

Peatlands

WHAT IS IT ABOUT?

Peatlands are ecosystems characterised by permanently wet soils, which prevent plant material from breaking down completely. The excess water and a resulting lack of oxygen in peatlands mean that dead plants and other organic materials decompose very slowly and, instead, accumulate over thousands of years to form the carbon-rich soils called peat.¹ Peatlands span various climatic zones and continents but are predominantly found in regions between 45-70° latitude such as Canada, northern Europe, and parts of Russia. In total, they cover more than 4 million km², making up 3% of the Earth's terrestrial surface.²

3 FAST FACTS

1 million

The number of hectares that need to be rewetted annually in Europe to meet the Paris Climate Agreement targets, out of a total of 2 million hectares worldwide.³

5x

more emissions are generated by dairy products from animals raised on drained peatlands compared to those raised on non-peatland soil.³

10 tonnes

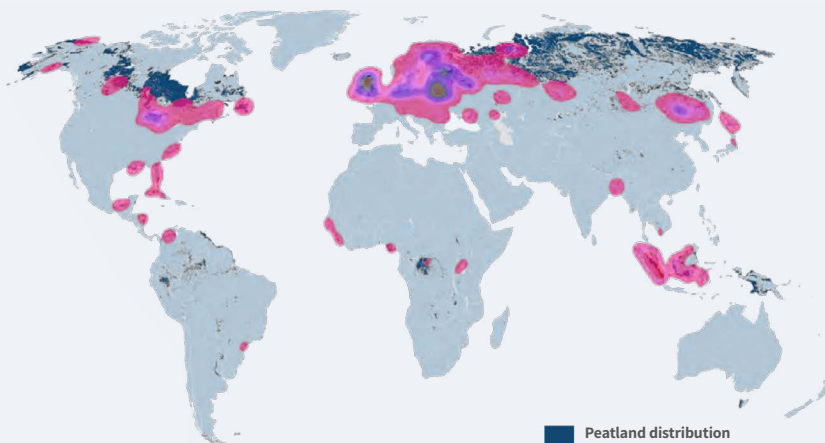
Avoided emissions every year per one hectare of rewetted peatland, which is equivalent to the average annual emissions of each European.⁴

WHY ARE PEATLANDS IMPORTANT FOR OUR CLIMATE?

With over 600 billion tonnes, peatlands store more carbon than any other terrestrial ecosystem including the world's forests.⁵ Intact peatlands also regulate water flows and lessen the risk of floods, droughts, and forest fires. Protecting peatlands is crucial, therefore, not just for curbing carbon emissions but also for adapting to climate change. Moreover, numerous endangered or endemic animal and plant species call peatlands their home.

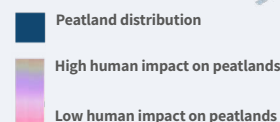
Humans have been draining peatlands for centuries, mainly to clear land for agriculture and forestry, and to extract peat for fuel or horticulture. However, draining peatlands causes water levels to fall and exposes stored carbon to oxygen. This leads to microbial decomposition of the peat which releases significant amounts of carbon dioxide and nitrous oxide into the atmosphere, ultimately turning peatlands from carbon sinks to carbon sources. In fact, degraded peatlands currently contribute about 5% of global CO₂ emissions and 7% of the EU's emissions.³

To address this challenge, funders should support measures that prevent or reduce the drainage of wet peatlands as well as efforts to restore degraded peatlands.



Peatland distribution and human impact

Adapted from Heinrich Böll Foundation et al. 2023



Rewetting degraded peatlands

Establishing real-world laboratories: Rewetting drained peatlands can partially restore them and significantly reduce their emissions.⁶ Changing water management systems and closing drainage channels are effective strategies to restore water levels.⁷ While often technically simple,⁸ challenges arise due to the heterogeneity of peatlands and the diverse interests of the stakeholders. Raising societal awareness is key to creating a public mandate for scaling up rewetting efforts. We need concrete examples of successful and inclusive peatland restoration. Funders can support these beacon projects, showcasing best practices and demonstrating how to engage stakeholders and overcome administrative challenges.



Reducing incentives for draining wetlands

Developing a business case for wet peatlands: To protect peatlands, financially viable alternatives to conventional agriculture are needed. *Paludiculture*, the commercial use of wet peatlands, offers many promising solutions, like using biomass to produce paper, cardboard, and building materials. However, immature markets hinder widespread adoption.⁹ For example, Germany imports much of its reed for thatched roofs from China, despite great potential for domestic production through paludiculture.³ To help the market uptake of paludiculture products, funders can stimulate early-stage development of scalable business models and foster stakeholder coalitions across sectors like construction, agriculture and manufacturing. In this way, funders not only contribute to reducing emissions from drained peatlands but also enhance the competitiveness of low-emission commodities.



Reforming subsidies: European agriculture heavily relies on subsidies and many governments, including the EU, incentivise farming on peatlands and thus drive the continuation of draining practices.³ Policy changes are necessary to scale peatland protection. Funders who prioritise political advocacy to shift subsidies would not only help to protect peatlands but also create an opportunity to promote alternatives to peat-based products. Crucially, policies should be developed in collaboration with local communities to ensure their needs are met.



There are many different strategies to engage in climate philanthropy. See our [Spotlight on Climate Funding Strategies](#) to learn more.

THINGS TO CONSIDER WHEN FUNDING PEATLAND ACTIVITIES

- ▶ **Balancing interests:** For centuries, peatlands were seen as obstacles and farmers have drained peatlands to clear land for agriculture. In the light of today's scientifically established conservation and climate targets, this perspective is outdated. Funders can play a pivotal role in changing perspectives by engaging with land-owners and showcasing the broader benefits of peatland restoration such as improving water retention and quality. Funders should act as facilitators, fostering dialogue between scientific experts and farming stakeholders to formulate solutions that balance ecological priorities with socio-economic realities.
- ▶ **Taking a long-term view:** While rewetting peatlands immediately stops carbon and nitrous oxide emissions, it increases methane emissions, slightly adding to global warming in the short term. After a few decades, however, rewetting contributes to cooling the planet because the reduction or elimination of carbon and nitrous oxide emissions outweighs the impact of the methane emissions.⁶ Funders should therefore approach the restoration of peatlands with a long-term vision to ensure their interventions have positive climate outcomes.
- ▶ **Geographical priorities:** Europe is the world's second-largest emitter of greenhouse gases from drained peatlands after Indonesia. While Indonesia has made notable strides in protecting peatlands, EU and national agricultural policies of European countries have largely neglected the adoption of sustainable peatland management practices.³ This leaves Europe with unresolved peatland drainage issues, making it a target for philanthropic intervention with considerable leverage.



Looking for funding opportunities? Explore our [Climate Solutions Hub!](#)

[Link to bibliography](#)