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PaluWise - Paludiculture demonstrations towards large-scale deployment in the EU

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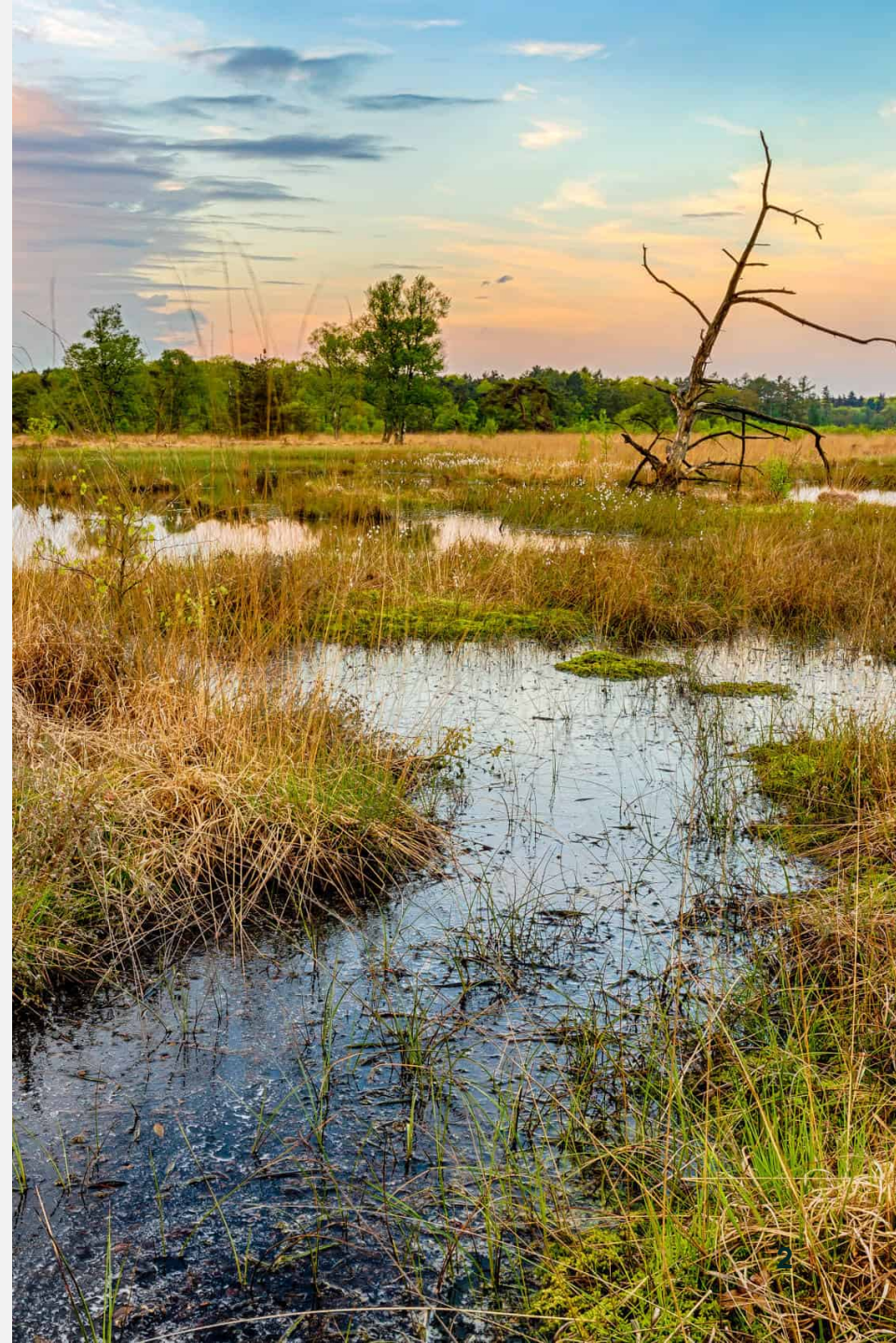


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PaluWise project

- **Project duration:** 4.5 years, Feb 2025 – Jul 2029
- **Paludiculture:** productive land use of wet and rewetted peatlands that preserves the peat soil and thereby minimises CO2 emissions and subsidence.
- **Develop advanced solutions for productive use of rewetted degraded peatland** ecosystems that support EU climate objectives and nature restoration actions
- Use a multi-actor approach in **4 large scale paludiculture demonstrations**
 - 2 well-established paludiculture sites + 2 new paludiculture sites
- Provide **recommendations for its large-scale deployment** in the EU

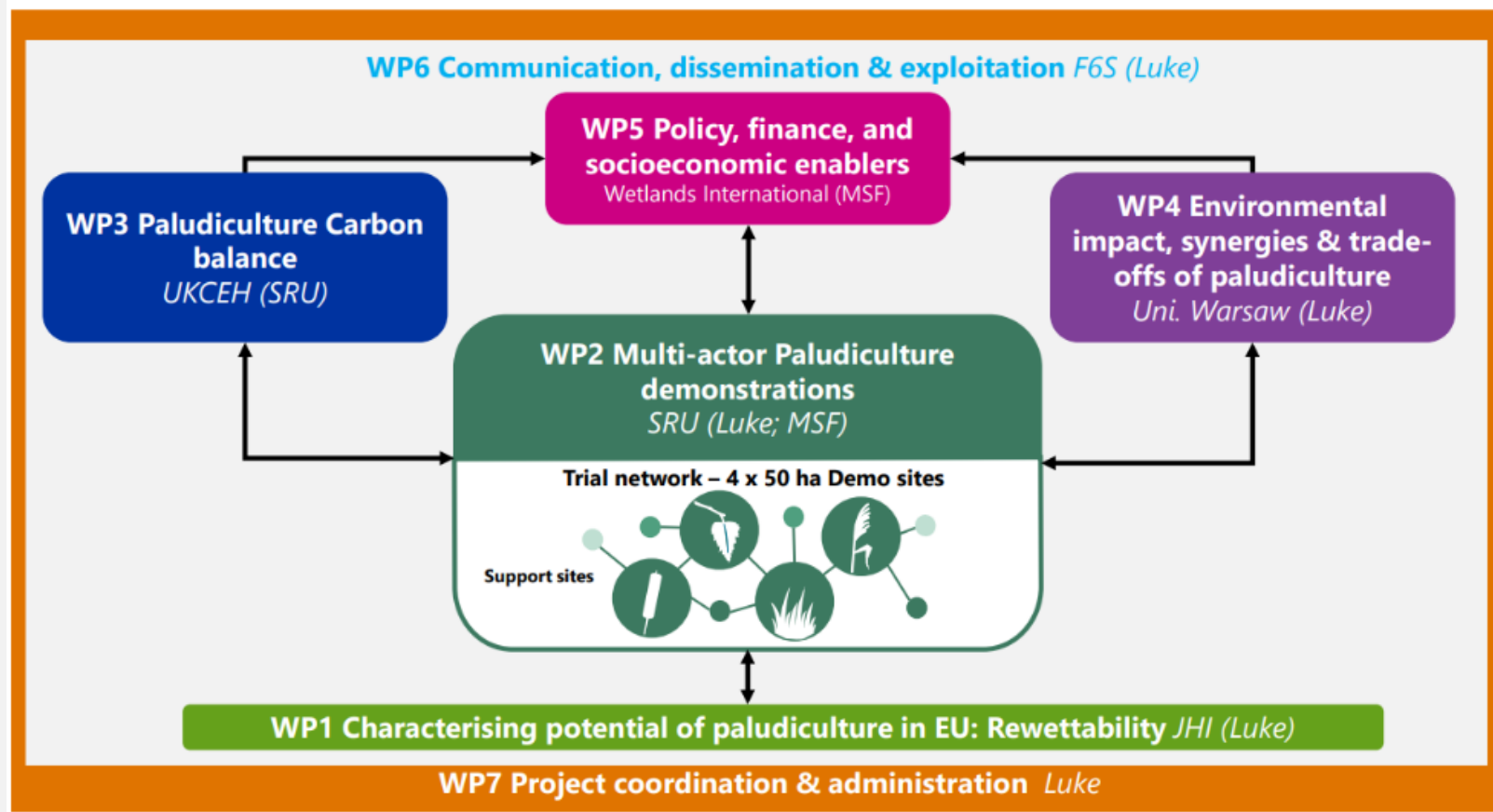


PaluWise's objectives

- Assess the possibility of degraded peatlands to be **converted to paludiculture**
- **Develop practical solutions** and recommendations for land managers to convert to paludiculture and the potential for **replicating activities and scale them up**
- **Engage actors and public awareness** of paludiculture to facilitate its sustainable upscaling
- **Quantify emission reduction, carbon sequestration potential** and other environmental benefits / impacts of paludiculture, including its contribution to relevant EU targets
- **Identify socioeconomic barriers and provide recommendations to improve policy and legislation** for large-scale deployment of paludiculture



Work Packages



Demonstration and knowledge sites

Demonstration sites, knowledge sites and participant countries

Planned crops are:

Finland – downy birch, reed canary grass, and willow

Netherlands – reed

UK - Typha, reed, and Sphagnum

Poland - sedges and Typha

+ knowledge sites in:

Finland, Germany (PaludiZentrale), Latvia, Lithuania, Scotland



Demonstration and knowledge sites in PaluWise

PaluWise demonstrations: objectives

- Establishing four 50-ha sites for biomass production, harvest and use
- Demonstrate the scale production processes of PaludiBiomass and analysing current practices to identify value chain improvements
- Monitoring key paludiculture performance indicators including Earth Observation
- Assessing practical barriers and enablers at the farm level



The Wieden (The Netherlands)

- Reed cultivation in National Park Weerribben-Wieden (5 000 ha) and around the park's bufferzones
- The high-quality reed, supported by optimal water acidity, is a valuable roofing material
- Challenges: Reed harvesting is declining due to land-use pressures, too few nutrients and increasing costs
- Solutions: Expand reed farming to nutrient-enriched degraded peat soils, improving both logistics and productivity; access to environmental schemes for carbon and nitrogen
- Additional market potential: secondary products (growing substrates, bioplastics, biochar, packaging additives)



Great Fen (The UK)

- Extensive areas of improved rewetted grassland / wetland on deep peat
- Restoration from 2008 to present
- Paludiculture trial site 5 ha established in 2020 incl. Typha for research and proof of concept
- Plans to establish two whole fields of Typha in 2026 for demonstration of scaling
- Currently two flux towers on site, one peat camera, weather station, network of dip wells and water quality testing points, data collection
- Challenges: costs, consents, protected species



Sonkajärvi (Finland)

- Former peat excavation area in Sonkajärvi
- Naturally forested by birch
- Growing stocks to be established: downy birch, reed canary grass, willow
- Material for biochar production (birch wood)
- Research infrastructure will be established in 2025, rewetting and establishment of plantations in 2026

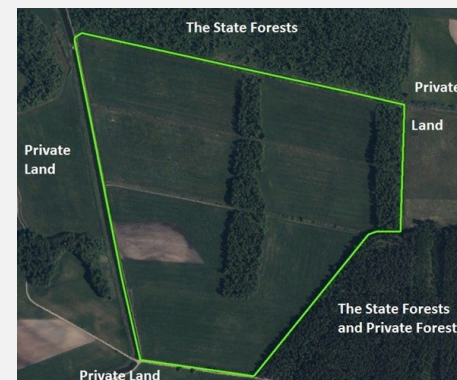


Photo: Sakari Sarkkola

Kuwasy Biebrza (Poland)

- Fen Kuwasy in the middle basin of the Biebrza river
- Managed by the Experimental Department of Institute of Technology and Life Sciences
- Current use: hay for dairy cattle
- Current water levels: 60-100 cm below ground
- Degraded peatland rewetting (approx. 50 ha)
- Sedge plantation establishment
- Rewettability and impact assessments
- Creating conditions for upscaling
- Currently collecting soil samples before rewetting, installing sensors

Photo: Hubert Piórkowski, Katarzyna Karpinska



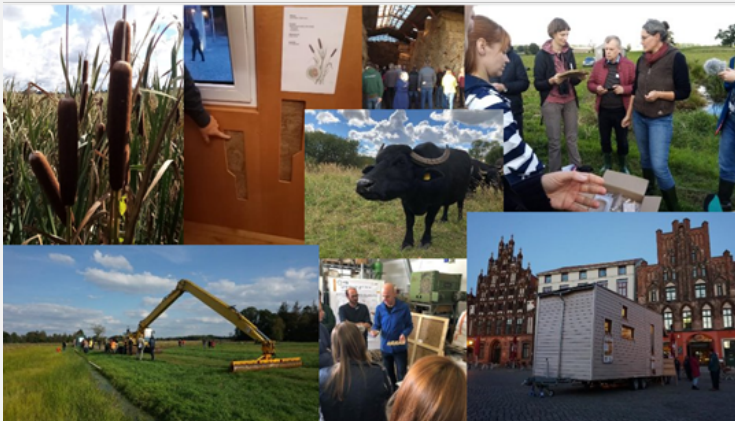
Knowledge sites



Scotland



Germany








Latvia



Lithuania

Value chain diagram

Value chain diagram

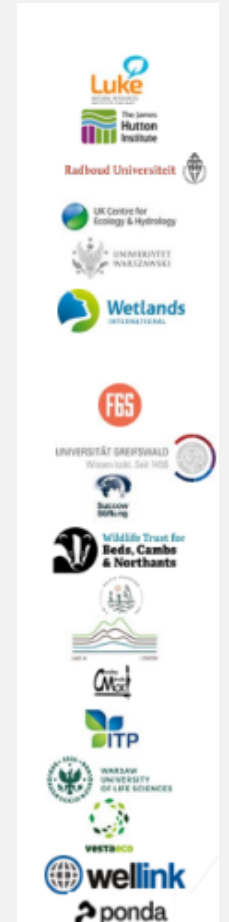
Primary crop	Paludiculture Biomass	Product (company name)	End uses / markets
FI  Downy birch	Harvest & Processing Wellink	Biochar (Carbons Finland Oy Ltd) (secondary product - Pyrolysis oils)	Soil amendments (adds Carbon to soil); Water protection (filter)
NL  Reed	Harvest & Processing Wellink	Construction material (roof thatching and board) (Riet)	Building roofing / construction
PL  Sedges	Harvest & Processing ITP	Insulation board (VestaEco) Horticulture substrate for growing mushrooms (Wokas)	Building construction Mushrooms - food
UK  Typha	Harvest & Processing SALT	Grazing material Filling material (BioPuff) Construction materials	Fodder for livestock Insulated clothing Building construction
LT LV  Reed Canary Grass	Harvest & Processing PF and LPRC	Seed production (secondary products: Micro-fibrillated fibres, Biochar, construction materials, compost, liquid fertiliser)	Seed market Food packages (fibres) Building constructions

Wetlands International Europe's current work in PaluWise

Policy barriers and upscaling paludiculture

- **Simplification package of the CAP** in May 2025
 - Member States' flexibility to adopt GAEC 2 for peatlands and wetlands protection
 - Paludiculture not yet promoted
 - Preparing a policy brief together with Palus Demos and Paludi4All, opportunities for paludiculture
- **Mobilising decision-makers** in site visits to paludiculture sites
 - First workshop on paludiculture and wet farming with a site visit on 14th October in Leuven
- **Organisation of workshops** with industry partners around paludiculture for the RRR conference in Greifswald on 23rd September.

PaluWise consortium





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