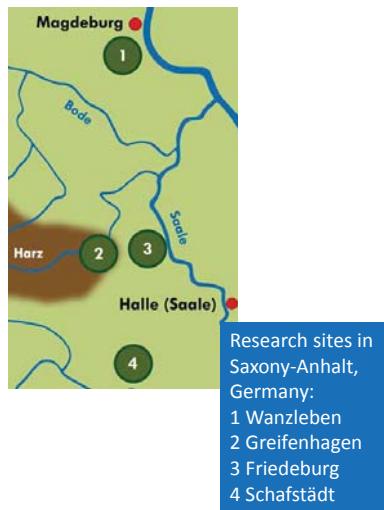


Green infrastructure – creating habitats with agriculture

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Research question

In our Biodiversa project EC21C, we are looking at implementation options of the EU's green infrastructure strategy. We research the social, economic and ecological implications for local and regional level actors in Saxony-Anhalt.



Resulting maps of spatially explicit scenarios with more green infrastructure for two research sites.

- Surface standing and running waters
- Grassland and tall forb habitats
- Heathland, shrub and tundra habitats
- Woodland, forest and other wooded land
- Inland habitats with sparse or no vegetation
- Cultivated agricultural, horticultural and domestic habitats
- Constructed, industrial and other artificial habitats
- Insect collection sites for ecological research
- Hedges with trees and shrubs
- Newly established meadows
- Forest margin, with flowering plants
- Hedges already newly established

Methods

- **Actor analysis**, based on semi-structured interviews and social network analysis with the NetMap tool
- **Participatory scenario development** with workshops and field visits using aerial maps
- **Policy field analysis** using the concept of environmental policy integration to analyze policy documents
- **Four 4x4 km research sites** with a gradient in existing semi-natural and natural structures (green infrastructures) in agriculturally used landscapes.

European Commission (2013): Green Infrastructure (GI) – Enhancing Europe's Natural Capital. COM(2013) 249 final.

Benedict, M.A. & McMahon, E.T. (2002): Green Infrastructure: Smart Conservation for the 21st Century. Renewable Resources Journal. 20(3), 12-17.
Schröter-Schlaack, C. & Schmidt, J. (2015): Ökosystemleistungen grüner Infrastrukturen. RaumPlanung 180, 16-21. [In German]

Results

GI structures including ecological focus areas were perceived to provide important ecosystem services. Farmers revealed ecological local knowledge and see themselves as food producers that are increasingly confronted with society's requests for multifunctional landscapes. The study shown the importance of information flows and regulations but also of social pressure, influencing farmers' land-use decision making. Economic factors like the land tenure system were identified as specific to the region studied.



Field visit with land-users

Conclusions

Policy implementation needs to incorporate **local and regional level requirements** and **measure design** should take aspects of **practicability, flexibility, efficiency and reliability** but also the **ecological usefulness of measures** into account and help farmers in their new role as landscape managers.

Green Infrastructure

- **green structures** in urban or rural areas, like hedges, tree lines or green roofs
- „**hubs**“ with high value for nature conservation, „**links**“ connect the hubs
- a **concept** for treating these green structures as valuable as grey infrastructure, meaning that investing in them is worth the cost and effort
- extending biodiversity protection to natural elements **outside areas designated for nature conservation**
- In rural areas it includes **ecological focus areas** implemented within the European Common Agricultural Policy (CAP)