

# UKRAINE & BELARUS– POLESIA

## Climate Change Mitigation in the Endangered Landscapes and Seascapes Programme



The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations

The Endangered Landscapes and Seascapes Programme supports nature restoration across European land- and seascapes.

### Why restore nature?

As well as providing benefits for biodiversity and ecosystem services, restoring nature also has the potential to contribute to climate change mitigation.

### About the project:

Polesia is a large lowland region surrounding the Pripyat River. The habitats here include floodplain meadow, forests, peatlands and wetlands.

This landscape provides valuable ecosystem services, including water provision and flood prevention. Additionally, it hosts high biodiversity, with species including wolf, lynx and European bison.

This restoration project aims to restore drained wetlands and protect existing forest areas. The aim is to improve ecological connectivity, which has been impacted by human activities.

**Project size:** 278,409 ha assessed out of 1,200,000 ha

**Assessment timeframe:** 2022-2042

**Project lead:** Frankfurt Zoological Society & BTO

### Key activities:

- Rewet drained peatlands
- Protect existing forest
- Improve ecological connectivity

**Total mitigation potential:** -2,895,015 tCO<sub>2</sub>-e

### Assessing the climate change mitigation potential of this project:

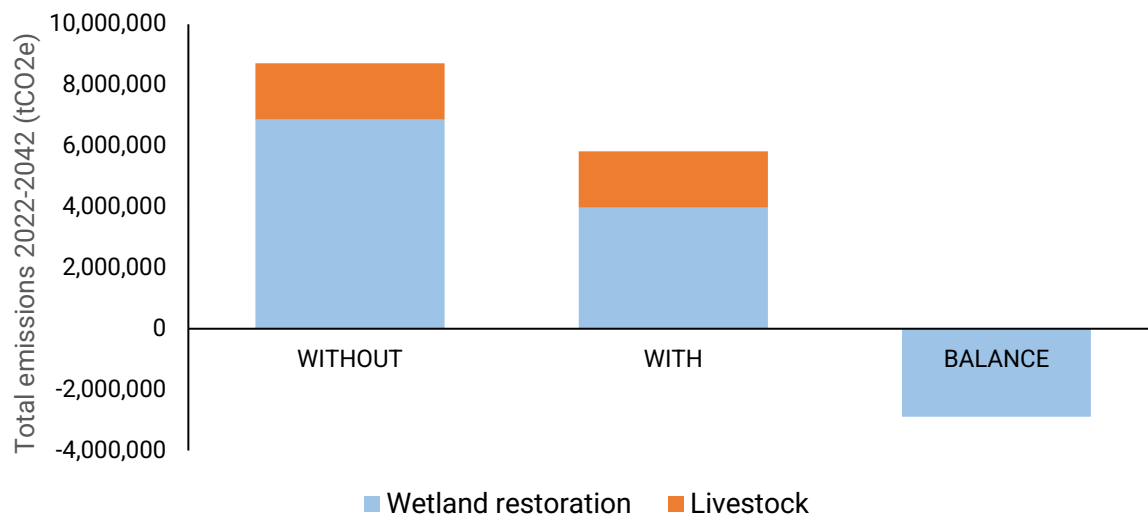
To determine the contribution of these actions towards climate change mitigation, their impacts on carbon stocks and GHG emissions need to be calculated. The most applicable tool for doing this is the EX-ACT carbon assessment tool, developed by FAO.

This tool uses the default 'Tier 1' emission factors, for the carbon sequestration of broad habitats and regions. Accuracy can be increased by more specific 'Tier 2' emission factors from the literature.

EX-ACT compares the 'project scenario' (the impacts of the restoration interventions) with a 'baseline scenario'. This determines the changes in greenhouse gas sequestration that are due to the project.

For this landscape, the interventions include rewetting drained peatlands and avoiding emissions from deforestation.

## Climate change mitigation results:



Assessed total emissions (tCO<sub>2</sub>-e) over 20 years in the baseline scenario (without), project scenario (with), and the resulting emissions difference due to the project (balance)

### Project outcomes

Over the 20 years of this assessment (2022-2042), the EX-ACT tool predicts there will be a total net emissions reduction of around **-2,895,015 tCO<sub>2</sub>-e**.

Emissions reductions are all predicted to be due to the rewetting of drained peatland. Although the peatland remains a net source of emissions over this timeframe, these are reduced compared to the baseline scenario. Moreover, the rewetted peatlands are expected to become a net carbon sink over time.

### Limitations

Due to the uncertainties associated with Tier 1 and Tier 2 emission factors, the results shown here are estimates. To increase accuracy, on-site carbon flux measurements can be used for future assessments.

The EX-ACT tool simplifies ecological processes and this adds further uncertainty.

The assessment timeframe of 20 years is also relatively short in relation to ecological processes. Over timescales longer than this assessment (beyond 2042) the mitigation potential is expected to be much higher.

### Associated benefits

- Improved ecosystem services, including flood management
- Increased ecological connectivity, supporting large mammals
- Improved habitat for threatened species

#### More information:

[ELSP- Polesia](#)

[EX-ACT tool](#)

[ELSP- Natural Climate Solutions](#)

