can the government become entrepreneurial in its planning and implementation approach and at the same time position itself as a long term trusted investment partner with the necessary skills and expertise
- How to establish trust and new forms of engagement between the public and private sector in arrangements for implementation
- How to mandate and monitor a decisive implementing authority, also as vehicle for development
- How can immediate short term measures be implemented while still shaping long term solutions (no regret)

Conclusions and wrap up

DS 4 The Netherlands

Delta Sessions
09.00 – 10.45
VAN OLDENBARNEVELT ROOM

The Delta programme aims to protect the Netherlands against flooding and to guarantee fresh water supply in the long term (2100).

In this session four presentations will address new national policy frameworks regarding:

- The new flood risk management policies
- Fresh water supply
- Climate/water proof spatial planning

And how these national frameworks are combined in a regional adaptive water management strategy of Lake IJssel, the biggest lake of the Netherlands.

The Netherlands session will focus on the following Building Blocks for a Delta Approach:

- Integrated approach
- Long term vs. short term
- Governance and cooperation with stakeholders
- Supported analysis
- Uncertainties & scenarios

Chair Bart Parmet, Staff Delta Programme Commissioner

Presentations	Updated flood risk management policies and protection standards Bert Naarding, Programme Water Safety, the Netherlands
	A new comprehensive policy on fresh water supply Ans van de Bosch, Programme Fresh water supply, the Netherlands
	A new policy framework for climate and water proof land use David van Zelm van Eldik, Programme Spatial Adaptation, the Netherlands
	Regional adaptive delta management in the IJssel lake area Herbert Bos, Programme Lake IJssel region, the Netherlands

10.45 – 11.15 **Break**

PL

Plenary
11.15 – 12.15
ROTTERDAM HALL

Chair Paula Verhoeven MA, City of Rotterdam

The economics of climate change impacts and adaptation
Stéphane Hallegatte, The World Bank, USA

How companies can contribute in implementing solutions
Stephan Ritter, CEO ARCADIS, Germany

Award ceremony International Climate Adaptation Business Challenge
Rens de Jong, BNR newsradio, the Netherlands


Paula Verhoeven


Stéphane Hallegatte


Stephan Ritter


Rens de Jong

12.15 – 13.30 **Lunch**

DD 9.5 Actors and agendas in the governing adaptation

Deltas in Depth Theme 9
13.30 – 15.15
OSCAR AUDITORIUM

Chair MSc Eric Massey, VU University Amsterdam, the Netherlands

Presentations

Design principles for governance arrangements for climate adaptation
Prof. Catrien Termeer, Wageningen UR, the Netherlands

Flood governance of Jakarta, Indonesia: Identifying societal and political processes in climate change adaptation
Gusti Ayu Ketut Surtiari, Indonesian Institute of Sciences, Indonesia

Multi-scale governance of ecosystem services and poverty in the GBM Delta - the Resilience Challenge
Dr. Michelle Lim, Centre for Water Law, Policy and Science, University of Dundee, United Kingdom

Scenario development for reaching urban and environmental planning integration in the context of climate change
Dr. Diego Sepulveda

DD 10.3 Evaluation of adaptation tools

Deltas in Depth Theme 10
13.30 – 15.15
DIAMOND ROOM II

Chair Paul Watkiss, University of Oxford, United Kingdom

Presentations

Economic modelling for selection of flood protection measures in Jakarta: An optimization approach
MSc Pini Wijayanti, Wageningen UR, the Netherlands

Design of assessment frameworks for delta adaptations – experiences from the Netherlands and the USA
PhD Marcel Marchand, Deltares, the Netherlands

Comparing economic tools for evaluation of adaptation pathways to support climate adaptation
MSc Maaike van Aalst, Deltares, the Netherlands

Interest of agent-based vs macroscopic approach to evaluate adapatation measures of private sectors to flooding
Pauline Brémond, IRSTEA, France

DD 7.2 Extreme weather impacts on critical infrastructures: International lessons to improve analysis

Deltas in Depth Theme 7
13.30 – 15.15
GOUDRIAAN ROOM II

Chair: Tiedo Vellinga, Port of Rotterdam / Delft University of Technology, the Netherlands

Presentations

Enhancing the resilience of Australian seaports to a changing climate
PhD Jane Mullett, Global Cities Research Institute, RMIT University, Australia

Multi-level vulnerability analysis of the Dutch electricity infrastructure to extreme weather events
L. Andrew Bollinger, Delft University of Technology, the Netherlands

Climate adaptation strategies for infrastructure networks - connecting science and policy
MSc Tara Geerdink, TNO, the Netherlands

Resilience of harbour companies to flood risk
PhD Judith E.M. Klostermann, Wageningen UR, the Netherlands

Impact of climate on pipe failure: Predictions of failures for drinking water distribution systems
Bas Wols, KWR Watercycle Research Institute, the Netherlands

DD 11.5 Decision analysis and support

Deltas in Depth Theme 11
13.30 – 15.15
LEEUWEN ROOM I

Chair: Dr. Rob Swart, Wageningen UR, the Netherlands

Presentations

Comparing robust decision making and adaptation pathways for supporting climate adaptation
Dr. Jan Kwakkel, Delft University of Technology, the Netherlands

Using data and technology for decision support and risk management
PhD Wenhui Zhang, AGT International, Germany

A risk-based approach for fresh water management: Supporting decision making in times of water scarcity?
PhD MSc Saskia van Vuren, HKV Consultants & Delft University of Technology, the Netherlands

Towards implementation of the delta approach: The added value of strategic environmental assessment
MSc Arend, Kolhoff, Netherlands Commission for Environmental Assessment, the Netherlands

Coastal state indicators interdependencies: Bottom up vs bottom down perspectives
PhD Andres Payo, Environmental Change Institute/Oxford University, Oxford, United Kingdom

DD 10.2 Economic impact of climate risks

Deltas in Depth Theme 10
13.30 – 15.15
PENN ROOM II

Chair Stéphane Hallegatte, The World Bank, USA

Presentations

The economic-wide consequences of large-scale floods. How resilient is the European economy?
Elco Koks, Institute for Environmental Studies, VU University Amsterdam, the Netherlands

Increasing stress on disaster-risk finance due to large floods
Brenden Jongman, Institute for Environmental Studies, VU University Amsterdam, the Netherlands

DD 2.4 Novel flood damage mitigation and precautionary measures

Deltas in Depth Theme 2
13.30 – 15.15
VAN OLDENBARNEVELT ROOM

Chair Dr. Heidi Kreibich, German Research Centre for Geosciences, Germany

Presentations

Flood insurance in England- assessment of the current and proposed insurance schemes in context of rising flood risk
PhD Swenja Surminski, Grantham Research Institute on Climate Change and the Environment, United Kingdom

Jakarta climate adaptation tools
Dr. Philip Ward, VU University Amsterdam, Institute for Environmental Studies, the Netherlands

Mitigating flood risk under conditions of strong growth and weak planning: Constraints and solutions in Can Tho City
PhD Matthias Garschagen, United Nations University, Institute for Environment and Human Security, Germany

Evaluating the effectiveness of flood damage mitigation measures by the application of propensity score matching
Paul Hudson, VU University Amsterdam, the Netherlands

The potential of wide green dikes along the Dollard
MSc Jantsje van Loon-Steensma, Wageningen UR, the Netherlands

DD 4.5 Building with nature

Deltas in Depth Theme 4
13.30 – 15.15
MEES AUDITORIUM

Chair: Prof.dr. Peter Herman, Netherlands Institute of Ecology / Royal Academy of Sciences, the Netherlands

Presentations

Ecomorphological effects of human interferences in estuaries and their consequences for management
Tom Ysebaert, Royal Netherlands Institute for Sea Research (NIOZ), the Netherlands

The role of biogenic reefs for coastal adaptation and conservation
Brenda Walles, Wageningen UR, the Netherlands

Restoring eroding coasts by stimulating sediment trapping
Prof.dr. Johan C. Winterwerp, Deltares, the Netherlands

Oyster reefs for coastal defense and food production: Experience from Bangladesh
Dr. M. Shahadat, Hossain Institute of Marine Sciences and Fisheries, University of Chittagong, Bangladesh

Integration of ecology and engineering in cost-effective nature-based flood defences
MSc Mindert de Vries, Deltares, HZ U. of Applied Sciences, the Netherlands

DD 3.4 Agriculture-water quantity, salinity, adaptation

Deltas in Depth Theme 3
13.30 – 15.15
TOKYO ROOM

Chair: Dr. Ad Jeuken, Deltares, the Netherlands

Presentations

Simulating drought vulnerability of the agricultural sector in the southwest Netherlands: An agent-based approach
Rianne Van Duinen, Deltares, the Netherlands

Dealing with the unpredictable: Anticipation of salinity stress to crops under erratic weather conditions
Prof. Sjoerd van der Zee, Wageningen UR, the Netherlands

Effects of low salinity levels on the growth of plant species from Dutch fens
Sija Stofberg, Wageningen UR, the Netherlands

Water availability: Climate change adaptation in the agricultural sector in the Czech Republic
PhD Eliska Lorencova, Global Change Research Centre, Czech Republic

Summer pathways of water and solutes in an agricultural field
MSc Joost Delsman, Deltares, the Netherlands

DP 7.2

Deltas in Practice Theme 7
13.30 – 15.15
TOWNHALL ROOM

Mainstreaming flood resilience and green infrastructure with investment and renewal programs: Best practices and challenges from vanguards cities across the globe

Urban (re)development provides opportunities for adapting cities to become more flood resilient. In so doing, it is important to incorporate cost-effective measures by synergistic mainstreaming within regular planning programmes, so that the inclusion of such interventions can become part of a short- and long-term climate adaptation strategy. Successful implementation will require a paradigm shift of planned adaptation from its primary focus on climate mitigation using stand-alone interventions to a broader focus on (i) increasing the performance of the city through green investment, (ii) integrating adaptation into urban redevelopment programs, and (iii) recognizing that climate resilient cities require continuous learning and action. Significant work has been undertaken in this field by the cities of Tainan, Copenhagen, Singapore, Melbourne and Dordrecht/Rotterdam. Together with stakeholders and researchers this session aims to explore successful institutional, planning, policy and business practices for mainstreaming adaptation and greening and opportunities for knowledge exchange.

Chair	Prof. Chris Zevenbergen, UNESCO-IH and Delft University of Technology, the Netherlands (chair) Dr. Yi-Chang, Chinese Culture University, Taiwan, Republic of China (co-chair) Dr. Peter van der Keur, GEUS, Denmark (co-chair) Dr. Beth McLachlan, City of Melbourne, Australia (co-chair)
Organised by	Prof. Chris Zevenbergen, UNESCO-IH and Delft University of Technology, the Netherlands

Presentations	Climate adaptation in Tainan: Best practices and challenges of the old city centre Mayor Ching-Te Lai, Tainan City, Taiwan
	Flood management in a growing and greening city Beth McLachlan, City of Melbourne, Australia
	Opportunities and treats of green infrastructure Tan Nguan Sen, PUB, the national water agency, Singapore
	Copenhagen Cloudburst Management plan Jan Rasmussen, City of Copenhagen, Denmark
	Mainstreaming adaptation in Dordrecht and Rotterdam Ellen Kelder, City of Dordrecht, the Netherlands

Panel	Dr. Yi-Chang, Chinese Culture University, Taiwan, Republic of China Dr. Peter van de Keur, GEUS, Denmark Prof. Nigel Tapper, Monash University, Australia Dr. Vladan Babovic, NUS, Singapore (tbc) Dr. Sebastiaan van Herk, Unesco-IH, the Netherlands John Jacobs, City of Rotterdam, the Netherlands

DP 6.4

Deltas in Practice Theme 6
13.30 – 15.15
DIAMOND ROOM I

Deltas and estuaries in peril: towards a global "Community of Practice" on the ecosystem-based-management of deltas under global and climate change

Managing human activities in coastal systems and contributing river-catchments sector-by-sector has proved insufficient. Global deltas, accommodating a growing number of over 500 Billion people and urban infrastructure, are facing rapid environmental change and increasing risk of natural hazards and deteriorating natural capital. Recent reports indicate that marine and coastal ecosystems are on the brink of long-term unsustainable development.

In order to fill in the information gaps and support countries and UN system partners to build capacity and develop strategies and policies to address key drivers of ecosystem degradation, UNEP seeks to establish a "Community of Practice" on the sustainability and ecosystem based - management of global deltas. Following the framework of UNEP's Global Environmental Outlook (GEO) Assessment process, the session will discuss a draft white paper on ecosystem-based management of deltas and best practices, and seek support to develop a comprehensive global UNEP programme on informing on the link between sustainable ecosystems and development in deltas under global and climate change and recommending appropriate policy measures.

Chair	Hartwig Kremer, UNEP, Kenya
	Keith Alverson, UNEP, Kenya
Organised by	Hartwig Kremer, UNEP, Kenya
	Cees van de Guchte, Deltares/Delta Alliance, the Netherlands

Presentations	Deltaic sustainability Prof. John W. Day, Louisiana State University, USA
	Impacts of sea level rise on deltas Robert Nichols, University of Southampton, United Kingdom
	Delta Risk Indices Peter Koefoed Bjorsen, UNEP-DHI, Denmark
	Climate Adaptation in deltas Dr. Saleemul Huq, International Institute for Environment and Development, Bangladesh
	Governance of deltas Kathleen Dominique, OECD, France
Panel	Dr. Ashok Khosla, International Resources Panel, India (tbc) Dr. Efi Foulafalou, University of Minnesota, USA Renske Peters, Delta Alliance, the Netherlands Euloge Agbossou, INE, Benin Dr. Ramachandran Ramesh, India National Centre for Sustainable Coastal Management, India Arnoud Molenaar, City of Rotterdam, the Netherlands

DP 7.1

In search of new (public-private) partnerships for resilient delta cities, practices in Rotterdam and New York: Unique or 'a few of many?'

Deltas in Practice Theme 7
13.30 – 15.15
GOUDRIAAN ROOM I

50% of the world's population lives in cities. By 2050 this number will have increased to 75%. Most of these cities are located in fragile delta areas, along rivers and coasts. Providing adequate flood protection and safeguarding freshwater provision will require huge investments. Government funding and programmes alone are not sufficient. New partnerships are needed.
In this workshop we will present two inspiring cases as an introduction; the Dutch Deltaprogramme and New York after Sandy. Then, similar experiences in other cities will be discussed. The aim of this workshop is to bring together a wide range of stakeholders who will be challenged to share their experiences and views on risks and opportunities, leading to a set of 10 practical guidelines to combine resilience projects with other functions and benefits.

Chair Msc Martin van der Does de Bye, RebelGroup, the Netherlands
Organised by Msc Martin van der Does de Bye, RebelGroup, the Netherlands

Presentations

Added value in the Dutch delta by bringing together public and private views and benefits during the policy making process
MA Luc de Vries, Ministry of Infrastructure and the Environment, the Netherlands

Rebuild by Design: Recovering New York after Sandy
Henk Ovink, Department of Housing and Urban Development, USA

DP 3.2 Creating floating cities: A dream or a new perspective for the future of the planet?

Deltas in Practice Theme 3
13.30 – 15.15
PENN ROOM I

Floating cities have fascinated people for decades. This dynamic and interactive workshop brings together global frontrunners from science, government, companies and NGO's, who are all working on floating cities. The session showcases visions for the future of our planet such as the BlueRevolution and Seasteading, but also concrete innovative projects such as a floating solar powered school in Makoko (Lagos, Nigeria) and the floating development in Rijnhaven (Rotterdam, the Netherlands). In Rotterdam the government and companies are implementing new forms of public-private-partnership to create a floating neighbourhood. What can floating urbanisation offer to rapidly growing delta cities such as Manila, the Philippines and Lagos, Nigeria? What are the effects on water quality and ecology and how can innovative measurement techniques such as underwater drones contribute in measuring these impacts? You will find it out in this workshop you will definitely remember after the conference.

Chair	Dr. Rutger de Graaf, Rotterdam University of Applied Sciences, the Netherlands
Organised by	Dr. Rutger de Graaf, Rotterdam University of Applied Sciences, the Netherlands

Presentations

Blue Revolution: Floating cities and their potential for coastal cities.
Reflection forum by stakeholders and decision makers from three coastal cities
MSc Bart Roeffen, Blue Revolution Foundation, the Netherlands

Floating Cities: Opening Humanities Next Frontier
Lasse Birk Olesen, Seasteading Institute, USA

Makoko Floating School: An innovative approach to address social and physical community needs in view of the impact of climate change
Kunlé Adeyemi, NLÉ Architects, Lagos, Nigeria

The effects of floating urbanization on ecology and water quality
MSc Floris Boogaard, Tauw, the Netherlands

Floating Urban Development and Area Development 3.0 in Rijnhaven, Rotterdam
Leander Ernst, Rotterdam University of Applied Sciences, the Netherlands

Panel

Potential of low cost floating housing for the Philippines
Rick Heikoop, Rotterdam University of Applied Sciences, the Netherlands
Gerard van Zomeren, Arcadis, the Netherlands
Jan Willem Roël, FlexBase, the Netherlands
Corazon Dee, Institute for Housing and Urban Development Studies, the Philippines

Co-reference

Jan Rasmussen, City of Copenhagen, Denmark
Floating urban development in London
Mark van Ommen, Floatbase, United Kingdom

DP 2.4 Creating and managing subsurface water buffers as a solution for fresh water shortage in coastal areas

Deltas in Practice Theme 2
13.30 – 15.15
ANTWERP ROOM

Deltas are dealing with decreasing freshwater availability, causing problems like seasonal water shortage, overexploitation of freshwater aquifers and seawater intrusion. Freshwater shortages are expected to increase due to climate change. Fresh water buffers can provide a suitable solution for water shortages in coastal areas worldwide. Several barriers have to be overcome to widely apply these technologies.

The session starts with an introduction of (the potential of) water buffering solutions and managed aquifer recharge, showing examples and experiences worldwide. The session continues with inspiring case-studies on specific characteristics and challenges (e.g. governance, technologies, costs-benefits): Llobregat River delta (Barcelona, Spain), Water buffering for productive use (the Netherlands) and Khulna/Satkhira Districts (Bangladesh). This session aims to create a roadmap for upscaling these promising concepts with the audience, in which national and international experiences are joined together. Also a new book '3R in coastal zone management' will be launched during this session.

Chair	MSc Paul C. van Koppen, Kopconsult, the Netherlands
Organised by	MSc Carl S.J. Paauwe, Waterbuffer Foundation, the Netherlands MSc Marlies L. Batterink, Aqua for All, on behalf of 3R-partnership, the Netherlands

Presentations	Water buffering: Worldwide examples of fresh water solutions PhD Frank van Steenbergen, Meta Meta, the Netherlands PhD Arjen de Vries, Acacia Water, the Netherlands
	Innovative aquifer recharge in the Netherlands: Spaarwater, ASR coastal and Go Fresh PhD Arjen de Vries, Acacia Water, the Netherlands
	Aquifer recharge for securing water resources MSc Pere Camprovin, CETaqua Water Technology Centre, Spain
	Creating fresh water bubbles in brackish aquifer Prof.dr. Kazi Matin Ahmed, Dhaka university, Bangladesh

DP 2.5

Resilient cities talk: Best practices and remaining challenges on creating resilient urban waterfronts

Deltas in Practice Theme 2
13.30 – 15.15
NEW YORK ROOM

Join a lively conversation between leading cities on their strategies to keep their cities safe from flooding. In this session a discussion is facilitated between practitioners and scholars sparked by short presentations introducing challenges in creating resilient coastal waterfronts in London, Hamburg, Rotterdam and Gothenburg. And you can participate in the discussion!

Many cities in the EU are struggling with an increasing risk of flooding due to climate change and intensive urbanisation of their waterfront areas. The question is how to respond to the urbanised floodplains becoming increasingly vulnerable. One strategy is aiming to reduce the consequences of an inundation through flood-proof architecture and utilities, and local flood mitigating measures. This resilience approach not only demands for a new set of design and planning tools when integrating flood risk management and urban planning processes, it also demands new ways of risk-communication, rethinking of roles and responsibilities of public and private parties and new approaches in stakeholder participation.

Chair	Camiel van Drimmelen, City of Amsterdam, the Netherlands
Organised by	MSc Peter van Veelen, City of Rotterdam and Delft University of Technology, the Netherlands MSc Martijn Steenstra, Grontmij and STAR-FLOOD project, the Netherlands

Presentations

Setting the scene
MSc Dr. Berry Gersonius, City of Dordrecht and Unesco-IHE, the Netherlands

Resilience and quality of life
Alex Nickson, Greater London Authority, United Kingdom

Resilient waterfronts in the Dutch delta: Challenges and opportunities of multi-layer safety in Rotterdam, Amsterdam and Dordrecht
MSc Peter van Veelen, City of Rotterdam and Delft University of Technology, the Netherlands

Safe from storm surges without dikes: Hamburg's new HafenCity
MSc Jan-Moritz Müller, City of Hamburg, Germany

Gothenburg under water? Challenges for the City, when talking about climate change
MSc Ulf Moback, Gothenburg City Planning Authority, Sweden

STAR-FLOOD members participating in the round table discussion:
Prof. Colin Green, Middlesex University, United Kingdom
Dr. Ann Crabbé, University of Antwerp, Belgium
MSc Martijn Steenstra, Grontmij, the Netherlands

DP 4.1 How to find the balance between economic and ecological sustainability – 5 WWF delta cases

Deltas in Practice Theme 4
13.30 – 15.15
BEURS LOUNGE

Deltas are important for both ecology and society. These transitional areas connect freshwater and saltwater, land and sea, urban and nature, thus they have pregnant unique and rich biodiversity. Further, deltas are historically the origin of human civilisation and now the hub of world economies. Deltas support most of the world's densely populated areas by providing ecosystem services and natural sanctuaries for regional development and safety.

Upstream developments in the basin, like dams, pollution and conversion of high value natural areas 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.

This workshop aims to summarise successful cases and lessons learnt in 5 world's representative deltas. It will provide valuable and tangible reference for all relevant stakeholders to take a serious consideration on their delta's future development.

Chair Esther Blom, WWF NL, the Netherlands
Organised by Bas Roels, WWF NL, the Netherlands

Presentations

The Yangtze delta: A case study on securing the water safety to safeguard the city of Shanghai while facing the impacts of global climate change
Dr. Ruan Renliang, Deputy Chief Engineering of Shanghai Water Authority, China

The Sundarbans delta: Stimulating public discussion and encouraging changes to establish sustained human development and restoration of an unique ecosystem
Anurag Danda, WWF India, India

The Mekong delta: A case study on successful green adaptation initiatives and policy advocacy on enabling legal frameworks on green adaptation from central to local government levels
Viet Hoang, WWF Vietnam, Vietnam

The Rhine-Meuse Delta: Using strategic partnerships to gather public support and understanding for moving back to a more open and natural delta
Bas Roels, WWF NL, the Netherlands

The estuary of the Guadalquivir: Increasing scientific knowledge from a holistic perspective for better decision taking
Eva Hernández, WWF Spain, Spain

DS 5 Bangladesh delta Plan 2100

Delta Sessions
13.30 – 15.15
LEEUWEN ROOM II

Within the context of the recently started Bangladesh Delta Plan 2100 project, Bangladesh and Dutch experts work together to develop long term strategies to deal with socio-economic trends and climate change in one of the largest and most dynamic deltas in the world. Different methods and approaches are employed to support the development of these strategies, such as scenario development and adaptive delta management principles. Inspired by comparable projects such as Dutch Delta Programme in the Netherlands and the Mekong Delta Plan in Vietnam, the project has as one of its priorities how to simultaneously anchor investments plans to facilitate the translation of long term strategies into implementation programmes.

The session will highlight and discuss:
- Governance and process management of the BDP2100
- Translation of long term delta planning to investment and implementation
- Comparing and incorporating lessons learned from the Netherlands and Vietnam

The Bangladesh session will focus on the following Building Blocks for a Delta Approach:
- Integrated approach
- Implementation
- Long term vs. short term
- Uncertainties and scenarios

Chair David Schaub-Jones, SeeSaw Group, South Africa, Paul van Koppen, NWP, the Netherlands

Presentations	Bangladesh delta challenges and the Bangladesh Delta Plan 2100 Giasuddin Chowdhury, Bangladesh, Jaap de Heer, Twynstra Gudde, the Netherlands and Mafidul Islam, GED, Planning Commission, Bangladesh
	Long term delta planning in the Mekong Delta Plan Dr. Dang Kim Son, Ministry of Agriculture and Rural Development, Vietnam
	Approaches and insights from the Dutch Delta Programme Jos van Alphen, Staff Delta Commissioner, the Netherlands
	Discussion with panel of presenters and audience What lessons can Vietnam and the Netherlands share with Bangladesh (and vice versa)?

15.15 – 15.45 Break

DD 9.6 Engaging the public in adaptation governance

Deltas in Depth Theme 9
15.45 – 17.30
OSCAR AUDITORIUM

Chair Prof.dr. Peter Driessen, Knowledge for Climate / Utrecht University, the Netherlands

Presentations

Roles and responsibilities of residents in the governance of climate change adaptation
PhD Dries Hegger, Utrecht University, the Netherlands

The role of solidarity in Dutch Adaptation Strategies
Dr. Andrea Keessen, Utrecht University, the Netherlands

An eco-bio-social approach to coastal zone for a better governance adaptation in the Gulf of St. Lawrence, Canada
PhD Omer Chouinard, Université de Moncton, Canada

The use of indigenous knowledge in developing climate change adaptation strategies
PhD Phuong Thi Hong Le, Wageningen UR, the Netherlands

DD 1.3 Changing weather and impacts (continues 1.4)

Deltas in Depth Theme 1
15.45 – 17.30
DIAMOND ROOM II

Chair Dr. Daniela Jacob, Climate Service Center2.0, Hamburg, Germany

Presentations

Climate change impacts on tropical cyclones and extreme sea levels – Examples for Fiji and Samoa
PhD Kathleen McInnes, CSIRO, Australia

Dynamics of extra-tropical transition of tropical cyclones hitting Western Europe in a warmer climate
Dr. Rein Haarsma, KNMI, the Netherlands

High resolution modelling improves the simulation of extreme winds in the coastal zone
Dr. Reinout Boers, KNMI, the Netherlands

Response of hourly precipitation extremes to climate perturbations: results from a mesoscale model
Dr. Geert Lenderink, KNMI, the Netherlands

Resolution dependence of European precipitation in a state-of-the-art atmospheric general circulation model
Ronald van Haren, KNMI, the Netherlands

DD 5.4 Economics of urban adaptation

Deltas in Depth Theme 5
15.45 – 17.30
GOUDRIAAN ROOM I

Chair: Prof.dr. Chris Zevenbergen, UNESCO-IHE, the Netherlands

Keynote: Mainstreaming flood resilience and sustainability with investment and renewal programmes
Prof.dr. Chris Zevenbergen, UNESCO-IHE, the Netherlands

Presentations

The potential of floating urban development and food production for coastal delta cities
PhD Rutger de Graaf, DeltaSync/Hogeschool Rotterdam, the Netherlands

The role of public-private partnerships to address climate risks: Case of the London Climate Change Partnership
PhD Swenja Surminski, London School of Economics, United Kingdom

Spatial cost-benefit analysis of flood-proofing buildings in New York City
Dr. Hans de Moel, VU University Amsterdam, Institute for Environmental Studies, the Netherlands

Urban adaptation to climate change in Rotterdam: From city to neighbourhood
Laura Kleerekoper, Delft University of Technology, the Netherlands

Toward a cost-effective restoration of a vital community in a safe delta, design of the 'New Meadowlands', New Jersey
MSc Mindert de Vries, Deltares - HZ U. of Applied Sciences, the Netherlands

DD 6.2 Strategies to increase food security (continues 6.3)

Deltas in Depth Theme 6
15.45 – 17.30
LEEUWEN ROOM I

Chair: Catharien Terwisscha van Scheltinga, Wageningen UR, the Netherlands

Presentations

Optimal crop production supported by climate-adaptive water management
Dr. Ruud Bartholomeus, KWR Watercycle Research Institute, the Netherlands

Future trends in crop production and food demand and supply in the Lower Mekong Basin
Johannes E. Hunink, FutureWater, the Netherlands

Salt-tolerance mechanisms in halophytes
MSc Diana Katschnig, VU University Amsterdam, the Netherlands

Climate change, food and water security in the coastal deltas: Towards a sustainable transformation in Bangladesh
PhD Candidate Mehdi Azam, Macquarie University, Australia

Rural development and food insecurity in the Ganges Brahmaputra Delta: Challenges and prospects
Sylvia Szabo, University of Southampton, United Kingdom

DD 2.5 Innovations in flood risk analyses

Deltas in Depth Theme 2
15.45 – 17.30
VAN OLDENBARNEVELT ROOM

Chair: Prof.dr. Jeroen Aerts, VU University, Institute for Environmental Studies, the Netherlands

Presentations

Spatial and temporal patterns of rainfall and inundation in the Amazon, Ganges, and Mekong deltas
PhD Zachary Tessler, CUNY Environmental CrossRoads Initiative, USA

How to obtain information on the effectiveness of potential flood risk management measures in only a few minutes?
Nathalie Asselman, Deltares, the Netherlands

Hazard to loss: modeling of inland flooding and associated economic losses in the Delaware river basin
PhD Jeffrey Czajkowski, Wharton Risk Management Center, USA

The Brisbane River catchment flood study
PhD Ferdinand Diermanse, Deltares, the Netherlands

Flood damage frequency estimation for flood risk analysis
Dr.-Ing. Kai Schröter, GFZ German Research Centre for Geosciences, Section Hydrology, Germany

DD 4.6 Ecosystem values and the coupling of human and natural dynamics

Deltas in Depth Theme 4
15.45 – 17.30
MEES AUDITORIUM

Chair: Prof.dr. Peter Herman, Netherlands Institute of Ecology / Royal Academy of Sciences, the Netherlands

Presentations

Coupled Natural-Human Dynamics in the Mississippi Delta
PhD Nina Lam, Louisiana State University, USA

Towards homogenization of Mediterranean lagoons under climate change
PhD Christian Ferrarin, CNR-ISMAR, Italy

Management options to adapt to high-end scenarios of sea-level rise: implications for deltaic coastal wetlands
PhD Carles Ibanez, IRTA, Aquatic Ecosystems Program, Spain

Spatial variation in soil salinity in relation to hydro-climatic factors in southwest coastal Bangladesh
Prof. Mashfiqus Salehin, Bangladesh University of Engineering and Technology (BUET), Bangladesh

New carbon market procedures recognizing the value of delta wetland
PhD Igino Emmer, Silvestrum, the Netherlands

DD 3.5 Adaptation policy and practices

Deltas in Depth Theme 3
15.45 – 17.30
TOKYO ROOM

Chair: Prof.dr. Shah Alam Khan, Bangladesh University of Engineering and Technology, Bangladesh

Keynote: Under what conditions will local to regional solutions for fresh water management become attractive?
Ad Jeuken, Deltares, the Netherlands

Presentations:

Implementing optimal fresh water service levels in times of climate change
PhD Stijn Reinhard, Wageningen UR, the Netherlands

Adaptation turning points: Implication of climate change for water supply in the Pearl River Delta, China
Dr. Saskia Werners, Wageningen UR, the Netherlands

Pond ecosystems: An effective resource base for community based adaptation to climate change
MD Golam Rabbani, Bangladesh Centre for Advanced Studies, Bangladesh

Risk based determination of service levels for fresh water supply in the Netherlands
Hans Korving, Witteveen+Bos, the Netherlands

DD 8.1 Disaster reduction and emergencies, regional perspectives

Deltas in Depth Theme 8
15.45 – 17.30
VAN WALSUM ROOM

Chair: Ed Thomas, Natural Hazard Mitigation Association, USA

Presentations:

Crisis management in Flanders, waterproof?
Hannelore Mees, Antwerp University, Belgium

The disaster management governance framework of Bangladesh: A model of good practice?
Dr. Michelle Lim, Centre for Water Law, Policy and Science, University of Dundee, United Kingdom

Firths of Forth and Tay Flood Warning System and the storms of 2012-2014
Keming Hu, Royal HaskoningDHV, United Kingdom

DD 11.6 Visualisation and mapping

Deltas in Depth Theme 11
15.45 – 17.30
BEURS LOUNGE

Chair Prof. Carlo Giupponi, Ca' Foscari University of Venice, Italy

Presentations

Flood damage modelling on basis of urban structure mapping using high-resolution remote sensing data
Dr. Heidi Kreibich, German Research Centre for Geosciences, Germany

Constructing vulnerability maps of material and energy pathways in deltas
Prof. Efi Foufoula-Georgiou, University of Minnesota, USA

A storm surge atlas for low-lying deltas with pilot application for the North Sea
PhD MBA Mathijs van Ledden, Royal HaskoningDHV, the Netherlands

Imagine the Impact: A guideline to visualise climate information
Dr. Hasse Goossen, Wageningen UR, the Netherlands

Using geodesign tools in adaptation workshops
MSc Tessa Eikelboom, VU University Amsterdam, Institute for Environmental Studies, the Netherlands

DP 2.6 Towards an integrated estuarine management: Examples of innovative approaches

Deltas in Practice Theme 2
15.45 – 17.30
TOWNHALL ROOM

The objective of this session is to discuss large scale management options to adapt towards increasing flood risks (rising sea levels, increased storm intensity, etc.) and human pressures (deepening, shipping, pollution, etc.) while maintaining the good ecological status. Experiences from the Schelde estuary will be compared in an international context with approaches in Germany, France, United Kingdom, China and Bangladesh, where several estuaries face similar problems.

The session consists of very short presentations delivering key messages of interest for an international public. The messages consist of crucial scientific insights, management options, practical experiences and lessons learnt. The participants will be invited to participate in an interactive session to share ideas and experiences leading to an updated list of key messages to be published on the website of the conference and participating organisations. We aim to start a closer cooperation between participants hopefully leading to joint approaches in management and setting up joint pilot and research projects.

Chair Prof. dr. Patrick Meire, University of Antwerp, Belgium
Organised by Prof. dr. Patrick Meire, University of Antwerp, Belgium

Presentations

Case study Schelde Estuary:

Changing boundary conditions I: Impact of changes in fresh water, sediment and nutrient fluxes from the catchment on estuarine functioning
MSc Tom Maris, University of Antwerp, Belgium

Changing boundary conditions II: Impact of sea level rise on estuarine hydraulics and morphology
MSc Yves Plancke, Antwerp Port Authority, Belgium
MSc Stefaan Ides, Flanders Hydraulic Research, Belgium

Ecosystem services delivered by an estuary: Can they be a common denominator for both ecology and economy?
Prof. dr. Patrick Meire, University of Antwerp, Belgium

Towards solutions I: Storing the water: Flood protection and creating ecological benefits
MSc Wim Dauwe, Flemish Waterway Administration, Belgium

Towards solutions II: Taming the tides: Large scale habitat creation in the outer estuary to reduce tidal amplification in the estuary and improve navigability
MSc Youri Meersschaut, Maritime Access, Belgium

Towards solutions III: Managing people: Communication, participation, planning
MSc Lieven Nachtergaele, Nature and Forest administration, Belgium
MSc Wim Dauwe, Flemish Waterway Administration, Belgium

Comparing with other estuaries and deltas:

Exploring the global potential for ecosystem-based adaptation of estuaries and deltas
Prof.dr. Stijn Temmerman, University of Antwerp, Belgium

Approaches in the United Kingdom: A complex estuarine management regime.
Prof.dr. Mike Elliot, Hull University, United Kingdom

Approaches in Germany: The Elbe management proposals from a Port Authority
Dr. Kirsten Wolfstein, Hamburg Port Authority, Germany
MSc Manfred Meine, Hamburg Port Authority, Germany

Approaches in France: The Seine and the Somme – restoring ecological functions in an industrialised and a non-industrialised estuary
Dr. Jean-Paul Ducrotoy, Seine Aval, France and University of Hull, IECS, United Kingdom

Estuarine management and bio-geomorphological evolution of the Yangtze estuary, China
Prof.dr. Tom Ysebaert, NIOZ and IMARES, the Netherlands
Dr. Zhengbing Wang, Deltares and SKLEC, the Netherlands/China

Vulnerability and resilience of the Ganges-Brahmaputra Delta to climate change: Global challenges in integrated coastal zone management
Prof.dr. M. Shahadat Hossain, University of Chittagong, Bangladesh (tbc)

DP 3.3

Deltas in Practice Theme 3
15.45 – 17.30
DIAMOND ROOM I

Room for the River presents: Learning from flood resilient cities Nijmegen and Mainz, combining flood management and urban development

At first sight, urban design and climate adaptation seem contradictory. This contradiction, however, can become an opportunity. The Room for the River project in the city of Nijmegen and the Zollhafen project in the city of Mainz illustrate this. Both cities adopted a new way of acting, from fighting against, towards living and working with water.

Both cities used an integral design attitude to make adaptation strategies work. Both projects were a co-creation between water planners and spatial planners using each other's strength and knowledge. Their approaches, although very different, show that water safety measures and a quest for spatial quality can reinforce one another.

In this workshop, we invite designers and engineers to learn from flood resilient cities Nijmegen and Mainz. After a comparison of the key success factors, participants will reflect on what challenges in their experience need to be overcome to transform problems into opportunities.

Chair Jan van der Grift, Room for the River, the Netherlands
Organised by Jan van der Grift, Room for the River, the Netherlands

Presentations
Nijmegen embraces the river Waal
MSc Mathieu Schouten, City of Nijmegen, the Netherlands

Zollhafen, the new city quarter of Mainz
MSc Heinrich Webler, City of Mainz, Germany

Co-reference Craig Woolhouse, Environment Agency, United Kingdom

DP 1.3 How the world's largest deltas are learning to learn from each other

Deltas in Practice Theme 1
15.45 – 17.30
GOUDRIAAN ROOM II

Many of the world's deltas face serious challenges when it comes to accommodating economic progress and ecological quality under future uncertainties such as climate change, global fluctuating markets, and socio-cultural dynamics. In 2010, assessments have been made of ten large deltas all over the world. In the meantime the methodology has been updated and five new deltas were added to the analysis. In this session the results of the assessments will be presented. To face the current and future challenges, new approaches in planning, design, technology and governance are needed. In a parallel project, the Delta Alliance is supporting these new approaches in adaptive delta management through the development of a Toolbox. In different phases of the adaptation process different tools are needed, such as tools to analyse the water system, tools to organise the stakeholders and tools to develop a new design. These tools are drawn from recent experiences from the Dutch Delta Programme as well as from other deltas, such as the Mekong Delta, Zambezi Delta (Mozambique), Ciliwung Delta (Indonesia, Jakarta) and Ganges-Brahmaputra Delta (Bangladesh). During the workshop we will launch the new Toolbox, containing descriptions of many new and tested tools on the Delta Alliance website and discuss its functionality.

Chair Renske Peters, Delta Alliance, the Netherlands
Organised by Dr. Judith Klostermann, Wageningen UR, the Netherlands

Presentations

Transboundary Water Assessment Programme: Assessments of 26 deltas MSc Wim van Driel, Wageningen UR, the Netherlands
Delta Alliance: Comparative assessment of 5 new deltas Tom Bucx, Deltares, the Netherlands
The Adaptive Delta Management Approach Dr. Marcel Marchand, Deltares, the Netherlands
The Adaptive Delta Management Approach applied in the Mekong delta Dr. Ho Long Phi, Vietnam National University, Vietnam
The Toolbox for Adaptive Delta Management, launch of the Toolbox website MSc Fokke de Jong, Wageningen UR, the Netherlands

DP 3.5 Multifunctional water storage: Eendragtspolder

Deltas in Practice Theme 3
15.45 – 17.30
PENN ROOM I

The multifunctional water storage facility in the Eendragtspolder, the largest in the Netherlands, prevents the Rotterdam area from flooding during heavy rainfall... and more! It is also a new recreational area in this densely populated region and it houses a brand new rowing course that meets the Olympic standards. Special attention was given to water quality and ecology. Therefore, the area will become, and already is, a safe haven for many species of water bound plants and animals.
In this workshop, the Regional Water Authority of Schieland & Krimpenerwaard and its partners involved will inform you not only about the technological challenges of this project but also the fail and success factors in a successful collaboration will be discussed.

Chair Toon van der Klugt, Regional Water Authority Schieland en de Krimpenerwaard, the Netherlands
Organised by Marc den Ouden, Regional Water Authority Schieland en de Krimpenerwaard, the Netherlands

Presentations
The Eendragtspolder multifunctional water storage facility: Coping with climate change at the highly urbanized deepest point of Western Europe
Johan Helmer, Regional Water Authority Schieland & de Krimpenerwaard, the Netherlands

Panel
Johan Helmer, Regional Water Authority Schieland & de Krimpenerwaard, the Netherlands
Monique Melger, Province of South Holland, the Netherlands
Arjan de Vries, Municipality of Zuidplas, the Netherlands
B.J.B. van Gaell, City of Rotterdam, the Netherlands
H. Sytsema, Regional Recreation Authority Rottemeren, the Netherlands

DP 7.3

Deltas in Practice Theme 7
15.45 – 17.30
PENN ROOM II

"The essence of strategy is choosing what not to do." [Michael E. Porter]: Economic assessment of inner-city climate adaptation strategy

Cities are realising that climate change may pose risks to inner-city life. Not only flood risk, but also heat, heavy rain and draught risks need to be taken into account by city planners. There are many possible strategies, ranging from adaptive behaviour to infrastructural investments in sewerage and buildings. Economic assessment can provide input for decision making between different (technical) solutions. A cost benefit analysis (CBA) attempts to value as many effects as possible, not only the investment costs, but also life cycle costs, risks and benefits.

In this workshop, which features case studies from Copenhagen and Rotterdam, we will demonstrate different approaches to economic assessment of climate adaptation in an inner-city area. Next to acquiring a broadened understanding of a cost benefit analysis with regard to climate adaptation, the participants will gain insights and exchange ideas on dealing with limited data quality and stakeholder participation

Chair MSc Sigrid Schenk, Rebel, the Netherlands
Organised by MSc Irene Pohl, Rebel, the Netherlands

Presentations

Economic assessment of the Rotterdam climate adaptation strategy
MSc Sigrid Schenk, Rebel, the Netherlands

Case study Kop van Feijenoord: Economic assessment of flood risk measures in an unembanked inner-city area
MSc Irene Pohl, Rebel, the Netherlands

How to use serious gaming in the development of a master plan for flood protection: experiences from Myanmar
MSc Annebeth Loois, Tygron, the Netherlands

Case study Bergpolder Zuid: Economic assessment of inner-city heat, heavy rain and draught risk adaptation strategies
MSc Sigrid Schenk, Rebel, the Netherlands
Corjan Gebraad, City of Rotterdam, the Netherlands

Climate change adaptation in Copenhagen: Socio-economic analysis of the implementation of Cloudburst Management Plan
Lykke Leonardsen, City of Copenhagen, Denmark

DP 4.2 Making the business case for Building with Nature

Deltas in Practice Theme 4
15.45 – 17.30
ANTWERP ROOM

Building with Nature (BwN) solutions for creating resilient coasts have rapidly gained momentum. Delta managers from across the world are now exploring how the concept can contribute to solving key challenges related to coastal security, environmental sustainability and use of scarce resources. Key to successful roll-out of BwN approaches will be the formulation of business cases that quantify costs and benefits of this new way of working and compare these with those related to conventional civil engineering approaches. This will aid delta managers and corporate stakeholders to make informed decisions about future scenarios, while stimulating the finance sector to consider investment in 'green' solutions.

This workshop will explore what is needed to compile a convincing business case, based on keynote presentations and break-out discussions, involving representatives from the finance sector, government and corporate end-users of building with nature solutions.

For more information about Building with Nature see: www.ecoshape.nl

Chair Jane Madgwick, Wetlands International, the Netherlands
Organised by Pieter van Eijk, Wetlands International, the Netherlands

Presentations

Towards a business case for Building with Nature: How and for whom?
Eric Schellekens, Arcadis, the Netherlands

A business case for Building with Nature along degraded tropical coasts: Indonesia
Pieter van Eijk, Wetlands International, the Netherlands

Building with Nature in intact and heavily modified delta environments: Australia & the Netherlands
Mark van Koningsveld, Van Oord, the Netherlands

DP 7.5

Cross-sector collaborations: Using strength in partnerships and design to catalyse change

Deltas in Practice Theme 7
15.45 – 17.30
NEW YORK ROOM

Planning for and recovering from climate-related disasters requires significant governmental and non-governmental engagement and investment. Facilitating lasting solutions calls for cooperation across borders with creative and flexible financing structures – often easier said than done.

Rebuild by Design (RBD) navigates this delicate balance. A multi-stage, multi-layer federal initiative, RBD connects innovative designs through resilience research. Implementation will be supported by Federal funding, intended to catalyse other non-government investments.

This panel discussion will explore RBD's unique process for delivering regional, interdisciplinary and design-driven solutions, and how this might be applied to other multi-faceted problems. Panellists will present case studies from non-profit, philanthropy, government, and design that showcase the various dimensions of processes which RBD connects, emphasizing the strength in partnerships and potential for future opportunities. The success of RBD's final solutions is the result of a network of efforts taking a 360-degree view on resiliency.

Chair Henk Ovink, Rebuild by Design, USA
Organised by Henk Ovink, Rebuild by Design, USA

Presentations

Talent by Design: Non-profit, planning, design, and research weave together regional solutions
Mary Rowe, Municipal Art Society, USA

Funding by Design: Philanthropic connections for building resilience (100 Resilient Cities, Changing Course, RBD)
Nancy Kete, Rockefeller Foundation, USA

Collaboration by Design: Navigating local, state and federal initiatives to build a stronger tomorrow
Dan Zarilli, New York City Mayor's Office, USA
Marion McFadden, Department of Housing and Urban Development, USA (tbc)

Rebuild by Design: How New Orleans' water plan informed perspective on resiliency in the US northeast
David Waggonner, Waggonner and Ball Architects, USA

Governance by Design: Lessons learnt from the Dutch Delta Program
Bart Parmet, Ministry of Infrastructure and the Environment, the Netherlands

DS 6 Vietnam: Shared framework for development

Delta Sessions
15.45 – 17.30
LEEUWEN ROOM II

The Vietnam session will focus on the overall theme of a 'shared framework for development' and will address the following thematic areas:

- National and regional aspects of decisions and developments
- Long term vision and shared framework
- National government and provinces involvement
- Decision support tool to support integrated approach

The Vietnam session will focus on the following Building Blocks for a Delta Approach:

- Integrated approach
- Legislation and depolitization
- Sustainability, flexibility, solidarity
- Supported analysis

Chair Welcome and introduction to the session
Prof.dr. Stefan Kuks, Water Authority Vechtstromen, Institute for Innovation and Governance Studies, University of Twente, the Netherlands
Welcome to the session, Interest of Vietnam
Nguyen Thai Lai, Vietnam (Co-chair)

Presentations

The Mekong Delta under pressure, challenges the government is facing
Dr. Tran Hong Thai, Ministry of Natural Resources and Environment, Vietnam

Building a sustainable framework for the Mekong Delta, the way forward
Dr. Gerardo van Halsema, Wageningen UR, the Netherlands

Combining efforts and building joint frameworks for development
Victoria Kwakwa, The World Bank, Vietnam

Joint frameworks and new agents of change to stimulate affordable solutions
Arthur Gleijm, Rebel Group, the Netherlands

Discussion with panel of all presenters and the audience

- Minimizing the financial gap requires innovative procurement, creative financial solutions, long term commitment and a good cooperation framework. How to proceed and how to coordinate?
- What is required to enable this process, what are the obstacles hindering new approaches?
- Who are the change makers, who should take the (first) initiative. Is there a role for the development partners, is the shared framework an instrument to support such initiative?

17.30 – 19.00 Reception and poster session

19.00 – 21.30 Drinks - Bites - Music

FRIDAY
26 SEPTEMBER 2014

08.00 – 13.00	Registration
09.00 – 13.00	Exhibition
09.00 – 10.15	Parallel sessions
10.15 – 10.45	Break
10.45 – 12.00	Parallel sessions
12.00 – 13.00	Plenary closure
13.00 – 14.00	Lunch
13.00 – 18.00	Excursions (optional)

DD 9.7 Multilevel governance of adaptation in the Netherlands

Deltas in Depth Theme 9
09.00 – 12.00
Including break
OSCAR AUDITORIUM

Chair: Prof.dr. Dave Huitema, VU University Amsterdam, Institute for Environmental Studies, the Netherlands

Presentations

Governance capacity for multilevel water governance: Can program approaches enable multilevel collaboration?
PhD Arwin van Buuren, Erasmus University, the Netherlands

An exploration of the conditions for a successful diversification of Flood Risk Management Strategies
Carel Dieperink, Utrecht University, the Netherlands

From flood prevention to multi-layer safety in the Dutch delta: Governance implication
PhD Mathijs van Vliet, Wageningen UR, the Netherlands

A typology of governance arrangements for the challenges of climate adaptation policies
PhD Rutger van der Brugge, Deltares, the Netherlands

Emergence and application of adaptive delta management in the Netherlands
PhD Jeroen Rijke, UNESCO-IHE, the Netherlands

DD 5.5 Managing urban water under changing climate conditions

Deltas in Depth Theme 5
09.00 – 12.00
Including break
ANTWERP ROOM

Chair: Dr. Cynthia Rosenzweig, Columbia University, USA

Keynote: Urban climate change research network: New approaches to climate change, water, and cities
Dr. Cynthia Rosenzweig, Columbia University, USA

Presentations

Flood protection and water resiliency for critical facilities in the New York city region
Edgar Westerhof, ARCADIS U.S. Inc., USA

Climate change impact on the drinking water distribution network temperature
PhD Claudia Agudelo-Vera, KWR Watercycle Research Institute, the Netherlands

The influence of active groundwater management on the current and future water demand of urban areas
PhD Rutger de Graaf, DeltaSync/Hogeschool Rotterdam, the Netherlands

Is it possible to develop a model of sustainable urban water cycle?
MEng MA Kalliopi Ntanou, INTRAS, France

DD 1.4 Changing weather and impacts (1.3 continued)

Deltas in Depth Theme 1
09.00 – 10.15
DIAMOND ROOM II

Chair John Church FAA, FTSE, CSIRO Fellow, Centre for Australian Weather and Climate Research, Australia

Presentations

Climate modelling - the needs and realities of cities
PhD/P.Eng. James Young, ARCADIS SENES Canada Inc., Canada

Satellite rainfall retrieval over coastal zones
Prof. Efi Foufoula-Georgiou, University of Minnesota, USA

Assessing the rate of subsidence in the Bengal delta
Maminul Haque Sarker, CEGIS, Bangladesh

DD 8.2 Positive, reality based approaches to regional and global resilience

Deltas in Depth Theme 8
09.00 – 10.15
GOUDRIAAN ROOM II

Chair Prof.dr. Dorothea Hilhorst, Wageningen UR, the Netherlands

Presentations

Economic benefits of disaster risk reduction - what can we learn from adaptation?
Swenja Surminski, London School of Economics, United Kingdom

Global delta vulnerability indicator development
PhD Fabrice Renaud, United Nations University - Institute for Environment and Human Security, Germany

Restoration of coastal resilience through tidal river management
PhD Rezaur Rahman, Bangladesh University of Engineering and Technology, Bangladesh

DD 6.3 Strategies to increase food security (6.2 continued)

Deltas in Depth Theme 6
09.00 – 10.15
LEEUWEN ROOM I

Chair Prof.dr. Adri van de Brink, Wageningen UR, the Netherlands

Presentations

Subsidence & development in the Ganges-Brahmaputra-Meghna: Past uncertainties & future challenges
Dr. Sally Brown, University of Southampton, United Kingdom

Controlled flooding to adapt to climate change: Lessons learnt from compartmentalisation in Bangladesh
MSc Judith de Bruijne, Euroconsult Mott MacDonald, the Netherlands

Changing livelihood strategies: Adapting to hydro-climatic change in the southwest coastal region in Bangladesh
Masud Iqbal Md Shameem, University of Newcastle, Australia

DD 5.6 Lessons from cities in developing countries

Deltas in Depth Theme 5
09.00 – 10.15

PENN ROOM II

Chair Prof. Bruce Glavovic, Massey University, New Zealand

Presentations

Climate proofing and masterplanning of delta cities: The case of Beira, Mozambique
Peter Letitre, Deltares, the Netherlands

A tale of two cities in times of changes: Hong Kong and Macau
PhD Chao Ren, The Chinese University of Hong Kong, Hong Kong

Flood adaptive city: The future of Mekong delta-cities
Dieu quang Pham, Delft University of Technology, the Netherlands

DD 4.7 Wetlands as natural flood protection

Deltas in Depth Theme 4
09.00 – 10.15
VAN OLDENBARNEVELT ROOM

Chair Prof. John Day, Louisiana State University, Baton Rouge, Louisiana, USA

Presentations

On the flood protection value of estuarine and deltaic wetlands: Local example and global potential
Prof.dr. Stijn Temmerman, University of Antwerp, Belgium

Bio-geomorphic shifts and stable states in intertidal flats and marshes
Chen Wang, University of Antwerp, Belgium

Wetlands in times of climate change: Perspective and discussion
Prof.dr. Peter Herman, Netherlands Institute of Ecology / Royal Academy of Sciences, the Netherlands

DD 2.6 Flood risk management challenges in national policies

Deltas in Depth Theme 2
09.00 – 12.00
(part I en II) including break
MEES AUDITORIUM

Chair Dr. Frans Klijn, Deltares, the Netherlands

Keynote Developing long-term views on water-related issues in Myanmar, the Netherlands and Vietnam
Dr. Cees Veerman, Ministry of Foreign Affairs, the Netherlands

Presentations

Reconciling different flood risk concepts in behalf of adaptive flood risk management planning
Frans Klijn, Deltares, the Netherlands

From policy concepts to delivery of integrated flood risk management
PhD MSc Sebastiaan van Herk, Bax & Willems, Spain

Improving flood risk governance: Exploring the opportunities and barriers in six European countries
PhD Dries Hegger, Utrecht University, the Netherlands

MISI-ZIIBI: Living with the Great Rivers, Climate Adaptation Strategies in the Midwest River Basins
Derek Hoeferlin, Washington University in St. Louis, USA

DP 7.7 Centuries of experience taking care of the future: What regional water authorities do to help making cities resilient to climate change

Deltas in Practice Theme 7
09.00 – 10.15
DIAMOND ROOM I

Being the oldest democratic organisations in the world, the regional water authorities in the Netherlands deal with water safety, wastewater treatment, water quality, water storage and discharge. All these aspects will be influenced by climate change.
Water experts from the three regional water authorities within the municipality of Rotterdam will indicate the critical success factors for a sustainable water management in a delta city like Rotterdam from their own experiences. The way the Dutch regional water authorities have managed the water for centuries gives a proper basis for a climate resilient urban environment. The recently published OECD report on the Dutch water management calls it 'fit for the future'.
During the interactive workshop we will elaborate on the do's and don'ts in a climate resilient regional water management. Examples of major water projects of each regional water authority will be used, but other delta cities are invited to supplement this with examples and (best) practices of their own.

Chair Jan Geluk, Regional Water Authority Hollandse Delta, the Netherlands

Organised by Marc den Ouden, Regional Water Authority Schieland en de Krimpenerwaard, the Netherlands

Presentations

General introduction to regional water authorities and their tasks
Jan Geluk, Regional Water Authority Hollandse Delta, the Netherlands

Dutch cooperative water management: Fit for the future
MSc Hans Waals, Regional Water Authority Hollandse Delta, the Netherlands

The Rotterdam Waterplan: Successful solutions for an attractive and climate resilient city
Marc den Ouden, Regional Water Authority Schieland en de Krimpenerwaard, the Netherlands
Marleen de Jong - Schmitz, Regional Water Authority Delfland, the Netherlands

DP 3.1 Developing multipurpose infrastructure for climate resiliency

Deltas in Practice Theme 3
09.00 – 12.00
including break
GOUDRIAAN ROOM I

This workshop will use simulated scenario planning to introduce practitioners to multipurpose delta infrastructure development. This new approach creatively expands narrow infrastructure planning to incorporate benefits from multiple related projects. It creates business cases for funding from multiple private and public sources, attracting new parties as shareholders. The resulting system of linked infrastructure and community assets offers more flexible and comprehensive solutions to climate change. In one example, multipurpose improvements to a dam improve the roadway, restore wildlife, and generate power: thereby also creating potential for private investment and tourism.

Workshop participants will design their own multipurpose solutions on a map containing urban, mobility and environmental challenges common in delta environments. Representatives from Rijkswaterstraat, Deltares, AT Osborne, and CUNY will share principles and examples via short presentations, and help brainstorm during the workshop. The workshop will enable practitioners to create multipurpose solutions in their own context, international or domestic.

Chair Jurgen van der Heijden, AT Osborne, the Netherlands
Organised by Jurgen van der Heijden, AT Osborne, the Netherlands

Presentations

Combining water infrastructures
Jurgen van der Heijden, AT Osborne, the Netherlands
Rosalie Franssen, Deltares, the Netherlands

Value creation in capital waterways
Arjan Hijdra, Rijkswaterstraat, the Netherlands

Principles for post-industrial public works
Prof. Hillary Brown, City University of New York and New Civic Works, USA

DP 2.7 Weathering the storms

Deltas in Practice Theme 2
09.00 – 12.00
including break
NEW YORK ROOM

Many cities are finding that an 'out of sight, out of mind' approach to managing storm water is increasingly failing to provide an acceptable standard of protection for their residents. A growing number of cities are moving towards complementing their traditional 'grey' drainage infrastructure with green infrastructure.

'Weathering the storms' provides an opportunity to hear from four leading cities (Copenhagen, Amsterdam, London and Hamburg) about their plans to develop and deliver city-wide, systematic, green infrastructure programmes to manage storm water and secure economic and social benefits.

This two-part workshop will kick off with a summary on each of the cities' storm water management programmes, before getting into an interactive expert panel-led discussion focusing on three key challenges:

- How much new infrastructure is 'enough'?
- How much will it cost and who pays for it?
- How do you deliver and maintain it?

The emphasis of the workshop is on ensuring key issues are addressed and transferrable good practice is identified and shared.

Chair	Alex Nickson, Greater London Authority, United Kingdom Lykke Leonardsen, Copenhagen City Council, Denmark
Organised by	Alex Nickson, Greater London Authority, United Kingdom Lykke Leonardsen, Copenhagen City Council, Denmark Paulien Hartog, Amsterdam Rainproof, the Netherlands Elke Kruse, HafenCity University Hamburg, Germany

Presentations	Copenhagen Cloudburst Management Plan Lykke Leonardsen, Copenhagen City Council, Denmark Jes Clauson-Kaas, HOFOR, Denmark
	Amsterdam Rainproof Programme Daniel Goedbloed, Amsterdam Rainproof, the Netherlands Paulien Hartog, Amsterdam Rainproof, the Netherlands
	Rain InfraStructure Adaptation Programme Elke Kruse, HafenCity University Hamburg, Germany
	London Sustainable Drainage Action Plan Alex Nickson, Greater London Authority, United Kingdom
Panel	Alex Nickson, Greater London Authority, United Kingdom Lykke Leonardsen, Copenhagen City Council, Denmark Jes Clauson-Kaas, HOFOR, Denmark Daniel Goedbloed, Amsterdam Rainproof, the Netherlands Jeroen Kluck, University of Applied Sciences Amsterdam, the Netherlands Wolfgang Dickhaut, HafenCity University Hamburg, Germany

DP 8.2

Deltas in Practice Theme 8
09.00 – 10.15
TOKYO ROOM

Early warning early action: How to mobilize humanitarian funding based on flood risk

This workshop seeks to convene practitioners and scientists to discuss the use of weather and climate information to anticipate and prevent the humanitarian effects of riverine flooding worldwide. In an interactive format, workshop participants will simulate a proposed innovation in humanitarian financing to establish disaster funding mechanisms based on early warnings of flood risk, rather than post-flood disaster outcomes. In this game-based simulation, participants will interact to statistically model flood risk in a case study location, ultimately vetting the hydro meteorological warning information that is needed to operationalize such a forecast-based financing system. Discussion will encompass:

1. Techniques for characterizing risk in situations of data scarcity
2. Communication of probabilistic flood risk to disaster managers
3. Selection of thresholds for flood risk warnings
4. Methods to prioritize appropriate humanitarian action based on flood risk thresholds
5. Practicalities of disbursing and monitoring risk-based financing

Chair Erin Coughlan de Perez, Red Cross / Red Crescent Climate Centre, USA
Organised by Erin Coughlan de Perez, Red Cross / Red Crescent Climate Centre, USA

DP 6.3

Deltas in Practice Theme 6
09.00 – 12.00
including break
VAN WALSUM ROOM

Science-to-Action: Aligning science with stakeholder and community needs in the Mekong and other delta systems

Scientific research from the sub-delta to the global scale adds to our understanding of the physical, biological, and human dimensions of delta systems, but has value beyond the confines of pure science. With increasing awareness of the exposure and vulnerabilities of deltas to hazards originating as drainage basin, coastal and ocean stressors, it is critical for this knowledge to be translated into a language that is useful to delta communities and stakeholders as they address issues of a changing climate. This workshop will link stakeholders and policymakers at the local and regional scale with scientists to identify key informational needs and knowledge gaps and to co-design a research strategy to improve the reliability and access to such information. The Mekong Delta System will be a case study, and we will emphasize the applicability of results and strategies to and from other delta systems worldwide.

Chair Prof. Charles J. Vörösmarty, CUNY Environmental CrossRoads Initiative, USA
Organised by Dr. Zachary D. Tessler, CUNY Environmental CrossRoads Initiative, USA

Presentations	Water management challenges in the Mekong Delta in a changing climate Dr. Marcel Marchand, Deltares, the Netherlands
	Mekong delta development: A multi-actor analysis Prof. Ho Long Phi, Vietnam National University, Vietnam
	Modelling of delta processes: A web-based toolbox Dr. Irina Overeem, University of Colorado, USA
	Data for vulnerability assessments: Problems of accessibility and availability Dr. Fabrice Renaud, United Nations University, Germany Dr. Zita Sebesvari, United Nations University, Germany

DS 7 Colombia: Room for the River, implementation in the Cauca Valley and other regions

Delta Sessions
09.00 – 10.15
LEEUWEN ROOM II

The session Colombia: Room for the River will focus on the experience with the implementation of the Room for the River concept in the Cauca Valley. Water management is of great importance in the valley. Recurring flooding poses a direct threat to the people in the area and cause much economic damage. In the development of the Flood Risk Master Plan Upper Cauca, a Dutch consortium led by ARCADIS applies the Room for the River concept in the Colombian context to define measures (no regret, short term, long term). Important aspects are the support and commitment of the authorities concerned and the main socio-economic stakeholders.

In the session the following themes will be addressed:
- Water governance and shared responsibilities
- Cooperation with stakeholders in the Cauca area
- Financing of measures
- Implementation of the Room for the River concept in other regions in Colombia

The session will include presentations from the reponsible authority Corporación Autónoma Regional del Valle del Cauca (CVC) and the Dutch consultancy firm ARCADIS.

The session Colombia will focus on 4 Dutch Building Blocks for Delta Approach:
- Integrated approach
- Governance and cooperation with stakeholders
- Financing and implementation
- Supported analysis

Chair David Schaub-Jones, SeeSaw Group, South Africa, Paul van Koppen, NWP, the Netherlands

Presentations

The national river policy of Colombia: challenges the authorities are facing concerning the Magdalena and Cauca river
Álvaro Gutierrez Botero, Minister Plenipotentiary, Embassy of Colombia

Room for the River Cauca: Water governance and shared responsibilities
MSc Klaas de Groot, ARCADIS Watermanagement and Business Development, the Netherlands

Reflection on Cauca Room for the River developments
Expert panel

Discussion with speakers, panel and audience
- Water governance is essential for the success of the Room for the River project. What (innovative) elements could support water governance in the Cauca area?
- Economic aspects are an important part of the implementation of Room for the River Cauca. What are the most effective ways to finance flood protection measures?
- Other regions in Colombia showed their interest in the Room for the River concept. What is the best approach to implement the Room for the River concept in these areas?

UDW 2 Urbanising Deltas of the World: Launch second call for proposals

Urbanising Deltas of the World
09.00 – 10.15
PENN ROOM I

Focussed session

The research programme Urbanising Deltas of the World (UDW) aims to promote innovative developments in science, technology, and new governance arrangements for pro-poor sustainable economic development in deltas across the world.

After a first Call for Proposals in 2012, in which seven 0,5-1 M€ projects working in North-South, Public-Private partnerships were awarded, the programme will now launch a second Call. This Call aims to specifically engage private sector parties in the programme.

This session will inform you about the context, the content, and the conditions for submitting a proposal. Room will be provided to meet potential partners. The session is aimed at researchers, private sector parties, NGOs and policymakers interested in funding opportunities for research.

UDW is funded by the Netherlands Organisation for Scientific Research (NWO) and The Dutch Ministry of Foreign Affairs, and aligned to the Dutch Topsector Water.

Organiser MSc Han van Dijk, NWO, the Netherlands
Chair Huub Savenije, Delft University of Technology, Chair Steering Committee UDW, the Netherlands

Presentations
Maarten Gischler, Ministry of Foreign Affairs, the Netherlands
Dr. Kees Slingerland, Export & Promotion Core Team Topsector Water, the Netherlands

10.15 – 10.45 **Break**

DD 9.7 Multilevel governance of adaptation in the Netherlands (continued)

Deltas in Depth Theme 9
09.00 – 12.00
including break
OSCAR AUDITORIUM

Chair Prof.dr. Dave Huitema, VU University Amsterdam, Institute for Environmental Studies, the Netherlands

Presentations

Governance capacity for multilevel water governance, Can program approaches enable multilevel collaboration?
PhD Arwin van Buuren, Erasmus University, the Netherlands

An exploration of the conditions for a successful diversification of Flood Risk Management Strategies
Carel Dieperink, Utrecht University, the Netherlands

From flood prevention to multi-layer safety in the Dutch Delta: Governance implication
PhD Mathijs van Vliet, Wageningen UR, the Netherlands

A typology of governance arrangements for the challenges of climate adaptation policies
PhD Rutger van der Brugge, Deltares, the Netherlands

Emergence and application of adaptive delta management in the Netherlands
PhD Jeroen Rijke, UNESCO-IHE, the Netherlands

DD 5.5 Managing urban water under changing climate conditions (continued)

Deltas in Depth Theme 5
09.00 – 12.00
including break
ANTWERP ROOM

Chair Dr. Cynthia Rosenzweig, Columbia University, USA

Keynote Urban climate change research retwork: New approaches to climate change, water, and cities
Dr. Cynthia Rosenzweig, Columbia University, USA

Presentations

Flood protection and water resiliency for critical facilities in the New York city region
Edgar Westerhof, ARCADIS U.S. Inc., USA

Climate change impact on the drinking water distribution network temperature
PhD Claudia Agudelo-Vera, KWR Watercycle Research Institute, the Netherlands

The influence of active groundwater management on the current and future water demand of urban areas
PhD Rutger de Graaf, DeltaSync/Hogeschool Rotterdam, the Netherlands

Is it possible to develop a model of sustainable urban water cycle?
Ioan M. Ciumasu, INTRAS, France

DD 1.5 A framework for regional system modelling --- supporting adaptation to climate change

Deltas in Depth Theme 1
10.45 – 12.00
DIAMOND ROOM II

Focussed session

Regional development within a changing climate is a challenge and requires climate responsible action taking into account both mitigation of further warming and adaptation to the unavoidable climatic changes. Therefore a framework is needed in which the development of regions can be explored proactive taken into account non-climatic and climatic drivers. The idea of this round table discussion is to identify possible settings of modelling frameworks which can help steering the development of regional systems. As an example the North Sea Deltas have been selected to analyse the many very different components of such a regional system. A first list of tools related to the framework should be developed, which can include regional climate models, hydrological models, impacts model, integrated assessment model, economic models, decision support tools, spatial planning tools and models simulating human behaviour.
The process of developing such a framework can eventually be related to the WCRP CORDEX initiative aiming at regional climate change information at local scales and might be a transferable methodology to help regional experts to develop and assess scenarios for their region of interest.

Chair Dr. Daniela Jacob, Climate Service Center2.0, Hamburg, Germany

After a very short introduction about the scope of the session (given by Daniela Jacob) a series of 5 minute impulse contributions are envisaged to introduce the following topics:

- Challenge to bridge the gap between regional and local climate information
- Using climate change information in water management and spatial planning
- Building a complex system through coupling of tools and methodologies from very different disciplines

DD 4.8 Coasts between conservation and realigment

Deltas in Depth Theme 4
10.45 – 12.00
VAN OLDENBARNEVELT ROOM

Chair Prof.dr. Stijn Temmerman, University of Antwerp, Belgium

Presentations

Modeling coastal dune development under climate change
Joep Keijsers, Wageningen UR, the Netherlands

Managed realignment: A sustainable approach to restore coastal habitats and manage flood risk?
Luciana S. Esteves, Bournemouth University, United Kingdom

Conservation and development of Wadden Sea salt marshes as a long-term adaption strategy
MSc Jantsje van Loon-Steensma, Wageningen UR, the Netherlands

DD 2.6 Flood risk management challenges in national policies (continued)

Deltas in Depth Theme 2
09.00 – 12.00
including break
MEES AUDITORIUM

Chair: Dr. Frans Klijn, Deltares, the Netherlands

Keynote: Developing long-term views on water-related issues in Myanmar, the Netherlands and Vietnam
Dr. Cees Veerman, Ministry of Foreign Affairs, the Netherlands

Presentations

Reconciling different flood risk concepts in behalf of adaptive flood risk management planning
Frans Klijn, Deltares, the Netherlands

From policy concepts to delivery of integrated flood risk management
PhD MSc Sebastiaan van Herk, Bax & Willems, Spain

Improving flood risk governance: Exploring the opportunities and barriers in six European countries
PhD Dries Hegger, Utrecht University, the Netherlands

MISI-ZIIBI: Living with the great rivers, climate adaptation strategies in the midwest river basins
Derek Hoeferlin, Washington University in St. Louis, USA

DP 2.9 Decision making in an uncertain world

Deltas in Practice Theme 2
10.45 – 12.00
DIAMOND ROOM I

Today more than ever, decision makers need ways to design good policies and projects in the face of deep uncertainties, including climate change. Traditional decision-making, which focuses on predicting the future, can leave societies paralysed by uncertainty or dangerously vulnerable to natural and manmade hazards. Instead, in a fast-changing and complex world, good decisions are robust: they work well in many possible futures even if they are not optimised to any single prediction. Robust decision making methods are not always intuitive or inexpensive: they involve a new way of thinking about decision making. To help make these concepts accessible and practical, this session will use a "serious game" to frame the concepts, followed by a short presentation. Blended with technical conversations and group discussion, the interactive games will expose participants to the principles of robust decision-making and basic tools for policy design and implementation in the face of deep uncertainty.

Chair: Stéphane Hallegatte, The World Bank, USA
Dr. Maarten van Aalst, International Red Cross Red Crescent Climate Centre, the Netherlands

Organised by: Stéphane Hallegatte, The World Bank, USA
Dr. Maarten van Aalst, International Red Cross Red Crescent Climate Centre, the Netherlands

Presentations

Methods for robust decision-making
Stéphane Hallegatte, The World Bank, USA

DP 3.1 Developing multipurpose infrastructure for climate resiliency (continued)

Deltas in Practice Theme 3
9.00 – 12.00
including break
GOUDRIAAN ROOM I

This workshop will use simulated scenario planning to introduce practitioners to multipurpose delta infrastructure development. This new approach creatively expands narrow infrastructure planning to incorporate benefits from multiple related projects. It creates business cases for funding from multiple private and public sources, attracting new parties as shareholders. The resulting system of linked infrastructure and community assets offers more flexible and comprehensive solutions to climate change. In one example, multipurpose improvements to a dam improve the roadway, restore wildlife, and generate power; thereby also creating potential for private investment and tourism. Workshop participants will design their own multipurpose solutions on a map containing urban, mobility and environmental challenges common in delta environments. Representatives from Rijkswaterstraat, Deltares, AT Osborne, and CUNY will share principles and examples via short presentations, and help brainstorm during the workshop. The workshop will enable practitioners to create multipurpose solutions in their own context, international or domestic.

Chair Jurgen van der Heijden, AT Osborne, the Netherlands
Organised by Jurgen van der Heijden, AT Osborne, the Netherlands

Presentations

Combining water infrastructures
Jurgen van der Heijden, AT Osborne, the Netherlands
Rosalie Franssen, Deltares, the Netherlands

Value creation in capital waterways
Arjan Hijdra, Rijkswaterstraat, the Netherlands

Principles for post-industrial public works
Prof. Hillary Brown, City University of New York and New Civic Works, USA

DP 5.1 Towards a climate adaptive integrated approach of the food chain

Deltas in Practice Theme 5
10.45 – 12.00
GOUDRIAAN ROOM II

Climate change will affect food access, utilisation and prices. Malnourished population increases by 11% in 2050; there will be 20-25 million undernourished children. Worldwide action by small and by multinational producers is needed. A large part of the world's food comes from deltas influenced by climate change. Since they are densely populated they need vast amounts of food supply. Vulnerability to climate change of food producing deltas will increase volatility of food prices. Multinational companies face challenges to stay the preferred food supplier and guarantee food quality and availability. The challenge lies in the whole value chain. Leaders from the industry, NGO and scientific sector science and financial sector will discuss the transition towards a climate adaptive, integrated food supply chain. They will be exchanging ideas, best practices and identify barriers to make sure people in vulnerable areas will have access to enough, qualitative and affordable food in the future.

Chair MA Rob Bonte, Royal HaskoningDHV, the Netherlands
Organised by MSc Hilde van Duijn, Royal HaskoningDHV, the Netherlands

Presentations

From Farm to Table: Sustainability in our supply chain. More food, less water
MSc Jan Burger, Coca Cola North West Europe and Nordics, the Netherlands

Standing on the sidelines: Why food and beverage companies must do more to tackle climate change
MSc Frank Mechielsen, Oxfam Novib, the Netherlands

The impact of climate change on food industry
Dr. Eddy Moors, Wageningen UR, the Netherlands

DP 2.7 Weathering the storms (continued)

Deltas in Practice Theme 2
09.00 – 12.00
including break
NEW YORK ROOM

Many cities are finding that an 'out of sight, out of mind' approach to managing storm water is increasingly failing to provide an acceptable standard of protection for their residents. A growing number of cities are moving towards complementing their traditional 'grey' drainage infrastructure with green infrastructure.

'Weathering the storms' provides an opportunity to hear from four leading cities (Copenhagen, Amsterdam, London and Hamburg) about their plans to develop and deliver city-wide, systematic, green infrastructure programmes to manage storm water and secure economic and social benefits.

This two-part workshop will kick off with a summary on each of the cities' storm water management programmes, before getting into an interactive expert panel-led discussion focusing on three key challenges:

- How much new infrastructure is 'enough'?
- How much will it cost and who pays for it?
- How do you deliver and maintain it?

The emphasis of the workshop is on ensuring key issues are addressed and transferrable good practice is identified and shared.

Chair	Alex Nickson, Greater London Authority, United Kingdom Lykke Leonardsen, Copenhagen City Council, Denmark
Organised by	Alex Nickson, Greater London Authority, United Kingdom Lykke Leonardsen, Copenhagen City Council, Denmark Paulien Hartog, Amsterdam Rainproof, the Netherlands Elke Kruse, HafenCity University Hamburg, Germany

Presentations	Copenhagen Cloudburst Management Plan Lykke Leonardsen, Copenhagen City Council, Denmark Jes Clauson-Kaas, HOFOR, Denmark
	Amsterdam Rainproof Programme Daniel Goedbloed, Amsterdam Rainproof, the Netherlands Paulien Hartog, Amsterdam Rainproof, the Netherlands
	Rain InfraStructure Adaptation Programme Elke Kruse, HafenCity University Hamburg, Germany
	London Sustainable Drainage Action Plan Alex Nickson, Greater London Authority, United Kingdom
Panel	Alex Nickson, Greater London Authority, United Kingdom Lykke Leonardsen, Copenhagen City Council, Denmark Jes Clauson-Kaas, HOFOR, Denmark Daniel Goedbloed, Amsterdam Rainproof, the Netherlands Jeroen Kluck, University of Applied Sciences Amsterdam, the Netherlands Wolfgang Dickhaut, HafenCity University Hamburg, Germany

DP 6.3

Science-to-Action: Aligning science with stakeholder and community needs in the Mekong and other delta systems (continued)

Deltas in Practice Theme 6
09.00 – 12.00
including break
VAN WALSUM ROOM

Scientific research from the sub-delta to the global scale adds to our understanding of the physical, biological, and human dimensions of delta systems, but has value beyond the confines of pure science. With increasing awareness of the exposure and vulnerabilities of deltas to hazards originating as drainage basin, coastal and ocean stressors, it is critical for this knowledge to be translated into a language that is useful to delta communities and stakeholders as they address issues of a changing climate. This workshop will link stakeholders and policymakers at the local and regional scale with scientists to identify key informational needs and knowledge gaps and to co-design a research strategy to improve the reliability and access to such information. The Mekong Delta System will be a case study, and we will emphasize the applicability of results and strategies to and from other delta systems worldwide.

Chair: Prof. Charles J. Vörösmarty, CUNY Environmental CrossRoads Initiative, USA
Organised by: Dr. Zachary D. Tessler, CUNY Environmental CrossRoads Initiative, USA

Presentations

Water management challenges in the Mekong delta in a changing climate
Dr. Marcel Marchand, Deltares, the Netherlands

Mekong delta development: A multi-actor analysis
Prof. Ho Long Phi, Vietnam National University, Vietnam

Modelling of delta processes: A web-based toolbox
Dr. Irina Overeem, University of Colorado, USA

Data for vulnerability assessments: Problems of accessibility and availability
Dr. Fabrice Renaud, United Nations University, Germany
Dr. Zita Sebesvari, United Nations University, Germany

DS 8 Egypt: Integrated coastal zone management

Delta Sessions
10.45 – 12.00
LEEUWEN ROOM I

The Egypt session will discuss options for sustainable management and development of the Northern coastal environment of Egypt. The Delta and the narrow valley of the Nile comprise 5.5% of the area of Egypt, but over 95% of its people, 30-40% of Egypt's agricultural production and half of Egypt's industrial production are situated here. The region is economically extremely important, attracting substantial capital investment. However, the Egyptian Mediterranean coast was subjected to many unsustainable developments during the past decades. The coastal environment is at many places seriously degraded. This is impacting the human use of the coastal zone, causing the loss of important economic assets. Irrational land use, water pollution, salt intrusion, shoreline erosion, flooding and deterioration of natural resources and habitats are the main challenges to be dealt with. More over, these challenges will be exacerbated due to climate change impacts, sea-level rise and land subsidence, causing prolonged vulnerability to flooding risks and coastal erosion.

By referring to Dutch Delta Management approaches and experiences, the session will address the following themes and focus on the following Building Blocks for a Delta Approach:

- Integrated approaches
- Governance, institutional development and stakeholder participation
- Financing
- Dealing with brackish circumstances

Chair David Schaub-Jones, SeeSaw Group, South Africa, Paul van Koppen, NWP, the Netherlands

Presentations

The Nile Delta in a world perspective
Prof. Job Dronkers, Advisor Coast and Sea

Integrated Coastal Zone Management, focus on adaptation to the impacts of climate change
Dr. Essam Khalifa, Ministry of Water Resources and Irrigation, Egypt

Coastal protection issues related to the impacts of climate change, focus on sea-level rise and coastal erosion
Dr. Mohamed Ahmed, MWRI, Shore Protection Authority, GEF, Egypt

Water management issues related to the impacts of climate change, focus on decreased fresh water availability, groundwater level and saline intrusion
Dr. Yasser Raslan, Coastal Research Institute Alexandria, Egypt

Plenary discussion

DS 9 Myanmar: Developing an integrated water management plan in Myanmar

Delta Sessions
10.45 – 12.00
LEEUWEN ROOM II

Myanmar is among the top-10 countries that are hardest hit by water-related disasters and was struck recently by cyclones like Nargis in 2008 and Giri in 2010. The country is also experiencing an increasing demand for water for agriculture and sanitation, and there is a need for clean drinking water and for port development. Currently, there is limited protection against flooding and a need for technological and organizational capacity at all levels of government and at universities.
Myanmar is now taking the first steps in developing an integrated water resources management (IWRM) strategy. One of the challenges in this process is that a lot of the necessary data and information is lacking.
Key question for Myanmar is how to make the right choices to be able to develop an IWRM strategy that takes into account future social economic developments and the effects of climate change, despite the limited availability of data and information.

This session will:
- Give an update on water management and climate change in Myanmar
- Give insight in the process of drafting a national IWRM strategy for Myanmar
- Show how to deal with limited availability of data and information by demonstrating the water model Ribasim as a decision support tool

The Myanmar session will focus on the following Building Blocks for a Delta Approach:
- Integrated approach
- Sustainability, flexibility, solidarity
- Supported analysis

Chair David Schaub-Jones, SeeSaw Group, South Africa, Paul van Koppen, NWP, the Netherlands

Presentations

Water management and climate change in Myanmar
U San Win, Myanmar Ministry of Environmental Conservation and Forestry, Myanmar

Strategic study IWRM Myanmar
U Aung Kyaw Hmuu, Myanmar Ministry of Transport, Myanmar, and Paul van Meel, Royal HaskoningDHV, the Netherlands

Building a water management knowledge infrastructure for Myanmar
Tjitte Nauta, Deltares, the Netherlands, and U Kyaw Myint Hlaing, Myanmar Ministry of Agriculture and Irrigation, Myanmar

Discussion with panel of all presenters and the audience
- How much data is required for a supported decision?
- How to keep the knowledge infrastructure affordable and still deliver high quality data to support effective, integrated water management?

PL Plenary Closure

12.00 – 13.00
ROTTERDAM HALL

Chair Paula Verhoeven MA, City of Rotterdam

The transformative capacity of adaptation
Henk Ovink, Hurrican Sandy Rebuilding Task Force / US Department of Housing and Urban Development, USA

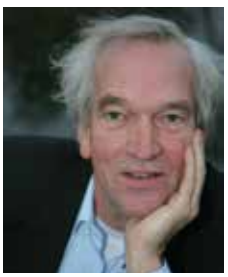
Award ceremony Best Young Delta Scientist (presentation and poster)
Prof.dr. Frans Berkhout (Chair Scientific Committee), King's College, United Kingdom / Future Earth Programme, France

Closure of the conference
Prof. Pier Vellinga, Knowledge for Climate


Paula Verhoeven


Henk Ovink


Frans Berkhout


Pier Vellinga

13.00 – 14.00 Lunch

13.00 – 18.00 Excursions (optional)

14 15

16

The posters will be on display during the entire conference. Special poster sessions will be held on:
Wednesday 24 September 18.00 – 19.00
Thursday 25 September 17.30 – 19.00

Deltas in Depth Theme 1. Climate projections and extremes

Understanding the relation between extreme precipitation intensities and temperature using a conceptual model
Loriaux Jessica, Technical University of Technology/KNMI, De Bilt, the Netherlands

Spatial precipitation patterns and trends in the Netherlands during 1951-2009
PhD Emma Daniels, Wageningen UR, the Netherlands

The correlation of climate change on health: Rainfall vs dengue hemorrhagic fever incidence in Phuket
Dr. Tasanee Aikvanich, Phuket Municipal Health Center, Thailand

Deltas in Depth Theme 2. Flood risk management

A strategic approach to an optimal flood risk strategy for the Rhine Estuary-Drechtsteden Delta
Dr. Robert Vos, Deltaprogram Rijnmond-Drechtsteden, the Netherlands

Reconciliation and trade-offs of a resilience and control rationale for flood risk management
PhD Rianne Bredenhoff-Bijlsma, University of Twente / Royal HaskoningDHV, the Netherlands

Factors influencing adoption of risk information within the flood prone communities: Okavango Delta, Botswana
PhD Olekae Tsompi Thakadu, Okavango Research Institute, University of Botswana, Botswana

Assessing flood risks and flood-proofing measures for the critical infrastructures in Dordrecht
Bob Souwer, UNESCO-IHE, the Netherlands

Calling for rain: Rainfall maps from cellular communication networks
Dr. Aart Overeem, Wageningen UR / KNMI, the Netherlands

A flood risk assessment and economic optimum safety level for Hoboken (NJ, USA)
MSc Marten Hillen, Royal HaskoningDHV, Singapore

The Nigeria flood of 2012: Impacts in the Niger delta and lessons learned
Prof. PhD Enuvie Akpokodje, University of Port Harcourt, Nigeria

Times of change – The institutional dynamics in Dutch flood risk management
PhD Maria Kaufmann, Radboud Universiteit, the Netherlands

Sustainable development challenges at southern mediterranean coastlines
PhD Nabil Ismail, Maritime Academy for Science and Technology, Egypt

A practical innovative design to protect Jakarta from increasing yearly floods
Leon Valkenburg, Witteveen+Bos, the Netherlands

Flood damage influencing factors for residential building in Can Tho city, Mekong delta
Heidi Kreibich, German Research Centre for Geosciences, Germany

Flood retention and forestry – an example of water friendly land management in the Hördt floodplain
Heinz Peter Wierig, Struktur- und Genehmigungsdirektion Süd, Germany

The potential of mobile services for early warning and food security in Bangladesh
PhD Femke Davids, Deltares, the Netherlands

Multi layer safety in the Wadden area
PhD Judith E.M. Klostermann, Wageningen UR, the Netherlands

What can the Netherlands learn from Germany and the UK about flood resilience?
MSc Marnix de Vriend, Aqua-delta Consult, the Netherlands

Deltas in Depth Theme 3. Fresh water management

Variations in the isotopes in groundwater from Ras Jbel and Guenniche aquifers due to artificial recharge
Jamila Hammami Abidi, Faculty of Sciences of Tunis, University of Tunis El Manar, 1092, Tunisia

Modelling rainfall-runoff processes in lowlands with WALRUS (Wageningen Lowland Runoff Simulator)
MSc Claudia Brauer, Wageningen UR, the Netherlands

The impacts of floating urban development on water quality and ecology
PhD Rutger de Graaf, DeltaSync/Hogeschool Rotterdam, the Netherlands

Deltas in Depth Theme 4. Coastal systems and wetlands

Adaptation program on climate resilient infrastructures in coastal zone of Bangladesh
Md. Sarafat Hossain Khan, Bangladesh Water Development Board, Bangladesh

River salinity on a mega-delta, an unstructured grid model approach
PhD Lucy Bricheno, National Oceanography Centre, United Kingdom

Wetland development and effects of sand engine at the coast of lake IJssel – An importance for ecological restoration
PhD Agata Klimkowska, Eco-Recover Ecosystem Restoration Advice, the Netherlands

Understanding sediment delivery to deltas under future environmental change
Frances Dunn, University of Southampton, United Kingdom

Global learning for local solutions: reducing vulnerability of marine-dependent coastal communities
PhD Kevern Cochrane, Rhodes University, South Africa

Regional sea level trends in the Bay of Bengal: preliminary results from a GRACE and Jason-1/-2 joint inversion
Bernd Uebbing, Bonn University, Germany

BanD-AID: Coastal Bangladesh vulnerability due to sea-level rise: an integrated natural & social science framework
C.K. Shum, School of Earth Sciences/Ohio State University, USA

Modeling the impacts of relative sea-level rise on deltaic rice fields
Ana Genua Olmedo, Intitute of Agriculture and Food Research (IRTA), Spain

Oyster Reefs: Opportunities for coastal protection and aquatic food production
Mohammed Shah Nawaz Chowdhury, Institute of Marine Sciences and Fisheries, University of Chittagong, Chittagong, Bangladesh

How coastal and riverine wetlands can adaptively reduce flood hazard
PhD Bregje van Wesenbeeck, Deltares, the Netherlands

Dynamics of the tidal creeks of Bangladesh Sundarban: An indicator of sea Level rise?
Dr. Anirban Mukhopadhyay, School of Oceanographic Studies, Jadavpur University, India

Erosion and submergence of New Moore Island from Sundarban delta
Dr. Anirban Mukhopadhyay, School of Oceanographic Studies, Jadavpur University, India

Impact of climate change and anthropogenic pressure on the ecology of a tropical coastal wetland
PhD Shadananan Nair, Nansen Environmental Research Centre, India

Long-term sea level variability along Western Australia and its impact on linear sea level trend estimates
Michael Kuhn, Curtin University, Australia

Sediment re-circulation in the Ganges-Brahmaputra-Meghna estuaries and its implications for ecosystem services
PhD Md. Munsur Rahman, Institute of Water and Flood Management, BUET, Bangladesh

Saline constructed wetlands may accommodate biodiversity demands under climate change in coastal areas
PhD MSc Marieke de Lange, Wageningen UR, the Netherlands

Water resources change and food security: An integrated study for sustainable development in the coastal areas
PhD Pham Dang Tri Van, Can Tho University, Vietnam

Tidal range vulnerability of the Bangladesh coast
PhD Golam Mahabub md. Sarwar, Bangladesh Unnayan Parishad (BUP), Bangladesh

The Ebre River delta (NW Mediterranean): A case study for climate change vs anthropic management
Lídia Cañas, ClimaDat-Institut Català de Ciències del Clima (IC3), Spain

Oyster reefs (Crassostrea gigas) stabilize eroding tidal flats under their footprint
MSc João Salvador de Paiva, HZ University of Applied Sciences, the Netherlands

Human-modified vs. natural landscape dynamics in the Ganges-Brahmaputra tidal delta plain
Carol Wilson, Vanderbilt University, USA

Human pressures and perceptions of the adverse impacts of water pollution in the semi-enclosed bay of Kalloni, Greece
Dr. Ourania Tzoraki, University of the Aegean, Greece

Deltas in Depth Theme 5. Urban adaptation to climate change

Urbmobi - A mobile measurement device for urban environmental monitoring
Dr. Lisette Klok, TNO, the Netherlands

The impact of urban green spaces on residents' outdoor thermal comfort – a psychological and physical approach
Dipl.Ing. Wiebke Klemm, Wageningen UR, the Netherlands

Assessment of implementation strategies for climate adaptation measures in Dutch social housing
MSc Martin Roders, Delft University of Technology, the Netherlands

Outdoor thermal comfort within the Rotterdam agglomeration as influenced by city design
PhD Bert van Hove, Wageningen UR, the Netherlands

Opportunistic adaptation of architecture and urbanism
Polpat Nil-u-bon, UNESCO-IHE, the Netherlands

Urban transportation, weather and climate change
Martin W. Adler, VU University Amsterdam, the Netherlands

The potential of modular floating urbanization for future urban space
Karina Czapiewska, DeltaSync, the Netherlands

Expanding coastal adaptation in New York City: a framework for floating structures and its co-benefits
Kristin Bell, Pratt Institute, USA

Urban climate maps and micro climate adaption strategies to reduce social vulnerability caused by climate impacts
Dipl.-Ing. René Burghardt, Department of Environmental Meteorology / University of Kassel, Germany

Modeling the influence of open water surfaces on the summertime temperature and thermal comfort in the city
Gert-Jan Steeneveld, Wageningen UR, the Netherlands

Quantifying local impacts of regional adaptation measures in the urban environment
PhD Herbert ter Maat, Wageningen UR, the Netherlands

Deltas in Depth Theme 6. Rural development and food security

Climate change and water conservation effects on vegetation patterns in a stream catchment
MSc Yasmijn van der Knaap, VU University Amsterdam, the Netherlands

Spatial modelling of the association between agricultural land use and poverty in the Ganges-Brahmaputra delta
Dr. Craig Hutton, University of Southampton, United Kingdom

Livelihoods in transformed floodplain: A case of flood polder in southwest Bangladesh
PhD Hamidul Huq, Institute of Livelihoods Studies, Bangladesh

Deltas in Depth Theme 7. Port development and infrastructure

Automated assessment of road stability following flooding or extreme rainfall
MSc Bert Sman, Deltares, the Netherlands

Deltas in Depth Theme 8. Disaster reduction and emergencies

The present and future situation of land subsidence in Mekong delta
PhD Satoshi Murakami, Ibaraki University, Japan

Deltas in Depth Theme 9. Governance of adaptation

Climate change and its effect for drinking water in the Mekong delta in Vietnam
Prof.dr. Meine Pieter van Dijk, UNESCO-IHE, the Netherlands

Climate change compliance for mobility by SNCF
Dr. Alexandre Kaddouri, SNCF, France

Adaptation or mal-adaptation to a changing climate: Governance of climate adaptation in the hills of rural Nepal
Popular Gentle, Charles Sturt University, Australia

Cost-benefit analysis as a major tool for Dutch multi-level water governance
Frits Bos, CPB Netherlands Bureau for Economic Policy Analysis, the Netherlands

Land-use change chronicle- Calling for change in solution and policy: Case study of 2011 Thailand floods
Pol.Lt.Col. Parinya Charoenbundit, Seoul National University, South-Korea

Adaptation research a transdisciplinary transnational community and policy centred approach
Jean-Paul Vanderlinden, CEARC/OVSQ/UVSQ, France

Community resilience as adaptive governance arrangement
Jean-Marie Buijs, HZ University of Applied Sciences, the Netherlands

Influencing "social norms" to promote greater climate change adaption measures to minimize localized flooding
Dawn Purves, Kingston University, United Kingdom

Bridging the gap: Effective collaboration and decision-support for adaptation planning
Todd Schenk, Massachusetts Institute of Technology, USA

A bottom-up empowerment and capacity building implement for coastal subsided area of Taiwan under climate threat
PhD Sinite Yu, TIIWE, Taiwan

Addressing livelihood insecurity through accessing local resources to minimize vulnerability in Bangladesh delta
Fahmida Islam, Jamuna Foundation, Bangladesh

Migration as an adaption to climate change: Case study Volta delta, Ghana
Kwasi Appeaning Addo, University of Ghana, Ghana

Translation in the cloud: The evolution and circulation of climate change knowledge among NGOs in the Mekong delta
Jacob Weger, University of Georgia, USA

Participatory monitoring as instrument to achieve intermediate outcomes in stakeholder participation processes
Bouke Ottow, Deltares, the Netherlands

Contested governance of ecosystem services for poverty alleviation in southwest Bangladesh
PhD Hamidul Huq, Institute of Livelihoods Studies, Bangladesh

Challenges of systemic innovation: cities as experimentation units?
Ioan M. Ciumasu, INTRAS, France

Deltas in Depth Theme 10. Economics and finance of adaptation

The economics of salinization due to climate change and possible adaptation investments
BSc Bart Kuiter, Wageningen UR, the Netherlands

Cost-effective adaptation to climate change under a long-term system reliability standard
MSc Thomas van der Pol, Wageningen UR, the Netherlands

Hands on for the Aansluitdijk // Aansluitdijk links ecology with economy at a 1 billion profit!
MSc Caspar Pompe, Aansluitdijk BV, the Netherlands

The role of water prices in agricultural water demand: Two case studies
PhD Vincent Linderhof, Wageningen UR, the Netherlands

Deltas in Depth Theme 11. Decision support tools and risk assessment

Dealing with uncertainty in the Dutch Deltaprogramme
Pieter Bloemen, Staf Deltacommissaris, the Netherlands

The information enrichment chain: Indicator and visualisation support for local climate adaption planning
MSc Monique de Groot-Reichwein, Wageningen UR, the Netherlands

The national ecosystem assessment of the Netherlands: A digital atlas of our natural capital
PhD Ton de Nijs, RIVM, the Netherlands

The European climate adaptation platform
André Jol, European Environment Agency, Denmark

Estimation of flood damage and its comparison with a GIS study in Pesanggrahan river Jakarta
MSc Pini Wijayanti, Wageningen UR, the Netherlands

A framework for the integrated assessment of vulnerability of deltas systems
MD Andressa Vianna Mansur, University of Cadiz, Spain

Analysing climate change impacts on local economic performance of Dutch agricultural systems
Vasco Diogo, SPINlab/VU University Amsterdam, the Netherlands

Long term reinvestment planning for the replacement of hydraulic structures – general methodology and case study
MSc Wouter D. van der Wiel, IV-Infra B.V., the Netherlands

Contribution to sustainable river basin management for a coastal zone of Southern Vietnam – Intermediate Results
Stephanie Zeunert, University of Technology, Germany

Coastal state indicators interdependencies: Bottom up vs bottom down perspectives
PhD Andres Payo, Environmental Change Institute/Oxford University, United Kingdom

Assessing future urban heat island patterns following socio-economic and climate scenarios
Dr. Eric Koomen, Dept. Spatial Economics/SPINlab VU University Amsterdam, the Netherlands

Quick scan of urban heat stress
PhD Msc Jeroen Kluck, Amsterdam University of Applied Sciences, the Netherlands

A user-driven atlas of waterpoort, Enabling a paradigm shift towards water sensitive area development
MSc Jonas Papenborg, HZ University of Applied Sciences, the Netherlands

Monitoring of adaptation at the local level
PhD Judith E.M. Klostermann, Wageningen UR, the Netherlands

Risk-based action under data scarcity: Use of global rainfall and hydrological information to anticipate disasters
Erin Coughlan de Perez, Red Cross/Red Crescent Climate Centre, USA

Global quick scan of the vulnerability of groundwater to tsunamis
PhD Gualbert Oude Essink, Deltares, the Netherlands

An ABM framework for modelling climate change impacts on road infrastructure in coastal areas
Srirama Bhamidipati, Delft University of Technology, the Netherlands

17 18

19

ARCADIS is an international company with 22,000 people worldwide and € 2.5 billion in revenues, that provides consultancy, design, engineering and management services in the fields of Water, Infrastructure, Environment and Buildings. In the global water market water, ARCADIS is ranked number 1 according to the ENR Top 200.
With a changing climate, governments in the world's river deltas and flood plains face new challenges in protecting their citizens and valuable assets. With more than a century of experience in water management in the Netherlands and abroad, and with our successful recent experience in New Orleans, we can help.
www.arcadis.com

Bosch Slabbers Landscape + Urban design specialises in the design of the outside environment in the urban and rural realm, both on local and regional scales.
Our office designs integrated solutions, taking all elements of our daily life into account: climate, water, soil, ecology, financial, social aspects, aesthetics, durability, usability. We use a sober and realistic attitude in combination with a creative, problem-solving approach when facing spatial issues.
Bosch Slabbers strives towards simplicity, developing plans with durability in mind. For this purpose we developed a specific expertise in the field of Delta Design, Climate Change, water landscapes, and cultural history.
www.bosch-slabbers.com

Connecting Delta Cities (CDC) brings together some of the world's leading delta and coastal cities in adaptation: Copenhagen, Ho Chi Minh City, Hong Kong, Jakarta, London, Melbourne, New Orleans, New York, Rotterdam and Tokyo. All committed to sharing knowledge and best practices about policies, planning measures, and technologies that reduce the impact of climate risks. In July 2014 CDC welcomed three new members: Singapore, Changwon and Venice, and more cities expressed their wish to join. Please visit us in the conference hall.
www.deltacities.com @Connectdelta

Deltares is the independent research institute for water, subsoil and infrastructure. Worldwide we have developed decision support systems to enable decision makers and practitioners to 'enable delta life'. Check out our interactive map on decision support and find out what we can do for you. Meet our experts during breaks and hear about the latest developments in climate adaptation, subsidence, nature based engineering, water scarcity and operational flood management. www.deltares.nl/en

Holland. Let's work together

Global water challenges...joint solutions. The Dutch Water Sector believes in partnerships to solve worldwide water issues. 'Let's work together' is the motto of this leading international sector. The combined expertise of the Dutch Water Sector is on show on www.dutchwatersector.com. Visit our booth and find out the latest on Dutch water projects and innovations. For example the 'building blocks for a delta approach' a step by step guide for governments and water professionals. www.dutchwatersector.com

---

Grontmij

Grontmij helps cities become climate adaptive. We offer an integrated approach with solutions that are not purely technical, but add value to the quality of life at the same time. Grontmij offers all consultancy, engineering and design services required to support cities in their development all over the world. With almost a hundred years of experience in urban planning, water management, water technology, environmental services, infrastructure, mobility and industry, we are the right partner for sustainable and climate adaptive urban development. www.grontmij.com

---

Knowledge for Climate

Research programme Knowledge for Climate aims to develop the scientific and applied knowledge required for climate-proofing the Netherlands and to create a sustainable knowledge infrastructure for managing climate change. We welcome visitors to the Knowledge for Climate stand to learn more about our interesting projects at the cutting edge of climate science and practice. You can also watch Climate TV, a series of short documentaries, developed to show a broader audience what climate adaptation looks like in the Netherlands and pick up your copy of the brand new Knowledge for Climate book 'Innovation in climate adaptation'. www.knowledgeforclimate.nl @climate.nl

---

ROTTERDAM.CLIMATE.INITIATIVE Climate Proof

In Rotterdam we see climate change as an opportunity rather than a threat. Within the Rotterdam Climate Initiative, Rotterdam addresses the entire field of climate change, both reducing the causes of climate change and adaptation. Thanks to its adaptation programme Rotterdam Climate Proof, the city and the port have become much greener, healthier and economically stronger. The city is a laboratory for innovations in urban water management and climate adaptation because it welcomes creative ideas from the private sector and knowledge institutes. A gallery of inspiring solutions are showed in our stand. www.rotterdamclimateinitiative.nl @RotterdamRCI

Royal HaskoningDHV
Enhancing Society Together

Royal HaskoningDHV is proud to sponsor the Deltas in Times of Climate Change II International Conference in Rotterdam. We are delighted that many of our global experts will be in attendance and running workshops, making presentations on a wide variety of relevant and innovative topics. Please do come and visit us at any of these activities and on our exhibition stand where you explore these and many other issues in person. www.royalhaskoningdhv.com

Springer

Looking to publish your research? Learn about our print and electronic publication services, including Open Access! Get high-quality review, maximum readership and rapid distribution. Come to our booth or find us online: www.springer.com/authors. Editors Margaret Deignan and Elodie Tronche will be available to discuss book projects and journals. You can also browse key titles in your field and buy (e)books at discount prices. With Springer you are in good company. www.springer.com

---

Tauw

Tauw is an independent European consulting and engineering company specialised in the design and improvement of the natural environment, built environment and infrastructure. We are experts in environmental consultancy, spatial development, civil engineering and the monitoring of environmental quality. We work for public authorities, private companies and non-governmental organisations. The client is at the core of our attention. Sustainability and climate change are our major concerns. Understanding the local context is the main pillar of our consultancy. That's why we work in a European network of regional offices in various parts of Europe, close to our clients and their subsidiaries.
www.tauw.com

VALORISATIEPROGRAMMA DELTATECHNOLOGIE & WATER

Hier wordt geïnvesteerd in uw toekomst. Dit project is mede mogelijk gemaakt met steun van het Europees Fonds voor Regionale Ontwikkeling van de Europese Unie.

Get inspired by our startups! The Valorisation programme Delta Technology & Water (VPdelta) was set up by the region of Rotterdam/Delft/Drechtsteden to increase entrepreneurship and innovative solutions for the challenge of remaining safe in delta areas. A changing climate, global population growth and increasing urbanization call for creative innovations. Knowledge institutes, companies and governmental organizations collaborate together in developing projects. Please come and meet and be inspired by our startups and their inventions. We present clever ideas ranging from water management, water powered energy, dealing with urban floods, high tech monitoring, floating urbanization, irrigation systems, temporary flood defences and so on. We are looking forward to meeting you!
www.vpdelta.nl

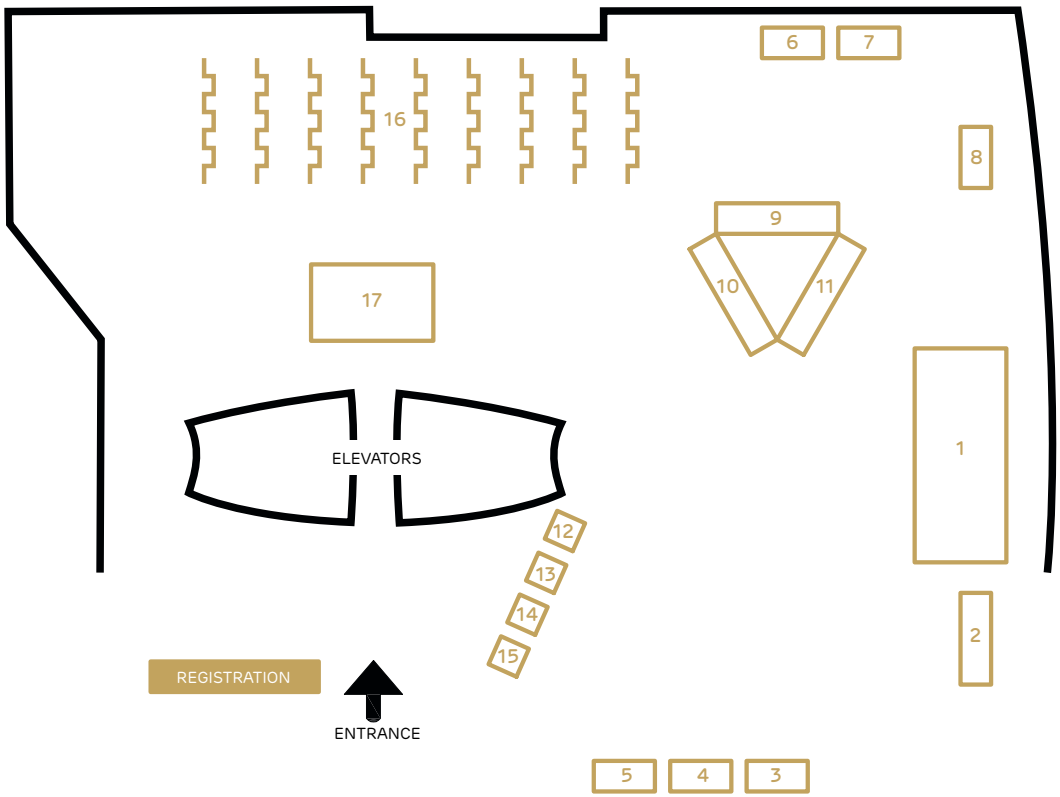
Hoogheemraadschap van Delfland

In the Netherlands regional water authorities take care of flood defences, the water level, waste water treatment and the quality of surface water. They work out actual water projects which fit well in the urban development. Like extra water storage, cleaner surface water and initiatives to make the environment more healthy and green.

Hoogheemraadschap van Schieland en de Krimpenerwaard

The way the Dutch regional water authorities have managed the water for centuries gives a proper basis for a climate proof urban environment. The recently published OECD report on the Dutch water management calls it 'fit for the future'. Visit our stand and learn more about Water Governance in the Netherlands.

www.hhdelfland.nl
www.schielandendekrimpenerwaard.nl
www.wshd.nl



1 Connecting Delta Cities
2 Knowledge for Climate
3 Dutch Water Sector
4 Tauw
5 Deltares
6 ARCADIS
7 Royal HaskoningDHV
8 Rotterdam Climate Initiative
9 • 10 • 11 Regional Water Authorities:
Hollandse Delta
Delfland
Schieland and Krimpenerwaard
12 Springer
13 Grontmij
14 Bosch en Slabbers
15 VPdelta
16 Posters, Deltas in Depth
17 Posters, International Climate Adaptation Business Challenge 2014

Recommendations Committee

Ahmed Aboutaleb	Mayor Rotterdam, the Netherlands
Sybilla Dekker	former Minister of Housing, Spatial Planning and the Environment, chair Supervisory Board Knowledge for Climate, the Netherlands
Shaun Donovan	Secretary for Housing and Urban Development, USA
Dr. Christopher Field	Co-chair Working Group 2 IPCC, Standford University, USA
Connie Hedegaard	European Commissioner for Climate Action, Belgium
Frank Heemskerk	Executive Director The World Bank, USA
Hans Huis in 't Veld	Topsector Water, the Netherlands
Frank Jensens	Mayor Copenhagen, Denmark
Prof.dr. Pavel Kabat	Director International Institute for Applied Systems Analysis, Austria
Yolanda Kakabadse	Ecuador, President WWF International
Prof. Diana Liverman	Co-director of the University of Arizona, USA
Nguyen Minh Quang	Minister of Natural Resources and Environment, Socialist Republic of Viet Nam
Hans Oosters	Chair Regional Water Authority Hoogheemraadschap van Schieland en de Krimpenerwaard, Member Executive Board Association of Regional Water Authorities, the Netherlands
Prof. Ho Long Phi	Director Center of Water Management and Climate Change (WACC), Vietnam
Dr. Judith Rodin	President Rockefeller Foundation, USA
Prof.dr. Sybe Schaap	Netherlands Water Partnership, the Netherlands
Daviz M. Simango	Mayor of Beira, Mozambique
Prof.dr. Cees Veerman	Former Chair of the Delta Commission and former Minister of Agriculture, Nature and Food Quality, the Netherlands
Joko Widodo	Governor of Jakarta, Indonesia

Deltas in Depth Scientific Committee

Prof.dr. Frans Berkhout (Chair)	King's College, United Kingdom / Future Earth Programme, France
Prof. Harriet Bulkeley	Durham University, United Kingdom
Prof.dr. Jim Hall	University of Oxford, Centre for the Environment, United Kingdom
Prof.dr. Peter Herman	Netherlands Institute of Ecology / Royal Academy of Sciences, the Netherlands
Dr. Saleemul Huq	International Centre for Climate Change Development, Bangladesh / International Institute for Environment and Development, United Kingdom
Dr. Daniela Jacob,	Max-Planck-Institute for Meteorology, Germany
Prof.dr. Shah Alam Khan	Bangladesh University of Engineering and Technology, Bangladesh
Prof.dr. Richard Klein	Stockholm Environment Institute, Sweden
Prof. Zbigniew Kundzewicz	Polish Academy of Sciences, Poland
Dr. Cynthia Rosenzweig	Columbia University, USA
Dr. Swenja Surminski	London School of Economics, United Kingdom
Dr. Koko Warner	United Nations University, Germany

Deltas in Depth Convenors

Maarten van Aalst	International Red Cross Red Crescent Climate Centre, the Netherlands
Prof.dr. Jeroen Aerts	VU University, Institute for Environmental Studies, the Netherlands
Prof.dr. Frank Berendse	Wageningen University and Research Centre, the Netherlands
Prof. Anthony G. Bigio	George Washington University, United States
Prof.dr. Adri van de Brink	Wageningen University and Research Centre, the Netherlands
Prof. Harriet Bulkeley	Durham University, United Kingdom
John Church	FAA, FTSE, CSIRO Fellow, Centre for Australian Weather and Climate Research, Australia
Dr. Emilio Custodio	Polytechnic University of Catalonia, Spain
Prof. Simin Davoudi	Newcastle University, United Kingdom
Prof. John Day	Louisiana State University, Baton Rouge, Louisiana, USA
Dr. Luciana S. Esteves	Bournemouth University, United Kingdom
Prof. Carlo Giupponi	Ca' Foscari University of Venice, Italy
Prof. dr. Bruce Glavovic	Massey University, New Zealand
Prof.dr. Joyeeta Gupta	University of Amsterdam, the Netherlands
Prof.dr. Jim Hall	University of Oxford, Centre for the Environment, United Kingdom
Stéphane Hallegatte	The World Bank, USA
Prof.dr. Wilco Hazeleger	Royal Netherlands Meteorological Institute, the Netherlands
Prof.dr. Peter Herman	Netherlands Institute of Ecology / Royal Academy of Sciences, the Netherlands
Prof.dr. Thea Hilhorst	Wageningen University and Research Centre, the Netherlands
Prof.dr. Dave Huitema	VU University Amsterdam, Institute for Environmental Studies, the Netherlands
Dr. Saleemul Huq	International Institute for Environment and Development, United Kingdom
Prof.dr. Daniela Jacob	Max-Planck-Institute for Meteorology, Germany
Dr. Ad Jeuken	Deltares, the Netherlands
Prof.dr. Shah Alam Khan	Bangladesh University of Engineering and Technology, Bangladesh
Prof.dr. Richard Klein	Stockholm Environment Institute, Sweden
Dr. Frans Klijn	Deltares, the Netherlands
Dr. Heidi Kreibich	German Research Centre for Geosciences, Germany
Prof. Zbigniew Kundzewicz	Polish Academy of Sciences, Poland
Prof. Corrine Larrue	University of Rabelais de Tours, France
Dr. Holly Michael	University of Delaware, USA
Prof. Edward Ng	Chinese University of Hong Kong, China
Dr. Gualbert Oude Essink	Deltares, the Netherlands
Dr. Hans Paerl	University of North Carolina at Chapel Hill, USA
Prof. Eelco Rohling	Australian National University, Australia
Dr. Cynthia Rosenzweig	Columbia University, USA
Dr. Swenja Surminski	London School of Economics, United Kingdom
Dr. Rob Swart	Wageningen University and Research Centre, the Netherlands
Prof.dr. Lori Tavasszy	TNO and Delft University of Technology, the Netherlands
Prof.dr. Katrien Termeer	Wageningen University and Research Centre, the Netherlands
Ed Thomas	Natural Hazard Mitigation Association, USA
Tiedo Vellinga	Port of Rotterdam / Technical University Delft, the Netherlands
Koko Warner	United Nations University, Germany
Paul Watkiss	University of Oxford, United Kingdom
Prof.dr. Chris Zevenbergen	UNESCO-IHE, the Netherlands

Deltas in Practice Advisory Committee

Chantal Oudkerk Pool MA (chair)	City of Rotterdam, the Netherlands
Chris Baker	Wetlands International, the Netherlands
Arjan Braamskamp	Netherlands Consulate General New York, USA
Piet Dircke	Arcadis, the Netherlands
Cees van de Guchte MA	Deltares, the Netherlands
Paulien Hartog	Waternet Amsterdam Region, the Netherlands
Mandy Ikert	C40, USA
John Jacobs MSc	City of Rotterdam, the Netherlands
Enrico Moens MSc	Grontmij, the Netherlands
Alex Nickson	Greater London Authority, United Kingdom
Stefan Nijwening	Rebel group, the Netherlands
Florrie de Pater MSc	Research Programme Knowledge for Climate, the Netherlands
Djeevan Schiferli	IBM, the Netherlands
Rob Schoonman MSc	Ministry of Infrastructure and the Environment, the Netherlands
Steven Slabbers	Bosch Slabbers landscape+urban planning, the Netherlands
Sabina Voogd	Oxfam Novib, the Netherlands
Chris Zevenbergen	Dura Vermeer, the Netherlands

Steering Committee

Prof.dr. Pier Vellinga (chair)	Research Programme Knowledge for Climate
Florrie de Pater MSc (secretariat)	Research Programme Knowledge for Climate
Prof.dr. Peter Driessen	Research Programme Knowledge for Climate
Peter van der Linde	Royal Boskalis Westminster N.V. / Topsector Water
Willem Mak	Ministry of Infrastructure and the Environment
Arnoud Molenaar MA	City of Rotterdam
Paula Verhoeven MA	City of Rotterdam

Organising Committee

Florrie de Pater MSc (chair)	Research Programme Knowledge for Climate
Ottelien van Steenis (secretariat)	Research Programme Knowledge for Climate
Irma Arends	City of Rotterdam
John Jacobs MSc	City of Rotterdam
Chantal Oudkerk Pool MA	City of Rotterdam
Rob Schoonman MSc	Ministry of Infrastructure and the Environment
Vincent van den Bergen MSc	Ministry of Infrastructure and the Environment

20 21

22

Registration desk

Opening hours registration desk:

Tuesday, 23 September	17.00 – 19.00
Wednesday, 24 September	08.00 – 19.00
Thursday, 25 September	08.00 – 19.00
Friday, 26 September	08.00 – 13.00

Speaker Service Centre (SSC)

The Speaker Service Centre (SSC) is located in the Captain's Lounge, on the first floor of the conference centre.

Opening hours SSC:

Wednesday, 24 September	08.30 – 18.00
Thursday, 25 September	08.30 – 18.00
Friday, 26 September	08.30 – 11.00

Posters

Posters Deltas in Depth will be on display during the entire conference located in the poster area on the exhibition floor. All abstracts of the posters can be found in the abstractbook.

Special poster sessions will be held on:

Wednesday, 24 September	18.00 – 19.00
Thursday, 25 September	17.30 – 19.00

Opening hours poster desk (located in the poster area):

Tuesday, 23 September	17.00 – 19.00
Wednesday, 24 September	08.30 – 19.00
Thursday, 25 September	08.30 – 19.00
Friday, 26 September	08.30 – 13.00

Mounting posters: as of Tuesday, 23 September at 17.00

Dismantling posters: before Friday, 26 September at 13.00

Deltas in Times of Climate Change II does not assume any responsibility for material displayed on the poster boards. Material that has not been taken away in time will be removed by the organisation and destroyed.

Coffee / tea breaks, lunches, receptions

During breaks coffee and tea will be served free of charge to all participants wearing their name badge on the exhibition floor. Besides this, participants are able to purchase coffee and tea for € 2 throughout the day. Lunches and receptions are included in the registration fee and will be served in the exhibition area.

Internet

There will be internet corners available in the exhibition area. Besides this, WTC offers all participants access to its extensive WiFi network at all locations on the premises.

Staff

If you have any questions, please do not hesitate to contact one of the staff members who can be recognised by their black polo shirts.

Useful contacts

Organising Committee	Ottelien van Steenis +31 317 48 6540 (also mobile), for text messages please use +31 6 1351 8776
Press Officer	Irma Arends +31 10 267 2529
Social Media Officer	Marjolein Pijnappels +31 6 4992 5262 m.pijnappels@programmabureauklimaat.nl Twitter: @climatedelta #climatedelta14 Linkedin: http://linkd.in/1mp5TiT Facebook: http://on.fb.me/1nvsl9l
Hotel service	Please visit the Registration desk if you need assistance
RET Rotterdam Public Transport	www.ret.nl
Rotterdam Taxi	+31 10 262 1 173
Rotterdam Tourist Information	www.rotterdam.info
Train information	www.ns.nl

Message board

Looking for someone? Or do you want to promote your session?
Please go to the Registration Desk and leave a message on the electronic message board.

Information tables

On the exhibition floor tables are available to stall your free information (reports, flyers etc.) for the participants of the conference. Deltas in Times of Climate Change II does not assume any responsibility for the material displayed. Material that has not been taken away in time will be removed by the organisation and destroyed.
Dismantling tables: Friday, 26 September, 13.00

Wardrobe / luggage storage

A guarded wardrobe and luggage storage is available.

Press

The Climate Delta Conference Press team deals with all media enquiries relating to the conference activities and its speakers. Access our media releases, download photographs, subscribe to our newsletter or follow us on Twitter. Keep up to date with the developments at www.climatedeltaconference2014.org or on Twitter @climatedelta.

Contact

Irma Arends
+ 31 10 267 2529
i.arends@rotterdam.nl

Opening hours press desk:

Wednesday, 24 September	08.30 – 11.30
Thursday, 25 September	08.30 – 11.30
Friday, 26 September	08.30 – 11.30

Social media

This conference is all about sharing ideas, knowledge and expertise. Get social and interact with other participants and people following the conference from the outside. During the conference we will give you updates, highlights, showcase interesting sessions and keep you updated with conference news through our Twitter account @climatedelta. We recommend you use the hashtag #climatedelta14 when you tweet about the conference to make it easier for others to find you.

Join our LinkedIn group and Facebook event page to see who else is attending or to promote your session, start preliminary discussions and contact participants. You can find our LinkedIn group by searching for 'Deltas in Times of Climate Change II' on LinkedIn or using the short link http://linkd.in/1mp5TiT.

The Facebook event page can be accessed by searching for 'Deltas in Times of Climate Change II' on Facebook or using the short link http://on.fb.me/1nvsl9l.

If you have any questions, tips for our social media news feed or need help promoting your event through social media, don't hesitate to contact the Media Coordinator during the conference.

Enjoy the conference, and share your knowledge!

Marjolein Pijnappels, Media Coordinator
+31 6 4992 5262
m.pijnappels@programmabureauklimaat.nl

23 24

25

On the afternoon of Friday 26 September (13.00-18.00 hrs) participants are offered a choice between 6 excursions. The trips give the participants a good overview of how Rotterdam and the Netherlands have adapted to climate change over the centuries.

1. Visit to the pearls of the Urban Necklace (city trip)

Rotterdam is vulnerable to the effects of climate change. One of the elements of its adaptation strategy is integration of adaptation in urban design. While developing new projects and reconstructing old parts of the city, Rotterdam is searching for opportunities for water storage, cooling hot spaces and increasing safety to flooding. By doing so an urban axis is created with 'adaptation pearls': water squares, green roofs, cool parks and buildings, all contributing to adapting to climate change, making the city robust.
This excursion takes you by foot from 'Central District', the Central Station area, along the meandering canal Westersingel to the Museum Quarter. From there it is a short walk to the river and the old harbour 'Leuvehaven', where a boat is waiting. Local experts will explain about the projects.

2. Mixing old and new: industrial monuments and high tech buildings (city trip)

The Netherlands have a long tradition and outstanding technology in dike construction. Most areas are well protected against flooding. Flood plains are the exception and also in built up areas flooding can occur. Rotterdam is planning to develop new housing on old industrial terrains outside the dikes. How can people and their dwellings be protected to damage from flooding? And what happens in existing housing areas in urban flood plains? Another issue to be discussed and seen during this excursion is how to counter salt water intrusion.
This trip leads us to the southern part of the city. Various projects will be visited: city area's not protected by dikes, newly developed housing areas, industrial monuments. The excursion ends in an old re-used cruise ship. Explanations will be given in the bus and on spot.

3. Keeping Rotterdam safe: a tour by bus and boat (region trip)

The 'Nieuwe Waterweg' connects Rotterdam with the North Sea. The canal was completed in 1872 and became the new entrance from the North Sea to North West Europe. Since then Rotterdam is developing new harbours, expanding industrial and transport facilities, enlarging its dikes and inventing water works against high tides. With climate change looming, Rotterdam gives lots of attention to adaptation, not seeing climate change as a threat only, but turning is into an opportunity to make the city more attractive.
This excursion concentrates on the most recent civil works protecting land from the sea. The trip is mainly done by boat and bus bringing the participants to an old garden city just re-developed, to the '2e Maasvlakte' (industrial area built in the North Sea), the 'Sand Engine' and 'Maeslantkering' (storm surge barrier). Several speakers will give explanations.
>> Due to the rush hour in Rotterdam it cannot be guaranteed that the excursion ends at 18.00 hrs.

4. Victory of the low lands: the Delta Works (region trip)

After the disastrous flood of 1953, when many people drowned and many more lost their houses, the Netherlands decided to built its biggest sea defence ever: 'The Delta Works'. These works consists of dikes and other ingenious engineering water works. It's not only meant to keep high water outside the doors, but also copes with salt and fresh water and of course climate change.
The excursion leaves Rotterdam by bus to Zeeland, a province of many islands, connected by bridges and protected by huge dikes. In the visitor centre 'Neeltje Jans' an explanation is given about the Delta Works. If time allows the Flood Disaster Museum at Ouwerkerk will be visited.
>> Due to the rush hour Rotterdam it cannot be guaranteed that the excursion ends at 18.00 hrs.

5. Visit our biggest multifunctional water storage in the Netherlands! (site visit by bus)

In the Eendragtspolder several organisations developed a recreational area, an international rowing course as well as a 4 million cubic meters storm water storage.
The design and realisation of a multifunctional territory of 300 ha in this polder took a lot of integrated cooperation.
Together we combined all our knowledge and created a typically Dutch solution to the intensifying precipitation in one of the most densely populated and lowest lying areas in Western Europe: 7 meters below sea level.
The excursion will offer you a breath-taking view of the Eendragtspolder site. Meanwhile you get informed about our experiences in technique and design, the costs as well as the various processes of design and realisation. The responsible board member and the project manager of the regional water authority Schieland en de Krimpenerwaard are happy to tell you all about the realisation of this large scale water storage, which keeps Rotterdam safe from flooding in times of extreme weather.
>> Due to the rush hour Rotterdam it cannot be guaranteed that the excursion ends at 18.00 hrs.

6. We are going to simulate a flood! (site visit by bus)

Every year, cities and regions all over the world face the challenge of temporary floods. This results in billions of euros in damages. At Flood Proof Holland, Dutch entrepreneurs are cooperating with staff and students of the Delft University of Technology to find innovative and practical solutions that offer protection against the rising water. Over the last year, many national and international delegations (from e.g. Brazil, Thailand, Romania, Mexico) and film crews (e.g. BBC, Discovery Channel, Thai, Vietnam, Dutch television) have visited the site.
During this excursion a bus will take you to Flood Proof Holland, the unique test and demonstration facility for innovative temporary flood defenses and flood prevention measures in Delft. You will be able to see some of the latest inventions during a real life flood simulation. For more info, please watch this video.
www.youtube.com/watch?v=1j6ernOI7BE

Research programme Knowledge for Climate

Knowledge for Climate is a research programme for the development of knowledge and services that makes it possible to climate proof the Netherlands. Governmental organisations (central government, provinces, municipalities and Regional Water Authorities) and businesses, actively participate in research programming through the input of additional resources (matching).
Visit www.knowledgeforclimate.nl for further information, follow us on Twitter @climate.nl and like us on Facebook.

Rotterdam Climate Initiative

In Rotterdam we see climate change as an opportunity rather than a threat. Within the Rotterdam Climate Initiative, Rotterdam addresses the entire field of climate change, both reducing the causes of climate change and adaptation. Thanks to its adaptation programme Rotterdam Climate Proof the city and the port have become much greener, healthier and economically stronger. The city is a laboratory for innovations in urban water management and climate adaptation because it welcomes creative ideas from the private sector and knowledge institutes. Rotterdam has become an inspiring example for other delta cities.
Visit www.rotterdamclimateinitiative.nl for further information, follow us on Twitter @RotterdamRCI.

Ministry of Infrastructure and the Environment

The Ministry of Infrastructure and Environment is committed to improving quality of life, access and mobility in a clean, safe and sustainable environment. The Ministry strives to create an efficient network of roads, railways, waterways and airways, effective water management to protect against flooding, and improved air and water quality. Read more www.government.nl/ministries/ienm

Ministry of Foreign Affairs

The Dutch Ministry of Foreign Affairs promotes the interests of the Netherlands abroad. The Ministry coordinates and carries out Dutch foreign policy at its headquarters in The Hague and through its missions in many places in the world. The Ministry is also responsible for development cooperation. Ambitions in this field are: to eradicate extreme poverty in one generation and to foster sustainable and inclusive growth everywhere in the world.
Read more www.government.nl/ministries/bz

C40 Cities Climate Leadership Group

The C40 Cities Climate Leadership Group (C40) is a network of large and engaged cities from around the world committed to implementing meaningful and sustainable climate-related actions locally that will help address climate change globally. C40 was established in 2005 and expanded via a partnership in 2006 with President William J. Clinton's Climate Initiative (CCI). The current chair of the C40 is Rio de Janeiro Mayor Eduardo Paes; the 108th Mayor of New York City Michael R. Bloomberg serves as President of the Board. To learn more about the work of C40 and our Cities, please visit www.deltacities.com, follow us on Twitter @c40cities and like us on Facebook.

Contact

Organising Committee
Ottelien van Steenis
Programme Office Knowledge for Climate
The Netherlands
+31 317 48 6540
o.van.steenis@programmabureauklimaat.nl
www.climatedeltaconference2014.org

Colophon

Graphic design www.lijnontwerp.nl

Photography © Eric Fecken
numbers 2, 5, 6, 10, 11, 12, 13

© Bosch Slabbers
numbers 1, 3, 4, 7, 8, 9, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25

HOSTS

ROTTERDAM.CLIMATE.INITIATIVE
Climate Proof

Knowledge for Climate

Ministry of Infrastructure and the Environment
Ministry of Foreign Affairs

C40CITIES
CLIMATE LEADERSHIP GROUP

SPONSORS

Royal HaskoningDHV
Enhancing Society Together

ARCADIS
Infrastructure · Water · Environment · Buildings

evides

Tauw

Deltares
Enabling Delta Life

ABEL

Hollandse Delta

Hoogheemraadschap van Delfland

Hoogheemraadschap van Schieland en de Krimpenerwaard

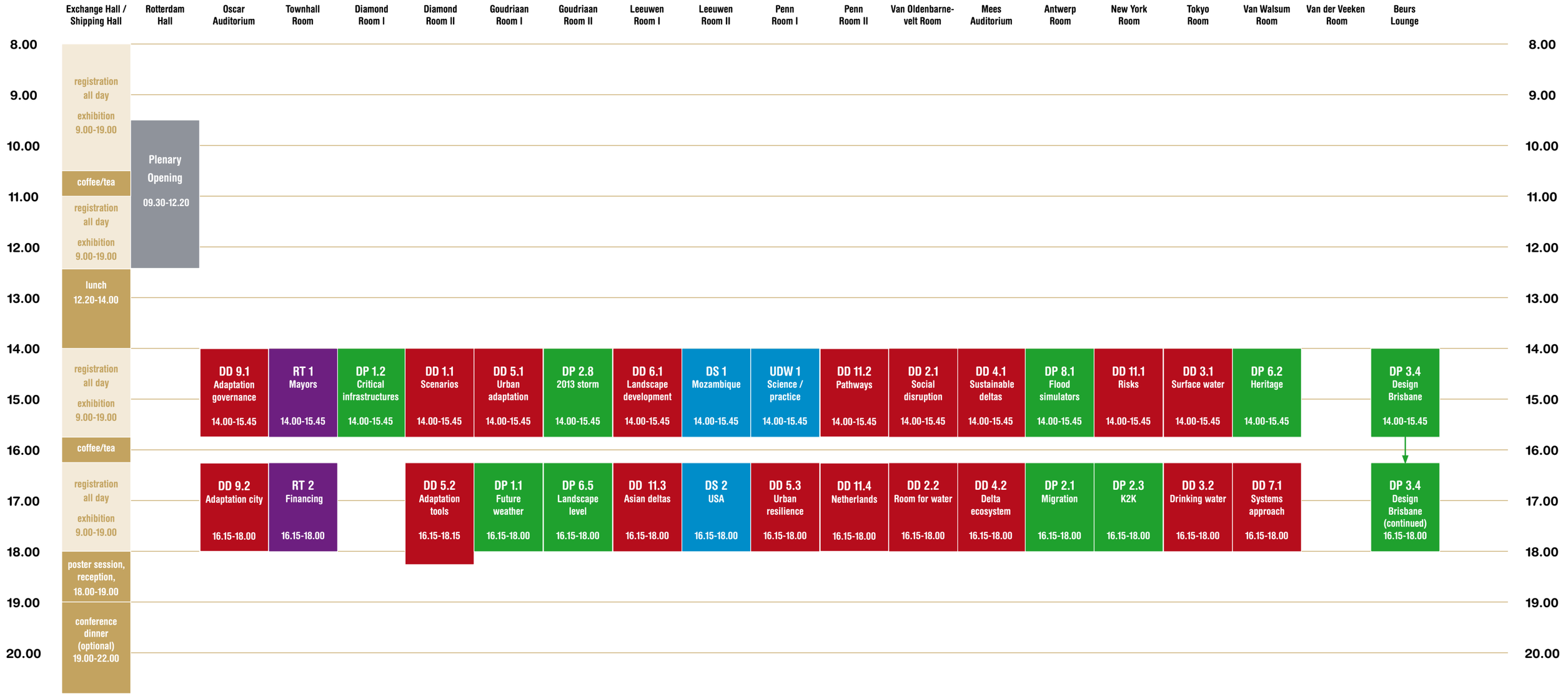
www.climatedeltaconference2014.org

SESSION OVERVIEW WEDNESDAY

SESSION OVERVIEW THURSDAY

SESSION OVERVIEW FRIDAY

WEDNESDAY, 24 SEPTEMBER 2014 W



THURSDAY, 25 SEPTEMBER 2014 T

	Exchange Hall / Shipping Hall	Rotterdam Hall	Oscar Auditorium	Townhall Room	Diamond Room I	Diamond Room II	Goudriaan Room I	Goudriaan Room II	Leeuwen Room I	Leeuwen Room II	Penn Room I	Penn Room II	Van Oldenbarne-velt Room	Mees Auditorium	Antwerp Room	New York Room	Tokyo Room	Van Walsum Room	Van der Veeken Room	Beurs Lounge
8.00																				
9.00	registration all day exhibition 9.00-19.00		DD 9.3 Adaptation coast 09.00-10.45	RT 3 Adaptation 09.00-10.45	DD 2.3 Flood risk management 09.00-10.45	DD 1.2 SLR 09.00-10.45	DD 9.4 Governing adaptation 09.00-10.45	DD 4.4 Sediment 09.00-10.45	DP 7.6 LT strategies 09.00-10.45	DS 3 Indonesia 09.00-10.45	DP 4.3 Green resilience 09.00-10.45	DD 4.3 Deltas 2015 09.00-10.45	DS 4 The Netherlands 09.00-10.45	IBC 09.00-11.00	DP 6.1 Resilient adaptation 09.00-10.45	DP 2.2 Regional strategies 09.00-10.45	DD 3.3 Groundwater 09.00-10.45		DP 7.4 City Blue print 09.00-10.45	DD 10.1 Financing 09.00-10.45
10.00																				
11.00	coffee/tea																			
12.00		Plenary 11.15-12.15																		
13.00	lunch 12.15-13.30																			
14.00	registration all day exhibition 9.00-19.00		DD 9.5 Actors and agendas 13.30-15.15	DP 7.2 Mainstreaming greening 13.30-15.15	DP 6.4 Ecosystems & estuaries 13.30-15.15	DD 10.3 Tools 13.30-15.15	DP 7.1 PPP 13.30-15.15	DD 7.2 Extreme weather 13.30-15.15	DD 11.5 Analysis / support 13.30-15.15	DS 5 Bangladesh 13.30-15.15	DP 3.2 Floating cities 13.30-15.15	DD 10.2 Climate risks 13.30-15.15	DD 2.4 Flood damage 13.30-15.15	DD 4.5 Building nature 13.30-15.15	DP 2.4 Subsurface water buffers 13.30-15.15	DP 2.5 Resilient cities talk 13.30-15.15	DD 3.4 Agiculture-water 13.30-15.15			DP 4.1 Resilient deltas 13.30-15.15
15.00																				
16.00	coffee/tea																			
17.00	registration all day exhibition 9.00-19.00		DD 9.6 Adaptation and public 15.45-17.30	DP 2.6 Estuarine management 15.45-17.30	DP 3.3 Room for river 15.45-17.30	DD 1.3 Weather /impacts (I) 15.45-17.30	DD 5.4 Economics 15.45-17.30	DP 1.3 DA Toolbox 15.45-17.30	DD 6.2 Food security (continues 6.3) 15.45-17.30	DS 6 Vietnam 15.45-17.30	DP 3.5 Eendragtspolder 15.45-17.30	DP 7.3 Economic assessment 15.45-17.30	DD 2.5 Flood risk analyses 15.45-17.30	DD 4.6 Ecosystem 15.45-17.30	DP 4.2 Building nature 15.45-17.30	DP 7.5 Cross-sector collaborations 15.45-17.30	DD 3.5 Policy and practices 15.45-17.30	DD 8.1 Disaster, regional 15.45-17.30		DD 11.6 Mapping 15.45-17.30
18.00	poster session, reception, 17.30-19.00																			
19.00	Drinks bites music 19.00-21.30																			
20.00																				

8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00

FRIDAY, 26 SEPTEMBER 2014 F