



Vision

Adapting to climate change is not only a technical issue but above all a demanding matter of governance. The governance of adaptation poses some specific challenges, like the context of institutional fragmentation as climate change involves almost all policy domains and governance levels; the lack of an institutionalised policy domain; the long term time horizon, the persistent uncertainties about the risks and proposed solutions; and the inevitable controversies. Governance arrangements for adaptation should be: (a) legitimate, i.e. ensuring transparency, accountability, fairness and equity; (b) effective, i.e. address the adaptation task decisively and efficiently through the right mix of norms, instruments, strategies and processes, and; (c) resilient, i.e. both enabling autonomous adaptation and building long term adaptive capacity.

Aims

This collaborative action research programme analyses, develops and tests governance arrangements that can contribute to developing and implementing adaptation options, and to increasing the adaptive capacity of society so that future climate changes can be confronted. In doing so the programme aims to contribute to scientific progress, to societal debates, and to the reflective practice of professionals (involved in the Knowledge for Climate Hotspot areas and the Delta Programme).

Key research questions

1. Why and to what extent do governance arrangements enhance connectivity within fragmented governance systems, and how can these insights be translated into design principles?
2. Which economic instruments and governance structures to allocate risks and responsibilities between the public and the private are promising, and how can they be implemented?
3. What are the consequences of uncertainties, stakeholders' perceptions and contested knowledge, and which methods help to cope with them in decision-making processes?
4. How can the principles of legitimacy, effectiveness and resilience be elaborated and what are the implications for the governance of adaptation?

Insights

Organizing connectivity

Climate adaptation actors tend to see climate adaptation as the most important policy aim, and overestimate their own ability to reach climate ambitions by making plans, laws and policies. Many actors in neighbouring domains like water, urban and regional planning, agriculture and economic development, are not dedicated to climate adaptation strategies and will not automatically support the implementation of these strategies. We found that the opportunities for effective implementation will grow considerably when adaptation strategies are connected with the implementation of other ambitions. We elaborate four sets of strategies which may be utilized to organize “connectivity for adaptation”: experiments, multifunctional land use, leadership and multilevel governance.

Dealing with controversies

In spite of the inherent uncertainties, ambiguities, controversies and conflicts of interest, decisions about adaptation strategies are being taken now. We found that controversy about climate change has almost disappeared as climate change has almost eclipsed from the policy agenda, which poses particular challenges to (re-)frame adaptation actions.

Furthermore, it appears that the knowledge-intensive nature of climate change adaptation at the regional level is met with problem reduction strategies and fitted into pre-existing science-policy arrangements. Another insight is that the governance challenges resulting from the long term character of the climate adaptation issue need more research attention.

(Re)allocating responsibilities and risks

While natural science research plays an important role in informing us what kind of climate adaptation measures can be implemented, it cannot answer who has to plan, realize and pay for them, and what kind of policy instruments need to be used. A conceptual framework has been developed that facilitates the comparisons of various arrangements. To showcase the usefulness of the framework we applied it to two specific cases, green roofs and natural climate buffers. One main insight is that the performance depends on whether the adaptation action just requires a one-time investment without much maintenance in later years, or periodic actions that need to be undertaken by various actors. Another insight is the negative correlation between efficiency and legitimacy, and between effectiveness and accountability.

Normative principles

Climate change puts existing normative principles and basic policy viewpoints of what is in the public interest to the test. General normative principles such as equity, non-shift, compensation, right to water and right to flood protection must be further elaborated in legal terms. It is essential to clarify the criteria resilience, legitimacy and effectiveness, since they acquire different meaning depending on the professional and policy contexts. It seems obvious to consider normative principles of adaptation to climate change in its transboundary and European context.



Collaborative action research

Through an innovative collaborative action research programme, our programme takes guidance from the Hotspots and Delta Programmes as the primary source of questions, dilemmas and empirical data regarding the governance of adaptation. We collaborate with policy makers in testing insights and concepts and evaluating their usefulness.

Close interaction between researchers and practitioners improves not only the utilization of scientific knowledge, but also its quality in terms of its sensitivity to contextual factors, the incorporation of local knowledge and its relevance. However, the implementation of the collaborative action research programme also faces some difficulties as it conflicts with existing norms of both the knowledge and policy institutions.



Case studies

Organizing connectivity

- Multifunctional land use project Roofpark (Dakpark) Rotterdam
- Leadership of the Province of Noord-Brabant and Waalweelde
- Multilevel governance in the Delta Programme: South-West Delta; Delta Decision Rijn-Maasdelta and Delta Programme Rivers

(Re)allocating responsibilities and risks

- Green roof governance arrangements in five European cities: Basel, Chicago, London, Rotterdam and Stuttgart
- Adaptive flood risk management in Hamburg and Rotterdam (Heijplaat)
- Fresh water supply in Hotspot South-West Delta
- Costs of water retention in Noord-Brabant
- Auctions for natural climate buffers in South-West Delta

Dealing with controversies

- The Delta Committee: understanding and dealing with the variety of climate change frames in governance processes, science-policy arrangements
- Evaluation of process Delta Programme IJsselmeer
- Droge Voeten 2050 (Dry Feet 2050). A process to prepare for climate change (Water Board Noordzijlvest, Hotspot Open waters and Peat Towards 2050)

Normative principles

- Juridical advices for Rotterdam and Delta Programme Fresh Water Supply
- Principles and practices of transboundary governance of climate adaptation Rijn-Niederrhein

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Working with Hotspots / Stakeholders

- Hotspot Haaglanden region
- Hotspot Rotterdam region
- Hotspot Major Rivers
- Hotspot South-West Netherlands Delta
- Hotspot Shallow Waters and Peat Meadow Areas
- Hotspot Dry Rural Areas
- Hotspot Wadden Sea
- Ministry of Infrastructure and the Environment

Consortium partners

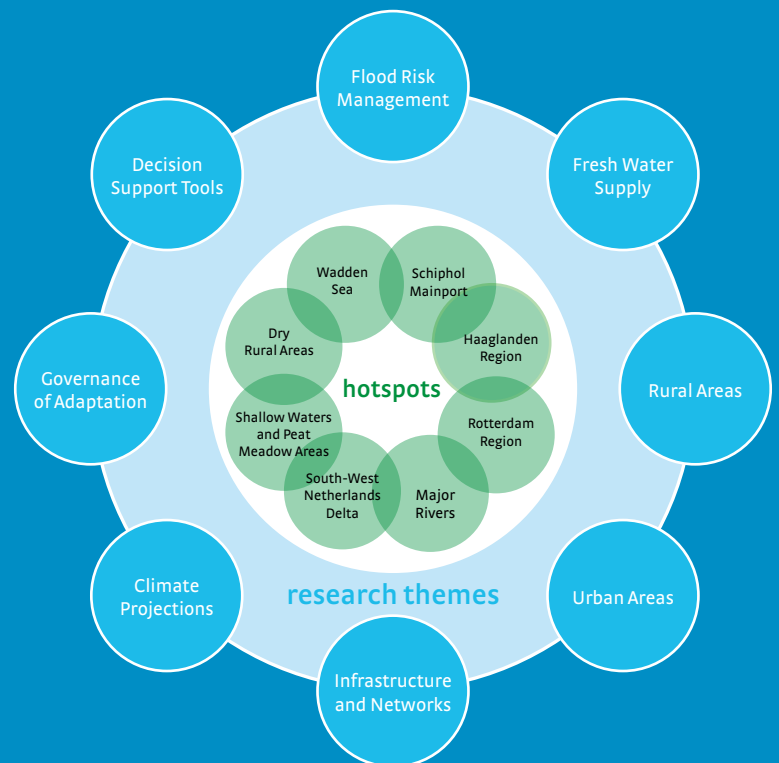


Knowledge
for Climate

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

Knowledge for Climate is a research programme (2008-2014) that develops knowledge and services needed to make the Netherlands climate proof. Governmental organisations (national government, provinces, municipalities and water boards) and businesses actively participate in the research programme. Knowledge for Climate focuses on eight areas, called hotspots: Mainport Schiphol, Haaglanden Region, Rotterdam Region, Major Rivers, South-West Netherlands Delta, Shallow waters and Peat Meadow Areas, Dry Rural Areas and the Wadden Sea Region. The scientific research is carried out in eight themes by consortia.

- Climate Proof Flood Risk Management
- Climate Proof Fresh Water Supply
- Climate Adaptation for Rural Areas
- Climate Proof Cities
- Infrastructure and Networks
- High-quality Climate Projections
- Governance of Adaptation
- Decision Support Tools



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