



Peat Pals for LIFE

A closer look at the Fochteloërveen



Why peatlands matter

Peatlands are unique ecosystems that are home to many rare and endangered species that are found nowhere else. Regionally, these areas influence hydrology, contribute to flood prevention and act as a buffer against water pollution. Worldwide, peatlands regulate the climate by storing enormous amounts of carbon. Due to human activities, the total surface area of peat has decreased dramatically in recent centuries and it faces similar problems such as desiccation, climate change and high nitrogen deposition. Action is needed to prevent further degradation and promote the recovery of our remaining peatlands.

About the project

The main objective of the **Peat Pals for LIFE** project is to structurally improve the condition of habitats and species that are currently in an unfavorable status within Natura 2000 areas. In this EU project, Natuurmonumenten (NM), Natuurpunt (NP), Wageningen University - Department of Environmental Sciences (WU-DES) and Eurosite (ES) will restore a variety of degraded and carbon-rich peat ecosystems in the Netherlands and Flanders. By doing this we create a variety of peat ecosystems, which are more resistant to external effects, in the **Fochteloërveen (Netherlands)** and in the **Valley of the Abeek, Dommeldal and the Veewei (Flanders)**.

Objectives and scope

- Restoration of various degraded peat ecosystems in the **Fochteloërveen (NL)** (260 ha) and in the **Valley of the Abeek, Dommeldal and the Veewei (Flanders)** (56 ha) by, among other things, (1) restoring the hydrology by building dams and closing drainage ditches, and (2) removal of shrubs.
- Contribute to a positive effect on the greenhouse gas budget; the total amount of greenhouse gases that we are allowed to emit in order to limit global warming to a certain level.
- Integrate lessons learned from practice into a broad **Peat Pals for LIFE** strategy.
- Use of the (peat) network to obtain and disseminate knowledge.



Nature restoration in the Fochteloërveen

The Fochteloërveen is a unique nature reserve with a surface area of 4,000 hectares, of which 1,500 hectares consists of recovering raised peat. This difficult to penetrate, soaking wet and nutrient-poor area is home to countless special animals and plants. Rare butterflies, dragonflies, reptiles and plant species are found in this nature reserve. **Cranes** create their nests here as well. Plants such as **cotton grass** and various types of heather grow in higher places in the area, whereas **peat moss** grows in lower places.

Challenges

Nitrogen deposition, climate change and desiccation are applying pressure on nature in the Fochteloërveen. Due to previous mining and drainage activities around the area, this nature reserve is higher than the rest of the surrounding environment. It is a raised peat remnant which is now 1/10 of the original part. The rainwater that is normally retained in the raised bogs drains away far too quickly. To solve this, Natuurmonumenten has built quays made of peat, foil and wood in the past to retain the water as part of the LIFE project. It worked well, as long as the material was submerged. However, climate change and the enrichment of the soil by nitrogen, which causes grass and birch growth and therefore more evaporation, accelerated the process. The quays started to leak and could no longer hold the water.



Working together

Restoring quays is necessary to retain rainwater for a longer period of time. The old wooden and foil quays are being replaced by sustainable sand quays which has a total length of 55 kilometres. Approximately 10 kilometres will be realized on behalf of the LIFE project. Together with partners we work to restore the area. Our partners are Staatsbosbeheer, the national government, the provinces of Fryslân and Drenthe, the municipalities all around and the water boards.

Results

By restoring the quays we achieve a favourable status of the hydrology in the compartment system in the Fochteloërveen (260 ha). In this way we develop good preconditions for the increase and quality of the habitat of typical raised bog species such as **peat moss**, **oblong-leaved sundew** and **round-leaved sundew**. This also applies to species such as the **large heath butterfly**, **large white-faced darter**, **bog dragonfly**, **subarctic hawk** and **crescent bluet**. The breeding habitat will be expanded and made more suitable for the birds, **whinchat** and **crane**.

The favourable hydrological status achieved with quay restoration makes it possible to restore and increase peat growth. Well-functioning active raised bog increases water retention and acts as a buffer during extreme precipitation and dry periods. By measuring carbon and greenhouse gas dynamics we understand the impact of restoration activities on, among other things, the reduction of CO₂ emissions. Collaboration with partners in and outside the area is conditional for achieving these results.

LIFE is a European subsidy program that works to achieve European environmental, energy and climate policy. This flyer is co-financed by the European Union. However, the views and opinions expressed are solely those of the author(s) and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for this.



Co-funded by
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