ForEst & FarmLand

The LIFE-IP project „ForEst&FarmLand“

restores 3,500 hectares of wet forest, 500 hectares of dry forest, 100 small bodies of water and 20 coastal meadows

The project aims to restore habitats to alleviate the adverse impact of the following processes:

- **the drainage of a third of Estonia’s mainland,** which has destroyed many wetlands, wet forests, open mires and fens, as well as small bodies of water;
- **intensive agriculture,** which has led to the replacement of landscape mosaics with monocultural farmlands, on which plant protection products and artificial fertilisers are heavily used;
- **the forestation of open areas,** which is causing open sandy areas and dune fields to disappear and the area of alvars and coastal meadows to decrease.

Drainage causes the peat in **wooded bogs** to break down and the water supply to change, after which the area ceases to function as a bog. The main purpose of restoring wet forest habitats is to **reduce the impact of drainage**. The most important restoration technique is filling in **ditches**, as this is something nature cannot do by itself. Once ditched, the area will not recover on its own. In exceptional cases, restoration techniques used include thinning the stand, designing a more natural species composition and creating dead wood.

The best way to preserve and improve the condition of wet forest habitats is to avoid further human interference in the natural development of the area.

A working group of researchers, conservationists and environmental officials selected the final 10 of 64 proposed restoration areas, Restoration is set to begin in 2024.

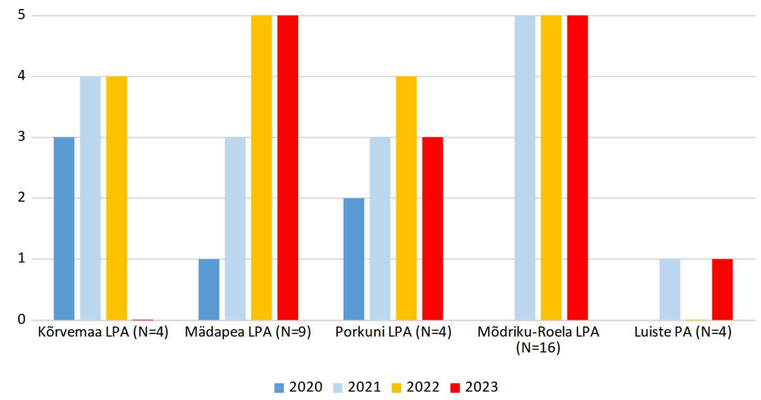
In addition to terrestrial habitats, **amphibians** need high-quality wetland and small bodies of water to live. Due to the destruction of suitable habitat complexes, five of the 11 species of amphibians found in Estonia are endangered: their numbers are decreasing and their range shrinking.

In nine Natura 2000 areas bordered by intensively managed agricultural landscapes, **we will restore various small bodies of water**, allowing amphibians to survive and thus increase their numbers in these landscapes.

Restoration in the Mädapea oak-forest landscape conservation area.

*Small bodies of water **must not** be drained, converted into fish ponds, polluted, closed up or allowed to become overgrown. Small bodies of water and wetlands increase the diversity of landscapes, create habitats and preserve water resources.*

Amphibians balance the ecosystem by limiting the number of invertebrates, including agricultural pests and pathogens. They are food for birds, mammals and reptiles.



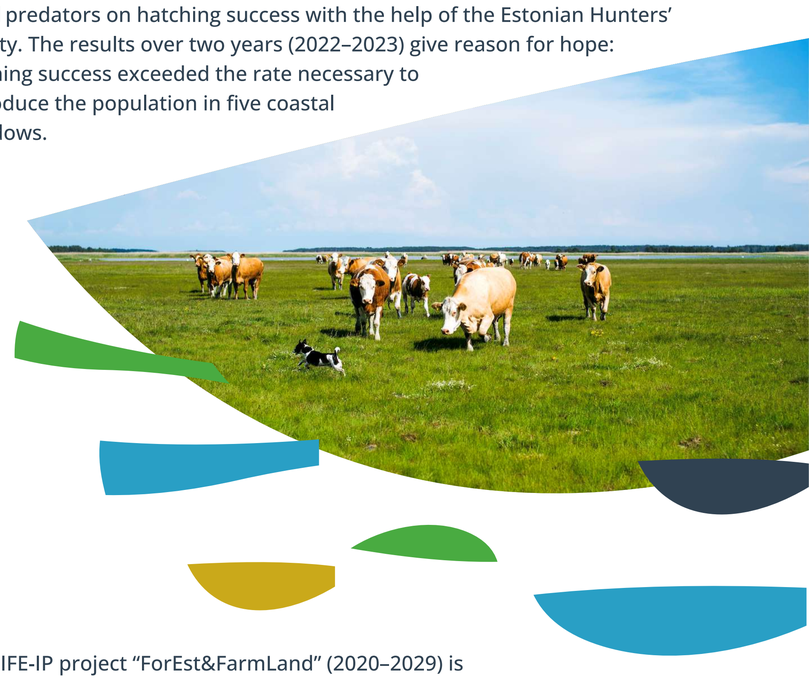
Number of amphibian species found in restored ponds before and after the restoration. At Kõrvemaa landscape protection area (LPA), Mädapea LPA and Porkuni LPA (2020-2021) before the restoration and (2022-2023) after the restoration. At Mõdriku-Roela LPA and Luiste limited-conservation area (2021-2022) before the restoration and 2023 after the restoration. In 2023 at Kõrvemaa landscape protection area and in 2022 Luiste limited-conservation area ponds were dry.

A fox in the Tohvri coastal meadow. The farther the waders’ nest is from the edge of the forest, the more likely the eggs are to hatch. The forest in the background has since been cut down for meadow restoration.

Coastal meadows are an important habitat for species dependent on wet open landscapes, including **waders.** The **forestation** and afforestation of coastal meadows has fragmented their habitats, reducing the openness and total area of these landscapes. Aside from the loss of habitat, waders are endangered by **nest raids**. We know that in coastal meadows, forestation and nest raiding are linked – since small predators frequent the edge of the forest, they most often raid nests closest to the forest.

By restoring coastal meadows, we create **open landscapes** suitable for waders to nest and **limit the range of small predators.**

As the rate of nest raiding is very high, we are testing the effect of hunting small predators on hatching success with the help of the Estonian Hunters’ Society. The results over two years (2022–2023) give reason for hope: hatching success exceeded the rate necessary to reproduce the population in five coastal meadows.



The LIFE-IP project “ForEst&FarmLand” (2020–2029) is designed to protect and restore Estonian landscapes and ecosystems, as well as to improve the condition of the species and habitats of our forests and farmlands. The project is funded by the LIFE programme of the European Union, and its budget is 19 million euros.

The ditch has been dammed up during the restoration of the area. Excavators and other heavy machinery can be used in restoration only if their damage to the existing natural assets not too significant.

Read more: www.loodusrikaseesti.ee/en

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