

## Who governs urban climate adaptation?

A comparative analysis of governance arrangements in urban areas

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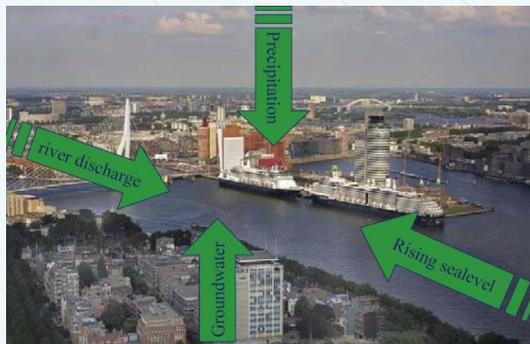
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## Research background



Why (urban) climate change adaptation?

- *New environmental policy field*
- *Specific challenges: uncertainty, spatial diversity, controversy & social complexity*
- *Urban areas particularly vulnerable to climate change*



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## Research background



Why does the issue of responsibility divisions matter

- *Vague and ambiguous responsibilities hamper adaptation*
- *The division of responsibilities influences the legitimacy, effectiveness, fairness etc. of the governance arrangement*

**Thesis:** A clear allocation of responsibilities is important for getting adaptation planning and action off the ground

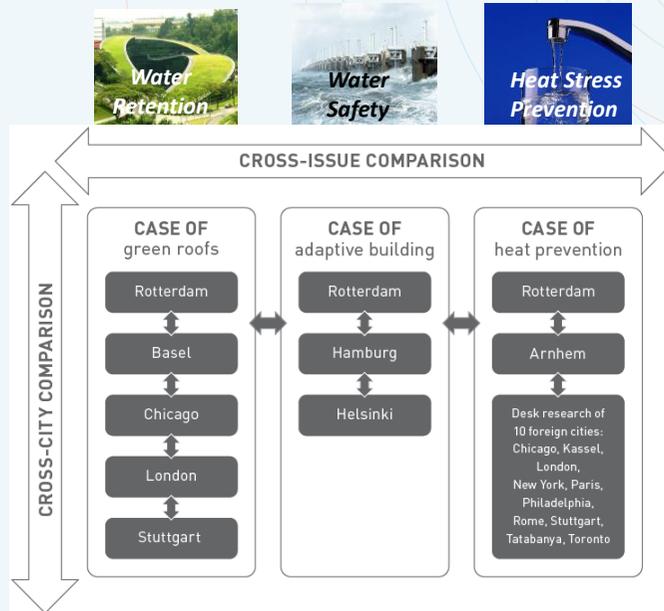
## Research objectives & questions



To explore, analyse, and evaluate governance arrangements for urban adaptation to climate change

- *Who is responsible for which role* among public and private actors across the stages of the policy process
- *How do the subsequent arrangements perform* in terms of effectiveness, legitimacy and fairness

## Comparative multiple case study design



## Cases & Research methods



### Cases & case units

- 3 adaptation measures for 3 key issues
- 20 local governance arrangements
- 15 cities
- 10 countries in North Europe & North America

### Data collection

- > 100 policy documents
- 97 in-depth interviews with stakeholders & experts
- 2 multi-stakeholder workshops

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## Results: **who** is responsible



### Analysis

- Different roles across the 4 stages of the policy process
- Public=local authorities (e.g. water mgt, public health)
- Private=private actors (citizens, businesses etc.)
- Public-private=shared responsibility (partnerships, networks)



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## Results: **who** is responsible



### Conclusions

- Existing arrangements are characterised by a large extent of public responsibilities
- Private responsibilities mainly during implementation
- Public-private responsibilities are quite rare

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## Results: how is the performance



### Analysis Green Roofs

- Most relevant consideration: Securing adaptation action
- Considerable uncertainty re. the ROI of green roofs, which deters private action

### Conclusions

- Securing any adaptation action requires public responsibilities in the first stage of the policy process
- Hierarchical arrangements with predominant public responsibilities are more effective, i.e. reach the highest implementation levels (factor 25x)



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## Results: how is the performance



### Analysis Adaptive Building

- Most relevant consideration: Legitimacy
- Adaptive building requires private responsibilities
- Private responsibilities for water safety raises legitimacy concerns (e.g. Democratic deficit)

### Conclusions

- Different responsibilities can be legitimate in different ways:
  - Public-private: high throughput legitimacy (inclusive participation)
  - Public: high output legitimacy (transparency, accountability)
  - Private: high output leg (sense of urgency & adaptive capacity)
- Ratification by elected governors are needed for high input legitimacy, irrespective of responsibility divisions



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## Results: how is the performance



### Analysis Heat stress prevention

- Most relevant consideration: Fairness in terms of the principle of 'putting the most vulnerable first'
- Vulnerable citizens are often unable to protect themselves, resulting in high morbidity & mortality rates



### Conclusions

- Public responsibility is (considered) necessary, particularly in developing targeted policies for active outreach to different vulnerable groups
- Putting the most vulnerable first can clash with legitimacy concerns: help from others (public or private) is easily viewed as paternalism

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## Overall conclusions



- Responsibilities for urban adaptation to climate change are primarily taken on by public authorities
- Public responsibility in the first stage of the policy process tends to raise the effectiveness, legitimacy and fairness of the arrangements

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## Overall conclusions



### However:

- Decisions on responsibility divisions are not very informed and deliberate: are other promising arrangements overlooked?
- Acceleration of climate impacts will raise the adaptation challenges and put existing arrangements under strain
- Deliberate and deliberative selection of responsibilities may lead to arrangements better equipped to deal with these challenges
- Taking conscious note of the challenges and considerations suggests network arrangements with shared public-private responsibilities

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## Design of alternative arrangements

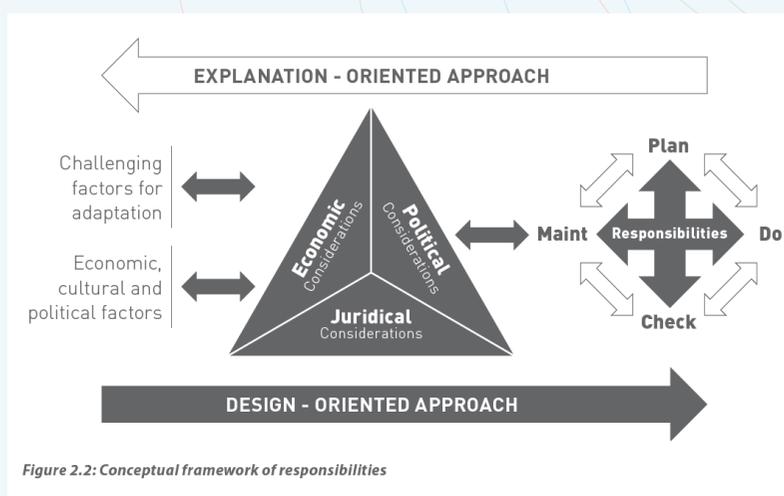


Figure 2.2: Conceptual framework of responsibilities

Published in Mees et al., 2012, Mees, 2014

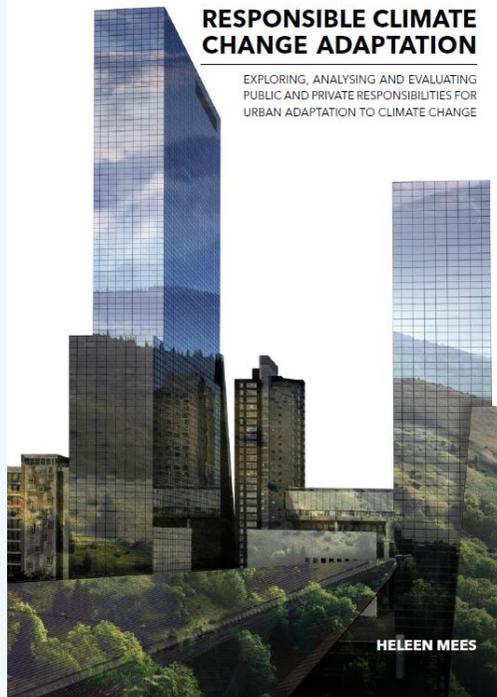
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## Publications of the PhD research



- Mees, H.L.P., P.P.J. Driessen and H.A.C. Runhaar, in press. "Cool" governance of a "hot" climate issue: public and private responsibilities for the protection of vulnerable citizens against extreme heat. *Regional Environmental Change*.
- Mees, H.L.P., Dijk, J., Van Soest, D., Driessen, P.P.J., Van Rijswijk, H.F.M.W. and Runhaar, H.A.C., 2014. A Method for the Deliberate and Deliberative Selection of Policy Instrument Mixes for Climate Change Adaptation. *Ecology & Society*19(2), 58.
- Mees, H.L.P., P.P.J. Driessen and H.A.C. Runhaar, 2014. Legitimate adaptive flood risk governance beyond the dikes: the cases of Hamburg, Helsinki and Rotterdam. *Regional Environmental Change* 14(2), 671-682.
- Mees, H.L.P., P.P.J. Driessen, H.A.C. Runhaar and J. Stamatelos, 2013. Who governs climate adaptation; Getting green roofs for storm-water retention off the ground. *Journal of Environmental Planning en Management* 56(6), 802-825.
- Mees, H.L.P., Driessen, P.P.J. and Runhaar, H.A.C. 2012. Exploring the scope of public and private responsibilities for climate adaptation. *Journal of Environmental Policy and Planning* 14(3), 305-330.

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