

Kennis voor Klimaat

Knowledge for Climate



Governance of Adaptation

Legitimate adaptive flood risk governance beyond the dikes: The cases of Hamburg, Helsinki and Rotterdam

Description of the research

This research entailed an international comparative case study on adaptive flood risk governance arrangements for urban waterfront regeneration projects. These projects apply flood risk strategies that aim to reduce the impacts of a flood in addition to preventing the occurrence of a flood so as to improve the resilience to climate change. Applying multiple flood risk strategies fits with the new strategy of “Multi-layered Safety” which was introduced in 2009 by the Dutch government.

3 Projects of un-embanked former harbour areas were studied: Heijplaat-Rotterdam (NL), Hafencity-Hamburg (GE) and Kalasatama-Helsinki (FI). These have in common that they represent frontrunner cases in adaptive flood risk governance, but they differ in the way they have allocated responsibilities between public and private actors. In addition to the analysis of similarities and differences in the governance arrangements, we analysed what the key differences in responsibility divisions mean for the legitimacy of the arrangements. Legitimacy is a key issue in relation to the acceptance of the arrangements and their outcomes with public and private stakeholders, and society in general. An important assumption of this research was that public arrangements require different sources of legitimacy than private or public-private arrangements. For these projects we analysed the relevant key policy documents and we conducted semi-structured interviews with key public and private stakeholders, 36 in total. The research was conducted between March and November 2012 on behalf of the hotspot Rotterdam Region.

- The selected projects have taken measures in all three layers, including layer 2 (measures in the built environment to reduce the impacts such as adaptive designs of buildings) and layer 3 (organisational measures to reduce the impacts and enhance the recovery such as evacuation planning and insurances).
- Hamburg is most elaborated in terms of the application of multiple measures across all three safety layers. Individual plots are being raised, individual buildings have adapted designs and flood doors, and evacuation routes are elevated. There is extensive risk communication to citizens, and building owners and residents are united in so-called “Flutschutzgemeinschaften”. These community groups are activated during floods to close the flood doors and to effectuate a smooth evacuation of the buildings.



Research question

How is legitimacy attained for adaptive flood risk governance arrangements in terms of their decision-making process and outcomes, and how can differences in legitimacy be explained in terms of differences in the divisions of responsibilities between public and private actors?

Conclusions regarding adaptive strategies

- An initial scoping exercise revealed that the majority of urban waterfront regeneration projects still employs flood prevention (safety layer 1) as the sole strategy (by raising the building level).

Conclusions regarding responsibilities

- All three projects show a certain shift of responsibilities for water safety to private actors. Private responsibilities are most widely developed in Rotterdam as a result of the creation of a public-private partnership.
- The governance arrangements in Hamburg and Helsinki show more dominant public responsibilities. The local authorities are in charge of the water safety policy (setting of norms and determination of the strategy), while this is a joint responsibility of the partnership in Rotterdam.

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- In Hamburg and Helsinki the local authorities play an important role in the monitoring and checking of adaptive building measures taken by the private sector. Private responsibilities manifest themselves primarily in the implementation of adaptive measures (layer 2) and flood preparation and damage control (layer 3).
- In Hamburg the responsibility for flood preparation is formalized via the Flutschutzgemeinschaften. The local authorities carry an important responsibility for flood risk communication, to make citizens aware of flood risks, their own responsibilities regarding the management of flood risks, and to provide them with action perspectives.

Conclusions regarding legitimacy

- In Rotterdam, being the sole case with joint public-private responsibilities, legitimacy is attained via direct forms of representation, participation and deliberation. In Hamburg and Helsinki legitimacy is indirectly attained via ratification processes of elected representatives.
- In all three cases legitimacy is also attained via a high degree of acceptance of the arrangement and its outcomes by public and private stakeholders (output legitimacy).
- In Rotterdam the direct forms of participation and deliberation have not automatically led to a higher output legitimacy than in the other two cases.
- Private responsibilities for flood preparation and control (layer 3) raise important legitimacy issues as to whether citizens 1) are sufficiently aware of the risks and urgency of flood risks, and 2) have sufficient adaptive capacity to take appropriate action.

Lessons from Hamburg and Helsinki

- Be transparent about flood risks and about the responsibilities of citizens themselves, and communicate these on a regular basis. The Hamburg authorities have a lot of experience with risk communication. See the picture or download from: http://www.hhla-immobilien.de/immobilien/docs/Merkblatt_HW_S.pdf.
- Allocate responsibilities with the private sector for those matters in which the private sector has most expertise. In Helsinki the development of the floating district is the sole responsibility of two private developers.



Challenges for Rotterdam

- The fact that not all citizens of Heijplaat are aware of the flood risks or that they find other matters such as the level of social facilities in their district more pressing and urgent, may be problematic in light of private responsibilities for adaptive building (layer 2) and flood damage control (layer 3).
- After the realization of adaptive building of the new part of the district, the older part of the district will have acquired a lower water safety level, which might give rise to legitimacy issues if disproportionate flood damage occurs during a flood event.

Opportunities for Rotterdam

- Raising the awareness of citizens increases their ability to deal with the impacts of floods (according to the study of De Boer et al, 2012). This requires a municipal effort for transparent and continuous risk communication to citizens.
- Take the interest of water safety into account right from the start of the re-development, in order to integrate it as much as possible with socio-economic interests.

More information

Detailed case study reports are available of all three projects, http://promise.klimaatvoorruijnte.nl/pro1/publications/show_publication.asp?documentid=7859&GUID=c8c2aff8-89d6-4d0c-9846-75395a545e3f. More information can be obtained from: Heleen Mees, Utrecht University, h.l.p.mees@uu.nl