PALUDICULTURE IN EUROPE

DEVELOPMENT & IMPLEMENTATION

Paludiculture Policies & Projects
Across European Peatland Countries

Imprint

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The report reflects only the authors' views. The European Climate, Environment and Infrastructure Executive Agency (CINEA) is not responsible for any use that may be made of the information it contains.

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Abbreviations

AECMs	Agri-Environmental and Climate Measures
AI	Artificial Intelligence
ANK	Federal Action Plan on Nature-based Solutions for Climate and Biodiversity
BMEL	Federal Ministry of Food and Agriculture
BMUV	Federal Ministry for the Environment, Nature Conservation, Nuclear
CAP	Common Agricultural Policy
CCF	Carbon Corporate Footprint
CO_2	Carbon dioxide
EEG	Renewable Energy Sources Act
EU	European Union
FNR	Fachagentur Nachwachsende Rohstoffe
GAEC	Good Agricultural and Environmental Conditions
GHG	Greenhouse gases
Ha	Hectares
LULUCF	Land use, land use-change and forestry
MRV	Monitoring, Reporting, and Verification
PEF	Paludiculture Exploration Fund
PRIA	Estonia's Agricultural Paying Agency
PV	Photovoltaic
RRF	Recovery and Resilience Facility
SCP	Safety and Consumer Protection
SOC	Soil Organic Carbon
VCUs	Verified Carbon Units

INTRO DUC TION

Paludiculture, the management and use of rewetted peatlands, is gaining attention as a sustainable farming solution to address climate, biodiversity, and land-use challenges across Europe. This study portrays EU-(co)-funded and other significant paludiculture projects in peatland-rich European countries, serves as a project overview and points out challenges encountered and lessons learned during the implementation process. Moreover, by highlighting the political frameworks supporting paludiculture in each portrayed country, this study identifies key legal developments that can serve as valuable references for policymakers, experts, advocacy groups, and project developers seeking to design and improve strategies for the sustainable use of peatlands in the future.

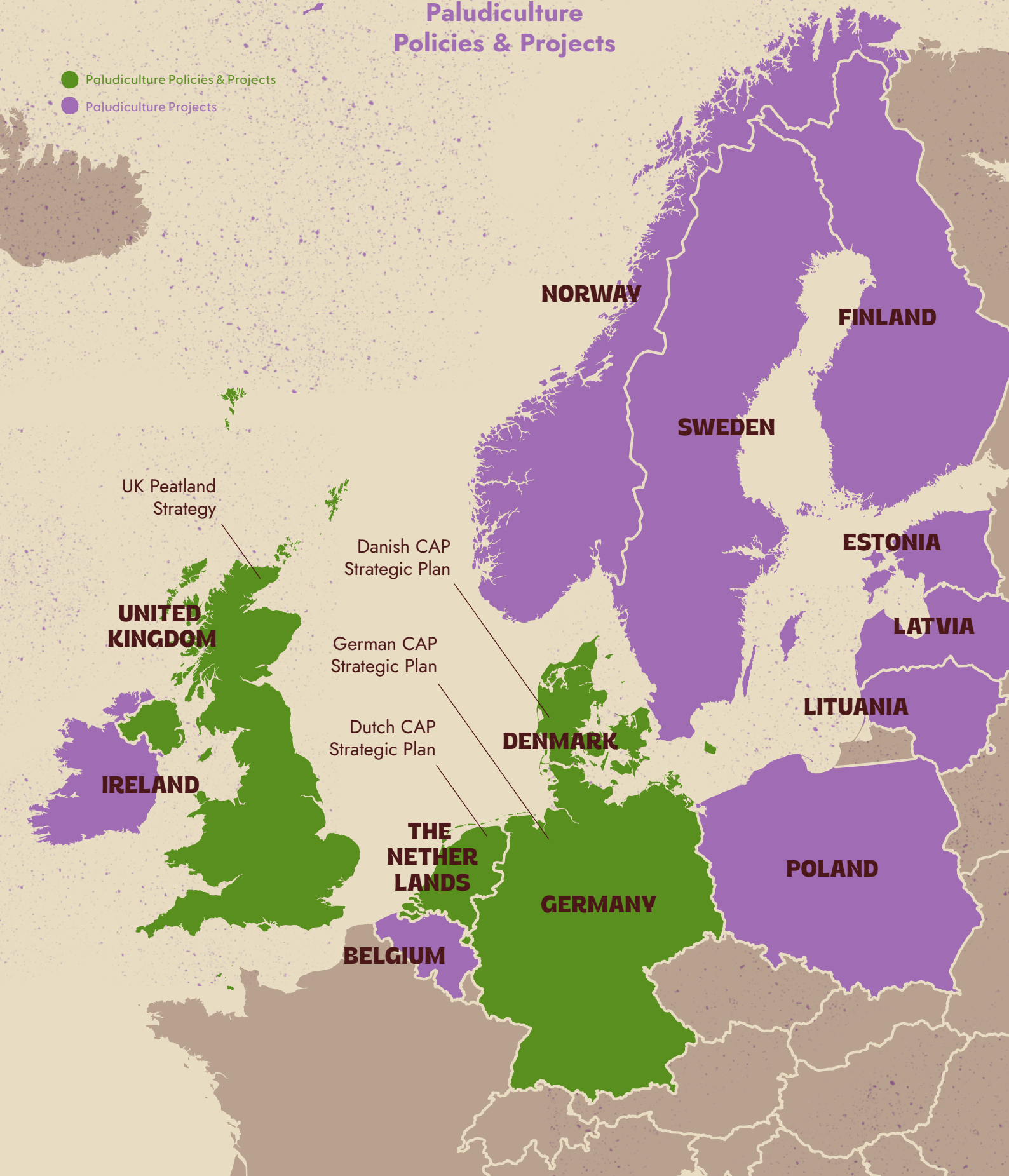
To ensure clarity, projects are listed under the country where they are coordinated, even if they involve multiple project sites across different countries. References are provided for countries with participating project sites but where the project is not primarily coordinated. While not a comprehensive catalogue of all paludiculture projects, this study presents an informed selection of EU-(co)-funded and other key initiatives.

The study aims to enhance understanding of the current state of paludiculture and serve as a starting point for future policy recommendations. By identifying barriers and comparing national policies, it seeks to provide reference for stakeholders and foster collaboration to realise the potential of rewetted peatlands for climate and biodiversity goals. With the upcoming Common Agricultural Policy (CAP) reform in 2027, integrating paludiculture into national and European strategic frameworks will be essential for achieving long-term sustainability objectives.

European Countries

with

Paludiculture Policies & Projects



SUMMARY

The analysis reveals a significant rise in paludiculture initiatives over the past decade, driven by growing awareness of the benefits of rewetting peatlands for climate mitigation and biodiversity conservation. While earlier projects focused on feasibility assessments and pilot studies, more recent efforts prioritize practical implementation, market development, and value chain integration. Despite this progress, only about 30 % of portrayed countries explicitly reference paludiculture in their national measures for sustainable peatland management, and an additional 30 % have separate national strategies or policies recognizing it as a potential land-use option. These limited references highlight significant gaps in policy alignment, unclear definitions, and a lack of economic viability. Measures such as GAEC-2, Eco-schemes, and AECMs aim to maintain conditions and prevent further degradation but have not yet driven substantial improvements.

To address these challenges, several EU countries are establishing large-scale, multi-stakeholder paludiculture demonstration sites. These initiatives aim to clarify definitions, create necessary frameworks, and evaluate value creation chains to support more effective policies and strategic plans. With the next CAP period beginning in 2027, it is crucial to incorporate paludiculture into national strategic plans across all EU member states with significant agriculturally used peatlands. This includes enabling farmers to access subsidies for paludiculture and introducing new programmes such as bonus payments for ecological improvements, result-oriented schemes, and action-based incentives, while phasing out direct payments for ecologically harmful practices.

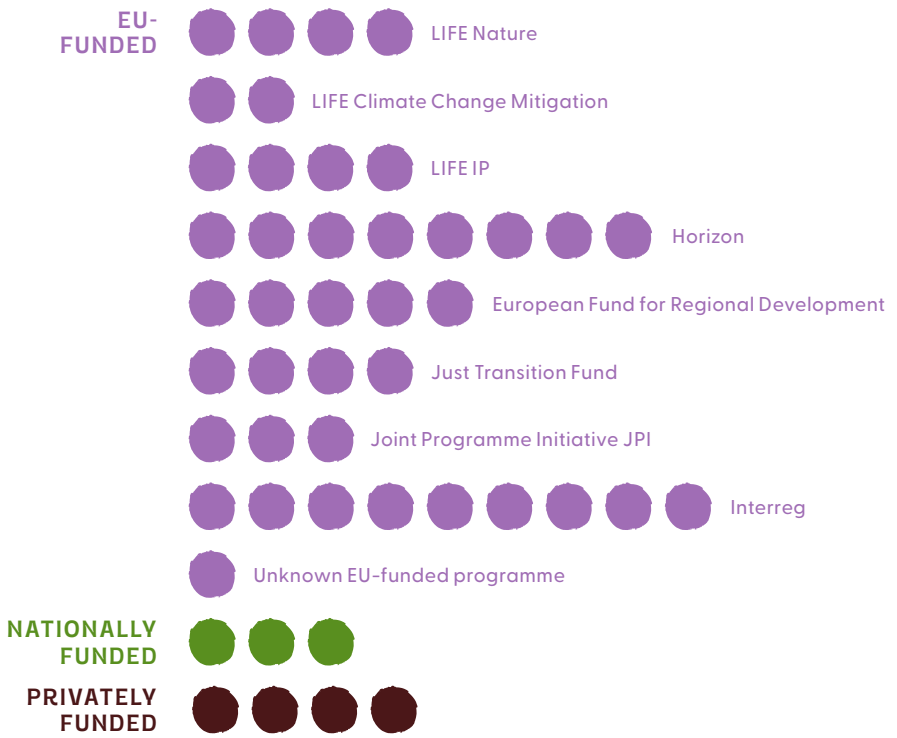
Project coordinators and associates highlighted several barriers to widespread paludiculture implementation across the 48 projects analysed in this study:

1. **Policy and funding gaps**
   41 projects (85 %) encountered challenges with inadequate policy support, highlighting the need for financial incentives and regulatory frameworks.
2. **Economic viability**
   34 projects (70 %) mentioned insufficient market demand for wetland biomass and high upfront costs for rewetting and infrastructure development.

3. **Technical and knowledge barriers**
   29 projects (60%) faced difficulties due to limited expertise in wetland agriculture and a lack of research on suitable crops and techniques.
4. **Landowner engagement**
   26 projects (55%) struggled with resistance from private landowners due to economic concerns and long-term land use restrictions.
5. **Coordination across stakeholders**
   Fragmented collaboration among policymakers, researchers, and practitioners often hindered project scaling.

Other challenges included legal complexities around land ownership and harmful subsidies incentivising status quo practices. Addressing these issues requires political frameworks that provide clarity and planning security for stakeholders.

Funding types of paludiculture projects



BELGIUM

Peatland cover 248 km² → 0,81%[1]
↳ **Flanders** 11,423 ha → 0,9%[2]
↳ **Wallonia** Information n/a
Estimated degraded peatland cover 80%[3]
Emissions from peatland Information n/a

Willow flower
Salix alba

Paludiculture Policies

Neither Flanders nor Wallonia explicitly promote paludiculture in their national CAP strategies, however, paludiculture could be indirectly supported through peatland protection measures outlined in the CAP strategic plan. Due to the lack of definitions and clarification, the implementation of paludiculture in Belgium is impeded.

Flanders: Paludiculture in the Flemish CAP Strategic Plan, 2023—2027

Eligible Hectares

Paludiculture is not listed as an eligible practice under the "eligible hectares" criteria. There is no mention of agricultural land used for paludiculture maintaining its eligibility for direct payments, and Article 4.4 does not provide any clear support for non-listed crops like those grown in wetland environments.

Pillar I: Good Agricultural and Environmental Conditions (GAEC)

GAEC 2 prohibits conversion, ploughing, drainage, burning of vegetation and peat extraction in all peatlands. Renewals of old drainage are only allowed under strict permitting. While paludiculture is not explicitly mentioned in the plan, the emphasis on maintaining natural hydrology indirectly supports the principles of paludiculture.

1 The peatland map of Europe, 2017
2 Veen in Vlaamse bodem en ondergrond in relatie tot klimaat en bovenen ondergronds ruimtegebruik, 2023
3 The peatland map of Europe, 2017

Pillar I: Eco-schemes

The eco-schemes in Flanders incentivise ecologically managed grasslands and soil carbon content in arable soils. These measures may indirectly support paludiculture. The introduction of subsidies for climate-resilient and biodiversity-friendly crops currently only focusses on legumes and other arable species but could be extended to paludiculture crops in the next CAP period.

Pillar II: Agri-Environmental and Climate Measures (AECMs)

AECMs could indirectly support paludiculture through measures that focus conversion to permanent grassland, perennial crops that support biodiversity or agroforestry maintenance that may include willow or alder strips in wet areas. Farmers participating in water retention or carbon sequestration measures might indirectly align with the goals of paludiculture, though it is not directly mentioned.

National Policies

In the national climate adaptation plan of Flanders (Vlaams Klimaatadaptatieplan 2030), paludiculture is explicitly mentioned. The document highlights paludiculture as one of the adaptive agricultural strategies that the government can encourage in regions highly sensitive to drought or flooding. Specifically, the plan notes that transitioning to crop types suited to varying water table availability is an approach to increase climate resilience in agriculture.

Wallonia: Paludiculture in the Wallonian CAP Strategic Plan, 2023—2027

Eligible Hectares

Paludiculture is not listed as an eligible practice under the "eligible hectares" criteria. There is no mention of agricultural land used for paludiculture maintaining its eligibility for direct payments, and Article 4.4 does not provide any clear support for non-listed crops like those grown in wetland environments.

Pillar I: GAEC 2

Protection measures for wetlands and peatlands under GAEC 2 include restricting harmful agricultural practices such as drainage, peat extraction, and the use of fertilizers and pesticides that could damage these ecosystems. Maintaining natural hydrology is a key focus to ensure these areas remain water-saturated, preserving their ecological functions and carbon storage capacity. Farmers are encouraged to adopt sustainable practices through financial incentives, promoting biodiversity-friendly management. While paludiculture is not explicitly mentioned, those measures indirectly support paludiculture.

Pillar I: Eco-schemes

Wallonia's eco-schemes focus on promoting sustainable farming practices, biodiversity, and water management. Wetland and peatland restoration efforts, particularly those aimed at carbon sequestration and water retention, could provide indirect support for paludiculture, though it is not directly listed under eco-schemes.

Pillar II: AECMs

Measures that focus on water retention, carbon sequestration, and wetland restoration could align with paludiculture practices, though the term is not specifically used. Programs could offer funding for activities that help to restore peatland hydrology, thereby creating conditions favourable for paludiculture.

To fully harness the potential of paludiculture, there is a need for more explicit support within the CAP's eco-schemes and AECMs. Developing incentives for farmers to adopt paludiculture could transform peatland management by creating sustainable land use practices that both restore and protect ecosystem services of peatlands and generate income. This would also contribute significantly to carbon reduction efforts, as rewetted peatlands play a crucial role in climate change mitigation.

Flemish and Wallonian Paludiculture Projects

1. ADMIRE

The Interreg ADMIRE project focuses on the conservation and restoration of peatlands in the transborder region of Flanders and the Netherlands. The project aims to address the challenges posed by the fragmentation and intensive use of landscapes, which threaten these vital ecosystems. ADMIRE seeks to establish sustainable collaborations with various stakeholders, including farmers, to promote wetland conservation and explore alternative farming methods, e.g., paludiculture. The project aims to develop viable business models for wet agriculture by fostering partnerships through events and co-creation workshops, with the goal of influencing policy recommendations and encouraging broader collaboration.

The project plans to restore six pilot sites, covering approximately 250 ha, by implementing measures to maintain a high and stable water table, which is essential for peatland restoration. Initial steps include conducting landscape ecological system analyses (LESAs) to understand the key factors affecting peatland health and degradation, followed by actions such as installing weirs and closing drainage ditches to raise groundwater levels.

Additionally, ADMIRE is engaged in raising awareness about novel farming techniques.

OVERVIEW Paludiculture Project "ADMIRE"

Project Budget	5,800,000 €
Total EU-Funding	2,900,000 €
Project Duration	01.04.2023–31.03.2026
Project Area	The Netherlands, Flanders
Project Lead	Natuurpunt
Project Link	Over ons | ADMIRE | Interreg Vlaanderen-Nederland

2. Care-Peat

Care-Peat was an Interreg North-West Europe (NWE) project aimed at reducing carbon emissions and restoring the carbon storage capacity of peatlands across North-West Europe. The project brought together 12 partners, including 7 knowledge institutes and 5 nature organizations from Belgium, France, Ireland, the Netherlands, and the United Kingdom, supported by 7 sub-partners and 41 associated partners. Through this collaboration, Care-Peat developed and tested innovative restoration techniques and socio-economic strategies to enhance peatland conservation.

A central component of Care-Peat was the integration of paludiculture into its peatland restoration strategies. The project implemented this approach across various pilot sites, demonstrating its potential to not only restore peatlands but also provide local economic benefits. These efforts successfully prevented carbon emissions and enhanced the long-term sustainability of peatland ecosystems.

Lessons Learned

- **Importance of Tailored Approaches:** The diversity of peatland ecosystems highlighted the need for customized restoration strategies. This insight was crucial in the development of the project's management and decision support tool, which was designed to be adaptable across different peatland types.
- **Broader Stakeholder Involvement:** The success of peatland restoration was closely linked to broad stakeholder engagement. The inclusion of farmers and landowners in the capitalisation project emphasized the importance of involving these key groups in environmental initiatives.
- **Knowledge Sharing:** The dissemination of a management and decision support tool, along with socio-economic models, underscored the value of sharing knowledge. These resources enabled other organizations to replicate Care-Peat's success, extending its impact across the region.

Successes

- **Innovative Restoration Techniques:** Care-Peat successfully implemented a variety of restoration methods, including re-wetting peatlands and cultivating additional peat moss, across its 7 pilot sites. These techniques demonstrated promising results, with an estimated 8,137 tons of carbon emissions prevented annually.
- **Technological Advancements:** The project developed cutting-edge tools and methods for carbon measurement and restoration, such as the use of drones and satellites for precise monitoring. These innovations significantly improved the accuracy and efficiency of peatland restoration efforts.
- **Stakeholder Engagement:** Care-Peat effectively engaged local landowners, innovative companies, and regional stakeholders, creating partnerships that enhanced the socio-economic impact of the project. The capitalisation project extended this engagement to farmers and farmer organizations, successfully integrating them into the restoration process.

Challenges

- **Variability of Peatland Types:** The project encountered challenges due to the diverse typology of peatlands across North-West Europe, which required tailored restoration approaches. This variability complicated the development of universal tools and strategies, necessitating flexible and adaptable methods.
- **Long-Term Sustainability:** Ensuring the durability of restoration efforts proved to be a key challenge, particularly in the face of land-use pressures and climate change. The project continuously refined its techniques to maintain the positive outcomes achieved during the pilot phase.

Output

- Measuring methods and integrated model to predict C-emissions and sequestration in natural peatland
- The Decision Support Tool
- Towards a Carbon Credit & Blue Credit Scheme for peatlands – White Paper: https://vb.nweurope.eu/media/19605/carbon-blue-credit-white-paper-january-2023.pdf
- Carbon Farming – Financial Feasibility and Pricing Tool: Care-Peat – Carbon loss reduction from peatlands: an integrated approach | Interreg NWE (nweurope.eu)
- Theoretical business case for using renewable energy to fund peatland restoration: care-peat_main_output_model_renewable_energy_wpt2.pdf (nweurope.eu)
- EU Peatland Policy Recommendations: care-peat_main_output_policy_wpt2.pdf (nweurope.eu)

OVERVIEW Paludiculture Project "Care Peat"

Project Budget	7,130,000 €
Total EU-Funding	4,280,000 € (Interreg North West Europe)
Project Duration	10.01.2019–31.12.2023
Project Area	Belgium, France, Ireland, UK, The Netherlands
Project Lead	Natuurpunt
Project Link	Care-Peat – Carbon loss reduction from peatlands: an integrated approach | Interreg NWE (nweurope.eu)

Additional project activities in Belgium with project leadership based in another country:

→ **LIFE Multi Peat**
→ **CANAPE**

DENMARK

Cottongrass
Eriophorum vaginatum

Peatland cover 2,029 km² → 4.71%[4]
Estimated degraded peatland cover >80%[5]
Emissions from peatland 5.4 Mt CO_2-eq/year[6]

Paludiculture Policies

Paludiculture is recognised under the national CAP Strategic Plan. The practice is explicitly mentioned in pillars I and II, under eco-scheme and AECMs.Conversely, the national programme, Green Denmark Agreement, does not promote paludiculture, instead it seeks to reduce carbon emissions by removing carbon-rich lowland soils from agricultural use altogether.

Paludiculture in the Danish CAP Strategic Plan, 2023—2027

Eligible Hectares

Paludiculture is explicitly mentioned as eligible under the Danish CAP. According to Article 4, Section 4(a) and (b), land that does not meet conventional eligibility requirements can retain its status if used for paludiculture, allowing direct payments for paludiculture on rewetted peatlands. Additionally, the legal framework specifies that certain crops, such as Reed canary grass (Phalaris arundinacea), grasses and other herbaceous species grown on arable land, and permanent grasslands qualify for this eligibility. Common reed (Phragmites australis) and Cattail (*Typha spp.*) are excluded as they aren't classified as agricultural crops under Annex I of the Treaty on the functioning of the European Unioin (TFEU). Areas must also serve agricultural purposes with defined agricultural activities.

Pillar I: GAEC 2

GAEC 2 prohibits conversion, ploughing, drainage, burning of vegetation and peat extraction in all peatlands. Renewals of old drainage are only allowed under strict permitting. While paludiculture is not explicitly mentioned in the plan, the emphasis on maintaining natural hydrology indirectly supports the principles of paludiculture.

4 The peatland map of Europe, 2017
5 Global Peatlands Assessment: The State of the World's Peatlands, 2022
6 Mapping and monitoring peatland conditions from global to field scale, 2023

Pillar I: Eco-Schemes

Paludiculture is supported under the eco-scheme for varied crop production. This eco-scheme explicitly includes the cultivation of grass and energy crops in paludiculture systems.

Pillar II: AECMs

Under the AECMs, paludiculture is encouraged as part of peatland conservation and rewetting projects aimed at sustainable management. The measures support cultivation for non-agricultural products, such as biomass, in paludiculture-dedicated areas. Current regulations restrict crop production on subsidized rewetted land (per Bekendtgørelse om tilskud til vand- og klimaprojekter 2024 og 2025, §22, stk. 2 nr. 7), designating rewetting solely for climate and ecological restoration, further limiting economic viability for biomass production.

Due to the restriction of ploughing, fertilization, and other land management practices, the implementation of paludiculture in Denmark has been challenging as harvested biomass under these conditions is not sufficient to maintain economic viability. Value chains for wetland biomass are in the early stages of development and the lack of financial incentives impedes further development.

National Programs

The Green Denmark Agreement focuses on carbon reduction and promoting the withdrawal of carbon-rich lowland soils from agricultural use. Its aim is to remove 140.000 hectares of carbon-rich lowland soils and its surrounding areas by 2030 from agricultural use, hence the implementation of paludiculture seems unlikely in this scenario. The Danish government allocates 9.4 billion DKK for land purchase to meet their goal and establish protected areas. Furthermore, the Danish government will start imposing a CO_2 tax in 2028 on emissions from peatlands. This tax is meant to incentivize landowners to participate in projects that aim to take land out of production. Landowners already participating will not be subject to the tax. A legal framework supporting the agreement is expected to be implemented by 2025.

Danish Paludiculture Projects

1. LIFE IP Natureman

The project addresses the challenges posed by the specialization and economies of scale in Danish agriculture, which have led to fragmented natural areas among cultivated lands. This fragmentation, compounded by intensive farming practices and drainage, threatens the conservation status of habitat types such as alkaline fens, petrifying springs, and grasslands. The overarching goal of LIFE IP NATUREMAN is to develop nature management as a viable branch of farming, making it financially attractive for farmers to integrate natural areas through grazing or biomass harvesting. The project targets 11 Natura 2000 network sites in central and northern Jutland, focusing on the specified habitat types under the Habitats Directive.

The paludiculture component of this project involves harvesting biomass from wet areas and utilizing the harvested biomass to produce biogas that is currently explored as a part of the project.

Challenges

- Harvesting of biomass from waterlogged soils (addressed in the sister-project Høsttek).
- Economic viability of wetland biomass remains serious issue.
- Regulatory challenges: Subsidies for extensification cease in 2024.
- Biodiversity concerns: The harvesting practice must consider impact on local biodiversity.

OVERVIEW Paludiculture Project "LIFE IP Natureman"

Project budget	17,417,232 €
Total EU Funding	10,450,090 €
Project Duration	01.10.2018–31.03.2026
Project Area	Denmark (Central and northern Jutland)
Lead Partner	Danish Nature Agency
Link	About – LIFE IP Natureman – landmanden som naturforvalter (life-natureman.dk)

Additional project activities in Denmark with project leadership based in another country:

→ **CANAPE**
→ **CAOS**

ESTONIA

Peatland cover 29,150 km² → 20.23%[7]
Estimated degraded peatland cover >72.3%[8]
Emissions from peatland 7.73 Mt CO_2-eq/year[9]

Black Grouse
Tetrao tetrix

Paludiculture Policies

There is no specific policy mentioning paludiculture in Estonia and no dedicated framework to directly promote paludiculture, however some indirect measures exist.

Paludiculture in the Estonian CAP Strategic Plan, 2023—2027

Eligible Hectares

In Estonia, lands used for environmental and climate-related purposes, such as those contributing to wetland and peatland conservation, can retain eligibility for CAP payments. Paludiculture practices, such as cultivating wetland-adapted crops, would likely remain eligible for subsidies under this provision if they align with climate and environmental objectives. Article 4(4) of the CAP regulation mentions that agricultural activities should include paludiculture, but the Estonian Strategic Plan does not specifically address paludiculture, leading to uncertainty about whether it qualifies for future CAP direct payments. However, basic income support of up to €130 per hectare per year is available for agricultural activities that may include paludiculture, although details remain vague.

Pillar I: GAEC 2

Paludiculture is indirectly supported in GAEC 2 as the regulations promote the conservation of peatlands through water retention. However, there is no explicit promotion of paludiculture in the context of GAEC 2, and no requirement to actively rewet degraded peatlands, limiting the direct impact on large-scale paludiculture adoption. Furthermore, wetland crops, such as reed and cattail, are not recognized in the Estonian CAP.

7 The peatland map of Europe, 2017
8 Peatlands and Climate in a Ramsar context, 2015
9 Peatlands and Climate in a Ramsar context, 2015

Pillar I: Eco-Schemes

Eco-schemes in Estonia support actions that improve biodiversity and carbon sequestration, which align with the goals of peatland rewetting. The eco-schemes encourage carbon farming, water management, and peatland conservation, but paludiculture is not explicitly mentioned as an eligible practice. Farmers involved in water retention on peatlands might benefit from eco-scheme payments, yet the lack of specific references to paludiculture crops makes it unclear whether these practices can directly benefit.

Pillar II: AECMs

Estonia's AECM Soil and Water Protection (KK4) allows the conversion of arable land on peatland into permanent grassland and its maintenance. Specific legislative acts to address paludiculture are still under development.

Additional Policies

The Estonian Climate Law, currently under development, includes a potential measure to support paludiculture by covering an additional 1,000 hectares each year, starting in 2026. Whether paludiculture gains momentum in the new CAP period depends heavily on the interpretation and application of these measures by Estonia's Agricultural Paying Agency (PRIA).

Estonian Paludiculture Projects

Currently, there are no EU-(co)-funded paludiculture projects coordinated in Estonia.

Project activities in Estonia with project leadership based in another country:

→ **EUKI – Carbon capturing by Baltic peatland farmers**

FINLAND

Peatland cover 90,000 km² → 26.71%[10]
Estimated degraded peatland cover 55%[11]
Emissions from peatland 37.4 Mt CO_2-eq/year[12]

Arctic Raspberry
Rubus arcticus

Paludiculture Policies

Currently no policy instruments specific to paludiculture are effective in Finland. Farmers can apply for investment and management aid for wetlands and controlled drainage through the CAP.

Paludiculture in the Finnish CAP Strategic Plan, 2023—2027

Eligible Hectares

Paludiculture is not recognised as a specific practice eligible for funding in the Finnish CAP under Article 4(4).

Pillar I: GAEC 2

Paludiculture is not explicitly mentioned as a recommended or supported land use. The focus remains on water retention and grassland management to prevent further degradation and carbon emissions. Management activities like tillage or ploughing are prohibited on peat soils and areas that are converted to agricultural land after 2022 must remain permanent grassland and cannot be transformed into arable land.

Pillar I: Eco-schemes

Finland's eco-schemes include actions for soil quality improvement, water management, and permanent grassland maintenance, which align with peatland conservation but do not explicitly promote paludiculture.

10 The peatland map of Europe, 2017
11 Mapping and monitoring peatland conditions from global to field scale, 2023
12 Global Peatlands Assessment: The State of the World's Peatlands, 2022

Pillar II: Agri-Environmental and Climate Measures (AECMs)

The AECMs include measures for peatland management, such as promoting long-term grass cultivation on peatlands without tillage and raising water tables. While peatland restoration is supported, there is no direct support for paludiculture.

National Programmes

Paludiculture was a key topic of discussion as a potential greenhouse gas (GHG) mitigation strategy during Finland's 2021 government budget negotiations. These talks led to an agreement to implement paludiculture on 30,000 hectares. However, this funding was cut from the state budget when a new government took office in 2023.

Finnish Paludiculture Projects

1. ACE LIFE – Accelerating Climate efforts and Investments

The ACE LIFE project focusses on solutions to reduce GHG emissions in agriculture, transport, and small to medium-sized industries. The primary source of emissions in agriculture are from the land use sector, particularly from drained peatlands, thus finding solutions to rewet peatlands while ensuring economic viability for farmers and landowners is crucial. ACE particularly aims to develop the first functional value chain for biomass from paludiculture and draft policy proposals to meet climate goals and enhance investment.

Challenges

- Efforts to secure the required land are still in the early stages, with a major obstacle being the cancellation of a € 30 million state budget for permanent rewetting, which was available when the proposal was initially written.
- Farmers now need to be convinced to participate without any financial support.

OVERVIEW Paludiculture Project "ACE LIFE"

Project budget	20,000,000 €
Total EU Funding	12,000,000 €
Project Duration	01.01.2024–31.12.2030
Project Area	Finland
Project Lead	Finish Environment Institute (Skye)
Link	LIFE 3.0 – LIFE22-IPC-FI-ACE-LIFE/101104613 (europa.eu)

2. FIBSUN – Novel Fibre Value Chains & Ecosystem Services from Sustainable Feedstocks

The FIBSUN project focuses on developing novel fiber value chains and enhancing ecosystem services from sustainable feedstocks by cultivating biomass on abandoned or degraded land. To address the critical gap in processing methods for emerging biomass sources, FIBSUN optimizes five bio-based fiber value chains

through real-world experiments in cultivation practices and industrial processes. The project specifically studies the use of reeds and cattail in insulation boards and evaluates the impacts of paludiculture on soil quality. By redirecting focus toward cultivating degraded soils, FIBSUN aims to combat environmental challenges and support the future of the rural bioeconomy and industrial competitiveness. The project provides sustainable biomass for industrial biorefineries from abandoned or marginal land while improving the sustainability of processing methods for paludiculture crops.

The consortium comprises six research organizations and eleven industry partners across various sectors, uniting expertise in cultivation, biomass logistics, industrial processing, and financial management.

Challenges

- Policy alignment.
- Lack of funding down the value chain.

OVERVIEW Paludiculture Project "FIBSUN"

Project budget	4,490,000 €
Total EU Funding	4,490,000 €
Project Duration	01.06.2023–31.05.2027
Project Area	Finland
Project Lead	Natural Resource Institute Finland (LUKE)
Link	PROJECT | FIBSUN

3. INSURE – Indicators for successful carbon sequestration and greenhouse gas mitigation by rewetting peat soils

The INSURE project focuses on paludiculture as a sustainable solution for reducing greenhouse gas emissions and water contamination from cultivated peatlands through wetland management. By raising the groundwater table and cultivating flood-tolerant crops, the project aims to minimize peat decomposition. This approach allows farmers to continue deriving income from these lands while mitigating environmental impacts.

However, rewetting peat soils can result in trade-offs, such as increased methane or phosphorus emissions, which may counteract the environmental benefits. INSURE addresses these challenges by identifying measurable indicators that can predict the success of rewetting initiatives and help select optimal sites. This will enhance the effectiveness of paludiculture while ensuring its environmental and economic viability.

The project combines experimental research with advanced modeling and analysis of peat composition to better understand the processes governing nutrient and carbon cycling in rewetted ecosystems. By developing reliable indicators for managing these trade-offs, INSURE aims to increase the success rate of rewetting projects and promote broader adoption of paludiculture as a climate-smart agricultural practice.

Challenges

- Lack of political support.
- Maintaining high water level throughout the entire experimental period.

OVERVIEW Paludiculture Project "INSURE"

Project budget	3,460,666 €
Total EU Funding	1,730,000 €
Project Duration	01.02.2021–31.12.2024
Project Area	Finland
Project Lead	Natural Resource Institute Finland (LUKE)
Link	INSURE (ejpsoil.eu)

4. **TURBITS** – New peatland crops and biobased side-streams: Production chains, valuable materials and circular economy

The TURBITS projects aim is the establishment of a research, infrastructure and innovation centre to develop an economy from former peat extraction sites. Potential paludiculture plants are explored to recover value from organic materials such as fibre materials, bedding and growing media for horticultural production. The main focus lies on plant cultivation, harvest techniques, logistics and comprehensive use cases for each paludiculture crop and industry to improve production chains and establish paludiculture as an economically viable alternative to peat extraction for the province of Central Finland.

Current status

The project is currently focused on developing laboratory methods and acquiring analytical equipment. Analysis of organic valuables has commenced for five species of moss and reed canary grass. Additionally, efforts are underway to develop instrumentation for using cattail fluff in the textile industry. The project does not involve actual cultivation trials but rather aims to develop harvesting, logistics, and recovery methods for organic valuables to promote the beneficial use of paludiculture plants.

Challenges

- Value chain establishment.

OVERVIEW Paludiculture Project "TURBITS"

Project budget	307,993 €
Total EU Funding	307,993 €
Project Duration	01.10.2023–30.04.2026
Project Area	Finland
Project Lead	University of Jyväskylä
Link	New Cultivated Plants on peatlands and biobased side-streams: Production Chains, Valuables and Circular economy (TURBITS) – University of Jyväskylä (jyu.fi)

5. **ArvoHiili** – Value from the carbon market for the next land use of peat production areas

An estimated 7.000 to 11.000 ha will be freed from peat extraction in South Ostrobothnia between 2022–2025. The ArvoHiili project investigates opportunities and challenges for carbon market activities in former peat extraction sites in the Finnish region South Ostrobothnia by identifying the scientific, technical, legal-administrative, and economic prerequisites for deriving value from carbon storage and sequestration through paludiculture. The opportunities and challenges of carbon farming and trading are being explored throughout the project by measuring and analysing climate data, investigating the current and prospective regulation and governance of carbon credit production at former peat extraction sites, and identifying economically viable value chains from carbon conserving land use.

Current status

Plant species were planted in 2023 and are managed by the respective landowners. *Sphagnum* was transferred to one restoration site in 2009 already and will be monitored ongoingly moving forward during the remaining two years of the project.

Plant species: Willow *(Salix ssp.)*, reed canary grass (*Phalaris arundinacea*), peat moss (*Sphagnum ssp.*), cattail *(Typha)*

OVERVIEW Paludiculture Project "ArvoHiili"

Project budget	985,679 €
Total EU Funding	788,547 €
Project Duration	01.10.2023–30.06.2026
Project Area	Finland – South Ostrobothnia
Project Lead	Geological Survey of Finland (GTK)
Link	Value From the Carbon Market for the Next Land Use of Peat Production Areas (ArvoHiili) | GTK

6. Growth from moss North Karelia

The project objectives are the development of sustainable *Sphagnum* moss cultivation to transform degraded peatland into long term carbon sinks, biodiversity hubs, and develop a sustainable economy from peatlands in the North Karelia region of Finland. The pilot project aims to identify efficient cultivation practices and water management in the region and explores additional the compatibility of *Sphagnum* farming and solar energy production. Best suitable target areas for different land uses will be explored. Overarching aim is to identify alternatives to peat-based growing media for horticultural production.

OVERVIEW Paludiculture Project "Growth from moss North Karelia"

Project budget	Information n/a
Total EU Funding	Information n/a
Project Duration	01.01.2024–31.05.2026
Project Area	Finland – North Karelia
Project Lead	University of Eastern Finland
Link	Growth from moss North Karelia – UEFConnect

7. **SuoLiike** – New business from peatland farming in Kymenlaakso

The SuoLiike projects aim is to identify and develop new business models and value chains for the peatland industry by identifying and testing potential paludiculture plants and evaluating business interest and demand. Furthermore, novel farming techniques and product ideas are developed. The carbon sequestration potential of different paludicultures will be evaluated, including the use of biochar and its impact on GHG emissions. Value chains in different industries are explored, e. g., nutrition, biochar, health, cosmetics, horticulture.

Current status

Field trials were set up in former peat extraction sites, where part or most of the peat has been extracted in the past. These sites were chosen to stop further degradation, accumulate organic matter, enhance biodiversity but also to extend its economic viability for the region of Kymenlaakso. Average remaining peat thickness for the field trials is 15 cm and water levels have been raised to 30 cm below ground.

Plant species that are explored in the field trials:

Food: Cranberry *(Vaccinium oxycoccos)*, arctic raspberry *(Rubus arcticus)*, black chokeberry *(Aronia melanocarpa)*, Kernza *(Thinopyrum intermedium)*, cloudberry *(Rubus chamaemorus)*, bog bilberry *(Vaccinium uliginosum)*, yellow nutsedge *(Cyperus esculentis)*, and stinging nettle *(Urtica dionica)*.

Plants with bioactive features: Meadowsweet *(Filipendula ulmaria)*, valerian *(Valeriana officinalis)**, Joe-Pye weed *(Eupatorium purpureum)*, garden angelica *(Angelica archangelica)*, and dyers woad *(Isatis tinctoria)*.

Biomass: Common reed (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*), cattail (*Typha*), Virginia fanpetals (*Sida hermaphrodita*), ribbed melilot (*Melilotus officinalis*), Sakhalin knotweed (*Reynoutria sachalinensis*).

OVERVIEW Paludiculture Project "SuoLiike"

Project budget	889,777 €
Total EU Funding	711,822 €
Project Duration	01.03.2024–30.06.2026
Project Area	Finland – Kymenlaakso
Project Lead	Kouvola Innovation
Link	Development of new Peatland Farming based business in the Kymenlaakso region (SuoLiike) | Kinno

*the cultivation of valerian in paludiculture systems does not align with paludiculture principles of minimizing the impact on peat soil and root layer, because traditionally the valerian root is harvested.

8. **LIFE IP CANEMURE** – Carbon-Neutral Municipalities and Regions

The Canemure project focused on implementing Finland's climate policy by promoting low-carbon solutions across sectors like transport, energy, and urban planning. A key aspect of the project is its focus on sustainable agricultural practices, particularly in peatlands. Canemure promotes paludiculture as a solution to reduce CO_2 emissions and enhance biodiversity in these sensitive ecosystems. By rewetting drained peatlands and cultivating wet crops, the project aims to mitigate climate change impacts while supporting sustainable land use. Through regional cooperation in seven Finnish regions, the project encourages local stakeholders to adopt and develop paludiculture practices, contributing to Finland's broader climate goals.

Output

- Guidelines for paludiculture.
- Carbon Corporate Footprint (CCF) management in peatlands for forestry experts and forest owners.
- Lessons learned
- Importance of topography and catchment area for potential paludiculture sites to ensure sufficient water supply during dry periods.

Challenges

- Original proposed study sites were not suitable for rewetting, leading to a change of sites.
- Finding separate areas for control sites within the study site.
- Methodological issues during measurements on site.
- Value chain establishment for paludiculture biomass.
- Lack of funding down the value chain (biomass purchasers).

OVERVIEW Paludiculture Project "LIFE IP CANEMURRE"

Project budget	15,203,472 €
Total EU Funding	9,122,083 €
Project Duration	01.09.2018–31.10.2024
Project Area	Seven Finnish regions: Uusimaa, Southwest Finland (Varsinais-Suomi), Satakunta, Pijt-Hme, Tampere, South Karelia and Northern Ostrobothnia. Additional 39 municipalities.
Project Lead	The Finnish Environment Institute (SYKE)
Link	Carbonneutralfinland > Canemure – Towards Carbon Neutral Municipalities and Regions (hiilineutraalisuomi.fi)

9. **PaluWise** – Paludiculture Demonstrations Providing Multi-Actor Approaches and Recommendations Towards Large-Scale Deployment in the EU

PaluWise focuses on demonstrating and scaling up best practices for paludiculture across four large-scale sites in Finland, the Netherlands, Poland, and the United Kingdom. These sites, featuring both established (NL, UK) and new (FI, PL) operations, will showcase effective methods for converting degraded organic soils to sustainable wetland farming. PaluWise emphasizes the development of value chains associated with key crops—Reed, Sedges, Cattail, and Reed Canary Grass—illustrating the replicability and scalability of paludiculture across Europe.

The project also incorporates network sites (e.g., PaludiZentrale in Germany) to share lessons learned and engage stakeholders in co-innovating solutions such as maintaining high water levels, adapting machinery, and selecting suitable crop species. PaluWise applies a multi-actor approach to enhance cost-effective, climate-smart value chains, covering every step from identifying suitable sites (Work Package 1 decision support tool) to evaluating the environmental benefits of paludiculture, including emission reduction, carbon sequestration, and biodiversity gains (WP3, WP4).

PaluWise aims to remove barriers and provide policy recommendations to support the large-scale adoption of paludiculture across Europe, positioning it as a viable, sustainable solution for climate change mitigation and ecosystem restoration.

OVERVIEW Paludiculture Project "PaluWise"

Project budget	10,273,604.75 €
Total EU Funding	9,999,999.50 €
Project Duration	01.02.2025–31.07.2029
Project Area	Finland, The Netherlands, Poland, UK (large scale implementation); Lithuania, Latvia (smaller action sites), Germany (knowledge site)
Project Lead	Natural Resource Institute Finland (LUKE)
Link	paluwise.eu

Additional project activities in Finland with project leadership based in another country

→ LIFE OrgBalt

GER MANY

Sundew
Drosera rotundifolia

Peatland cover 12,800 km² → 3,58 %[13]
Estimated degraded peatland cover 95 %[14]
Emissions from peatland 43.3 Mt CO_2-eq/year[15]

Paludiculture Policies

Paludiculture is increasingly recognised in Germany as a climate-friendly and economically viable agricultural practice. Various policies and funding opportunities support the implementation of paludiculture, aiming to mitigate GHG emissions, restore biodiversity, and provide alternative income sources for farmers.

Paludiculture in the German CAP Strategic Plan, 2023—2027

Eligible Hectares

According to Article 4(4) of the CAP, agricultural products not listed in the Annex, such as those grown under paludiculture, are eligible for funding if they meet specific climate and environmental objectives. These include:

- Contributing to climate protection.
- Promoting sustainable development.
- Preserving biodiversity, enhancing ecosystem services, and maintaining habitats.

Pillar I: GAEC 2

Paludiculture is integrated into Pillar I through GAEC 2, which aims at the protection of wetlands and peatlands. This regulation allows for site-adapted wetland use, meaning farmers can receive direct payments if they cultivate wetland crops on rewetted peatlands. However, certain restrictions apply. Paludiculture is not eligible for support if the areas are located within protected habitats (FFH areas, bird protection areas, or protected biotopes on permanent grassland).

13 The peatland map of Europe, 2017
14 The peatland map of Europe, 2017
15 Global Peatlands Assessment: The State of the World's Peatlands, 2022

Pillar I: Eco-schemes

Finland's eco-schemes include actions for soil quality improvement, water management, and permanent grassland maintenance, which align with peatland conservation but do not explicitly promote paludiculture.

Pillar I: Eco-schemes

Paludiculture is explicitly mentioned in Germany's eco-schemes. Farmers engaging in paludiculture are eligible for eco-scheme payments if their land meets the requirements for wetland conservation.

Pillar II: AECMs

Paludiculture is further supported through voluntary measures under Pillar II of the CAP, which provides additional funding for agri-environmental and climate measures. The specific sub-measures EL-0101 and EL-0101-03 focus on peatland conservation:

- EL-0101 includes commitments to improve climate protection, specifically targeting peatland restoration and sustainable management.
- EL-0101-03 supports the establishment of paludiculture in peat-rich regions, covering both agricultural production and the utilization of renewable raw materials.

While several measures that support paludiculture are integrated into the national CAP, paludiculture is not sufficiently defined in the Strategic Plan, leading to barriers to progress.

Additional Strategic Measures

The National Peatland Protection Strategy aims to protect, restore, and sustainably use peatlands in Germany. The strategy promotes the introduction and development of paludiculture as a peat conserving practice due to raised water levels. Pilot projects and model projects are supported in order to demonstrate cultivation, harvesting, and processing of biomass and the economic viability of paludiculture products.

The federal-state target agreement on climate protection through peatland protection is a voluntary agreement between the federal government and the German states. It asserts that paludiculture should be promoted to significantly reduce GHG emissions by raising water levels and significantly reducing or completely halting peat decomposition.

The Climate Protection Program 2030 and the Climate Protection Plan 2050 actively promote paludiculture as an alternative peatland use and a new source of income for farmers. These initiatives encourage the development of paludiculture to create synergies with environmental protection goals, while also minimizing potential conflicts with species conservation, thus contributing to a more resilient ecosystem.

National-Level Funding and Initiatives

BMUV Pilot Projects and the Federal Action Plan on Nature-based Solutions for Climate and Biodiversity (ANK)

At the national level, the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) has committed € 50 million over the next decade for pilot projects dedicated to peatland conservation, with a focus on advancing paludiculture practices. These projects aim to test and refine farming methods that facilitate the rewetting of peatlands while maintaining economic viability.

In addition, the Federal Action Plan on Nature-based Solutions for Climate and Biodiversity (ANK), which is part of Germany's broader climate protection strategy, includes significant financial resources for natural climate solutions. The program supports peatland rewetting and conservation as a critical tool for reducing CO_2 emissions from drained peatlands. The ANK allocates funds from its € 4 billion budget for measures that include paludiculture.

BMEL and FNR Funding for Research and Demonstration

The Federal Ministry of Food and Agriculture (BMEL), through its project agency Fachagentur Nachwachsende Rohstoffe (FNR, Agency for Renewable Resources), provides approximately € 10 million annually over a 10-year period for research and development and demonstration projects on paludiculture. These initiatives focus on practical implementation, guiding farmers through planning, rewetting processes, and sustainable land-use practices based on wetland agriculture.

German Paludiculture Projects

1. **VIP** – Vorpommern Initiative Paludikultur

The VIP project aimed to explore and demonstrate the viability of paludiculture as a sustainable land-use practice in the Western Pomerania region. The initiative focused on finding ways to restore degraded peatlands while utilising them productively, balancing environmental conservation with economic benefits.

During the project, researchers worked on developing and testing innovative harvesting techniques suited for wet and unstable peat soils, ensuring that operations would not harm the sensitive ecosystems. They also created marketable products from the biomass harvested in these wetlands, such as insulation materials, showcasing the potential of wetland plants like reeds as valuable resources. Alongside the technical aspects, the project conducted detailed ecological and economic assessments to evaluate the profitability and sustainability of using wetland biomass for materials and energy. Another important component was the examination of legal and socio-economic frameworks to identify barriers to implementing paludiculture and propose pathways for integrating it into agricultural policy and land management strategies. The VIP project actively engaged stakeholders, including farmers, local decision-makers, and the public, to raise awareness about the benefits of paludiculture and promote its acceptance as a viable alternative to conventional peatland use.

In recognition of its groundbreaking contributions to sustainability, the VIP project was awarded the Deutscher Nachhaltigkeitspreis (German Sustainability Award), highlighting its role as a model for innovative and environmentally conscious land management practices.

Challenges

- Developing and adapting machinery capable of harvesting biomass on wet peatlands without causing ecological damage.
- Ensuring the economic viability of paludiculture compared to traditional agricultural practices.
- Navigating legal and policy frameworks that were not fully supportive of paludiculture.
- Gaining acceptance from farmers and local communities to transition from conventional land-use methods to wetland agriculture.

OVERVIEW Paludiculture Project "VIP"

Project budget	Information n/a
Total EU Funding	Information n/a
Project Duration	01.10.2010–31.12.2013
Project Area	Germany
Project Lead	University of Greifswald
Link	Vorpommern Initiative Paludikultur – Moorwissen.de

2. LIFE Multi Peat

The LIFE Multi Peat project aims to restore 689 hectares of degraded peatlands across five European countries—Belgium, Germany, Ireland, Poland, and The Netherlands—by rewetting project sites to combat climate change and reduce CO_2 emissions. A key component of the project is the integration of paludiculture at two sites (Belgium and Germany), exploring sustainable alternatives to traditional, drainage-based peatland agriculture.

In Belgium, the project focuses on the cultivation of willow trees in a pilot buffer zone as part of peatland restoration. A feasibility study will assess technical and organisational possibilities for utilising woody biomass from willow trees for energy production, soil improvement, and other applications. The project aims to establish partnerships with local farmers and landowners, facilitating workshops to introduce them to paludiculture and evaluate its potential economic benefits.

In Germany, paludiculture involves wet grassland management with an emphasis on biomass utilisation for energy and materials. By raising water levels in wet meadows, the project supports biodiversity conservation and reduces nutrient runoff, contributing to water quality improvements. The harvested biomass will be evaluated for value chains, including uses in energy, animal bedding, and construction materials.

Through these efforts, LIFE Multi Peat aims to demonstrate paludiculture as a viable, sustainable practice for peatland management, offering both environmental and economic benefits.

Challenges

- Underdeveloped value chains: There is a lack of fully established and tested value chains for the harvested biomass, creating uncertainty for markets and income generation.
- High costs: Specialised machinery required for harvesting wetland crops can be expensive, posing financial challenges for widespread adoption.
- Stakeholder alignment: Long legal processes and property right issues delay implementation and complicate decision-making.

OVERVIEW Paludiculture Project "LIFE Multi Peat"

Project budget	7,763,615 €
Total EU Funding	4,269,988 €
Project Duration	01.10.2021–30.09.2026
Project Area	Belgium, Germany, Ireland, Poland, The Netherlands – Paludiculture activities planned in Belgium & Germany
Project Lead	NABU
Link	LIFE Multi Peat

3. MRV4SOC – Monitoring, reporting and verification of soil carbon and greenhouse gas balance

The MRV4SOC project aims to develop a comprehensive Monitoring, Reporting, and Verification (MRV) framework for the EU land sector. It focuses on accurately accounting for changes in carbon pools, estimating GHG emissions, and understanding the full carbon budget, including the coupling of carbon and nitrogen cycles. The project assesses soil organic carbon (SOC) accumulation and evaluates the impact of traditional land management practices and carbon farming. By adhering to the QU.A.L.ITY criteria—Quantification, Additionality and baselines, Long-term storage, and Sustainability—the project seeks to create methodologies that provide reliable GHG and carbon budget assessments.

The DEpaludic13 site in Bargischow, Germany, is the only paludiculture demonstration site within the MRV4SOC project. Currently a drained peatland used as grassland and cut three times a year, the site is being transformed into a paludiculture area. The research conducted at this site focuses on practical aspects of rewetting, establishing paludiculture, and collecting crucial data on greenhouse gas flux and biodiversity. This unique site plays a vital role in demonstrating how paludiculture can convert carbon sources into carbon sinks, aligning with the project's broader objectives of promoting sustainable land management and mitigating climate change.

OVERVIEW Paludiculture Project "MRV4SOC"

Project budget	6,999,966.25 €
Total EU Funding	6,999,966.25 €
Project Duration	01.06.2023–31.05.2026
Project Area	Germany
Project Lead	GMV Aerospace and Defence SAU
Link	MRV4SOC Project

4. Product Chains from Fen Peatland Biomass

The project is dedicated to the sustainable utilisation of biomass from re-wetted fen peatlands in Lower Saxony, Germany. The project focuses on establishing paludiculture with the aim of producing high-quality, bio-based products from plants like cattail (*Typha ssp.*) and reed (*Phragmites ssp.*).

This initiative seeks to reduce GHG emissions, prevent peat degradation, and restore the natural ecological functions of peatlands, such as carbon sequestration, habitat provision, and water regulation. The project addresses significant challenges, including the lack of established markets for paludiculture products, economic viability concerns, and the need for region-specific cultivation techniques.

Pilot sites have been established across different regions in Lower Saxony to evaluate and demonstrate the feasibility of large-scale paludiculture under local conditions. The project also aims to develop new value chains and overcome technical and policy barriers by working closely with stakeholders to ensure that the products meet ecological and economic standards. Additionally, it investigates the ecological benefits of paludiculture, including biodiversity enhancement and nutrient cycling, while also exploring the potential of these ecosystems to act as natural water filters. Through this multifaceted approach, the project seeks to contribute to the development of sustainable agricultural practices on peatlands.

The project demonstrated the potential of cultivating cattail and reed on rewetted fen peatlands to enhance biomass yields and act as a GHG sink, significantly reducing CO_2 emissions. It also showcased the ecological benefits of paludiculture, including improved biodiversity and water purification. Key achievements included the establishment of research plots, validation of both ecological and economic benefits, and collaboration among research institutions and industry to explore innovative applications like insulation materials from cattail.

Despite these successes, the project faced challenges in developing efficient cultivation methods and gaining market acceptance for new products. Ongoing research and supportive policies are needed to address these barriers and further advance paludiculture adoption.

Challenges

- Difficulty in acquiring suitable land for paludiculture research plots: only publicly owned land was considered, as private landowners or farmers showed little interest.

- Potential plots had to be inspected on-site due to outdated soil maps, requiring significant effort.
- The research plots were built smaller than originally planned due to challenges in land acquisition.
- Approval processes for water level change.
- Finding suitable seeds proved difficult.

OVERVIEW Paludiculture Project "Fen Peatland Biomass"

Project budget	1,630,000 €
Total EU Funding	815,000 €
Project Duration	01.12.2019–30.06.2023
Project Area	Germany
Project Lead	3N Kompetenzzentrum e. V.
Link	Produktketten aus Niedermoorbiomasse | 3N Kompetenzzentrum (3-n.info)

5. EUKI — Carbon capturing by Baltic peatland farmers: Practical exchange for paludiculture & carbon farming

The project addresses the issue of carbon emissions from peatlands drained for agricultural, forestry, or peat extraction purposes that need to undergo rapid transition, while remaining economically viable for farmers and land managers. The project's aim was to enhance the knowledge about climate-neutral use of peatlands and transfer the acquired practical experience to farmers of the Baltic countries. Implementation and monitoring of paludiculture pilot sites were supported through the project to tackle obstacles that prevent large-scale paludiculture implementation. The project involved various research activities, including the identification of potential paludiculture plants in the Holarctic region, the assessment of biomass yield and fibre components in different plant species, and the integration of paludiculture into agricultural practices. Water tables were raised to no more than 10 cm below surface.

Project outcome

The project identified several potential paludiculture plant species, including cattail (*Typha ssp.*), reed canary grass (*Phalaris arundinacea*), and common reed (*Phragmites australis*). These plants have the potential to be used for various purposes such as biomass production for energy, thatching material, and water purification. Further, best-practice guidelines for paludiculture on agricultural lands in northern Germany were developed in collaboration with the Greifswald Mire Centre to promote the sustainable use of peatlands while considering biodiversity conservation and climate change mitigation.

Challenges

- Lack of clear recognition or definition of paludiculture in national agricultural policies (e. g., Lithuanian CAP).
- Difficulty in acquiring suitable areas for wetland restoration and paludiculture

due to land use restrictions and outdated land ownership maps.

- Limited market for paludiculture biomass and a lack of innovation to scale its implementation.
- High initial investment costs for setting up paludiculture, including technical equipment and land preparation.
- Insufficient national incentives or subsidies for promoting large-scale paludiculture initiatives.

OVERVIEW Paludiculture Project "EUKI – Carbon capturing by Baltic peatland farmers"

Project budget	612,955.58 €
Total EU Funding	Information n/a
Project Duration	01.08.2021–30.06.2024
Project Area	Estonia, Latvia, Lithuania, Germany
Project Lead	Michael Succow Foundation
Link	Succow Stiftung | Practical exchange for paludiculture & peatland carbon farming

6. Paludi-Pellets

The Paludi-Pellets project aimed to develop sustainable solid biofuels from paludiculture, which involved cultivating biomass on rewetted peatlands. The project addressed the increasing demand for renewable energy by utilising biomass from areas unsuitable for food production. It focused on assessing and developing the potential of paludiculture biomass—primarily cattail and reed—for use in pellets and briquettes. The goal was to enable the market introduction of these biofuels by researching biomass potential, production processes, and combustion efficiency, while also evaluating their economic and ecological impacts. The project supported Western Pomerania's energy strategy by reducing greenhouse gas emissions, enhancing local employment, and promoting energy independence. It explored various aspects including land suitability, plant species, yields, composition, combustion properties, technology, harvesting methods, legal frameworks, costs, and greenhouse gas and energy balances.

The project explored various harvesting methods for paludiculture biomass, including summer harvest using grassland technology, winter harvest with crawler technology, and mobile pelletisation during winter. It emphasised the need to incorporate ecosystem services like biodiversity into carbon certification standards and addressed issues related to fuel standards, emission control, and ash utilisation. The Malchin heating plant served as a successful example of combining peat conservation with sustainable energy production, showcasing the benefits of paludiculture biomass for climate protection, biodiversity, and regional value creation.

Although the project demonstrated the potential of paludiculture, challenges around economic viability, standardisation, and regulatory development persist. These findings offer valuable insights for optimising paludiculture practices and integrating them into sustainable land management.

Challenges

- Economic viability remains a key hurdle in making paludiculture broadly sustainable.
- Lack of standardisation in harvesting methods and process chains limits scalability.
- Regulatory development is needed to ensure widespread adoption and integration into land management practices.

OVERVIEW Paludiculture Project "Paludi-Pellets"

Project budget	Information n/a
Total EU Funding	Information n/a
Project Duration	15.06.2013–30.04.2015
Project Area	Germany
Project Lead	University of Greifswald
Link	Paludi-Pellets-Projekt – Moorwissen.de

7. **CINDERELLA** – Comparative analysis, integration and exemplary implementation of climate smart land use practices on organic soils: processing paludicultures after centuries of peatland destruction and neglect

The CINDERELLA project aimed to enhance biomass production in paludiculture while minimising greenhouse gas emissions and nutrient release. It focused on integrating ecosystem services into paludiculture practices and developing management strategies to transition from laboratory research to practical field applications. The project employed a transdisciplinary approach, leveraging the expertise of its partners to study interactions between soil, water, and crops, and to improve biomass productivity through genetic research on crop genotypes under varying climatic conditions. Additionally, it addressed nutrient dynamics to boost productivity and support ecosystem services. The project also sought to disseminate its innovative concepts across Europe, fostering broader adoption and implementation of paludiculture practices.

The project demonstrated the effectiveness of specific plants in paludiculture for enhancing water retention and carbon sequestration, highlighting its potential to offer a range of ecosystem services beyond climate change mitigation. It fostered collaboration among international scientists, leading to valuable exchanges and potential partnerships. Additionally, the involvement of public servants created opportunities to explore subsidies and financial support for paludiculture, particularly through the Common Agricultural Policy (CAP).

However, the project encountered legal and regulatory challenges. Paludiculture intersects with laws related to water, land, nature conservation, and agri-environment, which are not fully addressed in national and European regulations. Ensuring compatibility with nature conservation laws in protected areas, clarifying

administrative procedures for water management, and addressing biomass utilisation in power plants were significant hurdles. Additionally, the lack of English translations of national regulations made compiling legal information difficult.

The project's outcomes included six peer-reviewed research papers, covering topics such as harvesting techniques and the economics of paludiculture.

Challenges

- Legal and regulatory hurdles due to the intersection of water, land, and nature conservation laws.
- Clarification needed for administrative procedures and biomass utilization regulations.
- Lack of English translations of national regulations hindered access to relevant legal information.

OVERVIEW Paludiculture Project "CINDERELLA"

Project budget	1,421,00.00 €
Total EU Funding	Information n/a
Project Duration	01.02.2015–31.01.2018
Project Area	Europe
Project Lead	University of Greifswald
Link	Cinderella – Moorwissen.de

8. MOOSWEIT

The MOOSWEIT project, a successor to MOOSGRÜN, focused on cultivating and harvesting peat moss (*Sphagnum*) to promote climate-friendly peatland management. Building on previous work, the project expanded the initial 4-hectare test site in the Hankhauser Moor to 14 hectares, tripling the production area. This expansion allowed for practical harvesting and regeneration trials, advancing the cultivation process on raised bog grasslands with shallow water levels. The project facilitated industrial-scale production of substrates using peat moss biomass, offering a sustainable alternative to traditional agriculture and peat extraction.

MOOSWEIT included five key activities: large-scale cultivation and harvesting, studying moss regeneration post-harvest, establishing new moss cultures, assessing growth-limiting factors, and evaluating the socio-economic aspects of peat moss cultivation. It also involved measuring greenhouse gas flows, studying biodiversity impacts, analysing hydrological effects, and developing mass production methods for peat moss seeds. These efforts supported the development of a sustainable peat moss production system, with a focus on minimising environmental impact and promoting biodiversity.

Challenges

- High cost of alternative substrates for horticulture makes it hard to compete with peat.

OVERVIEW Paludiculture Project "MOOSWEIT"

Project budget	Information n/a
Total EU Funding	Information n/a
Project Duration	01.02.2016–31.01.2019
Project Area	Germany
Project Lead	University of Greifswald
Link	Moosweit – Moorwissen.de

9. OptiMOOS – Optimising Sphagnum farming: water management, climate impact, biodiversity & product development

The OptiMOOS project focused on optimizing *Sphagnum* farming by improving water management, reducing climate impact, enhancing biodiversity, and developing new products. Building on previous projects, MOOSGRÜN and MOOSWEIT, the 14-hectare site in Hankhauser Moor demonstrated high biomass yields and improved ecosystem services, including significant reductions in greenhouse gas emissions, water, and nutrient retention, and the creation of habitats for rare species.

Key activities included developing strategies to reduce nutrient levels in irrigation water, minimizing topsoil removal, and optimizing ditch configurations to lower greenhouse gas emissions. Field trials were conducted to purify water using planted basins, study vegetation development, and assess the nutrient tolerance of various *Sphagnum* species. The project also focused on creating a substrate from paludiculture plants like cattail and reed, alongside peat moss. Further research investigated long-term effects on biodiversity, hydrology, water quality, greenhouse gas fluxes, and the economic viability of *Sphagnum* farming.

Challenges

- High nutrient levels in irrigation water promoted non-target species, which reduced the quality of the moss substrate.
- Ensuring consistent water quality and maintaining optimal nutrient levels for peat moss growth required complex water management systems.
- The removal of topsoil to create suitable conditions for peat moss cultivation led to climate impact concerns and required careful planning to minimize environmental disruption.

OVERVIEW Paludiculture Project "OptiMOOS"

Project budget	Information n/a
Total EU Funding	Information n/a
Project Duration	01.11.2019–31.12.2022

Project Area	Germany
Project Lead	University of Greifswald
Link	OptiMOOS – Moorwissen.de

10. Margin Up! – Raising the bio-based industrial feedstock capacity of marginal lands

The MarginUp! project tackles the degradation of European soils, where 60–70 % are unhealthy due to poor land management, pollution, intensive agriculture, urbanization, and climate change. Nearly 30 % of EU land is classified as marginal, meaning it's of low agricultural value and at risk of further degradation, leading to biodiversity loss and increased vulnerability to climate impacts like desertification. MarginUp! seeks to revitalise these lands by cultivating climate-resilient, biodiversity-friendly non-food crops, including through paludiculture practices on rewetted peatlands, for industrial use. This approach not only enhances biodiversity and supports ecosystem restoration but also leverages paludiculture to restore degraded peatlands, boosting carbon sequestration and reducing greenhouse gas emissions. The project works closely with farmers, land managers, and bioeconomy stakeholders to create sustainable, circular value chains that improve the resilience of rural farming systems. Additionally, MarginUp! focuses on ensuring that marginal lands are used with minimal environmental impact, particularly through low indirect land-use change (ILUC) biomass production.

OVERVIEW Paludiculture Project "Margin up!"

Project budget	7,829,821.28 €
Total EU Funding	6,992,754.31 €
Project Duration	01.12.2022–30.11.2026
Project Area	Europe
Project Lead	Leibnitz-Institut für Agrartechnik und Bioökonomie e. V. (ATB)
Link	Welcome to MarginUp! (margin-up.eu)

11. GO-GRASS – Grass-based circular business models for rural agri-food value chains

The GO-GRASS project focuses on creating business opportunities in rural areas by developing sustainable, grass-based products. Active in Denmark, Germany, Sweden, and the Netherlands, the project has established small-scale demonstration sites that produce products like paper, animal bedding, organic protein, biogas, and biochar. These innovations are tested and replicated in Spain, Romania, and Hungary to promote grasslands as a valuable resource for the bioeconomy.

Paludiculture Activities: In Germany's Lower Oder Valley National Park, GO-GRASS focused on converting low-nutritional grass from wetland areas into biochar through pyrolysis. This late-harvested grass, unsuitable for animal feed or

biogas, was transformed into a soil amendment, improving soil fertility and aiding in carbon sequestration. This initiative demonstrated how paludiculture practices could enhance the value of wetland biomass, offering a sustainable solution for carbon capture and soil health improvement.

Challenges

- Harvest timing and nutritional quality: Harvest time is constrained by ground-breeding birds. Late harvest leads to lower biomass quality that is nutritionally poor.
- Utilisation of low-nutritional grass: Finding effective methods to transform biomass of low nutritional value.
- Regulatory and policy support: Policymakers need to align their strategies to effectively support initiatives.
- Stakeholder engagement and education.

OVERVIEW Paludiculture Project "GO-GRASS"

Project budget	10,385,222.50 €
Total EU Funding	9,865,961.38 €
Project Duration	01.10.2019–31.03.2024
Project Area	Denmark, Germany, The Netherlands, Sweden
Project Lead	Leibniz-Institut für Agrartechnik und Bioökonomie e. V. (ATB)
Link	GO-GRASS – circular business models for rural agri-food value chains

12. DESIRE – Development of Sustainable (adaptive) peatland management by restoration and paludiculture for nutrient retention in the Neman River catchment

The DESIRE project focuses on the sustainable management and restoration of peatlands in the Neman River basin, aiming to improve water quality and restore ecosystem functions. A key aspect of the project is the pilot restoration of degraded peatlands and the assessment of their suitability for paludiculture. This involves developing strategies and tools to promote paludiculture as a means of enhancing the economic stability of the region while ensuring the sustainable use of natural resources. The project also includes extensive communication and training efforts to demonstrate the benefits of rewetting and paludiculture, ultimately contributing to nutrient retention and other ecosystem services in the area.

Challenges

- Value chain development is cost-intensive and slow and there is a need for additional funding mechanisms to support research, development, and the establishment of paludiculture.
- Legal and conservation restrictions: Conservation law and water policies impose limitations on land use and management practices.
- Technical and logistical barriers: water management, infrastructure, and processing capabilities need to be addressed.

- Stakeholder engagement and cooperation.

Publications

- Trehan, M., Wichtmann, W., Grygoruk, M. (2022): Assessment of Nutrient Loads into the River Ryck and Options for their Reduction. Published in Water, 14(13), 2055. This study evaluates nutrient loading in the River Ryck and explores strategies for mitigation.
- Stachowicz, M., et al. (2022): To Store or to Drain—To Lose or to Gain? Rewetting Drained Peatlands as a Measure for Increasing Water Storage in the Transboundary Neman River Basin. Published in Science of The Total Environment. This paper discusses the implications of rewetting drained peatlands on water storage in the Neman River Basin, evaluating the benefits of restoring these ecosystems.
- Czubaszek, R., Wysocka-Czubaszek, A., Wichtmann, W., & Banaszuk, P. (2021): Specific Methane Yield of Wetland Biomass in Dry and Wet Fermentation Technologies. Published in Energies, 14, 8373. The research focuses on methane production from wetland biomass under different fermentation technologies.

Additional Publications

- Draft Strategy and Economic Assessment: Strategy and Economic Assessment of Paludiculture for Nutrient Retention and Other Ecosystem Services. Available as a PDF on moorwissen.de. This document outlines a strategy and economic evaluation of paludiculture, focusing on nutrient retention and ecosystem services.

Online Tools and Resources

- SERVI-PEAT
  An online tool designed for stakeholders to estimate water retention, carbon sequestration, and nutrient retention in rewetted peatlands. This resource aids decision-making in peatland conservation and management for environmental ministries, water management bodies, and NGOs.
- Peatland Database for the Neman River Catchment
  An interactive GIS website titled Peatlands of Neman Basin provides a comprehensive map of peatland distribution, status, and land use within the Neman basin. It categorizes peatlands into fen, transitional, and bog types and includes data on land uses like natural areas, forests, and agricultural sites. The resource identifies priority areas for rewetting and protected sites, serving ministries, water authorities, environmental agencies, NGOs, and agricultural advisors in peatland management.

OVERVIEW Paludiculture Project "DESIRE"

Project budget	1,720,000 €
Total EU Funding	1,160,000 €
Project Duration	01.01.2019–30.09.2021
Project Area	Neman River Basin (Baltic Sea)
Project Lead	Michael Succow Foundation
Link	Interreg Baltic Sea Region (interreg-baltic.eu)

13. CAOS – Climate-Smart Agriculture on Organic Soils

The CAOS project addresses the environmental challenges posed by drained organic soils in Europe. These soils, often utilised for agriculture, release substantial amounts of CO_2 and are prone to land subsidence. CAOS aims to develop sustainable land-use strategies that balance agricultural productivity with environmental conservation by emphasising the rewetting of organic soils and the adoption of paludiculture practices, such as cultivating wetland-adapted crops to maintain productivity on rewetted lands and enhancing ecosystem services like water retention and biodiversity improvement. The project integrates field experiments across Northern and Central Europe with historical agro-economic data, soil monitoring, and water management strategies to identify effective solutions tailored to regional conditions. It fosters collaboration with farmers, scientists, and policymakers, ensuring practical applicability and policy alignment to advance sustainable practices while supporting climate mitigation and adaptation goals.

OVERVIEW Paludiculture Project "CAOS"

Project budget	Information n/a
Total EU Funding	Information n/a
Project Duration	2013–2016
Project Area	Denmark, Estonia, Finland, Germany, Sweden, The Netherlands
Project Lead	Thünen Institute
Link	CAOS Project

14. Moor-PV

The Moor-PV project (Climate and Peatland Protection through the Combination of Photovoltaics and Peatland Rewetting) is an initiative by the University of Greifswald. The project explores the integration of ground-mounted photovoltaic (PV) systems with peatland rewetting efforts to achieve both climate protection and sustainable land use. Peatland rewetting is recognised as an effective measure to reduce greenhouse gas emissions from drained peatlands; however, traditional agricultural practices become unfeasible post-rewetting. The installation of PV systems on these rewetted areas presents a novel, economically attractive land-use option. Since the Renewable Energy Sources Act (EEG) 2023, Moor-PV systems are classified as "special solar installations" and are eligible for funding. Despite this, significant research is needed to assess the impacts of PV installations on

rewetted peat soils, particularly concerning peat preservation, climate balance, water management, biodiversity, and the economic incentives for rewetting previously drained agricultural peatlands. The Moor-PV project aims to address these knowledge gaps by analysing the ecological and economic effects of combining peatland rewetting with photovoltaic installations. This includes evaluating the practical feasibility and economic viability of Moor-PV systems, assessing biodiversity and ecohydrology developments at Moor-PV sites compared to various reference scenarios, and determining the greenhouse gas balance of rewetted peatlands equipped with PV systems.

Challenges

- Designing and constructing photovoltaic systems that operate efficiently on rewetted peatlands without damaging ecosystems.
- Navigating legal frameworks and obtaining approvals for PV installations on sensitive peatland areas.
- Balancing the interests of stakeholders, including environmentalists, local communities, policymakers, and investors.
- Ensuring the economic sustainability of combining peatland rewetting with photovoltaic installations for landowners and investors.

OVERVIEW Paludiculture Project "Moor-PV"

Project budget	Information n/a
Total EU Funding	Information n/a
Project Duration	01.01.2024–31.12.2026
Project Area	Germany
Project Lead	University of Greifswald
Link	Moor-PV – Universität Greifswald

15. Paludi4All – Socio-Economic and Climate and Environmental Aspects of Paludiculture

Paludi4All aims to explore the socio-economic, climate, and environmental dimensions of paludiculture, providing a holistic assessment of its potential for climate change mitigation, environmental protection, and the creation of jobs and income in rural areas. The project focuses on identifying innovative solutions to scale up paludiculture in Europe, using an interdisciplinary, co-creation-based systems approach. This approach addresses farm-level practices, value chains, market dynamics, and the governance structures that influence them.

By enhancing our understanding of the economic and environmental impacts of paludiculture, Paludi4All seeks to accelerate the transition towards sustainable wetland farming. The project also aims to create a comprehensive market perspective on paludiculture, driving its development and supporting its role in carbon farming.

Aligned with the goals of the European Green Deal and the EU biodiversity strategy, Paludi4All contributes to climate change mitigation by improving monitoring, assessment, and decision-making support systems. The project plays a key role in advancing policies for sustainable land use at both European and global levels.

OVERVIEW Paludiculture Project "Paludi4All"

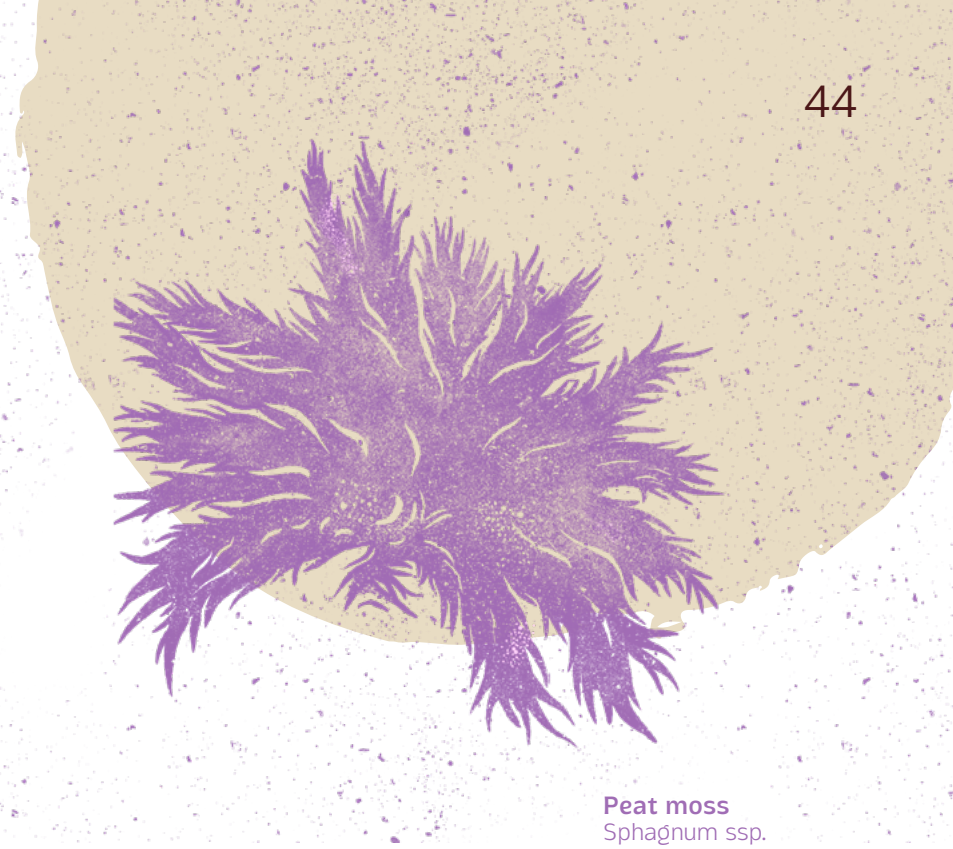
Project budget	4,829,708.38 €
Total EU Funding	4,829,708.38 €
Project Duration	01.02.2025–31.01.2029
Project Area	Europe
Project Lead	FNR – Fachagentur Nachwachsende Rohstoffe e. V.
Link	Paludi4All | Project | Europäische Kommission

Additional project activities in Germany with project leadership based in another country:

→ **Paludi & Bouw**
→ **Paludi & Markt**
→ **Bioeconomy**

IRELAND

Peatland cover 14,665 km² → 21 %[16]
Estimated degraded peatland cover >90 %[17]
Emissions from peatland 21.6 Mt CO_2-eq/year[18]



Peat moss
Sphagnum ssp.

Paludiculture Policies

Ireland does not explicitly include paludiculture in its national policies under the CAP. However, certain environmental and climate-related measures could indirectly benefit paludiculture practices, such as rewetting peatlands and supporting high water levels on grasslands.

Paludiculture in the Irish CAP Strategic Plan, 2023—2027

Eligible Hectares

Ireland allows certain peatlands and wetlands to remain eligible for CAP payments, even if these lands no longer meet traditional definitions of agricultural use. However, the inclusion of paludiculture in these eligible areas remains unclear. Article 4(4) mentions that lands used for environmental purposes may continue to receive payments, but specific references to crops used in paludiculture are not made.

Pillar I: GAEC 2

GAEC 2 mandates, from the 2025 claim year onwards, the protection of all peatlands and wetlands as agricultural land, prohibiting drainage, ploughing or conversion and requiring any new peatland-to-agriculture conversions to remain under permanent grass cover. The standard does not refer to paludiculture directly.

Pillar I: Eco-schemes

Ireland's eco-schemes emphasise biodiversity and environmental protection. Paludiculture is not mentioned but could benefit from measures related to organic matter retention.

16 The peatland map of Europe, 2017
17 Mapping and monitoring peatland conditions from global to field scale, 2023
18 Global Peatlands Assessment: The State of the World's Peatlands, 2022

Pillar II: ACRES

ACRES (Article 70 result-based AECMs) and cooperation projects offer direct water-retention interventions on peat soils. Under the peat-grassland action, farmers are paid via a scorecard for measures including drain blocking, earth-bank bunds, provision of swales and settlement ponds, floodplain management and installation of upland ponds. Cooperation Projects further support landscape-scale blanket bog rewetting and catchment-level works, bringing together groups of farmers to restore peat hydrology and accumulate carbon in rewetted soils. While none of these explicitly label themselves as paludiculture schemes, by raising water tables, revegetating bare peat and embedding wetland features on farms, they may create conditions ideal for paludiculture.

National Programs

Ireland's National Peatland Strategy (2015) sets after-use actions of industrial cutovers and formerly forested peatlands. Paludiculture is explored as a new crop production technique (especially the cultivation of *Sphagnum* moss) as an after-use strategy. Further, paludiculture research on degraded peatlands is intensified, including a review of restoration projects and techniques, and an assessment of their effectiveness in terms of hydrology, biodiversity, carbon storage, sequestration potential ad preservation of the archaeological heritage.

Irish Paludiculture Projects

1. The Farm Carbon E.I.P.

The Farm Carbon E.I.P. project is a voluntary program aimed at supporting local farmers in increasing their income from farming while also addressing environmental concerns and improving ecosystem services. The project focuses on restoring peat-based grasslands, which offer opportunities for carbon farming and paludiculture practices. The objectives of the project include developing a collaborative approach with stakeholders, conducting detailed assessments of participating farms, implementing suitable on-farm mitigation measures, establishing lighthouse farms to advance understanding of best practices, and developing innovative agricultural practices for scaling up carbon farming nationwide.

The project offers farmers the opportunity to establish paludiculture trial plots on their farms. These trial plots involve the cultivation of various crops and plants that are suitable for wetland agriculture, such as berries (e.g., blueberries, cranberries), *sphagnum*, cattail, herbs, and wet multi-species sward mix. The aim is to explore the feasibility and profitability of these crops in wetland conditions. Financial supports are available to implement paludiculture measures.

Current status

The original 2-year project was extended by one year. Water tables of participating farmers were raised to -40 cm, as opposed to -100 (+) before measures were implemented. A total of 55 farmers participates in the project, however, not all of them implemented paludiculture. Pilot sites were established to demonstrate possibilities other than grassland.

Challenges

While farmers understand the importance of paludiculture, funding has been identified to be the biggest obstacle in the implementation of paludiculture.

OVERVIEW Paludiculture Project "The Farm Carbon E.I.P."

Project budget	1,147,000 €
Total EU Funding	Information n/a
Project Duration	01.01.2021–31.12.2024
Project Area	Ireland – Catchment of rivers Camcor, Little Brosna and Silver in the counties of Offaly, Laois and North Tipperay
Project Lead	Green Restoration Ireland
Link	Farm Carbon – Sustainable Farming of Peatlands

2. PALUS DEMOS – PALUdiculture large-Scale DEMOnstrationS

The PALUS DEMOS project aims to establish three large-scale paludiculture demonstration sites (minimum 50 ha each) in Ireland, the Netherlands, and England, to explore innovative agricultural business models, create employment opportunities, and improve habitats for flora and fauna while enhancing water quality in line with the Water Framework Directive. By showcasing paludiculture's potential, PALUS DEMOS seeks to inspire agricultural entrepreneurs, the biobased industry, communities, politicians, and environmental organisations to adopt this sustainable approach for preserving peatlands, storing CO_2, and reducing greenhouse gas emissions.

The project emphasises a bottom-up process where agriculture informs scientific research, offering a sustainable path forward for agriculture. Specifically, PALUS DEMOS will focus on improving soil health, reducing greenhouse gas emissions, and enhancing carbon storage through innovative indicators and artificial intelligence (AI). The project will also develop and standardise cost-effective monitoring, reporting, and verification (MRV) methods to support carbon markets and policymaking. Additionally, new business models will be created to scale up paludiculture, ensuring equitable benefit-sharing and long-term sustainability.

Policy alignment is crucial to the project's success, as it will facilitate the broader adoption of paludiculture and contribute to European and global environmental goals. Data analytics and AI will be leveraged to enhance soil health and sustainability, with the project contributing valuable data to the European Union Soil Observatory. Effective community engagement and communication will be key, ensuring that the project's results are widely disseminated and adopted across Europe and beyond.

OVERVIEW

Paludiculture Project "PALUS DEMOS"

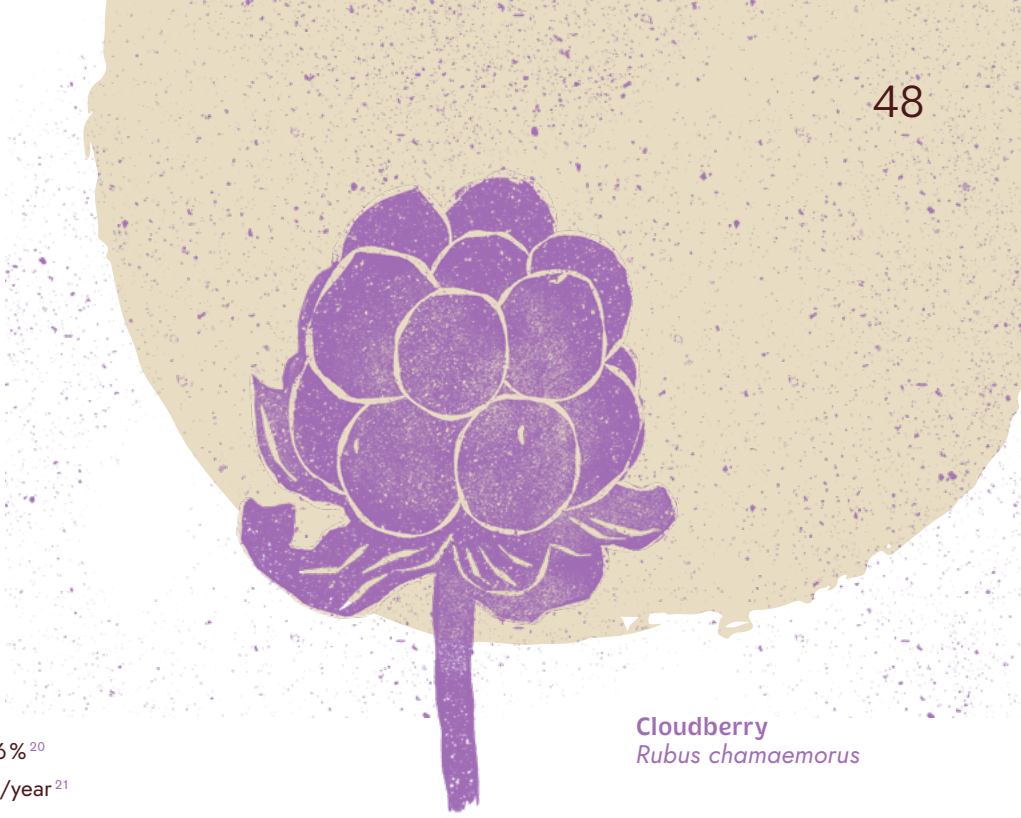
Project budget	11,056,306.25 €
Total EU Funding	9,999,435.75 €
Project Duration	01.02.2025–31.07.2029
Project Area	Ireland, England, The Netherlands
Project Lead	University of Galway
Link	palusdemos.org

Additional project activities in Ireland with project leadership based in another country

→ Care-Peat

LATVIA

Peatland cover 7,514 km² → 11.64 %[19]
Estimated degraded peatland cover 71.6 %[20]
Emissions from peatland 13.53 Mt CO_2-eq/year[21]



Cloudberry
Rubus chamaemorus

Paludiculture Policies

There is no specific paludiculture policy in Latvia, however, paludiculture is indirectly supported through measures in the CAP and recognised as one of the most suitable methods for peatland recovery, particularly following peat extraction.

Paludiculture in the Latvian CAP Strategic Plan, 2023—2027

Eligible Hectares

Paludiculture is not listed as an eligible practice under the "eligible hectares" criteria. There is no mention of agricultural land used for paludiculture maintaining its eligibility for direct payments, and Article 4.4 does not provide any clear support for non-listed crops like those grown in wetland environments.

Pillar I: GAEC 2

GAEC 2 prohibits deep ploughing more than once every five years on organic soils, new drainage unless low-emission, water-retentive structures (e.g. swales, two-stage ditches, sedimentation basins) are used, and requiring any peatland newly brought into agriculture to remain permanently under grass cover. Paludiculture is not directly mentioned.

Pillar I: Eco-Schemes

Latvia's eco-schemes target climate adaptation and organic matter preservation, can indirectly support paludiculture. However, paludiculture is not mentioned and no explicit list of wetland crops is provided in the eco-schemes.

19 The peatland map of Europe, 2017
20 Peatlands and Climate in a Ramsar context, 2015
21 Peatlands and Climate in a Ramsar context, 2015

Pillar II: AECMs

Latvia's AECMs mandate that on organic soils deep ploughing may occur only once every five years, new drainage is forbidden unless accompanied by low-emission, water-retentive works (e.g. two-stage ditches, sedimentation basins, artificial wetlands) and any peatland newly converted to agriculture must remain under permanent grass cover. Further, farmers can receive subsidies for the creation of ponds and engineered wetland structures that raise and stabilise water table. Paludiculture is not specifically mentioned.

National Policies

Paludiculture is recognised as one of the most suitable methods for peatland restoration, particularly at former peat extraction sites. According to the Cabinet Order No. 696, "Guidelines for the Sustainable Use of Peat 2020-2030," it is listed as a land use option. Recommended paludiculture species are reeds, cattail, alders, and *sphagnum* moss.

The National Energy and Climate Plan (2021–2030) includes rewetting as part of its draft Land use, land use-change and forestry (LULUCF) target scenarios. The plan proposes rewetting and subsequent natural afforestation of 80,000 hectares of organic soils on agricultural land and rewetting 12,000 hectares in peat extraction sites, with low-value forests established in re-naturalised peatlands. Afforestation of biologically valuable grasslands and specially protected areas is explicitly excluded. While rewetting measures are planned, there are debates over the use of temporary drainage systems for young forests, and their effects remain unassessed in Latvia.

The National Energy and Climate Plan emphasises the restoration of hydrological regimes for peatlands, including the cessation of economic activities and closure of drainage systems on organic soils, followed by natural afforestation. These actions aim to transform less valuable grasslands into swamp forests such as alder carr, expanding biologically valuable habitats. However, implementation challenges, including protests from the agricultural sector and ongoing discussions within working groups, have delayed consensus on sectoral proposals for emission reductions in the LULUCF sector.

Latvian Paludiculture Projects

1. LIFE OrgBalt

The LIFE OrgBalt project (Demonstration of climate change mitigation potential of nutrient-rich organic soils in Baltic States and Finland) aimed to identify and demonstrate cost-effective climate change mitigation (CCM) measures for managing nutrient-rich organic soils in agriculture and forestry. Spanning five years, the project focused on developing regional greenhouse gas (GHG) emission factors, creating spatial models and tools, and proposing improvements to sectoral strategies to enhance the accuracy of national GHG inventories and inform climate policies. The project established 17 demonstration sites across Latvia and Finland to implement and monitor various CCM measures.

The project compiled the first regional Baltic/Finnish GHG emission factors for managed nutrient-rich organic soils (current and former peatlands), which have been made available for the customary scientific review and further verification for national GHG inventories in the hemiboreal region in Finland and the Baltic countries. While the project analysed selected CCM measures for drained organic soils in agriculture and forestry and developed spatial models and tools, it also identified remaining knowledge gaps. To bridge the remaining limitations and fill the gaps, it is essential to continue GHG measurements and model development, as well as to broaden and complete the scope of the evaluated CCM measures in the after-LIFE-project period, notably by including rewetting and restoration of peatlands that are currently considered to be among the most recommended CCM measures on drained peatlands in the EU. In addition, the developed Simulation and PPC models still include limited macroeconomic considerations and lack an assessment of all environmental impacts. For all these reasons, these models should be used carefully in CCM strategy development for the identification of gaps in climate neutrality transition policy and funding frameworks and need further optimization for broader applicability as decision-making tools.

Challenges

- Knowledge gaps regarding the inclusion of rewetting and restoration of peatlands as effective climate change mitigation measures.
- Limitations in the developed simulation and public-private cooperation models, including a lack of macroeconomic considerations and assessments of all environmental impacts.
- Insufficient continuous and long-term data collection for a comprehensive understanding of GHG emissions and carbon sequestration in organic soils.

OVERVIEW Paludiculture Project "LIFE OrgBalt"

Project budget	3.360.948 €
Total EU Funding	1,844,004 €
Project Duration	01.08.2019–31.08.2023
Project Area	Estonia, Finland, Germany, Latvia
Project Lead	SILAVA (Latvian state forest institute)
Link	OrgBalt – LIFE project

Additional project activities in Latvia with project leadership based in another country

→ **PaluWise**
→ **EUKI – Carbon capturing by Baltic peatland farmers**

LITHUANIA

Peatland cover 6,460 km² → 9.89 %[22]
Estimated degraded peatland cover 72.4 %[23]
Emissions from peatland 7.7 Mt CO_2-eq/year[24]

Cranberry
Vaccinium oxycoccos

Paludiculture Policies

Lithuania has no specific paludiculture policy implemented to date. However, the Lithuanian government has recently implemented (2024) a measure to 'Enhance GHG absorption capacity (restoring the hydrological regimes of peatlands)' for agricultural land. The aim is to restore 6000 ha of agricultural land until 2026, of which 2000 ha must be restored by the end of 2024. Natural and legal persons that engage in agricultural activities and other entities that legally hold the land to be managed are eligible to apply. The implementation of paludiculture may benefit from this measure. Paludiculture is not directly supported through the CAP, however, some measures could indirectly support paludiculture.

Paludiculture in the Lithuanian CAP Strategic Plan, 2023—2027

Eligible Hectares

Paludiculture is not listed as an eligible practice under the "eligible hectares" criteria. There is no mention of agricultural land used for paludiculture maintaining its eligibility for direct payments, and Article 4.4 does not provide any clear support for non-listed crops like those grown in wetland environments.

Pillar I: GAEC 2

Paludiculture is integrated into Pillar I through GAEC 2, which aims at the protection of wetlands and peatlands. This regulation allows for site-adapted wetland use, meaning farmers can receive direct payments if they cultivate wetland crops on rewetted peatlands. However, certain restrictions apply. Paludiculture is not eligible for support if the areas are located within protected habitats (FFH areas, bird protection areas, or protected biotopes on permanent grassland).

22 The peatland map of Europe, 2017
23 Peatlands and Climate in a Ramsar context 2015
24 Peatlands and Climate in a Ramsar context 2015

Pillar 1: Eco-schemes

Paludiculture is not explicitly mentioned in the eco-schemes. However, practices such as the extensive management of peatlands are promoted to maintain ecosystem services. Three eco-schemes related to wetlands are included: conversion of arable peatlands into grasslands, a grassland and wetland maintenance programme, and extensive wetland management. These practices aim to reduce greenhouse gas emissions, preserve biodiversity, and safeguard soil, indirectly supporting paludiculture.

Pillar II: AECMs

Paludiculture is not explicitly mentioned in the Lithuanian CAP's AECMs. However, measures like converting arable peatlands into grasslands and managing wetlands could indirectly support paludiculture practices. These interventions focus on reducing soil erosion, lowering greenhouse gas emissions, and promoting sustainable land use, which aligns with the principles of paludiculture. Investment measures include support for non-productive investments such as restoring and conserving biodiversity, habitats, and landscapes through actions like the removal of woody and/or grassy vegetation. However, these measures prohibit changes to the hydrological regime and ploughing, limiting their direct application to paludiculture. Restoration of the hydrological regime is not included in these measures.

A lack of definition and recognition of paludiculture in the Lithuanian CAP leads to uncertainties for farmers.

National Policies

The Lithuanian National Energy and Climate Plan sets two specific peatland restoration targets. The first target involves the restoration of 8.000 hectares of abandoned or forest peatlands, with the Ministry of Environment as the responsible authority. The second target involves the restoration of 8.000 hectares of agricultural peatlands, with the Ministry of Agriculture as the responsible authority. These targets align with the RRF (Recovery and Resilience Facility) measure. Carbon credits or payments for carbon sequestration are still underdeveloped. NGOs are working to adapt the MoorFutures standard, and some private players from the finance and banking sectors, as well as Agri-Food Lithuania, are piloting payments for non-tillage practices, reimbursing farmers for these activities.

Lithuanian Paludiculture Projects

Currently, there are no EU-(co)-funded paludiculture projects coordinated in Lithuania. However, two nationally and privately funded projects are ongoing.

1. **Restoration of cut-over peatlands** by applying paludiculture and other restoration approaches

The project focuses on the reclamation of abandoned peat extraction sites that cover about 20.000 ha of land in Lithuania by rewetting them, and the planting of the roots of typical peatland plants, e.g., *sphagnum*, cranberries, reeds, cattails. The project is ongoing and started its work in 2019 by implementing the measures in parts of the Aukštumala peat bog (Šilutė district). Measures were extended and

experimental field plots were installed in 2020 in the Ežerėlis peat bog (Kaunas district) to develop a good practice for the restoration of peatland ecosystems.

Challenges

- Maintaining a consistently higher water level. For instance, at Aukštumala, a water reservoir and an alternative water source were created, and solar-powered pumps installed due to lack of electricity in the area.
- Limited interest from peat companies in new restoration techniques, like *sphagnum* reintroduction.
- Absence of national best practices to scale peatland restoration using paludiculture.

OVERVIEW Paludiculture Project "Restoration of cut-over peatlands"

Project budget	Information n/a; partly funded by JSC Klasmann-Deilmann Ežerėlis and JSC Klasmann Deilmann Šilutė
Total EU Funding	Information n/a
Project Duration	2020–Information n/a
Project Area	Lithuania
Project Lead	Foundation for Peatland Restoration and Conservation (Pelkių atkūrimo ir apsaugos fondas)
Link	Išeksploatuotų durpynų atkūrimas | Pelkių fondas (pelkiufondas.lt)

2. **Promoting peatland restoration** by influencing legislation, raising public awareness and involvement to reduce the countries GHG emissions

The project aims to reduce GHG emissions from agriculture on peat soils and the peat extraction industry. The main focus lies on promoting peatland restoration and the implementation of paludiculture on agriculturally used peat soils. Additionally, it aims to reduce GHG emission from the peat industry by promoting peatland re-cultivation, research alternative growing media to replace peat in horticulture by raising awareness on the climate impact of peat and its alternatives.

Expert opinions and proposals are submitted to authorities, i.e., Ministry of Environment, Ministry of Agriculture, State Service for Protected Areas to promote novel guidelines and regulations for peatland restoration and paludiculture in Lithuania. Furthermore, an information campaign on peatland restoration and paludiculture is organized for different target groups to provide information and assistance.

OVERVIEW Paludiculture Project "Promoting peatland restoration"

Project budget	85,856 €
Total EU Funding	Information n/a
Project Duration	01.09.2023–31.08.2025
Project Area	Lithuania
Project Lead	Foundation for Peatland Restoration and Conservation (Pelkių atkūrimo ir apsaugos fondas)
Link	Pelkiu atkurimo skatinimas | Pelkių fondas (pelkiufondas.lt)

3. LIFE MagniDucatusAcrola

The LIFE MagniDucatusAcrola project (Stepping stones towards ensuring long-term favourable conservation status of Aquatic Warbler in Lithuania) aimed to improve the conservation status of Europe's rarest migratory songbird, the Aquatic Warbler (Acrocephalus paludicola). The project focused on restoring and managing breeding habitats in Lithuania and Belarus, reducing habitat fragmentation, and creating sustainable mechanisms to maintain these areas.

The project restored over 20,509 hectares of degraded wetlands, optimized hydrological conditions in fen mires, and addressed habitat fragmentation to support the bird's recovery. It included the translocation of 100 Aquatic Warblers from Belarus to Lithuania to re-establish populations in restored habitats. A significant innovation was the establishment of a biomass processing facility in the Neman River delta, which processed late-cut biomass from managed habitats into marketable products, ensuring economic sustainability for habitat maintenance. This integration of sustainable land use aligned with paludiculture principles.

By combining large-scale habitat restoration, hydrological improvement, and sustainable biomass use, the project created a model for balancing biodiversity conservation with economic development, ensuring long-term habitat viability for the Aquatic Warbler.

OVERVIEW Paludiculture Project "LIFE MagniDucatusAcrola"

Project budget	4,097,038 €
Total EU Funding	3,072,038 €
Project Duration	07.07.2016–31.01.2026
Project Area	Lithuania
Project Lead	Viesoji istaiga „Baltijos aplinkos forumas“
Link	LIFE 3.0 – LIFE15 NAT/LT/001024

Additional project activities in Lithuania with project leadership based in another country

→ **PaluWise**
→ **EUKI – Carbon capturing by Baltic peatland farmers**
→ **DESIRE**

NORWAY

Peatland cover 44,700 km² → 13.81%[25]
Estimated degraded peatland cover 9.4%[26]
Emissions from peatland 6.26 Mt CO_2-eq/year[27]

European golden plover
Pluvialis apricaria

Paludiculture Policies

Currently, there are no policies in Norway that specifically support paludiculture, and farmers cannot receive subsidies for its implementation. However, farmers can apply for financial compensation if they maintain high water tables in spring to promote biodiversity and support bird migration. Grazing livestock in protected wetland areas with higher water level is also supported.

In 2020, Norway introduced a ban on converting wetlands into new agricultural land. This ban applies to both pristine and drained, uncultivated wetlands, but not to grassland or arable land.

Norwegian Paludiculture Projects

1. **PEATWISE**– Wise use of drained peatlands in a bio-based economy: development of improved assessment practices and sustainable techniques for mitigation of greenhouse gases

PEATWISE focused on reducing GHG emissions from drained peatlands by developing sustainable land and water management technologies. One of the key mitigation options explored was paludiculture. Wetland crops were used for biorefinery, biomaterials, and bioenergy, offering an alternative to traditional peatland use while maintaining biomass production.

The project tested paludiculture field trials to evaluate the potential of these species in mitigating GHG emissions, alongside ongoing studies that refined water and soil management techniques. PEATWISE developed a general water table-GHG relationship to guide land and water authorities in making informed decisions on water management for emission reduction. Collaborating with stake-holders such as farmers, policymakers, and industry, the project analyzed existing

25 The peatland map of Europe, 2017
26 Peatlands and Climate in a Ramsar context, 2015
27 Peatlands and Climate in a Ramsar context, 2015

policies and developed strategies to integrate paludiculture into wider land use and climate mitigation frameworks, including the 2030 GHG reduction goals.

The international collaboration between European and New Zealand researchers provided a unique opportunity for broader knowledge transfer and the development of innovative solutions across different peatland ecosystems.

OVERVIEW Paludiculture Project "PEATWISE"

Project budget	Information n/a
Total EU Funding	Information n/a
Project Duration	01.11.2017–31.10.2020
Project Area	Norway
Project Lead	NIBIO
Link	Wise use of drained peatlands in a bio-based economy: development of improved assessment practices and sustainable techniques for mitigation of greenhouse gases — ERA-LEARN

POLAND

Peatland cover 14,950 km² → 4.79 %[28]
Estimated degraded peatland cover 85 %[29]
Emissions from peatland 31 Mt CO_2-eq/year[30]

Aquatic Warbler
Acrocephalus paludicola

Paludiculture Policies

Poland does not currently have explicit, dedicated policies for paludiculture. However, some existing measures, such as eco-schemes for water retention on permanent grassland and agri-environmental-climate measures (AECMs) for wet meadows and peatlands, indirectly support wetland management and paludiculture. Despite these measures, paludiculture is not mentioned explicitly, and proposed changes to include paludiculture in the CAP from 2023–2027 were rejected.

Paludiculture in the Polish CAP Strategic Plan, 2023—2027

Eligible Hectares

Paludiculture is not recognized as a specific practice eligible for funding in the Polish CAP under Article 4(4).

Pillar I: GAEC 2

Paludiculture is not explicitly mentioned as a recommended or supported land use. The focus remains on water retention and grassland management.

Pillar I: Eco-schemes

Poland's eco-schemes include measures for water retention on permanent grasslands, which may indirectly support wetland management and peatland conservation, but paludiculture is not specified. The eco-scheme for carbon farming (soil improvement and water retention) may benefit peatland areas but does not list paludiculture as an activity eligible for payments.

28 The peatland map of Europe, 2017
29 Peatlands and Climate in a Ramsar context, 2015
30 Peatlands and Climate in a Ramsar context, 2015

Pillar II: AECMs

Poland's AECMs offer some indirect support for wetland restoration and peatland management through measures targeting wet meadows and peatland conservation. However, paludiculture is not explicitly supported or encouraged as a practice within these measures. Current AECMs aim to maintain traditional agricultural land use on wetlands rather than promoting innovative land uses like paludiculture.

Despite the indirect support of paludiculture, the existing policies have not measurably contributed to the rewetting of peatlands.

National Programs

While the CAP lacks direct support for paludiculture, Poland is developing a Strategy for the Protection of Wetlands. Although unpublished, this strategy reportedly recognises the potential of paludiculture as a climate-friendly land use. The Ministry of Climate and Environment is working towards including paludiculture as an important measure in future peatland conservation initiatives.

Polish Paludiculture Projects

1. **Facilitating Aquatic Warbler** habitat management through sustainable systems of biomass use

The LIFE09 NAT/PL/000260 project "Facilitating Aquatic Warbler (*Acrocephalus paludicola*) Habitat Management through Sustainable Systems of Biomass Use" focused on conserving habitats critical for the Aquatic Warbler, Europe's rarest migratory songbird. Implemented in Poland, Lithuania, Germany, and Belarus, the project sought to ensure the long-term management of wetland habitats through sustainable biomass utilization.

Central to the project was the development of an innovative system for harvesting biomass from wetland areas, specifically late-season vegetation that would otherwise accumulate and degrade habitat quality. The harvested biomass was processed into products like briquettes and pellets for energy use, creating an economic incentive for wetland management. By linking habitat conservation with biomass markets, the project demonstrated a scalable model that integrates biodiversity preservation with renewable energy production.

The project restored over 4,000 hectares of wetland habitats, implemented targeted mowing systems, and established facilities to process harvested biomass. These actions enhanced the ecological status of wetlands while supporting paludiculture practices to ensure sustainable habitat management for the Aquatic Warbler.

Challenges

- Transporting harvested biomass from fen mires required specialised equipment, such as caterpillar-tracked vehicles, to navigate wetland terrain.
- Introducing the OTOPellet biomass fuel product required efforts to gain recognition and acceptance among the local population.

- Ensuring the economic sustainability of habitat conservation through biomass utilisation necessitated feasibility studies, including evaluations for potential power plant modernisation in Mońki County.

OVERVIEW Paludiculture Project "Biomass use for Aquatic Warbler"

Project budget	3,811,995 €
Total EU Funding	2,730,471 €
Project Duration	01.09.2010–31.03.2015
Project Area	Poland
Project Lead	Ogólnopolskie Towarzystwo Ochrony Ptaków
Link	LIFE 3.0 – LIFE09 NAT/PL/000260

2. NBSoil – Nature Based Solutions for Soil Management

The NBSoil project addresses the global challenge of soil degradation by promoting nature-based solutions (NBS) to improve soil health. With over 90% of soils projected to become degraded by 2050, the project will design an immersive blended learning programme aimed at equipping soil advisors with the knowledge and skills needed to implement a holistic approach to soil health management. The project focuses on six key multifunctional categories: organic fertilisers from biowaste, cover crops, paludiculture, forest diversification, bioremediation, and blue-green infrastructure in urban areas.

Paludiculture Component: As part of the NBSoil project, paludiculture plays a crucial role in maintaining soil health by encouraging the cultivation of crops on wet, re-wetted peatlands. This approach prevents the degradation of peat soils, reduces CO_2 emissions, and enhances biodiversity. Through the paludiculture activities, the project aims to transform drained peatlands into productive ecosystems that support sustainable agriculture while also mitigating climate change impacts.

Participants will learn how to implement paludiculture practices effectively, gaining insights into the environmental benefits, such as improved carbon sequestration, water retention, and the restoration of peatland ecosystems. Paludiculture will be explored alongside other nature-based solutions to promote a sustainable land management strategy that balances agricultural productivity with environmental conservation.

By mainstreaming paludiculture knowledge through the NBSoil training programme, the project seeks to create a new generation of soil advisors who can integrate these practices into wider soil health and land management efforts, contributing to the broader EU mission of achieving sustainable and resilient landscapes.

OVERVIEW Paludiculture Project "NBSoil"

Project budget	4.688.807 €
Total EU Funding	4.688.807 €
Project Duration	01.12.2022–30.11.2026
Project Area	Poland
Project Lead	Instytut Uprawy Nawożenia i Gleboznawstwa Państwowy Instytut Badawczy
Link	NBSOIL – The Nature Based Solutions for Soil Management (nbsoil.eu)

Additional project activities in Poland with project leadership based in another country :

→ **PaluWise**
→ **DESIRE**

SWEDEN

Peatland cover 66,450 km² → 14.76 %[31]
Estimated degraded peatland cover 18.2 %[32]
Emissions from peatland 14.4 Mt CO_2-eq/year[33]

Common crane
Grus grus

Paludiculture Policies

Sweden currently lacks a specific national policy dedicated to paludiculture. While the CAP framework in Sweden acknowledges wetland and peatland restoration, paludiculture itself is not explicitly mentioned as an activity eligible for direct support. The focus is primarily on traditional agricultural practices and wetland conservation under broader eco-schemes and environmental measures, but the CAP doesn't specifically mention and incentivise paludiculture through its funding mechanisms. This results in limited opportunities for farmers to adopt wetland-based crops like cattail or reed, which are common in paludiculture systems.

Paludiculture in the Swedish CAP Strategic Plan, 2023—2027

Eligible Hectares

Paludiculture is not listed as an eligible practice under the "eligible hectares" criteria. There is no mention of agricultural land used for paludiculture maintaining its eligibility for direct payments, and Article 4.4 does not provide any clear support for non-listed crops like those grown in wetland environments.

Pillar I: GAEC 2

Sweden enforces GAEC 2 for the protection of wetlands and peatlands. This measure is aimed at preventing further degradation of peat soils and curbing greenhouse gas emissions from drained wetlands. However, there is no explicit mention of paludiculture as a recommended or supported practice within GAEC 2. The emphasis remains on restricting drainage rather than promoting wet cultivation systems.

31 The peatland map of Europe, 2017
32 Peatlands and Climate in a Ramsar context, 2015
33 Global Peatlands Assessment: The State of the World's Peatlands, 2022

Pillar I: Eco-schemes

Eco-schemes are designed to support practices that benefit climate and biodiversity, but paludiculture is not explicitly mentioned in the list of eligible practices. The eco-schemes focus on water retention measures and soil carbon sequestration and could therefore indirectly support paludiculture practices.

Pillar II: AECMs

Sweden's AECMs offer some indirect support for wetland and peatland restoration. These measures aim to restore wetlands for nutrient retention and enhance biodiversity through sustainable management of wetland areas. However, the main focus remains on traditional wetland conservation activities.

National Programs

There is currently no national program supporting paludiculture. The lack of advisory services and investment support for the necessary machinery and infrastructure for water management further limits the adoption of paludiculture practices.

Swedish Paludiculture Projects

There are no paludiculture projects coordinated in Sweden at present. Research shows a significant lack of awareness about paludiculture among farmers and relevant organisations, which hinders peatland restoration efforts. Addressing this gap is critical, and suggestions include creating dedicated platforms for information dissemination, and organising conferences. Currently, there is little advisory support or investment for the necessary infrastructure and machinery required for paludiculture.

The Swedish University of Agricultural Sciences conducted a *Sphagnum* Farming project (Rewetting efter peat extraction and *Sphagnum* Farming | Externwebben). The project coordination was contacted, but there was no response.

Project activities in Sweden with project leadership based in another country

→ CINDERELLA
→ GO-GRASS

THE NETHER LANDS

Cattail
Typha

Peatland cover 2,733 km² → 7.32 %[34]
Estimated degraded peatland cover >80 %[35]
Emissions from peatland 4 Mt CO_2-eq/year[36]

Paludiculture Policies

The Dutch CAP integrates a variety of measures to promote paludiculture as part of its strategy to achieve climate and environmental goals. By fostering the transition to wet cultivation and supporting farmers through subsidies and technical assistance, the Netherlands aims to reduce CO_2 emissions, enhance biodiversity, and ensure the long-term sustainability of its agricultural landscapes.

Paludiculture in the Dutch CAP Strategic Plan, 2023—2027

Eligible Hectares

Under Article 4(4) of the CAP, agricultural products not listed in the Annex, such as those grown through paludiculture, are eligible for funding if they meet specific environmental objectives, including:

- Contributing to climate protection.
- Promoting sustainable development.
- Preserving biodiversity, enhancing ecosystem services, and maintaining habitats.

Pillar I: GAEC 2

Paludiculture is recognised under GAEC 2 for the protection of wetlands and peatlands. This measure ensures the protection of peat soils by allowing sustainable, wetland-specific agricultural practices. Farmers practicing paludiculture on

34 The peatland map of Europe, 2017
35 Global Peatlands Assessment: The State of the World's Peatlands, 2022
36 CO_2 emissions of drained coastal peatlands in the Netherlands and potential emission reduction by water infiltration systems, 2024

rewetted peatland areas are eligible for direct payments, but certain restrictions apply, e.g., for protected Natura 2000 areas.

Pillar I: Eco-schemes

In the eco-schemes, paludiculture is explicitly mentioned as a recognised eco-activity. Farmers can receive payments for paludiculture, which is only eligible if the land was registered in the agricultural cadastre between 2015 and 2022. The eco-scheme supports a detailed list of eligible wetland crops (i.e., Mosquito ferns, Cranberry, Mediterranean Sea Lavender, Cattail, Phragmites, Wild Rice, and Glassworts), which must be harvested at least once a year. The scheme aligns with climate and environmental goals by promoting CO_2 reduction through water management on peatlands.

Pillar II: AECMs

AECMs under Pillar II offer additional support for longer-term environmental and climate practices, including paludiculture. Farmers in peat-rich regions can receive financial support for rewetting peatlands and converting to paludiculture, contributing to both climate adaptation and biodiversity enhancement. These measures help restore degraded peatlands while offering farmers alternative income through wetland crop production.

Additional Strategic Measures

The Peat Meadow Programme (Veenweideprogramma 2021–2030) promotes paludiculture as a sustainable key practice in the Frisian peat meadow area, while ensuring long-term farmer income, and involving various stakeholders for support. Knowledge transfer through demonstrations and outreach is emphasised.

The Dutch Climate Agreement does not explicitly promote paludiculture, however it does advocate for sustainable management of peat soils, which could encompass paludiculture as part of a broader strategy.

Dutch Paludiculture Projects

1. Paludi & Bouw

The Paludi & Bouw project seeks to address peatland degradation and CO_2 emissions by developing bio-based building materials from paludiculture crops, particularly cattail (*Typha ssp.*), which are grown on water saturated soils.

Key project activities include:

- Cultivation of cattail and other wetland crops to produce sustainable building materials, such as insulation and board materials.
- Incorporating mycelium (fungal biomass) to enhance these products, making them environmentally friendly and suitable for homes with specific fire safety regulations.

- The project focuses on scaling up the production and commercialisation of these materials, creating a sustainable supply chain that involves farmers, manufacturers, and construction companies across the regions of Northern Netherlands, Lower Saxony, and North Rhine-Westphalia.
- Testing and refining the production process to meet the technical standards, such as fire resistance, soundproofing, and insulation efficiency, while ensuring compliance with the building regulations of both Germany and the Netherlands.

The project promotes a circular economy by creating bio-based materials that are low in CO_2 emissions and encourage biodiversity. The goal is to transform paludiculture into a commercially viable option for farmers and developers, contributing to the broader aim of peatland restoration and climate change mitigation. The sister project Paludi & Markt that launched in January 2023 focuses on the development of substrate products from cattail and other wet crops as a substitute for harvested peat. Both Paludi & Markt and Paludi & Building have a strong cooperation established as Paludi & Markt is using finer fibres of cattail plats, whereas fine fibres are not suitable for the development of construction materials.

OVERVIEW Paludiculture Project "Paludi & Bouw"

Project budget	2,291,916.20 €
Total EU Funding	976,608.33 €
Project Duration	01.09.2024–01.09.2027
Project Area	Germany, The Netherlands
Project Lead	Stichting Technologie Centrum Noord-Nederland
Link	Paludi & Bouw – Interreg (deutschland-nederland.eu)

2. **Paludi & Markt** – Upscaling Typha cultivation as an alternative growing substrate

The Paludi & Markt project is a collaborative initiative between Germany and the Netherlands and focuses on scaling up the cultivation of cattail (*Typha ssp.*) as a sustainable agricultural practice for substrate production, aiming to reduce reliance on traditional peat.

Building on small-scale experimental plots, the projects transitions cattail cultivation to a larger scale, involving commercial operators to optimise production, storage, and processing to meet market demands. A key emphasis is placed on knowledge sharing and communication throughout the process.

The project unites partners from across the value chain, including substrate producers, universities, competence centres, and networking organisations from both Germany and the Netherlands, to ensure a comprehensive approach to developing and implementing paludiculture on a commercial scale.

OVERVIEW Paludiculture Project "Paludi & Markt"

Project budget	1,064,086.10 €
Total EU Funding	407,510.64 €
Project Duration	01.01.2023–30.04.2026
Project Area	Germany, The Netherlands
Project Lead	Stichting Bargerveen
Link	Paludi & Markt – Interreg (deutschland-nederland.eu) Paludi & Markt – Stichting Bargerveen (stichting-bargerveen.nl)

3. RIWET

The RIWET project focuses on restoring rivers, wetlands, and biodiversity through nature-based solutions. It promotes reshaping rivers, revitalising marshes, and restoring peatlands to enhance water retention, reduce flooding risks, and improve biodiversity, while helping to mitigate climate change impacts.

A key aspect of the project is the promotion of paludiculture as a sustainable land management practice to combat the issues caused by traditional agriculture on peatlands, such as CO_2 emissions and land degradation. By encouraging wetland cultivation, RIWET aims to preserve peatlands, improve water management, and restore ecosystems. The project involves 12 partners and 4 authorities from 11 European regions, working collaboratively with local communities to develop adaptive policies and nature-based solutions for the restoration of blue-green infrastructure.

Challenges

- Lack of political support for nature conservation and sustainable practices.
- Public resistance to conservation measures due to a lack of trust.

OVERVIEW Paludiculture Project "RIWET"

Project budget	2,869,626 €
Total EU Funding	1,434,813 €
Project Duration	01.04.2024–30.06.2028
Project Area	The Netherlands – Province of Drenthe
Project Lead	Province of Drenthe
Link	RIWET – Public-private Governance of Rivers and Wetlands Restoration and Conservation as blue-green Infrastructure | Interreg Europe – Sharing solutions for better policy

4. Carbon Connects

The Carbon Connects project aims to enhance carbon sequestration in peatlands across North-West Europe, including the Netherlands, by promoting sustainable business models and transforming land use towards wet agriculture. The project focuses on reducing CO_2 emissions from agricultural peatlands by shifting towards practices that prioritise environmental sustainability, particularly paludiculture.

In the Netherlands, several key activities are implemented to achieve these goals:

- **Pilot sites:** Multiple experimental areas have been established to test innovative business models for growing wet crops like cattail (*Typha*), reed, and others. These sites explore sustainable wetland farming methods, focusing on rewetting drained peatlands while maintaining productivity.
- **Farmer-to-farmer learning programme:** This programme encourages knowledge exchange among peatland farmers, both locally and internationally, focusing on sustainable practices, climate change mitigation, and carbon sequestration.
- **Collaborative living lab platform:** This platform addresses legal and practical issues, shares updates on pilot sites, and distributes publications and event information.
- **Online toolbox:** An online toolbox provides resources on land use practices, sustainable business models, and carbon credit accounting, spreading knowledge to a broader audience.
- **Paludiculture promotion:** The project promotes paludiculture as a method of wet agriculture. By doing so, it helps reduce CO_2 emissions, improve biodiversity, and maintain land productivity, thus offering a sustainable solution for peatland management.

The project's efforts in the Netherlands focus on rewetting drained peatlands, introducing new wetland crops, and developing sustainable business models that balance ecological benefits with economic viability.

Challenges

- Recognition of paludiculture crops as agricultural crops.
- Effects of rewetting on neighbouring fields.
- Scale of production.
- Value chain development.

OVERVIEW Paludiculture Project "Carbon Connects"

Project budget	5,300,000 €
Total EU Funding	3,200,000 €
Project Duration	2018–2023

Project Area	The Netherlands
Project Lead	Van Hall Larenstein University of Applied Science
Link	CCONNECTS – Carbon Connects | Interreg NWE (nweurope.eu)

5. **Bioeconomy** – Green Chemistry product chains from paludiculture

Bioeconomy – Green Chemistry was an Interreg project that focused on the development of concrete value chains from paludiculture biomass in Germany and the Netherlands. The aim was the development of several demand-oriented chains with simple products that are geared to the market demand and to eliminate the bottlenecks that hinder that development. Furthermore, the project was geared towards establishing a cross-border cooperation network with German and Dutch partners to exchange knowledge and experiences. The project focused on the development of three chains: (1) the use of cattail (*Typha*) and reed (*Phragmites*) as a peat substitute in substrates for horticulture and as soil amendment in agriculture, (2) the use of cattail as an insulating material in the building industry and as a raw material for sheet material, (3) the use of peat moss (*Sphagnum*) as a material for renaturation.

OVERVIEW Paludiculture Project "Bioeconomy"

Project budget	6,577,302.25 €
Total EU Funding	2,464,277.45 €
Project Duration	01.06.2018–31.05.2022
Project Area	Eems Dollard Regio (EDR)
Project Lead	Germany, The Netherlands
Link	BioÖkonomie – Grüne Chemie – INTERREG (deutschland-nederland.eu) Bioeconomy – Green Chemistry (keep.eu)

6. BUFFER+

The project aims to restore peatlands and create healthy peat landscapes by implementing sustainable land and water use practices, with a focus on paludiculture. This initiative addresses climate change adaptation and water management, especially to prevent major flooding in Groningen. Establishing natural water buffer areas and developing moist hay meadows and herb-rich grasslands are key components of this strategy. Central to the project is the Innovation Workplace (IWP), a collaborative hub where students, professionals, and residents can transform best practices into region-specific solutions. Balancing ecological goals with local water management priorities poses a significant challenge, given the variability in soil structure across the area. Detailed knowledge of local soil conditions is crucial for the successful implementation of paludiculture and the development of a circular economy. Citizen involvement is essential, particularly when changes impact recreational areas and local ecosystems. Farmers willing to adopt paludiculture and wet crops will need compensation, and the project

suggests exploring green finance options to support these transitions. Regional partnerships, especially with neighbouring Friesland, are vital for strengthening biodiversity, enhancing spatial quality, and developing nature-based opportunities for farmers.

Improving governance and exploring instruments like blue credits for water replenishment are also recommended. While there is a solid foundation of knowledge and initiatives, significant gaps remain, particularly in understanding local environmental conditions and the long-term viability of agricultural practices. Ensuring proper compensation for landowners and involving the community are crucial for the project's success.

Challenges

- Complex soil structures pose challenges for uniform rewetting measures and machinery use.
- Stakeholder engagement and distrust in the government pose challenges for the implementation of innovative farming practices.
- Lack of future funding and slow value chain development.

OVERVIEW Paludiculture Project "BUFFER+"

Project budget	9,742,961.88 €
Total EU Funding	5,845,777.09 €
Project Duration	01.04.2023–31.07.2027
Project Area	Belgium, France, Germany, Ireland, The Netherlands
Project Lead	Province of Groningen
Link	BUFFER+

Additional project activities in the Netherlands with project leadership based in another country

→ **ADMIRE**
→ **Care-Peat**
→ **PaluWise**
→ **CINDERELLA**
→ **PalusDemos**

UNITED KINGDOM

Peatland cover 26,838 km² → 11.07%[37]
Estimated degraded peatland cover 78%[38]
Emissions from peatland 29.8 Mt CO_2-eq/year[39]

Common Reed
Phragmites australis

Paludiculture policies in the UK

Around 250,000 hectares of peatlands in the United Kingdom are drained for agricultural purposes, of which one third is currently used for crop production and two thirds is grassland.

UK Peatland Strategy 2018–2040

This strategy discusses paludiculture as a sustainable agricultural practice that enables production with minimal or no drainage. It presents paludiculture as a way to maintain farming livelihoods while fostering new enterprises in UK agriculture. The strategy outlines steps for trialling new systems, exploring new markets, and enhancing water management, with the long-term goal of transitioning agricultural peat soils to sustainable management regimes by 2040.

IUCN Peatland Code

The Peatland Code is a UK voluntary certification standard designed to attract private investment for peatland restoration, helping to reduce greenhouse gas emissions. It focuses on degraded peatlands, guiding projects to restore and rewet these areas, halting carbon losses and rebuilding ecosystems. Independent validation and verification ensure the credibility of carbon savings, which are quantified into verified carbon units (VCUs) that can be sold to investors as offsets. Alongside carbon benefits, the code supports wider environmental goals such as biodiversity conservation, water quality improvement, and flood mitigation, aligning with the UK's climate and ecological targets.

37 The peatland map of Europe, 2017
38 Mapping and monitoring peatland conditions from global to field scale, 2023
39 Global Peatlands Assessment: The State of the World's Peatlands, 2022

Agricultural Transition Plan

Introduced in 2020, this plan outlines the UK government's strategy for transitioning from the EU's Common Agricultural Policy to a domestic agricultural policy. The 2024 update includes measures to improve and maintain the restoration of approximately 240,000 ha of peatland by 2050, focusing on retaining soil carbon and establishing carbon sinks. Through this plan, farmers can receive payments for raising water tables, rewetting peatlands, and adopting more sustainable management practices, although paludiculture is not specifically mentioned.

Paludiculture Exploration Fund (PEF)

Launched in 2023, the PEF is a grant scheme managed by Natural England with a budget of £5 million. It aims to explore and overcome the challenges of implementing commercially viable paludiculture on lowland peat soils. The fund supports projects that reduce greenhouse gas emissions, maintain high water tables, and develop new crops suitable for wet farming conditions. Eligible stakeholders include farmers, businesses, charities, and local authorities. Funded projects focus on activities such as managing water levels, increasing crop production, and developing specialised machinery for wet conditions, along with creating products derived from paludiculture crops like cattail and reed. The key objective is to make paludiculture a commercially viable alternative to traditional peatland agriculture, thereby contributing to the UK's net zero ambitions.

Lowland Agricultural Peat Task Force

In January 2024, DEFRA published the results of the Lowland Agricultural Peat Water for Peat Pilots programme, which explored rewetting peatlands and promoting paludiculture. Supported by nearly £7 million, the pilots assessed water-level management and sustainable farming practices on peat soils. The initiative emphasised the importance of public investment, technical advice, and private finance to support sustainable land management, while involving farmers in decision-making processes. These efforts align with the UK government's strategy to achieve net-zero carbon emissions by 2050, highlighting the role of peatlands in climate change mitigation.

SW18: Raised Water Levels on Grassland on Peat Soils

This Countryside Stewardship initiative focuses on protecting lowland peat soils by maintaining higher water levels on permanent grasslands. Farmers participating in the SW18 option receive £1,381 per hectare annually to rewet peat soils, which helps prevent further degradation, reduces carbon dioxide emissions, improves soil health, supports biodiversity, and enhances natural flood management. This initiative is aligned with paludiculture, creating conditions conducive to wetland-compatible crops and providing additional income streams for farmers.

UK Paludiculture Projects

1. **CANAPE** – Creating A New Approach to Peatland Ecosystems

CANAPE was a project working in five countries to restore and preserve, with the aim of reducing greenhouse gas emissions and supporting the creation of a sustainable economy for the population of the North Sea Region. The project rewetted over 90 ha of peatland and established three experimental paludiculture farms to showcase agricultural production on rewetted peatlands, without the need for ongoing drainage. The three experimental paludiculture farms were established in three different countries: (1) *Sphagnum* farm in Germany, (2) *Typha* and wetland grass farm in Denmark, and (3) *Typha* and Phragmites farm in the UK. An important aspect of the project was the involvement of the local communities and farmers to increase awareness and acceptance for new management practices on peatlands and secure the long-term success.

The CANAPE project explored the following products:

- **Peat moss** (*Sphagnum*)
  Growing medium for orchids
  Decorative material and lining for exotic animal terrariums
  Seed material for bog restoration
  Reed (*Phragmites*)
  Compost
  Biochar
- **Cattail** (*Typha)*
  Construction materials
  Animal fodder
  Water filtration
  Clothing
- **Waste wood**
  Charcoal for cooking
  Biochar
  Canary grass (*Phalaris canariensis*)
  Animal fodder

Lessons learned

- **Local knowledge is crucial:** Engaging with local experts who understand the nuances of the environment is vital for accurate project planning, especially in terms of water flow and land conditions.
- **Stakeholder engagement:** Early and thorough stakeholder mapping is essential to include all relevant parties and avoid backlash from excluded groups.
- **Water Control:** Effective water control is crucial for the success of plant germination and the overall health of the site. This was particularly evident in the success of pre-planted coir matts over other methods.
- **Material sustainability:** The use of environmentally sustainable materials has gained importance and are often no longer accepted by the broader public (e.g., plastic membranes).

Challenges

- **Legal and Permit Procedures:** Regulatory processes are complex and time-intensive, often requiring specialised expertise.
- **Accurate Estimations:** Many projects struggle with miscalculations in soil removal, water abstraction, and anticipated carbon savings, reducing efficiency and benefits.
- **Funding Timelines:** Mismatch between funders' expectations for shovel-ready projects and the need for long-term planning and stakeholder engagement.
- **Environmental Factors:** Challenges include climate variability (e.g., dry summers) and damage from uncontrolled animal activity, which can harm new plantings.
- **Construction and Equipment Losses:** Damage to infrastructure or equipment during project implementation increases costs and delays progress.
- **Cultivation:** Wet conditions in rewetted areas complicate planting and harvesting, requiring innovative solutions to ensure feasibility.
- **Knowledge Gaps:** Limited data on suitable crops, establishment methods, costs, and biomass applications hinder widespread adoption.
- **Economic Viability:** High costs for establishing crops like Typha and sedges deter farmers, and limited value chains reduce market opportunities.
- **Environmental Considerations:** Managing phosphorus levels to balance biodiversity and productivity remains a key challenge, with biomass removal offering partial solutions.

Project outputs

- 'Sustainable Peatlands' conference in collaboration with the Carbon Connects (CCONNECTS) project
- Pocket Guide to Sustainable Peatland Farming
- Policy Guide: Peatlands Across Europe: Innovation & Inspiration – shared guide between 5 projects (CANAPE, CARE-PEAT, Carbon Connects, DESIRE and LIFE Peat Restore)
- Guide for Partners – Natural Capital Asset Check

OVERVIEW Paludiculture Project "CANAPE"

Project budget	5,500,000 €
Total EU Funding	3,300,000 €
Project Duration	2017–2022
Project Area	Belgium, Denmark, Germany, United Kingdom, The Netherlands
Project Lead	Broads Authority (UK)
Link	CANAPE, Interreg VB North Sea Region Programme

2. Cumbrian BogsLIFE+ – Restoration of degraded lowland raised bogs on three Cumbrian SCI/SACs

The project focused on the restoration and conservation of peatland habitats, specifically Bolton Fell Moss and Walton Mosses in the UK. The restoration process involved controlling the hydrology by raising the water table and removing woody vegetation, allowing *sphagnum* mosses to establish. Monitoring involved vegetation surveys, hydrological measurements, and greenhouse gas measurements to assess impact of the restoration efforts.

A paludiculture trial was established in Bolton Fell Moss. The aim of this trial was twofold: to create a suitable *sphagnum*-rich donor site for future restoration of peatlands in the region, and to investigate the practicalities of *sphagnum* farming on cut-over peat bogs. The trial involved the establishment of six trial beds using different methods of vegetation establishment, including donor vegetation from other sites, *sphagnum* hummock plugs, micro-propagated *sphagnum* gel/beads, and *sphagnum* pellets.

Outcome

The *sphagnum* cultivation trial was not successful in Bolton Fell Moss, as maintaining the required water levels was too difficult. As a result, the infrastructure was removed, and future direction were re-evaluated. The Bolton Fell Moss area is now being restored to a M18 lowland raised bog under the National Vegetation Classification system in the UK.

Challenges

- Maintaining water tables was not successful.

OVERVIEW Paludiculture Project "Cumbrian BogsLIFE+"

Project budget	6,585,236 €
Total EU Funding	3,292,618 €
Project Duration	01.08.2014–31.12.2019
Project Area	Cumbria, UK
Project Lead	Natural England
Link	Cumbria BogLIFE project – GOV.UK (www.gov.uk)

3. Broads Peat Discovery Project

The Broads Peat Discovery Project, led by the Broads Authority, focused on restoring peatlands within the Broads National Park to mitigate carbon emissions and enhance ecosystem services. Conducted between 2022 and 2023, the project surveyed 15 sites across various river valleys, collecting data on soil composition, water levels, vegetation, and wildlife.

A significant aspect of the project was exploring paludiculture as a sustainable land-use practice. By rewetting drained peat soils, the initiative aimed to reduce greenhouse gas emissions and create new income streams for farmers through the cultivation of wetland crops. The project identified several barriers to peatland restoration, including financing, policy constraints, product development, and

farmer engagement. To address these, the partnership developed restoration plans for eight sites and applied for restoration grants to support implementation.

OVERVIEW Paludiculture Project "Broad Peat Discovery"

Project budget	1,125,800 £
Total EU Funding	Information n/a
Project Duration	01.12.2021–31.08.2023
Project Area	England
Project Lead	Natural England
Link	Broads Peat Discovery Project (broads-authority.gov.uk)

4. Peatland Progress

The Peatland Progress: A New Vision for the Fens project focuses on restoring 120 hectares of degraded peatland at Speechly's Farm to create a continuous wetland corridor between Holme Fen and Woodwalton Fen National Nature Reserves. The project aims to demonstrate large-scale paludiculture by cultivating wetland crops like *Typha* (bulrush) and *sphagnum* moss, showcasing sustainable wet farming practices. It also prioritises community engagement through accessible landscapes and educational programmes designed to enhance health, well-being, and connections to nature. The project tackles climate change and biodiversity loss by rewetting peatlands to reduce carbon emissions and increase habitat diversity.

OVERVIEW Paludiculture Project "Peatland Progress"

Project budget	8,000,000 £
Total EU Funding	Information n/a
Project Duration	2023–2027
Project Area	England
Project Lead	Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire
Link	Peatland Progress

Additional project activities in the UK with project leadership based in another country

→ Care-Peat
→ PaluWise
→ PalusDemos

CONCLUSION

Paludiculture is a growing approach to managing Europe's peatlands, offering solutions to address climate change, biodiversity loss, and sustainable land use. This study, based on the analysis of 47 projects across peatland-rich European countries, highlights its growing recognition, as demonstrated by the increasing number of projects since 2010. Despite this progress, the widespread adoption of paludiculture remains hindered by several recurring challenges. These include a lack of clear policy support, insufficient financial incentives, regulatory barriers, and a lack of developed value creation chains from biomass cultivation and harvest to marketing of products. In particular, most projects struggle with economic viability, long-term security, and technical barriers, such as outdated soil maps and difficulties with water management infrastructure.

Policy support is critical to achieving greater participation and fostering a shift in the attitudes of farmers and landowners. Without long-term incentives and robust frameworks, many stakeholders remain hesitant to transition to paludiculture. The study emphasises the need for clearer definitions of paludiculture in the CAP, ensuring certainty and a long-term perspective for farmers. Only 30 % of the portrayed countries explicitly reference paludiculture in their CAP strategic plans, and also 30 % incorporate it into national strategies. This highlights a significant gap that must be addressed, particularly in the context of the upcoming CAP reform in 2027.

Despite these challenges, EU-(co)-funded projects, such as those under the LIFE programme, Horizon, Interreg, or EAFRD, have proven the value of coordinated efforts and serve as key references for future initiatives. By addressing the outlined barriers and integrating paludiculture into comprehensive strategic frameworks, Europe has the opportunity to scale up this innovative practice. Paludiculture can become a cornerstone of sustainable peatland management, fostering climate resilience, ecological restoration, and new economic opportunities for farmers.

Annex – List of projects cited

LIFE Multi Peat

LIFE20 CCM/DE/001802