

**United Nations Environment Assembly Resolution 4/16**  
**“Conservation and sustainable management of peatlands”**  
Summary Report to 30 June 2025



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## Executive Summary

This report has been produced as a UNEP internal requirement to accompany the closure of the [official reporting by UNEP](#) on UNEA 4/16 Resolution on “[Conservation and sustainable management of peatlands](#)” since the request to UNEP’s Executive Director was delivered (see Paragraph 2). Nevertheless, work carries on supporting countries, partners and stakeholders to continue to implement the Resolution 4/16 on Peatlands from July 2025, but reporting will be through the delivery of UNEP’s Programmes of Work and through its role as lead of the [Global Peatlands Initiative](#).

In 2016, UNEP and partners established the [Global Peatlands Initiative](#), an effort by leading experts and institutions to save peatlands as the world’s largest terrestrial organic carbon stock and to prevent it being emitted into the atmosphere. In 2017, UNEP published a Rapid Response Assessment - [Smoke on Water: Countering Global Threats from Peatland Loss and Degradation](#) pointing to the urgent need for the world to take note and action, highlighting that healthy peatland ecosystems are a global strategic asset for climate and biodiversity. Also notably, in 2017, UNEP’s work on emerging issues and global topics of concern for progress toward tackling the triple planetary crisis included surveying our network of scientists and institutions and identifying 5 emerging issues, including [Permafrost Peatlands](#) ([Frontiers 2018/2019: Emerging Issues of Environmental Concern](#)).

Covering an estimated 500 million hectares worldwide, peatlands hold roughly one-third of the world’s soil carbon and support globally important ecosystems. Healthy peatlands including bogs and forested swamps also safeguard freshwater supplies, buffer floods, and underpin the livelihoods of millions of people. Yet peatland degradation – through drainage for agriculture and forestry, peat mining, fires and other pressures – has already dried or damaged about 12% of these areas, releasing vast stores of carbon. This relatively small fraction of degraded peatlands is estimated to contribute approximately 4% of all human-induced greenhouse-gas emissions annually, exacerbating climate change and raising the risk of uncontrolled wildfires, floods and droughts.

In March 2019, recognizing peatlands’ significant importance, all UN Member States and the 9 Major Groups and Stakeholders adopted Resolution 4/16 “[Conservation and sustainable management of peatlands](#)” during the 4<sup>th</sup> UN Environment Assembly. The Resolution calls on UNEP and on all governments and stakeholders to give greater emphasis to the conservation, sustainable management and restoration of peatlands worldwide. Amongst other calls to action, the resolution encourages all to enhance regional and international collaboration to protect, restore and sustainably manage these carbon-rich wetlands as a cornerstone of global climate and biodiversity efforts, including a global peatland inventory, knowledge-sharing networks, and partnerships such as the [Global Peatlands Initiative and the International Tropical Peatlands Centre](#).

## Key Achievements and International Cooperation

Responding to the requests from Member States, UNEP has made significant progress since 2019 in understanding and elevating peatlands on the global agenda through the Global Peatlands Initiative. For example, under UNEP's leadership, and as requested in the resolution, the Executive Director of UNEP oversaw the [Global Peatlands Assessment \(GPA\)](#), establishing the first comprehensive and accurate inventory of global peatlands – an important baseline on peatland extent, status and value – developed in consultation with the Ramsar Convention Secretariat amongst other Global Peatlands Initiative partners. This flagship assessment mapped peat resources worldwide and quantified their losses and emissions – about 2 gigatons CO<sub>2</sub>-equivalent per year from peatland degradation, representing 4% of global anthropogenic emissions. It highlighted the immense climate gains from protecting and rewetting peat soils, and provided a policy roadmap (on inventory, protection, subsidy reform, finance and reporting) to guide countries. Crucially, the GPA and its [Summary for Policymakers](#) have equipped decision-makers with better data and tools: for example, an [online interactive Global Peatland Map](#) and the [Global Peatland Hotspot Atlas](#) now identify priority peatland areas under threat, in an accessible format for planners and the public.

The GPA's findings have directly informed policy worldwide – from Peru adding peatland targets to its climate pledge ([NDC](#)), to the European Union adopting a new law with specific peatland restoration targets ([Nature Restoration Law](#)), and Germany committing close to 2 billion Euros to rewet their degraded peatlands as part of their [National Peatland Protection Strategy](#), within their [Federal Action Plan for Biodiversity and Climate](#) and its effort to reach net zero by 2050. These outcomes have been explicitly credited to the heightened visibility and knowledge generated by the GPI partnership and the GPA.

In a survey of countries circulated through UNEP's Committee of Permanent Representatives, several reported using the GPA to shape national decisions, showing the report's immediate value in policymaking. The GPA's impact has been further amplified through its wide visibility at high-level climate and biodiversity forums, including UNFCCC COP27, 28, 29, CBD COP16, and the Global Landscapes Fora, where it helped elevate global awareness of peatlands as critical carbon sinks and emphasized their role in national climate and biodiversity conservation strategies.

To ensure broad dissemination and relevance, the GPA was showcased across all its chapters, global and regional, through a series of targeted events. These included international and regional launches and dialogues in Oceania, Africa, Asia, Europe, and South America, organized with the active support of GPA Coordinating Lead Authors and other [Global Peatlands Initiative](#) (GPI) partners. This strategic outreach ensured that the GPA's key findings reached diverse stakeholders, helping to translate global knowledge into local action and catalyze peatland conservation and restoration efforts worldwide.

In addition, international cooperation on peatlands has accelerated, creating new alliances, knowledge networks, and commitments. Since 2019, UNEP and the Global Peatlands Initiative (GPI) – a multi-partner coalition – have convened numerous events and fostered partnerships to share best practices, advance science, inform policies, practices and programmes, amongst other actions. Notably, at UNFCCC COP26 (2021) a dedicated Global Peatlands Pavilion put peatlands in the spotlight as a nature-based climate solution. The pavilion engaged over 2,700 participants from more than 100 countries, exploring key topics such as the role of peatlands in Nationally Determined Contributions (NDCs), mobilising finance, enhancing adaptation and resilience, and advancing peatland science and policy. It also served as a catalyst for new bilateral and regional cooperation. For example, it facilitated a Scotland–Chile partnership to exchange expertise and drive joint peatland restoration efforts. It also spurred tangible policy pledges: Uganda announced peatland restoration in its national climate plan, and Baltic States began developing peatland protection measures – including exploring carbon credit schemes for rewetting peat soils – in direct response to the pavilion dialogues.

The COP26 peatland pavilion saw the launch of the [Global Peatland Map 2.0](#) as a sneak peak for the 2022 published Global Peatlands Assessment; re-enforced commitments to include peatlands in NDCs in the Nile Basin; enabled dialogue on the development of a new European Peatlands Initiative; and hosted the launch of landmark reports by UNEP on the [Economics of Conservation, Restoration and Sustainable Management of Peatlands](#), by the Convention on Wetlands on Peatland Restoration Practice, and by IUCN UK Peatland Programme on peat-free horticulture. The Global Peatlands Pavilion Summary Report can be found [here](#). The momentum continues beyond the COP26 conference through a [Virtual Peatland Pavilion](#) platform, which allows ongoing exchange of the latest science, success stories and training resources, thereby building global capacity and political will to save peatlands. The Virtual Peatland Pavilion is a living legacy that continues to evolve, regularly updated with new content from GPI partners. It is showcased globally through its ongoing World Tour. You can explore the constantly updated Virtual Peatland Pavilion World Tour [here](#).

Regional initiatives have likewise emerged: in Europe, a new [European Peatlands Initiative](#) (led by Ireland with EU support) now unites governments and stakeholders to scale up peatland conservation across the continent. This complements the EU's landmark Nature Restoration Law (2023) – the first EU-wide mandate for ecosystem restoration – which sets binding targets for member states to rewet and restore drained peatlands by 2030 and beyond. In South America, Chile and Argentina launched the [Patagonia Peatlands Initiative](#), a transboundary effort formalized by the 2022 [Venice Agreement on Peatlands](#), to jointly protect peatland ecosystems in Patagonia while sharing expertise south–south and linking to global goals. Across tropical Africa and Asia, countries are reinforcing cooperation through frameworks like the [Brazzaville Declaration](#) in the Congo Basin, which guides peatland conservation in Central Africa, and new multi-country projects to safeguard high-altitude peat bogs in the Andes. These GPI-linked collaborations illustrate a growing recognition that international partnership is key: peatlands' benefits and threats cross borders, so governments are working together to align policies and pool resources.

Additionally, other national-level efforts have emerged to strengthen peatland conservation: the Canadian Peatland Initiative ([Can-Peat](#)), which aims to unite peatland experts and stakeholders across Canada to advance national coordination. Its core objectives include reducing uncertainty around greenhouse gas (GHG) emission reductions from peatland management actions, strengthening the scientific basis for peatland-related climate mitigation, and evaluating effective policy instruments to support implementation at multiple levels of governance. And in Asia, the [Mongolian Peatland Initiative](#) has been launched to focus on building the capacity of local communities and government authorities to enhance the ecosystem services provided by peatlands. A particular emphasis is placed on reducing GHG emissions from degraded peatlands, improving sustainable land-use practices, and integrating peatland management into broader environmental and climate strategies in Mongolia.

Global knowledge exchange and capacity-building have been pivotal in driving peatland action. Through the GPI including partners such as [FAO](#), multilingual training programs and workshops have reached practitioners and officials around the world, building skills in peatland mapping, monitoring, fire prevention and restoration techniques. Dozens of trainings – conducted in English, French, Spanish and other languages – have transferred practical know-how (e.g. using remote sensing or engaging local communities) to those managing peatlands on the ground. A full list of trainings conducted by FAO and UNEP is available in the [terminal report of the GPI project](#). To strengthen the science-policy interface, a [GPI Research Working Group](#) was established in 2019, co-led by SRUC and UNEP, connecting experts globally to identify research priorities and share data. This network has coordinated an integrated peatland research program aligned with UN goals and hosted [free online training sessions for early-career researchers in 2020–2021](#), covering topics from field methods to policy engagement. Participants from dozens of countries benefitted, and many have since applied the lessons in their home institutions. The working group also convened a groundbreaking consensus process to standardize peatland monitoring globally, defining core indicators for climate, hydrology, biodiversity and fire, so that data from different regions can be compared and combined to inform policy more effectively. This step toward globally consistent peatland data will help governments track progress and refine strategies using evidence-based insights.

Innovative finance and market-based solutions are emerging to support peatland conservation. The international community has increasingly focused on mobilizing resources, public and private, to fund peatland restoration at scale. On 2021, the GPI launched the report on [“Economics of Peatlands Conservation, Restoration and Sustainable Management”](#), identifying undervaluation and underinvestment as the primary drivers of peatland mismanagement. The report calls for urgent investment backed by strong policies and innovative financing mechanisms to safeguard these critical ecosystems. The GPA further developed this and highlighted the need for blended-finance approaches that combine public funding with private payments for ecosystem services (such as carbon sequestration and biodiversity). By leveraging carbon markets and other green investment, these models aim to reduce investment risk and incentivize conservation while ensuring local community's benefit. In 2024, UNEP and GPI partners supported the release of a dedicated report [“Investing in Peatlands”](#) to guide investors and governments in financing peatland projects, profiling successful case studies and financial instruments. As a result, new financing

mechanisms are taking shape. Peatlands are now featured in global climate-finance discussions – for example, a special report on peatlands was launched at COP 27 – and countries like Canada have announced new funding streams for peatland restoration as part of their national climate strategies. Domestic voluntary carbon markets in particular are proving to be a viable tool in a growing number of countries.

## Country-Level Impacts and Policy Responses

National governments across all regions have stepped up with policies and actions to conserve and sustainably manage peatlands, indicating broad uptake of Resolution 4/16's objectives. In total, at least 45 countries have introduced peatland-focused policies, strategies or regulations since 2019 in line with the UNEA resolution. Many countries reported new initiatives through a UNEP survey, and additional policy reforms were identified via the Global Peatlands Assessment, underscoring a global trend toward stronger peatland governance. While approaches differ by nation, the common theme is a move to integrate peatland conservation into climate, land-use and development planning. For example:

**New legislation and regulations:** Some countries have created legal frameworks specifically for peatland protection. [Belarus adopted a dedicated \*Law on Protection and Use of Peatlands\* \(2019\)](#) to conserve mires, limit new peat extraction to already drained sites, and require rehabilitation of degraded peat areas. China included explicit peatland provisions in its 2022 [Wetland Protection Law](#) – banning unauthorized drainage, mining or groundwater extraction in nationally important peatlands – and mandated local governments to map and safeguard these wetland areas. Indonesia, in response to devastating peat fires, established a [Peatland Restoration Agency](#) in 2016 and expanded its mandate to over 3.6 million hectares; the government tightened regulations (e.g. banning development on deep peat domes and requiring a minimum 30% natural vegetation cover in peat landscapes) to prevent a recurrence of peat fires and haze. In the European Union, member states such as Germany, UK and Ireland have moved to phase out peat as a fuel and growing medium, and are strengthening permitting rules to halt peatland drainage. Many more countries took policy actions to conserve and sustainably manage peatlands, the highlights mentioned above are a sample. These regulatory steps signal that peatlands are increasingly seen as a public good requiring legal protection and active management.

**Integration into climate and conservation strategies:** Countries are weaving peatlands into their national climate commitments and biodiversity plans. Chile, for instance, made peatland conservation a part of its updated Nationally Determined Contribution (NDC) under the Paris Agreement – committing to protect and restore peatlands as a climate-mitigation measure. This inclusion (a direct result of UNEP's direct support to Peru and sustained global advocacy highlighting peatlands' massive carbon storage) set a precedent in Latin America. Canada has similarly recognized peatlands in its climate strategy: Canada's latest NDC and net-zero plan emphasize nature-based solutions and identify peatland preservation as key to carbon sequestration, backing this with domestic funding for peatland restoration. Belize now explicitly includes wetland and mangrove peat ecosystems in its climate pledges and has strengthened

wetland protections as a result. Many other nations have developed or updated national peatland strategies or wetland action plans, with Gabon and Republic of Congo (home to part of the vast Cuvette Centrale peatlands) as an example, who are formulating national peatland management plans with international support. Also, as an important action to support policy and planning, Uruguay has committed to map all its peatlands by 2025 and place at least 50% under protection (100% with additional support) as part of its restoration targets. Though peatland specific action is growing, some of these efforts are often aligned with broader programs like the Bonn Challenge or land-degradation-neutrality targets and forest restoration commitments, increasingly linking peatlands to multiple global goals and Multilateral Environmental Agreements.

**Market-based and incentive mechanisms:** Alongside regulations, governments are employing economic instruments to encourage peatland-wise practices. Several European countries have introduced agri-environment subsidies or carbon-payment schemes for farmers to keep peatland soils wet (reducing carbon loss) and some are piloting paludiculture (the cultivation of wetland crops on rewetted peatlands). In the United Kingdom, the [Peatland Code's](#) success is complemented by public grants, so landowners have both regulatory and financial reasons to restore peatlands. Costa Rica has extended its national Payment for Ecosystem Services program to peatlands, paying landholders to conserve and rehabilitate forested peatlands (often referred to as swamp forests). In Southeast Asia, countries are exploring carbon finance: for example, Malaysia and Indonesia are developing carbon-credit projects that monetize the emissions avoided by protecting (forested) peatlands, and Philippines is assessing how to include peatlands in its carbon-offset frameworks. UNEP has been working to help unlock finance for peatlands including publishing the [Economics of Peatlands Conservation, Restoration and Sustainable Management](#) report, and with GPI partners the [Investing in Peatlands](#) paper. With growing resources and best practices, market-based solutions are still emerging, but they offer a promising avenue to channel private investment into peatland conservation, especially where public budgets are limited. At the same time, several nations are reforming subsidies that have historically driven peatland drainage (such as agricultural incentives for peatland conversion), recognizing that redirecting or removing these nature and climate negative incentives is crucial to sustainable peatland management.

These country-level impacts demonstrate a growing momentum: from the tropics to the Arctic, countries are beginning to treat peatlands as strategic natural assets. By establishing new laws, revising land-use policies, investing in restoration, and leveraging climate finance, governments are not only fulfilling the UNEA resolution but also enhancing their own climate resilience and sustainable development. Peatland-rich nations are reporting multiple co-benefits from these protection, conservation and sustainable management actions – from reduced wildfire risks and better water regulation to new green jobs – making a strong case for further investment, new peatland market and job creation, and policy support. However, the report also notes that progress is uneven. Some countries still lack explicit peatland policies, and implementation and enforcement remain challenges in many places. To secure the vast carbon and ecosystem services that peatlands offer, the report calls for scaling

up efforts and adopting a more coordinated, ambitious policy and institutional framework moving forward.

## **Strategic Recommendations**

To consolidate gains and address remaining gaps, this summary report (drawing on the Global Peatlands Assessment's recommendations) outlines a strategic agenda for policymakers and stakeholders to take forward in continuing to implement the UNEA 4/16 Resolution on Peatlands. Key recommended actions include:

1. Align sectoral policies and statutory instruments so that agriculture, water, forestry, energy, climate and spatial planning no longer contain contradictory provisions; embed quantified peatland restoration and protection targets in national legislation, implementation and reporting under the Paris Agreement, the Kunming-Montreal Global Biodiversity Framework (GBF), the Convention to Combat Desertification (UNCCD), the Convention on Wetlands, Convention on Migratory Species (CMS) and the EU Nature Restoration Law.
2. Prepare, regularly update and fund national peatland strategies or plans—supported by cross-agency coordination platforms—and ensure they guide sub-national authorities that share peatland hydrological units. These strategies should promote integrated, landscape-level, multi-stakeholder governance models supported by strengthened institutions that align with ecological boundaries and social contexts.
3. Strengthen legal controls: phase out harmful operations that degrade peatlands by prohibiting new drainage, burning, mining and peat extraction; require licences that impose rewetting or restoration obligations for existing operations; apply sanctions for non-compliance; and introduce pollution or carbon taxes where incentives alone have failed.
4. Designate intact and prioritize the restoration of high-priority degraded peatlands (plus buffer zones) as protected areas; map peatland hydrological units to capture entire water systems and avoid leakage of impacts.
5. Clarify the legal definition of peatlands within national legislation, ensuring that definitions are tailored to each country's local and regional geographic and physical characteristics of peatlands and organic soils. This enables more consistent and effective harmonization of peatland policy across sectors.
6. Empower Indigenous Peoples and their communities, local communities and gender-diverse groups through gender-responsive governance models, co-management agreements, early rights-holder mapping, removal of participation barriers, co-design of benefits, and independent reviews that enable adaptive practice. Enhance recognition and support for Community Conserved Areas (CCAs), Other Effective area-based Conservation Measures (OECMs), and other Indigenous-led and community-led management and governance frameworks.

7. Increase public budgets for conservation and large-scale restoration (e.g. multi-year programmes modelled on Indonesia's (former) BRG, Germany's National Peatland Protection Strategy or Scotland's Peatland Action); complement these with blended-finance structures that combine grants, concessional loans and guarantees to de-risk private capital.
8. Develop high-integrity carbon, biodiversity and water-quality crediting systems with national certification that ensures additionality, permanence and social safeguards; reform or remove subsidies that promote drainage; channel a share of revenues to local people through clear benefit-sharing contracts.
9. Promote sustainable economically viable wet uses—paludiculture, grazing, sphagnum farming and nature-based tourism—by redirecting agricultural support, providing technical advice and securing offtake agreements.
10. Maintain national, open data systems on peatland extent, condition, use and hydrology to underpin policy, monitoring and enforcement; update the Global Peatland Assessment and ensure alignment with platforms such as the Global Wetland Watch; close critical knowledge gaps through coordinated research that evaluates policy instruments across regions and scales; promote international and interdisciplinary policy research to strengthen evidence-based decision-making globally.
11. Establish robust monitoring, reporting and verification frameworks that track peatland protection, restoration and sustainable management outcomes, inform adaptive management and meet international transparency requirements.
12. Use blended international finance and technology transfer to accelerate action in low-income regions; support participation in global and regional peatland initiatives, knowledge networks and South-South cooperation.

By pursuing these recommendations, policymakers can secure the long-term future of peatlands and the vital services they provide, from carbon storage to water regulation and biodiversity conservation. The achievements since 2019 show what is possible: peatlands are now firmly on the global agenda, and numerous successful models exist for protecting, restoring, and sustainably managing them. Scaling up these efforts with stronger governance, stronger institutions and finance will allow peatland ecosystems to fully play their role in helping member states meet their global climate and sustainable-development goals. In short, investing in peatland conservation is a high-return strategy – one that safeguards a critical nature-based solution and delivers benefits for people and the planet.

# 1 Introduction

The United Nations Environment Assembly (UNEA) Resolution 4/16 on the “conservation and sustainable management of peatlands” was adopted at the fourth session of the UN Environment Assembly, which took place in Nairobi from 11-15 March 2019. The resolution recognises the critical importance of protecting and restoring peatlands to achieve global climate and biodiversity goals, as one of the world’s largest terrestrial carbon stores, accounting for around a third of the world’s soil carbon and providing habitats for internationally important flora and fauna (UNEP, 2022). Present in more than 180 countries across the world, healthy peatlands also provide other vital services to society, including fresh water supplies and flood risk mitigation, and support the livelihoods of millions of people.

Peatland ecosystems around the world are being degraded, as they are drained for agriculture, forestry and infrastructure, overgrazed and eroded, mined for fuel and compost, polluted and burned. Although only around 12% have so far been degraded, these activities are releasing significant amounts of stored carbon to the atmosphere, where it contributes towards climate change. UNEP (2022) estimated that degraded peatlands currently account for around 4% of all anthropogenic emissions on an annual basis, with wildfires leading to significant additional emission spikes. Degraded peatlands are also associated with biodiversity loss and widespread environmental degradation.

As climate change increases temperatures and reduces rainfall in many parts of the world, there are concerns that peatland wildfires could become more common, leading to a positive feedback loop. In this context, advancing sustainable peatland conservation and management is not only critical to reducing emissions and preserving biodiversity, but also to improving resilience, strengthening local livelihoods, and achieving the objectives of key multilateral environmental agreements. These include the UNFCCC and Paris Agreement, the Convention on Wetlands, the Convention on Biological Diversity, the Convention to Combat Desertification, the 2030 Agenda for Sustainable Development, and specific peatland-related initiatives, such as the Brazzaville Declaration, among many others.

UNEA Resolution 4/16 also emphasizes the need for countries to improve peatland management through sound, science-based information, equitable participation of local communities, and international cooperation, recognizing the shared interest of all regions in safeguarding these globally important ecosystems.

Policies, plans and investments are urgently needed to protect remaining intact peatlands, and to restore and sustainably manage degraded areas. In recognition of this, UNEA Resolution 4/16 urged governments and other relevant groups to prioritise peatland conservation, sustainable management and restoration, backed by a UNEP-coordinated global inventory, acknowledging existing Convention on Wetlands (Ramsar) technical guidance and through strengthened research, knowledge exchange and capacity-building. It also called for coordinated action among Member States, international organisations, and the private sector to support and engage in initiatives such as the Global Peatlands Initiative (GPI) and the International Tropical

Peatlands Centre, and to align biodiversity and climate goals and secure the ecological functioning of degraded peatlands (see Box 1 for the resolution text).

To achieve the goals of the resolution around peatland inventory, research and knowledge exchange, the Global Peatlands Assessment (GPA) process was conducted and published (UNEP, 2022). Providing the first global baseline, the assessment mapped roughly 500 million ha of peatlands, quantified losses and about 2 Gt CO<sub>2</sub>e annual emissions, standardised terminology, identified critical data gaps, demonstrated the climate- and biodiversity-related returns of conservation, restoration and sustainable management, and set out a policy roadmap on inventories, protection, subsidy reform, finance and reporting.

To strengthen intersectoral collaboration and build capacity, an Interdisciplinary Research Working Group was established, providing training to researchers, and members of the policy and practice communities internationally on research impact methods for achieving the goals of the resolution. Building on this, there are a range of policy<sup>1</sup> and governance<sup>2</sup> instruments that have the potential to achieve the objectives of UNEA Resolution 4/16 by halting further degradation of peatlands and facilitate their restoration and sustainable management. Policy and governance instruments that can tackle peatland degradation include regulatory, financial, and market mechanisms, partnerships and co-management approaches, and educational, capacity building and behavioural change programmes (UNEP, 2022) (Box 2).

It is estimated that more than 180 countries contain peatlands and although not always extensive, they often provide essential services to populations that could be lost through degradation (UNEP, 2022). The last global survey of peatland policies, reported under the IUCN's resolution 43 on global peatlands (Reed et al., 2019) found evidence of policies and governance to protect, restore and sustainably manage peatlands in 23 countries, which were collectively responsible for over half of global peatland emissions, noting that the survey had limited coverage.

To assess progress towards international resolutions and multi-lateral agreements, this resolution report therefore relies on findings from a survey sent to all Member States who adopted the resolution in 2019, refined on the basis of research from the Wet Horizons project (funded by the EU Horizon programme; for more information about the research design and survey, see Reed et al., 2024). This report supplements findings from the survey trial (Reed et al., 2024; Appendix 1) with survey responses from additional Member States collected via a refined UNEP survey based on the trial instrument (Appendix 2), to provide the most comprehensive description to date of national peatland policy and governance around the world. Findings were supplemented by web searches of publicly available information in English and other languages (subsequently translated into English), information contained in semi-annual resolution reports submitted by UNEP through the UNEA Monitoring and

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<sup>1</sup> We define policy as “actions that are proposed or adopted by organisations to achieve a goal” (Reed, 2024:13)

<sup>2</sup> We define governance as “the various ways policy can be influenced, made, and delivered by a large number of governmental and non-governmental organisations” (Reed, 2024: 13), including informal (e.g., cultural norms) or formal (e.g., agreements) through multi-level interactions (from local to international) among state, market, and civil society actors (Folke et al. 2005; Lebel et al. 2006; Cundill and Fabricius 2010).

Reporting Portal, and an independent impact evaluation of the Peatland Pavilion at UNFCCC COP26 (Reed et al., in press).

The report first summarises key achievements, following the UNEA 4/16 Resolution and drawing on the activities of and linkages to the GPI and other relevant groups, before describing the impacts on peatland policy and governance in individual member states. The report concludes with key lessons and recommendations.

The findings of this summary report have been formally submitted to the UNEA Monitoring and Reporting Portal as part of the resolution's reporting process, while additional reporting will be captured in the POW reporting related to peatland projects implemented by UNEP.

## Box 1: Extract from UNEA Resolution 4/16 on the Conservation and sustainable management of peatlands

### ***The United Nations Environment Assembly...***

1. *Urges* Member States and other stakeholders to give greater emphasis to the conservation, sustainable management and restoration of peatlands worldwide, including through ongoing efforts by institutions such as the United Nations Environment Programme and the Food and Agriculture Organization of the United Nations;
2. *Requests* the Executive Director of the United Nations Environment Programme, within the scope of existing resources and in consultation with the secretariat of the Ramsar Convention, to coordinate efforts to create a comprehensive and accurate inventory of global peatlands, which will be crucial as a basis for identifying the extent of peatlands globally, determining appropriate interventions, understanding the value and potential of carbon sequestration and planning for sustainable peatlands management;
3. *Welcomes* the development of technical guidance on peatlands, including tropical peatlands, and, in that regard, notes the guidance set out in resolution XIII.13 of the Conference of the Contracting Parties to the Ramsar Convention as an important means of encouraging improved ecological functioning of degraded peatlands;
4. *Also welcomes* collaboration efforts and, in that regard, notes decision 14/5 of the Conference of the Parties to the Convention on Biological Diversity, on biodiversity and climate change;
5. *Encourages* Member States and other stakeholders to enhance regional and international collaboration for the conservation and sustainable management of peatlands, including but not limited to the following:
  - (a) Sharing information, knowledge and best practice regarding the conservation and sustainable management of peatlands;
  - (b) Continuing interdisciplinary research to advance the conservation and sustainable management of peatlands;
  - (c) Building capacity for the conservation and sustainable management of peatlands;
  - (d) Promoting a multi-stakeholder approach to the conservation and sustainable management of peatlands involving private landowners, concession holders, businesses and other stakeholders;
6. *Encourages* Member States, international organizations, the private sector and all other actors involved in the conservation, management and restoration of peatlands at the national and regional levels, including, inter alia, the International Tropical Peatlands Centre being established in Indonesia, to cooperate with existing national, regional and international peatland management organizations and all actors, including the Global Peatlands Initiative led by the United Nations Environment Programme, to foster the conservation and sustainable management of peatlands.

## Box 2: Policy and governance instruments that could achieve the objectives of Resolution 4/16

**Regulatory approaches:** Regulatory instruments can protect peatland functions and control peatland resource use, but global policy incoherence and economic priorities often undermine conservation efforts. Government policies and subsidies to agriculture and fossil fuels often undermine peatland conservation policies.

**Protected areas:** Peatlands remain largely unprotected and vulnerable to land use change. Protected peatlands are often small and lack resources for effective conservation. Legal protections vary by country, and indigenous and local communities play a critical role in peatland management, but this can be complicated by unclear or complex property regimes.

**Other regulatory mechanisms:** Peatlands outside protected areas may receive statutory protection through planning zones and buffer zones. For example, in the EU, the Water Framework Directive provides a level of protection to some peatlands, on the basis of their role in water purification. Regulatory mechanisms, such as moratoria and licensing, have been shown to prevent peatland degradation in many countries, but it is essential to manage trade-offs with the economic uses that led to their degradation.

**Financial and market instruments:** Economic incentives can play an important role in peatland restoration and sustainable management. Although essential, public funding is insufficient to meet the scale of the challenge in many countries. As a result, private investment and mechanisms that blend public funding with private finance, are increasingly being used to monetise and pay for the carbon, biodiversity and other benefits of restoration. However, community engagement and equitable benefit distribution are important as part of a just transition for these landscapes.

**Enabling behaviour change:** Understanding human behaviour and using "softer" mechanisms can support land use changes. However, it is important that behaviour change approaches consider social, cultural, political, and historical contexts, for example working with community and religious leaders to lead change.

**Creating an enabling governance environment:** Governance arrangements should be interactive, reflective, and adaptive. Participatory and co-management approaches can balance diverse values in decision-making and address power asymmetries, for example encouraging and acknowledging women's role in peatland conservation.

## 2 Key achievements

The following key achievements can be reported, as international cooperation on peatlands has accelerated since the UNEA4 peatlands resolution.

A flagship **Global Peatlands Assessment** was launched, providing the first comprehensive state-of-the-world report on peatlands along with an updated global peatland map and “hotspot” maps identifying areas under greatest threat:

- Under UNEP’s leadership, and as requested in the resolution, the Executive Director of UNEP oversaw the Global Peatlands Assessment (GPA), establishing the first comprehensive and accurate inventory of global peatlands – an important baseline on peatland extent, status and value – developed in consultation with the Ramsar Convention Secretariat amongst other Global Peatlands Initiative partners.
- The GPA has played a direct role in shaping environmental policies globally. Examples include the inclusion of peatland-specific mitigation in Peru’s Nationally Determined Contributions (NDC), increased support for adaptation measures in Andean peatlands, the adoption of the European Union’s Nature Restoration Law, which includes specific targets for peatlands, and Germany committing close to 2 billion Euros to rewet their degraded peatlands as part of their [National Peatland Protection Strategy](#), within their [Federal Action Plan for Biodiversity and Climate](#) and its effort to reach net zero by 2050. These outcomes are explicitly credited to the visibility and knowledge base provided by the GPI partnership and the GPA. Survey data indicated that of the 16 countries that were asked, six reported using the GPA to inform decision-making processes (the majority of others described policy decisions that pre-dated the GPA).
- The GPA has been presented at high-level international platforms including UNFCCC events (e.g., COP27 and COP29), CBD COP16, the Global Landscapes Forum 2024, and major conferences in Rwanda, China, Germany, and New Zealand. These engagements have raised global awareness of peatlands as critical carbon stores and biodiversity hotspots, encouraging their inclusion in climate and biodiversity planning.
- The [Summary for Policymakers](#) was translated into French and Spanish and disseminated globally to help national authorities integrate peatlands into decision-making. The [Global Peatlands Hotspot Atlas](#) and [Interactive Global Peatland Map](#)—developed from GPA data—provide user-friendly visual tools to identify high-priority areas and are designed to be accessible for civil society, practitioners, and policymakers.

- The GPA has informed UNEP’s technical support to GPI pilot countries and has been used to justify and structure new projects like SAMPeat (South American Mountain and Patagonian Peatlands project funded by IKI – pending approval). The GPA also supports ongoing efforts to update the Global Peatland Database through the Greifswald Mire Centre, responding to the resolution’s mandate for a comprehensive and accurate inventory of global peatlands.
- UNEP has tracked the GPA’s impact by identifying its use in both internal and external publications. This includes monitoring citations in scientific literature and policy documents, suggesting broad uptake of its findings across sectors. The GPA has been cited in at least 77 scientific research papers to date, with the precise number likely higher as many citations are not yet captured in formal databases. Beyond these scientific works, the GPA has been referenced in a wide range of additional publications, including UN and government reports, technical manuals, policy briefs, and books. Citations rose sharply in 2023 and remained high through 2024–2025, demonstrating its rapid uptake. Moreover, numerous documents cite derivative products of the GPA and the Global Peatland Database, extending its influence far beyond direct citations and embedding its findings across global peatland research, policy, and practice.

**Global knowledge-sharing, collaboration and policy development** have been fostered through a series of international conferences and collaborations, for example:

- The **Global Peatlands Pavilion** at UNFCCC COP26 promoted peatlands as a nature-based solution for climate mitigation and adaptation. It significantly raised the profile of peatlands on the global stage, engaging over 2,700 participants from 100+ countries, exploring key topics such as the role of peatlands in Nationally Determined Contributions (NDCs), mobilising finance, enhancing adaptation and resilience, and advancing peatland science and policy. It catalysed new international cooperation for peatland conservation, including a landmark Scotland–Chile partnership to share expertise and drive joint peatland action. It prompted concrete national commitments and policy advances, for example, Uganda embedded peatland restoration in its national climate pledge, and the Baltic States initiated new peatland protection measures (exploring carbon credit schemes and large-scale restoration). Dialogue at the Pavilion prompted Historic Environment Scotland to adopt peatland restoration guidelines that integrate cultural heritage protection, with new training programmes now helping practitioners apply these practices. The pavilion launched the [Global Peatland Map 2.0](#) used for the Global Peatlands Assessment; re-enforced

commitments to include peatlands in NDCs in the Nile Basin; enabled dialogue on the development of a new European Peatlands Initiative; and hosted the launch of landmark reports by UNEP on the [Economics of Conservation, Restoration and Sustainable Management of Peatlands](#), by Ramsar on Peatland Restoration Practice, and by IUCN UK Peatland Programme on peat-free horticulture. The Global Peatlands Pavilion Summary Report can be found [here](#).

- Launched at COP26 and extended significantly since, a dynamic [Virtual Peatland Pavilion](#) online platform has enabled the latest science, best practices, and success stories to continue being exchanged internationally, building capacity and political will for peatland conservation. The Virtual Peatland Pavilion is a living legacy that continues to evolve, regularly updated with new content from GPI partners. It is showcased globally through its ongoing World Tour. You can explore the constantly updated Virtual Peatland Pavilion World Tour [here](#).
- The [High-Level Ministerial Dialogue hosted by the Government of Peru as part of the 4th GPI Partners Meeting](#) on 2021 marked a significant step forward for South-South Cooperation on peatlands. Bringing together Ministers from Indonesia, the Republic of Congo, the Democratic Republic of Congo, and Peru, the online event fostered an open exchange of experiences, challenges, and commitments around peatland conservation and sustainable management. A key milestone was Peru's formal Declaration of Commitment to join the International Tropical Peatlands Center (ITPC), signalling its intention to work alongside tropical peatland countries to implement the Brazzaville Declaration and UNEA4 Resolution.
- GPI and partners convened sessions during regional **Climate Weeks** (Africa, Asia-Pacific), focusing on peatland restoration finance, sustainable management, and carbon monitoring. At these forums, countries and experts called for stronger peatland targets – for example, UNEP and Indonesia with GPI members and the Climate Champions team proposed developing a Peatland Breakthrough to set collectively determined and science-based global peatland targets to support an upscaling of climate action.
- **The Global Landscapes Forum (GLF)**, in partnership with UNEP and its Global Peatlands Initiative, has played a pivotal role in elevating the global profile of peatlands. Notable events include the 2019 session in Bonn on "[Permafrost and Peatlands – An Emerging Frontier in the Defence Against Climate Change](#)", the 2020 GLF Biodiversity Conference and session on [Peatlands as a super nature-based solution to climate change, and a refuge for unique and threatened biodiversity](#), and the 2024 conference titled "[The Climate Solution We Forgot](#)," which focused entirely on peatlands. These forums have catalyzed international cooperation, advanced science-policy dialogue, and

positioned peatlands as a critical component of global climate and biodiversity strategies.

**Regional alliances and strategies** have emerged as a key part of international progress:

- In Europe, the establishment of a [European Peatlands Initiative \(EPI\)](#) – spearheaded by Ireland with support from the EU, UNEP and Global Peatlands Initiative members – is creating a coalition of governments and stakeholders to scale up peatland protection and restoration across the continent.
- This complements the European Union’s new [Nature Restoration Law](#) (adopted in 2023), which for the first time sets binding targets for restoring degraded ecosystems including peatlands. The law sets quantitative targets (such as rewetting a certain percentage of drained peatland by 2030 and beyond) and compels national governments to develop peatland restoration plans. This supranational policy is driving European countries to enact or upgrade their own peatland conservation measures in line with the law’s requirements.
- In the southern hemisphere, with support from the Wildlife Conservation Society, UNEP and GPI members, the [Patagonia Peatlands Initiative](#) has been established between Chile and Argentina as a transboundary effort to conserve peatlands in Patagonia. This collaboration was further strengthened by the [Venice Agreement](#) on Peatlands, initially signed in June 2022 and revisited in [June 2024](#), which links local peatland efforts around the world with global efforts by Member States to support peatlands protection and conservation locally for impact globally. The Venice Agreement represents a collective commitment by peatland artists, activists, Indigenous Peoples, youth, scientists and other peatland custodians around the world to shift the ecological and cultural management of peatlands toward effective, long-term conservation. By embracing a bottom-up approach that recognizes local and regional initiatives as essential partners in the global peatland agenda, the agreement sets a new standard for valuing and protecting these vital ecosystems. Its guiding motto: **“Protecting local peatlands globally.”**
- Similarly, across tropical peatland-rich regions, partnerships are strengthening: for instance, the long-standing [Brazzaville Declaration](#) continues to guide peatland collaboration in the Congo Basin, and UNEP is supporting new multi-country projects to protect mountain and high-altitude peatlands in the Andes. The [International Tropical Peatlands Centre \(ITPC\)](#), established in Jakarta in 2018, serves as a key platform for South-South

cooperation among tropical peatland countries—including Indonesia, the Republic of Congo, and the Democratic Republic of the Congo—by promoting knowledge exchange, joint research, and coordinated action to advance the sustainable management of tropical peatlands.

**Knowledge exchange and capacity building** has been achieved in a number of ways nationally and internationally:

- GPI partners, including FAO, have delivered [multilingual training programs](#) on peatland mapping, monitoring, and restoration techniques to support countries in improving their peatland inventories. Dozens of workshops and webinars, held in English, French, Spanish and other languages, have transferred expertise in remote sensing, community engagement, and sustainable livelihood development on peatlands. In total, more than 2,700 participants across Africa, Latin America, Asia, and Europe have taken part in these activities, delivered through a mix of online, hybrid, and in-person sessions, covering from technical trainings to national validation workshops, high-level events, and field missions. This combination of global and country-focused sessions has enabled practitioners and governments to build applied skills for effective peatland mapping, monitoring, and management.
- The [GPI Research Working Group](#) was established in 2019 to facilitate international interdisciplinary scientific collaboration on peatland issues. Co-led by partners at SRUC and UNEP, it identifies priority research needs and funding opportunities, coordinating an integrated programme of peatlands research at a global scale aligned with UN environmental goals. The group holds regular meetings that bring together scientists from around the world to foster collaborative research efforts and runs a capacity-building programme. Between 2020 and 2021 the Research Working Group hosted a [series of free online training sessions](#) for peatland researchers, covering topics from effective fieldwork and data analysis to policy engagement and science communication. These trainings were highly valued: participants gave an average rating of 4.7 out of 5 for the sessions' quality and especially appreciated the practical tools, peer discussion, field methods guidance, and real-life case studies provided. Many attendees have applied the lessons to their own work; for example, one participant used materials from the course to enhance a government training workshop in Tanzania, highlighting the programme's lasting impact on professional development.
- The Research Working Group also organised an [evidence synthesis training programme](#) (funded by the British Academy and UNEP) to build capacity for evidence-based peatland policy among more than 50 early career researchers internationally, leading to a series of synthesis papers and policy

briefs answering peatland policy questions collected by the [PeatQuest project](#) (led by University College Cork, Ireland).

- The group also coordinated consensus-building workshops to **standardise how peatland research is conducted and reported** worldwide, published as a peer-reviewed paper in the journal, *Mires & Peat* (Reed et al., 2022). Drawing on best practices from the medical sciences, these workshops brought together experts to identify key outcomes that should consistently be measured in peatland studies – such as indicators of climate impact, hydrology, biodiversity, and fire. The aim was to ensure that data from different projects, regions, and institutions can be compared and combined more easily to inform decision-making. The process produced a set of “core outcomes” for tropical and temperate peatlands that researchers are encouraged to measure in all future studies. This is a major step toward creating globally consistent datasets on peatland restoration and conservation.
- The GPA has been used to strengthen capacity across global, regional, and national platforms, including through sessions at UNFCCC and CBD COPs, the Global Landscapes Forum events, and major conferences in Rwanda, China, Germany, and New Zealand, where region-specific science and policy findings have been shared to expand awareness among practitioners and policymakers

Financially, **efforts to channel more resources** into peatland conservation have advanced:

- The GPA reviewed efforts to mobilise private and public investment in peatland restoration, leading to **recommendations to develop blended finance mechanisms** that combine public funding with private payments for ecosystem services, including carbon and biodiversity markets. These approaches are intended to de-risk investment, incentivise conservation and sustainable use, and ensure fair access to finance and equitable benefits for local communities
- On 2021, UNEP and the GPI launched the report on “[Economics of Peatlands Conservation, Restoration and Sustainable Management](#)”, identifying undervaluation and underinvestment as the primary drivers of peatland mismanagement. The report calls for urgent investment backed by strong policies and innovative financing mechanisms to safeguard these critical ecosystems.
- In 2023, GPI and its partners co-organized a series of finance-focused events, including the **Green Finance Workshop “Is the Conservation Sector Ready?”** with the North Pennines AONB Partnership in London, which provided space

to examine the challenges and risks of using blended and private-sector finance in peatland conservation. UNEP and partners—including Climate Catalyst, the UN High-Level Climate Champions, Carbon Connects, the G20 Land Initiative, and the IUCN UK Peatland Programme—also convened an **innovation lab on “Unlocking Private Sector Action for Peatlands.”** More than 40 participants from companies such as Unilever, Sony, and Salesforce co-designed six practical solutions to increase private-sector investment, captured in the [UN Innovation Lab Outcome Report: Unlocking Private Sector Action For Peatlands](#)

- A dedicated report, “[Investing in Peatlands](#),” was released in 2024 to guide public and private investors in funding peatland restoration, highlighting blended finance models and the multiple benefits of peatland projects for climate, ecosystems, and communities. This led to the production of a peer-reviewed journal article on methods for blending public and private finance to responsibly scale investment in peatland restoration (Reed et al., in press; funded in part by the EU Wet Horizons project).
- Likewise, GPI has been working with partners to activate the private sector and investment partners to ensure that peatlands financing is considered as a viable and valued investment – both for protection and restoration. Peatlands have been included in the UNEP flagship report series on the [State of Finance for Nature](#) – pointing to an important opportunity to make gains for nature, climate and people all at once.
- Through engagement with countries and partners, we have seen that peatlands are increasingly featured in **global climate finance discussions**, for example, at UNFCCC COP27 a special report on peatlands and climate commitments was launched, and countries like Canada and others have announced new funding for peatland restoration as part of their climate strategies (see Box 3 for more examples of private finance initiatives to restore peatlands).

### **Key Publications and Online Resources by UNEP and GPI Partners**

Below is a curated list of some of the stand-out publications and platforms developed by UNEP and GPI, showcasing cutting-edge research, policy guidance, mapping tools, and knowledge-sharing resources to support global peatland conservation, restoration, and sustainable management:

- [Smoke on Water: A Rapid Response Assessment](#) (2016)  
Landmark UNEP report raising awareness of peatland fires and global risks.
- [Brazzaville Declaration on Peatlands](#) (2018)  
A milestone South-South cooperation agreement to protect the Cuvette Centrale peatlands and overall tropical peatlands.

- [\*\*2018/19: Emerging Issues of Environmental Concern - Chapter On Permafrost Peatlands – Losing Ground in a Warming World\*\*](#)  
Every year a network of scientists, experts and institutions across the world work with UNEP to identify and analyze emerging issues that will have profound effects on our society, economy and environment – highlighting the pressing issue of permafrost loss and the opportunity of protecting peatlands
- [\*\*UNEA Resolution 4/16 on the Conservation and Sustainable Management of Peatlands\*\*](#) (2019)  
The first UNEA resolution focused on peatlands, adopted at UNEA-4.
- [\*\*South-South Cooperation in Action: Stories of Success\*\*](#) (2020)  
Highlights the Global Peatlands Initiative as a leading case of environmental cooperation.
- [\*\*Economics of Peatlands Conservation, Restoration and Sustainable Management\*\*](#) (2020)  
Assesses the financial case for investing in peatlands.
- [\*\*Peatland Mapping and Monitoring Report\*\*](#) (2021)  
Technical guidance for mapping and monitoring peatlands globally.
- [\*\*Needs and Knowledge Gaps on Peatlands for Climate Action\*\*](#) (2021)  
Identifies challenges and gaps to better integrate peatlands in climate planning.
- [\*\*Peatlands and Climate Planning\*\*](#) (2022)  
Explains how peatlands are linked to NDCs and national climate goals.
- [\*\*Global Peatland Map 2.0\*\*](#) (2022)  
An updated map of the Global Peatlands Database.
- [\*\*Wetlands in Climate Commitments\*\*](#) (2022)  
Preliminary insights into the integration of wetlands into national climate strategies.
- [\*\*Global Peatlands Assessment \(GPA\)\*\*](#) (2022)  
UNEP’s flagship report on the state of the world’s peatlands and pathways for action.
- [\*\*Online Global Peatland Map\*\*](#) (2023)  
An interactive tool from UNEP’s World Environment Situation Room (WESR) providing access to global peatland data.
- [\*\*Story Maps from Global Peatlands\*\*](#) (2023)  
Interactive stories presenting regional data on peatland distribution, degradation, conservation status, and policy recommendations.
- [\*\*Global Peatland Hotspot Atlas\*\*](#) (2024)  
Visual and narrative tool identifying peatland degradation hotspots worldwide.
- [\*\*Investing in Peatlands Report\*\*](#) (2024)  
Explores investment opportunities for sustainable peatland management.
- **Virtual Peatlands Pavilions** (2021-2025)  
Archive of peatland resources from multiple UNFCCC COPs:
  - [COP26 Virtual Peatlands Pavilion](#)
  - [COP28 Virtual Peatlands Pavilion](#)

- [COP29 Virtual Peatlands Pavilion](#)
- [Virtual Pavilion Library](#)
- **[GPI Website](#)**  
Central hub for all GPI-related updates, resources, and events.
- **[GPI YouTube Channel](#)**  
Recordings of major GPI events, Peatland Pavilion sessions, and training content.
- **[ITPC Website](#)**  
Platform for the International Tropical Peatlands Center and its partners.
- **[FAO YouTube Playlist – Peatlands and Climate Change](#)**  
A curated set of video materials covering science, policy, and restoration.

Overall, through GPI's coordination, significant progress has been made in sharing best practices, developing tools and data, and securing commitments that elevate peatlands as a priority in global environmental agendas. This international momentum is driving stronger collaboration, knowledge exchange, and resource mobilization to implement the UNEA4 peatlands resolution and safeguard peatlands worldwide.

### Box 3: Markets for peatland ecosystem services around the world

Although not explicitly mentioned in the UNEA resolution, many of the countries surveyed were supplementing public funding for peatlands with private finance via carbon, biodiversity and other nature markets. Due to restrictions under the World Trade Organisation, it is not possible for governments to compensate landowners for anything other than the costs of peatland restoration and management, and any income foregone. As such, those with least opportunity costs (e.g. hill farmers) and most intrinsic motivation (e.g. institutional landowners with conservation objectives) are most likely to restore their land and farmers with higher opportunity costs (e.g. arable and horticulture on peat) and more production-oriented values are less likely to adopt. Privately funded ecosystem markets, in which payments are made in return for the provision of ecosystem services such as climate change mitigation or biodiversity, are not classified as public subsidies and so are allowed by the World Trade Organisation (technically, they are classified as “green box”). This means that landowners are able to profit from the sale of these services, making their management more financially viable, and in some cases attractive, and so incentivising peatland restoration and sustainable management.

Although Verra’s VM0036 peatland methodology could be applied to generate peatland carbon units in many countries, this methodology has to date only been applied in two projects, in Latvia and China (according to the Verra Registry). However, a number of domestic voluntary carbon markets have now emerged in different jurisdictions to finance peatland restoration, with some now extending to include payments for biodiversity. For example:

- Introduced in 2010 in Mecklenburg-Western Pomerania, Germany, MoorFutures® became the first regional carbon market for peatland rewetting. It issues credits for GHG emission reductions and carbon sequestration to finance rewetting, using the GEST approach for quantifying reductions, which follows a similar approach to Verra’s VM0036 methodology. Credits are registered by the State’s Ministry for Environment and Agriculture, selling units within Germany, mainly to regional clients. Carbon units were selling for between EUR 29 and EUR 67 in 2022 (the most recent year for which data are available).
- The Peatland Code, launched by the UK government in 2015, and owned and operated by the IUCN UK Peatland Programme, is a voluntary standard to market climate benefits of peatland restoration that are real, quantifiable, additional, and permanent. The Code mandates independent validation, regular monitoring, and a minimum project term of 30 years. Version 2.0 launched in 2023, expanding the scope of the market from restoration of blanket bog habitats to fens and certain modified peatlands. The Code is currently developing a methodology to generate biodiversity units that will enable the generation of carbon units that are explicitly bundled with quantified biodiversity uplift. It is hoped that future versions will extend its scope to paludiculture, carbon sequestration in peat, and forest-to-bog restoration. Funding from carbon credits is complemented by public funding,

to enable cost-effective restoration and maximise incentives for landowners. As of July 2nd, 2024, the Peatland Code has registered 267 projects in the UK, covering a total of 34,310 ha, with an average project size of 132 ha and an average duration of 79 years. Average prices of Peatland Carbon Units in 2022 (the latest year for which data is available) were £24 per unit.

- In June 2020, the Netherlands issued the first verified CO<sub>2</sub>eq certificates for 32 ha of agricultural peat pastures using the Valuta voor Veen (Currency for Peat) method. Valuta voor Veen, developed by various environmental organizations, aims to compensate farmers for income loss due to rewetting and operates voluntarily. Farmers can reduce emissions by maintaining higher groundwater levels, practicing paludiculture, or converting land to back to semi-natural habitat. GHG emission reductions are calculated on the basis of changes in water levels and land use. Carbon credits sell between €18-€80 per ton of CO<sub>2</sub>eq and certification is managed by the National Carbon Market Foundation and credits can be purchased via a registry run by PlatformCO2neutral. As of August 2024, five projects have been created, two of which have already sold out of peatland carbon units.
- In France, Label Bas Carbone (the Low Carbon Label) finances projects that reduce GHG emissions and enhance carbon storage. This certification, granted by an independent third party, promotes voluntary reduction projects that can be shown to go beyond standard agricultural practices, after meeting environmental integrity criteria approved by the Ministry of Ecological Transition. Various methodologies exist for different sectors, and the National Federation of Conservatory of Natural Landscape recently introduced three new methodologies, including one for peatland restoration. As of August 2024, no peatland projects had been approved.
- EU carbon removals certification framework (CRCF), adopted in April 2024, sets stringent EU-wide standards for quantification, additionality, long-term storage and sustainability of removals to meet the 2050 climate-neutrality goal. It requires independent verification, public disclosure via an EU registry (to be operational within four years) and applies tailored rules to permanent storage, carbon farming and product-based storage. Certified activities must also deliver biodiversity, adaptation or pollution-reduction benefits, with an effectiveness review scheduled for 2026.

### 3 Impacts

A total of 28 responses were received for 26 countries in English, French and Spanish. In addition to these countries, the GPI identified peatland policies and strategies in 19 additional countries, summarised in Box 4. This synthesis draws on content from the Global Peatlands Assessment and supplementary desk research. Only two responses were received for the United Kingdom (for Scotland and Northern Ireland), so for completeness, policies for England and Wales were identified from publicly available sources, and each are presented as separate countries in the analysis, although they share the same NDC and NBSAP, which are described in the section on England. This makes a total of 45 countries that have introduced policies and strategies to protect, restore and sustainably manage peatlands, in line with the UNEA4/16 resolution. The rest of this section summarises peatland policies and wider governance mechanisms to manage peatlands in the countries not covered in Box 4. Full details of peatland policies and strategies in each of these countries can be found in Appendix 3, including a policy overview, regulatory framework, economic instruments and subsidies, programmes and strategies, international commitments and regulatory gaps.

#### Box 4: Additional peatland policies and strategies identified in the Global Peatlands Assessment

**Argentina:** Addresses peatlands through environmental and mining statutes while finalising dedicated wetland legislation. Peat (“turba”) is treated as a mineral; the Mining Code (Law 1919) and Mining Environmental Law (Law 24 585) restrict extraction to deposits deeper than 1 m, while the General Environmental Law (Law 25 675) imposes sustainability duties. Draft National Wetlands Law (Ley de Humedales, 2022) would create an inventory, strengthen impact assessments and provide funding to protect all wetlands, explicitly including peatlands

**Belarus:** Adopted the Law “On the protection and use of peatlands” (2019) to conserve natural and near-natural mires, confine new extraction to already drained sites, require peat-soil farming techniques that curb organic-matter loss, and mandate rehabilitation of exhausted or heavily disturbed areas.

**China:** Governs peatlands through the Wetland Management Department of the National Forestry and Grassland Administration. The Wetland Protection Law (June 2022) introduces explicit peatland provisions: local plans, protection of sites listed as “national important wetlands”, and a ban on unauthorised mining, drainage or groundwater extraction in these areas.

**Costa Rica:** Cites peatlands in its updated Nationally Determined Contribution, pledging to conserve or restore them as natural carbon sinks. Existing forest, wetland and payment-for-ecosystem-services policies now extend to mapping peat deposits, avoiding drainage and integrating peat protection into area management.

**Democratic Republic of the Congo:** Developing a National Peatland Strategy with UNEP support to conserve the vast Cuvette Centrale. Peatlands feature in the REDD+ National Strategy (2018), which calls for inventories of carbon stocks and

emissions. A network of parks and reserves already covers more than 12% of forested peat soils. At COP26 officials launched a Peatland Management Unit and began community consultations on a policy roadmap; peatlands are also referenced in the country's NDC. Internationally, DRC is a beneficiary country of the Global Peatlands Initiative, joining in 2017 and a member of the International Tropical Peatlands Centre (ITPC).

**Indonesia:** Responded to the 2015 fire crisis by establishing the Peatland Restoration Agency (BRG) in 2016 with a 2.4 M ha rewetting/restoration mandate, later expanded as the Peatland and Mangrove Restoration Agency (BRGM) to an additional 1.2 M ha. Government Regulation No. 57/2016 tightened controls on drainage, while Ministry Regulation No. 10/2019 restricts activity on deep peat domes. Peatland Hydrological Units must retain at least 30% natural cover. Peatlands are integral to Indonesia's Long-Term Low-Carbon Strategy, which aims for net-zero forest-and-land-use emissions by 2030. Peatlands are referenced in the country's NDC. Indonesia is a founding country partner and beneficiary and hosts the ITPC.

**Ireland:** The National Peatlands Strategy 2015 coordinates action across all peatland types; state-sponsored bodies (Coillte, Bord na Móna) now lead rehabilitation of cut-over and afforested bogs. Results-based payment schemes such as the Pearl Mussel and FarmPEAT projects reward farmers for rewetting peat soils, while the Community Wetlands Forum supports local groups. Government has committed significant funds, including €5 M in 2020 to rewet former industrial sites, and seeks to mobilise private finance via carbon credits.

**Lao PDR:** Draft Wetland Conservation Decree (2019) explicitly lists peatlands as protected wetlands. District-level action plans in Savannakhet and Champasak combine floodplain and peat restoration with community livelihoods, leading to two new Ramsar sites and a national peatland inventory. Canal-blocking and weir repairs are part of rewetting efforts in pilot areas.

**Malaysia:** Guides peatland conservation through the National Action Plan for Peatlands, the National Policy on Biological Diversity (2016–2025) and the National Physical Plan. The Malaysian Sustainable Palm Oil certification scheme sets criteria to minimise conversion and promote best practice on peat soils. Integrated management plans restore hydrology, reduce fire risk and provide alternative livelihoods on rewetted peatlands.

**Mongolia:** Mongolia has adopted a Strategic Plan for Peatlands Restoration and Sustainable Management, supported by the Asian Development Bank, and included peatlands in its UN-REDD Programme since 2016. Approximately 40% of its peatlands are protected within nature reserves and Ramsar-designated sites. However, building national capacity and closing critical data gaps remain priorities. To strengthen implementation and align diverse ongoing efforts, Mongolia is working to establish a Mongolian Peatlands Initiative, a national coordination mechanism to connect targets and resources, streamline investments, and support the achievement of the government's ambitious peatland goals. Mongolia has been added as a beneficiary country of the Global Peatlands Initiative since early 2025.

**New Zealand:** Protects 79% of intact bogs and 47% of fens within reserves, yet only ~20% of the original bog area remains. The Arawai Kākāriki Programme restores hydrology at key peatland sites with iwi and regional councils. Law reforms embed Māori environmental values (Te Mana o te Wai) in freshwater management. The Emissions Reduction Plan 2022 prioritises rewetting degraded peatlands as a nature-based climate solution.

**Papua New Guinea:** Building a peatland knowledge base to include emissions in its NDC. Mapping, training and Ramsar participation are first steps toward avoiding drainage, preventing fires and integrating peatland forests into REDD+ programmes.

**Republic of the Congo:** After 2017 documentation of extensive peatlands in the Cuvette Centrale, peatlands rose on the policy agenda. Historical Mining Code treats peat as a mineral resource. The country co-hosted with DRC and UNEP the 3<sup>rd</sup> meeting of the Global Peatlands Initiative partners (2018), signed the Brazzaville Declaration with DRC and Indonesia, and helped create the ITPC. A joint land-use plan with DRC aims for sustainable use of the Lake Télé–Lake Tumba landscape. Internationally, RoC is a GPI founding country partner and beneficiary and a member of the ITPC.

**Russian Federation:** Peatlands cover 139 M ha. The 1922 State Decree began a national inventory; peatlands are assigned to forest, agriculture, industrial, water or protected categories. The Intersectoral Action Plan (2003) coordinates management; the Water Code 2006 classifies peatlands as water bodies and makes rewetting a priority. In response to severe fires, a large-scale programme rewetted 73 000 ha around Moscow (2010–2013) and set a target to restore all drained and abandoned peatlands (~800 km<sup>2</sup>) in European Russia. Peatland emissions and removals are included in national greenhouse-gas inventories.

**Thailand:** Uses a three-zone system in southern provinces: Protected Zone for intact peatland swamp, Conservation Zone for restoration, Development Zone for controlled use. In Narathiwat's Pru To Daeng Sanctuary (42 000 ha), 48% is strictly protected, 13% under rehabilitation and 39% allocated to small-scale agriculture, where drainage difficulties reinforce the emphasis on keeping peat soils waterlogged.

**Uganda:** Uganda has integrated peatland restoration into its 2022 updated NDC, which targets a 24.7% reduction in GHG emissions by 2030, recognizing peatlands as critical to achieving this goal. The Ministry of Water and Environment is working closely with GIZ to implement a strategy for the sustainable management of peatlands, aimed at strengthening national and local capacities in monitoring, carbon stock assessment, and restoration-linked climate finance. Although legal protections for wetlands exist under the Constitution, the Wetland Policy (1995), and the National Environment Act (Cap. 153), limited data continues to hinder the full potential of peatlands in climate policies and commitments. Nonetheless, Uganda remains committed to advancing science-based policymaking, enhancing regional collaboration, and mobilizing sustainable finance through initiatives such as

Peat4People. Uganda (Ministry of Water and Environment) joined as a GPI member in 2022.

**United States of America:** Protects peatlands through general wetland regulation under the Clean Water Act and a federal “no net loss” policy. Compensatory mitigation and wetland banking have restored or created wetlands to offset permitted impacts, conserving many peat bogs. Some states add their own safeguards, and wetlands, including peatlands, now feature in carbon markets as natural climate solutions.

**Uruguay:** Under its National Climate Change Policy (2017) and NDC, Uruguay commits to map all peatlands by 2025 and place at least 50% (41 800 ha) under protection, rising to 100% with additional support. The National Wetland Strategy (2019) recognises peatlands’ carbon and hydrological values; inventory work and new protected areas are under way.

**Vietnam:** Focuses on Mekong Delta peatland swamps. Historical 60 000 ha have declined to ~12 700 ha due to conversion and fires. Two national parks (U Minh Thượng and U Minh Hạ) now protect 9 174 ha of peatlands; the community-based “Green Contract” in buffer zones links sustainable livelihoods to conservation, effectively eliminating human-caused fires since implementation.

## 3.1 Peatland Policies and Governance Mechanisms of Surveyed Countries

### Australia

Australia manages peatlands through general wetland, biodiversity and climate frameworks shared by federal, state and local governments. The Environment Protection and Biodiversity Conservation Act underpins protection where peatlands (bogs) are listed as endangered ecological communities, Ramsar sites or World-Heritage areas. State planning laws provide the day-to-day controls, but the absence of a national peatland inventory or dedicated statute leaves patchy coverage. Funding is channelled through the National Landcare Program, bush-fire recovery packages and the Emissions Reduction Fund, which has approved wetland-restoration methodologies that could be applied to peatland re-wetting. Key delivery vehicles are alpine-peat bog recovery plans and post-fire ecological assessments backed by the National Environmental Science Program. Internationally, Australia implements Ramsar obligations and references wetland carbon in its Paris-Agreement commitments, having co-sponsored the 2019 UNEA resolution on peatlands. Core gaps remain in mapped knowledge outside protected areas, uneven state enforcement and limited incentives for private-land re-wetting, although alpine projects show effective community partnerships.

### Austria

Austria's 2022 National Peatland Strategy 2030+ gives the country one of Europe's most explicit peatland roadmaps. While nature-conservation powers sit with its nine states, the federal strategy binds them to ban new drainage, deep ploughing and peat extraction, and to phase out imported horticultural peat. The legal back-stop combines provincial nature laws, a nationwide prohibition on burning or mining peat and EU directives that list many peatlands (bogs) as Natura 2000 habitats. Financially, Austria couples EU CAP eco-schemes with national climate and biodiversity funds; pilot payments are steering farmers toward permanent grassland and paludiculture on organic soils. Restoration is rolling out via Helmi-style habitat projects that block drains, map peat depth and engage local "moor councils". Internationally, Austria frames the strategy as its delivery arm for Ramsar, the EU Biodiversity Strategy 2030 and the proposed Nature Restoration Law. Remaining gaps include an incomplete national inventory, dependence on imported peat soil for horticulture and the need for long-term budget lines once current grants expire.

### Belize

Belize treats its limited but ecologically rich peatland deposits—largely coastal mangrove swamps and lagoon marshes—as part of broader wetland management. Mangrove-protection regulations, EIAs and the National Protected Areas System secure key sites such as the Sarstoon-Temash and Crooked Tree Ramsar wetlands. Economic levers are mostly external: GEF and blue-carbon projects fund restoration

and pay communities for ecosystem services, while the national PACT trust disburses conservation grants. Current programmes include a draft National Wetland Policy, regional “Wise Use of Caribbean Wetlands” initiatives and a peat-mapping project that will feed carbon-stock data into Belize’s NDC. Commitments under Ramsar, the Bonn Challenge and the High Ambition Coalition for Nature frame action internationally. Enforcement capacity, fragmented data and reliance on donor finance leave gaps, but the policy trajectory is towards tighter national wetland rules and carbon-based incentives.

## **Canada**

Canada’s 1.1 million km<sup>2</sup> of peatlands—one-quarter of the global total—are gaining strategic weight in climate policy. Resource jurisdiction rests with provinces, producing varied regimes: Manitoba’s Peatlands Stewardship Act limits mining; Quebec and New Brunswick license horticultural harvest with mandatory restoration; Ontario’s Far North Act guides vast intact peatland (bogs). Federally, the Impact Assessment Act, the Federal Wetland Policy and targeted protected-area designations safeguard peatlands on Crown lands. The C\$780 million Nature Smart Climate Solutions Fund, Indigenous Guardian programmes and a small voluntary peat credit certify restoration projects; industry funds reclamation at active horticultural sites. Provincial wetland plans, federal mapping initiatives and Indigenous-led protected-area proposals in the Hudson-James Bay Lowlands constitute the principal delivery mechanisms. Ramsar listings and Paris-Agreement land-sink pledges underpin Canada’s international stance. Yet a cohesive national strategy, uniform data, and strong economic signals to halt southern peat extraction remain as governance gaps. Canada is working to establish a Canadian Peatlands Initiative amongst other actions through the [Can-Peat Project](#) (supported by the University of Waterloo, a GPI member since 2019), with Canada’s peatlands as nature-based climate solutions funded through the Government of Canada’s Environmental Damages Fund, administered by Environment and Climate Change Canada.

## **Chile**

Chile’s 2.3 million ha Patagonian peatlands shifted from resource to protected status with the 2024 Peatland Protection Law, which bans peat mining outright and removes peat from the mining code, while allowing tightly regulated Sphagnum-moss harvesting. The new law, plus existing protected-area rules and EIAs under the Environmental Framework Law, forms an unprecedented regulatory shield. Economic transition is supported by GCF and GEF projects, blue-carbon pilots and planned subsidies for peat-free horticulture and ecotourism. Government-led peatland-inventory work and a forthcoming National Peatland Strategy anchor programmes; cross-border “Patagonian Peatland Initiative” linked to the Global Peatlands Initiative and other peatland projects including drainage-blockage pilots exemplify delivery. Peatlands figure in Chile’s Paris-Agreement NDC, Ramsar agenda and CBD targets. Remaining challenges include ensuring enforcement across remote Tierra del Fuego, finalising sustainable moss-harvest quotas and funding community diversification.

## **Colombia**

Colombia's high-Andean páramo peatlands—critical water sources for Bogotá and other cities—are governed chiefly by Law 1930 (2018), which restricts mining and intensive agriculture above set elevations and mandates integrated páramo management plans. Complementary wetland and EIA regulations, plus protected-area designations such as Chingaza National Park, strengthen safeguards, although lowland Amazon peatland swamps receive less attention. Payments-for-ecosystem-services funds, water-company contributions and climate-finance projects reward communities for conservation; the carbon-tax offset mechanism is trialling peatland-restoration credits. Ongoing programmes include páramo boundary delineation, restoration of drained sites and Indigenous “Páramo Guardians” monitoring schemes. Internationally, Colombia's NDC, Ramsar listings and Initiative 20×20 pledges reinforce peatland goals. Gaps lie in uneven enforcement, limited data on lowland peat, and ambiguity over small-scale drainage in páramo zones. Colombia has been added as a beneficiary country of the Global Peatlands Initiative since early 2025.

## **Denmark**

Denmark has made peat-soil re-wetting a flagship solution under its Climate Act to achieve a 70 % reduction in GHG emissions by 2030. The 2021 Agricultural Climate Agreement earmarks over Dkr 3.9 billion to retire 100 000 ha of drained peat fields and ties CAP subsidies to higher water tables. Environmental orders allow drainage prohibitions and streamlined restoration permitting, while protections under Section 3 (§3) of the Danish Nature Protection Act cover remaining intact peatlands (bogs). Grants compensate landowners, finance drain blocking and pilot paludiculture crops. National mapping, catchment-level “wet agriculture” trials and large-scale projects under the Wetland Restoration Scheme drive delivery. Targets exceed EU Nature-Restoration-Law minima and underpin Denmark's Paris and Ramsar commitments. Key risks are administrative delays, farmer resistance and nutrient-release management.

## **England**

England's 2021 Peat Action Plan integrates peatlands into climate-net-zero and 25-Year Environment Plan objectives. Protection relies on SSSI and Natura 2000 designations, planning controls that bar new peat-extraction licences and 2021 rules curbing burning on peatland blanket bog, while a retail peat-soil sales ban is pending. The Nature for Climate Fund devotes at least £50 million to restore 35 000 ha by 2025 and supports the voluntary Peatland Code carbon market; new Environmental Land Management schemes pay farmers for re-wetting and lowland paludiculture. Large-scale partnerships such as the Great North Bog and Lowland Peat Task Force exemplify programme delivery. The policies help meet UK Paris-Agreement targets and Ramsar obligations, but fragmented responsibilities, voluntary uptake of incentives and continuing lowland drainage leave emissions reductions uncertain beyond current funding cycles.

## **Estonia**

Estonia frames peatlands as both a biodiversity asset and a major GHG emission source. The Constitution-backed Nature Conservation Act protects peatlands (mires), while the Earth's Crust Act restricts new mining to degraded sites and the Land Improvement Act curtails fresh drainage. An extraction fee (€0.90 m<sup>3</sup>) funds oversight; EU CAP payments now reward high-water grassland and paludiculture. LIFE projects and state-forestry schemes have rewetted >17 000 ha, and a new mire plan will add 13 000 ha more by 2030. EU directives, Ramsar listings and the forthcoming Nature Restoration Law set binding restoration percentages. Gaps include dispersed authority, 128 active extraction sites still emitting, and incomplete carbon-credit methodologies.

## **Finland**

Finland's mid-term-reviewed Peatland Strategy pivots from extraction to large-scale restoration to meet a 2035 carbon-neutrality goal. The Climate Act and Nature Conservation Act now tightly regulate drainage; fuel-peat excise duties hasten energy exit, while the Helmi Habitat Programme and CAP eco-schemes pay landowners for 60 000 ha of protection and 30 000 ha of re-wetting by 2030. Implementation is tracked rigorously through national inventories and LIFE PeatCarbon pilots. EU NDC, Habitats Directive and the new Nature Restoration Law supply international momentum. Obstacles include continued forestry emissions on drained peatlands, lack of a full horticultural-peat soil ban and pending high-integrity carbon-credit rules.

## **France**

France embeds peatlands within its fourth National Wetlands Plan (2022-26). The Code de l'environnement and mining ICPE rules mandate water permits and full post-extraction rehabilitation, while CAP GAEC 2 will bar new drainage once mapping is complete. €60 million per year from river-basin agencies funds ditch blocking and land purchase; a Label Bas Carbone methodology for peatland re-wetting is almost finalised. LIFE Anthropofens and regional action plans restore priority peatlands (bogs and fens). EU Biodiversity Strategy, Ramsar obligations and the incoming Nature Restoration Law drive targets to protect 60 000 ha and restore nearly the same area. Fragmented legal responsibilities, incomplete wetland mapping and continuing horticultural-peat soil demand remain challenges.

## **Germany**

Germany's 2022 National Peatland Protection Strategy aims to cut annual peatland and peat-soil emissions by 5 Mt CO<sub>2</sub>-eq by 2030, end extraction by 2040 and phase out peat soil in horticulture. Federal-state agreements align state action plans with national goals; extraction now requires restoration and is confined to pre-degraded sites. CAP eco-schemes, a €4 billion Natural Climate Protection Programme and pioneering MoorFutures carbon credits finance re-wetting and paludiculture pilots.

Strategy delivery supports EU Green Deal, Paris and Ramsar pledges. Fragmented authority, farmer resistance on productive grasslands and the timetable for a full peat ban constitute the principal gaps.

## **Gabon**

Gabon positions extensive swamp forests and mangrove-peat deposits as pillars of its net-carbon-sink ambition to 2050. Although lacking a dedicated wetlands law, the Environmental and Forestry Codes, a 2020 decree requiring EIAs in mangroves and the national parks network protect key sites; nine Ramsar areas cover three million ha. Climate-finance precedent was set by a US\$150 million CFI payment for avoided emissions, and Ordinance 019/2021 allows domestic carbon credits once a peat methodology is approved. The GEF-backed Critical Wetlands Ecosystems Project is building management plans and community co-management. Internationally, Gabon leads Congo Basin peat diplomacy and the 30x30 High Ambition Coalition. Gaps include an incomplete peat inventory, no unified wetlands strategy and limited enforcement capacity in remote swamps.

## **Latvia**

Latvia's Guidelines for Sustainable Use of Peat 2020-30 seek to balance a large export-oriented peat soil industry with EU climate duties. The Subterranean Depths Law licences extraction for up to 75 years, requiring restoration bonds and EIAs; about 40 % of peatland bogs lie in protected areas where new drainage is barred. A natural-resource tax and CAP eco-schemes provide modest economic signals, while the Just Transition Fund allocates EU money to recultivate 13 600 ha of exhausted fields and develop paludiculture. Latvia's NECP pledges to re-wet 15 000 ha by 2030 and meet forthcoming EU Nature-Restoration-Law targets. Enforcement gaps, incomplete inventories and no horticultural-peat phase-out timeline remain challenges.

## **Lithuania**

Lithuania's Climate-Change Management Strategy counts peat-soil re-wetting toward its 2050 net-zero goal. Commercial mining is licensed under the Subsoil Law with obligatory EIAs and after-use, while recent CAP rules ban new drainage on peat soils. €16 million from the EU Recovery Plan funds 8 000 ha of restoration, and voluntary MoorFutures-style credits are emerging. A Peatland Action Plan is being drafted; LIFE OrgBalt pilots test re-wetting on forest and agricultural peatlands. International drivers are EU Effort Sharing, Ramsar and the Nature Restoration Law. Key gaps include fragmented statutes, weak enforcement outside protected areas and an ongoing peat-substrate export industry.

## **Netherlands**

The Netherlands' Climate Agreement targets a 1 Mt annual CO<sub>2</sub> cut from peatland meadows by 2030. Water authorities and provinces are raising groundwater tables or installing submerged drainage; GAEC 2 bans fresh conversion. Grants compensate farmers for wetter management or paludiculture, while pilot carbon-credit schemes (e.g., CarePeat) monetise emission cuts. Provincial veenweide action plans and national research into subsidence underpin programmes; peatlands support EU LULUCF and Biodiversity Strategy goals. Gaps include voluntary uptake, long-term financing and a still-fragmented national legal framework.

## **Northern Ireland**

Northern Ireland's 2022 Peatland Strategy aligns with its first Climate-Change Act, which mandates net-zero by 2050. Peatland safeguards rely on ASSI and SAC designations and planning-permission controls on extraction, but historic permits persist. Agri-environment payments, the Environmental Challenge Fund and emerging Peatland Code projects finance restoration; DAERA's Resilient Peatlands Programme and cross-border PEACE+ projects are key delivery routes. International obligations flow from the UK NDC, Ramsar and CBD. Gaps include incomplete extraction-site records, limited enforcement and pending legislation to ban horticultural peat soil sales.

## **Norway**

Norway's 2020 ban on cultivating undisturbed peatlands, strict drainage permits under water regulations and the Nature Diversity Act provide a strong legal shield. Few new concessions are issued under the Mineral Resources Act as Norway phases out commercial peat extraction. Restoration grants from the Environment Agency, agri-environment schemes and potential integration with domestic carbon pricing fund re-wetting of degraded peatland mires; pilot paludiculture studies test wet-crop viability. National peatland restoration is embedded in the 2021–2030 Climate Action Plan and biodiversity priorities, supporting ambitious Paris targets and numerous Ramsar sites. Enforcement is robust, but gaps include limited private-sector carbon finance and continued emissions from historically drained forestry peatlands.

## **Peru**

Peru's 2021 wetlands decree explicitly bans commercial peat extraction and mandates multisectoral peatland management plans. Protection is reinforced through EIAs and expansion of conservation areas such as Yaguas National Park. Economic support comes mainly from REDD+ payments, ecosystem-services legislation and donor-funded projects that promote sustainable Aguaje harvesting. Mapping, a National Wetlands Strategy and a Peatlands Action Plan (linked to Peru's NDC) guide current programmes; regional "peatland guardian" schemes involve Indigenous communities. Internationally, Peru is a GPI founding and beneficiary country partner, a

Ramsar party and an ITPC member. Implementation gaps include limited enforcement in remote Amazon peatland swamps, incomplete inventories and insufficient livelihoods alternatives.

## **Philippines**

The Philippines is finalising a Peatland Conservation Bill that will extend NIPAS-style protection to all peatlands and require local governments to integrate peatlands into land-use plans. Until enacted, peatland swamps rely on protected-area status (e.g., Agusan Marsh Ramsar site), general wetland rules and DENR guidance aligned with the ASEAN Peatland Management Strategy. Economic instruments are nascent: protected-area funds, climate-adaptation grants and donor-supported community projects finance small-scale restoration and fire management. The National Peatland Action Plan, peatland-fire-prevention pilots in Leyte and community wardens underpin delivery. Ramsar, CBD and ASEAN commitments drive policy, but gaps persist in legal coverage outside protected areas, enforcement resources, and economic alternatives for farmers on peatlands.

## **Poland**

Poland now treats its 1.2 million ha of peatland soils as a climate priority. The 2020 Greenhouse-Gas Reduction Strategy pledges a 30 per cent cut in land-sector emissions by 2030 and anchors rewetting of drained peatland fens in the National Energy and Climate Plan. Protection rests on the Nature Conservation Act, which covers roughly a quarter of peatlands inside Natura 2000, and on a tightened Water Law that subjects any ditch renewal to permit. Large-scale horticultural mining has ended and the remaining 5 000 ha of licences must be returned to wetland. EU-funded agri-environment schemes have so far rewet about 40 000 ha of marginal fen grassland; a new CAP eco-scheme will pay farmers up to €350 ha<sup>-1</sup> yr<sup>-1</sup> for keeping the water table above –30 cm. LIFE projects have restored a further 16 000 ha of raised bog. Poland supports the EU Nature Restoration Law and helped craft its peatland targets, but governance remains uneven: lowland arable peatland fens in the Vistula and Oder valleys still lose carbon, county water boards lack staff for enforcement and a draft National Peatland Strategy, promising binding targets and a domestic carbon market, has yet to be adopted.

## **Romania**

Romania's peatlands are scattered in the Danube Delta and high-Carpathian bogs; they sit under general wetland and biodiversity law rather than a dedicated peatland strategy. EU rules frame their protection: most sites lie inside Natura 2000, drainage or extraction must pass impact assessment, and new CAP conditionalities now tie farm subsidies to safeguarding carbon-rich soils. Restoration is driven by externally funded projects. EEA-Norway grants and LIFE schemes have begun re-wetting mountain peatland mires and delta wetlands, while a national guide on peatland rehabilitation and small agri-environment payments encourage peatland-friendly land

use. Ramsar listings and Romania's commitment to the EU Biodiversity Strategy and forthcoming Nature Restoration Law will require wider action, yet gaps persist. Enforcement in remote sites is patchy and a national peatland inventory is still lacking.

## **Scotland**

Scotland holds 20 % of the UK's land in peatlands, positioning it as a flagship for nature-based climate solutions. The devolved government aims to restore 250 000 ha by 2030 and has ring-fenced £250 million over ten years for its Peatland Action grant scheme. A tightening of planning policy discourages development on deep peatlands, while forthcoming regulations will ban retail peat sales and restrict muirburn on peatland blanket bogs. Carbon finance is advancing through the UK Peatland Code, enabling estates to stack private credits on top of public grants. Commitments under the Climate Change (Scotland) Act, Ramsar and an ongoing Flow Country World-Heritage bid underpin international leadership, but monitoring capacity and the pace of licence surrender in the shrinking extraction sector remain challenges.

## **Slovakia**

With only 60 000 ha of peatland, Slovakia nonetheless embeds peatland mires in its Low-Carbon Development Strategy, assigning them a mitigation potential of 0.4 Mt CO<sub>2</sub> yr<sup>-1</sup>. Active bogs and fens enjoy strict protection under the Nature and Landscape Protection Act and half lie in Natura 2000. Fuel-peat extraction ended in 2012 and the last horticultural site must be rehabilitated by 2026. EU Rural Development money funds restoration: LIFE projects have rewetted 3 200 ha of alpine mires and lowland fen. A CAP eco-scheme launching in 2023 pays €260 ha<sup>-1</sup> for high water tables, while paludiculture pilots grow reed canary grass for insulation boards. Slovakia is active in the Carpathian Wetland Initiative and reports three mire Ramsar sites, but privately owned spruce-planted bogs still fall through regulatory gaps and no national carbon market yet exists. A Peatland Action Plan under review proposes a rewetting fund financed from ETS revenues to close those gaps.

## **Spain**

Spain's 90 000 ha of peatlands are thinly scattered but climatically sensitive. The 2021 Integrated Energy and Climate Plan assigns wetland restoration a role in meeting LULUCF sink goals, while the Strategic Wetland Plan seeks to restore 20 000 ha of degraded wetlands by 2030. Protection depends on the Natural Heritage and Biodiversity Law, yet enforcement varies among autonomous communities—Galicia and Catalonia ban drainage outright; others do not. Industrial peat mining ceased in 2018 and post-extraction sites are being re-saturated through LIFE projects. CAP payments support extensification on mountain peatland bog pastures and fund drain blocking. Water-agency grants add financing where restoration secures drinking-water quality. Spain hosts three peatland Ramsar sites and backs the EU Nature Restoration Law, but a complete national peatland inventory is lacking and small drainage works

can still evade EIA thresholds. A proposed national peatland committee aims to harmonise mapping and restoration across regions.

## **Sweden**

Sweden's six million hectares of peatlands are central to its 2045 net-zero target. Since 2018 the Forestry Act requires consultation before re-ditching drains on peatlands, often leading to refusals. A rising carbon tax and ETS inclusion are phasing out energy-peat; extraction should cease by 2035. The revised Wetland Strategy (2023) pledges to restore 650 000 ha of drained peatlands by 2050 and protect all intact peatland mires larger than 50 ha. Rural-development grants and new CAP eco-schemes pay landowners to raise water tables; LONA and LIFE projects have already blocked drains on 17 000 ha. Pilot sphagnum farms and reed biomass plants explore paludiculture markets. Key gaps are privately owned forestry drains, limited GHG-flux data and inter-agency coordination; a national peatland map and enhanced monitoring network are being built to address them.

## **Wales**

Wales holds 90 000 ha of peatland and counts them toward its legally binding carbon budgets. The National Peatland Action Programme (NPAP 2020-25) aims to place all semi-natural peatlands under favourable management and restore a quarter of the most degraded area. Blanket peatland bogs are protected as SSSIs and SACs, while commercial peat cutting has ended and a retail sales ban is pending. Glastir and the forthcoming Sustainable Farming Scheme pay farmers to block drains and manage wet bog pasture; LIFE projects add funds for raised-bog recovery. By 2024 NPAP had rewetted more than 3 000 ha, guided by a national peatland map. Wales showcases NPAP in the Global Peatlands Initiative but still needs assured funding after 2025, fuller engagement of common-land graziers and better GHG monitoring to stay on track.

## 4 Key lessons

### 4.1 Peatland policy drivers

The survey findings demonstrate the growing prevalence and breadth of policies and governance strategies to protect, restore and sustainably manage peatlands across the world, since the UNEA4 resolution was agreed. In general, there was a lack of coordination between policies relating to peatlands across the countries surveyed. Some countries (e.g., Germany, France and the nations of the United Kingdom) had policy strategies dedicated to peatlands. For example, Scotland has a Scotland Peatland Strategy, which is part of a wider UK Peatland Strategy that coordinates peatland policies across all four UK nations. France has a National Wetland Plan, enacted via regional Peatland Action Plans. Both of these countries allow for sub-national variation in approaches, tailored to the unique contexts of peatlands across the country, whilst retaining national (or in the case of the UK supra-national) policy coherence. Germany has a National Peatland Protection Strategy which is designed to help meet climate targets at both federal and state levels. The peatland strategies in each of these countries are not in themselves legally binding but provide coordination and coherence between policies that apply to peatlands, in an attempt to avoid perverse incentives and other trade-offs that could lead to the degradation or destruction of peatlands.

In many EU countries, peatland policy was driven primarily by agricultural strategies for implementing the CAP, and to a lesser extent the need to meet other directives and strategies around water and biodiversity. Whether in the EU or elsewhere internationally, the nesting of peatland policy within agricultural policy remits was sometimes problematic, due to trade-offs between the management of agricultural peat soils for productive purposes (including arable and horticultural uses, and extraction for compost and energy), and the need to rewet and change land use or management to retain their carbon stores, where agriculture continues to be practised.

Countries varied in their support for paludiculture as a more sustainable alternative to traditional agricultural uses of peatlands. Although paludiculture featured prominently in German policies, it was not mentioned explicitly in the majority of countries surveyed (note: paludiculture is not a credible policy option in some countries (like Finland or Scotland) where there is a limited area of lowland peats under cultivation). Further analysis is needed, especially in countries lacking a peatland strategy, to ensure that subsidies are changed or removed that incentivise practices that degrade or convert peatlands to other land uses. The savings generated from avoiding perverse incentives could potentially be redirected to further incentivise restoration of degraded sites.

### 4.2 Regulatory approaches

Regulation of activities that could degrade or destroy peatlands was inconsistent between the countries surveyed. The majority of countries regulated afforestation on

peatlands, to manage existing woodland on peat soils to reduce emissions and avoid drainage for new planting leading to the loss of carbon alongside biodiversity impacts (Temperton et al. 2019). Regulation of peat extraction was more patchy however, ranging from an actual ban on extraction of peat (e.g., in Norway and Finland), and planned bans on extractive activities, to the announcement of intentions to explore (France) or implement bans in future (Finland), and a lack of any regulation of extractive activities in other countries (e.g. Poland and Romania). Future peatland policy in these countries may usefully explore regulatory approaches to the cessation of extractive activities, learning from experience in countries that have already implemented bans.

While the priority should be protecting peatlands from being converted, drained and/or modified (Fleischman et al. 2020), it is also possible to license ongoing practices to protect carbon stores and prevent subsidence, for example requiring more sustainable land management practices, requiring the maintenance of higher water tables under agriculture and forestry on peat soils, or requiring the restoration of former extraction sites (UNEP, 2022). Given the extensive use of peatlands for agriculture and forestry, it is unsurprising that the designation of peatlands as protected areas was less prominent than other policy approaches in the countries surveyed.

### **4.3 Incentive mechanisms and markets**

Given the difficulty of sufficiently incentivising peatland restoration and sustainable management via public subsidies alone (see previous section), there is a potential opportunity for countries to develop domestic voluntary carbon markets for peatlands, or markets for other ecosystem services, such as biodiversity or freshwater. There are a number of lessons that may be learned from existing peatland carbon markets (Box 3). In particular, these markets report insufficient supply of projects to meet demand, suggesting that the additional financial incentives associated with carbon markets are insufficient in themselves to incentivise landowner engagement. Recent research commissioned by Scottish Government (Reed et al., 2024) suggests that concerns remain about the financial model (e.g., the extent to which intermediaries benefit and the level and reliability of income that can be achieved), risks pertaining to future market instability and long-term liabilities arising from maintenance requirements, and concerns around the credentials of buyers who may be using units for “greenwashing”, given that there is no regulation to ensure buyers only offset residual emissions.

This creates a number of opportunities for policy, including the introduction of certification (e.g., following the Voluntary Carbon Market Integrity Initiative) or regulation to tackle greenwashing, and blended finance options that use public funding to derisk market engagement for landowners (e.g., via floor price guarantees that pay a minimum price for carbon units, in the eventuality of a market crash). There may also be opportunities to generate additional income via the sale of co-benefits from peatland restoration. Although most of these markets promote the co-benefits of peatland restoration, especially biodiversity enhancement, these benefits are not quantified. These “implicit bundles” of carbon and unquantified co-benefits are believed to be attractive to buyers but there is no evidence that implicitly bundled

carbon achieves higher prices than carbon that is marketed without these co-benefits. In an attempt to monetise these co-benefits, the UK's Peatland Code is developing a methodology to generate biodiversity units that can be explicitly bundled with carbon, or stacked and sold separately in projects where additionality criteria can be met (see Box 3 for more details of peatland markets).

## 4.4 Key lessons

To conclude, a number of lessons may be drawn from implementation of the UNEA4 resolution to date:

- National statutes that set quantified peatland targets and timelines may accelerate coordination and funding flows; early adopters such as EU members responding to the Nature Restoration Law moved fastest from pilot to programme scale.
- Fragmented legal mandates slowed delivery; where cross-agency platforms mapped entire peatland hydrological units, duplication of effort was reduced and trade-offs were handled more transparently.
- Public grants remain the primary driver of large-scale rewetting; voluntary carbon and biodiversity markets added value but, on their own, did not overcome landholder risk perceptions, long-term liability concerns or supply shortages.
- Early engagement of local communities, including recognition of customary rights and equitable benefit-sharing, consistently reduced conflict and improved stewardship outcomes.
- Standardised inventories, common outcome metrics and open data portals underpinned credible monitoring and adaptive management; absence of comparable baselines hindered progress tracking.
- Pilot-scale paludiculture and other wet-use demonstrations de-risked innovation and built agronomic know-how, but required structured mechanisms to transfer lessons into mainstream agricultural policy.
- Transnational knowledge exchange, via the Global Peatlands Initiative, regional pacts and multilingual training, shortened learning curves for countries drafting first-generation peatland policies.
- Intensifying drought and wildfire risk highlighted the need to embed climate-resilience considerations into hydrological design from the start, rather than treating them as add-ons.
- Clear regulatory signals (e.g., bans or sunset clauses on peat extraction and new drainage) were politically feasible when phased and paired with support for alternative livelihoods, delivering measurable emission cuts.

- Aligning agricultural, forestry and water subsidies with peatland conservation proved the quickest lever to curb ongoing degradation; where such alignment lagged, perverse incentives persisted.
- Strong, cross-sectoral partnerships are essential for delivering holistic and impactful peatland outcomes, by uniting expertise in policy, mapping, livelihoods, finance, and monitoring.
- Sustained commitment and leadership from UNEP and its GPI team are vital to maintain momentum on the implementation of the UNEA4 peatlands resolution, ensuring long-term sustainability, scaling, and institutional knowledge retention. Flexibility, dedicated funding, and stakeholder engagement further strengthen resilience and lasting impact.
- Implementation of the UNEA Resolution remains constrained by limited funding for large-scale peatland projects globally. Meeting country demands requires timely access to adequate and flexible resources. Strengthening coordination, supporting countries, and advancing the Global Peatlands Inventory urgently require investment. Closing data, knowledge, and cross-sector coordination gaps is essential to unlocking the resolution's full potential.
- GPI experience has identified four success factors for replication and scaling up support to more countries: (1) fostering South–South cooperation across levels and sectors—exemplified by the Brazzaville Declaration on Peatlands and the establishment of the International Tropical Peatlands Center (ITPC), a GPI milestone designed to connect science and practice and promote interdisciplinary collaboration across tropical peatlands; (2) defining a shared goal to drive coordinated and ambitious outcomes; (3) providing a strong scientific foundation for informed decision-making, as demonstrated by the Global Peatlands Assessment; and (4) engaging a wide range of stakeholders—from policy-makers and scientists to Indigenous Peoples and artists—to foster shared ownership and accelerate collective action through GPI linked initiatives like the Venice Agreement on Peatlands is also critical to secure long term scaled up action.

## 5 Recommendations

The analysis presented in this report underscores the critical need for coherent and coordinated peatland policies across the world to address the significant challenges of climate change and biodiversity loss. Despite progress in some countries, substantial gaps remain in policy implementation, funding, and landowner engagement. The following are adapted from the recommendations of the GPA:

1. Align sectoral policies and statutory instruments so that agriculture, water, forestry, energy, climate and spatial planning no longer contain contradictory provisions; embed quantified peatland restoration and protection targets in national legislation, implementation and reporting under the Paris Agreement, the Kunming-Montreal Global Biodiversity Framework (GBF), the Convention to Combat Desertification (UNCCD), the Convention on Wetlands, the Convention on Migratory Species (CMS), and the EU Nature Restoration Law.
2. Prepare, regularly update and fund national peatland strategies or plans—supported by cross-agency coordination platforms—and ensure they guide sub-national authorities that share peatland hydrological units. These strategies should promote integrated, landscape-level, multi-stakeholder governance models supported by strengthened institutions that align with ecological boundaries and social contexts.
3. Strengthen legal controls: phase out harmful operations that degrade peatlands by prohibiting new drainage, burning, mining and peat extraction; require licences that impose rewetting or restoration obligations for existing operations; apply sanctions for non-compliance; and introduce pollution or carbon taxes where incentives alone have failed.
4. Designate intact and high-priority degraded peatlands (plus buffer zones) as protected areas; map peatland hydrological units to capture entire water systems and avoid leakage of impacts.
5. Clarify the legal definition of peatlands within national legislation, ensuring that definitions are tailored to each country's local and regional geographic and physical characteristics of peatlands and organic soils. This enables more consistent and effective harmonization of peatland policy across sectors.
6. Empower Indigenous Peoples and their communities, local communities and gender-diverse groups through gender-responsive governance models, co-management agreements, early rights-holder mapping, removal of participation barriers, co-design of benefits, and independent reviews that enable adaptive practice. Enhance recognition and support for Community Conserved Areas (CCAs), Other Effective area-based Conservation Measures (OECMs), and other indigenous and or community-led management and governance frameworks.

7. Increase public budgets for conservation and large-scale restoration (e.g. multi-year programmes modelled on Indonesia's (former) BRG, Germany's National Peatland Protection Strategy or Scotland's Peatland Action); complement these with blended-finance structures that combine grants, concessional loans and guarantees to de-risk private capital.
8. Develop high-integrity carbon, biodiversity and water-quality crediting systems with national certification that ensures additionality, permanence and social safeguards; reform or remove subsidies that promote drainage; channel a share of revenues to local people through clear benefit-sharing contracts.
9. Promote sustainable economically viable wet uses—paludiculture, grazing, sphagnum farming and nature-based tourism—by redirecting agricultural support, providing technical advice and securing offtake agreements.
10. Maintain national, open data systems on peatland extent, condition, use and hydrology to underpin policy, monitoring and enforcement; establish and update the Global Peatland Assessment and ensure alignment with platforms such as the Global Wetland Watch; close critical knowledge gaps through coordinated research that evaluates policy instruments across regions and scales; promote international and interdisciplinary policy research to strengthen evidence-based decision-making globally.
11. Establish robust monitoring, reporting and verification frameworks that track peatland protection, restoration and sustainable management outcomes, inform adaptive management and meet international transparency requirements.
12. Use blended international finance and technology transfer to accelerate action in low-income regions; support participation in global and regional peatland initiatives, knowledge networks and South-South cooperation.

By following these recommendations, it is hoped that new policy and governance may be developed to ensure that peatlands continue to deliver critical ecosystem services and contribute to global climate and biodiversity goals.

Future research and policy efforts should focus on refining and expanding the application of the survey to a broader range of countries, ensuring comprehensive global coverage of peatland policies and governance. Building on the initial findings, further studies should investigate the effectiveness of various policy instruments and their implementation at local, national, and international levels. Continuous monitoring and evaluation of peatland policies will be essential to adapt to new scientific insights and evolving environmental conditions, ensuring the sustained protection and restoration of these critical ecosystems.

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