Aligning risks and coping appraisals to kick off local climate action

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Research questions

How do local actors in climate active and inactive municipalities differ with regard to their risk and coping appraisal?
How can a shared understanding of climate risk and coping potential increase the uptake and effectiveness of climate policy instruments and local climate action?

Risk appraisal and coping of local actors
Climate action, inaction, maladaptation
Governance conditions (e.g. institutions, resources)
Actors (e.g. values, trust, networks)

Protection Motivation Theory (PMT)

Governance capacity

case study approach
local governance capacity
climate change adaptation
support for biodiversity friendly measures
Framework – governance capacity for local climate action

Multi-level governance arrangements
Agenda setting, assignment of responsibilities per level, legislative rules in use

Social learning by reflection on different understandings of coping and risks

Local governance capacities
- Actors: Values, reciprocal trust, relations and networks, network position
- Governance conditions: Institutional context, organisational structure, resources

Shared understanding
- Risk appraisal
- Coping appraisal
- Non-protective responses
- triggers promotes inhibits

Local climate action
Research design

- Selection of two most-similar case study regions (Gerring 2007): Region Römerland Carnuntum and Region Weinviertel (both Lower Austria)
- Selection of 6 municipalities:
  - Size between 1,500 and 4,000 inhabitants
  - Affected by similar climate change-related natural hazards (drought, heat, floods)

BUT
- Differences in climate related activities:
  - **Frontrunners**: Lassee (Weinviertel) and Ebergassing (Römerland Carnuntum)
  - **Potential** municipalities:
    - Obersiebenbrunn (Weinviertel)
    - Gramatneusiedl (Römerland Carnuntum)
    - Engelhartstetten (Weinviertel)
    - Moosbrunn (Römerland Carnuntum)

--> project focus is on the natural hazards **heat** and **drought**

Control group

Municipality with experimental participatory intervention
Climate action - frontrunner municipalities

Methods
- Precautionary check for natural hazards (Vorsorgecheck Naturgefahren im Klimawandel) together with the eNu
- Historical analysis of the minutes of the municipal council and municipal newspaper
- 24 interviews with selected stakeholders from local government, business, civil society actors, agriculture

Results
Shared understanding:
- Perception of climate change induced changes relates primarily to own observation
- Awareness regarding the increase of heat and drought
- Local policy makers see themselves as responsible for measures in CCA and CCM in their local sphere of influence
- Decision-makers undertook numerous CCA and CCM activities in the last ten years, e.g. participation in relevant networks (e.g. Klimabündnis, e5, EE Gemeinschaft NÖ, Bodenbündnis Mitgliedsgemeinde)

Governance capacities:
- Self-image as a climate-active municipality is a key driver for climate action
- Decision-makers are well informed and have clear priorities in dealing with natural hazards
## Climate action - potential municipalities

### Methods
- **Precautionary check for natural hazards** *(Vorsorgecheck Naturgefahren im Klimawandel)* together with the eNu in Engelhartstetten and Moosbrunn
- **Historical analysis of the minutes** of the municipal council and municipal newspaper
- **12+9 interviews** with selected stakeholders from local government, business, civil society actors, agriculture
- **2 co-creation workshops per municipality** as experimental intervention to build a shared understanding and map courses of action

### Results
#### Shared understanding
- Personal awareness regarding heat and drought but **no perception as a problem** yet; other natural hazards such as floods as well as storms and associated soil erosions are seen as more pressing;
- Perception of climate change induced changes relates primarily to **own observation**
- **Contradictory** picture regarding adequate measures related to CCA

#### Governance capacity
- Weak social cohesion and networks within the community as barrier to forming actor coalitions
- Low importance of climate active self-image "Because we really just have other concerns."
- Despite convictions on the subject of environmental protection, powerlessness, resignation and helplessness prevail
Discussion

Difficulties encountered during the project

- Due to the low awareness for heat and drought in the potential municipalities it was difficult to identify enough interview partners
- Mayors are strong agenda setters: balanced knowledge integration during the co-creation workshop was challenging
- Reluctance in the potential municipalities to participate in the tailormade municipality specific co-creation workshops --> active individuals have been identified --> reorientation of the project focus on change agents?

Overarching findings

- Heat and drought are gradual processes and therefore not recognized as a problem yet
- Shared risk appraisal is a necessary but not sufficient component of shared understanding
- Mayor has a central role as coordinator, linking different actor groups (--> social capital)
- Trust and social networks within the community are critical for municipal governance capacities
- eNu (Energy and Environment Agency of Lower Austria) links the local with the federal governance level and turned out to be an important source of information as well as network builder for municipalities
- In particular during the transdisciplinary discourse on coping opportunities, the depth of information provided has to be consciously aligned to the pre-knowledge and level of activity of the local actors
Thank you!

**Academic outreach**


Papers (in preparation):


**Public outreach**

Klimawandelanpassung in Gemeinden - geht da (noch) was? Panel discussion at the BOKU-Energiecluster, 17 Oct 2023, Vienna.


Reports on the outcomes of the Natural Hazard Check, available for each of the municipalities Ebergassing, Engelhartstetten, Lassee and Moosbrunn.

Fact Sheets on the results of the stakeholder workshops, available for the municipalities Engelhartstetten and Moosbrunn.

Fact sheets on the result of the expert interviews, available for each of the municipalities Ebergassing, Engelhartstetten, Lassee and Moosbrunn, Gramatneusiedl, Obersiebenbrunn.

Podcasts (in preparation): Tino Blondieau (eNu), three additional podcasts foreseen.