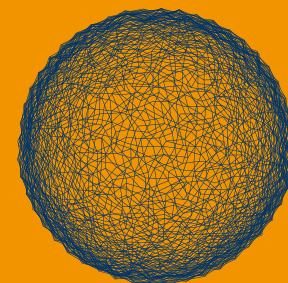


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CLIMATE

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Science and experience in dealing with climate change

COP15  
COPENHAGEN  
UN CLIMATE CHANGE CONFERENCE 2009

# Holland Climate House

Science and experience in dealing with climate change

Dear guest,

Welcome to the Holland Climate House at the Copenhagen Climate Conference. We hope you will enjoy your stay with us. During the entire COP15, the Holland Climate House offers a broad spectrum of activities including presentations about issues such as new regional climate models and the climate-proofing of cities. There will be discussions about what happens when things get out of hand under extreme scenarios and about meat consumption patterns. Well-known scientists will frequent the Holland Climate House, as will the mayor of Rotterdam, Dutch ministers and Dutch water authorities.

The Holland Climate House is an initiative of the two Dutch climate research programmes 'Knowledge for Climate' and 'Climate changes Spatial Planning', established by the Dutch Ministry of Housing, Spatial Planning and the Environment. These programmes enable scientists to work closely together with policy makers and others to develop knowledge that is scientifically innovative and practice oriented. The programme is put together by these two research programmes and fifteen other science- and policy based organisations described on the last pages of this programme booklet<sup>1</sup>. On behalf of these organisations we invite you to join us in the Holland Climate House.

Prof. Pier Vellinga  
Chairman  
Knowledge for Climate  
The Netherlands

Prof. Pavel Kabat  
Scientific Director  
Climate changes Spatial Planning  
The Netherlands

<sup>1</sup> This programme has been finalized mid November. An updated programme can be found on our daily flyers and on internet [www.climate-research-netherlands.nl/cop15](http://www.climate-research-netherlands.nl/cop15)

# Delta Alliance

The Holland Climate House gives me the opportunity to present the initiative of the International Delta Alliance.

I support this alliance, for it is the way to connect developed countries with developing countries in exchanging knowledge in the field of adaptation to climate change in delta areas and delta cities.

Jacqueline Cramer  
Minister of the Environment  
and Spatial Planning

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# Theme Climate of the 21st century – the knowledge basis

Organized by Royal Netherlands Meteorological Institute (KNMI), Energy research Center of the Netherlands (ECN)

Our understanding of climate systems forms the scientific basis of expected climate change and sea level rise. Climate models that incorporate this knowledge are a major source of future climate information. They simulate our future climate while using different emission of greenhouse gasses and aerosols as input variables.

The Royal Netherlands Meteorological Institute (KNMI) leads a European consortium in an effort to develop a state-of-the-art global earth system model called EC-Earth. The model is derived from a weather prediction model of the European Centre for Medium-Range Weather Forecasts. Both weather prediction and climate change studies share the same physical principles.

However, global climate models are too coarse grained to give the relevant information needed for adaptation to climate change, which typically takes place at regional scales. Therefore, fine-mesh climate models of a specific region, such as the Dutch RACMO model, provide the required regional climate information.

Climate models give physically based and consistent pictures of a future climate. Together with data from climate monitoring networks they are the essential building blocks for climate services that guide strategies to cope with climate change, the main theme of the Copenhagen conference.

Time	Topic	Abstract of the session
12.00 – 18.00	Knowledge base of the climate of the 21st century  Lunch	We will hold running presentations on climate modeling. Animated results are shown of the global earth system model EC-Earth and of the fine-mesh regional simulations with the RACMO model Leading climate scientists will be interviewed about the state-of-the-art in climate science and future developments. Those sessions will alternate with informal discussions with climate researchers.
18.00 – 20.30	The Holland Climate House warming party	Drinks in informal setting
20.30 – 21.30	Biomass for climate change, how to keep the balance right?	Sustainable biomass is an important renewable energy option for climate change abatement. If the right processes and conversions are used, biomass energy can be produced with negative carbon emissions. Nitrogen management plays an important role in regulating the greenhouse gas balance. An integrated approach is needed to keep the balance right, focusing on linking the different cycles, water, land use and other environmental impacts. Prof. Jan Willem Erisman (ECN) will present and discuss biomass options without carbon emissions.

Tuesday

8

December

## Theme Cities and climate change

Organized by TNO, KWR Watercycle Research Institute (KWR), Deltares, water authority Waternet

Cities are complex entities. Therefore reducing greenhouse gases and adapting to climate change in cities pose specific challenges. Cities are vulnerable to the impacts of climate change due to the concentration of people and capital goods. At the same time cities provide a range of possibilities to reduce CO<sub>2</sub> emissions. But to do so, adaptation and mitigation measures need to be incorporated in the already dense urban fabric. Integration, also in policy processes, is a key concept for success.

We will present approaches and solutions to climate adaptation and mitigation developed for Dutch cities. These solutions all use a so-called systems approach: looking for energy solutions along the whole water cycle, looking for integral solutions in adapting existing residential areas, improving adaptive capacities and comfort of buildings. We will also explore capacity building as an important step to link knowledge with governance.

As 'cities and climate change' is a relatively new research theme, we aim to start an exchange of views on possible research directions and to establish networks with urban researchers from other countries. Also we would like to start relationships with interested regions and cities.

Time	Topic	Abstract of the session
10.30 – 11.30	Film 'Connecting Delta Cities'	<p>A film about four coastal cities affected by sea level rise: Alexandria, Jakarta, New York and Rotterdam. Exchange of knowledge and extensive cooperation is needed to face the challenges in each of these cities. The film is made by the Rotterdam Climate initiative and the Institute for Environmental Studies (IVM).</p>
11.30 – 13.00	Climate robust cities	<p>In this session we will provide an overview of the challenges of climate change adaptation in cities against the background of urban development. All aspects, from urban climate, vulnerability and impacts to measures and urban climate governance, will be discussed.</p> <ul style="list-style-type: none"> <li>• Climate adaptation in cities by Peter Bosch (TNO)</li> <li>• Water, heat and health by Patrick Smeets (KWR)</li> </ul> <p>A forum of international urban researchers will discuss challenges to adaptation in cities in developed countries.</p>
12.30	Lunch	
13.00 – 15.00	Water robust cities	<p>Excess precipitation, flooding risks, periodic droughts and heat are the upcoming challenges for urban planners and city managers. As the infrastructure and buildings of the future are built now, this session discusses upcoming solutions for water robust cities.</p> <ul style="list-style-type: none"> <li>• Climate robust infrastructures by prof. Chris Geurts (TNO)</li> <li>• Water robust buildings by Frans van de Ven (Deltares)</li> <li>• WATERgraafsmeer: an example of innovative climate adaptation and urban transition Pauline Hartog (Waternet)</li> </ul>

Tuesday  
**8**  
December

## Theme Cities and climate change

Time

Topic

Abstract of the session

15.00 – 17.00

Energy, transport and water solutions for cities

Cities are main sources of greenhouse gas emissions; they therefore have a special responsibility to take mitigation measures. This session will highlight some technologies and approaches for cities that go beyond the traditional solutions of renewable energy and energy efficiency. Applying a systems approach reveals unexpected possibilities, both for mitigation and for adaptation.

- Reducing the GHG emissions of transport by half by Isabel Wilmink (TNO)
- Geothermal Greenhouses: the Dutch case -Low temperature, High performance- by Henk Pagnier (TNO)
- Underground thermal energy storage: combining climate adaptation and mitigation in an urban environment, by Matthijs Bonte (KWR)
- Towards a climate neutral water cycle by Jan Hofman (KWR)
- Building for a Changing Climate by prof. Chris Geurts (TNO)

Concluding notes by Peter Bosch (TNO) on the combination of adaptation and mitigation measures.

17.00 – 18.00

Film 'Connecting Delta Cities' and drinks

Networking drinks. See film description 10.30 – 11.30.

18.00 – 19.30

Master class cities and climate change: creating capacity to connect science, policy and people

A short introduction on capacity building and its role in dealing with climate change in European cities, will be followed by a demonstration of capacity building activities. Adriaan Slob (TNO) will lead a workshop on local climate policies and ways to connect citizens, policy makers and scientists. Participants will better understand how to bridge the gap between science and policy.

# Theme From the sky to the surface: climate monitoring and data acquisition

Organized by

Royal Netherlands Meteorological Institute (KNMI), Energy research Center of the Netherlands (ECN), Delft University of Technology (TUD), Eindhoven University of Technology (TUE), Alterra Wageningen/University and Research (WUR)

Wednesday

9

December

Current climate change is caused largely by changes in atmospheric chemical composition. From space we can detect the changes in temperature, precipitation, aerosols, biomass and greenhouse gas emissions. However, for the assessment of impacts of climate change and for the identification of viable adaptation and mitigation measures we need data at a finer temporal and spatial scale.

In the Netherlands we are currently developing a system to monitor the climate system including the atmospheric composition and the emissions of greenhouse gases. This climate monitoring system, in combination with research, will provide a basis for understanding climate change and its economic and social consequences. By definition it is based on a multi-disciplinary approach, and involves space-based as well as air-borne or ground-based instruments.

Wednesday  
9  
December

## Theme From the sky to the surface: climate monitoring and data acquisition

Time

Topic

Abstract of the session

10.00 – 18.00

Monitoring of atmospheric composition

Running presentations and posters on monitoring of concentration and anthropogenic emissions of NO<sub>2</sub>, methane, aerosols and ozone. Developments of satellite instruments in the Netherlands: SCIAMACHY-OMI-TROPOMI

10.00 – 10.30

Monitoring of atmospheric composition by satellites

Changes in atmospheric chemical conditions can be detected from space in an unequivocal way. The Netherlands is pioneering efforts to detect trace gases with satellite instruments (OMI and SCIAMACHY). Results of ozone, NO<sub>2</sub>, methane, and aerosols will be shown. Plans to continue these measurements with the Dutch initiated TROPOMI instrument will be addressed. Presentation by prof. Pieternel Levelt (KNMI/TUE).

10.30 – 11.00

Going where the action is: Using in-situ observations to verify greenhouse gas emissions

Greenhouse gas emissions dissolve not long after their emission. If we want to get valid information on emissions from the atmospheric concentration, then satellite, air-borne and in situ measurements have to cope with high precision requirements and with large transport model errors. If the measurements take place closer to the areas where the emissions take place, the validity of information can improve.  
After a presentation by Alex Vermeulen we will discuss the main advantages and disadvantages of in-situ observations with the audience. We focus on the usefulness for emission verification countrywide.

# Theme From the sky to the surface: climate monitoring and data acquisition

Wednesday

9

December

Time	Topic	Abstract of the session
11.00 – 11.30	Can we understand climate change without quality measurements? A blueprint for climate monitoring in the Netherlands	Climate monitoring provides the empirical basis for understanding climate change and its consequences. We will discuss the basic philosophy of climate monitoring and a possible blueprint for climate monitoring in The Netherlands. A recent inventory of needs and ways to improve climate monitoring convinced us that advanced monitoring systems are needed and feasible. The session will be led by prof. Herman Russchenberg.
11.30 – 12.00	Multi monitoring system	We developed a monitoring system that measures greenhouse gas emissions in different ways and at different scales. In this session we give an introduction to this multi monitoring system and show how the system can be used for international evaluation. Presentation by Ronald Hutjes.
12.00	Lunch	During lunch we will summarize different research results of the morning presentations. The researchers are available for questions and information.
14.00 – 16.00	Going where the action is	Four short presentations on how to use an integrated data monitoring system for climate related decision making. An international panel with representatives of potential users and researchers will reflect on the presentations. Also the possibilities and restrictions for using these systems for reporting and monitoring will be discussed. Chair: Eddy Moors.

Thursday

10

December

## Theme Assessing vulnerability and coping with uncertainty

Organized by Co-operative Programme on Water and Climate (CPWC), Netherlands Commission for Environmental Assessment (MER), Institute for Environmental Studies (IVM), Netherlands Environmental Assessment Agency (PBL)

Climate change affects natural resources, societies and economies. Some of the impacts of climate change are beneficial, others harmful, but climate change will in any case affect the resilience of societies, economies and ecosystems.

One of the main concerns of the COP15 is the development and use of tools for the assessment of the vulnerability of ecosystems, societies and economies to climate change as well as the development of adequate policy responses. These tools and policy responses have to provide answers to how to cope with uncertainties about the magnitude of climate change and its impacts. Over recent years a lot of work has gone into developing tools and approaches to assess and manage vulnerability and risk, and to develop policy under uncertainty. Today several examples of vulnerability assessments, risk sharing and policy development under uncertainty will be presented and discussed. The aim is to share experiences but, more importantly, to provide opportunities to bring practitioners together and start new working relations.

Time	Topic	Abstract of the session
10.00 – 11.30	Closing the gap between global assessments and regional/national realities in adaptation and development	<p>The session will include a multi-stakeholder consultation about how best to close the gaps between global assessments and regional realities. The objective is to develop a system to link global financing with country level implementation programmes, including mainstreaming in sectoral activities. We also want to identify ways to monitor development assistance and adaptation funds. The focus of this session is on developing countries.</p> <ul style="list-style-type: none"> <li>• Presentation of ‘Global typology of regions based on exposure to water related stress under climate change’ by Willem Ligtoet and Marloes Bakker (Netherlands Environmental Assessment Agency (PBL))</li> </ul> <p>Panel discussion with William Cosgrove (World Water Assessment Programme, tbc), Ania Grobicki (Global Water Partnership), Michael Jacobson (World Bank), John Matthews (World Wildlife Fund (WWF)) and representatives of the Netherlands and UK Ministries of Development Cooperation. Chaired by Henk van Schaik (CPWC).</p>
12.00 – 14.00	SEA, IWRM and Climate change  Lunch	<p>Integrated Water Resource Management (IWRM) and Strategic Environmental Assessment (SEA) are tools that countries use to assess vulnerability to climate change. IWRM is used in the water sector with large communities of practitioners. SEA is used in all sectors and is becoming increasingly a legal requirement. In this session we will discuss the synergy that may come from linking the tools, drawing on the experiences of the Global Water Partnership, the World Bank, the Netherlands Commission for Environmental Assessment and the SEA task force of the OECD DAC.</p> <p>With presentations by:</p> <ul style="list-style-type: none"> <li>• Ania Grobicki (Executive Secretary of the Global Water Partnership)</li> <li>• Warren Evans (Director of the World Bank Environment Department)</li> <li>• Rob Verheem (Deputy Director of the Netherlands Commission for Environmental Assessment)</li> </ul>

Thursday  
**10**  
December

## Theme Assessing vulnerability and coping with uncertainty

Time

Topic

Abstract of the session

14.30 – 16.30

Adaptive management:  
merging top down and  
bottom up

Climate change introduces a cascade of uncertainties in assessing impact. These have to be dealt with in decision making at global, regional and national level. We will present the need for a combination of top down (engineering and structural ) approaches with bottom up (resilience based, multi stakeholder involvement) approaches for adaptation. We will present examples of this combined top-down/ bottom-up approach. These include the Thames 2100, the Rotterdam case and the Great Lakes. We will call for more practical examples to be shared.

- Examples will be presented by Jeroen van der Sluijs (Copernicus Institute, Utrecht), Robert Pietrowski (Unites States Army Corps of Engineers), John Matthews (WWF), Jos van Alphen (Dutch Delta Commission, tbc)
  - Adaptation policies – coping with uncertainties by Willem Ligtoet (PBL)
- Panel discussion. Chaired by Henk van Schaik (CPWC).

17.00

Drinks

18.00 – 20.00

Management of  
changing risks from  
extreme weather

Risks of weather disasters in urbanized coastal areas are changing. The two main drivers are variations in the frequency and magnitude of extreme weather events (floods, windstorms, droughts) and socio-economic trends. Risk is a function of the number of inhabitants and economic assets that are exposed to these hazards. We will address issues that relate to detecting historic trends in climate and weather extremes and economic losses. A particular aspect is the role that insurance and other financial instruments can play in covering and spreading risk of extreme losses.

Time	Topic	Abstract of the session
18.00 – 20.00	Management of changing risks from extreme weather	<p>Experience in research for applying these financial mechanisms will be presented.</p> <ul style="list-style-type: none"> <li>• index based insurance mechanisms by Molly Hellmuth (IRI Columbia University)</li> <li>• historical and future projections of extreme weather risks by Laurens Bouwer (Institute for Environmental Studies, Amsterdam)</li> <li>• Climate change, catastrophe risk and modelling optimum adaptation strategies by Robert Muir-Wood (Risk Management Solutions)</li> </ul> <p>Panel discussion between presenters and with the audience, led by prof. Jeroen Aerts (IVM).</p>
20.00 – 22.00	Groundwater, climate change and adaptation	<p>Improved knowledge and use of groundwater can aid adaptation to climate change impacts on freshwater resources</p> <ul style="list-style-type: none"> <li>• Climate change adaptation with groundwater: development issues with a focus on Asia by Karen Grothe Villholth, (GEUS – Geological Survey of Denmark)</li> <li>• Groundwater and climate change in Africa – the Kampala Statement by prof. Richard Taylor (University College London)</li> <li>• Outcomes from the second Africa Water Week (November 2009, Johannesburg) by Bai-Mass Taal (Executive Secretary of the African Ministers’ Council on Water – AMCOW)</li> <li>• Recharge, retention and re-use of groundwater – 3 R by Peter Letitre (International Groundwater Resources Assessment Centre)</li> <li>• Assessing groundwater resources under the pressure of climate change – GRAPHIC arid focus by Francesco Rizzo (UNESCO’s International Hydrological Programme (IHP))</li> </ul> <p>Panel discussion with speakers on how groundwater management can help in adapting to climate change, chaired by prof. Richard Taylor.</p>

Friday

11

December

## Theme Climate robust water supply, agriculture and nature

Organized by Alterra Wageningen/University and Research (WUR), KWR Watercycle Research Institute (KWR), Both ENDS, Wetlands International, Dutch Federation of Agriculture and Horticulture (LTO)

Adaptation is already vital and will become even more important as the climate changes. Today we will give an overview of adaptation research in different sectors. In the morning we will focus on agriculture: how can we make agriculture more climate robust? In the afternoon presentations and discussions will focus on fresh water availability in developed and developing countries. Wetlands International will show how restoring ecosystems can help to protect against flooding and droughts and how important community-based adaptation is.

At the end of the day we will see how adaptation strategies for sectors come together at the local level and can be combined with mitigation measures. This can indicate how we can make cross sectoral adaptation and mitigation strategies.

Time	Topic	Abstract of the session
10.00 – 12.00	Design climate robust agriculture	<p>What is the impact of climate change on agriculture and how do we design a climate robust agriculture? We present a general overview, show the effects of climate change on the production of potatoes, milk and wheat and offer insight into the design of climate robust systems. Finally we discuss the role of scientists, policy makers and farmers in designing a climate robust agriculture. Presentations by Jim Hansen (Columbia University), Frank Metzger (tbc) and Peter Prins (LTO-Noord). The session is chaired by John Porter (University of Copenhagen).</p>
12.15 – 14.15	Towards a climate proof freshwater supply  Lunch	<p>Climate change will have major implications for fresh water availability on a global, regional and local scale. Impacts on a global scale are studied in the European WATCH project (Water and Global Change). We will discuss the increasing mismatch between demand and supply of fresh water in the deltaic region of the Netherlands, being under pressure of increasing salinization and explore possible adaptation strategies. Finally, examples of technological solutions for regional water supply will be presented and challenges, hurdles and solutions will be identified.</p> <ul style="list-style-type: none"> <li>• WATCH project by prof. Pavel Kabat (Wageningen University)</li> <li>• Demand and supply of fresh water in the Deltaic region by Ad Jeuken (Deltares)</li> <li>• Potential of water technology for regional water supply by Jan Hofman (KWR Watercycle Research Institute)</li> </ul> <p>Discussion led by prof. Pavel Kabat.</p>

Friday

11

December

# Theme Climate robust water supply, agriculture and nature

Time

Topic

Abstract of the session

14.30 – 15.30

ADAPTS: Adaptive water management at a local scale

How do people in Ethiopia, Brazil, Peru, Vietnam, Botswana and Ghana deal with water shortage and implement successful water management initiatives to adapt to climate change? In this session we will share their practical initiatives and experiences in linking climate change models to the basin level within our ADAPTS programme. We will also show examples of how local NGO's started a dialogue with policy makers to ensure sustainable and climate proof water management policies.

- Introduction about ADAPTS by Annelieke Douma (Both ENDS) and Ralph Lasage (IVM)
  - Presentations about the experience with the ADAPTS programme by Rahel Belete (Action for Development, Ethiopia) and Ken Kinney (Development Institute, Ghana)
- Panel discussion with the speakers and the audience led by prof. Jeroen Aerts.

15.45 – 17.45

Ecosystems and communities for a climate robust society

Ecosystem and community based adaptation constitute a critical element in creating a climate proof society. Restoring and adapting ecosystems can help to protect for example against floods and droughts. How can policy makers, scientists and field practitioners combine their efforts to study, prioritize, plan and implement adaptation action? In this session we will offer an overview of the challenges and, in plenary discussion, we will explore the possibilities for co-operation.  
Chair: Henk van Schaik (CPWC).

17.45

Drinks

# Theme Outside the Bubble – Successful Climate Governance after Copenhagen

Organized by Netherlands Environmental Assessment Agency (PBL), Institute for Environmental Studies (IVM), Wetlands International

Saturday

12

December

Climate change has triggered a large number of governance responses worldwide. These responses culminate in the unprecedented global governance effort of the COP conference in Copenhagen. However, whatever the outcome of this conference, rapidly rising emissions increasing outpace the responses.

The implementation of yet unknown, but almost certainly drastic measures worldwide, will be a key challenge to policymakers in the future. Can this challenge be solved in the context of present, conventional policy approaches by governments worldwide? Or is a complete rethinking of climate change governance ‘outside the bubble’ of the current negotiation circuits required – with governments interfering massively in the lifestyles of their citizens, or even replacing the current ‘economic growth’ paradigm by alternative considerations about what is a ‘good life’?

We will analyse the contours of future successful climate governance after Copenhagen on global, national and local levels – between a continuation of present institutional arrangements and a complete reshuffling of present institutions and approaches.

Discussion will focus on the extent to which organizations and institutions ‘outside the bubble’ should be accelerators for establishing successful climate governance. Further, we will examine what a desirable research agenda on climate governance for the future could be.

Saturday  
**12**  
December

## Theme Outside the Bubble – Successful Climate Governance after Copenhagen

Time

Topic

Abstract of the session

10.00 – 11.00

What can we do when things get out of hand? Extreme mitigation and adaptation scenarios

Emissions may rise even faster than anticipated so far. What could be done in this 'worst case' scenario? And to what extent could geo-engineering be a viable solution? Presentations by Leo Meyer (PBL), Jip Lenstra (ECN), Kenneth Oye (MIT). Chaired by Frans Berkhout (IVM).

11.15 – 12.45

Examining Climate Governance: Global, EU and development experiences

This presentation by experts from the Dutch Institute for Environmental Studies (IVM) focuses on three key levels and arenas of climate governance.

- Climate governance at the global level by prof. Frank Biermann (IVM)
- The role the EU has to play by prof. Frans Berkhout (IVM)
- Climate governance and development cooperation issues by prof. Joyeeta Gupta (IVM)

12.45

Lunch

13.15 – 14.30

Meat – How far can governments go in influencing lifestyles?

Present meat consumption patterns in industrialized countries are unsustainable. Changing these patterns and discouraging their development in lower-income countries are therefore crucial challenges. Taking meat as a case-study, this session will discuss how far governments can go in influencing lifestyles of their citizens. Maarten Hajer (PBL) interviews Vandana Shiva, Henriette Prast (Tilburg University), Sjur Kasa (CICERO), Carolyn Steel (architect).

Time	Topic	Abstract of the session
14.45 – 16.15	The international governance agenda after Copenhagen – Who are the agents of change?	<p>What are conditions for successful climate governance in the future and who will be the pivotal agents of change?</p> <p>Maarten Hajer (PBL) interviews John Dryzek (ANU), Frank Biermann (IVM), Richard Bradley (International Energy Agency), Norichika Kanie (Tokio Institute of Technology), prof. Mikael Skou Andersen (Aarhus University).</p>
16.15 – 17.00	The Adaptive Capacity Wheel – a qualitative tool for assessing the adaptive capacity of social institutions	<p>This presentation focuses on a qualitative tool, the Adaptive Capacity Wheel. It is developed to assess the nature of the adaptive capacity of social institutions. Adaptive capacity is a key component of any future climate governance. This tool's greatest merit is its potential for encouraging policymakers and other social actors to discuss issues and to better organise and institutionalise leadership and learning. The session is organized by prof. Joyeeta Gupta (IVM).</p>
17.00 – 17.30	Policy and scientific responses to degrading Peatlands	<p>Degrading peatlands cover less than 0.1% of the global land surface, but contribute about 10% of global GHG emissions. Emissions from South East Asia's degrading tropical peat swamp forests constitute over half of this. This session reviews current developments in science, policy and governance that will enable peatland emissions to be targeted under the UNFCCC and other mechanisms, with presentations by Deltares and Wetlands International.</p>

Monday

14

December

## Theme Innovations and local initiatives on reduction of GHG emissions

Organized by Ministry of Housing, Spatial Planning and the Environment (VROM), Dutch Regional Water Authorities, Eneco, Rotterdam Climate Initiative (RCI), Wageningen University and Research (WUR), Provinces of Zuid-Holland, Drenthe and Utrecht

Climate change affects almost every issue local and regional authorities are responsible for. Climate change poses new challenges and opportunities. In the Netherlands many provinces, water authorities and municipalities began to implement climate mitigation policies a long time ago. Since 2006, adaptation policies are spelled out and integrated in spatial plans. Both mitigation and adaptation strategies cannot be implemented by governments alone. Close cooperation with the business community and with NGO's is often a prerequisite for success. Finally, public support is crucial to implement climate measures. Examples of innovative projects show that the challenge of climate change is essentially met on a local and regional scale.

Today we show and discuss various examples of local initiatives by regional governments and energy companies to reduce greenhouse gases. Eneco organizes a panel discussion about several climate issues. We share with you some experiences to turn waste water treatments into energy plants. The Dutch project 'The energy Factory' initiated a national movement to create energy neutral waste water treatment plants. Twelve regional water authorities have already bundled their knowledge and experience to complete this mission.

Local authorities from the Netherlands will discuss about effective local climate policy. Marijke Vos (Deputy Mayor of Amsterdam) will explain the extensive and ambitious Climate Program: the 'New Amsterdam Climate'. Important pillar is the need for a 'scale-leap' towards sustainable energy. The role of local and regional governments in realizing such a "scale-leap" towards sustainable energy is one of the main issues this morning.

In the late afternoon Rotterdam will present the Rotterdam Climate Initiative. Rotterdam and several provinces will also give presentations about Carbon Capture and Storage followed by a panel discussion.

Time	Topic	Abstract of the session
10.00 – 12.00	Local initiatives for GHG reductions: examples from the Netherlands	<p>Pitch presentations of local and regional innovative initiatives, followed by a lively panel discussion with: Marijke Vos (deputy mayor Amsterdam), Robbert Jan Piet (alderman Heerhugowaard), Rik Grashof (alderman Rotterdam), Peter Glas (chairman water authority De Dommel), Wouter de Jong (Vice-Governor Province of Utrecht) and Tanja Klip (Executive Board Province of Drenthe). Facilitator: Lian Merkxs (deputy mayor Delft).</p>
12.45	Lunch	
13.00 – 15.00	From waste water treatment to energy plant	<p>Dutch water authorities present their ideas and initiatives to turn their waste water plants into energy plants. Water authorities work together and share their knowledge with other countries, such as Turkey to fulfill their ambitions on energy neutral waste water plants and to develop new energy techniques.</p> <ul style="list-style-type: none"> <li>• Presentations about climate initiatives of regional water authorities and their international cooperation projects by Peter Glas (vice-chairman Dutch Association of regional water authorities)</li> <li>• Presentations on how to reduce emissions and improve energy efficiency of waste water plants by Ferdinand Kiestra and Judith Hoogenboom (Aa en Maas) and André Strucker (Waternet)</li> </ul> <p>Discussion with the audience on the possibilities for the Netherlands and other parts of the world to create climate neutral waste water plants in 2020. Chaired by Peter Glas (vice chairman of the Association of regional water authorities).</p>

Monday  
**14**  
December

## Theme Innovations and local initiatives on reduction of GHG emissions

Time

Topic

Abstract of the session

15.00 – 17.00

Tomorrow's energy company: Sustainable, Decentralized, Together

What is energy company Eneco's response to global climate change and the need for sustainable energy? Aware of their corporate social responsibility, they are looking forward to discussing their approach with you.

A panel discussion on climate change scenarios, fair trade certified energy and tomorrow's energy company are the ingredients of this event.

Panellists are Jacques van Ham (ICCO), Pier Vellinga (Knowledge for Climate), William Sweet (US journalist) chaired by Marieke Jellema.

17.00 – 19.30

Rotterdam Climate Initiative

How to deal with CCS?

Drinks

Improving climate for the benefit of people, the environment, and the economy. That is the challenge faced by the initiators of the Rotterdam Climate Initiative. In the RCI, public and private partners have created a movement in which governments, companies, knowledge institutions and citizens work together. We would like to present the Rotterdam approach and discuss the driving force of regions and cities as key actors in the implementation of climate measures.

- Short presentations of the Rotterdam approach
- Focus on Carbon Capture and Storage (CCS) and public engagement, including how politicians deal with public concern about safety aspects. Presentations by Rotterdam and the provinces Zuid-Holland and Drenthe.

Panel discussion with mayor Aboutaleb and alderman Grashoff (Rotterdam), Erik van Heijningen (Executive Board Province of Zuid Holland), Tanja Klip (Executive Board Province of Drenthe), Wiert-Jan de Raaf (director RCI), Paula Verhoeven (Climate Director Rotterdam), Minister Jacqueline Cramer (tbc, VROM) and companies from the Rotterdam area. Chaired by prof. Pier Vellinga.

Time

Topic

Abstract of the session

20.00 – 21.30

Presentation of the book 'The Biobased economy: Biofuels, Materials and Chemicals in the Post-oil Era'

The introduction of a biobased economy requires a long term transition process. We will launch a book published by Earthscan, providing a state-of-the-art overview of biobased technologies including biofuels and biorefineries. The book describes how policy and market can promote a biobased economy that is effective, sustainable and cost efficient. It shows how biomass can significantly reduce GHG emissions and provide more income than generally is assumed. Presentations by Hans Langeveld (Director of Biomass Research) and prof. Johan Sanders (Valorization of Plant Production Chains at WUR), followed by a brief reflection on the role of biobased economy. The book will be presented to representatives of government and private sector from the Netherlands, Germany, Brazil and Canada. Minister Jaqueline Cramer (tbc) will formally be handed the first copy of the book.

21.30 – 22.30

Himalaya Alert!  
A film by Mark Verkerk (Buddhas lost children) and Bernice Nootenboom

During the last three years journalist Bernice Notenboom reported from the North Pole, South Pole, and Greenland Icecap about climate change while pulling a sled across the ice. This year she focused on The Himalaya. Glaciers originating in the Himalaya are melting with incredible speed. 1.3 billion people are depending on water from these rivers. As she trekked to Everest Basecamp she visited spiritual leaders and sherpas who live in threatening zones. On May 23rd she reached the top of Everest. Himalaya Alert! is a truthful film about a vast changing landscape. Predictions are in 2040 there won't be any glaciers left in the Himalaya.

Tuesday

15

December

## Theme How will the Netherlands survive climate change?

Organized by Dutch Regional Water Authorities, Provinces of Utrecht, Drenthe and Zuid-Holland, Associations of Provinces (IPO), Research programmes Climate changes Spatial Planning (CcSP) and Knowledge for Climate (KfC)

The Netherlands can survive climate change. But they have to adapt to the climate of the future. Today we will show how local initiatives can make urban areas in a delta like the Netherlands climate proof. The examples show which climate tools we use to plan for the future. The climate effect atlas will be presented; a series of maps, produced by scientists and provinces together, that make climate effects visible. Grounds for Change is an international project that mapped energy possibilities and combined these with adaptation.

We will share studies and experiences about how to cope with the effects of sea level rise and water shortage in the Netherlands and what this will mean for land use. A panel discussion will include views from other countries on how they deal with the effects of climate change.

Time

Topic

Abstract of the session

10.00 – 11.30

More rain, no wet feet –  
how can we manage  
water in the city?

Dutch water authorities and provinces will present their adaptation initiatives to prepare the Dutch delta for climate change and make urban areas climate proof.

- the WATERgraafsmeer in Amsterdam, an example of innovative climate adaptation and urban transition by Johan de Bondt (chairman water authority Amstel, Gooi en Vecht)
- Rijnenburg, a new climate proof district in Utrecht, by Wouter de Jong (vice governor Province of Utrecht)
- the climate robust dike in Tiel by Ton Drost (water authority Rivierenland)

Discussion with the audience on how to share lessons learned and which barriers still have to be overcome, moderated by Peter Glas (vice-chairman Association of regional water authorities).

11.30 – 12.30

Ground for Change –  
bridging energy planning  
and spatial design  
strategies

Building a sustainable energy system will affect our environment, but also our physical environment will influence our energy system. In what ways do the specific spatial characteristics of a region influence the options for a sustainable energy system? All systems – energy, agriculture, industrial production, transport and water management – are interacting. We present ‘Grounds for Change’ and the opportunities discovered in the North of the Netherlands.

- Presentations by Tanja Klip (Executive Board Province of Drenthe) and Frank van Dussel (Drenthe); focus on adaptation, mitigation (green gas) and participation, the cornerstones of the Grounds for change approach
- Short film about the research project climate and agriculture: applying sensor technology

Tuesday  
**15**  
December

## Theme How will the Netherlands survive climate change?

Time

Topic

Abstract of the session

12.30 – 14.00

Film: Province of Utrecht  
Climate Neutral and  
Resilient by 2040

Lunch

The Province of Utrecht has the highest growth of GDP per capita in Europe. It aims to be climate neutral and climate proof by 2040. Projects include the design of new residential areas, green transportation and the transformation of existing urban areas to energy producing units. This will be done in interaction with scientists, the business community and inhabitants in order to introduce effective innovations. The region is home to excellent enterprises and science in this field and we anticipate economic benefits to rise in tandem with environmental gains.

- Short film about adaptation and mitigation initiatives in the Province of Utrecht
- Discussion with the audience and Wouter de Jong (vice governor Province of Utrecht).

14.00 – 15.00

Research and practice  
together for a climate  
proof planning

Researchers and policy makers from the provinces work closely together to climate proof the Netherlands. Together they have developed the Climate Effect Atlas, a helpful tool to plan for the future. They also work hand in hand with water authorities to apply the 'hotspot approach'.

- the climate effect atlas by Hasse Goosen (Alterra/WUR) and Erik de Haan (Zuid-Holland)
- hotspot Zuidplaspolder, an example of how urban areas in the delta 6 meter below sea level can be made climate proof. Presentation by Hans Oosters (chairman water authority Schieland en de Krimpenerwaard)
- Regional study on how to deal with climate change and water shortage by Sara de Boer (water authority Aa en Maas)

15.00 – 16.00

Climate change, a dry and  
salty taste

Sea level rise and drought increase problems with fresh water supply in the west of the Netherlands. In the coming decades salinization of ground- and surface water could become an increasing threat for agriculture and nature. Recently some studies have been done to acquire more insight into the specific effects of drought and salinization. Research is on going about possible measures and strategies.

Time

Topic

Abstract of the session

15.00 -16.00

Climate change, a dry and salty taste

Many deltas will face salinization in the future due to sea level rise. We can learn from other deltas and strategies developed in the Netherlands could be of use in other parts of the World.

- Fresh water demand and supply in a changing climate: a case study for the delta region by prof. Pier Vellinga (Climate Research Netherlands)
- Preserving the Green Heart of Holland by Erik van Heijningen (Vice governor Province of Zuid-Holland)

Panel discussion between prof. Pier Vellinga, Erik van Heijningen, and Hans Oosters (chairman water authority Schieland en de Krimpenerwaard), chaired by Florrie de Pater.

16.00 - 17.00

Regional governments can make the difference

Short presentations about adaptation followed by a panel discussion with vice governors of Dutch provinces, Tanja Klip (Drenthe), Wouter de Jong (Utrecht) and Erik van Heijningen (Zuid-Holland), Jaroslaw Sloma (minister Warmia-Mazury, Poland) and others.

19.30 - 21.00

Drinks and buffet

The Netherlands Minister for Development Cooperation, Bert Koenders, will give the keynote speech and participate in a panel discussion with representatives from a number of developing countries during 'Climate change adaptation - building bridges between North and South'. The event will include a book launch for: [The Adaptation Continuum - Groundwork for the Future, Lessons from the Netherlands Climate Assistance Programme](#) Organized by Ian Tellam (ETC Foundation).

## Theme Dutch Approaches in Adaptation to Climate Change / Knowledge and Capacity sharing in Delta Areas

Organized by Co-operative Programme on Water and Climate (CPWC), Ministry of Transport, Public Works and Water Management (V en W), Climate Research Netherlands, Ministry of Housing, Environment and Spatial Planning (VROM)

In 2007, the government in the Netherlands formulated a formal Dutch Adaptation Strategy entitled 'Make Space for Climate!'. This strategy has been endorsed by all relevant ministries and the umbrella organisations of the provinces, municipalities and water authorities. The strategy was the starting point for formulating a more comprehensive climate adaptation policy, primarily related to spatial measures but also for raising awareness and identifying gaps in knowledge. In addition, sectoral plans have been developed and, in 2008, a State Advisory Commission (Delta Commission) has presented recommendations on water safety and fresh water availability. The minister responsible for Climate and Spatial Planning stressed that adaptation to climate change has to be concerned with threats to public health, with flooding, drought and heat-waves, with changing habitats for plants and animals and with possible economic damage. Adaptation to climate change involves the spatial development of the entire country.

Countries benefit from an exchange of knowledge and experiences. Both good and bad examples help to show the way towards adapting to climate change. The sessions today will present several initiatives in the Netherlands including policymaking on adaptation to climate change and preliminary results of research. The initiatives show how adaptation to climate change is interwoven with spatial planning and water management. For successful adaptation, an integral 'Dutch' approach is needed. We will present the Delta Alliance, an initiative to join forces in several regions in the world. A discussion will be moderated on how to promote further cooperation worldwide.

# Theme Dutch Approaches in Adaptation to Climate Change / Knowledge and Capacity sharing in Delta Areas

Wednesday

16

December

Time	Topic	Abstract of the session
09.30 – 11.00	Adapting to climate change – bridging the climate negotiations with the need for local actions	<p>The session starts with presentations on water and climate by Government representatives from the Netherlands, Bangladesh, Germany, Vietnam, Denmark and others.</p> <p>The Global Public Policy Network as lobbyist in the negotiations, UN Water and the World Business Council on Sustainable Development will present their views on the progress of the negotiations and its impacts on their positions.</p> <p>Panel discussion with challenging reactions from the floor to the panelist. Moderators of the session: Henk van Schaik (CPWC) and Ger Bergkamp (World Water Council - WWC).</p>
11.00 – 12.30	Launch of the UNECE Guidance	<p>The new UNECE Guidance on Water and Adaptation to Climate Change has been developed under the UNECE Water Convention. It aims to spur climate change adaptation that takes into account the transboundary dimension of water management. It guides the different steps of developing and implementing adaptation strategies in transboundary basins. The objective of this Guidance is to support cooperation and decision-making in transboundary waters on a range of issues related to climate change. This new Guidance will be launched at the event.</p>
12.00	Lunch	

Wednesday  
**16**  
December

## Theme Dutch Approaches in Adaptation to Climate Change / Knowledge and Capacity sharing in Delta Areas

Time

Topic

Abstract of the session

12.30 – 14.00

Scientific support in developing 'adaptation to climate policy'

Science can be of help to policy makers to set out strategies and to assess measures. Especially in the field of climate change this is needed, since there are so many things unknown. In order to bridge the gap between science and practice climate services have been set up, the hotspot approach has been invented and specific boundary organisations were initiated. In this session three different approaches will be presented and discussed.

Presentations by Annette Münzenberg (Klimzug, Germany) t.b.c., Chris West (UK-CIP, United Kingdom) (tbc) and prof. Pier Vellinga (Knowledge for Climate) followed by a panel discussion, led by Florrie de Pater (IVM).

14.30 – 16.30

Climate proofing the Netherlands – the Delta Programme

The start of the Delta Programme end 2009 marks a shift in the Dutch National Adaptation Strategy (NAS). Its next step will include an enhanced focus on water related issues in an integral approach. This strategy focuses on: Main water system and coastal zone, Rural areas, Urban areas and Networks.

Presentations by Hans ten Hoeve (VROM) and Joost Buntsma (V&W), co-referent from United Kingdom or Germany (tbc). Moderator: prof. Pavel Kabat.

16.30 – 17.00

Delta Committee / the movie

The Delta Committee report (September 2008) is a major milestone: solving present problems in a future context. In implementation the focus is on articulating 'spatial planning choices for the future' and reinforcing existing policies in particular in the field of flood protection, fresh water management and conservation, urban development and nature management.

# Theme Dutch Approaches in Adaptation to Climate Change / Knowledge and Capacity sharing in Delta Areas

Wednesday

16

December

Time

Topic

Abstract of the session

17.00 – 20.30

The International Delta Alliance

Meet the press

Drinks

Today the Delta Alliance network will be announced by ms. Cramer, Minister of the Environment and Spatial Planning/ms. Huizinga, Vice Minister for Transport, Public Works and Water Management, and a representative of the Indonesian and Bangladesh Government (t.b.c). The focus of the event will be on the benefits of sharing and developing knowledge on adaptation to climate change between delta regions worldwide. This side event intends to inspire potential new partners to participate. Adaptation to climate change is urgent and must be integrated in a spatial planning context with other development aims (e.g. restoring natural resource, increasing agricultural productivity). Many deltas worldwide experience the same problems. Deltas can improve and speed-up adaptation efforts by sharing information and experience and by collaborating in research and adaptation projects. The international Delta Alliance network is being launched to support such cooperation. It is working together with the World Estuary Alliance and Connecting Delta Cities to achieve this goal. The official launching of the International Delta Alliance will take place September 30th 2010 during the climate conference 'Deltas in times of climate change' in Rotterdam. The Alliance will start with a first selection of deltas in Indonesia, Vietnam, Bangladesh, California and the Netherlands.

- Introductory remarks by Kees Slingerland (Acting Chairman Delta Alliance)
- Presentations on adaptation needs in delta regions and international collaboration potentials by
  - Prof. Dr. Jan Sopaheluwakan (Deputy Chairman, Indonesian Institutes of Sciences)
  - Prof. Dr. Le Quang Minh (Vice President, Vietnam National University)
  - Tony Brunello (California Deputy Secretary for Climate Change and Energy) or Mike Chrisman (California Secretary for Natural Resources)
  - A representative of the Bangladesh government
- Restoring natural resilience in estuaries as an adaptation measure and opportunities for international cooperation by John Matthews (World Estuary Alliance – WWF)
- Closing remarks by Kees Slingerland (Acting Chairman of Delta Alliance)

## Theme Climate services

Organized by Royal Netherlands Meteorological Institute (KNMI), Deltares

Climate influences many sectors including water management, transport, nature, agriculture and public health. To deal adequately with these influences, governments, companies, NGO's need detailed and tailored information about the current and future climate. This information is provided through our Climate Services.

The basis for information about the current climate is provided by observations. For the climate of the future we use simulations with climate models. However, these data often have to be tailored for specific users. For example, for estimates of extreme river discharges other information is needed about precipitation than for estimates of water excess in urban areas. Based on climate model simulations several countries make their own limited number of regional climate scenarios, which can be used for impact and adaptation studies and strategies. During today's side event, a parallel exposition will be held showing examples of climate services and tailoring of climate data. This exposition will be accompanied by presentations on climate services, by live interviews and informal discussions with users of climate information.

Time

Topic

Abstract of the session

12.00 – 18.00

(expositon floor)

Climate services and tailoring of climate data

In recent years the number of sectors paying attention to climate and climate change has increased, leading to an enormous increase in requests to the KNMI for data and information. Consequently KNMI has invested considerably in improving its climate services. In a running presentation we will provide an overview of the various elements of our Climate Services, developments and the basic information sources we use. We will also present several examples of ‘tailoring’ climate data.

- Presentations of tailoring climate data by Gé Verver and Rob van Dorland (KNMI)
- Interviews with representatives of users and providers of climate information about the development and use of this information in planning, policy and practice in order to better adapt to climate change
- Informal discussions with users of climate information

12.00 – 18.00

(expositon floor)

Water scenarios for the Netherlands

Climate change will lead to changes in precipitation, temperature, wind and evaporation. All these lead to changes in discharge of rivers, ground water tables, sea levels and storm surges. Located in a delta, ‘water scenarios’ describing the range of plausible changes for these parameters are needed for the design of adaptive water management strategies. The presentation by Jaap Kwadijk shows how we make such water scenarios.

Thursday

17

December

## Theme Mitigation day

Organized by Energy research Center of the Netherlands (ECN), Netherlands Environmental Assessment Agency (PBL)

The objective of Mitigation Day is to inform scientist and policy makers on the state of mitigation technologies and the future perspective. The spotlight will be on new developments and insights in the mitigation arena. We have been able to organize a group of well informed speakers to just do that.

In the first session we will discuss the value of the pledges for reduction targets that are on the table. The second session will offer views on progress being made with a number of technologies. We will discuss possibilities for accelerating implementation.

The third session is on the role of international cooperation in the field of mitigation technologies. Together we are stronger, but pressure to cooperate with companies is turning research institutes into competitors in a commercial market. What is the right balance?

During the reception we will be informed by the Netherlands Minister of Environment Mrs. Jacqueline Cramer (if available at that moment) or another well informed negotiator on the progress made so far on this important COP.

In the evening it is time to look forward. Long term perspectives have changed since the scientific community is giving signals that reduction policies alone are not sufficient to guarantee that we can stay within save limits. The chance of exceeding limits is already big enough to investigate stronger reduction policies and emergency measures.

Time	Topic	Abstract of the session
10.00 – 12.00	The impacts and value of Annex-I pledges	<p>What will be the stabilisation level associated with the combined emission reduction pledges of industrialised countries? What are these pledges worth?</p> <p>Modelling studies presented by Michel den Elzen (PBL) and Markus Amann (IIASA, tbc) will answer the first question. Remko Ybema (ECN) and several other leading policy researchers from Japan, Canada and other industrialised countries will discuss pledges and what they are worth based on current developments.</p>
12.00	Lunch	
13.00 – 15.30	Progress in technology and policy development	<p>Series of presentations on the state of affairs around essential mitigation technologies, including discussion on the policy needs.</p> <ul style="list-style-type: none"> <li>• Solar energy technology and roadmap by prof. Wim Sinke (ECN)</li> <li>• Wind energy technology and roadmap by Jos Beurskens (ECN)</li> <li>• Advanced biomass options and roadmap by Jip Lenstra (ECN)</li> <li>• CO<sub>2</sub> capture and storage: Global t(h)reat or Dutch treat? by Jan Brouwer, director CATO<sub>2</sub> – Dutch national R&amp;D programme on CCS</li> <li>• The EU energy technology portfolio for greenhouse gas mitigation (European Commission, tbc)</li> </ul> <p>Panel discussion on incentives to accelerate development of mitigation technologies, panellists are the speakers and William Sweet (US-journalist), moderator Remko Ybema (ECN).</p>

Thursday  
**17**  
December

## Theme Mitigation day

Time

Topic

Abstract of the session

16.00 – 18.00

International cooperation on technology

International collaboration can accelerate progress on necessary mitigation technologies. What is the current state of affairs?

- Ton Hoff (director ECN, chairman of EERA) on EU cooperation between energy research institutes in EERA
  - Ambuj Sagar (IIT Delhi, tbc) and Pieter Boot (ECN/Clingendale) on an international network of Centres of Excellence
  - Heleen de Coninck on the role of technology in international collaboration
- Panel discussion with the speakers, moderated by Remko Ybema (ECN).

18.00 – 19.00

Reception

Guest speaker: Minister for the Environment, Mrs. Jacqueline Cramer, will inform us on the current state of the negotiating process (if her negotiation duties allow her to come).

19.00 – 21.00

Extreme climate change, extreme responses?

Long term perspectives and scope of action for the case of extreme climate change. Now the chances of exceeding safe limits are increasing, what answers can technology provide?

- The urgency of Climate Change, an update on climate science by Bart Verheggen (ECN)
- Extreme climate scenario's by Leo Meyer (PBL)
- Drastic measures in response to sudden climate change by Xander van Tilburg (ECN)
- Can geo-engineering help? Jip Lenstra (ECN)

Debate on what the energy research institutions should do to curtail the immediate risk of extreme climate change, moderated by Remko Ybema (ECN).

# Partners of the Holland Climate House

## Alterra Wageningen, University and Research Centre (WUR)

Wageningen University and Research Centre provides education and generates knowledge in the field of life sciences and natural resources. Wageningen UR aims to make a real contribution to our quality of life. To us, quality of life means both an adequate supply of safe and healthy food and drink, on the one hand, and the chance to live, work and play in a balanced ecosystem with a large variety of plants and animals. Alterra is part of the Wageningen UR.

[www.alterra.wur.nl](http://www.alterra.wur.nl)



## Co-operative Programme on Water and Climate (CPWC)

The Cooperative Programme on Water and Climate (CPWC) was initiated in 2001. Its mission is to promote and mainstream activities in the water sector that contribute to coping with the impacts of climate variability and change, especially for the most vulnerable communities. CPWC assists the Netherlands government and water sector with the implementation of its international ambitions on water and climate in 'Water Mondiaal'.

[www.waterandclimate.org](http://www.waterandclimate.org)



## Deltares

Deltares is a Dutch independent research institute for water, soil and subsurface issues. Throughout the world our advanced expertise enables safe, clean and sustainable living in deltas, coastal areas and river basins. We conduct research and provide specialist advisory services in the Netherlands and globally. Deltares helps clients to develop new concepts for disaster risk reduction, water safety and water supply and adaptive strategies for development of infrastructure and ecosystems.

[www.deltares.nl](http://www.deltares.nl)



## Dutch Association of Regional Water Authorities (UvW)

The Dutch Association of Regional Water Authorities (UvW) promotes the interest of the 26 Dutch water authorities (waterschappen) at a national and international level. The association also advises the water authorities, draws up guidelines, safeguards the interests with regard to third parties, supports the water authorities with the implementation of European regulations and participates in studies and research. On an European level the Association is member of EUREAU, EUWMA and EWA. In the Holland Climate House you can meet the following water authorities: Aa en Maas, Schieland en de Krimpenerwaard, Amstel, Gooi en Vecht and Rivierenland.

[www.uvw.nl](http://www.uvw.nl)



## Eneco

Eneco is an integrated energy company, aiming to be the most sustainable energy service provider in North-West Europe. Committed, outspoken and proactive, we work towards a sustainable future with affordable and available energy for everybody. Eneco specialises in the production, trade, transmission and supply of gas, electricity and heat and related services. Our goal is to be an example and a source of inspiration to others by demonstrating that a swift transition to sustainable energy is technically possible and economically viable.

[www.eneco.nl](http://www.eneco.nl)



# Partners of the Holland Climate House

## Energy research Center of the Netherlands (ECN)

ECN develops high-quality knowledge and technology for the transition to sustainable energy management. Our focus is on energy conservation, sustainable energy and an efficient and clean use of fossil fuels. ECN also possesses unique environmental expertise. Monitoring of greenhouse gases and modeling concentrations and emission patterns are part of this expertise, as well as measuring greenhouse gas fluxes above fields.

[www.ecn.nl](http://www.ecn.nl)



## Institute for Environmental Studies (IVM)

IVM is the oldest environmental research institute in the Netherlands. Since 1971 IVM has built up considerable experience in dealing with the complexities of environmental problems. Its purpose is to contribute to sustainable development and the rehabilitation and preservation of the environment through academic research and training. The institute has repeatedly been evaluated as the best Dutch research group in this field.

[www.ivm.vu.nl](http://www.ivm.vu.nl)



## The provinces and the Association of the Provinces of the Netherlands (IPO)

All twelve Dutch Provinces are represented by IPO. This umbrella organisation has three important functions: looking after the common interests of its members, forming a platform and stimulating innovation. In addition to being a platform IPO creates space to exchange knowledge and experiences, developing visions and taking on new initiatives.

[www.ipo.nl](http://www.ipo.nl)



The province of Zuid-Holland is one of the most densely populated areas in the world. It is situated in the delta of the Meuse and Rhine and borders the North Sea. Since it lies mainly below sea level, changes in climate could cause significant risks. Zuid-Holland focuses on wind, heat and green gas to reduce GHG emissions and applies the innovative 'Sand engine' approach to adapt to climate change.

[www.zuid-holland.nl](http://www.zuid-holland.nl)



The province of Drenthe is sensitive for droughts in summer and flooding in winter. The province cooperates with the national government, municipalities, water boards, the other Northern provinces and private parties in the Northern Climate Agreement. The province focuses on green gas, energy saving and geo-thermals to reduce GHG emissions. With regard to adaptation water storage and agriculture (sensortechnology) are priorities.

[www.drenthe.nl](http://www.drenthe.nl)



The province of Utrecht is the region with the highest growth of GDP per capita in Europe. It is a road and railway junction and an ecological junction; a place where the busy Randstad delta meets the quiet forested area. The province is confronted with a wide range of consequences from climate change. It takes climate change seriously and wants to reduce its GHG emissions to zero in 2040 by working together with universities and the business community.

[www.provincie-utrecht.nl](http://www.provincie-utrecht.nl)



# Partners of the Holland Climate House

## Royal Netherlands Meteorological Institute (KNMI)

KNMI (Royal Netherlands Meteorological Institute) is the Dutch national institute for weather, climate research and seismology, founded in 1854. Climate research at KNMI focuses on observing, understanding and predicting changes in climate systems. Our selection of research topics is based on the state of international and Dutch climate research and on questions posed by the government and the public. Making this knowledge, data and information accessible is a core activity. [www.knmi.nl](http://www.knmi.nl)



Royal Netherlands  
Meteorological Institute  
Ministry of Transport, Public Works  
and Water Management

## KWR Watercycle Research Institute (KWR)

One of KWR's most urgent challenges is to realise a climate-proof, sustainable water cycle. KWR's research programme consists of fundamental, applied and technological research and includes the entire water cycle, ranging from water sources, water treatment, distribution, sanitation, wastewater, industrial processes, and health related issues – to ecosystem-water interaction, nature conservation and water management. Climate change affects all these issues. [www.kwrwater.nl](http://www.kwrwater.nl)

**KWR**

Watercycle Research Institute

## Ministry of Housing, Spatial Planning and the Environment (VROM)

VROM's goal is to make a policy in pace and harmony with current social, technological and political developments. We implement that policy in close co-operation with other ministries, local and regional governments, social organisations, businesses and interest groups as well as other national governments. The main overall objective of VROM is: "Working for a permanent quality of the living environment." [www.vrom.nl](http://www.vrom.nl)



Environment and Spatial Planning  
Ministry of Housing, Spatial Planning and  
the Environment

## Ministry of Transport, Public Works and Water Management (V & W)

The Ministry of Transport, Public Works and Water Management ensures that the physical basis on which the Netherlands rests remains robust and that we can move around smoothly, safe in our lives and at work. In doing so, the Ministry contributes to a dynamic and sustainable society. The Ministry's motto is: Moving smoothly. Living safely. [www.verkeerenwaterstaat.nl](http://www.verkeerenwaterstaat.nl)



Ministry of Transport, Public Works  
and Water Management

## Netherlands Environmental Assessment Agency (PBL)

PBL is the national institute for strategic policy analysis in the field of environment, nature and spatial planning. We contribute to improving the quality of political and administrative decision-making by conducting outlook studies, analyses and evaluations in which an integrated approach is considered paramount. Policy relevance is the prime concern in all our studies. We conduct solicited and unsolicited research that is always independent and scientifically sound. [www.pbl.nl](http://www.pbl.nl)

The logo of the Netherlands Environmental Assessment Agency (PBL) consists of a horizontal bar with a color gradient from purple to yellow, followed by a series of small, colorful triangles pointing to the right.  
Netherlands Environmental Assessment Agency

# Partners of the Holland Climate House

## The national research programmes Climate changes Spatial Planning (CcSP) and Knowledge for Climate (KfC)

A major goal of Climate changes Spatial Planning is to provide a sound knowledge base to policy makers and practitioners on how to cope with climate change. It focuses on climate scenarios, mitigation, adaptation and communication. Climate for Knowledge develops knowledge and services that makes it possible to climate proof the Netherlands. Its focus is on eight 'Hotspot' areas. Both programmes enhance joint-learning between scientists and spatial planners. The two programmes work closely together.

[www.climate research netherlands.nl](http://www.climate research netherlands.nl)



## Rotterdam Climate Initiative (RCI)

In the Rotterdam Climate Initiative government, organizations, companies, knowledge institutes, and citizens collaborate to achieve a fifty per cent reduction of CO<sub>2</sub> emissions, adapt to climate change, and promote the economy in the Rotterdam region. The Rotterdam Climate Initiative wants reduction of CO<sub>2</sub> emissions by 2025 (compared to 1990), while at the same time strengthening the Rotterdam economy.

[www.rotterdamclimateinitiative.nl](http://www.rotterdamclimateinitiative.nl)



## TNO

TNO is the largest fully independent research, development and consultancy organisation in the Netherlands with a staff of about 4000 employees. TNO supports and assists trade and industry including governments and others in technological innovation and in solving problems by rendering services and transferring knowledge and expertise. We are committed to preventing climate change and diminishing the impacts of climate change.

[www.tno.nl](http://www.tno.nl)



# Other organisations featuring in the Holland Climate House

## **Both ENDS**

Both ENDS strives for a more sustainable and fairer world by supporting organisations in developing countries to fight poverty and to work towards sustainable environmental management. They know their own problems like no other and they often come up with alternative solutions that work in the real world. Both ENDS supports organisations from developing countries via a three-pronged approach, consisting of direct support via the service desk, strategic cooperation and policy development.

[www.bothends.org](http://www.bothends.org)

## **Co-operative Programme on Water and Climate (CPWC)**

CPWC aims to stimulate activities in the water sector that contribute to coping with the impacts of climate variability and change, especially for the most vulnerable communities. CPWC assists the Netherlands' government and water sector with the implementation of their international ambitions on water and climate.

[www.waterandclimate.org](http://www.waterandclimate.org)

## **Delft University of Technology (TUD)**

The Delft University of Technology is Netherlands largest technical university, with over 15,000 students, 2,700 scientists and 1,800 people in the support and management staff. It is a member of the IDEA League and ranks amongst the top universities in the world in the field of technology according to the Times Higher Education ranking.

[www.tudelft.nl](http://www.tudelft.nl)

## **Eindhoven University of Technology (TU/e)**

Eindhoven University of Technology is a research driven, design oriented university of technology at an international level, with the primary objective of providing young people with an academic education within the 'engineering science & technology' domain.

[www.tue.nl](http://www.tue.nl)

## **Netherlands Commission for Environmental Assessment (MER)**

The Netherlands Commission for Environmental Assessment (NCEA) is an independent expert body that provides advisory services and capacity development on environmental assessment. In the Netherlands the Commission has a legal status to act as an independent advisor since 1987, issuing non binding advice to government agencies responsible for environmental assessments.

[www.commissiemer.nl](http://www.commissiemer.nl)

## **Wetlands International**

Wetlands International is a global organisation that works to sustain and restore wetlands and their resources for people and biodiversity. Wetlands include river delta, lakes, peat swamps, lagoons, estuaries and reefs. Wetlands International is an independent, not-for-profit, global organisation, supported by government and NGO membership from around the world.

[www.wetlands.org](http://www.wetlands.org)

