

ADMIRE

FLANDERS AND THE NETHERLANDS JOIN FORCES FOR PEATLAND RESTORATION



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PEATLANDS UNDER PRESSURE

Peatlands are under pressure worldwide. They are drained on a large scale for peat extraction and conversion into agricultural land or forestry, in several regions already over the last 1000 years. As a result of water level drawdown and/or an increase of nutrient loads, peat formation stops and the peat soil gradually degrades. The organic carbon stored in the peat soil for thousands of years is rapidly released into the atmosphere as carbon dioxide.



In the Flemish and Dutch river valleys remaining peatlands still gradually disappear due to drainage and water pollution. This region has probably lost more than 75% of its remaining wetlands and peatlands since 1950 (Declercq et al., 2016) while an even larger area may have been lost during the centuries before. It is therefore crucial to preserve and restore the last remaining peatlands.

PEATLAND RESTORATION FOR BIODIVERSITY AND CLIMATE

Climate change has put peatlands back in the spotlight. After all, peatlands store huge amounts of carbon and protect us against floods and droughts. An intact peat soil acts like a sponge, sucking up water during wet periods and releasing it only gradually during droughts. Also, these unique habitats are home to a distinct peatland biodiversity, including many endangered plant and animal species.

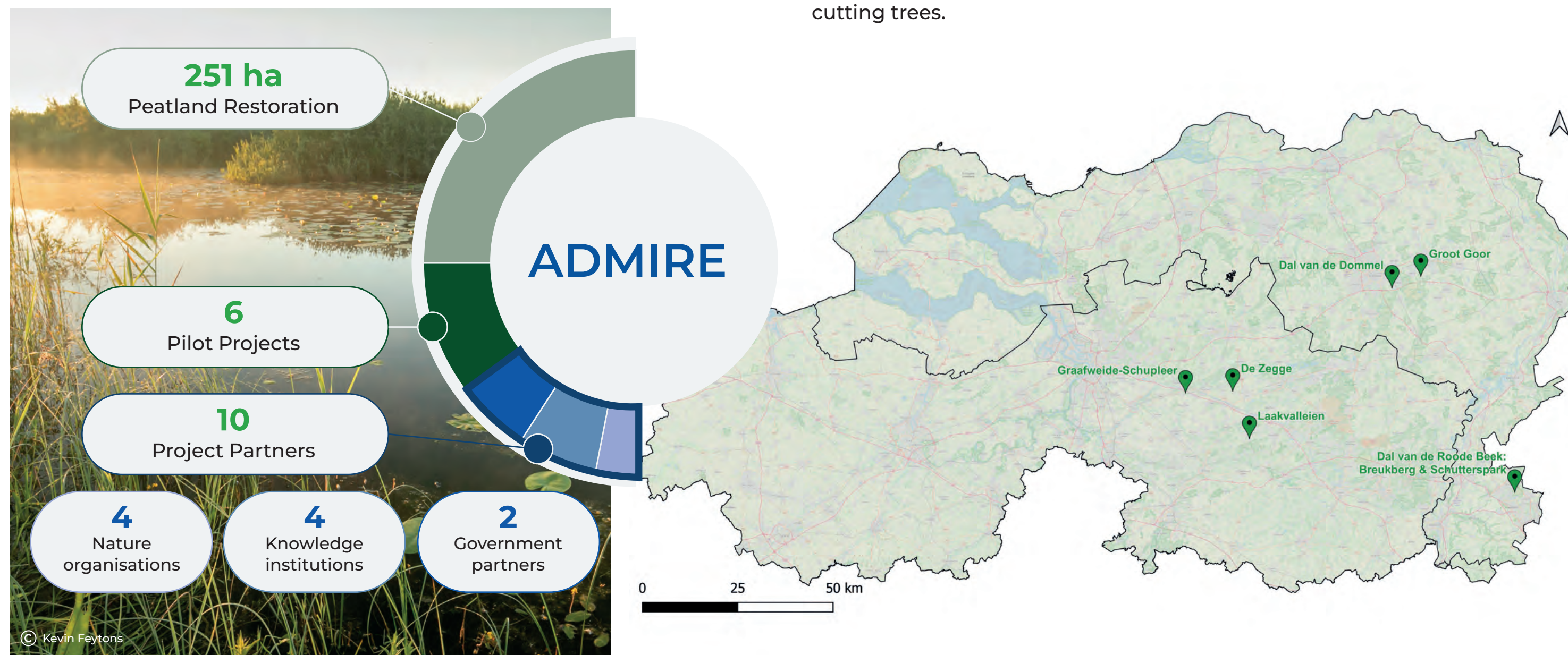
In Interreg ADMIRE, 10 project partners in Flanders and the Netherlands work together to restore peatlands in this transborder area. Extensive research is conducted into the benefits for both biodiversity and climate. This will allow to construct a best practices handbook for peatland restoration and management.



250 HA OF PEATLAND RESTORATION

Interreg ADMIRE ('adding mire' or 'making more peatlands!') builds on experiences and knowledge gained in previous European projects and aims to realise peatland restoration and accompanying build-up of expertise through research and exchange between the partners in this transborder region. The project aims to restore 6 pilot sites, about 250 hectares in total.

A high and more stable water table is required to restore these peatlands. As a first step in the restoration actions landscape ecological system analyses (LESAs) are carried out by Stichting Bargerveen and University Antwerp, to understand the key factors and processes in the functioning of these peatlands and their degradation and to take effective rewetting measures. The project includes measures, like installing weirs and closing of drainage ditches in and around the sites to raise groundwater levels and cutting trees.



ADMIRE: A LANDSCAPE SCALE APPROACH

A landscape scale approach is necessary for long-term conservation and restoration of these ecosystems. This is quite a challenge because the landscape is often highly fragmented and intensively used. That is why ADMIRE also wants to set up sustainable collaborations with stakeholders, like farmers, around the sites.

ADMIRE project, around 120 farmers are engaged in discussions about the impacts of wetland conservation and alternative farming methods on wetter lands. The project aims to contribute to viable business models for wet agriculture in the region by fostering collaborations between farmers and other relevant companies through events and co-creation workshops. The outcomes are being shared actively to influence policy recommendations and foster broader collaboration.

For example, in the Kleine Nete area the Flemish Land Agency is exploring sustainable agriculture and environmental conservation. As part of the



MONITORING THE EFFECTS OF PEATLAND RESTORATION

Research is being carried out regarding the impact of peatland rewetting on biodiversity and other ecosystem services.

Monitor GHG emissions as a base for Carbon Credit System Flanders-Netherlands

Within ADMIRE, Radboud University measures greenhouse gases (GHG) at two pilot sites comparing a hydrologically restored peatland with a still degraded peatland (despite restoration efforts) at both locations.

Also, ADMIRE is exploring the creation of a region-specific carbon credit system based on the Voluntary Carbon Standard (VCS), linking various environmental improvement measures.

To predict the impact of hydrological measures on greenhouse gas emissions, Greenhouse gas Emission Site Types (GEST; Couwenberg et al., 2011/2008) are incorporated. The GEST approach uses water level and vegetation to estimate GHG emissions for peatlands current and future land use scenarios. GHG measurements by Radboud University, in combination with groundwater level measurements and vegetation mapping, are used to improve this GEST method for the specific case of Dutch and Flemish river valley peatlands.



Mapping typical peatland biodiversity and determining its response to restoration

Which hoverflies, spiders, carabid beetles and grasshoppers typical of peatlands are still present in our pilot sites? What other peatland species still have relict populations in the pilot sites? How do invertebrate communities respond to peatland restoration at the pilot sites? And how does mowing affect invertebrates in the peatland? To find answers to these questions, Natuurpunt (Study) conducts research in collaboration with the site managers. Malaise traps are used to determine which hoverfly species are present in three pilot sites. As with spiders and ground beetles, there are many hoverfly species that depend on peatland. There are e.g. species whose larvae feed on aphids on typical peatland plants. Others live in seepage mud, and are very sensitive to the desiccation of their habitat. A field experiment has been initiated to assess the effect of different

mowing techniques on the remaining peatland invertebrates. Finally, the first effects of peatland restoration is studied in 2 severely degraded pilot sites. At present, the baseline situation before restoration is being determined.



For wider biodiversity inventories of the pilot sites and other peatland areas a citizen science approach is taken, making use of the most widely used online biodiversity data platform waarnemingen.be/waarneming.nl and its apps. A peatland challenge covering over 400 typical peatland species was launched to stimulate recording sightings of peatland species and raise awareness of peatland biodiversity.

AWARENESS AND KNOWLEDGE SHARING

Interreg ADMIRE also focuses on raising awareness about the importance of peatland conservation and restoration in the transborder region and launched the Peatland Platform in Flanders and the Netherlands for exchange of knowledge and practical experience on peatlands.

Also, a handbook with decision trees is being developed to provide nature managers in Flanders and the Netherlands with the necessary tools to identify win-win situation and balance trade-offs between different peatland restoration and management techniques.



'Veenplatform Vlaanderen - Nederland' (Peatland Platform Flanders-Netherlands)



We are a new knowledge platform for nature managers, researchers and (local) authorities. The platform shares knowledge and experience on peatland restoration and management based on three pillars: best practices, research and policy. It challenges nature managers and researchers to protect and preserve the unique and seriously threatened peatland landscapes in Flanders and the Netherlands more effectively.

Besides the digital platform we will also organise seminars, field visits and symposia. Follow us online!



PROJECT WITH EUROPEAN SUPPORT

EU support: € 2.90 million (50%)
Total budget: € 5.80 million
Duration: 01.04.2023 - 31.03.2026
Interreg VI Theme: A greener Europe



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