

We are restoring the traditional, yet so mysterious woodland habitats

Voldemar Rannap, project manager

Kaidi Tingas, project communication manager

Wetlands – areas that are permanently wet or at least partly covered by water for part of the year, including wet woodlands, shallow water bodies or flat seashores – are some of the world’s most important ecosystems, providing nature’s benefits and a place for recreation for people, as well as habitats for many species of plants, fungi and animals. At the same time, wetlands are some of the most threatened ecosystems in the world, with nearly 35% of wetland habitats lost due to human activities. An economic impact assessment of ecosystem restoration has found that for every euro invested in wetland restoration, up to €38 can be gained. Wetlands include not only our rivers and lakes, but also all Estonia’s mires and mire woodlands.

Wetland habitats are disappearing around the world

In Estonia, a third of the land has been drained. If lined up, the drainage ditches, dug mainly during the Soviet occupation, could wrap almost two times around the globe – this is about 70,000 kilometres of ditches. The total length of Estonia’s rivers and streams is comparatively small, only 19,000 km.

As a result of prolonged drainage, peat in mire woodlands decomposes, plants of wetland habitats disappear and the fauna changes, too. As the stand becomes denser, the resulting loss of light will lead to the disappearance of light-demanding mire species. This is how pine mires and alder marshes are replaced by spruce stands on drained peatland, which can no longer be easily converted back to their natural state.

More than half of the state forest – about 450,000 ha – has been drained. In the course of the LIFE IP ForEst&FarmLand project we will restore about 3,500 ha of wet woodland habitats there.

Over time, however, woodlands have not only been drained, but have also been impoverished by logging, and for many species there are not enough old and dead trees, light-rich glades or fallen trees.

However, the protection of biodiverse woodlands is an important objective of both Natura 2000, the world’s largest network of protected areas, and nature conservation efforts in Estonia. We need to ensure that natural areas are large enough and connected by dispersal corridors, so that the

habitat would support as many species as possible. In the future, too, because as climate and land use change, we need to support biodiversity.

However, it is also possible to restore and regenerate degraded forests, which is why the Action Plan for Wet Woodland Habitats was prepared as part of the LIFE IP ForEst&FarmLand project through extensive cooperation. The Action Plan provides further guidance for the protection and restoration of Estonia's wet woodland habitats.

What are wet woodlands?

In Estonia, wet woodland habitat types include Fennoscandian deciduous swamp woods, transition mire and bog woodlands, alluvial forests with alder and ash and, somewhat provisionally, also riparian mixed forests. Why should we care about them and has anyone ever been in such a forest?

Meelis Suurkask, a specialist from the Environmental Board who led the preparation of the Action Plan for Wet Woodland Habitats, describes these woodlands as follows: 'These are very mysterious woods. Some of these woodlands are occasionally flooded with water, so you can boat between trees and have a picnic on a fallen trunk.

In others, there are high protruding tree roots with water shimmering between them, and chest-high thickets of yellow iris. As soon as you stop walking, you are surrounded by a buzzing cloud of mosquitoes.

Or it might be a luminous pine forest on a higher bog slope, where heather cocks fight in spring, and in midsummer the forest floor is abundantly covered with white blossoms of Labrador tea and the air makes your head spin. And if you're lucky, you can pick yellow cloudberry in the forest.

Or else, it might be a forest of old oaks, linden trees, fluttering elms and ash trees on a river bank, where the giant trees stretch their branches over the river and young beavers have built their slides on the clay bank under the shade of a great elm.'

So, wet woodlands are familiar places that we all know and want to preserve for the future!

The Action Plan for Wet Woodland Habitats sets targets for the future

The Action Plan, which was the result of three years of heated debate between authorities and researchers, analyses the causes and risk factors of the poor condition of our wet woodland habitats, proposes a range of conservation actions and sets the target that by 2030 all wet

woodland habitats will have been mapped, their degradation halted and 11,500 hectares of various woodland habitats restored. This is less than two per cent of all drained forests in Estonia, but we still hope it will be a lifeline for many species, including our moor frog population, which is rapidly declining according to current monitoring data. The wet woodlands at the edges of bogs are key to the survival of the largest member of our grouse species, the wood grouse, but also provide important habitats for various large game.

Of this 11,500 hectares, we will restore about 3,500 hectares of woodlands on state land and in protected areas over the next few years as part of the LIFE IP ForEst&FarmLand project. Restoration sites are in six locations across Estonia and were selected by researchers, conservationists, practitioners from State Forest Management Centre (RMK), and environmental officials. The largest sites, which are also the first to be restored, are Peterna-Laashoone and Meleski in the Alam-Pedja Nature Reserve. Other restoration sites include Karukose in the Soomaa National Park and a few hundred hectares in the Ohepalu, Tudusoo, Laulaste and Pihla-Kaibaldi nature reserves.

Restoration is not undertaken lightly

The main objective of restoring the wet woodland habitat is to reduce the impact of drainage by closing ditches. Members of the working group are very conservative about the planned restoration activities. At a recent meeting, where the planner presented the Peterna-Laashoone restoration plan, the entire existing ditch network was examined ditch by ditch, and the planner got the green light for constructing dams only for about a half of the ditches. In many cases, the question was whether or not such restoration would be at the expense of some other habitat, species or natural asset that had evolved in the meantime, and if that were the case, there could be no intervention.

The key words for the whole process are a research-based approach, feasibility and conservatism in a good sense. The questions ‘where?’, ‘what?’ and ‘why do it?’ were hotly debated both in the course of preparing the Action Plan for Wet Woodland Habitats and while selecting restoration sites. In the selection process, the aim was to pick sites that had been ‘damaged’ by human activity relatively recently and where natural recovery would take a long time and the restoration activities would not damage existing natural assets.

At the same time, cost-effectiveness was also taken into account while selecting restoration sites. For example, it takes a very long time for a drained peatland forest to recover. Therefore, preference should be given to sites that could be more effectively enhanced as a wet woodland

habitat. Sometimes a little help from people is all that is needed – this can be as simple as not reconstructing drainage ditches.

A wet woodland is not a flooded woodland

Recently, some people have expressed the fear that restoration activities involve flooding the woods, but we don't do that – restoration only raises the water level in the soil to a suitable level for wet woodland species.

Thus, restoring wet woodlands is far from creating Soomaa-like flooded areas. For all that, walking through the woods of the Soomaa National Park in midsummer, you probably have no notion of the extent of the spring floods there, which allow you to canoe between the big trees at high tide or go on wild ice-skating trips in winter.

When the first draft of the restoration site project is ready, RMK will present it to everyone interested. The cooperation board of Alam-Pedja Nature Reserve will soon hold a public meeting regarding the Peterna-Laashoone restoration site. All interested parties, authorities and private forest owners are welcome to attend. Updates are also available on the website of LIFE IP ForEst&FarmLand: www.loodusrikaseesti.ee/en

We are restoring the wet woodlands also for our own sake. If man did not interfere at all, nature could cope nicely on its own. The natural state of wet woodlands would also be restored over time, but it would take longer than we can wait. The increase in water levels in the soil resulting from the restoration of wet woodlands will also help to keep regional water supplies stable, so we may be able to cope with increasingly frequent droughts and reduce the risk of forest fires in summer. As we know, bog woods are also rich in cloudberries and cranberries.

The restoration of nature is first and foremost necessary for ourselves, because our existence depends on nature.