

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:

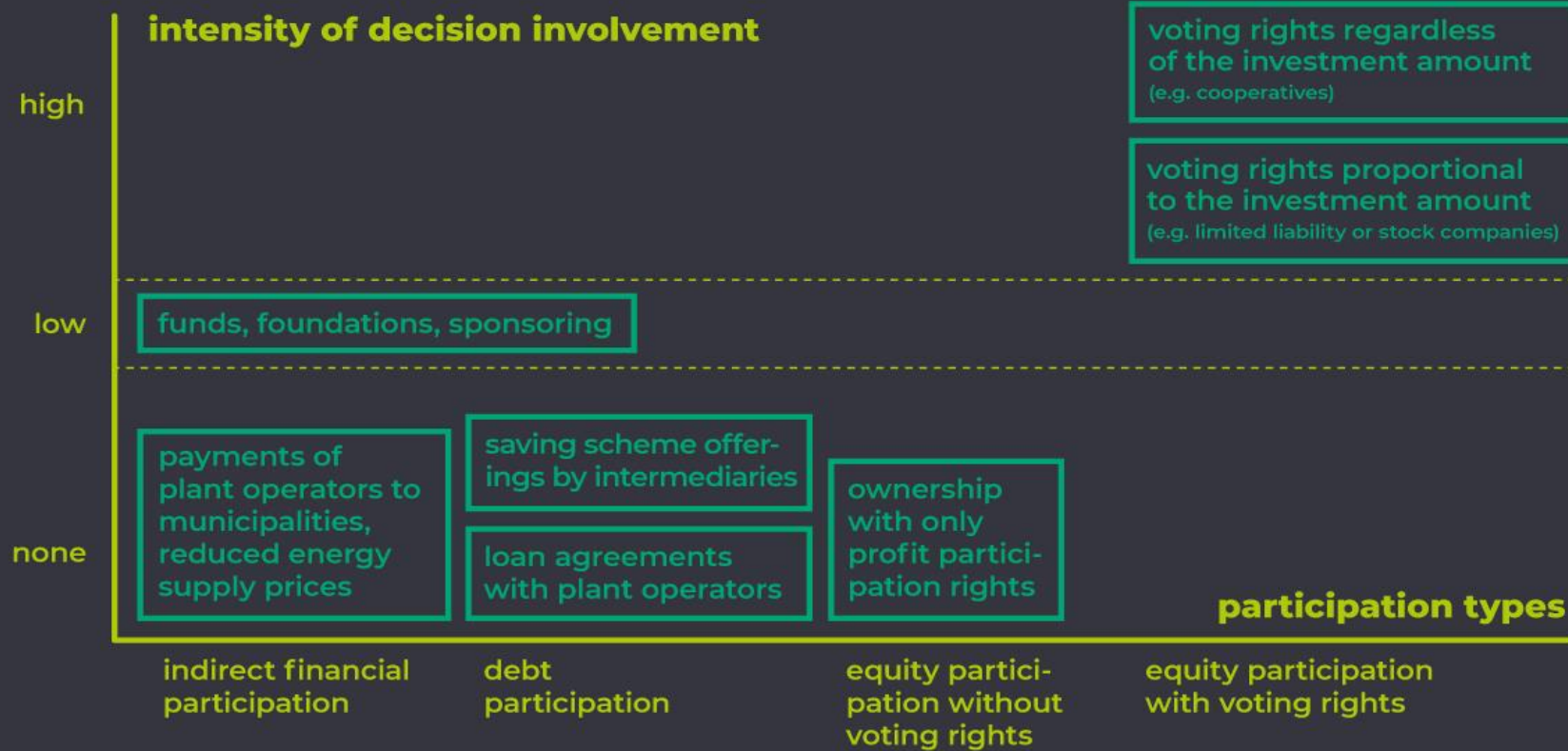


on the basis of a decision by the German Bundestag

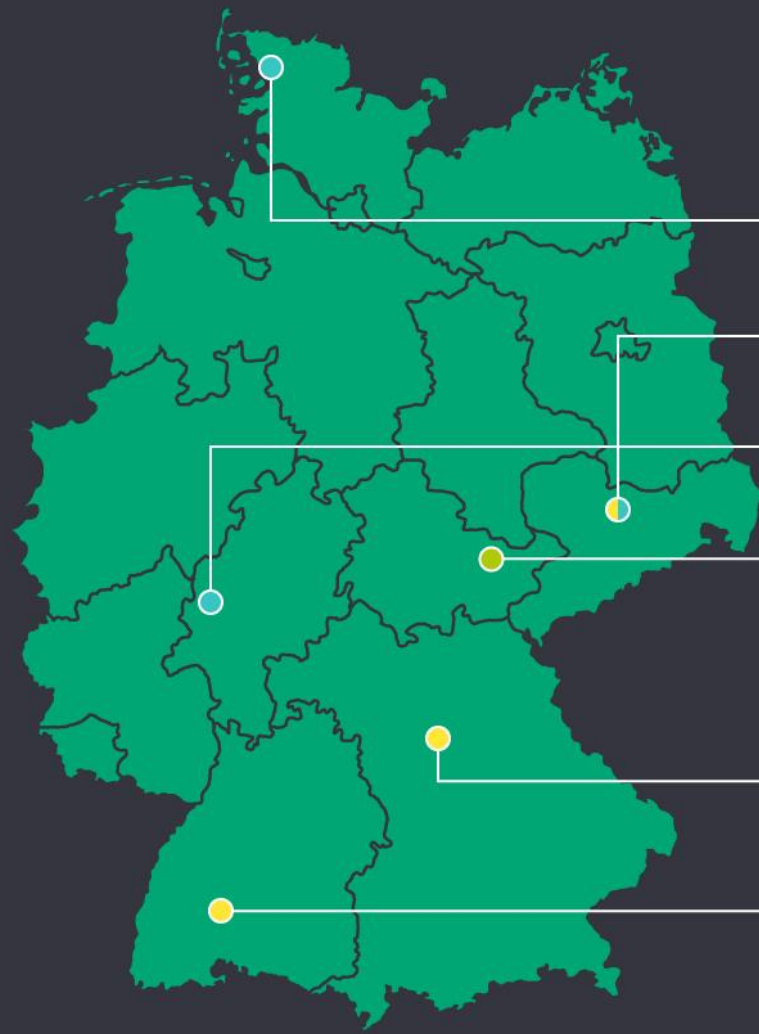
Background: Participation

- 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  

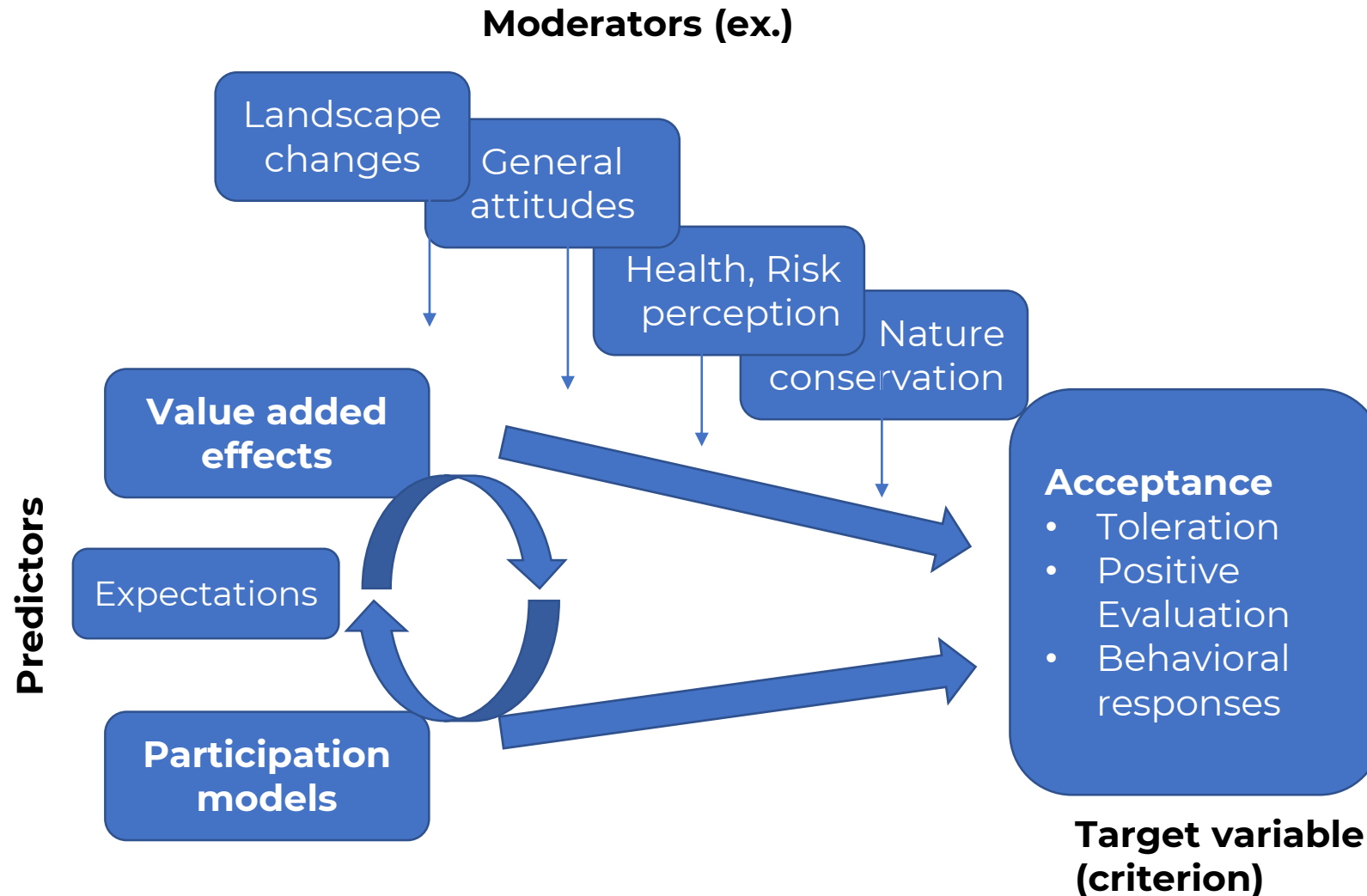
Hünfelden 

Schlöben 

Uttenreuth 

Tübingen 

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



Perception of benefits and response to project

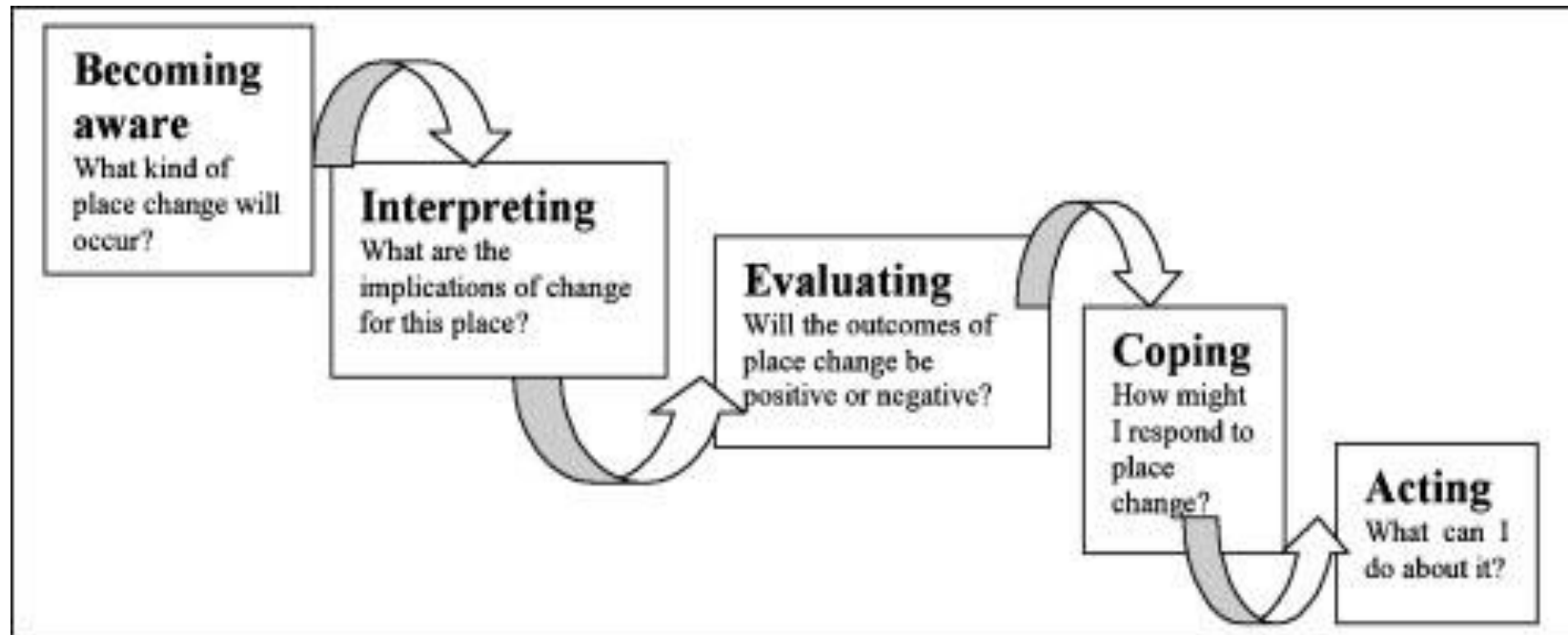


Figure: Stages of psychological response over time to place change (Devine-Wright, 2009)

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