

Local Communities Adapting to Climate Change: An Exploration of the Relationship between Risk Perception and Action

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What is this study about?

Climate change is real. A rising sea level, increasing average temperatures and more extreme weather events are already occurring, and, moreover, northwestern Europe is being struck by rising temperatures that are even higher than the climate change scenarios tell.

Based on the most recent data, the Intergovernmental Panel on Climate Change maintains that climate change is an inevitable development (IPCC 2007). Even if we were able to curb our emissions today, the climate will change due to the accumulation of greenhouse gases emitted in the past. Thus, even from a skeptical point of view, it is now widely recognized that we must begin to initiate adaptation measures now.

The Netherlands are at the focus of this study. Due to its low-lying location and the close connection to the North Sea and the large rivers Rhine and Meuse, the country is particularly vulnerable to flooding risk. Despite sophisticated civil engineering projects, the country has faced many flooding events throughout its history. This flooding risk will only increase due to climate change.

Currently, all layers of government are formulating adaptation strategies to cope with climate change adaptation. At national level, the National Adaptation Strategy was delivered in 2007. At regional and local level, more hands-on strategies are gradually being delivered. Locally, the scale and ambitions of adaptation strategies are very diverse.

What is being done?

In my PhD project, I address the following research question:

What are the driving factors for local communities in the Netherlands to formulate climate change adaptation strategies, and what is the effect of risk and institutional capacity on the level of action of a municipality?

A combination of quantitative and qualitative methods is applied to answer the research question:

1. Inventory round of case studies on the effect of risk and experience on the level of action;
2. A quantitative survey among practitioners on driving factors and risk perception;
3. Thematic case study on civil protection

and climate change ;

4. Comparative case studies on driving factors for local climate adaptation;
5. Literature study and theoretical framing.

The output of the PhD project is a selection of papers. These papers will be presented at international conferences and submitted to peer-reviewed journals.

What does this study add?

In the climate adaptation debate, the local government is crucial since climatic events will per se have local impacts to which these governments should to protect the community from. Yet only little is known about how and why this governmental layer deals with climate change adaptation as studies in this field are limited given the novelty of the issue.

The current PhD project aims at a contribution to fill this gap by producing insights and knowledge on the driving factors for Dutch local authorities to act on climate change adaptation. The designed conceptual framework presented in the Figure will be applied in analyzing the effect of climate change risks on these driving factors and the role of institutional capacity in order to explain the current status of climate change policies in Dutch municipalities.

Conceptual framework and empiric basis

Figure 1 Conceptual framework for local climate adaptation

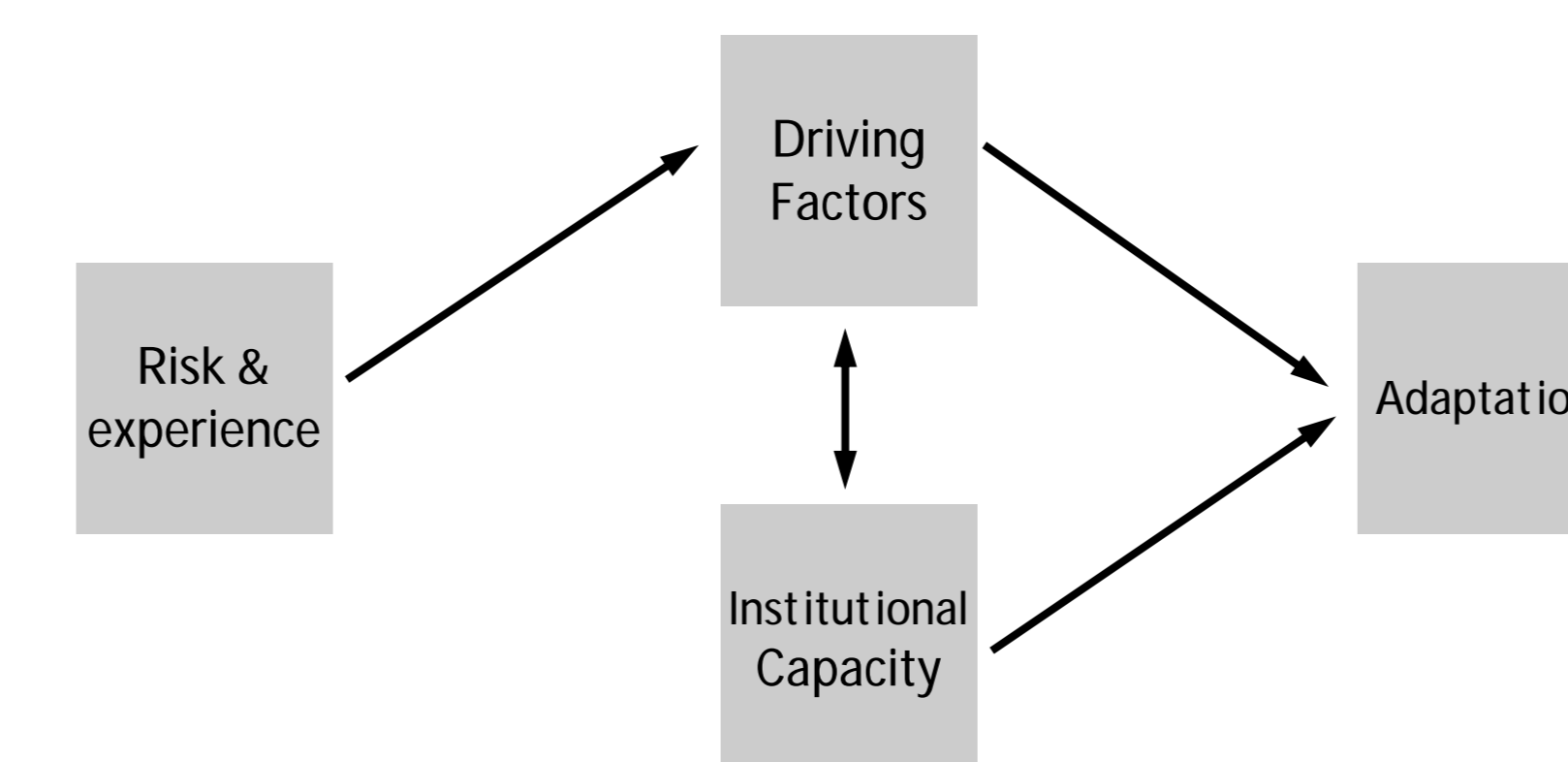
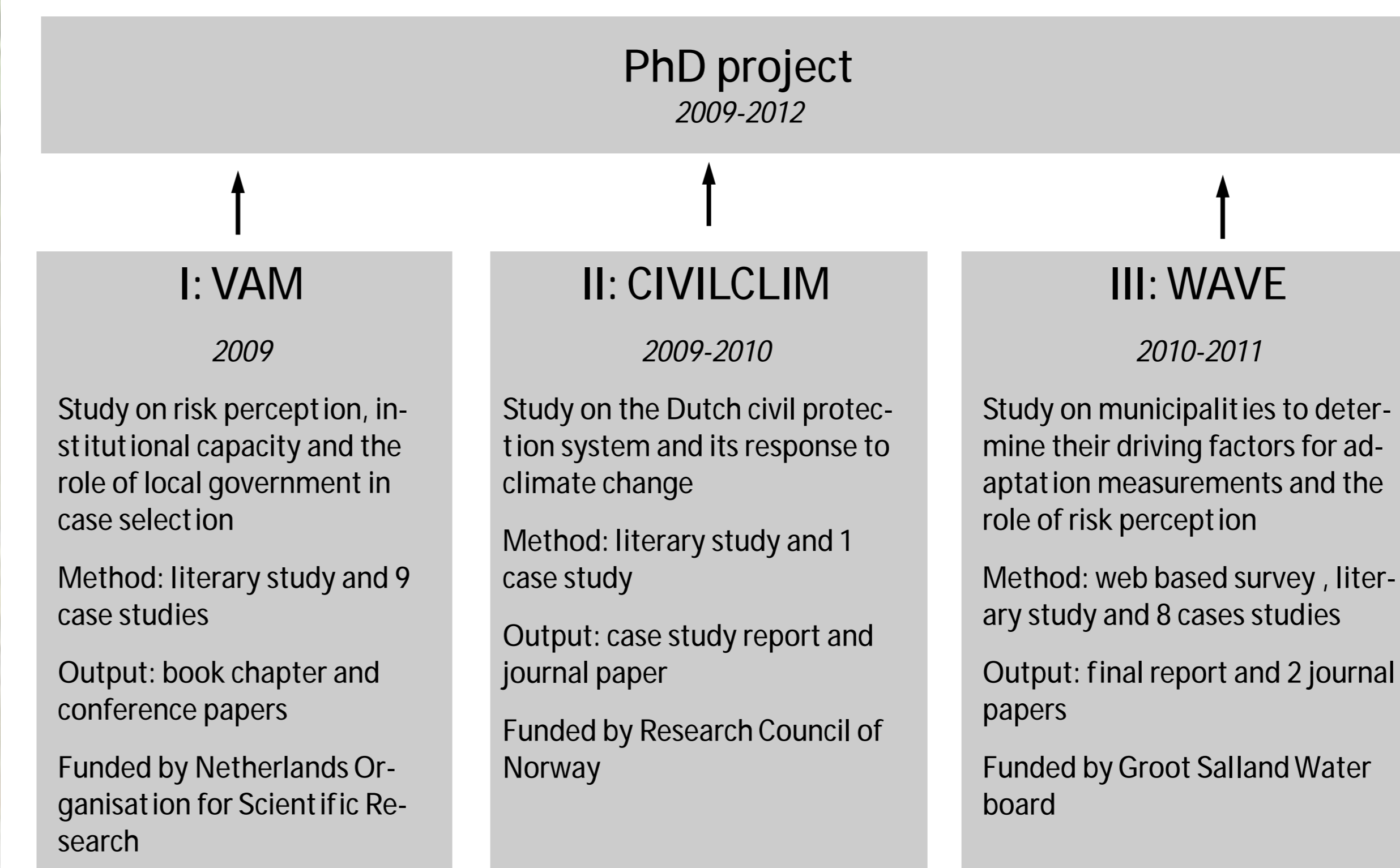


Figure 2 Empiric basis of the PhD project



What are the results so far?

Van den Berg, M. M., Lafferty, W. M. & Coenen, F. J. H. M. (2010). Adaptation to climate change induced flooding in Dutch municipalities. In P. Martens and C. Chang (Eds.), *The Social and Behavioural Aspects of Climate Change. Linking Vulnerability, Adaptation and Mitigation*. Greenleaf Publishing: Sheffield UK. Forthcoming August 2010.

Van den Berg, M.M. (2010). *Climate Change Adaptation in Dutch Local Communities. Risk Perception, Institutional Capacity and the Role of Local Government*. Enschede: CSTM, University of Twente.

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Van den Berg, M.M., & Coenen, F.J.H.M. (2009). *Local-level civil protection and climate change impacts: a case study report on Rotterdam. Internal case study report to the second stage of the CIVILCLIM project*. Enschede: CSTM, University of Twente.

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