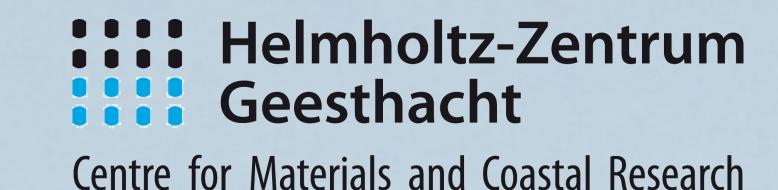
Harvesting energy: People's place-based perspective on mitigating climate change with renewable energy technologies



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Motivation:

Climate change and energy transition

Discussions on mitigating climate change revolve around the question of how to enable a low-carbon energy transition based on renewable energy technologies (RETs) such as wind and solar energy. Communities and individuals have increasingly been recognised in public and policy for making an important contribution to sustainable energy transition.

To improve local energy transition, a better understanding is needed of **how** people's place attachment and meanings, and understandings of climate change shape innovation processes.

Theoretical background: Local entrepreneurship and community renewable energy

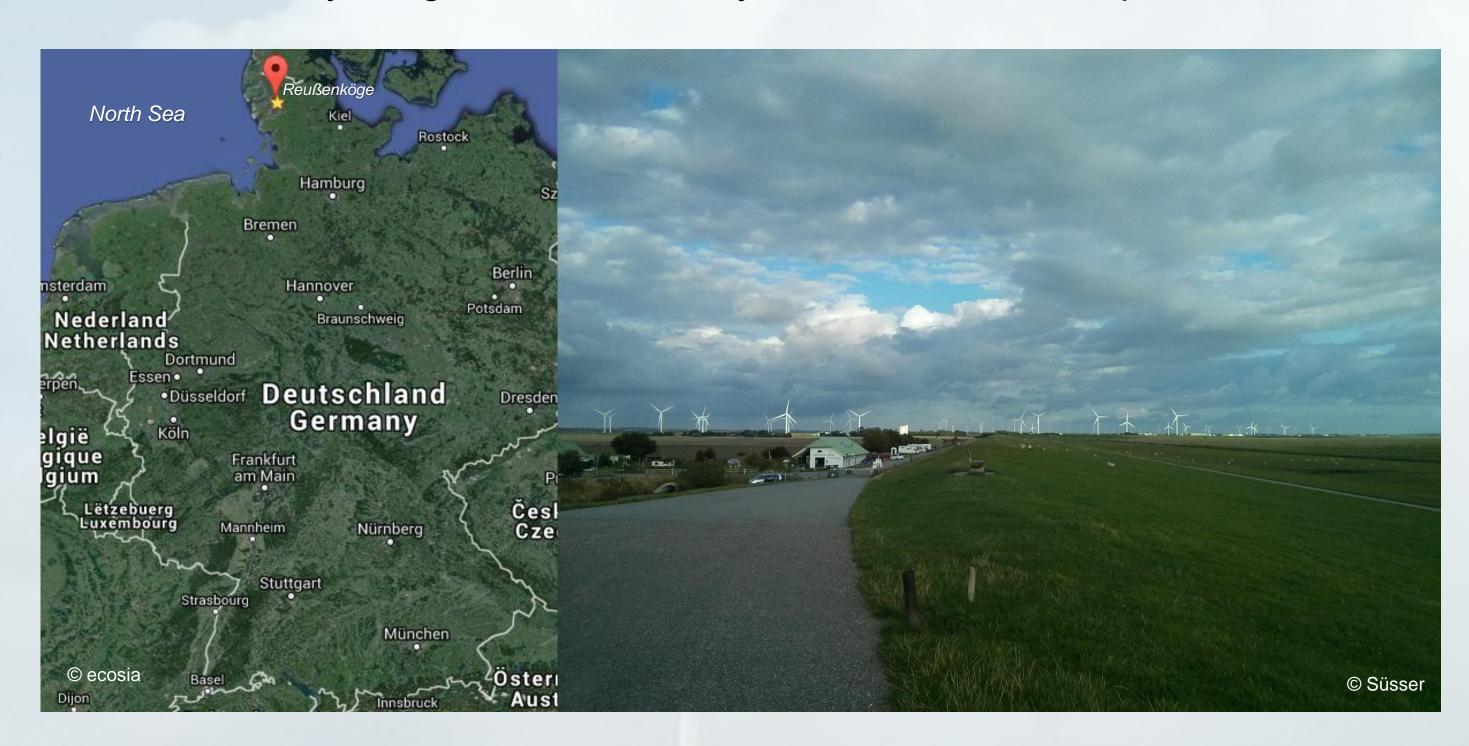
In the context of our study, local entrepreneurship involves the identification, evaluation and exploitation of opportunities by local individuals for community-based renewable energy.

Place is conceptually understood as an area of engagement and as a source for innovative activities that initiate and support processes of innovation diffusion. Entrepreneurs are conceived as innovators, change agents and/or leaders who contribute to shaping places and transforming local communities.

Case study and methods: Interviews in a coastal municipality in Germany

Our research is based on qualitative interviews undertaken with 15 inhabitants of the coastal municipality of Reußenköge in North Frisia, Germany. Reußenköge is a low-lying coastal area characterised by a landscape of dikes.

Over the last two centuries, it developed from an average agricultural into a socalled 'model-region' for renewable energy. Nowadays, community-owned wind parks harvest wind and mainly privately-owned solar installations harvest sun's rays to generate electricity and local economic profit.



Results: From harvesting fields to harvesting energy

Physical and social place attachment

"... I do feel a strong bonding to my farm, my home, my region. (Interview_R_#1)

> socio-geographic embeddednes

Contested place

'Biogas has caused a lot of trouble because it is in conflict with traditional farming.' (Interview_R_#15)

Place

Community

Renewable energy technologies

Historical (genealogical) place attachment

'We do live in a cultural super landscape that would not exist without land reclamation by the people here.' Interview_R_#15)

identification with historically shaped landscape

Innovative place

'Because we have been always pioneers/innovators for something new. If you build a dike, you are a pioneer.' (Interview_R_#12)

Materialisation of climate change

'For me, if we look outside the window, we do have the wind mills who produce clean energy. That is our contribution to mitigate climate change.' Interview_R_#12)

Personal, locally anchored relevance

'Climate change is on our doorstep.' (Interview_R_#7)

Climate in Place

Innovation catalyst

"It is for me a driving force to do what I am doing.' (Interview_R_#15)

Energy political issue

The [energy transition] is politically targeted and governed, and has provided an economic incentive, which has taken advantage of here.' (Interview_R_#5)

Grounded entrepreneur:

Identification with the place "I do have the advantage that I am farmer by myself [...] and grounded so to say." (Interview_R_#8)

Innovative entrepreneur:

Challenging and visionary individual 'We are a bit proud here in the North that we are the innovators [...]. We have built the first community wind parks .' (Interview_R_#8)

Economic entrepreneur:

Creation of local profit '[...] we recognise renewable energy is the future, also an economic future [..].' (Interview_R_#7)

8 important characteristics of local entrepreneurs

Change-making entrepreneur:

Changer and distributor 'And you can change something. I think that if I wouldn't have started with solar energy here, it had started later.' (Interview_R_#15)

Collaborative entrepreneur:

Public participation "...the interest in operating collectively renewable energy in form of wind farms for more than 20 years. (R_#7:35-36) (Interview_R_#15)

Networking entrepreneur: Social dialogue and integration 'We have founded the federal association for wind energy here, the special interest group. (Interview_R_#8)

Communicating entrepreneur:

Exchange, information, education 'Yes, that it is transparent and understandable, what we want, and no mistrust arises. (Interview_R_#8)

Political entrepreneur:

Strategic management 'But he has another view point on many things. The farmer is transformed into a political agent.' (Interview_R_#3)

Conclusion: Importance of investigating local perspectives of innovation processes

- Place, climate change and entrepreneurs proved to be relevant analytical units for investigating the process of the local implementation of RETs.
- The qualitative approach enabled us to empirically analyse the multifaceted interplay between place, climate change and local entrepreneurs.
- We were able to identify 8 placed-based entrepreneurial characteristics promoting the local implementation of RETs in the municipality of Reußenköge.
- * The placed-based perspective proved to be important for a better understanding of local innovation processes and sustainable energy transition.





