

Open call Adaptation to Climate Change

Invitation to submit pre-proposals



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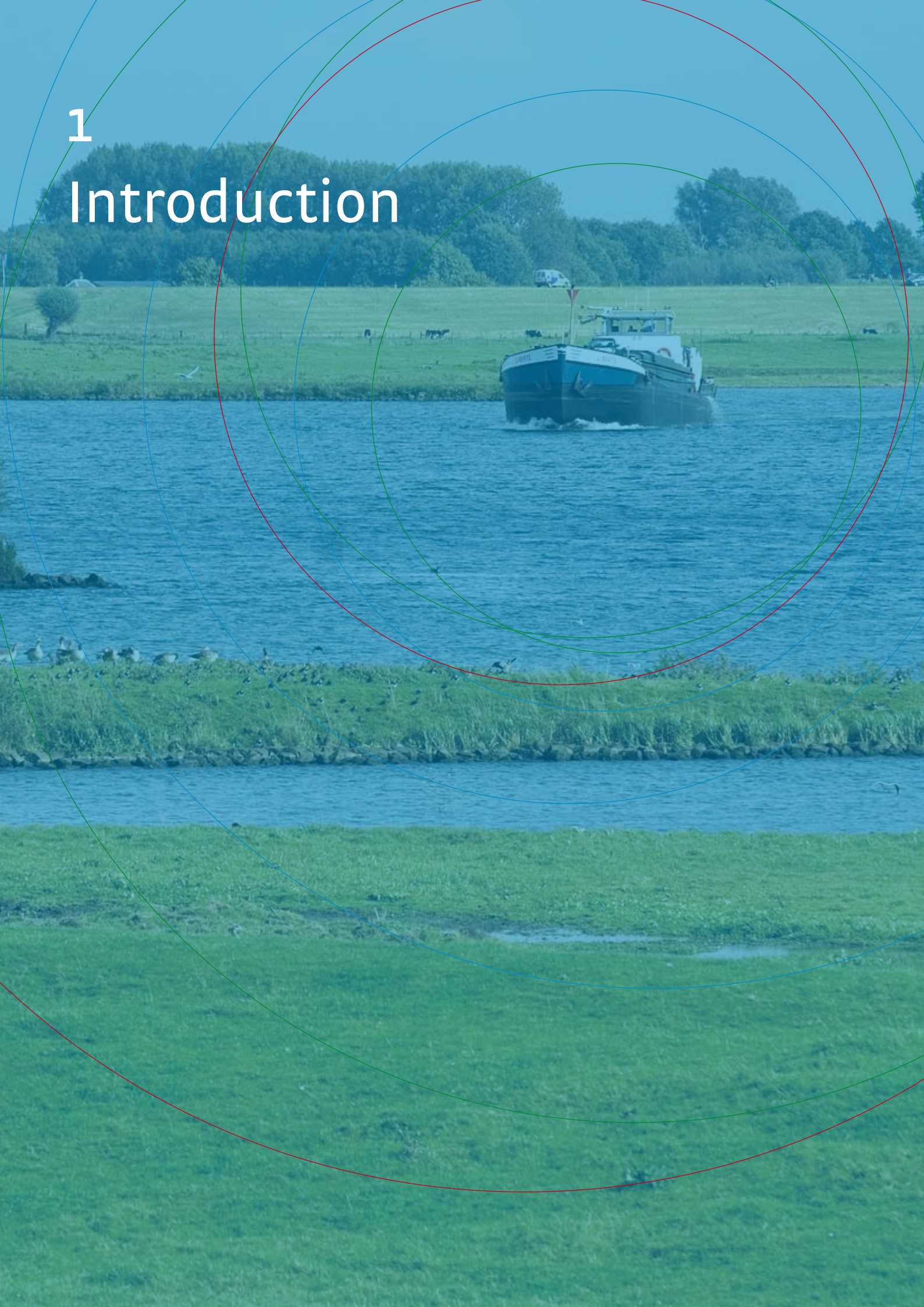
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Introduction



Climate change and the human role in it emerged at the top of the international political agenda at the end of the nineteen eighties. Since then, international agreements have been reached to limit the emission of greenhouse gases. However, even if a reduction in emissions is achieved, the time lag in the climate system will inevitably cause a substantial degree of climate change. Particularly for a densely populated and vulnerable country such as the Netherlands, timely adaptation to the effects of climate change is essential.

[Knowledge for Climate](#) is the Dutch national research programme that aims to develop the knowledge needed to climate-proof the Netherlands. It relates to regional, national and international adaptation strategies with a time horizon of up to 2050 and in certain cases even up to 2100. Its mission:



To develop the scientific and applied knowledge required for climate-proofing the Netherlands and to create a sustainable knowledge infrastructure for managing climate change.

A total of € 50 million has been made available for the programme out of the Dutch government's Economic Enhancing Fund (FES). This budget can be used to subsidise research. However, a co-financing obligation is in place.

In [Knowledge for Climate](#), knowledge institutes work closely with the Dutch authorities and the business community. The better the cooperation between these parties, the better the chance of successful and feasible adaptation strategies. Demand is a significant driver for knowledge development. Knowledge about climate, water, the natural environment, urban areas and physical space serves as the basis for further developing and shaping ideas and plans for climate-proofing the Netherlands. This encompasses both scientific and technical knowledge as well as knowledge from the social sciences. The programme also aims to help promote Dutch businesses in the fields of climate and delta technology and delta area management, and to help boost their exports.

Adaptation to climate change is under discussion across the entire world. Especially in agricultural areas vulnerable to changes in water availability, and in densely populated delta areas exposed to rising sea levels, research is identifying options available for adapting to the changing climate. The national research programme [Knowledge for Climate](#) aims to work on an international level in the search for adaptation options. This cooperation extends not only to scientists, but also to governments and businesses engaged with this problem. In order to strengthen international cooperation, initiatives from within [Knowledge for Climate](#) are being carried forward to set up an international [Delta Alliance](#).

Adaptation options and their feasibility can best be examined in a national and regional setting, since that is where one finds the knowledge and experience for effective intervention strategies. This is why the [Knowledge for Climate](#) programme focuses on a limited number of areas, mainly in the Netherlands: the so-called hotspots. These areas are important, either because of the large investments made in them or because of their relatively high vulnerability to the consequences of climate change.

The following eight Dutch hotspots are identified in the [Knowledge for Climate](#) programme.

Schiphol Mainport and the Schiphol Region



The Schiphol Region is a highly dynamic area that represents a major economic interest, not only because it accommodates an international airport but because of the various extensive projects that play a significant role in the development of the northern Randstad. This area, including the airport itself, is also vulnerable to climate change. Climate-proofing is essential for Schiphol Mainport, whose operation is highly sensitive to changing climate and weather conditions. The priority for the Schiphol Region is a climate-proof spatial organisation, along with water management in the wider area surrounding the airport.

Objective:

[to generate knowledge and thereby contribute towards a climate-proof and sustainable organisation of the airport and surrounding areas.](#)

The Haaglanden Region



The Haaglanden Region includes the conurbation of The Hague, an extensive peat meadow area and a substantial concentration of greenhouse cultivation establishments. The limitations of the urban expansion have by now almost been reached. The province, municipalities and the business community have therefore chosen to restructure and concentrate the existing urban and greenhouse cultivation area. However, this choice is complicated by the enormous demand for space to hold water, which to a large extent is also connected with the effects of climate change.

Objective:

[to develop specific strategies for adaptation to climate change, with a specific focus on the water system, in order to make the area less vulnerable to climate change, to maintain its economic strength and to enhance the livable environment.](#)

The Rotterdam Region



Rotterdam, the port and the surrounding areas will be subject to heavy spatial and industrial investments over the next ten years. These investments are focused on further industrial development, increasing port capacity, improving accessibility, urbanisation of the former port area (Stadshavens project) and further urban development along the Meuse axis.

Objective:

to climate-proof the area and make it an optimally attractive place in which to work and live, with a particular focus on the port, transport and the housing function of this area.

The Major Rivers



Climate change brings a new challenge for water management of the area surrounding the major rivers: higher river discharge levels in the winter and less rainfall in the summer months. A rising sea level and increasing river discharge levels imply a higher risk of floods, if no additional measures are taken. The greater risk of flooding, and also of periods of drought, will not only affect the lower-lying areas of the Netherlands but also the higher areas.

Objective:

to adjust the use of space in the river area as well as possible to climate change.

South-West Netherlands Delta



In future, the South-West Netherlands Delta will be faced with rising sea levels, changing wind patterns and changing river discharge levels (lower levels in the summer and higher in the winter months). This will lead to salinisation and changes in water quality and water availability. This will have effects on nature, agriculture and other functions in the area.

Objective:

to integrate the consequences of climate change in long-term policy goals for agriculture and nature (the freshwater/saltwater gradient) and to formulate adaptation strategies for water management and spatial planning, which can be implemented quickly and efficiently in both ongoing and future planning processes.

Shallow waters and peat meadow areas



There are many shallow water systems in the Netherlands such as lakes and pools as well as numerous ditches and canals, all of which are characteristic of peat-meadow areas. These shallow water systems have a function in terms of water storage, water discharge, nature, agriculture, recreational activities and drinking water. Climate change effects include parched land, peaks in water levels, salinisation and changes in water quality. Drainage leads to (intensified) peat decomposition.

Objective:

to generate knowledge on how to gear the water system to climate change in order to prevent – as much as possible – the decomposition of peat and to guarantee the ecological quality of the water.

Dry rural areas



Large areas of the Dutch countryside that are situated on higher sandy ground are presently undergoing a transition from a food-production landscape to a multi-functional landscape connected more closely to their surrounding urbanised areas. Climate change is exerting enormous pressure on this transition, due to the increasingly dynamic water management system. Flooding and water stress will lead more frequently to even greater problems.

Objective:

to generate knowledge regarding the consequences of climate change on regional development in the short and medium term.

Wadden Sea



While the Wadden Sea is a significant wildlife area, from an international perspective it also has a recreational function and acts as a safety buffer for the coastal areas of the northern Netherlands. The Wadden system is characterised by its high spatial and temporal variability and is highly resilient. Nevertheless, the Wadden ecosystem already seems to be altering because of climate change.

Objective:

to generate knowledge regarding the resilience and sustainability of the Wadden ecosystem as a safety buffer in a changing climate.

Call to submit pre-proposals

This [open call](#) is aimed at research into national and regional adaptation strategies in which the main focus is on the Dutch situation. In a parallel programme (i.e. separate from this [open call](#)) a limited number of international hotspots are examined, as well as the organisation of the aforementioned [Delta Alliance](#).

Research consortia are requested to submit [pre-proposals](#) for research into climate adaptation in which a link is established between generic research questions and area-specific research questions. A maximum of € 20 million in subsidy funding is available for this [open call](#). A sum of at least € 13.7 million must be added by co-financing parties, which is in accordance with the subsidy order of the Dutch Ministry of Housing, Spatial Planning and the Environment.

'In 50 years' time the climate in the Netherlands will not be the same as it is today. We must start taking measures now to adapt to more rainfall, higher temperatures, more frequent periods of drought, and a rising sea level. Together with other ministries, provincial authorities, local councils and water boards, the Ministry of Housing, Spatial Planning and the Environment (VROM) has devised a strategy to tackle these problems. That strategy offers points of departure and sets out the main lines. Several parties have already started to make plans for adapting to climate change on the basis of it. The Ministry of Housing, Spatial Planning and the Environment is jubilant about these plans which are often in the form of 'No Regrets' measures. We are aware that much more knowledge is still needed for us to be able to implement the most appropriate measures. Knowledge for Climate will provide a constructive contribution to bringing that knowledge to the surface. Nevertheless, it will need to be in line with the practical situation and hence the 'hotspot' approach was chosen: researchers collaborating with workers in the field. This is a challenge for both parties. The Ministry of Housing, Spatial Planning and the Environment is eagerly looking forward to the results.'

*Chris Kuijpers
Director General of Spatial Planning, Ministry of Housing,
Spatial Planning and the Environment*



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Characteristics of the open call

Programme preparation

In preparation of the programme a list was drawn up of the issues concerning climate adaptation at both national and regional level. [Knowledge for Climate](#) adhered to a very thorough procedure to identify these issues. In the preparatory stage, a mixed team of representatives of governments, companies and knowledge institutes (the so-called [hotspot team](#)) was drawn up in each hotspot to catalogue the need for knowledge. Also, several exploratory studies were carried out by experts on scientific, technical and social science themes. Synchronization was also achieved with the [National Programme for Adaptation to Climate Change \(ARK\)](#), a joint programme of the Ministry of Housing, Spatial Planning and the Environment, the Ministry of Transport, Public Works and Water Management, the Ministry of Agriculture, Nature and Food Quality, the Ministry of Economic Affairs and the following umbrella organisations: the IPO (Association of Provincial Authorities), VNG (Association of Netherlands Municipalities) and UvW (Association of Water Boards). The resulting reports from these exploratory studies are available on the [Knowledge for Climate](#) website.

A Programme in three phases

[Knowledge for Climate](#) subsidises research in three phases, the first of which is already underway. In the first phase, the hotspots formulated research projects which were put out to closed tender. These primarily concern short and medium-term projects, focusing on the most urgent needs for knowledge. A list of these projects can be found on the [Knowledge for Climate](#) website. This [open call](#) relates to the second phase of the [Knowledge for Climate](#) programme. The main components of this stage are long-term studies that generate more in-depth knowledge in which the link between generic and area-specific questions plays the central role. A substantial part of the [Knowledge for Climate](#) research funding will be spent on this second phase. In the third phase, which will have a combined closed/open character, the hotspots will need to combine the results from the various research lines in order to develop adaptation strategies.

Second phase: eight research themes

The [Knowledge for Climate](#) programme opted for steering in advance for reasons of cohesion: not only cohesion between generic and area-specific questions but also between different disciplinary and sectoral lines of knowledge. In order to promote cohesion a total of eight themes were selected which in combination will determine the adaptation agenda. These eight themes are considered to be the most important ones for the development of national and regional adaptation strategies. The thematic line of approach also contributes to stimulating scientific innovation and in-depth research. This [open call](#) contains a description of the eight research themes. They are:

- [Water safety at national and regional level](#)
- [Freshwater supply at national and regional level](#)
- [Climate-proofing rural areas](#)
- [Climate-proofing urban areas](#)
- [Infrastructure and networks](#)
- [Improving climate projections and the set of instruments used for modelling](#)
- [Governance of adaptation](#)
- [Decision support tools](#)

Scientific quality and societal applicability

In this stage of the programme [Knowledge for Climate](#) calls for innovative and in-depth research in particular; research that will take a maximum of four years to complete. Proposals must be of high scientific quality and be in line with the international scientific debate. Although the focus is primarily on the Netherlands, the research carried out must also contribute to the development of international knowledge in the field of climate adaptation. Of equal importance, the research must contribute to the development and successful implementation of national and regional adaptation strategies. To this end, the proposals must be in line with the need for knowledge as expressed by the hotspots, governments and other stakeholders. In short, the ambition is to link high scientific quality to societal relevance and applicability. Research proposals will therefore be assessed primarily on the basis of this combined perspective.

One important additional goal of [Knowledge for Climate](#) is to strengthen the national knowledge infrastructure in the field of adaptation to climate change. Therefore, in this programme priority is given to research projects and research consortia that focus on innovation and multidisciplinary, while at the same time bridging the ongoing, more sectoral and disciplinary research programmes of the various ministries. Proposals for sectoral and disciplinary research will only be subsidised by [Knowledge for Climate](#) if they are essential for the programme to succeed as a whole, and if a reasonable case can be made to show that the research is not – or will not be – included in the regular research programming of the ministries.

The eight themes will be described in brief in the following chapter. A more detailed description of the themes can be found in a so-called [source document](#) on the [Knowledge for Climate](#) website. This document also contains information on the specific research questions formulated by the hotspots, authorities and other interested parties.

Relationship with the NWO programme, Integrated Sustainable Earth Research

NWO and the [Knowledge for Climate](#) Foundation have earmarked € 1.5 million for postdoctoral projects, in which connections will be established between the different research programmes of the partners in the [National Partnership for a Sustainable Earth](#). [Knowledge for Climate](#) is one of the partners. The [open call](#) for that specific [Integrated Sustainable Earth Research](#) programme will be published at the same time as this [open call](#). The programme has three main themes: modelling, uncertainty and governance. The central elements are the underlying relationships between levels of scale and feedbacks in the ‘earth – life – society’ system. Details on this [open call](#) can be found on the websites of NWO and [Knowledge for Climate](#).

3

Eight research themes



3.1 Water safety at national and regional level

Water safety has always been high on the agenda in the low-lying country of the Netherlands. Over the past few centuries a good hydraulic engineering infrastructure and an efficient water management system have been developed to protect our country from high tides. Nevertheless, climate change and the associated accelerated rise in sea level, extreme rainfall in the summer months and higher water discharge from the rivers Rhine and Meuse, are giving rise to new tasks to protect us from high water. The second Delta Committee put forward several recommendations in 2008 for protecting the Netherlands from high tides and for adapting to the effects of climate change in terms of water management at regional and national level.

We are faced with the major challenge of adapting our densely populated and low-lying country to the (partly uncertain) effects of climate change and dealing with the risks involved. Diverse research programmes on water safety are currently in progress. [Knowledge for Climate](#) intends to focus primarily on the development of additional and more in-depth knowledge regarding adaptation measures, based on topics formulated by the hotspots. Measures to be taken must also be adequately sustainable and robust in order to offer resistance to the uncertainty of anticipated climate effects. Options are limited in the Netherlands, a country which is densely populated and densely built. Adaptation measures are therefore closely interwoven with the spatial organisation and specific circumstances of the individual locations, whose interests and functions will need to be taken into account. We must search for sustainable and location-specific measures that focus on combining 'blue', 'green' and 'red' functions. For instance, natural processes can be utilised to augment water safety. We can probably learn from the way other nations deal with the effects of climate change on water safety and the measures they are taking. Knowledge development within this theme focuses on prospects for action, with a particular emphasis on developing a deeper understanding of the concept of [robustness](#), in terms of function, environmental engineering, economics and society.



Key questions

- Which adaptation measures regarding water safety are sufficiently robust to offer resistance to a whole range of potential climate change effects?
- What are the possibilities of combining the water safety function of new types of climate-robust dikes (including wider dikes) with other functions (nature, housing, recreation, infrastructure, etc.)?
- What opportunities are offered by natural climate buffers in terms of water safety?
- What are the possibilities and limitations of building flexible dams.
- How effective are these prospects for action in relation to the regional and national safety risks? To what extent can measures to limit the consequences contribute to reducing the risks?
- What can the Netherlands as a country learn from the way in which other nations are dealing with these problems?

Relevant hotspots

The Major Rivers, South-West Netherlands Delta, the Rotterdam Region, Schiphol Mainport and Schiphol Region and Wadden Sea.

See the [source document](#) for specific questions put forward by the hotspots.

'It goes without saying that in Zeeland the aspect of safety comes first and foremost, but in this day and age we must give more consideration to other interests as well. Especially the natural qualities of the area and accessibility to Zeeland score high. Typical projects in this respect are Perkpolder and Waterdunen. The scientific prognoses with regard to climate also entail a good few uncertainties and in practice we have to play safe. This is only possible if politicians (and therefore the general public too) are convinced of the necessity to take measures. We need to intervene in such a way that in 50 years' time those interventions will still be regarded as having been the right ones to take. Science can help in this respect by developing No Regrets strategies, and also by offering more certainty, for instance on the storm barriers along the coastline in worst-case scenarios. The Sand Engine is a new concept that allows the coastline to grow along with the rise in sea level. We want to know how sand deposits are spread by wind and sea currents. Nor do we have a really good solution for the need for sand in the Oosterschelde. If Knowledge for Climate proposes research of relevance to us, then it goes without saying that we too will become a partner. We can then ensure sound coordination. A magnificent challenge for the consortia of researchers.'

*Rein van der Kluit
Director RWS Zeeland*

3.2 Freshwater supply at national and regional level

Via an extensive infrastructure of canals, streams, lakes and pumping stations, the freshwater supply in the Netherlands aims to support a wide range of functions such as the supply of drinking-water and agricultural water, nature, recreation and the urban water supply. Climate change will lead to a rise in sea level and both higher and lower discharges from the rivers Rhine and Meuse. This will mean a substantial change in hydrodynamics and the salinity situation in various regions of the Netherlands. Together with the climatic effects on the weather (rainfall and evaporation extremes) this will have a direct consequence on the drinking-water and agricultural water supply, nature, recreation and other functions related to river water and groundwater. Proposed management measures (higher water level in the IJsselmeer, salinisation of the Volkerak-Zoommeer, transportation of freshwater, etc.) can increase and/or reduce these adverse consequences locally.

Therefore, a significant task lies ahead to achieve an adequate and sustainable adaptation strategy for the water supply; a strategy that supports as much as possible the various functions related to river water and groundwater, but which also takes into account the quality of the water and its ecological values.

Various implementation and research programmes on the freshwater supply are currently underway. Knowledge development within this theme aims at the scientific underpinning of sustainable and innovative regional and national adaptation strategies for the long-term water supply and water quality. Contact will need to be maintained with ongoing and planned research to ensure that it supplements and deepens understanding.

The development of an adaptation strategy for the water supply and water quality is not only an important task for the Netherlands. The water supply in almost every location on earth is influenced by climate change. Studies are being carried out into how society can deal with water more efficiently around the whole globe. This is why an international orientational study into this issue is so essential for this theme.



Key questions

- In what way can the water supply be organised in a robust fashion so that we can flexibly anticipate a wide range of potential effects of climate change?
- What opportunities are offered by a decrease in the demand for water and/or the reuse of water for the freshwater supply in the long-term?
- What are the possibilities and limitations of bringing in freshwater from elsewhere and/or the storage/buffering of surplus water for the water supply?
- What possibilities are offered by water-technological and organisational measures to maintain and increase water quality and ecology?
- How can we adapt to and deal with periods of water shortage and fluctuations in water quality?
- How effective are these prospects for action in relation to the regional and national water supply and water quality risks?
- What can the Netherlands learn from the way other nations deal with these problems?

Relevant hotspots

The Major Rivers, South-West Netherlands Delta, The Haaglanden Region, The Rotterdam Region and Schiphol Mainport / Schiphol Region.

See the [source document](#) for specific questions put forward by the hotspots.

'The climate is changing, and as a water board we will be faced with the consequences of that change. For the Haaglanden region the freshwater supply is crucial for the various functions and destinations, also in periods of drought. Fresh surface water is used for the greenhouse farming businesses located in the Westland for instance. It is also important for the flora and fauna, as well as for the peat meadow area in Midden-Delfland. We are doing our absolute best to ensure a safe and inhabitable delta, in both dry and rainy periods. We therefore wish to prepare ourselves for climate change now. We need knowledge and insight to ensure that we make the best choices regarding the space and investments needed.'

*Michiel van Haersma Buma
dike warden Delfland Water Board*

3.3 Climate-proofing rural areas

The regional water system is as much a part of rural areas as the farmland and natural landscape. While the Netherlands is home to a wide variety of landscapes and natural values, it is also noted for its intensive farming and high level of agricultural produce. The rural areas not only have important functions in terms of agriculture, natural environment and landscape, but also for recreational activities, the drinking-water supply, housing and employment. It also carries visible infrastructure such as roads and dikes, and underground infrastructure such as the sewage system and water mains. In particular, the rural areas around the densely populated Randstad offer a mix of agricultural land use, natural environment and co-use by urban areas for recreation, housing and mobility, etc.

Water management can be a major guiding factor for the development of regional spatial planning and infrastructure. One key question is whether adapting to or moving along with the changes in the water balance caused by climate change is the best water management strategy for agriculture, the natural environment and the drinking-water supply.

We need to search for adaptation measures that take into account or even make use of the specific characteristics and functions of the area. The challenge here is to combine as many functions as possible. For such an integrated, multifunctional approach to the use of space, attention needs to be devoted to both physical and socioeconomic aspects of adaptation measures. Moreover, these adaptation measures must also be in line with the mitigation task to which the Netherlands has committed itself through international agreements. These mitigation agreements probably even offer the opportunity to develop new functions, such as the fixation of greenhouse gases or producing climate-neutral energy. With regard to adaptation, there would also seem to be opportunities for developing so-called climate services, such as buffer areas to reduce the effects of extreme weather conditions and to cool urban areas during heat waves.

Nature policy is also an important theme for rural areas. Apparently there is no frame of reference currently available for natural environmental goals that are realistic and appropriate in a changing climate. Perhaps opportunities exist to link up with the potential climate services offered by small landscape features.

Key questions

- What is the impact of climate change on its rural areas and the associated functions?
- What combinations of function contribute to a climate-neutral, robust and optimum organisation of the rural areas, and how can peri-urban rural areas be organised to counteract or reduce the adverse effects of climate change in urban areas?
- What are the prospects for developing a so-called [climate service](#) for both agriculture and nature, and how could the transition take place from the agricultural system, the water system and nature conservancy to a [climate service](#) as a new economic agent?
- What are adequate adaptation strategies for agriculture, nature and the water system, and on which points of departure must these strategies and the ensuing policy (including nature policy) be based? Is it possible to design and manage the regional water system in such a way as to support the functions of agriculture and nature?

Relevant hotspots

The Haaglanden Region, Dry rural areas, Shallow waters and peat meadow areas, The Rotterdam Region, Wadden Sea and South-West Netherlands Delta.

See the [source document](#) for specific questions put forward by the hotspots.

'A strong stimulus is required to climate-proof the elevated parts of the Netherlands. Government and the individual regions must join forces to counteract the increasing amount of parched land. A wide range of up-to-date knowledge and area-specific research is needed if we are to gain insight into the nature and consequences of climate change on higher situated sandy soil in order to put forward innovative, practicable and affordable solutions.'

Lambert Verheijen
dike warden Aa and Maas Water Board



3.4 Climate-proofing urban areas

Climate change has an influence on cities and surrounding areas. Adaptation of urban patterns, public space and the water system, and of houses/buildings is essential to keep cities pleasant to live in over the years and to protect them from social dislocation and discomfort. Cities are a complex system of physical, economic and social structures; a system which is closely linked with the surrounding rural area and with the urban structure of surrounding areas. Many components are interrelated. For instance: research will need to focus on the different scales evident in cities (building, street, district, city, the urban conurbation) and their respective interaction. The element of time is also highly significant for cities, firstly because investments in cities are long-term (sewage system, buildings, public spaces, roads, water and ICT infrastructure, etc.). If these investments are to be profitable and continue to contribute to a habitable city, then the future climate, with all its associated uncertainties, must now be taken into account in plans, design and management. Secondly, time plays a role in finding time intervals in which action can be taken. Transitions in cities that demand a different organisation and allocation of space are difficult to engineer. Therefore, the opportunities that arise will need to be used cleverly. The restructuring of districts or industrial estates, the laying of a new sewage mains, the re-landscaping of a park or the renovation of a street can all present such opportunities.

Key questions

- What is the climate system in the city, both now and in the future, and which measuring system and models are required to gain more insight into it? What are the threats and opportunities as a result of climate change, and how can we quantify and prioritise them?
- What is the optimum configuration of 'red', 'green' and 'blue' land use functions in the city, at the different scale levels, taking into account the climate and climate change, and providing a maximum contribution to the well-being of city-dwellers with the least possible impacts on the quality of life? The relationship between indoor and outdoor climate must also be taken into consideration. This question relates to newly built estates, district and industrial estate restructuring. An inherent component of this question is: how will cities function in 2050?
- How can streams and ponds be used in such a way that they give off heat to buildings and districts during the winter and keep them cool in the summer?
- How can measures for climate adaptation be weighed within a wider assessment framework, with a view to the long-term, in the context of urban overcrowding and the wish of many cities to be climate-neutral before 2050?
- What can we learn from how cities abroad deal with adaptation issues?

Relevant hotspots

The Haaglanden Region, Schiphol Mainport / Schiphol Region and The Rotterdam Region.

See the [source document](#) for specific questions put forward by the hotspots.



'Knowledge for Climate makes it possible for Rotterdam to conduct research into the long-term effects of climate change on the city's water system as well as on the quality of life in the city. That is a significant contribution to the challenging task that faces our municipality in terms of the climate!'

Lucas Bolsius
Alderman of Rotterdam

3.5 Infrastructure and networks

A change in the climate can have a major effect on both underground and aboveground networks and on the infrastructure. Yet little is known about the effects of climate change on the functioning of networks and the infrastructure. What is the influence of higher temperatures and salinisation on underground cables, pipes and mains in terms of corrosion? Where is rising pipework and mains giving concern in view of different groundwater levels? There is also little known about the effectiveness of adaptation policy. Infrastructure as referred to in this theme means linear infrastructure (roads, railway and waterways) and fixed-point infrastructure (sewage treatment plants, power plants, engineering structures, etc.). This theme focuses on the aspect of functionality at the system level of infrastructure and networks. The theme relates not only to today's infrastructure and networks but also those that will be in operation in 50 years' time. What will the networks and infrastructure look like 50 years from now? What might the climate be like then, and what does that imply for adaptation projects now?

Key questions

- What are the effects of climate change on the infrastructure and networks?
- How vulnerable or resilient are infrastructure and networks?
- What will be the damage for national and regional economies if, as a result of climate change, the infrastructure (both road transport and shipping), networks, mains services, mainports and urban conurbations are hindered in terms of their proper functioning, or if certain mains services, (fixed-point) infrastructure or networks break down for any length of time?
- Which adaptation strategies are possible, and which are feasible in terms of economy, society, ecology and space, given the timescale and the speed at which climate change is expected to occur?
- What can we learn from how other nations are dealing with these problems?

Relevant hotspots

Schiphol Mainport / Schiphol Region and The Rotterdam Region. See the [source document](#) for specific questions put forward by the hotspots.

'Collaboration with the region is essential in the Knowledge for Climate programme. Airport infrastructure and airport operations are susceptible to weather and climate changes. An additional factor is that Schiphol and the Schiphol region is situated four metres below sea level. The changing climate and the anticipated effects of that change, such as the rise in sea level and increased periods of heavy rainfall, are major challenges that require a great deal of research and time. Joining forces now should make it possible for us to adapt to those changes in due course. We are confident that our participation in the Knowledge for Climate programme will enable us to deal adequately with these matters.'

Jos Nijhuis
President & CEO Schiphol Group



3.6 Improving climate projections and the set of instruments used for modelling

Hotspots and governments focusing on adaptation to climate change need information about the future climate for the area of relevance to them. This calls for climate models and climate effect models that provide useful information at regional and local level, taking into account the uncertainties. Climate and sea level scenarios that show the potential future climate are drawn up on the basis of modelling results. The scale used for the current models is Europe, or part of it, and the resulting climate scenarios provide information on a limited number of climate parameters within a limited spatial and temporal domain. In this theme, the research must focus on regional climate projections, the links from climate to climate effects, and scenario development methods and interpretation.

It is important that a continuing knowledge infrastructure will be developed to serve users of climate information in the future. It is also important to create knowledge which – in the longer term – will be required to continue generating up-to-date climate information.

A connection must be sought with international developments, for instance climate services institutions in foreign countries. A contribution must also be made to new data and knowledge generated for the [IPCC 5th Assessment](#), and use must be made of this data.

Key questions

- How can relevant, consistent, scientifically-founded information on the future climate and climate effects – at the regional and local scale – be furnished effectively, geared towards the user on the basis of the wishes of stakeholders (in hotspots)?
- What are the significant links between climate models and the existing national set of effect model tools that can be used for the particular scale and issues that are relevant to the hotspots?
- What are the relevant new scenarios for the future climate at the regional and local scale, based on new climate information and models, and how can they be applied meaningfully, taking into account the uncertainties?
- Giving particular attention to the natural variability and spatial differentiation, with spatial-specific information on the risks, what are the mechanisms of regional climate change and how can regional climate change models be improved?

Relevant hotspots

Dry rural areas, The Major rivers, Wadden Sea, Schiphol Mainport / Schiphol Region and Shallow waters and peat meadow areas.

See the [source document](#) for specific questions put forward by the hotspots.



'Climate change has a major impact on the hydrologic system of the rivers Rhine and Meuse. The expectation is that discharge from these rivers will be less in the summer months, and the peak discharges that occur in the winter will be higher. In order to gear the water management system to future trends the Dutch Government has a need for climate projections in terms of the changes that will take place in the hydrology of our major rivers. It is essential that these climate projections also include the opinions of experts in our neighbouring countries so as to arrive at joint climate forecasts. In addition to internationally-oriented prognoses it is also essential that we gain insight into the relevant margins and how to come to grips with the uncertain future.'

*Hendrik Buitenveld
Rijkswaterstaat Waterdienst, senior consultant*

3.7 Governance of adaption

Attention in the [Knowledge for Climate](#) programme focuses primarily on spatial adaptation to climate change and strategies will need to be developed that contribute to climate-proofing the Netherlands (and the different regions within it). In addition to a substantive component, these strategies also have an (economic and policy) governance component. The latter is central in this theme. The question here is how to increase the 'adaptive capacity' of our society. Analysis of the adaptive capacity will be coupled specifically to the substantive component (the feasibility of physical spatial adaptation) and to the existing institutional structures. Strategies and instruments for adaptation can differ according to the substantive issues under discussion. Furthermore, adaptation strategies must be in line with the current institutional structures of a policy area such as the relevant (European and national) legislation, the public and private parties involved (and the associated tasks and responsibilities) and the prevailing normative principles. This does not alter the fact that, given the necessary effectiveness of adaptation policy, essential adjustments to the institutional structures could arise from the research to be carried out.

Six building blocks are considered important to promote adaptive capacity in this theme: (1) the institutional structure, (2) dealing with uncertainties and perceptions of risk, (3) supervising policy processes, (4) the utilisation of policy instruments, (5) the carrying-over of knowledge to adaptation policy and (6) socioeconomic capacities.

Key questions

- Are reinforcements or adjustments to the institutional structure (including funding regimes) necessary in order to effect climate adaptation policy? What is the relationship between the private and public efforts in climate adaptation?
- How can we deal wisely with uncertainties, risks and perceptions in regional climate adaptation projects, for instance by means of insurance?
- How can regional policy processes aimed at climate adaptation be organised, taking into account the level of support, linkage to other interests, unobstructed implementation and long-term perspectives?
- What existing and/or new policy instruments can be used in national and regional climate adaptation policy, and what is the role of financial and economic instruments in this regard?
- What improvements are feasible in the relationship between knowledge development and policy implementation?
- What can we learn from experiences abroad in the field of governance and adaptation?

Relevant hotspots

Dry rural areas, The Major rivers, The Haaglanden Region, Shallow waters and peat meadow areas, Wadden Sea and South-West Netherlands Delta.

See the [source document](#) for specific questions put forward by the hotspots.

'Climate change is a transnational problem that has enormous consequences for our future. For an area of global significance in terms of biodiversity, etc., like the Wadden Sea, it is essential that we respond and take action fast. This will only be possible if there is consensus among all parties concerned. And there are many in the Wadden Sea area: not only the various local governments of different countries but also their inhabitants and pressure groups. This demands large-scale coordination if we are to agree on what is the best way to deal with climate change in the Wadden Sea. It is therefore vastly important to initiate governance projects that examine how to best organise ourselves. We must wait no longer and start immediately.'

*Tineke Schokker-Strampel
Province of Friesland representative*



3.8 Decision support tools

To draw up a well-considered climate adaptation strategy or to enable an assessment of its effects, certain tools to enable decision-making would be helpful. For instance: both ex-ante tools – which play a role particularly in policy preparatory work, such as scenarios, appraisal and assessment frameworks – and ex-post tools – that can be utilised at the implementation and evaluation stage, such as monitoring and evaluation methods. One important condition for the effective use of these tools is that they take into account the specific characteristics of climate change and adaptation policy. These include not only the inherent political character of policy processes in general, but also the long-term perspective, the uncertainties that creep in and the dependence on other societal interests and developments, etc. In other words, the administrators need clear and unambiguous knowledge that must be available and usable in the short-term, while they are confronted with the need to draw up long-term plans with regard to climate change and are faced with major uncertainties.

Some of these tools are currently under development and existing instruments are being enhanced with a climate-proofing ‘module’. These initiatives are or will be funded by, inter alia, the [Climate changes Spatial Planning](#) programme and one of the components of [Knowledge for Climate](#), namely [Building blocks for National Adaptation Strategy](#). The intention of this research theme is that a widening, innovating and further deepening of understanding takes place, together with a reflection on and evaluation of the existing and recently developed tools. It must be emphasised that the research must be in line with present knowledge.

Key questions

- How can current national scenarios and outlooks (socioeconomic, climatological, technological) be translated into consistent regional development scenarios for the medium and long-term, in order to adapt water management and the use of space (in both rural and urban areas) to the changing climate conditions?
- What policy instruments are available to develop various policy options in the field of adaptation, make them perceptible, weigh them up against each other and assess them in terms of their climate-proofing? How do these instruments function and what is their value in bringing together knowledge and practice (evaluation of existing practices for the purpose of optimising future practices)? Are new instruments needed to support the regional adaptation policy and, if so, do they differ from the existing instruments? Which instruments can be used in which circumstances?
- How can the MKBA (Social Costs and Benefits Analysis), plus other economic analysis methodologies and multi-criteria analyses, be further developed for the economic assessment of national and regional adaptation strategies, so that uncertainties, indirect economic effects, reputation damage, societal dislocation, assessment of group risks, timing of interventions and the long-term character of investments (>50 years) can be included in the analyses?
- Which instruments are available, or need to be developed, to be able to visualise region-specific adaptation measures (make them perceptible to the citizens involved) and monitor the degree of adaptation? What indicators can be used in the monitoring process? In this respect, it is advisable to relate the indicators for climate robustness to sustainability indicators.

Relevant hotspots

Dry rural areas, The Major rivers, Wadden Sea and Shallow waters and peat meadow areas.

See the [source document](#) for specific questions put forward by the hotspots.



‘When discussing the climate we tend to think primarily of the melting ice caps; but what is happening here, just around the corner, as a result of climate change? The risk of flooding, heat stress in built up areas, a higher level of land subsidence, inadequate sewers, new plant varieties, etc., etc. To gain insight into these effects, and to deal with them, the Provincial authorities of Utrecht, for example, make use of climate effect maps showing which problems are to be found where, as well as diagrams of promising projects. The approach we are taking calls for knowledge – and the dissemination of knowledge – for us to comprehend the consequences and to keep up the pace of our approach.’

*Wouter de Jong
Province of Utrecht representative*

4

Proposal submission guidelines

The procedure for submitting proposals consists of two steps:

- a. Submission of a **pre-proposal**
- b. Submission of a **full proposal**

Submitting a pre-proposal

Consortia are requested to submit a **pre-proposal** for the execution of a research theme as described in the previous chapter. A proposal must relate to a research theme in its entirety and be formulated in English. The format for **pre-proposals** can be found on the **Knowledge for Climate** website.

Pre-proposals may be submitted by a qualified scientific researcher associated with a Dutch knowledge institute. The main applicant is also deemed to be the leader of the research consortium. **Pre-proposals** will be assessed by a review committee comprising scientists and representatives of societal parties. This assessment will be used as the basis for the Executive Board to decide which consortium will be selected for each research theme.

Composition of a research consortium

The partners in a consortium must be knowledge institutes capable of conducting research in a scientific and appropriate manner. These include universities, institutes for applied scientific research and research bureaux in the public and private domain. Each consortium shall be composed of at least three Dutch knowledge institutes. Given the international character of climate change and the international ambitions of the **Knowledge for Climate** programme, the consortium must include at least one foreign knowledge institute which is able to contribute specific expertise and play an advisory and/or executive role. It is expected that specific research groups affiliated with knowledge institutes will participate in the consortia. For each theme, research groups may take part in one consortium only.

A knowledge institute participating in a consortium may use no more than 40% of the available subsidies per theme.

When can a pre-proposal be submitted?

A **pre-proposal** must be submitted to the **Knowledge for Climate** Programme Office by email and as a PDF document by **Friday 21 August, 12.00 noon** at the latest. A hard copy of the **pre-proposal** signed by the main applicant, sent by registered mail, has to arrive at the Programme Office no later than three working days after the dead line. Submitted proposals may not be adapted or changed during the review procedure. Proposals received after the deadline will not be considered. Persons submitting proposals will be sent a message of receipt and admissibility.

Query period

Queries concerning the substance and procedure of this **open call** may be submitted in writing (only) to the Executive Board of the **Knowledge for Climate** Foundation in the period before 30 June 2009. The questions and the associated answers will be compiled and published on the **Knowledge for Climate** website on 6 July 2009.

Assessment of pre-proposals

All pre-proposals will be assessed by a review committee in September 2009. Chapter 5 of this brochure provides an overview of the relevant assessment criteria. Persons submitting a **pre-proposal** will receive the review committee's judgement on 14 September 2009. They will subsequently be given the opportunity to present a brief written defence within one week. The Executive Board will make a well-founded decision as to which consortium is the best for each theme at the end of September 2009. This decision will be based on the assessments and the defence of the persons submitting the proposal. The decision may be supplemented with additional terms and conditions and suggestions to further develop the **pre-proposal** into a **full proposal**. The Executive Board may, on the basis of the **pre-proposal** assessment, also attach conditions concerning the composition of the consortium.

Full proposal submission procedure

The selected consortium may develop the research theme in the form of a research proposal for the whole theme. This detailing process will first and foremost relate to the work packages indicated in the **pre-proposal**, the associated individual research projects (including the interrelationship between the projects) and the way in which the knowledge that will be acquired can be used for the practical adaptation issues of the hotspots.

Subsidy can be requested for the appointment of PhD students, research students and senior researchers for a minimum of one year and a maximum of four years, and for all specific expenses reasonably connected with the research that do not fall under the standard provisions of knowledge institutes. This therefore relates chiefly to long-term proposals, for which the ruling applies that a substantial part (around 50% or more) of the available budget is used for PhD students and the remaining budget for other researchers.

From October up to and including December the consortia will have the opportunity to further develop their **pre-proposals** into **full proposals**. In doing so account must be taken specifically of the wishes and interests of the hotspots. During this stage the consortia must have finalised the co-financing. The selected consortia, in consultation with the Executive Board, will establish contact with the interested hotspots and other co-financing parties that have expressed interest in participating in the research theme. One objective of these meetings is to obtain focus and mass in the research programme and the other is to concentrate on practical adaptation issues. The Executive Board will organise initial meetings at the beginning of October 2009 for selected consortia and hotspot representatives. The dates will be published on the **Knowledge for Climate** website in mid-July.

The planned date for submitting a **full proposal** is **12 noon on Monday 21 December 2009**.

Full proposal assessment

The **full proposal** will be assessed on scientific quality and social relevance and applicability. The scientific quality will be assessed by three international experts. The assessments made by these three experts will be presented anonymously to the persons responsible for submitting the **full proposal** by the **Knowledge for Climate Programme Office**. These persons will subsequently be given the opportunity to submit a brief letter of defence.

A review committee will discuss the **full proposals**, partly on the basis of experts' opinions and the responses of the applicants, together with their own judgement on social relevance and applicability. With regard to the latter, the main question is whether the knowledge to be acquired can be used for the practical adaptation topics presented by the hotspots.

The Executive Board will then make their well-founded judgement, on the basis of the recommendations put forward by the review committee. If the judgement is positive, the consortium may continue to implement the research programme. If the judgement is negative, then the Executive Board will determine whether it is possible and feasible for the consortium to adapt the proposal.

The format for submitting a **full proposal**, plus an overview of the assessment criteria, will be published on the **Knowledge for Climate** website at the beginning of July 2009.

Available subsidy budget

The maximum subsidy budget available for projects in the second phase is € 20 million. **Knowledge for Climate** is obliged to generate a co-financing sum at the programme level. Co-financing for this second phase, to be brought in by the parties participating in research projects and other stakeholders, must be at least € 13.7 million. The definitive sum of the subsidy budget available for the second phase will be established when the selected consortia for the eight themes formulate the definitive research proposals.

The budget available per theme will depend on the extent to which the hotspots agree with the themes and, broadly coherent with this, the co-financing sum that can be generated per theme. Consequently it is not possible to give an exact indication of the subsidy budget available per theme, at the stage of drawing up the **pre-proposals**. However, on the basis of an initial inventory of the interest shown by the hotspots, it is possible to give an indication of the range of the subsidy budget, the co-financing required and the project budget (see Table 1). This indication is provided for the purpose of formulating **pre-proposals**. No rights may be derived from this indication.

Table 1 Indication of the subsidy budget, co-financing and project budget per theme

Theme	Subsidy budget in € * 1.000	Cofinancing required in € * 1.000	Project budget in € * 1.000
1 Watersafety	2.500 – 3.000	2.000 – 2.500	4.500 – 5.500
2 Freshwater supply	2.500 – 3.000	2.000 – 2.500	4.500 – 5.500
3 Rural areas	2.500 – 3.000	2.000 – 2.500	4.500 – 5.500
4 Urban areas	2.500 – 3.000	2.000 – 2.500	4.500 – 5.500
5 Infrastructure and networks	1.500 – 2.000	1.000 – 1.500	2.500 – 3.500
6 Climate projections and instruments	2.750 – 3.250	1.000 – 1.500	3.750 – 4.750
7 Governance of adaptation	2.250 – 2.750	1.500 – 2.000	3.750 – 4.750
8 Decision support tools	1.500 – 2.000	1.000 – 1.250	2.500 – 3.250

5 Pre-proposal assessment criteria



Research subsidised by **Knowledge for Climate** must meet both scientific and societal criteria. That means the research must be in line with current international academic practice and the area-specific questions from the field. The quality of the research consortium also plays a role in the assessment.

An independent review committee will put forward their recommendations to the Executive Board as to the quality of the **pre-proposals**. The review committee that will assess the **pre-proposals** will be broadly based and comprise both scientific and societal experts, with competences that cover all the themes.

The submitted **pre-proposals** will be assessed on the basis of the following criteria:

Societal criteria:

- Affiliation of the research with strategic policy questions at national and regional level and the level of linkages established with the current sectoral and disciplinary knowledge agendas of the ministries.
- Applicability of the intended results.
- The way in which the results of the research will be disseminated to potential users in ministries, regional and local governments, societal organisations and/or businesses.
- The way in which stakeholders will be involved in executing the research.
- Appropriateness of the resources to be employed.

Scientific criteria:

- The scientific formulation of the problem, scientific quality in terms of theory and method, and the proposal's relevance in the context of the international scientific debate.
- Innovative and multi-disciplinary character.
- Cohesion, consistency and demarcation of the proposed research programme.
- The degree to which the research programme establishes a link between the long-term adaptation goals (2050) and the short and medium-term intervention options.
- Views on the connection between generic research questions and area-specific research questions.

Criteria relating to the research consortium:

- A balanced composition of the research consortium and the degree to which various disciplinary and sectoral lines of knowledge are linked through the consortium's composition.
- The quality of the research consortium and the constituent parts, as well as the degree to which the consortium is able to contribute to strengthening the knowledge infrastructure in the field of climate adaptation.
- The quality of the senior researchers concerned.
- Research programme management.
- Organisation of international collaboration.

Qualification required

Pre-proposals will be marked as follows on the aforementioned three main categories:

- Excellent = 5 points
- Very good = 4 points
- Good = 3 points
- Moderate = 2 points
- Poor = 1 point

The review committee must award at least 11 points to a **pre-proposal** for it to be selected for the next stage. An additional requirement is that none of the three categories score lower than 3 points. Both requirements should be seen as minimum qualifications and do not automatically lead to selection. Whether a **pre-proposal** is selected partly depends on the quality of the other competing **pre-proposals**.

6

Execution of the research



Subsidy agreement

After the research programme has been approved, a start can be made on the actual research activities. The basis for conducting the research is a subsidy agreement entered into between all members of the consortia with the [Knowledge for Climate Foundation](#). Aspects regulated by this [Agreement to provide a financial contribution by the Knowledge for Climate Foundation](#) are:

- The maximum subsidy percentage to be provided for projects.
- Establishing the basis for project costs and hourly rates.
- Stipulations regarding co-financing.
- The utilisation and exploitation of knowledge and intellectual property.
- Monitoring of and reporting on progress in terms of content and finances.

For more information concerning the rules and guidelines that apply within the [Knowledge for Climate](#) research programme please refer to the following documents (only available in Dutch):

- The subsidy agreement: [Agreement to provide a financial contribution by the Knowledge for Climate Foundation](#);
- Frequently Asked Questions about the available research subsidies on the [Knowledge for Climate](#) website.

Steering committee

Steering committees will be set up during execution of the various research themes. Each theme will have its own steering committee. These committees will consist of representatives of the participating hotspots and representatives of other co-financing parties. The task of a steering committee is to monitor, supervise and where necessary give advice in terms of adjusting the execution of the research. The formal competence to intervene lies with the Executive Board.

Knowledge transfer

One of the goals of the research is the application of the results by potential users. The consortia themselves are responsible for the dissemination and diffusion of the knowledge they generate in their projects. They will be given assistance in this respect by [Knowledge for Climate](#), especially the [Knowledge Transfer](#) unit. It is expected that consortia will set out in their [pre-proposals](#) the strategies they wish to follow for knowledge dissemination and diffusion. This strategy must be worked out in detail in the [full proposals](#). We stress that knowledge dissemination and diffusion is fundamental even during the research period.

7

FAQ's relating to open call

What exactly is a knowledge institute and a research group?

In this **open call** the following definition of **knowledge institute** is applicable: an institute of higher education, as set out under 'a' and 'b' of the annexe to the Higher Education and Research Act, or a profit-seeking or non-profit research institution in the field of scientific and/or applied research, governed by public or private law, which advertises itself as such publicly. Faculties, departments, units, knowledge institutes and similar bodies that form a part of the abovementioned organisations are therefore not regarded as separate knowledge institutes.

A **research group** is the smallest conceivable research unit within a knowledge institute which advertises itself as such publicly (e.g. in scientific publications or by means of a website). A research group usually consists of a supervisory senior researcher (e.g. a professor) and one or more auxiliary researchers.

What is the maximum number of institutes or research groups that may be a part of a consortium?

There is no limit, but the composition of the consortium must be practical, i.e. the role of each institute or each research group must be clearly reasoned in the research proposal. The added value of each institute and/or group must therefore be demonstrated.

What is the precise role of a foreign knowledge institute in a research consortium?

A foreign partner must add extra quality to the research consortium. This can mean that the partner brings in exclusive knowledge which is important for the project to be a success, or even assists in conducting part of the research.

May consortia consult with hotspot representatives at the pre-proposal stage?

That is not the intention. Bringing the proposal into line with the questions from the hotspots cannot be worked out properly at this stage; nor is the aspect of co-financing under discussion as yet. It is also not intended that the hotspot representatives make their preferences known regarding the composition of a consortium at this stage.

May consortia consult with potential co-financers at the pre-proposal stage?

Making agreements with co-financers is not allowed at this stage. The main argument is that co-financers will not be able to make any binding commitments at this stage, because the executive consortium has not yet been selected. The degree of co-financing is therefore not a criterion in **pre-proposal** assessments.

What is the role of hotspot teams and co-financers at the stage of developing the pre-proposals into full proposals?

Intensive consultation must be held between the selected consortium and the relevant hotspot teams at this stage in order to arrive at research proposals that also deal with the questions from hotspots. Discussions will also need to be held with other potential co-financing parties that may be interested in participating in the theme. A steering committee of co-financing parties will be set up for each theme by the Executive Board. These steering committees will be set up partly on the recommendations of the consortium.

At which stage must the co-financers commit themselves to their contribution to financing the research?

Commitments regarding co-financing must be made when the selected consortium submits the **full proposal**. These commitments must be appended in writing to the **full proposal** and at this stage may have the status of a **letter of intent**. The commitments must be made definitive when concluding the subsidy agreement.

Do the co-financers have a say in the composition of a consortium, and may they help decide on the substance of research proposals?

Support from co-financers with regard to the research proposal is essential. All research projects subsidised by the **Knowledge for Climate Foundation** need co-financing. The procedures have been developed in such a way that the best consortium may develop the research proposals in detail. At that stage it is desirable to hold discussions with the co-financers, to achieve the best fit between the wishes of the public and private parties concerned and the interests of the knowledge institutes in the consortium. Decisions about which consortia may develop the research proposals, and about the subject matter of research proposals, are in the hands of the Executive Board, the body which is advised by the Programme Council.

Can co-financers withdraw during the actual execution of the research?

The co-financers guarantee that they will help to pay for the execution of a research programme for one or more of the themes. Certain aspects are laid down in a contract. Withdrawal during execution of the research is therefore not possible. However, the subsidy granted for a research project may be discontinued by the Executive Board if the commitments are not honoured, or the agreements regarding progress and delivery of results are not being met, or if there is reason to discontinue subsidy on the grounds of advice from the aforementioned steering committee.

If, during the execution of the research, its scientific and societal relevance leads to conflicting requirements regarding the substance and direction of the research, which mechanisms are included to resolve such conflicts?

Problems in the relationship between scientific and societal relevance can always occur, particularly in this type of research. Assessment of the research proposals includes taking a critical look at any potential tension between the two. This cannot fully prevent problems from arising when conducting the research. It is primarily the responsibility of the consortium leader to solve the problem in a prudent fashion. The steering committee can also play an advisory role in this respect. If tension or disputes persist, then the Executive Board will make a binding decision.

At the execution stage of the research, can a steering committee demand that a different course be taken?

This is only possible if the course taken deviates from the approved **full proposal** and if new insights prompt such action. The Executive Board may formally enforce adjustment. In most cases adjustment can be achieved in consultation between the researchers and the steering committee. Each adjustment or deviation from the original course must have the approval of the Executive Board.

What is the function of the hotspot teams during execution of the research projects?

Hotspot teams are represented in the steering committees that supervise the various research themes. As they go along, the hotspot teams will need to bring together the research results from the various themes to form integrated adaptation strategies in a follow-up stage.

8

Miscellaneous information



The following relevant documents are available on the Knowledge for Climate website:

- A PDF version of this brochure in Dutch and English.
- The source document for this **open call** containing a description of the themes and the specific research questions from the hotspots.
- An overview of all the projects in the first phase.
- The exploratory scientific reports for programming.
- A format for a **pre-proposal**.
- The subsidy agreement: **Overeenkomst tot verlenen van financiële bijdrage door Stichting Kennis voor Klimaat** (Agreement to provide a financial contribution by the Knowledge for Climate Foundation).
- **Frequently Asked Questions** on the available research subsidies.

Procedure for lodging an objection

The main **pre-proposal** or **full proposal** applicant may lodge an objection as a result of the decision taken by the Executive Board. Notices of objection must be submitted to the **Knowledge for Climate Programme Office** 5 working days at the latest after despatch of the relevant decision of the Board.

Costs

All costs involved with the preparations of the **pre-proposal**, including cost of requirements made, will be on the applicant's own account. The same applies in case **Knowledge for Climate** did not select the consortium, postpones or stops the **open call**, or decides not to select any of the consortia.

Confidentiality

Knowledge for Climate will deal with the information provided by the applicant in strict confidentiality. Regardless of the **pre-proposal** being successful or not, information will not be provided to third-parties who are not involved in the review procedure.

Time table

Activity	Day	Deadline	Responsible
Publication open call	0	25 May 2009	Knowledge for Climate
Questions	36	30 June 2009	Applicant
Publication of answers to questions	42	6 July 2009	Knowledge for Climate
Submission pre-proposal	88	21 August 2009	Applicant
Selection of consortium	102	14 September 2009	Knowledge for Climate
Option for written defence	109	21 September 2009	Applicant
Invitation to submit full proposal	118	1 October 2009	Knowledge for Climate

Contact information

Knowledge for Climate Programme Office

Visit address

Daltonlaan 400
3584 BK Utrecht

Postal address

Postbus 80115
3508 TC Utrecht

T +31 88 335 7880

office@kennisvoorklimaat.nl

www.knowledgeforclimate.org



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