



## **LIFE Peatlands Platform Meeting**

**26 - 28 April 2023**

Berlin, Germany

# The benefits of peatland restoration for Europe

## POLICY MESSAGES

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Ombrotrophic peatlands in Flow County, Scotland, UK (photo: R. Lindsay)

## Peatlands and their importance for biodiversity and climate

**Peatlands**, generally also known as bogs, mires, or moors, are unique wetland ecosystems characterized by the accumulation of partially decomposed plant material - peat. They play a crucial role in maintaining global biodiversity and regulating the Earth's climate. Covering only about 3% of the Earth's land surface, peatlands harbour an astonishing variety of species and possess immense carbon storage capacity.

- **Peatlands** are often Biodiversity Hotspots, hosting a wide array of specialised plant and animal species. Their unique waterlogged conditions and, as for ombrotrophic bogs, highly acidic environment create a distinct ecological niche that supports a diverse range of organisms. Moreover, peatlands serve as vital habitats for numerous rare and endangered species such as carnivorous plants, amphibians, insects or mammals. Many migratory species, rely on peatlands as breeding and feeding grounds. By conserving and restoring peatlands, we safeguard these invaluable ecosystems and their important functions and species assemblages.
- **Peatlands** are at the same time also very important for Carbon storage and worldwide climate regulation. They are the most effective terrestrial carbon sinks. In the form of peat, peatlands store twice as much carbon as all the world's forests combined, despite covering only a fraction of the land surface. This carbon storage function helps mitigate climate change by preventing the release of greenhouse gases into the atmosphere. Disturbances to peatlands, such as drainage, peat extraction, afforestation, or wildfires, can lead to releasing stored carbon and exacerbating global warming.
- **Peatlands** also play a vital role in regulating water resources and flood prevention. Some types of undisturbed may function as natural 'sponges', they absorb and store rainfall or surface waters, slowly releasing them over time, thus reducing the risk of floods and maintaining a steady water supply during dry periods. They also act as natural filters, purifying water by trapping sediment and pollutants before they enter rivers and streams. By conserving and restoring peatlands, we can ensure the provision of clean water for both human populations and aquatic ecosystems downstream.
- **Peatlands** are also archives of the past, documenting valuable information on biodiversity, climate and pollution in their stratified peat layers. And for centuries, people have depended on peatlands for water, food, fuel and recreation.

## Peatlands in the European Union and their policy relevance

In the EU peatlands are also considered amongst the most important ecosystems because of their broad ecosystem services and their key value for climate control, water retention and supply, and biodiversity conservation. The importance of restoration of European peatlands and revitalisation of all their functions grows year by year with the increasing negative effects of the climate change (rising temperature, desertification, water scarcity), and the progressing loss of biodiversity.

The total area of all peatlands in Europe covers roughly 594,000 km<sup>2</sup>, of which 54% are natural peatlands. In the EU Member States (EU27), the total peatland area is about 268,000 km<sup>2</sup>, of which 51% are natural peatlands. Peatlands occur across all Europe, but they are mainly found in the Boreal, Atlantic, Continental and Alpine biogeographical regions (Fig. 1 and Fig. 2). Almost one-third of EU peatlands is located in Finland and more than a quarter in Sweden. Large peatlands can however also be found in Belgium, Estonia, France, Germany, Ireland, Latvia, Lithuania, the Netherlands, Norway, Poland, and the United Kingdom. Almost one-third of EU peatlands is located in Finland and more than a quarter in Sweden. Large peatlands can however also be found in Belgium, Estonia, France, Germany, Ireland, Latvia, Lithuania, the Netherlands, Norway, Poland, and the United Kingdom.

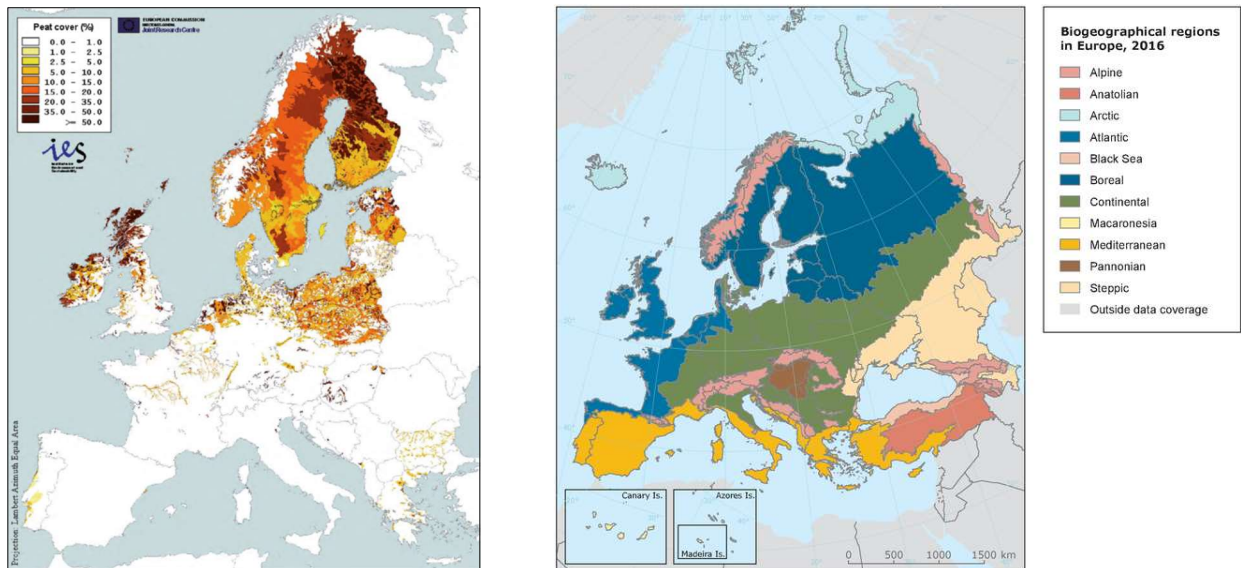


Figure 1 (left): Peatland distribution in Europe (the map shows the relative cover (%) of peat and peat-topped soils in the soil mapping units (SMUs) of [the European Soil Database](#)); Figure 2 (right): Biogeographical regions in Europe (source: [EEA EU](#)).

European peatlands have for centuries been converted into agricultural land or forest through drainage and fertilisation, causing a dramatic change in the ecosystem. In addition, at the end of the 19th century large-scale peat mining first started for fuel and later for horticultural purposes.

This peatland degradation continues today. Degraded, drained, and cultivated peatlands release huge amounts of greenhouse gases into the atmosphere. *With 174 Mt, the EU (27) is after Indonesia (500 Mton) and before Russia (161 Mt) the World's 2nd largest emitter of drainage-related peatland CO<sub>2</sub> (excl. extracted peat and fires) .*

The proportion of EU’s protected natural and near natural peatlands (mires) in the Natura 2000 network is quite small. The Habitats Directive distinguishes twelve peatland habitat types. In addition, bog woodland, grouped under Forests of Temperate Europe, counts as a naturally forested peatland.

In total, some 33,000 km<sup>2</sup> of these 13 habitat types are protected in more than 8,700 Natura 2000 sites. This area represents roughly only 24% of all remaining natural peatlands. Furthermore, Article 17 reporting for 2013-2018 shows that just over half (56.5%) of Natura 2000 peatland habitats are in good condition, while conditions are not good for 12% and unknown for 31.5% . Since 1992, LIFE programme has funded over 380 projects designed to improve the conservation status of peatlands- mainly raised bogs, blanket bogs, aapa mires, calcareous fens and bog woodland.

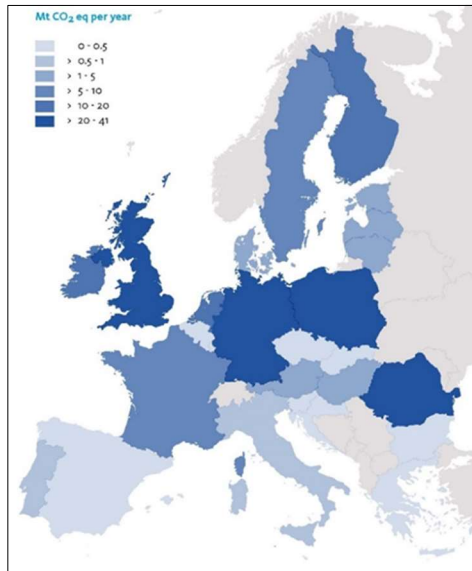


Fig. 3: GHG emissions from agriculturally used organic soils in the European Union member states (source: [Global Peatland Database](#) / Greifswald Mire Centre 2018).

Since the begin in 1992, the LIFE programme financed more than 360 LIFE projects to conserve and restore peatlands, out of which some one third focus primarily on peatlands, while two third dealt with peatland restoration along with associated habitats as part of a larger landscape approach (Fig. 4).

All projects (1998-2021), all relevance	<b>363</b>
All projects (1998-2021), high relevance only	<b>106</b>
Total costs (2000-2021), high relevance only	<b>399.930.649 €</b>

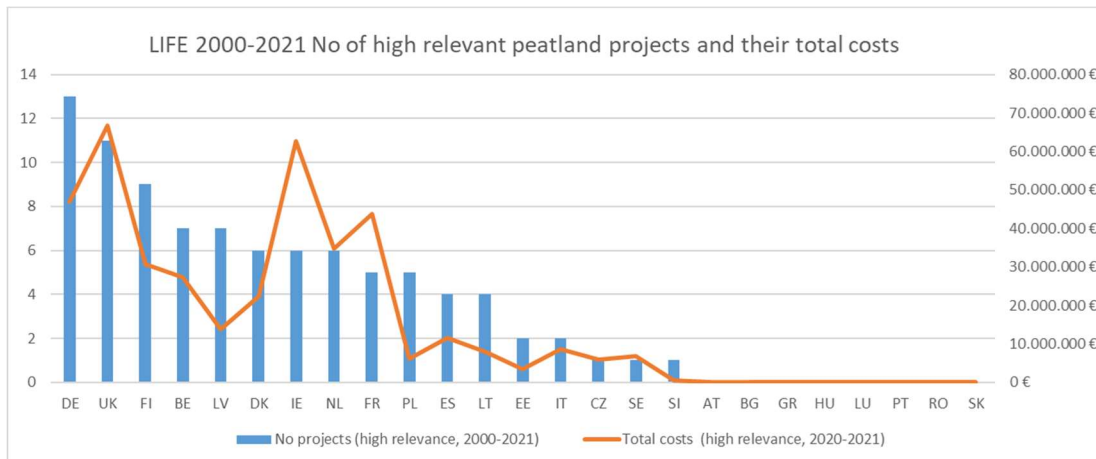


Fig. 4: Number of high-relevance peatland projects implemented between 2020 and 2021 and their total costs in the EU member states.

The total financial value of all high relevance LIFE projects over the last 21 years of almost EUR 400 million is significant, but it should be noted that these projects have reached an improvement of no more than

360 km<sup>2</sup> of peatlands<sup>1</sup>, which represents just about 1.1% of all natural peatlands and only 0.14% of all peatlands in the EU. This area ratio shows that even though LIFE projects can achieve significant positive results at the local and regional level in terms of peatland habitat conservation status and improvement of peatland functions within project areas, but that much larger interventions are needed to achieve visible and lasting changes at the landscape level required to achieve the ambitious EU environmental goals.

While in the first two decades of LIFE's history the focus was on peatland habitats and species, their protection and the improvement of their conservation status, with advancing climate change and the launch of the LIFE Climate Change Mitigation (CCM) and Adaptation (CCA) strand in 2014, LIFE CCM and LIFE CCA projects also gained importance, focusing primarily on the peatland functions as carbon and greenhouse gas stores and sinks.

In addition to the EU Habitats Directive, the conservation, restoration and wise use of peatlands and organic soils has now been meanwhile addressed in numerous policy documents at EU level, such as

- EU Biodiversity Strategy for 2030,
- EU Climate Law,
- EU Water Framework Directive,
- Common Agricultural Policy, or
- EU Cohesion Policy.

Apart from the frame EU laws, regulations and strategies numerous (peatland-rich) Members States addressed the conservation, management, and use of peatlands in their national policy documents, such as:

United Kingdom (UK):

- [UK Peatland Strategy 2014-2040](#)
- [England Peat Action Plan](#)

Ireland:

- [National Peatland Strategy](#)

Finland:

- [Finnish National Strategy for the Conservation and Sustainable Use of Peatlands](#)

Germany:

- [German National Peatland Strategy](#)

However, the picture on peatland policies in Europe remains heterogenic: While countries such as Ireland and the UK are already implementing their national strategies, others are still in the process of developing them or have not yet considered starting to prepare one. Further exchange between responsible ministries, agencies and involved experts from different countries is thus important to share lessons learned and to improve the individual national processes<sup>2</sup>.

The recently closed project LIFE Peat Restore exemplarily elaborated Legal regulatory frameworks of peatland exploitation, draining and restoration for countries participating in the project:

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<sup>1</sup> Calculated with an guess of approximate 100 ha restored peatlands per project; this average value is likely over estimated.

<sup>2</sup> Refer to: <https://www.bfn.de/sites/default/files/2021-06/policy-brief-peatland-strategies-bfn.pdf>

- Legal regulatory framework [Estonia](#)
- Legal regulatory framework [Germany](#)
- Legal regulatory framework [Latvia](#)
- Legal regulatory framework [Lithuania](#)
- Legal regulatory framework [Poland](#)

## LIFE Peatland Platform Meeting and its policy relevance

LIFE Platform meetings, organised by selected LIFE projects in cooperation with a team of external monitoring experts on behalf of the European Climate, Infrastructure and Environment Executive Agency (CINEA), have been held regularly on an annual basis with the aim of addressing current and urgent environmental and policy-relevant issues and topics raised in ongoing or recently completed LIFE projects.

The LIFE Peatland Platform meeting 2023 '*The benefits of peatland restoration for Europe*' (in further text only Platform) was dedicated to the restoration, conservation and wise use of European peatlands.

The meeting was organised by the host NGO Naturschutzbund Deutschland (NABU), Berlin (coordinating beneficiary of the projects LIFE Peat Restore and LIFE Multi Peat), on behalf of the European Commission Directorate General for Environment, Directorate General for Climate and the European Climate, Infrastructure and Environment Executive Agency (CINEA), in close cooperation with the platform team of external monitoring experts.

The aim of the Platform was to showcase some flagship projects focussing on best practice, innovative solutions and collaborative working, as well as to bring together the latest thinking on methods and techniques to restore European peatlands and revitalise their multiple valuable functions (ecosystem services), possible financing as well as challenges in combining different needs in order to ensure sustainable use of peatlands.

Accordingly, the main expected outcome of the meeting was to provide feedback on the above issues to the European Commission, and in particular to DG ENV and DG CLIMA based on shared practical experiences of implementing LIFE projects.

Given the impressive legacy of the LIFE programme in peatlands restoration and management, it is expected that the Platform will provide a positive contribution to future EU policy formulation and implementation by providing successful and sustainable cases, as well as lessons learnt.

Four key themes related to peatlands restoration, land use, financing, and policy implications were identified following a thorough mapping of LIFE, Interreg and Horizon 2020 projects and via consultation with DG ENV, DG CLIMA, and CINEA:

I **Restoration of peatland habitats**, where best practices, failures, reasons for failures, restoration techniques and approaches were explored, alongside regional differences, long-term monitoring results and common challenges.

***II Peatlands, land use and carbon sequestration***, where the participants focused on sustainable use of peatlands, best practices of sustainable use of formerly degraded peatlands, challenges and barriers.

***III Peatland restoration and climate change mitigation***, focusing on restoration of peatlands and degraded organic soils, GHG measurements and need for EU wide standards, best practices, monitoring, reporting and indicators of success.

***IV Peatland restoration in EU and national policies***, financing peatland restoration, focusing on policies such as IPCC, EU climate targets, Nature Restoration Law, EU Thematic Soil Strategy and Soil Health Directive, public and private financing, offsetting, carbon credits.

The Platform was held as a hybrid event with 92 people present in person.

The first plenary day with nine keynotes, plenary talks and the speed elevator pitch session was streamed online to reach a wider audience. The participants included LIFE project managers, site managers, officers from governmental, local or regional authorities, non-governmental organizations, academic and technical institutions, international organizations from 13 EU countries, the UK and Kenya, as well as experts from CINEA, DG CLIMA and DG ENV. Some 500 individuals watched the livestreaming event on first day.

The entire second day was dedicated to working in thematic groups. In four working groups, participants discussed issues related to the selected above-named themes.

In the morning of the third day, the results of the working groups were presented, and the main policy recommendations were elaborated. The platform ended with a field excursion to the German project sites of the LIFE Peat Restore project, which gave participants the opportunity for further discussions on site.

The detailed agenda of the Platform and the list of participants are annexed to this document.

## Policy Messages of the LIFE Peatland Platform Meeting

This '**Policy Messages**' document presents the most important messages transmitted through the presentations and discussions at the Platform. Political relevance was not only one of the four main themes of the platform but was also taken up in other workshop groups where relevant and important.

On the last day of the Platform the results and policy-relevant recommendations of all four workgroups were presented to the whole audience and jointly prioritised according to number of votes each policy statement received. This voting process provided validation of the results as given in the next chapters.

To achieve the Union 's biodiversity and climate targets and goals, few of most crucial and urgent overarching conditions and requirements regarding the efficient peatland conservation and restoration were repeatedly highlighted during the presentations, workshops and discussions. The Platform clearly demonstrated that the right tools exist:

(i) There is a lot of evidence available that restoring peatlands is indispensable for biodiversity, climate, water, flood alleviation and cultural benefits, and



(ii) there are many studies and examples of good practice in the sustainable peatland restoration and its positive impact.

What is urgently needed is sufficient political will and effort to make the restoration a reality. Accordingly, the main overarching policy recommendations that emerged from the platform meeting can be summarised as follows:

**The protection of all natural or near-natural peatlands in Europe and worldwide, characterised by intact typical habitats and provided all valuable ecosystem services, shall be a top priority.**

Despite the growing recognition of the multiple benefits of undisturbed and fully functional peatlands, they still remain under threat both across the globe and in Europe. Protection of existing resources and restoration of degraded systems needs to be reached in a sustainable manner and have to be scaled up to all undisturbed peatlands if Biodiversity targets of 30% under protection by 2030 are to be met. The "export" of unsustainable direct or indirect exploitation of peatlands to other Member States or other countries outside Europe, such as peat cutting or oil palm plantations after peat swamp forest deforestation, should be stopped in order to achieve full protection of all natural peatlands and their resources as soon as possible.

**The still existing and widespread public financial support for unsustainable use of peatlands should be stopped as soon as possible.**

First and foremost, the CAP and its implementation regulations by Member States should be harmonised with all other relevant Union and Member State laws and regulations and their financial instruments as soon as possible so as not to conflict with biodiversity, climate and land use policy objectives, thereby accelerating peatland rewetting and supporting the sustainable use of peatlands.

**The large-scale restoration of degraded peatlands is an urgent and challenging task that absolutely must be at the top of the agenda of all key actors and stakeholders.**

Healthy peatlands are the most spatially effective terrestrial long-term carbon stores and sinks in the biosphere of our planet. Sufficient rewetting of peatlands is one of the most effective nature-based solutions for climate change mitigation, adaptation and other environmental benefits<sup>3</sup>. In Europe, more than half of all pristine peatlands have been lost or converted, and few are currently in good ecological condition.

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<sup>3</sup> Greifswald paper

With only seven years left to meet biodiversity targets by 2030 and 27 years to meet net-zero climate targets, the pace of restoration must be significantly increased. Consequently, policymakers, decision-makers, land users, industry and consumers need to make a concerted effort to achieve the ambitious EU and national targets. It is imperative that the rewetting and restoration of peatlands be done on a landscape scale and that adequate funding be made available for this tremendous act (see Box below).

Sufficient means should be made available in peatland-rich MS to reach the fast transfer from the peatland degradation to peatland conservation and wise use of peatland resources. The value of peatlands should be adequately recognised to compete with other land use and exploitation demands.

**Hintergrund: Was kostet ein Kilometer Autobahn?**



Example Germany: Since reunification, the Germany has expanded its road network by 40 percent. In 2019 alone, 61 km of new highways and 122 km of new federal roads were constructed. The new investment volume for new construction and expansion measures in the highway network for the years 2021 to 2025 amounts to about €7.2 billion. At the same time, the transport sector in Germany is dramatically failing to meet its own climate targets<sup>4</sup>.

*It's worth comparing*

- Construction costs of 1 km new highway in Germany: €20-30 million
- Total cost of all LIFE high-relevance peatland projects in Germany in last 21 years: €36.2 million  
= 1-2 km highway.

**It is high time for upscaling paludiculture from trials to marketable products.**

To enable the large-scale rewetting and restoration of peatlands that have been degraded by unsustainable land use, there is an urgent need to make paludiculture methods accessible to landowners and to create incentives for the market and paludiculture products. In the meantime, there are already numerous pilot projects for suitable new paludiculture techniques and crops, as well as small demonstrations of the first marketable products. New processes and products are developing rapidly. What is urgently needed, however, is the upscaling of trials to marketable products and their viable placement on the markets. Paludiculture cultivation can produce a high-quality biomass for fibres, building materials, substrates in horticulture, etc. in a potentially carbon-negative way. To establish paludiculture on degraded organic soils as an integral part of (wet) agriculture, a new, long-term financing framework for upscaling is needed, together with the rapid creation of a whole new business chain of investors, producers and users.

<sup>4</sup> [Deutsche Klimaziele - Kaum Fortschritte im Verkehrssektor](#): According to the amended Climate Protection Act 2021, the transport sector may only emit 85 million tonnes of CO<sub>2</sub> in 2030. In 2021, the transport sector emitted around 148 million tonnes of CO<sub>2</sub> - three million tonnes more than was specified for the year. To reach the target for the transport sector, a reduction of seven million tonnes per year would be necessary - i.e. a utopian fourteen-fold increase in speed.

### **Implementation and financing schemes and procedures need to evolve for large-scale peatland restoration.**

In the last decades, EU projects have developed and successfully tested numerous suitable techniques to restore damaged peatlands and degraded organic soils.

However, efficient and long-lasting implementation and financing schemes and procedures need to be established very soon for large-scale peatland restoration so that they can be practically accessible and financeable (easy to understand, use and finance) by multiple stakeholders concerned.

Further development and standardisation of Carbon certificates from restored peatlands play a key role too. There are a few, such as IUCN Peatland Code or MoorFutures that start to be well recognised and trusted by landowners and investors alike as a credible certification system. In case of the necessary expansion of paludiculture, wide range of paludiculture crops should be listed as eligible for direct payments under national CAP Strategic Plans and Pillar II instruments should be taken into account within National CAP Strategic Plans to make paludiculture implementation possible.

### **Efforts are urgently needed to standardise methods and approaches for monitoring the impacts of peatland restoration, aimed at both biodiversity enhancement and climate change mitigation.**

Minimum standards for monitoring should be agreed as soon as possible, especially for GHG monitoring, so that all stakeholders can have confidence in the results to measure progress against targets and monetise peatland outcomes. As the restoration of degraded peatlands and organic soils has become the main topic of the LIFE Climate sub-programme, there is an urgent need for streamlined and standardised methodologies at European level for GHG measurements. Reliable standards are necessary for the private sector (e.g., for the calculation of carbon credits), but also a key issue for KPIs in order to monitor medium and long-term project effects fairly and evenly across all projects implemented.

A more detailed synopsis of the key points underpinning these main messages, as discussed and weighted (by voting) during the closing session of the Platform, is shared in the next pages.

## Work Group 1: Restoration of peatland habitats

*'We know the surface of the moon better than we know the world's peatlands'* (R. Lindsay)

- **STOP: Stop incentivising unsustainable use of peatlands (13<sup>5</sup>)**  
Significant concerns raised that current incentives (mainly in the agriculture sector) are still leading to degradation of peatlands directly through drainage and indirectly through increased levels of nutrients and pollution loads. Harmonisation of the CAP and its implementation with policies for Biodiversity, Climate, and Land Use for the benefit of peatlands is needed.
- **SCALE:** Adopt a landscape approach ensuring whole ecosystem recovery to deliver multiple service benefits (10)  
Speed up investment in developing the tools that are needed to quantify the benefits. Adopt existing tools like the IUCN Peatland Code, ecosystem services assessment, natural capital assessment and agree how best to approach assessing multiple benefits (including cultural services). The restoration of peatlands is essential to reaching EU's goal of climate neutrality by 2050. Urgently by 2030, 30% of EU peatlands should be rewetted.
- **INCENTIVISE:** increase motivation of landowners to take part in restoration (10)  
Create positive incentives for alternative land use activities that benefit (rather than destroy) peatlands such as paludiculture (wet agriculture, growing Typha or Sphagnum) for energy, food, fodder, medicinal use and raw material provision. Example in the UK of a £5 million fund to promote sustainable farming on peatlands (Paludiculture Exploration Fund – seeks to unlock barriers to making commercial paludiculture a reality. See also WG2.
- **SUPPORT:** encourage more innovation and finance alternative to peat-based products (7)  
Opportunities still exist to sell peat-based products especially in relation to gardening products. There is currently no EU wide policy prohibiting the sale of peat-based products. Some countries have introduced their own restrictions (Dutch – covenant to reduce peat use; UK total ban on horticulture sales by 2024) but there are continued concerns that national production could be replaced by international imports. The meeting called for a EU-wide legislation restricting the sale of peat-based products in the horticulture sector.
- **CAPACITY:** important to invest in people and peatland skills e.g. Peatland Diploma (4)  
There was general recognition that there is a skills gap in most countries. Peatland restoration work requires specialist skills and there are insufficient people (and equipment) to carry out current restoration activities and certainly not enough capacity to upscale. Facilitate improved networking, knowledge sharing and experiences. Invest in building skills base – make peatlands and attractive business to be involved in.
- **FUNDING:** restoration and management (4)  
Long term management and monitoring has to be funded as well as the restoration works. Public finances are insufficient (in most countries) to meet the restoration requirements for

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<sup>5</sup> The policy statements / recommendations are ordered top down according their significance / relevance, based on the voting of the audience, with the most relevant statement on the top. **The number in brackets show the number of votes given for the respective statement by the audience / participants.**

either climate or biodiversity targets for peatlands. Provide enabling environment for private sector involvement and embrace tools like the IUCN Peatland Code.

Footnote: In a 10 year period the LIFE programme has invested €400 million in Peatland projects which equates to 20 km of highway development in Germany – a case for prioritising peatland restoration and moving it up the national political agendas.

- **FASTER:** Peatland restoration should be a priority - accelerate restoration activities (3)  
Need to act now! Rewet the peatlands as a top priority followed by other restoration actions to meet biodiversity, climate, cultural and economic needs. The more we delay it the more we lose, not just in terms of the benefits to the environment but in monetary terms to society as a whole. A recent study<sup>6</sup> focusing on Scotland calculated that restoration would provide £191 million of benefits annually if it took place now rather than between 2039 and 2050.
- **CLARITY:** on peatland specific restoration and GHG reduction targets (3)  
Notwithstanding the outcome of the EU Restoration Law<sup>7</sup> the urgent need to quantify restoration and GHG emission reduction targets (for peatlands) at the EU and national level, and crucially agreeing a timetable for action to meet the 2030 and 2050 deadlines. Ultimately leading to net zero CO2 emissions from peatlands by 2050.

## Work Group 2: Peatlands, land use and carbon sequestration

*'Paludiculture is Paludifuture'* Greifswald Mire Centre

- **UPSCALING: from trials to marketable products (16)**  
Food production might be limited, but high-quality biomass for fibres, construction materials, substrates in horticulture etc can be produced in a potential carbon-negative way. There are many pilots, examples, small scale demonstrations and people with experience – changing scale is the next step. Cannot continue to work at the project level for transformative action and upscaling. Need of a long-term funding framework for upscaling. Barrier is that the market is not yet there – need to create a whole new business to attract private investors and innovators for go from trials for commercial scale – policy makers need to create the enabling environment.
- **STRATEGY:** fading out the use of unsustainable peatland products (9)  
Create the demand side (for alternative sustainable products) and let this lead the strategy. This would give visibility to the sector, farmers/producers and industry, allowing planning and attracting investment. Strategy elements:
  - Peat-based products should not be (economically) attractive and should be phased out and eventually forbidden (set a timetable for change).
  - Mobilise consumer opinion to change consumer behaviour and stop them from buying destructive products. Raise awareness on peat based products and peat friendly products.
  - Stop commercial peat extraction at a global level – requires international effort and agreements.

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<sup>6</sup> <https://environment.leeds.ac.uk/research/news/article/5438/act-now-for-economic-benefits-from-peatland-restoration>

<sup>7</sup> Potentially 20% of peatlands restored by 2030 and all ecosystems by 2050

- **STABILITY:** support schemes need to be long term (9)  
Financial support is arguably more important in this sector than others because it is more difficult to work on wet soils. Improve cooperation frameworks and advisory services which are non-existent at the present time.
- **SIMPLICITY:** access to financing (6)  
Imperative that any system to access funding is not so complicated that it stops people from accessing it. Farmer's income cannot be made of carbon credits + blue credits + CAP support + selling products. It is too complex and insecure to trust and induce change.
- **FACILITATE:** changes of land use to allow paludiculture (6)  
Shifting from drainage-based agriculture to paludiculture is one of the biggest carbon farming game changers of the decade. In particular from woodland to farmland. More than anything farmers need stability and visibility in the market and regulatory conditions.
- **DEFINE:** a good paludiculture standard (4)
- **RESOLVE:** make paludiculture a priority under the CAP (4)  
Paludiculture is partly included in the CAP but it is not sufficiently strong to make the necessary difference. Better definition and description in the CAP Strategic plans (CSP), including strengthening the support schemes. Some limited support to the sector, in some cases support is inadequate or absent.
- **CLARITY:** better definition of paludiculture at the EU level (2)  
Need clarity and agreement regarding the eligibility of wetland farming under the CAP (make definition available to wider stakeholders farming associations, controlling agencies and advisory services). Need to bring about a change in mind set concerning what a productive farmland can look like and what it can produce – what crops are acceptable? Better recognition of the role that peat plays in flood protection, conserving water levels and water quality. Suggest this is a work assignment for an EU level experts' group to develop best agricultural practices for peat and organic soils and a list of (acceptable) potential crops.

### Work group 3: Peatland restoration and climate change mitigation

*'Dissemination process for academic intelligence tends to remain with the academic community rather than focussing on dissemination to the end users'* (R. Lindsay)

- **STANDARDISE: approach to monitoring GHG emissions (21)**  
Currently there are no standards or min requirements. There are various monitoring schemes depending on projects. Further there is no clear method to differentiate source vs sink. Need for a streamlined approach to direct GHG measurements (should be embedded in LIFE proposals) and validated by the scientific community. Reliable standards are a key issue for KPIs, private sector/carbon credits. Urgent need to standardize methods at a European level – possibly through the Expert Working Group.

- **CONTEXT:** apply the right method, at the right time and in the right place (9)  
Monitoring methods must be tailored to every site. Existing methods of GHG measurements provide a solid base but need a reliable scientific foundation. Definition of data collection protocols establishing minimum standards in terms of geographical scope/density and timescale, considering the sites' history, land cover and the sites' inherent characteristic. Ensure minimum requirements take context into account.
- **DEVELOP:** cheap and reliable proxy methods on GHG calculations (8)  
Need for adequate monitoring protocols & indicators to observe ecosystem restoration based on future projections. Proxies such as Topographic Wetness Index (TWI) or Greenhouse Gas Emission Site (GEST) might be the answer. These cannot be applied to just any context especially those without reference values (e.g. forest habitats). Define determining factors ruling the switch from carbon storage to methane emission. Arguably, because the emission factors are still not so solid, constant rise of water level and recovery of bog vegetation could be a better indicator, than expected GHG-Emission savings.
- **REVISIT (DATA):** collate long term data sets from previously restored sites and closed projects (7)  
Time is of the essence. To compensate for the time lost over the last decades, relying on existing generic datasets could form (at least part) of the solution (basic soil/water parameters collected in the framework of previous projects/activities can feed GHG evolution models, in particular water levels, t° and vegetation). Other factors such as climate change, evolution of soil cover and/or management methods (e.g. Sphagnum planting) also affect the establishment of a common baseline. Revisiting previously long-time restored/monitored sites (e.g. revisiting LIFE projects closed longer time ago and having good data from the time of their implementation time ) is very recommended, to assess the real long-term restoration effects versus the results and effects initially planned.
- **SHARING (DATA):** open data sourcing and accessibility to the end user (6)  
No data repository (as opposed to results) is available for future analysis by third parties, to further research and contribute to establishing a state-of-the-art, open access repository. All data must be collected based on standard protocols, then shared among the community. Call to create a LIFE data repository to collect the data (not the results) from all projects, so substantiate the reliability of the proxies.
- **CREDIBILITY:** turning CO2 equivalents into carbon credits (3)  
Solid scientific evidence must support future regulations, to turn CO2 equivalents into carbon credits value. Seek ways to apply different measurements methods (e.g. GEST and TWI) to transition states (e.g. after restoration), to meet funders' requirements for assurance of short-term results.
- **MONEY:** creative collaborations to circumvent financial constraints (1)  
Budget is an issue with direct measurements (chambers, flux towers) but such measurements are still required to confirm the accuracy and robustness of possible proxies. Future funding opportunities that would ensure long-term monitoring should be identified well ahead, to secure long-term commitment of stakeholders (private donors, governments, but also national organisations with a duty to collect data). Validation of success is key to future funding for

rehabilitation (e.g. after-life commercial carbon market plan). Make future financing available for monitoring at the national scale.

- **DEFINE:** data collection protocols (0)  
Criteria for peatland identification: peat depth/soil carbon store? Dependency on pre-existing conditions. Need for a data collection plan & better coordination/dissemination. Methodology for the chambers is basically set up. But guidelines are disputed among the scientific community. Challenge the expert working group to define the data collection protocols.

#### Work group 4: part 1 - EU and national policies

*'What is needed is strong political will and coordinated action by the private sector, aided by regulators and governments to bring solutions to scale and ultimately impact economies and the ecosystems they rely on.'* (K. Kemper – Global Director, Environment, National Resources and Blue Economy at the World Bank)

- **CONFLICT: address perverse incentives (linked to carbon credits) (16)**  
The best thing that can be done is to lock in and protect what peat remains but landowners are reluctant to take part in peatland restoration because there is a lack of clarity around carbon credits. Conflicts between the policies that hinder the restoration of peatlands e.g. CAP, need to be better understood so that it doesn't lead to perverse incentives e.g. where carbon credits could lead to further degradation of peatlands. Poor peatland condition = more C credits, thus potentially incentivizing landowners to trash their land so that they could get higher payments to restore peatlands. Urgently need common frameworks for restoration and quantification of carbon reduction to avoid 'a race to the bottom.'
- **ALIGN:** align national, EU and international policies linked to peatland restoration (11)  
Focus on (LIFE project) policy portal and key questions: accessibility, relationship to other portals (GPI's peatland tab in decade of restoration), critical to identify contradictions between policies in peatlands e.g. CAP and WFD BUT these do not need to be a barrier and there are excellent examples of overcoming such conflicts and aligning policies (e.g. Irish RBAPS). The European Peatland Initiative (EPI) can connect national governments that are willing and ready to define ambitious restoration targets – open dialogue between EU and UN to define realistic but ambitious targets.
- **STACKING:** review ecosystem benefits aligned to payments and resolve stacking issues (6)  
Can a landholding deliver more than one element of a variety of ecosystem services? Stacking and bundling environmental units could significantly improve uptake of restoration measures by landowners and bring greater multiple benefits. Provided that landowners can demonstrate multiple services (on the same piece of land) have been delivered there is no reason why, for example, biodiversity net gain units cannot be paid for alongside carbon credits. Clarification on the policy surrounding stacked benefits, governance, verification, and audit systems is urgently required.
- **ACCESSIBILITY:** make information available to all stakeholders (5)



Need to increase the transparency about what restoration actions work. All stakeholders need a seat at the table, including practitioners, farmers/land managers, landowners and private sector investors. Currently, some stakeholders, most notably private investors, are rarely represented in the process.

- **INCENTIVISING:** focus on quality outcomes leads to behaviour change (3)  
It is not sufficient just to remove the negative incentives it is equally important to incentivise landowners in a positive way. Farmers and land managers need to be rewarded for delivering high quality ecosystem benefits (biodiversity, climate, water quality, communities) – the more they deliver the more they should be rewarded. Positive reinforcement of good practice leads to positive behaviour changes and attitudes.
- **STREAMLINING:** more effective funding (3)  
Need to streamline and improve the ability for national authorities to pay for ecosystem services and climate benefits. Payments should target the people and communities where actions can deliver the most benefits for society. Landowners can suffer cash flow problems when payments are delayed, especially from public sources. Prolonged delays disincentivise landowners from taking part in actions that protect and restore peatlands. The meeting called for stronger policies that protect and avoid further harming our peatland resource and better channel existing public funding more effectively.
- **HOLISTIC:** ecosystem approach (3)  
Needs to be a whole farm, whole catchment, ecosystem, landscape scale approach which includes the communities which live within and depend upon the land. Everything is connected, and policies need to address impacts within a landscape.

#### Work group 4: part 2 - Financing Peatland Restoration

*'After languishing for many decades in the shadows, peatlands have begun attracting substantial sums of research and site-management funding, largely, it has to be recognised, because of their huge stores of carbon'* (R. Lindsay)

- **CREDIBILITY & CREATING SAFETY: certification system e.g. Peatland Code (26)**  
The IUCN Peatland Code is not perfect, but it is recognised and trusted by landowners and investors alike as a credible certification system. Carbon credit is like a bottle of wine, you can buy one for €3 in the supermarket or a Chateau Lafite for €300. We need a national (or global) standard that is similarly widely recognised and credible (Chateau Lafite) to avoid poor practice and greenwashing (supermarket bargain). Invest effort to agree a credible certification system within the next 2-3 years.
- **MONEY:** public finding alone is not enough (3)  
Public finding alone will not allow the ambitious nature and climate targets to be met. Landowners and Corporates (and not governments) are the most important players to speed up peatland restoration work (and meet the Biodiversity Strategy and Climate targets for 2030 and 2050).

Private or blended finance is vital to upscale and accelerate peatland restoration. Develop policies to incentivise and regulate private investors.

- **OPPORTUNITIES:** private sector drivers can contribute to policy targets (3)  
The private sector presents a clear, untapped opportunity for peatland restoration. Corporates want to buy peatland code accredited carbon credits to contribute to their Environmental Social Governance targets (net zero, biodiversity etc) and have positive reputational impact. Landowners want to receive funding for peatland restoration, sell carbon credits and/or achieve their own net zero targets. In addition, in the UK, corporates must publish their own net zero plans by 2023 and carbon credits will be a valuable tool for them to meet their obligations. There needs to be a better understanding of how private sector drivers can contribute to policy targets.
- **UNCERTAINTIES:** all about the risks (1)  
There are uncertainties about the risks (investor vs. landowner), lack of regulatory framework, volatility of the market price for carbon, impact on land value and length of timeframes of commitments and what happens to carbon credits after 2050. These uncertainties have led to the bottlenecks in implementing the Peatland Code more widely. Establish sound regulatory framework within the next 2-3 years.
- **CULTURAL:** overcome diverse stakeholder differences (0)  
Not to be underestimated are the cultural differences between conservationists, corporates and landowners. These cultural differences need to be overcome to make the most of private financing opportunities for peatland restoration. The peatland community needs to be prepared for private financing. Define the rules for private investment and ensure that they are conservation led and not finance led – ‘private sector on tap not on top’