

POLESIA

Climate Change Mitigation in the Endangered Landscapes Programme

Why Restore Landscapes?

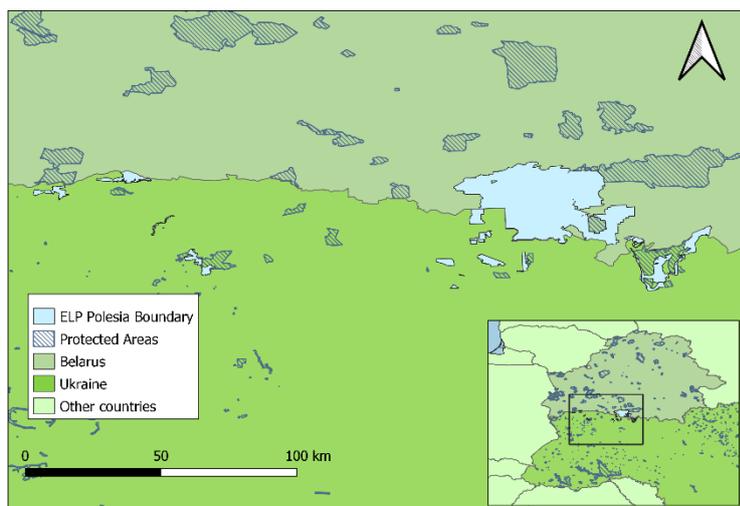
Landscape restoration is increasingly being recognised as a vital tool in limiting the consequences of climate change whilst meeting global biodiversity goals.

The Endangered Landscapes Programme aims to restore natural ecological processes and conserve biodiversity across Europe.

The Project

Polesia is one of the last truly 'wild' locations in Europe, covering more than 18 million ha, including the last remaining oak Taiga and floodplain forests, the Almany mire and the unmodified Pripyat river. Often compared to the Amazon due to its size and rich biodiversity, Polesia is home to flora and fauna of national and international conservation importance, such as Greater Spotted Eagles and European Bison.

The Polesia project aims to enhance protection, securing ecosystem service functioning and benefits for the long-term conservation of its varied and internationally important biodiversity.



Assessing the climate mitigation potential of restoration projects

There are several tools and methodologies available for assessing the climate mitigation potential of restoration projects. The choice of an appropriate tool depends on the data available and detail required. This project utilises the EX-ACT GHG assessment tool developed by FAO.

By default, EX-ACT makes use of 'Tier 1' emissions factors: globally agreed means for broad habitat and climate regions. However, 'Tier 2' inputs can be added: emissions factors specific to local areas or adjusted with site-specific information. Updating these values to 'Tier 2' can provide projects with more tailored results and reduce associated uncertainty.

By comparing the outcomes of the project to a baseline, or "business-as-usual" scenario the Greenhouse Gas benefits can be assessed.

The Baseline scenario assumed the previous management of the site would remain unchanged with no restoration activities taking place. This includes annual deforestation rates and forest impact by wildfires remaining unchanged.

The Project scenarios included the main outcomes of the project, with peatland rewetting taking place on 6,000 ha. Annual deforestation and forest fire impact are expected to be reduced to align with neighbouring protected areas.

Project Size: 272,425 ha

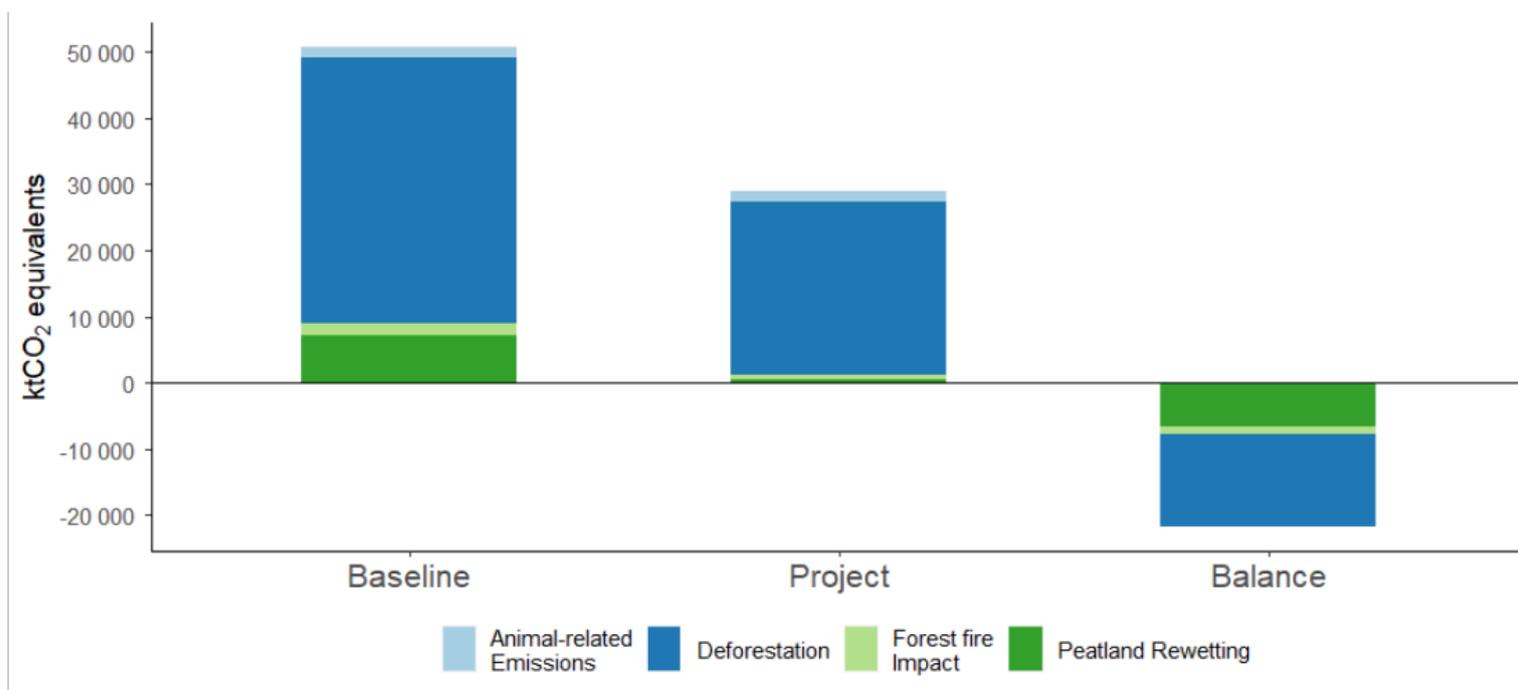
Assessment timeframe: 2020-2040

Project Outcomes

- **Strengthen the protection status of the region** to conserve existing habitats and reduce anthropogenic degradation in the core areas of Central Polesia
- **Improve connectivity of habitats** across Central Polesia for large mammals including wolf, lynx and bison.
- **Restoration of 6,000ha of wetlands** affected by drainage, through rewetting projects.
- Work with local communities to develop sustainable economies

Tool: EX-ACT

Mitigation potential: -21,850,741 tCO₂e



Project Outcomes

According to the GHG assessment tool EX-ACT, the project is expected to significantly reduce emissions as well as sequester carbon over 20-year period. Expected project activities were estimated to result in a net negative GHG balance of **-21,850,741 tCO₂e**.

The rewetting of drained peatlands was estimated to reduce emissions compared to the drained state and sequester carbon totalling **-6,695,853 tCO₂e** over the assessment period. Some increased methane emissions result from rewetting, but are heavily outweighed by reductions in emissions from degrading peat soils, and carbon sequestration.

The project also assessed historic deforestation rates across each forest class (between 2015-2019) in the project site and neighbouring established protected areas. Deforestation rates falling to the latter were calculated to reduce associated emissions by **-14,193,030 tCO₂e** in comparison to the Baseline scenario.

Similarly, reducing forest fire impact to rates seen in neighbouring protected areas was estimated to reduce associated emissions by **-961,858 tCO₂e**.

Limitations

The results presented here are estimates and could be further improved with emissions factor and carbon storage data collected from the site. Data on emissions associated with peatlands in drained and rewetted states within the project site were limited and on-site measurements to verify these would greatly improve estimates.

Similarly, deforestation rates and fire impact estimates would be improved with data collected from the site and greater understanding of the impact of increased protection on these.

Further Benefits

- **Improved habitat** and connectivity for wildlife.
- **Reduced wildfire occurrence and severity** through the restoration of drained wetlands.
- **Improved ecosystem service functioning** benefitting both wildlife and local communities.
- Benefits to the wider community through improved local economies.

More information

[ELP Polesia](#)

[Frankfurt Zoological Society](#)

[British Trust for Ornithology](#)

[BirdLife Belarus](#)

[Ukrainian Society for the Protection of Birds](#)

[EX-ACT Tool](#)

[ELP Natural Climate Solutions](#)



giving nature
a home



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