

# **Bioenergy village Schlöben: Interdependencies between regional value creation, participation and local acceptance**

Jan Hildebrand, IZES gGmbH

Department Environmental Psychology

07th October 2021

Online Conference • Ressourcen und Mehrwert der Bioenergien auf lokaler Ebene  
Office franco-allemand pour la transition énergétique |  
Deutsch-französisches Büro für die Energiewende e.V. (OFATE|DFBEW)

# Empirical investigation of the connection between regional value creation, participation models and acceptance in the energy transition - ReWA



**Institut für ZukunftsEnergie- und Stoffstromsysteme gGmbH (IZES gGmbH)**

Jan Hildebrand  
Irina Rau  
Dr. Timo Kortsch



**Institut für ökologische Wirtschaftsforschung (IÖW) GmbH, gemeinnützig**

Dr. Steven Salecki  
Katharina Heinbach



**Agentur für Erneuerbare Energien e.V. (AEE)**

Ilka Müller  
Valentin Jahnel

Funded by: Federal Ministry for Economic Affairs and Energy (BMWi) 03EI5208A-C

Duration: 01.06.2020–31.10.2022

Supported by:

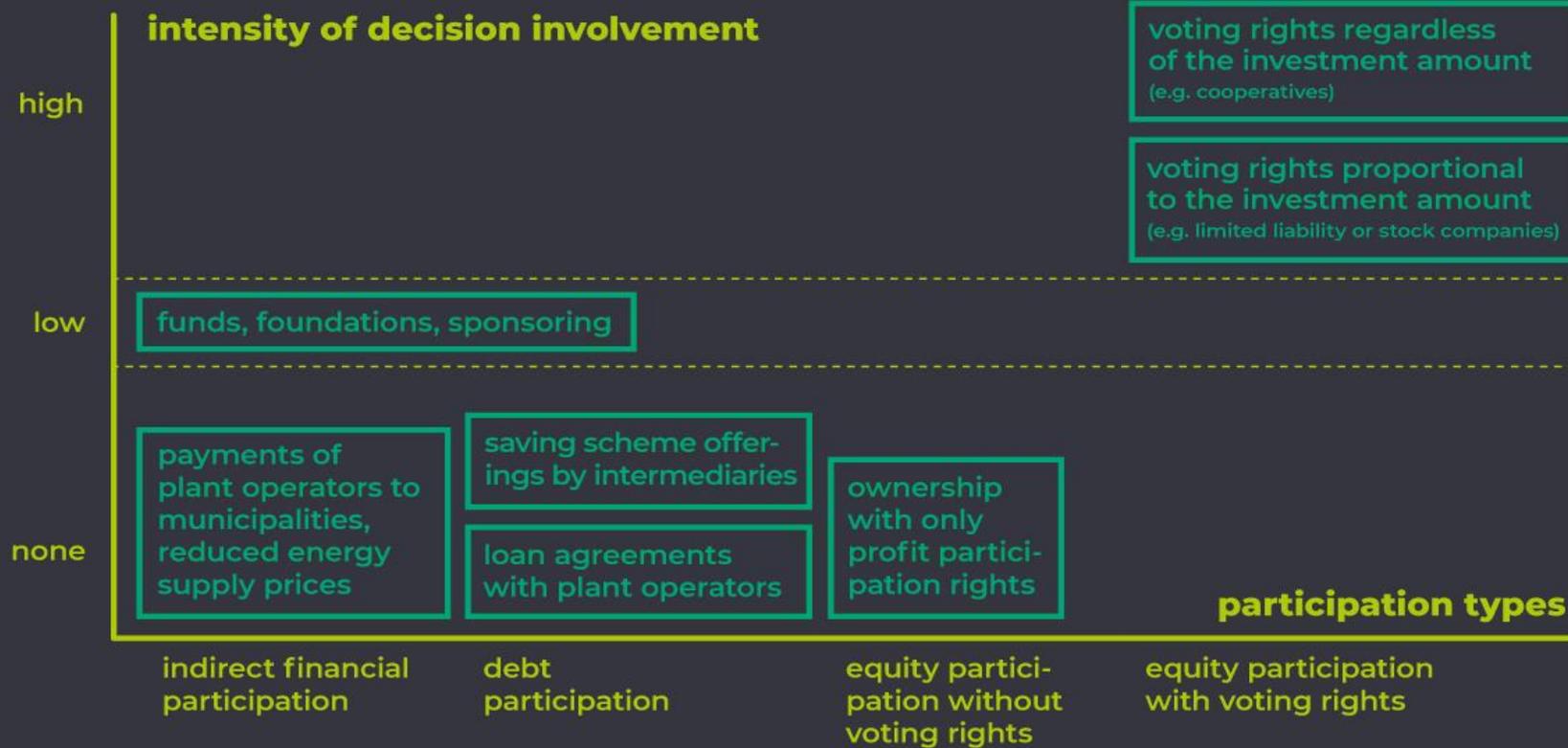


on the basis of a decision by the German Bundestag

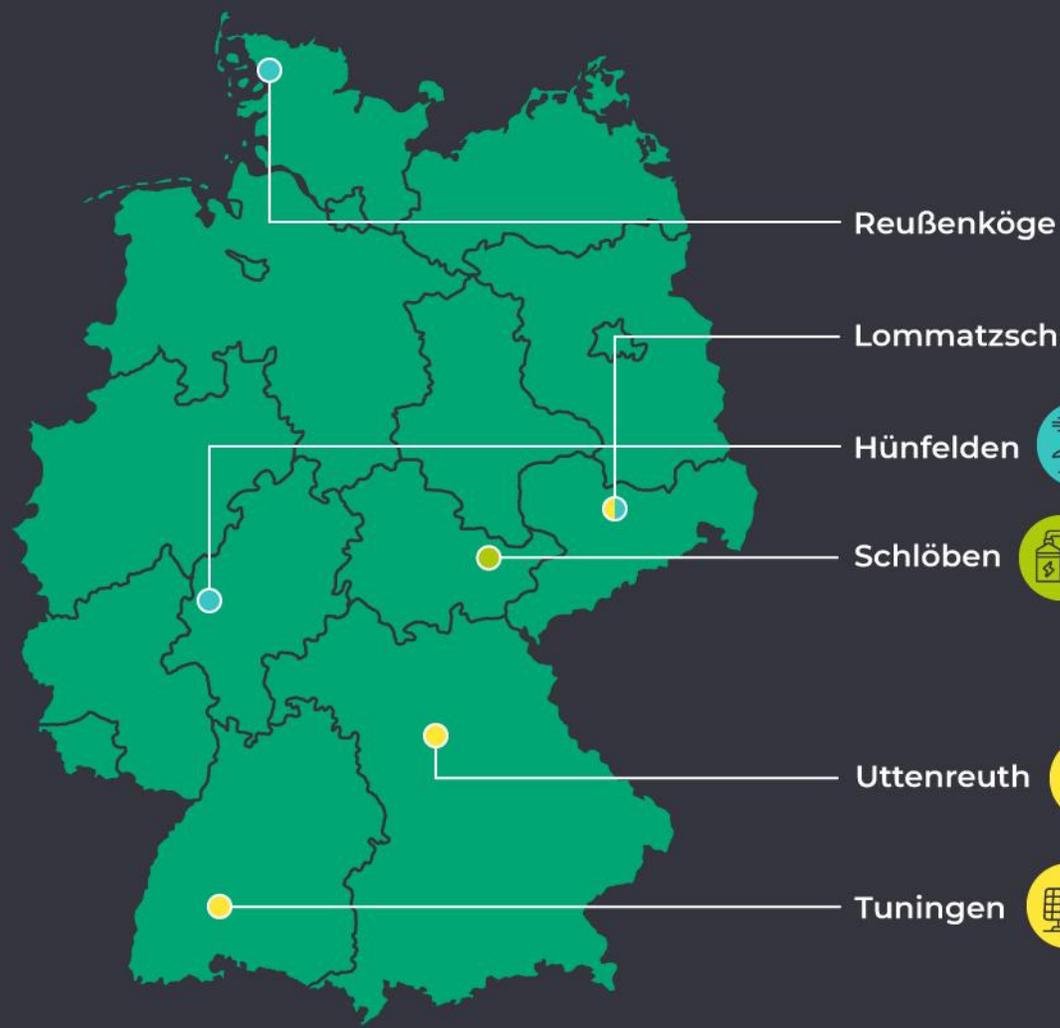
# Background: Participation

- Meaning of participation has increased over the last years
- Political participation on planning and decision making (permitting procedures)
- Challenges: Often too late, local needs not part of the formal procedure, lack of transparency and knowledge on procedures
- Financial participation (-> value creation): individual vs. collective, direct vs. indirect approaches, singular vs. continuously during project phases
- Recent research indicates correlation between participation and acceptance, but the concrete relation has not be shown yet

# Financial participation: participation types and decision involvement



## ReWA – case studies



Reußenköge 

Lommatzsch  

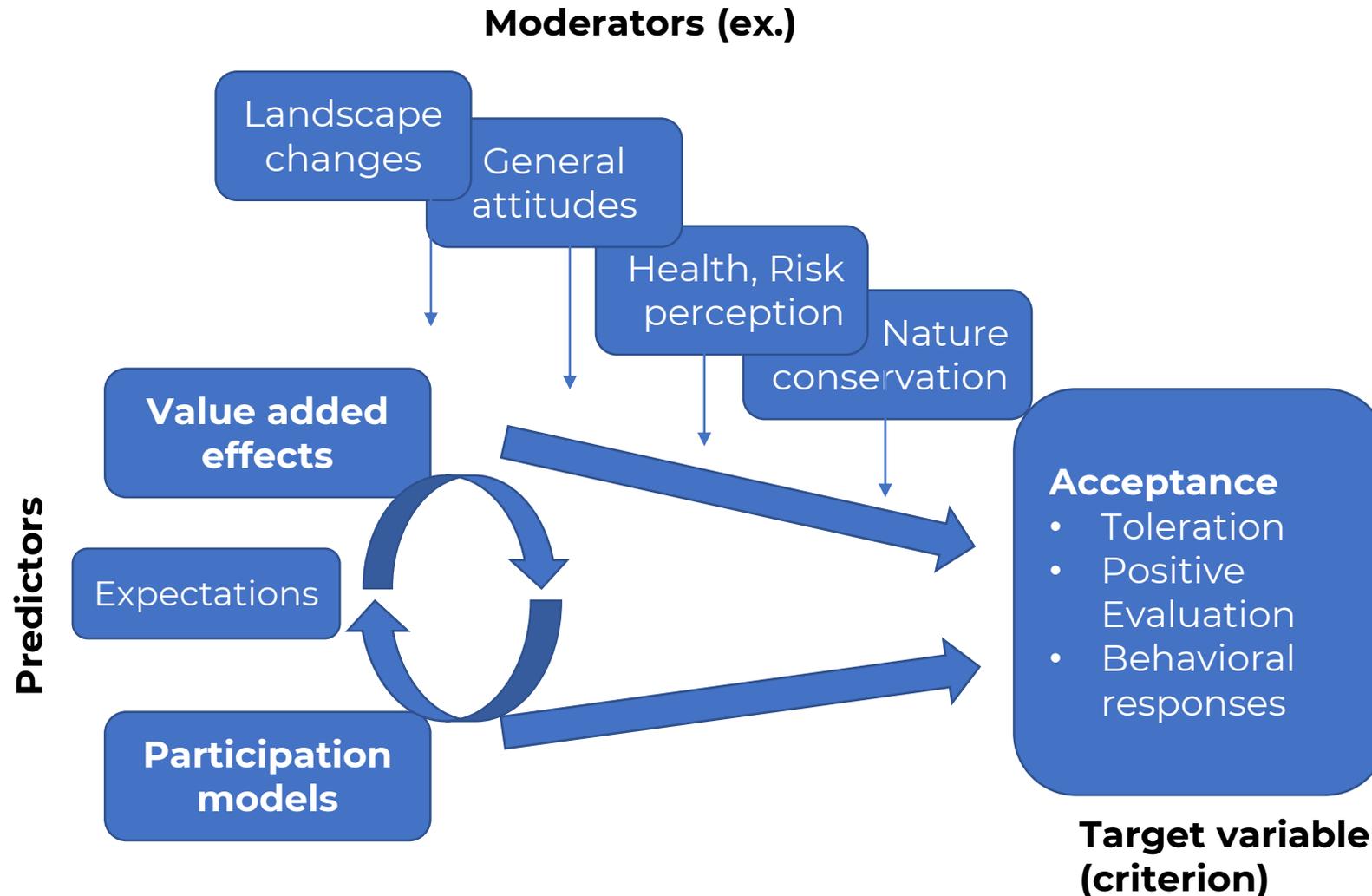
Hünfelden 

Schlöben 

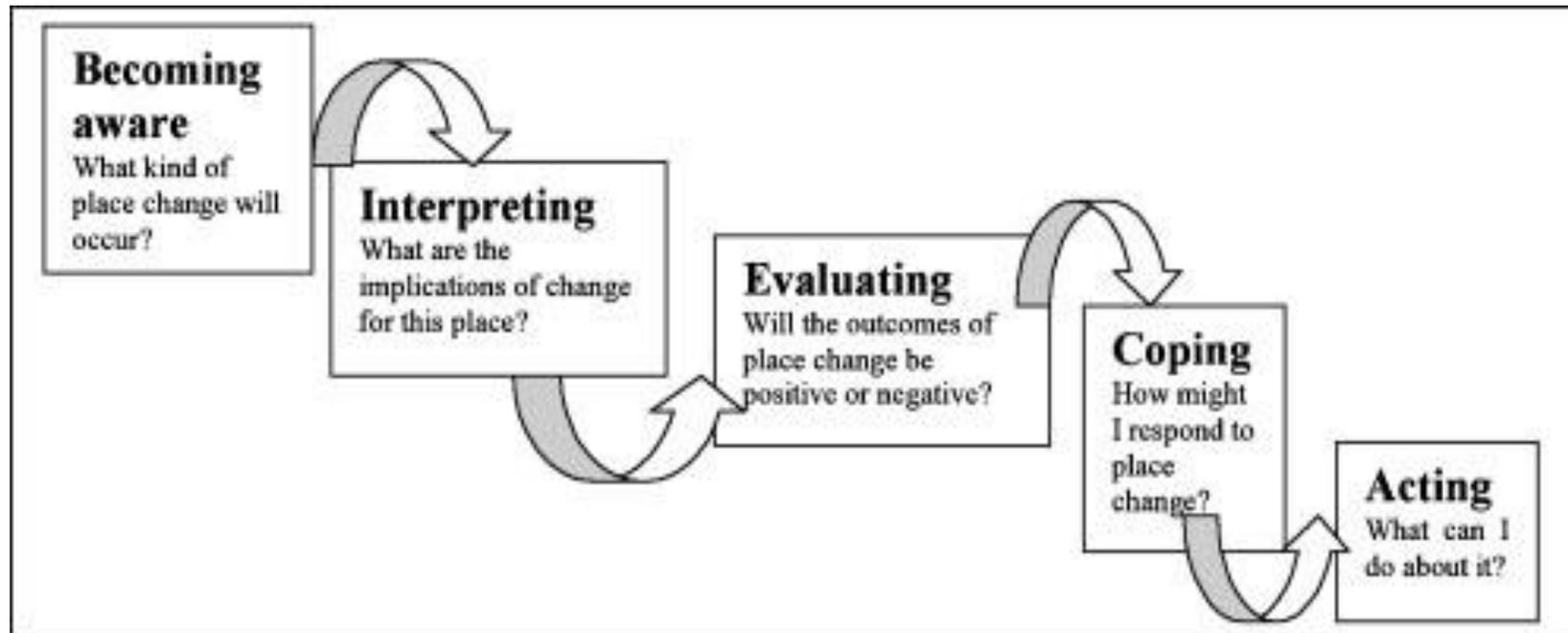
Uttenreuth 

Tuningen 

# Link between perceived value added, participation and acceptance towards the project



# Perception of benefits and response to project



**Figure:** Stages of psychological response over time to place change (Devine-Wright, 2009)

Devine-Wright, P. (2009). Rethinking NIMBYism: The role of place attachment and place identity in explaining place-protective action. *Journal of Community & Applied Social Psychology*, 19(6), 426–441.

Information cascade about the benefits connected to the project:

- perception, beliefs, firstly cognitive,
- later connected to more concrete visions and emotionally loaded expectations
- shaping the connection between expected value and renewable project

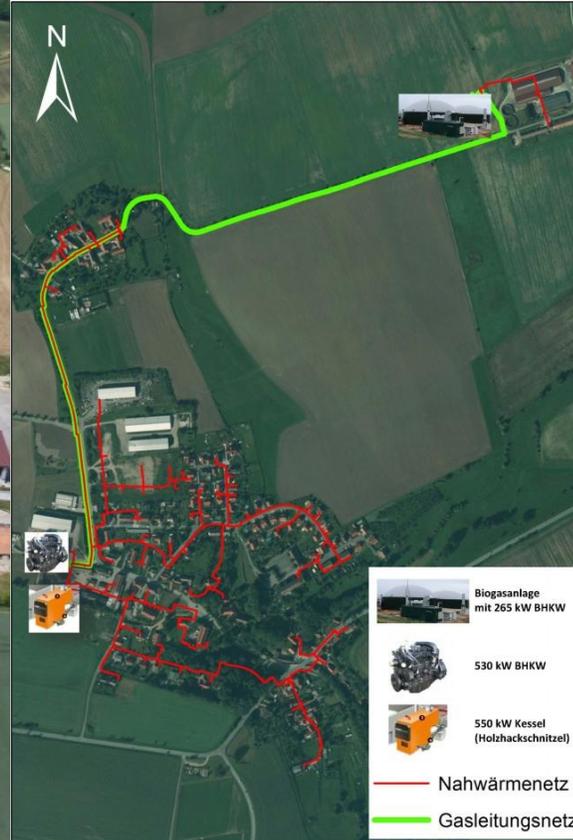
# Methods

- Qualitative interviews with stakeholders referring to the renewable projects in the case studies (13 IVs, 17 persons)
- Media analysis / framing analysis of local media referring to the renewable projects in the case studies
- Calculation of regional value added per renewable project (Aretz et al. (2013) - Value-added and employment effects from the expansion of renewable energies [Wertschöpfungs- und Beschäftigungseffekte durch den Ausbau Erneuerbarer Energien], p.31)
- Standardised questionnaires in the case studies on the level of broad population (-> Summer/Autumn 2021)

# Bioenergiedorf Schlöben

- <https://bioenergiedorf.schloeben.de/die-vision/dezentrale-energieversorgung/>
- Established from 2009 to 2012, includes three elements
  1. Biogas plant in Mennewitz: Provides heating for Schlöben through a biogas pipeline of 1,6km length
  2. Wood pellet heating: Covers basic heating with wood from a maximum 15km radius
  3. Heating network of 6km between Schlöben and Zöttnitz: Heating of residential areas and transport of hot water
- Self-sufficiency of the agricultural farm in Mennewitz

# Bioenergiedorf Schlöben



Pictures:  
<https://bioenergiedorf.schlöben.de/division/dezentrale-energieversorgung/>

# Financial participation

- Bioenergy village Schlöben is organised as a cooperative
- Residents of Schlöben can participate with equity capital
- Integration of everyone who is willing to participate -> connection to the local heating network
- Stability: Steady price of local heating
- They receive voting rights in the general meeting (active participation) -> democratisation process

# Local value added

- Value added within the agricultural farm through closed material cycles -> Securing of existence of community
- Free connection to the fibre optic cable for everyone
- Business taxes are spent for the community
- Increased appeal of the municipality for new residents -  
> local heating network for development area
- Securing of existing infrastructure -> e.g. through connection of the school and kindergarten to the local heating
- New jobs created in the agricultural farm

# Acceptance perspectives

- In general positive relation to agriculture in Schlöben
- No significant conflicts, minor problems were solved quickly
- Especially fibre optic cable meets high acceptance
- 90-95% of the residents are connected to the local heating network
- Finally connection to the local heating network for residents (Mennewitz) with greatest nuisance from traffic

# Conclusion Schlöben

- Constellation of different positive factors:
  - Active stakeholder network – strong political will towards energy transition
  - Supporting governance structures: umbrella organisations & „national bioenergy region competition“
  - Resources: Local craftsmanship, technical expertise within the region
  - Constructive coping with conflicts
  - Technological needs – mutual benefits
- Evidence based research provides counterbalance to the cost narrative on the socio-political level (“energy transition makes everything more expensive, especially energy prices”)
- Additionally: Comprehensive understanding of socially beneficial value additions provided by energy projects needed, also including non-monetary benefits (e.g. symbolic/ intrinsic values, trust, identification, learning and empowerment of the municipalities)

**Thank you for your  
attention!**

Jan Hildebrand

IZES gGmbH

Department Environmental Psychology

Tel: +49 (0) 681 844 972-29

E-Mail: [hildebrand@izes.de](mailto:hildebrand@izes.de)