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How to apply best practice of wet peatland use for common practice?

Learning from existing approaches in Germany

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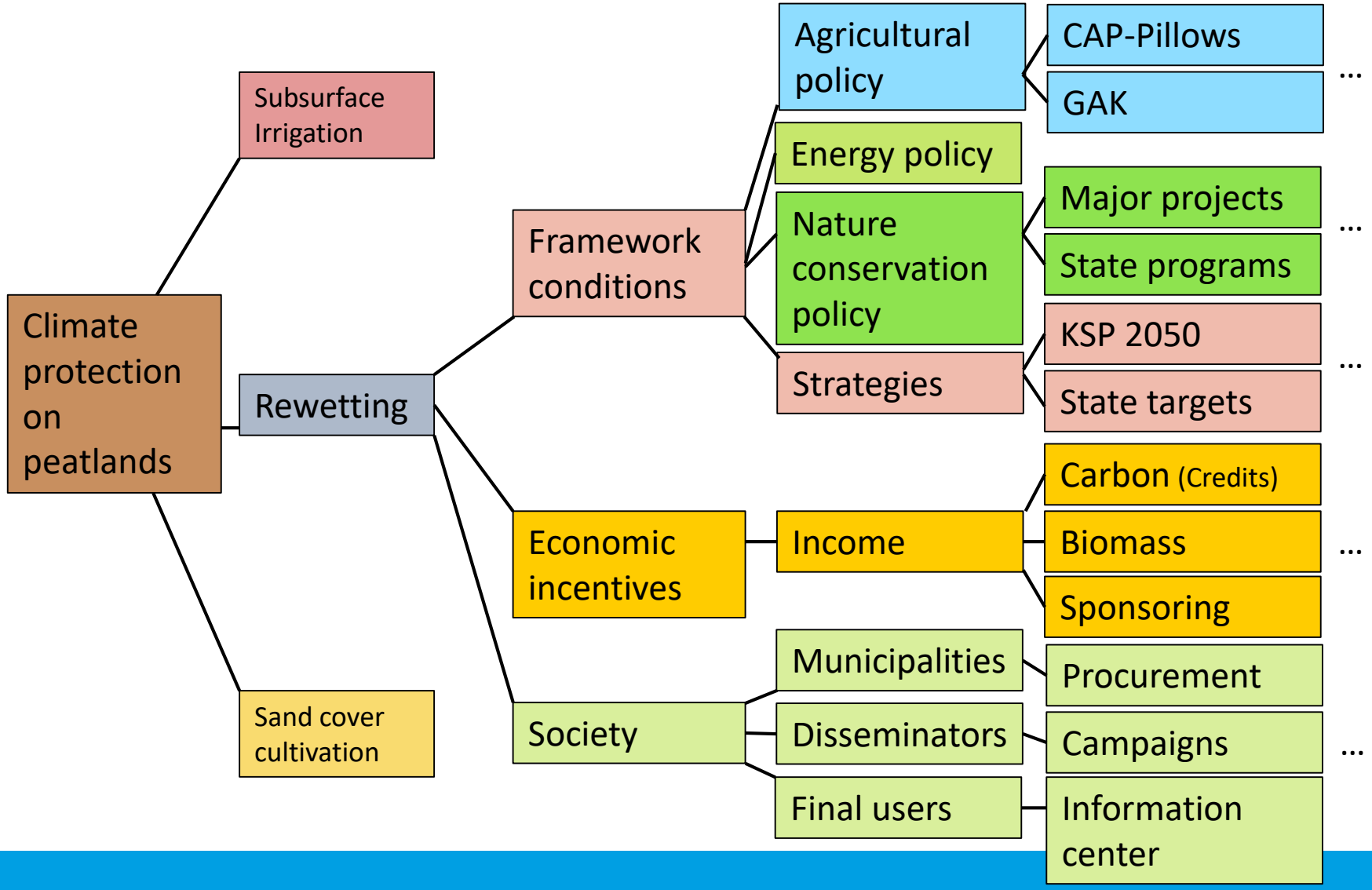
Photo: www.lensescape.org

Climate protection approaches through peatland protection



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Utilisation paths

Paludiculture

Wet meadows


Photo: www.lensescape.org


Photo: M. Wenzel

Crop cultivation


Photo: C. Schröder


Photo: C. Fritz


Photo: A. Schäfer


Photo: C. Schröder

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Best practice

- Proved practice or model procedures

= specific approach is generally accepted as most appropriate alternative

- Benchmarks for empirical defined, best achieved approach
- Always in comparison with similar types of management

- *Best practice* → stimulation for others

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Best practice in wet peatland use I

- Why are we engaged with best practice examples?
  - Knowledge transfer for different stakeholders
  - Constraints and obstacles → focus areas of (future) work
  - Enhancing methods and improvement of techniques → R&D need

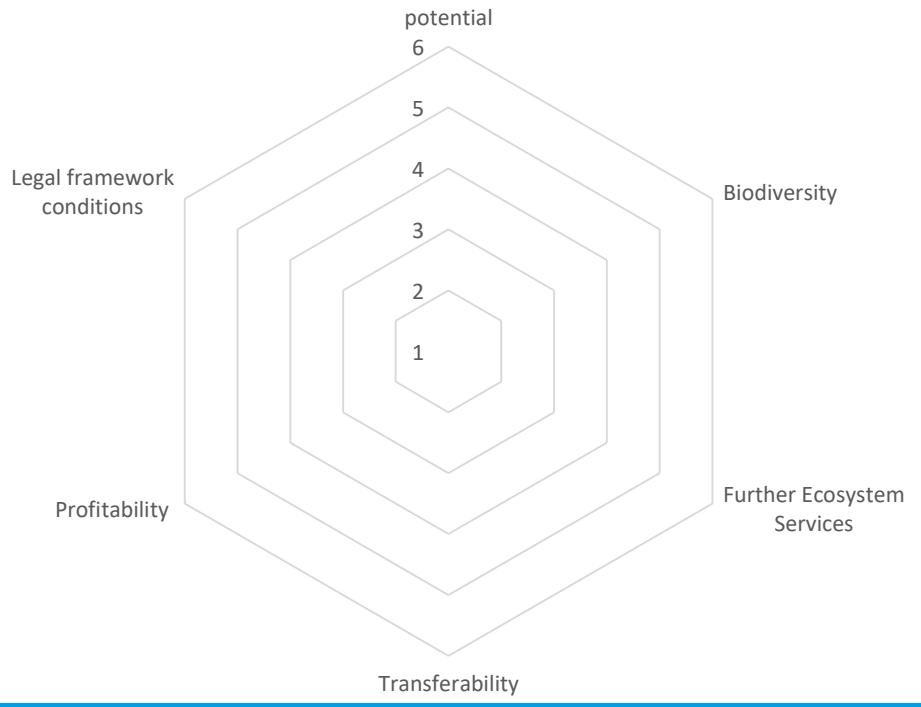
Best practice in wet peatland use II

Assessment of

- GHG reduction potential
- Delivery of further ecosystem services (water and nutrient retention)
- Nature conservation value (Biodiversity)
- Transferability (site potential, acceptance, knowledge, markets, time frame)
- Economic feasibility
- Current legal and political framework conditions

Expert judgement

- Knowledge of or insight into a particular field
- Gain overview & test assessment method for best practice



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Example I: Biomass heating plant Malchin

- Fuel: 1.200 t Hay (6.500 bales, 300 ha), optional wood chips
- Supply 4.000 MWh of heat
- District heating: 540 households, kindergarten, school, office building
- Basic and average load (peak load: natural gas)
- Mitigation of 1.000 t CO_2 emission per year
- Productions costs 5 ct/kWh


Photo: www.lensescape.org

Photo: P. Schroeder

Example I: Biomass heating plant Malchin

- Sustain peatland use after (conservation based) rewetting
- Change value chain, as cattle breeding with changing vegetation composition not longer possible
- Heat delivery with similar prices to fossil fuels possible
- On site practical knowledge transfer

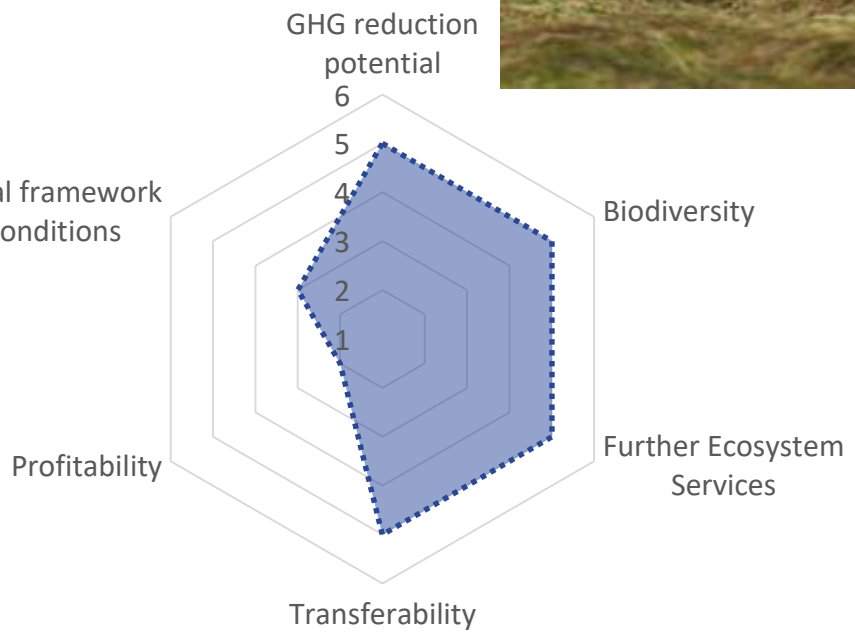
Current constraints:

- biomass summer harvest with existing machinery in wet summers
- Demographic change in rural areas (changing heat demand)
- low added value

Example I: Biomass heating plant Malchin

GHG reduction potential	5
Biodiversity	5
Further Ecosystem Services	5
Transferability	5
Profitability	2
Legal framework conditions	3


Photo: www.lensescape.org



Example II: Sphagnum farming Hankhausen

- 14 ha sphagnum farming on former bog grassland
- Site established 2011
- First harvest and site extension 2016
- Research driven
- Close cooperation with peat company MOORKULTUR RAMSLOH

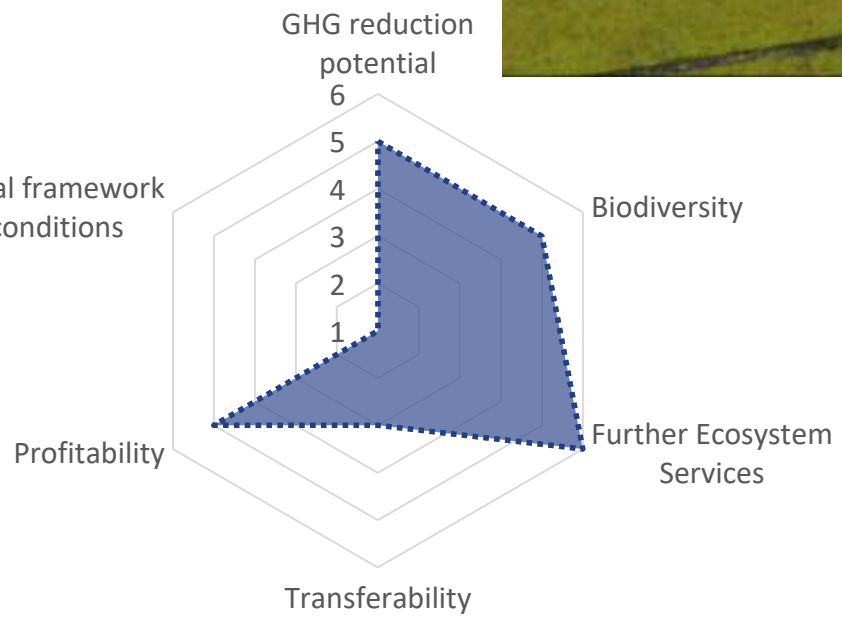
Example II: Sphagnum farming Hankhausen

- High investment costs
- No seeding material available
- Substitute for white peat in growing media → not economically feasible yet
- Sale of sphagnum for special subtrates and seeding material for bog restoration → already feasible
- Currently depends on (public) financial support
- Long term business perspective

Photos: S.Busse

Example II: Sphagnum farming Hankhausen

GHG reduction potential	5
Biodiversity	5
Further Ecosystem Services	6
Transferability	3
Profitability	2-5
Legal framework conditions	1



Example III: Typha cultivation for material use

- Suitable properties for insulation & building material (leaf design, mould resistance)
- Typhatechnik and other companies with market-ready products
- Harvest machinery available/adaptable
- Experiments with other utilisation (i.e. seeds)


Picture: C. Schröder


Picture: C. Schröder


www.typhatechnik.de

Example III: Typha cultivation for material use

Constraints

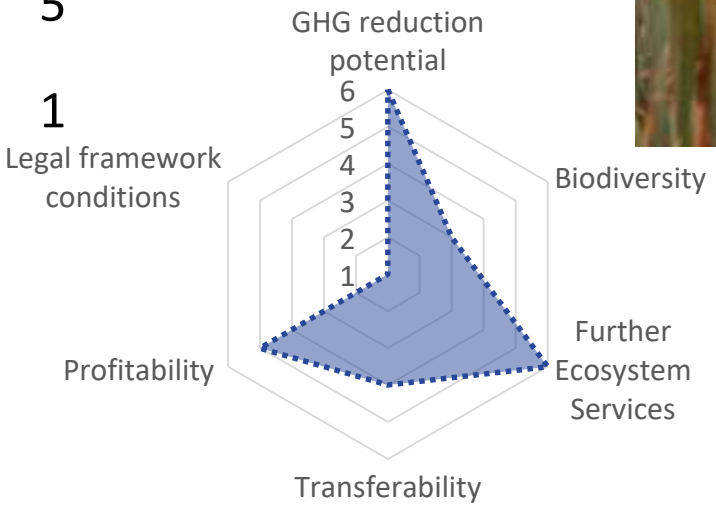
- Site availability! (legal framework)
- Knowledge on cultivation


Picture: C. Schröder


Picture: A.Nordt

Example III: Typha cultivation for material use

GHG reduction potential	6
Biodiversity	3
Further Ecosystem Services	6
Transferability	4
Profitability	5
Legal framework conditions	1



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Conclusion I

- Best practice ≠ best possible practice
- Best practice = best possible practice under given situation
- Existing best practice rely on engaged stakeholders, windows of opportunities & sometimes on missing alternatives
- Best practice examples are needed for knowledge transfer and to improve approaches, as they deliver (long term) experiences

Conclusion II

- Individual solutions
- transferability challenging

→ transfer of experience on how to integrate key stakeholders & how to develop and implement individual local solutions **ECONOMIC LEVEL**

→Use existing best practice examples for policy makers to adapt legal frameworks **POLITICAL LEVEL**

→ Peatland use should not be according to existing rules and frameworks if they support negative effects but should aim to minimize negative impact **SOCIATAL LEVEL**

Best practice examples in wet peatland use are necessary to widen the range of common thinking and to let us differentiate of what would be best in which situation

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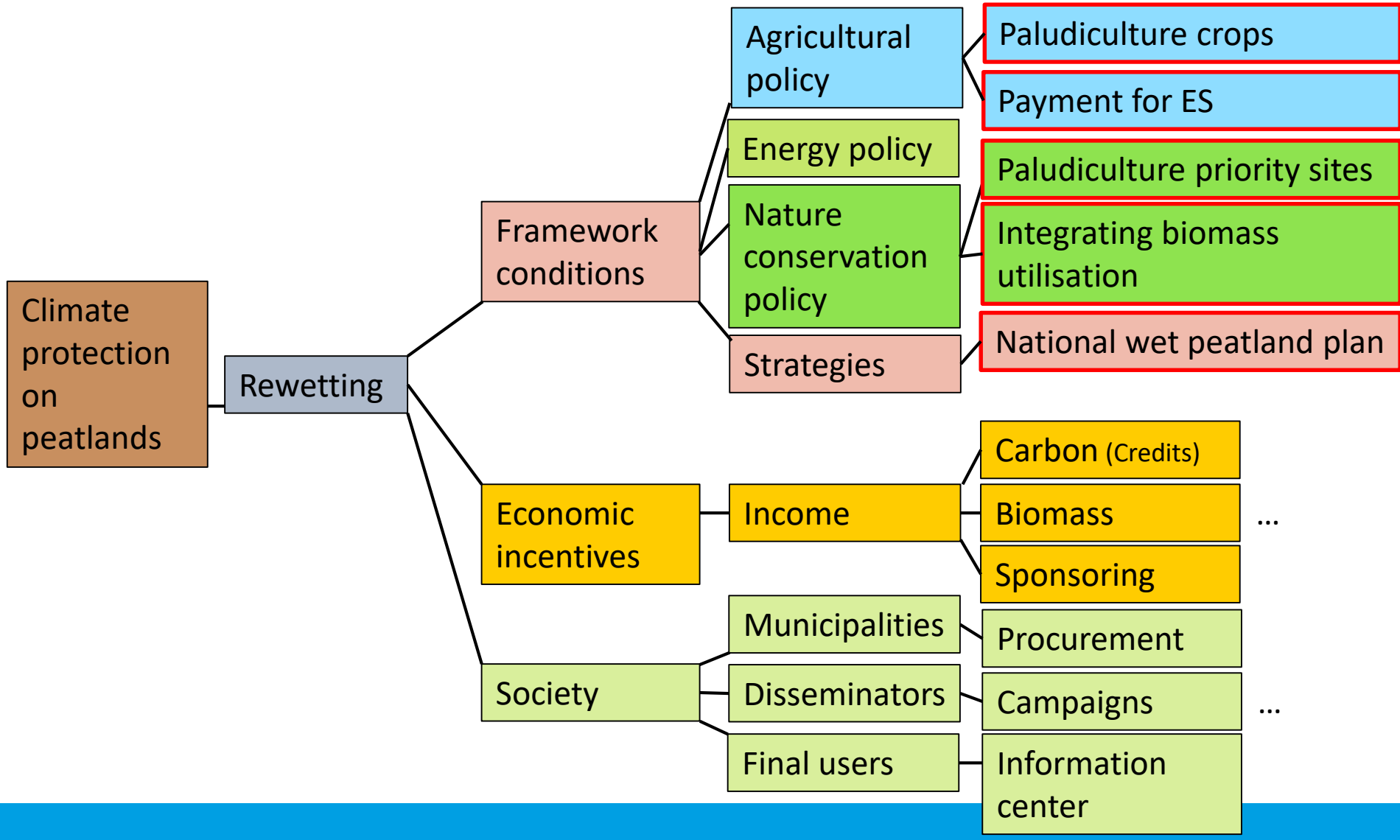

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Thank you for listening!

Photo: A.Nordt