





# LIFE ORGBALT AND THE EU NATURE RESTORATION LAW: TAKING DECISIVE STEPS TOWARDS RESTORATION OF DRAINED PEATLANDS THROUGH SCIENTIFIC ANALYSIS



The European Environmental Agency has estimated that 81% of EU-protected habitats were in poor condition in 2018 (1). Considering this statistic, the European Biodiversity strategy for 2030 was developed with a long-term plan of protecting nature and reversing the degradation of ecosystems (2). The EU Nature Restoration Law comes as a response to the Strategy, elaborating the key steps and goals in nature restoration. The European Council agreed on a proposal for the Nature Restoration Law in June 2023, which will be the basis for further negotiations with the European Parliament in the second half of 2023. While the specific conditions of the law are yet to be agreed upon, it is worth examining the direction in which this policy will guide nature restoration efforts in the upcoming decades.

LIFE OrgBalt is a project that tests and implements **Definition of restoration** climate change mitigation measures in drained The term nature restoration in context of the Law nutrient-rich organic soils. In the context of the states that "Restoration is a process to support the Nature Restoration Law, the project and its recovery of degraded, damaged or destroyed approaches can be used as a knowledge base for *ecosystems and bring more nature and biodiversity* accelerating nature restoration on peatlands across Europe. In this article, the concept *marine environment and urban spaces."* (3) of nature restoration, especially restoration of Two approaches to restoration can be distinguished drained peatlands, is explored and examples of - active and passive. Active restoration entails successful restoration measures are presented, actions that eliminate the source of ecosystem demonstrating how additional investment into degradation nature restoration can help build more resilient accelerate the recovery. Passive restoration only ecosystems and protect against future threats.

drained back everywhere, from agricultural and forest land to

implements and measures to removes the factors contributing to ecosystem













GREIFSWALD







degradation and allows for the ecosystem to recover naturally (4).

In practical terms, restoration measures can range from introducing flower strips in agro-ecosystems to reducing areas of impermeable concrete in urban areas to reconnecting rivers to its surrounding floodplains (5).

### **Costs and benefits of restoration**

With such a variety of nature restoration measures, the potential costs of implementation also differ. The overall costs of the Law are estimated to amount to 154 billion euro - this financing is needed for restoration efforts. purchasing land, compensation payments, and administrative costs for Member States (6). In the long term, benefits like ensuring greater resilience against catastrophic events, as well as providing climate change mitigation and adaptation, are expected to outweigh the costs. The European Commission estimates that this type of investment will add €8 to €38 in economic value for every €1 spent, due to ecosystem services like food security, climate change mitigation, and human health, fostered by nature restoration (7).

In this context it is important to note that the Nature Restoration Law does not aim to stop economic activity in ecosystems, but instead provide solutions for maintaining nature-based industries sustainably. The activities of nature restoration both create new jobs and help maintain the industries dependent on the quality of ecosystems - agriculture, forestry, fishery, tourism, etc. Apart from employment opportunities created, well-functioning ecosystems bring economic value from crop provision, flood mitigation, and water supply and treatment, which otherwise would require more investments and man-made infrastructure to maintain (8). For example, when designing solutions for adaptation to floods, it has been found that reconnecting a river to its floodplains is much cheaper than building a concrete storm basin upstream (9).

#### Peatlands, wetlands, forests, grasslands benefits

Of all the ecosystems in the scope of the Nature Restoration Law, we further focus on those addressed by the project Orgbalt - drained peatland managed for agriculture and forestry. The forestry and agriculture sectors rely on the wellbeing of these ecosystems, as these habitats bring numerous benefits for flood management, food provision, and carbon storage in biomass and soil.

Unfortunately, a steady decline has been observed in the quality and quantity of these ecosystems in Europe. Since 1970, the area of wetlands in the wider Western, Central and Eastern European region has shrunk by 50%, and as of now, 84% of peatlands are in unfavourable conservation status (10). Around 49% of European grasslands are deemed to have a bad conservation status, with an alarming trend for further deterioration (11).

Some of the measures supported by the Nature Restoration Law in its current form with regards to drained peatlands include removing peatland drainage structures, discontinuing peat excavation, applying paludiculture, and converting cropland to grassland (12). Multiple similar efforts focused on peatland restoration have already been tested and successfully implemented across Europe. These are examples that can serve as a guide for future investment into effective nature restoration measures under the Nature Restoration Law.

#### **EU case studies**

(m) Luke

A series of six LIFE projects focusing on mire restoration in Belgium were implemented between

BALTIJAS KRAST







2003 and 2019. The projects mapped about 40% of the peatlands nationally and achieved improved peat soil hydrology in over 2500 ha of peatlands (13). To name a few, the nature restoration measures implemented in these projects were related to deforestation by stopping natural spruce regeneration, hydrological restoration of peaty or very wet soil by ditch blocking, building dams, digging small ponds, and recolonising the areas with purple moor grass (14).

Nature restoration work on raised bog areas in Natura 2000 sites was implemented in Ireland under the LIFE project "Living Bog". To restore 3000 ha of raised bog, measures such as drain blocking for restoring the original hydrological level and removal of invading trees for improving the ecological conditions for recovery were implemented (15).

The restoration of mountain grasslands and peatlands was tackled in the Piedmont region of Italy, where a LIFE project launched in 2003 led to increased biodiversity, improved the amount of nutrients, and stopped the processes of degradation from erosion and trampling. The nature restoration measures employed in the project habitats were related to cattle and horse grazing, shrub removal, and restoration of the original hydrological regime (16).



#### Orgbalt case studies

LIFE OrgBalt is one of the projects currently contributing to the demonstration of science-based and region-specific climate change mitigation measures in nutrient-rich organic soils. In the project, the distinction of forest and agricultural areas is applied to design and analyse the most appropriate measures.

The Nature Restoration Law sets out nature restoration goals for forest and agricultural ecosystems. For forest ecosystems, restoration efforts should aim at reaching a positive trend for standing and lying deadwood, uneven aged forests, forest connectivity, abundance of common forest birds and stock of organic carbon (17). In agricultural ecosystems, the focus is on increasing the grassland butterflies and farmland birds, the stock of organic carbon in cropland mineral soils, and the share of agricultural land with high-diversity landscape features; with the goal of restoring 30% of drained peatlands under agricultural use by 2030; and 50% by 2050 (18). The targets for drained peatland restoration were softened by the Council, taking into consideration the disproportionate impacts of these targets on various member states (19).

The project LIFE Orgbalt contributes to these goals by implementing measures related to paludiculture, agroforestry, and other common practices also potentially to be supported under the Nature Restoration Law. For example, cropland is turned into an agroforestry site by planting fast growing trees and grass; grassland is afforested with black alder and birch; fast growing species are introduced in riparian buffer zones of croplands. Demonstration of these practices serves for both climate change mitigation and nature restoration.

Most importantly, the demonstrations of these practices are closely monitored and analysed.





















Environmental data is gathered in project sites to judge the effectiveness of the measures and share the outcomes with the scientific community. Economic and social factors of implementation are analysed to boost the feasibility of upscale and transfer of such solutions after the project is concluded. With more ambitious investment into nature restoration to follow, it is crucial that the restoration measures supported are science-based, economically feasible, and socially beneficial. The outcomes of past and current nature restoration projects can serve as valuable tools for bringing the targets set out in policy to life.

LIFE ORGBALT TEAM



To receive our newsletter, send us an email to <u>info@baltijaskrasti.lv</u> or submit a request on our project <u>website</u>.

**FIND OUT MORE** 





Project "Demonstration of climate change mitigation potential of nutrient rich organic soils in Baltic States and Finland" (LIFE OrgBalt, LIFE18 CCM/LV/001158) is implemented with financial support from the LIFE Programme of the EuropeanUnion and State Regional Development Agency of the Republic of Latvia. www.orgbalt.eu

The information reflects only the LIFE OrgBalt project beneficiaries view and the European Climate, Infrastructure and Environment Executive Agency is not responsible for any use that may be made of the information contained therein. Additional information: www.orgbalt.eu









## References

1https://www.eea.europa.eu/en/topics/at-a-glance/nature/state-of-nature-in-europe-a-healthcheck/habitats-and-species-latest-status-and-trends 2 https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030\_en 3 https://ec.europa.eu/commission/presscorner/detail/en/qanda\_22\_3747 4 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022SC0167&qid=1686750707844 5 https://op.europa.eu/en/publication-detail/-/publication/95311c9d-f07b-11ec-a534-01aa75ed71a1 6 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022SC0167&qid=1686750707844 7 https://op.europa.eu/en/publication-detail/-/publication/95311c9d-f07b-11ec-a534-01aa75ed71a1 8 https://ieep.eu/wp-content/uploads/2023/01/5\_Economic-benefits-of-Nature-Restoration.pdf 9 https://op.europa.eu/en/publication-detail/-/publication/95311c9d-f07b-11ec-a534-01aa75ed71a1 10 https://ec.europa.eu/commission/presscorner/detail/en/qanda\_22\_3747 11 https://www.eea.europa.eu/ims/conservation-status-of-habitats-under 12 https://www.consilium.europa.eu/media/65128/st10867-en23.pdf 13 https://biodiversity.europa.eu/europes-biodiversity/habitats-to-be-restored/wetlands 14 https://webgate.ec.europa.eu/life/publicWebsite/index.cfm? fuseaction=search.dspPage&n\_proj\_id=4048 15 https://environment.ec.europa.eu/topics/nature-and-biodiversity/nature-restoration-law/successstories\_en 16 https://lib.icimod.org/record/13650 17 https://ec.europa.eu/commission/presscorner/detail/en/qanda\_22\_3747 18 https://ec.europa.eu/commission/presscorner/detail/en/ganda\_22\_3747 https://www.consilium.europa.eu/en/press/press-releases/2023/06/20/council-reaches-agreement-on-thenature-restoration-law/ 19 https://www.consilium.europa.eu/en/press/press-releases/2023/06/20/council-reaches-agreement-on-



the-nature-restoration-law/









