

Incentive based policy instruments guiding towards sustainable use of peatlands in EU

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- Restoring hydrology for drained peatlands = largest potential for emissions reductions.
- **Lacking** of economic incentives for **farmer** to initiate the new practises.
- **Lacking** of **policy** for emissions reductions on drained peatlands
- This institutional aspect rarely investigated by peer-reviewed articles.



How to develop/adapt the **policy instruments** for **climate mitigations** on peatlands addressing the (in)coherence within different **sectoral** policies and **governance** levels?

Approach: literature and stakeholder interview

34 interviews



Policy documents

Reports

Research article



15 stakeholders



12 stakeholders



6 stakeholders



17 policy makers



7 practitioners



10 researchers

Results: policy sectors vs. emission reduction

	Support	Conflict
Climate	Climate neutrality by 2050	
	LULUCF net zero target	
Nature	Renaturation measures	Species Conservation
	Biodiversity measures (Meadow birds)	
	Natura 2000	
Water	River Basin Management Plans	WFD focuses on natural flow of the water
		Ecological passage
		Drainage infrastructure law
Energy		Production of biogas on the drained peatlands.
		Not recognize paludi on formerly drained peatlands
Forest		Not allowed to remove small birch pines on peatlands
Agriculture	(EAFRD/AECM)	CAP direct payment
	Regional development (ERDF)	Permanent grassland rule

Incentive based policy / economic instrument

- **Convince** farmers and reward pioneer
- Create an **incentive** to farm the peatlands more wet.
- **Voluntary**

Regulation

- Prohibitions on drained peatlands is too radical for now.
- **Regulation as complementary:** Bavaria is prohibited to deepen the drainage on organic soils.
- After **transitional period**, in **later period** could be stronger regulation

Results: current incentive based policy for mitigation measures

	BY	BB	NI	MV	SH
Paludi					
Raising water table on grassland		×			
Wet top-up on grassland	×			×	
Conversion from arable to grassland	×	×		×	(×)
Grassland extensification	×	×	×	×	×
Submerged irrigation					
Wet forest					

- Most policies do not have clear targets on water level
- Paludiculture is not supported
- Raising water table on grassland (Moorschonende Stauhaltung) is a nice example
- Nature conservation is the main goal
- Grassland extensification is well accepted and largely implemented. But it is only intermediate step.

Results: long term “effective” or short term “diplomatic”?

	Mitigation effects	Impact on Agricultural production	Dependence on				
			neighbor (cooperative)	water availability	infrastructure (wire, pipe)	market (product)	policy (payment)
Denaturation	very high	very strong	very high	very high	low	n/a	very strong
Paludiculture	very high	strong	very high	very high	moderate	very strong	very strong
Raising water table on grassland	high	moderate	very high	very high	moderate	low	strong
Conversion from arable to grassland	low	low	n/a	n/a	n/a	moderate	moderate
Grassland extensification	low	low	n/a	n/a	n/a	no	low
Submerged drainage	mixed	low	moderate	high/moderate	very high	no	strong
Afforestation	?	n/a	n/a	n/a	n/a	low	strong
Wet forest	?	n/a					strong

EU

- Upper limits
- Temporary (5years)
- Parcel based
- Input / opportunity costs, not output / climate mitigation
- Not combinable
- Lots of funding

National

- Traditionally not strongly involved
- Should set targets (how much emissions, how many hectares, when)
- Funding for 10 years large scale implementation

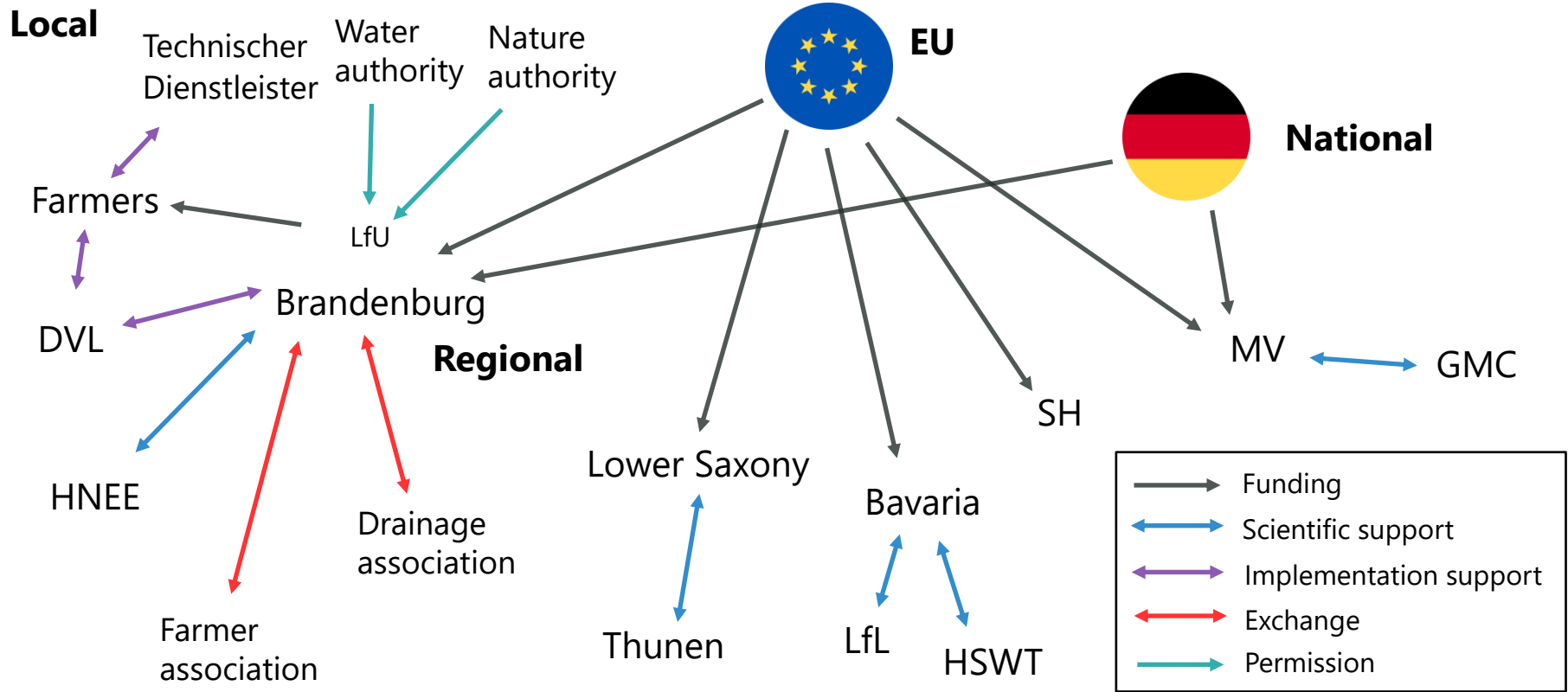


Regional (Länder)

- Specific concrete design
- Implementation and permission
- Lack of funding



Results: governance level and actors



- Neighbor/ cooperative approach
- Water infrastructure
- Water supply
- Water management
- Machinery
- Monitoring



- New CAP: conditionality by good agricultural and environmental condition (GAEC 2) and eco-scheme
- LULUCF and agriculture into carbon pricing

Prepare the transition:

- climate proofing legislation
- improving the capacity in authorities
- support research: large scale
- knowledge transfer and advice

Start the transition: incentive based policy

- long term scheme: 15-20 years of funding
- higher payment
- farmer cooperation

Accelerate the transition:

- concrete targets for emission reduction
- Regulation on dry use

- Raising water table is currently not supported by policies.
- EU CAP has a decisive steering (negative and positive) effect.
- National water, nature, property laws (negatively) affects the implementation.
- Technical issues and site specific are important.
- Incentive instrument helps transition but difficult to achieve the climate target.
- Regulation should be complemented.

Thank you for your attention.



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- Submerged drains do not mitigate greenhouse gas emissions.
- Pressured drains can have 25% reduction of CO₂
- Paludiculture reduces CO₂ emission, but increasing CH₄ emission depending on groundwater table and vegetation type
- Sand and ash additions do not give promising results