



DELTAS IN TIMES OF CLIMATE CHANGE II

INTERNATIONAL CONFERENCE

ROTTERDAM, THE NETHERLANDS 24 - 26 SEPTEMBER 2014



OPPORTUNITIES FOR PEOPLE, SCIENCE, CITIES AND BUSINESS

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CALL FOR SCIENTIFIC ABSTRACTS DELTAS IN DEPTH





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OPPORTUNITIES FOR PEOPLE, SCIENCE, CITIES AND BUSINESS

Our societies face massive challenges. Economic globalisation, growing unmet needs, declining natural resources and a climate changing in alarming ways. On our planet, delta regions are in the eye of this hurricane of change. About 70 percent of the world's population today lives and works in low-lying coastal areas and deltas, where more than 75% of global economic value is produced. These zones are inherently vulnerable to natural hazards such as hurricanes, storm surges, river floods and extreme rainfall; moreover, severe droughts and low river runoff threaten water supplies and transport. Almost without exception, large concentrations of people and capital stocks are at risk in hazard-prone delta settings. Climate change makes these regions even more vulnerable. Yet it can also spur efforts to make our coastal cities and fertile lands even more attractive and resilient.

Climate change affecting a world in transformation poses many questions – both fundamental and applied – to science and other domains of knowledge. Every city and every region has its own characteristics, yet there is much in common and much to learn from one another.

Therefore the research programme Knowledge for Climate, the city of Rotterdam and two Dutch ministries are organising the second International Conference 'Deltas in Times of Climate Change'. Its focal questions are: What can we do to make delta areas less vulnerable? What adaptation measures are effective and feasible? What are the benefits of climate adaptation? Who is responsible for advancing it? What does adaptation cost and how do we finance it?

As a consequence of the European Climate Adaptation Strategy almost all member states are preparing or actualising their National Adaptation Strategy (NAS) between now and 2017. This provides an excellent moment to share knowledge and experience during the conference, not only between EU member states, but also in a broader international context.

The conference will provide a setting for sharing scientific insights, for discussing political-governmental issues and exchanging practical knowledge and experience. It will be organised in about 70 sessions around specific themes and the world's major deltas.

The organisers are working together with several scientific institutions, such as the Belmont Forum, Future Earth and the Netherlands Organisation for Scientific Research, and with several key international bodies such as Connecting Delta Cities, the C40 and the Delta Alliance. We hope to strengthen links with other organisations that foster cooperation between science and practice in low-lying coastal areas, deltas and delta cities.

We hope to see you in Rotterdam from 24 to 26 September 2014. Please mark the dates in your calendar.

Melanie Schulz van Haegen
Minister of Infrastructure and the Environment

Ahmed Aboutaleb
Mayor of Rotterdam

Pier Vellinga
Chairman Knowledge for Climate



SUBMISSION OF ABSTRACTS FOR THE SCIENTIFIC THEMES

In this call we invite you to submit an abstract of scientific findings you wish to present in one of the scientific sessions. These are organised according to 11 themes. In all sessions the practical significance of the research will also be discussed. Abstracts therefore are required to answer the question: what is the relevance of the research for practical application?

The conference consists of three types of sessions:

Deltas in Depth scientific sessions This invitation calls for presentations for the scientific sessions.

Deltas in Practice workshops Workshops to showcase and discuss experiences, new practical tools, best practices, case studies, practical innovations regarding all issues deltas and delta cities are confronted with while planning and implementing adaptation strategies and measures. Workshop proposals can be submitted till January 15, 2014.

Delta sessions Sessions organised around specific deltas.

Authors who wish to present a paper or poster related to the scientific programme are invited to submit an abstract. The abstracts have to be submitted before March 15, 2014, and will be expected to fit within one of the scientific themes. The instructions for the submission of abstracts and posters and the full text of the themes can be found on the conference website. Those whose abstracts or posters are selected by the convenors and the scientific committee will be notified as soon as possible.

VENUE OF THE CONFERENCE

The conference will be held in the Beurs-World Trade Center, located in the heart of Rotterdam. The conference centre is easily accessible by both public transport and car. A direct train from Schiphol Airport will take you to Rotterdam in 30 minutes.

DATES TO BE REMEMBERED 2014

January 30	Registration open
March 15	Deadline submission abstracts
April/May	Notification of abstract/poster selection
June 15	Publication final programme
September 24-26	Conference



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.

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.

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.

4. COASTAL SYSTEMS AND WETLANDS

Convenors John Day, Peter Herman, Hans Pearl

Coastal systems, such as estuaries, sandy beaches, coastal wetlands and mangrove forests, are threatened by the accelerating human population growth and resultant impacts in 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.

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.

6. RURAL DEVELOPMENT AND FOOD SECURITY

Convenors Frank Berendse, Adriaan 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.

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?

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. Under this theme we welcome contributions on the role of adaptation in hazard mitigation and on possibilities to strengthen post hazard reconstruction with a long term adaptation perspective.

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, we welcome contributions that engage with questions 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?

10. ECONOMICS AND FINANCE OF ADAPTATION

Convenors Stéphane Hallegatte, Swenja Surminski, Paul Watkiss

For policy makers and politicians the most challenging question is: what are the cost 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?

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.



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
- Dr. Christopher Field, co-chair Working Group 2 IPCC, Stanford University, USA
- Frank Heemskerk, Executive Director The World Bank, USA
- Hans Huis in 't Veld, Topsector Water, the Netherlands
- Frank Jensen, Mayor Copenhagen, Denmark
- Prof.dr. Pavel Kabat, Director International Institute for Applied Systems Analysis, Austria
- Yolanda Kakabadse, President WWF International, Switzerland
- Prof. Diana Liverman, Co-director of the University of Arizona, USA
- Prof. Ho Long Phi, Director Center of Water Management and Climate Change (WACC), Vietnam
- Hans Oosters, Chair Waterboard Hoogheemraadschap van Schieland en de Krimpenerwaard, Chair Board STOWA (Foundation for Applied Water Research), the Netherlands
- 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

DELTAS IN DEPTH SCIENTIFIC COMMITTEE

- Prof.dr. Frans Berkhout (chairman), Future Earth, International Council for Science (ICSU), United Kingdom
- 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. Zbigniew Kundzewicz, Polish Academy of Sciences, Poland
- Dr. Cynthia Rosenzweig, Columbia University, USA
- Dr. Swenja Surminski, Association of British Insurers / London School of Economics, United Kingdom
- Dr. Koko Warner, United Nations University, Germany

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
- Pex Langenberg, Ministry of Infrastructure and the Environment
- Peter van der Linde, Royal Boskalis Westminster N.V. / Topsector Water
- 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
- John Jacobs MSc, City of Rotterdam
- Chantal Oudkerk Pool MA, City of Rotterdam
- Rob Schoonman MSc, Ministry of Infrastructure and the Environment

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CONFERENCE HOSTS



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Knowledge
for Climate



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