



# The roles of residents in climate adaptation – a systematic review in the case of the Netherlands

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# Method & Approach

- Residents can produce public & private adaptation goods in & around their homes
- Distinction between 3 forms of commitment of residents:
  - As **citizens** in relation to the (local) government
  - As **consumers** on the market
  - As **members of civic organizations**
- Mapping of **default** and **additional** (=unused potential) roles
- 3 adaptation issues: flood risk/storm water/heat stress management

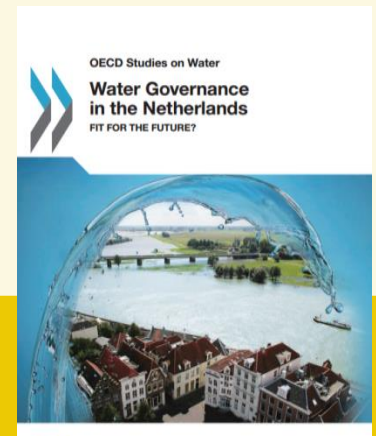
# Overview of the resident as citizen

Adaptation domain	Mainstream roles of residents in the Netherlands	Additional roles that are less widely present in the Netherlands, and examples from other countries
Flood risk management (FRM)	Limited involvement	-Addressee of pro-active risk communication; carrying out formal responsibilities in FRM (e.g. Flutschutzgemeinschaften Hafencity Hamburg)
Stormwater management	Addressee of local governments as potential action taker regarding the retaining of rainwater on their own premises	Taker of measures (e.g. green roofs or replanting green; rainwater harvesting on premises, leading to disconnection of rainwater from the sewer)
Preventing or dealing with heat stress	No explicit or formal roles for residents	Taker of measures (e.g. incentive programmes and mandatory requirements for new buildings).



# The resident as citizen

- Default option: governments as primary actors delegating responsibilities to residents (who may protest or remain inactive)
- Unused potential: promote risk awareness, provide action perspectives and optimise processes of participatory governance
- Need for nuanced overview: limitations both to mobilising residents and to fruitful citizen participation (Few et al. 2007)



# Overview of the resident as consumer

Adaptation domain	Mainstream roles of residents in the Netherlands	Additional roles of residents that are less widely present in the Netherlands, and examples from other Western countries
Flood risk management	Limited involvement	<ul style="list-style-type: none"> <li>-Customer of flood insurance schemes (niche development)</li> <li>-Purchasers of floating houses and property level flood protection</li> <li>-Customer of flood insurance schemes and flood doors/barriers (internationally)</li> </ul>
Stormwater management	Customers of green roofs and rainwater retention measures more generally (for reasons of functionality only)	Customers of green roofs and rainwater retention measures for other considerations than pure functionality only, e.g. because of their aesthetic value
Dealing with heat stress	Customer of products for reacting to heat	Customers of pro-active adaptation to heat, including green/white roofs and tree planting





# The resident as consumer

- Default option: resident as homo economicus (e.g. insurance schemes)
- Unused potential: go beyond (financial) incentives to stimulate residents to take action
- Need to look for win-win situations between adaptation options and consumers' lifestyle choices (e.g. social distinction; mainstreaming of adaptation in 'normal' consumer practices)



# Overview of the resident as civil society member

Form of commitment of residents	Adaptation domain	Mainstream roles of residents in the Netherlands	Additional roles of residents that are less widely present in the Netherlands, and examples from other Western countries
Residents as members/partners of civil society organisations	Flood risk management	Limited involvement	Volunteer in flood preparation
	Stormwater management	Limited involvement	Initiator of eco-villages that included measures for rain water retention/green roofs
	Dealing with heat stress	Lobbying for measures to deal with heat stress	Member of community groups working with public health officers in staffing heat lines

# The resident as civil society member

- Default option: limited NGO involvement, mainly in cases of disaster management
- Unused potential: more explicit and pro-active focus on climate change adaptation
- E.g. eco-villages initiated by residents); community level flood preparedness (Flutschutzgemeinschaften in Hamburg; local crisis teams; voluntary fire fighters)





# There is a lot of unused potential

In particular in their roles as consumer on the market and as member of civic organizations

Necessary shifts in governance arrangements:

- From centralized to decentralized governance
- Increase in public-private, interactive and self-governance => facilitation rather than orchestration. But: How to facilitate?



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# Thanks for your attention!

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