Knowledge for Climate

MIDTERM ASSESSMENT

PREVIEW OF END RESULTS

PROGRAMME

4 October 2012 • Amsterdam, Royal Tropical Institute (KIT)

THEMES • HOTSPOTS • NWO - KfC

KNOWLEDGE FOR CLIMATE

Themes

- Theme 1 Climate Proof Flood Risk Management
- Theme 2 Climate Proof Fresh Water Supply
- Theme 3 Climate Adaptation for Rural Areas
- Theme 4 Climate Proof Cities
- Theme 5 Infrastructure and Networks
- Theme 6 High-quality Climate Projections
- Theme 7 Governance of Adaptation
- Theme 8 Decision Support Tools

Hotspots

- Hotspot Schiphol Mainport
- Hotspot Haaglanden region
- Hotspot Rotterdam region
- Hotspot Major Rivers
- Hotspot South-West Netherlands Delta
- Hotspot Shallow waters and peat meadow areas
- Hotspot Dry rural areas
- Hotspot Wadden Sea

Science System Analyses

- SSA01 project: Comparative monitoring of Knowledge for Climate

NWO SUSTAINABLE EARTH / KNOWLEDGE FOR CLIMATE PROJECTS

- INSPIRATOR: Integrated analysis of the Science-Policy interface in Research projects on global climate change and sustainability: implications for actors involved in the co-production of knowledge
- Connecting micro and macro: bringing case studies and model-based approaches together in analyzing patterns of vulnerability to global environmental change
- Integrating global and local assessment models; improving an integrated multi-scale modelling framework to assess the interrelationships between land use and climate change
- Bridging the gap between stakeholders and climate modellers: demand-driven adaptation assessment for uncertain changes in weather extremes
- Exploring adaptation pathways for sustainable river management into the uncertain future

In 2010 these 5 postdoctoral projects started from a joint call by NWO Sustainable Earth Programme and Knowledge for Climate (until end 2012). The projects involve research into climate change adaptation and the relationship between land use and climate change, with focus on interdisciplinarity, interaction between earth, life and society, and longer time scales.

INTRODUCTION

Knowledge for Climate develops scientific and applied knowledge needed to make the Netherlands climate proof. The research involves many actors in joint exploration of diverse options for adaptation to a changing climate. In the programme the research is focussed in eight regions, the Hotspots. Here, scientists work together with actors from public and private sectors to ensure a relevant research agenda and effective employment of research results. The research is carried out in eight Themes by consortia with scientists that work on the forefront of a broad range of disciplines. Knowledge for Climate started in 2008, by the end of 2014 the programme will finish. 40 Research projects have been carried out in the first tranche, focusing on the most urgent needs for knowledge in the Hotspots. The eight research consortia started in the second tranche, with in-depth studies in which generic knowledge and area-specific questions are linked. Therefore October 2012 is a perfect time to organise a midterm assessment and focus on what to expect as end results.

Goal • The objective of the Midterm Assessment 2012 is to inform the scientific community and relevant stakeholders on the current state of the programme, and give 'A Preview of End Results'. The central question is: *How can we achieve excellent scientific results and at the same time contribute to the necessary societal change?* We aim for interactive sessions and lively discussions between presenters, reviewers and audience, in order to inspire and learn from each other, and to make adjustments where possible.

Sessions • Three rounds of parallel sessions are organized, in which research leaders, international reviewers, researchers and PhD's from the Knowledge for Climate community will discuss the work so far. Consortium leaders will present their vision on the research themes, the main results and outlook on the expected scientific results in 2014. For the Hotspots, this midterm assessment is a great opportunity to present and discuss the outline of their regional adaptation strategy; the final products of the Hotspots in the programme. Three sessions are organized in which (final) results are presented of the joint NWO Sustainable Earth – Knowledge for Climate post doc projects on research into adaptation and the relationship between land use and climate change.

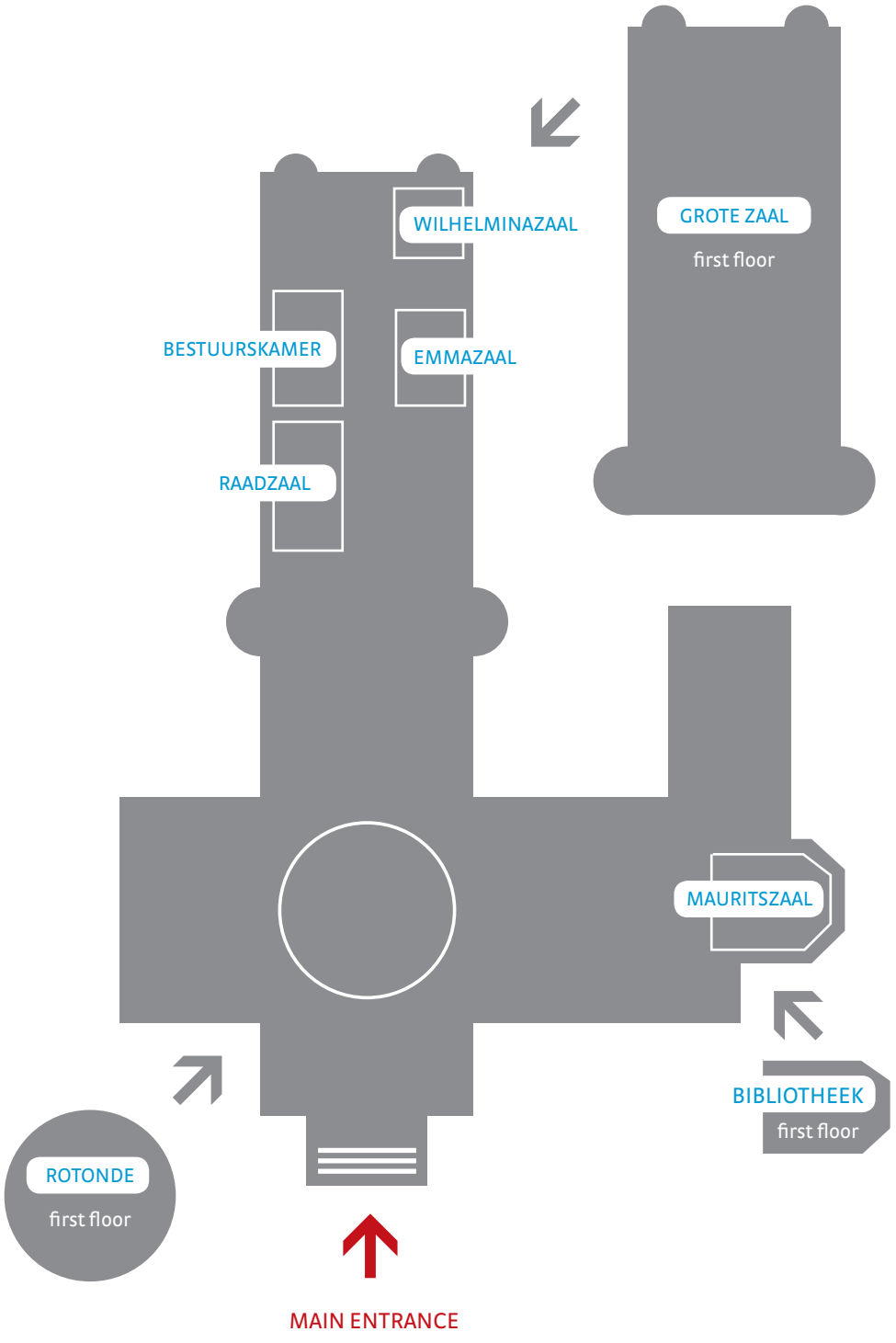
Reviewers • Leading international scientists and representatives of societal organizations in the review panels in each session give their reflection on the presentations, and on the midterm reports they reviewed. The review focuses on optimizing (end) results, and aims to provide recommendations for scientific progress, knowledge dissemination and valorisation. The midterm assessment supplies the Board of Directors of Knowledge for Climate input to evaluate the progress of the research and subsequently consider the course for the second half of the programme.

We are proud that we have managed to bring together this international community of scientists, practitioners and policy makers in the field of climate adaptation research and practice. The Midterm Assessment 2012 will lead to new insights, inspiration and contacts within this community. We strongly believe that the Knowledge for Climate programme will benefit substantially from this assessment meeting, but this event will also contribute to the international scientific debate and adaptation strategy development at regional, national and international levels.

Prof.dr. Peter Driessen
Scientific Director and Chair of the Organizing Committee

Prof.dr. Pier Vellinga
Chair of the Board of the Knowledge for Climate Foundation

GROUND PLAN



PROGRAMME OVERVIEW

08.45 • 09.15 Registration

09.15 • 09.45 Plenary Opening — GROTE ZAAL

09.45 • 11.15 First round of parallel sessions: themes and projects

1

- Session 1.1 • Climate Proof Flood Risk Management (Theme 1) — BIBLIOTHEEK
- Session 1.2 • Climate Proof Fresh Water Supply (Theme 2) — BESTUURSKAMER
- Session 1.3 • Climate Proof Cities (Theme 4) — GROTE ZAAL
- Session 1.4 • Decision Support Tools for Adaptation (Theme 8) — MAURITSZAAL
- Session 1.5 • Knowledge co-creation in climate adaptation research (NWO-KfC) — RAADZAAL

11.15 • 11.45 Break

11.45 • 13.15 Second round of parallel sessions: hotspots and projects

2

- Session 2.1 • Urban Hotspots: Towards regional adaptation strategies in Rotterdam – The Hague region — GROTE ZAAL
- Session 2.2 • Delta Hotspots: Scientific and local knowledge on water management contributing to the national Delta Programme — BIBLIOTHEEK
- Session 2.3 • Rural Hotspots: Climate adaptation in unique rural landscapes and environmental diversity incorporated in regional strategies — BESTUURSKAMER
- Session 2.4 • Hotspot Schiphol Mainport — RAADZAAL
- Session 2.5 • Multi-scale (micro-macro) interactions in integrated assessment models (NWO-KfC) — MAURITSZAAL

13.15 • 14.15 Lunch

14.15 • 15.45 Third round of parallel sessions: themes and projects

3

- Session 3.1 • Climate Adaptation for Rural Areas (Theme 3) — BIBLIOTHEEK
- Session 3.2 • Infrastructure and Networks (Theme 5) — BESTUURSKAMER
- Session 3.3 • High-quality Climate Projections (Theme 6) — RAADZAAL
- Session 3.4 • Governance of Adaptation (Theme 7) — GROTE ZAAL
- Session 3.5 • Dealing with uncertainty in climate adaptation research (NWO-KfC) — MAURITSZAAL

15.45 • 16.15 Break

16.15 • 17.15 Plenary Closure

17.15 • 18.00 Drinks

18.00 • 20.00 Knowledge for Climate PhD - Postdoc pubquiz and dinner (by invitation only) — MAURITSZAAL

Posters and project demonstrations — ROTONDE • EMMAZAAL

08.45 • 09.15 **Registration**

GROTE ZAAL

09.15 • 09.45 **Plenary opening**

Chair

Prof.dr. Pier Vellinga, Chair Board Knowledge for Climate

Introduction Preview of End Results
Prof.dr. Pier Vellinga, Chair Board Knowledge for Climate

From knowledge to practice
Renske Peters, Director, Water Business and International Water Affairs, Ministry of Infrastructure and Environment

Introduction to the Workshops
Florrie de Pater, MSc, Coordinator Knowledge Transfer, Knowledge for Climate

BIBLIOTHEEK

Session 1.1 Climate Proof Flood Risk Management (Theme 1)

Chair Pieter Huisman, MSc, Chair Steering Committee Theme 1

Reviewers Tjalle de Haan, Advies voor de natte waterstaat, the Netherlands
Prof. Robert Nicholls, University of Southampton, United Kingdom
Marjolein van Wijngaarden, MSc, Ecoshape, the Netherlands
Prof. Zbigniew Kundzewicz, Polish Academy of Sciences, Poland

Presenter Dr. Frans Klijn (Deltares), leader Consortium Climate Proof Flood Risk Management

Towards climate proof flood risk management: what are strategic alternatives for flood risk management from the point of view of risk reduction? The design of adaptation responses to flood risks requires insight in the effectiveness of individual measures. The consortium presents the current state of its exploration of innovative measures for the Netherlands' adaptation policy inspired by experiences from abroad.

BESTUURSKAMER

Session 1.2 Climate Proof Fresh Water Supply (Theme 2)

Chair Prof.dr. Sybe Schaap (Emeritus, Delft University of Technology), Chair Steering Committee Theme 2

Reviewers Prof. Keith Beven, Lancaster University, United Kingdom
Prof. Mike Edmunds, University of Oxford, United Kingdom
Peter Glas, MSc, Waterboard De Dommel, the Netherlands
Prof. Joost Schrijnen, Delta Programme South West Delta, the Netherlands

Presenter Dr. Ad Jeuken (Deltares), leader Consortium Climate Proof Fresh Water Supply

What are opportunities and adaptation strategies for fresh water supply? The focus of research is on local to regional solutions for fresh water supply for agriculture and nature in low-lying regions in the Netherlands. The consortium analyses how these areas can be more self-sufficient and how adaptation of the water system can contribute to a more robust water supply.

09.45 • 11.15
1
FIRST ROUND PARALLEL SESSION

GROTE ZAAL

Session 1.3 Climate Proof Cities (Theme 4)

Chair Prof.dr. Wim Hafkamp (Netherlands Institute for City Innovation Studies, NICIS), Chair Steering Committee Theme 4

Reviewers Prof. Simin Davoudi, Newcastle University, United Kingdom
Marjolein Demmers, MSc, Royal HaskoningDHV, the Netherlands
Prof. Martin Parry, Imperial College London, United Kingdom
Christiaan Wallet, Ministry of Infrastructure and the Environment, the Netherlands

Presenter Ronald Albers, MSc (TNO), leader Consortium Climate Proof Cities

How to make cities climate proof? The consortium investigates the urban climate system, the vulnerability and the potential impacts of climate change on several scales (building, neighbourhood, city, agglomeration). Knowledge is generated on the technical and economical effectiveness of adaptation measures and for an in-depth understanding of the governance processes needed for implementing adaptation measures.

MAURITSZAAL

Session 1.4 Decision Support Tools for Adaptation (Theme 8)

Chair Prof.dr. Peter Nijkamp (VU University), Chair Steering Committee Theme 8

Reviewers Prof.dr. Leen Hordijk, European Commission, Joint Research Centre, Belgium
Dr. Marianne Linde, TNO, the Netherlands
Dr. Roger Street, University of Oxford, United Kingdom
Britta Verboom, MSc, Province of Gelderland, the Netherlands

Presenter Prof.dr. Ekko van Ierland (Wageningen UR), leader Consortium Decision Support Tools for Adaptation

The core task of this consortium is to develop and improve tools for design and evaluation of regional and national adaptation strategies. Ex-ante tools, such as scenarios and the *Climate Effect Atlas*; and ex-post tools such as monitoring and evaluation methods are applied in several case studies, enabling systematic implementation of adaption options by various relevant stakeholders.

09.45 • 11.15
FIRST ROUND PARALLEL SESSION
1

RAADZAAL

Session 1.5 Knowledge co-creation in climate adaptation research (NWO – KfC)

Chair Prof.dr. Pieter Leroy, Radboud University Nijmegen

Reviewers Dr. Hens Runhaar, Utrecht University, the Netherlands
Dr. Sebastian Helgenberger, University of Natural Resources and Life Sciences, Vienna, Austria

Presenters **Dr. Wouter Boon** (Rathenau Institute), SSA01: Comparative Monitoring of Knowledge for Climate (*second tranche KfC project*)
Prof.dr. René Kemp (Maastricht University), INSPIRATOR: Integrated analysis of the Science-Policy interface in Research projects on global climate change and sustainability: implications for actors involved in the co-production of knowledge

The projects 'Comparative monitoring of Knowledge for Climate (SSA01) and INSPIRATOR both investigate how multi-, transdisciplinary and heterogeneous teams work and which factors can explain their effectiveness in terms of the meaningful knowledge production. This session sheds light on the drivers and barriers of knowledge co-production. How to organize these projects? Which incentives to use? Which roles can users play? And what action perspectives have project managers? Findings are presented and discussed in an interactive way.

11.15 • 11.45 **Break**

GROTE ZAAL

Session 2.1 Urban Hotspots: Towards regional adaptation strategies in Rotterdam – The Hague region

Chair Corné Nijburg, MSc, Water Governance Centre

Reviewers
Lenie Dwarshuis-van de Beek, the Netherlands
Prof. Mark Pelling, King's College, United Kingdom
Prof.dr. Piet Rietveld, VU University, the Netherlands
Michelle Talsma, MSc, Stowa, the Netherlands

Presenters
Arnoud Molenaar, MSc (City of Rotterdam), coordinator Hotspot Rotterdam region
Arno Lammers, MSc (Stadsgewest Haaglanden), Hotspot Haaglanden region

The *Hotspot Rotterdam region* and *Hotspot Haaglanden region* gained a lot of knowledge through various case studies on local climate conditions, potential climate change impacts, adaptation measures and their implementation in the urban environment. Based on the main results and related to specific tasks and ambitions in their regions, the hotspots will elaborate on the development of their regional adaptation strategies.

11.45 • 13.15
SECOND ROUND PARALLEL SESSION 2

BIBLIOTHEEK

Session 2.2 Delta Hotspots: Scientific and local knowledge on water management contributing to the national Delta Programme

Chair Prof.dr. Herman Eijsackers, Wageningen UR

Reviewers
Jos van Alphen, Delta Commissioner, the Netherlands
Prof. Colin Green, Middlesex University, United Kingdom
Hans van der Kooi, MSc, the Netherlands
Prof.dr. Jan van Tatenhove, Wageningen UR, the Netherlands

Presenters
Nico Landsman, MSc (Province of Zeeland), coordinator Hotspot South-West Netherlands Delta
Harold van Waveren, MSc (RIZA), coordinator Hotspot Major Rivers
Dr. Kim van Nieuwaal (Knowledge for Climate), Hotspot Wadden Sea

The *Hotspots Major Rivers*, *South-West Netherlands Delta* and *Wadden Sea* cover areas where challenges on climate adaptation mainly concern water issues. Researchers from the Knowledge for Climate consortia work closely together with stakeholders in local case studies aiming at long-term water safety and fresh water supply. The hotspots are strongly related to the sub-programmes of the national Delta Programme. In this session they will present the current state of research in their hotspot, and the implications for the regional adaptation strategies in the Delta Programme.

BESTUURSKAMER

Session 2.3 Rural Hotspots: Climate adaptation in unique rural landscapes and environmental diversity incorporated in regional strategies

Chair Chris Kalden, MSc, Staatsbosbeheer

Reviewers Prof. Ivan Janssens, University of Antwerp, Belgium
Marten van der Gaag, MSc, IPO, the Netherlands
Prof.dr. Peter Klinkhamer, Leiden University, the Netherlands
Ine Neven, MSc, Province of South Holland, the Netherlands

Presenters Frank Lamoen, MSc (Province of North Brabant), coordinator Hotspot Dry Rural Areas
Prof.dr. Jos Verhoeven (Utrecht University), coordinator Hotspot Shallow Waters and Peat Meadow Areas

The characteristic low lying delta environment in the *Hotspot Shallow Waters and Peat Meadow Areas* and the higher sandy grounds of the *Hotspot Dry Rural Areas* cover the unique rural landscape of the Netherlands. Both hotspots are geographically fragmented and deal with diverse and specific challenges with respect to climate adaptation on agriculture, nature and other functionalities in the areas. The Hotspots will present their approach to develop options for regional adaptation strategies that can be incorporated in decision-making processes, based on the knowledge obtained from Knowledge for Climate research.

RAADZAAL

Session 2.4 Hotspot Schiphol Mainport

Chair Tjeerd Talsma, Province of North-Holland

Reviewers Prof.dr. Bram Bregman, Royal Netherlands Meteorological Institute, the Netherlands
Peter van der Geest, MSc, NLR Air Transport Safety Institute, the Netherlands
Hans Huis In't Veld, MSc, the Netherlands
Peter Stoter, MSc, Meteo Consult B.V., the Netherlands

Presenter Peter van den Brink, MSc (Schiphol Airport), coordinator Hotspot Mainport Schiphol)
Dr. Albert Jacobs (KNMI), The impact of climate change on the critical weather conditions at Schiphol airport (IMPACT)
Dr. Oscar Hartogensis (Wageningen UR), WindVisions: an airport Wind and Visibility Monitoring System for critical weather conditions in a changing climate
Jan Sondij (KNMI), Applied Knowledge for Climate research in the framework of aviation meteorological services

The aim of the research for this Hotspot is to better understand the impact of climate change on the Schiphol operations and to provide new innovative tools to analyze and forecast the weather conditions at the airport. How can Schiphol use this knowledge in its adaptation strategies and maintain its competitive position as a mainport? How can this knowledge and the tools that are being developed be useful in other sectors and for other mainports?

11.45 • 13.15

2

SECOND ROUND PARALLEL SESSION

MAURITSZAAL

Session 2.5 Multi-scale (micro-macro) interactions in integrated assessment models (NWO – KfC)

Chair
Tom Kram, MSc, Netherlands Environmental Assessment Agency, the Netherlands

Reviewers
Prof.dr. Frans Berkhout, VU University, the Netherlands
Dr. Free Huizinga, CPB Netherlands Bureau for Economic Policy Analysis, the Netherlands
Prof.dr. Gail Whiteman, Rotterdam School of Management, Erasmus University Rotterdam, the Netherlands

Presenters
Dr. Henk Hilderink (Netherlands Environmental Assessment Agency), Connecting micro and macro: bringing case studies and model-based approaches together in analyzing patterns of vulnerability to global environmental change
Dr. Eric Koomen (VU University), IGLO – Integrating global and local assessment models; improving an integrated multi-scale modelling framework to assess the interrelationships between land use and climate change

Local environmental problems and dynamics of socio-environmental systems are often connected to global level changes that either drive or constrain local processes. The projects in this session address the integration of processes operating across different scales and enhance the linkages and feedback between socio-economic and biophysical processes. Both projects contribute to the improvement of Integrated Assessment Models and better targeting of adaptation policies to global change.

13.15 • 14.15 **Lunch**

14.15 • 15.45

3

THIRD ROUND PARALLEL SESSION

BIBLIOTHEEK

Session 3.1 Climate Adaptation for Rural Areas (Theme 3)

Chair
Prof.dr. Tom Veldkamp (University of Twente), Chair Steering Committee Theme 3

Reviewers
Wouter de Jong, MSc, Boerenverstand, the Netherlands
Prof. Björn-Ola Linnér, Linköping University, Sweden
Prof.dr. Consuelo Varela-Ortega, Universidad Politécnica de Madrid, Spain
Gijs Kuneman, CLM - Centre for Agriculture and Environment, the Netherlands

Presenter
Prof.dr. Adri van den Brink (Wageningen UR), leader Consortium Climate Adaptation for Rural Areas

What are the effects of climate change on rural areas in the Netherlands and what are effective and feasible adaptation strategies? The consortium assesses strategies that are meant to optimize the overall functionality of the rural landscape, in terms of water management, biodiversity, agriculture, drinking water and recreation. Agent-based modelling is used to simulate complex decisions and to evaluate the efficacy of adaptation measures.

BESTUURSKAMER

Session 3.2 Infrastructure and Networks (Theme 5)

Chair Prof. Ben Immers (Trail Research School), Chair Steering Committee Theme 5

Reviewers Hubert Habib, MSc, Grontmij N.V., the Netherlands
Prof.dr. Robert Holländer, University of Leipzig, Germany
Prof. John Polak, Imperial College London, United Kingdom
Klaas Strijbis, MSc, Movares, the Netherlands

Presenter Prof.dr. Lori Tavasszy (TNO), leader Consortium Infrastructure Networks Climate Adaptation & Hotspots

How does climate change affects our infrastructure and networks? Which strategies can be adopted to increase their robustness for climate change? The consortium explores the effects of climate change on the performance of physical infrastructures, including socio-economic effects, and identifies adaptation strategies including improved infrastructure design, new network governance and process innovations. The focus is on transport (road, rail) and utilities (electricity and drinking water) networks.

14.15 • 15.45
3
THIRD ROUND PARALLEL SESSION

RAADZAAL

Session 3.3 High-quality Climate Projections (Theme 6)

Chair Dr. Fons Baede, Chair Steering Committee Theme 6

Reviewers Ron Franken, MSc, Netherlands Environmental Assessment Agency, the Netherlands
Prof. Bryan Lawrence, University of Reading, United Kingdom
Henk Merkus, MSc, Ministry of Infrastructure and the Environment, the Netherlands
Prof. Hans von Storch, Institute for Coastal Research, Germany

Presenter Dr. Arnout Feijt (KNMI), leader Consortium High-quality Climate Projections

Projects within this theme are designed to obtain high-quality climate projections for the Netherlands and to apply these to various sectors. Uncertainty about the pace and extent of climate change is a central issue: how to reduce, quantify and communicate these uncertainties? Research and user inventories by this consortium are an important part of the process leading to the KNMI*next* scenarios (www.knmi.nl/climatescenarios).

GROTE ZAAL

Session 3.4 Governance of Adaptation (Theme 7)

Chair Prof.dr. Roel in't Veld, Chair Steering Committee Theme 7

Reviewers Dr. Lilian van den Aarsen, Delta programme Rivers, the Netherlands
Dr. Tom Downing, Global Climate Adaptation Partnership, United Kingdom
Prof.dr. Jörg Knieling, HafenCity University Hamburg, Germany
Joost Tennekes, Netherlands Environmental Assessment Agency, the Netherlands

Presenter Prof.dr. Katrien Termeer (Wageningen UR), leader Consortium Governance of Adaptation

The specific complexities concerning the governance of adaptation call for new approaches and strategies. This consortium is developing and testing governance arrangements that will increase the adaptive capacity of society and contribute to implementing adaptation options. Projects are dealing with issues like creating connectivity, coping with uncertainties and different perceptions on risks, analyzing policy processes and estimating socio-economic capacities.

14.15 • 15.45
THIRD ROUND PARALLEL SESSION 3

MAURITSZAAL

Session 3.5 Dealing with uncertainty in climate adaptation research (NWO – KfC)

Chair Prof.dr. Harro van Lente, Utrecht University

Reviewers Prof.dr. Bert Holtslag, Wageningen University, the Netherlands
Prof.dr. Kristine Kern, University of Potsdam and Leibniz Institute for Regional Development and Structural Planning, Germany

Presenters Prof. dr. Arthur Petersen (Netherlands Environmental Assessment Agency), Bridging the gap between stakeholders and climate modellers: demand-driven adaptation assessment for uncertain changes in weather extremes
Dr. Heleen Vreugdenhill (ICIS, Maastricht University) & dr. Nanda Wijermans (Utrecht University), Exploring adaptation pathways for sustainable river management into the uncertain future

Climatic change abounds with uncertainty, all the more so when we are interested in changes in extreme weather and adaptation options at the regional scale. Not only are uncertainties intrinsic in the climate science (scientific); societal actors also have different opinions on what specific aspects of climatic change constitute a problem and why (societal). In this session, one project addresses both the scientific and societal dimensions of uncertainty, the other project presents its results on how to deal with these uncertainties in today's water management.

15.45 • 16.15 **Break**

GROTE ZAAL

16.15 • 17.15 **Plenary closure**

Chair

Prof.dr. Pier Vellinga, Chair Board Knowledge for Climate

Climate Change Science and IPCC: Why they matter for both mitigation and adaptation
Prof. Jean-Pascal van Ypersele, Université catholique de Louvain (UCL), IPCC Vice-chair

A Preview of End Results: Reflections from an international perspective
Paneldiscussion

Knowledge co-creation: value for money
Sybilla Dekker, Chair Supervisory Board Knowledge for Climate

17.15 • 18.00 **Drinks**

MAURITSZAAL

18.00 • 20.00 **PhD – Postdoc pubquiz and dinner**
(by invitation only - Knowledge for Climate PhDs and Postdocs)

DEMONSTRATIONS

ROTONDE

Exploring the evolution of electricity infrastructures - an agent-based model (Theme 5)

L. Andrew Bollinger, Emile Chappin, Delft University of Technology

Climate change may affect the performance of our electricity infrastructure in myriad ways. Before we can determine how its performance may be affected, we need to understand how this infrastructure may change over the coming decades. This demonstration will allow participants to explore the evolution of an electricity network under different conditions.

EMMAZAAL

3Di Watermanagement (Theme 8)

Christian Kehl, Gerwin de Haan, Delft University of Technology

On our portable Virtual Reality installation we will demonstrate the current research prototype for interactive visualization of flooding scenarios. Visitors will experience a smooth and realistic 3D view of flooding simulations on several Dutch urban and rural areas. We explain our methods for accurately integrating and comparing flooding scenarios in a large 3D landscape models, and describe upcoming innovations towards interactive simulation and decision making.

ROTONDE

Use of the touch table for the development of spatial adaptation strategies (Theme 8 • Hotspot Shallow waters and peat meadow areas)

Ron Janssen, Tessa Eikelboom, Alfred Wagtendonk, VU University

The assignment in the peat meadow region is to reduce its contribution to the climate problem by green house gas emissions, but also to make this area less vulnerable to the effects of climate change such as drought, flooding and soil subsidence. In this demonstration spatial multicriteria analysis is used to show trade-offs between goals and to support dialogue between stakeholders.

ROTONDE

Websites Kennis voor Klimaat / Knowledge for Climate

Fokke de Jong

All you want to know about our websites, publications and projects.

ROTONDE

Climate adaptation atlas, touch table

Arjen Koekoek, Geodan, Hasse Goosen, Alterra

The Climate Adaptation Atlas brings together policymakers, designers and researchers to discuss climate change and provides an instrument to discuss climate change in an applied spatial planning context.
A touch table is used to visualize the climate data available in the Climate Adaptation Atlas and to apply this information with stakeholders in a planning context.

ROTONDE

Theme 1 • Climate Proof Flood Risk Management

Philip Bubeck, Heidi Kreibich, GFZ
Private flood precaution - an important component of integrated flood risk management and climate Adaptation

Theme 2 • Climate Proof Fresh Water Supply

Joost Delsman et al., Deltares
Water management in a more saline future: are there solutions in our water system?
Pieter Pauw en Gualbert Oude Essink, Deltares
Increasing freshwater supply from a freshwater lens in sandy creek deposits
Klaasjan Raat et al., KWR Watercycle Research Institute
Sustainable use and protection of groundwater resources in delta areas: the fresh maker and fresh keeper
Sija Stofberg, Wageningen UR
Salt exposure and effects on floating fen plants as a result of temporary increase of surface water salinity
Koen Zuurbier and Pieter Stuyfzand, KWR Watercycle Research Institute
Optimizing small- to medium-scale aquifer storage and recovery in coastal aquifers for irrigation water supply

Theme 3 • Climate Adaptation for Rural Areas

Yuki Fujita, KWR Watercycle Research Institute
Predicting nitrogen availability on a regional scale: on the necessity to include intricate interactions with local hydrology in a SOM model
Yasmijn van der Knaap, VU University
Optimization of water storage in stream valleys in the elevated cover-sand landscape
Pytrik Reidsma, Wageningen UR
Climate change adaptation in agriculture: multi-scale modelling and stakeholder participation in the Netherlands
Pytrik Reidsma, Wageningen UR
Climate change adaptation in agriculture: an integrated assessment

Theme 4 • Climate Proof Cities

Reinder Ronda, Wageningen UR
Anthropogenic heat release and Urban Heat Islands effects in Rotterdam, The Netherlands

Theme 5 • Infrastructure and Networks

L. Andrew Bollinger, Emile Chappin, Delft University of Technology
Exploring the evolution of electricity infrastructures - an agent-based model
John van Esch, Bert Sman, Deltares
Modeling Groundwater Flow through Embankments for Climate Change Impact Assessment
John van Esch, Bert Sman, Deltares
Modeling Groundwater Flow through Dikes and Levees for Real Time Stability Assessment

POSTERS

Theme 6 • High-quality Climate Projections

Alexander Bakker, KNMI
Climate projections and future time series
Emma Daniels, Wageningen UR
Spatial patterns and seasonal precipitation trends in the Netherlands during 1951-2009UR
Vasco Diogo, VU University
Coupling land-use and hydrological modelling systems
Astrid Manders, TNO
The impact of uncertainties in climate models on future air quality modelling
Martin Roth, TU Eindhoven
A regional peaks-over-threshold model in a non-stationary climate
Ben Schaap, Wageningen UR
Participatory design of farm level adaptation to climate risks in an arable region in the Netherlands

Theme 7 • Governance of Adaptation

Daan Boezeman, Radboud University Nijmegen
Science-policy arrangements in adaptation governance, warranting scientific requests and social robustness?
Belinda McFadgen, VU University
What is the Value of Twisting the Lion's Tail?
Evaluating the Use of Policy Experiments in Adaptation Governance and How they can Facilitate Learning
Heleen Mees, Utrecht University
Who Governs Climate Adaptation? Exploring the scope of public and private responsibilities
Jitske Verkerk, Saskia van Broekhoven, Erasmus University Rotterdam
Organising connectivity multilevel governance and multifunctional land use

Thema 8 • Decision Support Tools

Tessa Eikelboom, Ron Janssen, VU University
Interactive spatial tools to support the development of regional adaptation strategies
Monique de Groot, Wageningen UR
Visualising complex climate information for spatial adaptation planning
Trond Husby, VU University
Economic modeling of flood risk
Chris Jacobs-Crisioni, VU University
Accessibility and land use change
Christian Kehl and Gerwin de Haan, Delft University of Technology
Interactive Simulation and Visualization of Flooding Scenarios
Jason Levin-Koopman, VU University
Economic modeling of the impacts of water scarcity
Thomas van der Pol, Wageningen UR
Two cases of cost minimisation under uncertainty with the anticipation of new information: (1) dike height and (2) local compliance with uniform surface water inundation standards

NOTES

ORGANIZING COMMITTEE

Prof.dr. Peter Driessen	•	chair
Sonja Döpp, MSc	•	scientific organization
Els van Eersel	•	organization
Dr. Kim van Nieuwaal	•	scientific organization
Florrie de Pater, MSc	•	Knowledge Transfer
Dr. Monique Slegers	•	scientific organization
Ottelien van Steenis	•	organization and communication

CONTACT

Knowledge for Climate
Ottelien van Steenis
o.van.steenis@programmabureauklimaat.nl
T: +31 317 48 6540
www.knowledgeforclimate.org

Knowledge for Climate